	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
2	Usnea angulata	A beard lichen	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	7.1.2, 1, 5.3	Suppression in the Fire Regime / Residential and Commercial Development / Logging and Wood Harvesting	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3)		
3	Porpidia lowiana	A boulder lichen	Plant	Plant	I	b	Cliff and Talus	11, 6.1.3, 9.5	Climate Change and Severe Weather / Recreational Use of Cliffs and Rock Faces / Airborne Pollutants	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / e.g., rock climbing, hang-gliding / Air contaminant emissions from a point or non-point source.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
4	Plagiochasma rupestre	A flapwort	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	7.3.2, 8.1.2,	Vegetation Succession / Terrestrial Plants /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
5	Heterodermia erecta	A fringe lichen	Plant	Plant	I	b	Boreal Forests	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
6	Polytrichastrum formosum var. densifolium	A haircap moss	Plant	Plant	I	b	Boreal Forests	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
7	Calvitimela talayana	A lichen	Plant	Plant	I	b	Cliff and Talus	6.1.3, 3.2.3, 8.1.2	Recreational Use of Cliffs and Rock Faces / Quarries and Sand Pits / Terrestrial Plants	e.g., rock climbing, hang-gliding / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
8	Canoparmelia alabamensis	a lichen	Plant	Plant	I	b	Cliff and Talus	6.1.3, 9, 11	Recreational Use of Cliffs and Rock Faces / Pollution / Climate Change and Severe Weather	e.g., rock climbing, hang-gliding / Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support. (6.1.3) Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment. (9), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Lobby for legislation that reduces the production of heat-trappping particulates and encourages "greener" lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources. (11)		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
9	Parmelia neodiscordans	a lichen	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	11, 9.5, 6.1.3	Climate Change and Severe Weather / Airborne Pollutants / Recreational Use of Cliffs and Rock Faces	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Air contaminant emissions from a point or non-point source. / e.g., rock climbing, hang-gliding	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5), Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3).		
10	Psilolechia clavulifera	A lichen	Plant	Plant	I	b	Boreal Forests	11, 9.5,	Climate Change and Severe Weather / Airborne Pollutants /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Air contaminant emissions from a point or non-point source. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
11	Punctelia graminicola	A lichen	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	6.1.3, 9.5,	Recreational Use of Cliffs and Rock Faces / Airborne Pollutants /	e.g., rock climbing, hang-gliding / Air contaminant emissions from a point or non-point source. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
12	Acrobolbus ciliatus	A liverwort	Plant	Plant	I	b	Forests and Woodlands, Cliffr and Talus, Riparian and Floodplains, Headwater Streams, Creeks and Rivers	5.3, 8.2.4, 11	Logging and Wood Harvesting / Insect Pest Epidemics / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
13	Bazzania nudicaulis	A liverwort	Plant	Plant	I	b	Boreal Forests	11, 5.3, 8.2.4	Climate Change and Severe Weather / Logging and Wood Harvesting / Insect Pest Epidemics	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
14	Cephaloziella spinicaulis	A liverwort	Plant	Plant	I	b	Cliff and Talus	5.3, 7.3.3,	Logging and Wood Harvesting / Natural Erosion and Sedimentation /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and regulations to improve water quality and create healthy watershed (7.3.3).		
15	Frullania caulisequa	A liverwort	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 7.2.5,	Logging and Wood Harvesting / Drainage in Forest Environments /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
16	Lejeunea ruthii	A liverwort	Plant	Plant	I	b	Forests and Woodlands	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
17	Marsupella paroica	A liverwort	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Cliff and Talus	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
18	Nardia lescurii	a liverwort	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Riparian and Floodplains, Creeks and Rivers, Croplands	5.3, 7.3.2,	Logging and Wood Harvesting / Vegetation Succession /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
19	Neoorthocaulis attenuatus	A liverwort	Plant	Plant	I	b	Cliff and Talus	6.1.3, 6.1, 11	Recreational Use of Cliffs and Rock Faces / Recreational Activities / Climate Change and Severe Weather	e.g., rock climbing, hang-gliding / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
20	Plagiochila austinii	A liverwort	Plant	Plant	II	b	Forests and Woodlands	5.3, 8.2.4, 11	Logging and Wood Harvesting / Insect Pest Epidemics / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
21	Plagiochila echinata	A liverwort	Plant	Plant	I	b	Cliff and Talus	5.3, 8.2.4, 11	Logging and Wood Harvesting / Insect Pest Epidemics / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
22	Plagiochila exigua	A liverwort	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	5.3, 8.2.4, 11	Logging and Wood Harvesting / Insect Pest Epidemics / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
23	Solenostoma appalachianum	A liverwort	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Riparian and Floodplains, Croplands	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
24	Syzygiella nipponica	A liverwort	Plant	Plant	I	b	Cliff and Talus	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
25	Hypotrachyna lividescens	A loop lichen	Plant	Plant	II	b	Cliff and Talus, Non-tidal Wetlands	6.1.3, 9.5,	Recreational Use of Cliffs and Rock Faces / Airborne Pollutants /	e.g., rock climbing, hang-gliding / Air contaminant emissions from a point or non-point source. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
26	Hypotrachyna prolongata	A loop lichen	Plant	Plant	I	b	Boreal Forests	11, 5.3, 8.2.4	Climate Change and Severe Weather / Logging and Wood Harvesting / Insect Pest Epidemics	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
27	Hypotrachyna virginica	A loop lichen	Plant	Plant	I	b	Boreal Forests	11, 5.3, 8.2.4	Climate Change and Severe Weather / Logging and Wood Harvesting / Insect Pest Epidemics	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
28	Polygala cruciata var. cruciata	A milkwort	Plant	Plant	IV	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
29	Campylopus surinamensis	A moss	Plant	Plant	I	b	Forests and Woodlands, Croplands	7.1.2, 5.3, 3.2.3	Suppression in the Fire Regime / Logging and Wood Harvesting / Quarries and Sand Pits	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
30	Codriophorus aduncoides	A moss	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	5.3, 7.3.3,	Logging and Wood Harvesting / Natural Erosion and Sedimentation /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and regulations to improve water quality and create healthy watersheds (7.3.3).		
31	Conardia compacta	A moss	Plant	Plant	I	b	Cliff and Talus	6.1.3, 3.2.2,	Recreational Use of Cliffs and Rock Faces / Open-Pit Mines /	e.g., rock climbing, hang-gliding / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
32	Cryphaea nervosa	A moss	Plant	Plant	I	b	Forests and Woodlands	5.3, 1, 8.1.2	Logging and Wood Harvesting / Residential and Commercial Development / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
33	Dicranum muehlenbeckii	A moss	Plant	Plant	I	b	Cliff and Talus	6.1.3, 6.1, 11	Recreational Use of Cliffs and Rock Faces / Recreational Activities / Climate Change and Severe Weather	e.g., rock climbing, hang-gliding / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
34	Forsstroemia producta	A moss	Plant	Plant	I	b	Forests and Woodlands, Savannas, Cliff and Talus	7.1.2, 5.3,	Suppression in the Fire Regime / Logging and Wood Harvesting /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
35	Grimmia alpestris	A moss	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	7.1.2, 8.1.2, 4.1	Suppression in the Fire Regime / Terrestrial Plants / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
36	Herpetineuron toccoae	A moss	Plant	Plant	I	b	Cliff and Talus	6.1.3, 6.1, 7.2.1	Recreational Use of Cliffs and Rock Faces / Recreational Activities / Water Level Management Using Dams	e.g., rock climbing, hang-gliding / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
37	Heterocladium macounii	A moss	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
38	Hylocomiastrum umbratum	A moss	Plant	Plant	I	b	Boreal Forests	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
39	Neckera complanata	A moss	Plant	Plant	I	b	Cliff and Talus	5.3, 7.3.3, 11	Logging and Wood Harvesting / Natural Erosion and Sedimentation / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and regulations to improve water quality and create healthy watersheds (7.3.3), Educate the public on the importance of protecting natural habitats. Support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
40	Orthotrichum elegans	A moss	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3	Logging and Wood Harvesting / /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
41	Schlotheimia rugifolia	A moss	Plant	Plant	I	b	Croplands	5.3, 8.1.4,	Logging and Wood Harvesting / Aquatic Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
42	Syntrichia amphidiacea	A moss	Plant	Plant	I	b	Cliff and Talus	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
43	Syrrhopodon incompletus	A moss	Plant	Plant	I	b	Forests and Woodlands	7.2.5, 5.3,	Drainage in Forest Environments / Logging and Wood Harvesting /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, uselow-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
44	Tuerckheimia svihlae	A moss	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3	Logging and Wood Harvesting / /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
45	Ulota hutchinsiae var. rufescens	A moss	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	11, 5.3, 1	Climate Change and Severe Weather / Logging and Wood Harvesting / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
46	Lecanora masana	A Rim Lichen	Plant	Plant	I	b	Boreal Forests	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Supportlegislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
47	Parmotrema louisianae	A ruffle lichen	Plant	Plant	I	b	Forests and Woodlands	5.3, 9.5,	Logging and Wood Harvesting / Airborne Pollutants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Air contaminant emissions from a point or non-point source. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
48	Carex sp. 3	A sedge	Plant	Plant	I	a	Non-tidal Wetlands	4.1, 7.3.2, 7.2.5	Roads and Railroads / Vegetation Succession / Drainage in Forest Environments	Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
49	Viola sp. 1, now V. tenuisecta	A violet	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens, Croplands	7.1.2, 4.1, 8.1.2	Suppression in the Fire Regime / Roads and Railroads / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
50	Clematis addisonii	Addison's leatherflower	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Croplands	7.1.2, 4.1,	Suppression in the Fire Regime / Roads and Railroads /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
51	Sceptridium jenmanii	Alabama grape fern	Plant	Plant	I	b	Grasslands, Glades and Barrens	8.1.2, 7.3.2, 7.1.2	Terrestrial Plants / Vegetation Succession / Suppression in the Fire Regime	/ Natural vegetation succession causing habitat loss for species of early successional habitats. / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
52	Myriopteris alabamensis	Alabama lip fern	Plant	Plant	I	b	Cliff and Talus	6.1.3, 7.3.2,	Recreational Use of Cliffs and Rock Faces / Vegetation Succession /	e.g., rock climbing, hang-gliding / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
53	Endotropis alnifolia	Alder-leaved buckthorn	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	7.1.2, 7.3.2, 7.2.7	Suppression in the Fire Regime / Vegetation Succession / Withdrawal of Groundwater	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Withdrawal of groundwater for human consumption, crop production or other purposes. E.g., pumping water from the water table.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Limit the effects of groundwater withdrawl in sensitive areas. Hydrologic changes could occur over broad areas due to water withdrawl for agricultural or industrial use. Regional management efforts or legislation may be necessary to lessen these negative impacts (7.2.7).		
54	Thermopsis mollis	Allegheny mountain golden-banner	Plant	Plant	II	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
55	Allium allegheniense	Allegheny onion	Plant	Plant	I	b	Forests and Woodlands, Savannas, Cliff and Talus	6.1, 11, 8.1.2	Recreational Activities / Climate Change and Severe Weather / Terrestrial Plants	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
56	Prunus alleghaniensis var. alleghaniensis	Allegheny plum	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	5.3, 7.3.2,	Logging and Wood Harvesting / Vegetation Succession /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
57	Polytrichastrum alpinum var. alpinum	Alpine haircap moss	Plant	Plant	I	b	Beaches and Dunes	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
58	Berberis canadensis	American barberry	Plant	Plant	II	b	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
59	Diarrhena americana	American beakgrain	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
60	Buchnera americana	American bluehearts	Plant	Plant	I	a	Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
61	Schwalbea americana	American chaffseed	Plant	Plant	I	a	Shrublands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
62	Castanea dentata	American chestnut	Plant	Plant	I	c	Forests and Woodlands	8.2.4, 7.1.2,	Insect Pest Epidemics / Suppression in the Fire Regime /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
63	Lygodium palmatum	American climbing fern	Plant	Plant	III	b	Forests and Woodlands, Lakes, Ponds, Non-tidal Wetlands, Croplands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
64	Phragmites americanus	American common reed	Plant	Plant	IV	c	Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positivelifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
65	Ulmus americana	American elm	Plant	Plant	III	a	Forests and Woodlands, Grasslands, Shrublands, Riparian and Floodplains, Non-tidal Wetlands, Tidal Wetlands	8.2.4, 5.3, 7.2.1	Insect Pest Epidemics / Logging and Wood Harvesting / Water Level Management Using Dams	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
66	Lonicera canadensis	American fly-honeysuckle	Plant	Plant	IV	b	Forests and Woodlands, Boreal Forests, Non-tidal Wetlands	11, 5.3, 1	Climate Change and Severe Weather / Logging and Wood Harvesting / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Supportlegislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
67	Limnobium spongia	American frog's-bit	Plant	Plant	III	b	Riparian and Floodplains, Shorelines, Ponds, Non-tidal Wetlands, Tidal Wetlands, Croplands	7.2.5, 8.2.1, 7.3.2	Drainage in Forest Environments / Habitat Alteration by Beavers / Vegetation Succession	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers / Natural vegetation succession causing habitat loss for species of early successional habitats.	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
68	Panax quinquefolius	American ginseng	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.1.2, 5.2.4	Logging and Wood Harvesting / Terrestrial Plants / Poaching/Eradication of Terrestrial Plants or Fungi	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Deliberate and illegal harvesting of plants or fungi for personal or commercial purposes or eradication due to prejudices against the species. E.g., illegal gathering of American ginseng, eradication of cow parsnip because of its similar appearance of giant hogweed, an invasive alien species	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public (foreign and domestic) on the negative impact that poaching has on species populations and ecosystem health. Support efforts to promote a shift from wild-harvested to nursery-grown products. Increase efforts to monitor illicit activity and increase penalties for violations of the law (5.2.4).		
69	Lithospermum latifolium	American gromwell	Plant	Plant	III	b	Forests and Woodlands, Savannas	7.1.2, 5.3,	Suppression in the Fire Regime / Logging and Wood Harvesting /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
70	Cyperus neotropicalis	American halfchaff sedge	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Beaches and Dunes, Creeks and Rivers, Large Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Ponds, Non-tidal Wetlands, Urban Lands	7.2.1, 8.1.2,	Water Level Management Using Dams / Terrestrial Plants /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
71	Gillenia stipulata	American ipecac	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 4.1, 8.1.2	Suppression in the Fire Regime / Roads and Railroads / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
72	Nelumbo lutea	American lotus	Plant	Plant	III	b	Riparian and Floodplains, Headwater Streams, Creeks and Rivers, Tidal Headwater Streams, Tidal Creeks and Rivers, Ponds, Tidal Wetlands, Urban Lands	8.1.4, 9,	Aquatic Plants / Pollution /	/ Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9).		
73	Glyceria grandis var. grandis	American mannagrass	Plant	Plant	I	b	Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	8.2.1, 8.1.2, 11	Habitat Alteration by Beavers / Terrestrial Plants / Climate Change and Severe Weather	Flooding/drainage of habitats caused by beavers / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Supportlegislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed source (11).		
74	Styrax americanus var. americanus	American snowbell	Plant	Plant	IV	b	Riparian and Floodplains, Ponds, Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
75	Vicia americana var. americana	American vetch	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Cliff and Talus, Riparian and Floodplains, Croplands	7.3.2, 8.1.2,	Vegetation Succession / Terrestrial Plants /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
76	Epilobium ciliatum ssp. ciliatum	American willow-herb	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 11, 8.2.1	Vegetation Succession / Climate Change and Severe Weather / Habitat Alteration by Beavers	Natural vegetation succession causing habitat loss for species of early successional habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Flooding/drainage of habitats caused by beavers	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
77	Wisteria frutescens var. frutescens	American wisteria	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.2.5, 7.3.2,	Drainage in Forest Environments / Vegetation Succession /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
78	Diplophyllum andrewsii	Andrew's earwort	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages Positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
79	Rhynchospora caduca	Angle-stem beaksedge	Plant	Plant	IV	b	Forests and Woodlands, Beaches and Dunes, Non-tidal Wetlands, Tidal Wetlands	7.1.2, 11.1.1,	Suppression in the Fire Regime / Changes in Vegetation Communities /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
80	Ludwigia leptocarpa	Angle-stem primrose-willow	Plant	Plant	IV	b	Riparian and Floodplains, Ponds, Non-tidal Wetlands, Urban Lands	11.1.1, 8.1.4,	Changes in Vegetation Communities / Aquatic Plants /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Supportlegislation that reduces the production of heat-trappping particulates and encourages Positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
81	Actaea rubifolia	Appalachian bugbane	Plant	Plant	I	b	Forests and Woodlands	5.3, 11, 8.1.2	Logging and Wood Harvesting / Climate Change and Severe Weather / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
82	Cleistesiopsis bifaria	Appalachian dragonhead pogonia	Plant	Plant	II	a	Forests and Woodlands	7.1.2, 1, 7.3.2	Suppression in the Fire Regime / Residential and Commercial Development / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
83	Trichomanes boschianum	Appalachian filmy fern	Plant	Plant	I	b	Cliff and Talus	6.1, 7.2.1,	Recreational Activities / Water Level Management Using Dams /	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
84	Huperzia appressa	Appalachian fir clubmoss	Plant	Plant	II	b	Glades and Barrens, Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis.Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
85	Heterodermia appalachensis	Appalachian fringe lichen	Plant	Plant	I	b	Forests and Woodlands	5.3, 9.5, 11	Logging and Wood Harvesting / Airborne Pollutants / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Air contaminant emissions from a point or non-point source. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
86	Gentiana austromontana	Appalachian gentian	Plant	Plant	II	b	Forests and Woodlands	5.3, 11, 1	Logging and Wood Harvesting / Climate Change and Severe Weather / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11)		
87	Polytrichastrum appalachianum	Appalachian haircap moss	Plant	Plant	I	b	Boreal Forests, Cliff and Talus	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Supportlegislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
88	Stachys appalachiana	Appalachian hedge-nettle	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2),Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
89	Gymnocarpium appalachianum	Appalachian oak fern	Plant	Plant	II	b	Forests and Woodlands	5.3, 8.1.2, 11	Logging and Wood Harvesting / Terrestrial Plants / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
90	Isoetes appalachiana	Appalachian quillwort	Plant	Plant	I	b	Riparian and Floodplains, Creeks and Rivers, Non-tidal Wetlands	7.2.5, 5.3, 8.2.1	Drainage in Forest Environments / Logging and Wood Harvesting / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
91	Drepanolejeunea appalachiana	Appalachian threadwort	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	8.2.4, 5.3,	Insect Pest Epidemics / Logging and Wood Harvesting /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
92	Ageratina altissima var. roanensis	Appalachian white snakeroot	Plant	Plant	III	b	Forests and Woodlands, Boreal Forests, Grasslands, Shrublands	11, 5.3, 1	Climate Change and Severe Weather / Logging and Wood Harvesting / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
93	Carex austrolucorum	Appalachian woodland sedge	Plant	Plant	III	b	Forests and Woodlands	11, 5.3, 1	Climate Change and Severe Weather / Logging and Wood Harvesting / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

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94	Carex aquatilis var. substricta	Aquatic sedge	Plant	Plant	I	b	Ponds	7.2.1, 8.2.1,	Water Level Management Using Dams / Habitat Alteration by Beavers /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
95	Bromus kalmii	Arctic brome	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
96	Symphyotrichum urophyllum	Arrow-leaved aster	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
97	Spiranthes bightensis	Atlantic ladies tresses	Plant	Plant	I	c	Non-tidal Wetlands, Tidal Wetlands, Urban Lands	7.3.2, 7.2.5,	Vegetation Succession / Drainage in Forest Environments /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
98	Heteranthera pauciflora	Atlantic mud-plantain	Plant	Plant	I	c	Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Rivers, Tidal Creeks and Rivers, Large Tidal Rivers	6.1, 11.1.1,	Recreational Activities / Changes in Vegetation Communities /	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
99	Chamaecyparis thyoides	Atlantic white-cedar	Plant	Plant	III	b	Forests and Woodlands, Non-tidal Wetlands, Tidal Wetlands	7.1.2, 5.3, 11	Suppression in the Fire Regime / Logging and Wood Harvesting / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
100	Pycnanthemum setosum	Awned mountain-mint	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
101	Carex atherodes	Awned sedge	Plant	Plant	I	b	Headwater Streams, Non-tidal Wetlands	7.2.1, 8.2.1, 7.3.2	Water Level Management Using Dams / Habitat Alteration by Beavers / Vegetation Succession	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers / Natural vegetation succession causing habitat loss for species of early successional habitats.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
102	Paronychia baldwinii ssp. riparia	Baldwin's nailwort	Plant	Plant	IV	b	Forests and Woodlands, Savannas, Glades and Barrens, Urban Lands	7.1.2, 7.3.2, 3.2.3	Suppression in the Fire Regime / Vegetation Succession / Quarries and Sand Pits	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
103	Eleocharis baldwinii	Baldwin's spikerush	Plant	Plant	I	c	Riparian and Floodplains, Headwater Streams, Ponds, Non-tidal Wetlands, Urban Lands	7.2.5	Drainage in Forest Environments / /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
104	Abies balsamea	Balsam fir	Plant	Plant	I	c	Boreal Forests	11, 8.2.4, 5.3	Climate Change and Severe Weather / Insect Pest Epidemics / Logging and Wood Harvesting	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positivelifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
105	Packera paupercula var. paupercula	Balsam ragwort	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Riparian and Floodplains, Shorelines	7.1.2, 7.3.2, 6.1	Suppression in the Fire Regime / Vegetation Succession / Recreational Activities	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
106	Juncus balticus var. littoralis	Baltic rush	Plant	Plant	I	a	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
107	Carex barrattii	Barratt's sedge	Plant	Plant	II	b	Ponds, Non-tidal Wetlands	8.2.1, 7.2.5, 7.3.2	Habitat Alteration by Beavers / Drainage in Forest Environments / Vegetation Succession	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats.	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
108	Pycnanthemum clinopodioides	Basil mountainmint	Plant	Plant	I	b	Grasslands, Savannas, Glades and Barrens, Cliff and Talus, Urban Lands	7.3.2, 4.2, 4.1	Vegetation Succession / Utility and Service Lines / Roads and Railroads	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
109	Dichanthelium appalachiense	Bath county witchgrass	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
110	Malaxis bayardii	Bayard's malaxis	Plant	Plant	I	b	Forests and Woodlands, Savannas	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
111	Prunus maritima	Beach plum	Plant	Plant	I	c	Shrublands, Beaches and Dunes	11.1.1, 7.3.1, 6.1	Changes in Vegetation Communities / Shoreline Alteration / Recreational Activities	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
112	Cuscuta rostrata	Beaked dodder	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Grasslands, Shrublands, Savannas, Croplands	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Supportlegislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, uselow-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
113	Carex utriculata	Beaked sedge	Plant	Plant	I	b	Headwater Streams, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
114	Eleocharis rostellata	Beaked spikerush	Plant	Plant	IV	c	Non-tidal Wetlands, Tidal Wetlands	11.1.1, 7.3.2, 8.1.4	Changes in Vegetation Communities / Vegetation Succession / Aquatic Plants	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. (8.1.4).		
115	Arctostaphylos uva-ursi	Bearberry	Plant	Plant	I	b	Cliff and Talus	6.1, 11, 7.3.2	Recreational Activities / Climate Change and Severe Weather / Vegetation Succession	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
116	Diplachne maritima	Bearded sprangletop	Plant	Plant	II	c	Shorelines, Beaches and Dunes, Tidal Wetlands, Urban Lands	7.3.2, 11.1.1, 7.2.5	Vegetation Succession / Changes in Vegetation Communities / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
117	Hypericum galioides	Bedstraw St. John's-wort	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
118	Geum geniculatum	Bent avens	Plant	Plant	I	c	Forests and Woodlands, Non-tidal Wetlands	11, 5.3, 1	Climate Change and Severe Weather / Logging and Wood Harvesting / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
119	Corallorhiza bentleyi	Bentley's coralroot	Plant	Plant	I	c	Forests and Woodlands, Croplands	7.3.2, 4.1, 8.1.2	Vegetation Succession / Roads and Railroads / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
120	Eleocharis bifida	Bifid spikerush	Plant	Plant	I	b	Cliff and Talus	8.1.2, 6.1, 3.2.2	Terrestrial Plants / Recreational Activities / Open-Pit Mines	/ Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2).		
121	Nymphoides aquatica	Big floating heart	Plant	Plant	I	c	Ponds, Urban Lands	8.1.4, 9,	Aquatic Plants / Pollution /	/ Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9).		
122	Ilex coriacea	Big gallberry	Plant	Plant	I	b	Forests and Woodlands, Lakes, Non-tidal Wetlands	7.2.5, 7.3.2,	Drainage in Forest Environments / Vegetation Succession /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
123	Juncus megacephalus	Big-headed rush	Plant	Plant	II	c	Beaches and Dunes, Ponds	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
124	Magnolia macrophylla	Bigleaf magnolia	Plant	Plant	I	b	Forests and Woodlands	5.3	Logging and Wood Harvesting / /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
125	Potamogeton amplifolius	Bigleaf pondweed	Plant	Plant	I	c	Headwater Streams, Creeks and Rivers, Ponds, Non-tidal Wetlands, Urban Lands	9, 7.2.5,	Pollution / Drainage in Forest Environments /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
126	Styrax grandifolius	Bigleaf snowbell	Plant	Plant	IV	b	Forests and Woodlands, Cliff and Talus	5.3, 7.1.2,	Logging and Wood Harvesting / Suppression in the Fire Regime /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
127	Cuscuta indecora	Big-seed alfalfa dodder	Plant	Plant	I	b	Grasslands, Shrublands, Ponds, Non-tidal Wetlands, Tidal Wetlands, Urban Lands, Croplands	8.1.2, 7.3.2, 4.1	Terrestrial Plants / Vegetation Succession / Roads and Railroads	/ Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
128	Fraxinus biltomoreana	Biltmore ash	Plant	Plant	I	c	Forests and Woodlands, Savannas, Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands	8.2.4, 5.3,	Insect Pest Epidemics / Logging and Wood Harvesting /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
129	Fraxinus nigra	Black ash	Plant	Plant	I	c	Riparian and Floodplains, Non-tidal Wetlands	8.2.4, 5.3, 8.2.1	Insect Pest Epidemics / Logging and Wood Harvesting / Habitat Alteration by Beavers	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
130	Actaea racemosa	Black cohosh	Plant	Plant	III	a	Forests and Woodlands	5.3, 5.2.4, 8.1.2	Logging and Wood Harvesting / Poaching/Eradication of Terrestrial Plants or Fungi / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Deliberate and illegal harvesting of plants or fungi for personal or commercial purposes or eradication due to prejudices against the species. E.g., illegal gathering of American ginseng, eradication of cow parsnip because of its similar appearance of giant hogweed, an invasive alien species /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public (foreign and domestic) on the negative impact that poaching has on species populations and ecosystem health. Support efforts to promote a shift from wild-harvested to nursery-grown products. Increase efforts to monitor illicit activity and increase penalties for violations of the law (5.2.4), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
131	Carex arctata	Black sedge	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	11, 5.3, 1	Climate Change and Severe Weather / Logging and Wood Harvesting / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Supportr legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1)		
132	Anzia colpodes	Black-foam Lichen	Plant	Plant	I	b	Forests and Woodlands	5.3, 9.5,	Logging and Wood Harvesting / Airborne Pollutants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Air contaminant emissions from a point or non-point source. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
133	Isoetes melanopoda ssp. silvatica	Black-footed quillwort	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	7.2.5, 5.3, 8.2.1	Drainage in Forest Environments / Logging and Wood Harvesting / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
134	Eleocharis melanocarpa	Black-fruited spikerush	Plant	Plant	II	b	Ponds	7.2.1, 7.2.5, 1	Water Level Management Using Dams / Drainage in Forest Environments / Residential and Commercial Development	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
135	Lejeunea blomquistii	Blomquist leafy liverwort	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Headwater Streams, Creeks and Rivers	5.3, 7.3.3, 11	Logging and Wood Harvesting / Natural Erosion and Sedimentation / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and regulations to improve water quality and create healthy watersheds (7.3.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
136	Dichanthelium consanguineum	Blood panic grass	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
137	Fraxinus quadrangulata	Blue ash	Plant	Plant	I	c	Forests and Woodlands, Savannas	8.2.4, 5.3,	Insect Pest Epidemics / Logging and Wood Harvesting /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
138	Dichanthelium caerulescens	Blue panic grass	Plant	Plant	I	b	Forests and Woodlands, Beaches and Dunes, Non-tidal Wetlands, Tidal Wetlands	7.3.2, 6.1, 1	Vegetation Succession / Recreational Activities / Residential and Commercial Development	Natural vegetation succession causing habitat loss for species of early successional habitats. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid impacts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
139	Cardamine flagellifera	Blue Ridge bittercress	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands	5.3, 7.2.1, 8.1.2	Logging and Wood Harvesting / Water Level Management Using Dams / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
140	Agalinis decemloba	Blue Ridge false foxglove	Plant	Plant	III	b	Forests and Woodlands, Shrublabnds, Savannas, Glades and Barrens	7.1.2, 4.2, 8.1.2	Suppression in the Fire Regime / Utility and Service Lines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plant (8.1.2).		
141	Carex manhartii	Blue Ridge purple (Manhart's) sedge	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	11, 5.3, 8.1.2	Climate Change and Severe Weather / Logging and Wood Harvesting / Terrestrial Plants	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
142	Packera millefolia	Blue Ridge ragwort	Plant	Plant	II	a	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 8.1.2, 7.3.2	Suppression in the Fire Regime / Terrestrial Plants / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
143	Hypericum mitchellianum	Blue Ridge St. John's-wort	Plant	Plant	II	b	Forests and Woodlands, Boreal Forests, Grasslands, Shrublands, Glades and Barrens, Non-tidal Wetlands	11, 7.3.2,	Climate Change and Severe Weather / Vegetation Succession /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
144	Bacopa caroliniana	Blue water-hyssop	Plant	Plant	I	b	Shorelines, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
145	Baptisia australis	Blue wild indigo	Plant	Plant	II	c	Cliff and Talus, Riparian and Floodplains, Shorelines, Headwater Streams, Creeks and Rivers, Large Rivers	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
146	Eryngium integrifolium	Blue-flower eryngo	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
147	Quercus incana	Bluejack oak	Plant	Plant	II	b	Forests and Woodlands, Shrublands, Savannas, Beaches and Dunes	7.1.2, 5.3,	Suppression in the Fire Regime / Logging and Wood Harvesting /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
148	Sceptridium oneidense	Blunt-lobe grape fern	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 8.2.1, 6.1.3	Vegetation Succession / Habitat Alteration by Beavers / Recreational Use of Cliffs and Rock Faces	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / e.g., rock climbing, hang-gliding	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
149	Poa paludigena	Bog bluegrass	Plant	Plant	II	a	Non-tidal Wetlands	7.2.5, 7.3.2, 8.2.1	Drainage in Forest Environments / Vegetation Succession / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
150	Stellaria alsine	Bog chickweed	Plant	Plant	I	c	Non-tidal Wetlands	7.2.1, 7.3.2, 5.3	Water Level Management Using Dams / Vegetation Succession / Logging and Wood Harvesting	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Natural vegetation succession causing habitat loss for species of early successional habitats. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
151	Coryphopteris simulata	Bog fern	Plant	Plant	I	b	Non-tidal Wetlands	8.2.1, 5.3, 7.2.5	Habitat Alteration by Beavers / Logging and Wood Harvesting / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
152	Solidago uliginosa var. uliginosa	Bog goldenrod	Plant	Plant	II	a	Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2),Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
153	Juncus elliottii	Bog rush	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.2.5, 4.2	Suppression in the Fire Regime / Drainage in Forest Environments / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
154	Liparis loeselii	Bog twayblade	Plant	Plant	II	b	Forests and Woodlands, Boreal Forests, Non-tidal Wetlands, Croplands	8.2.1, 8.1.2,	Habitat Alteration by Beavers / Terrestrial Plants /	Flooding/drainage of habitats caused by beavers / /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
155	Epilobium leptophyllum	Bog willow-herb	Plant	Plant	II	b	Non-tidal Wetlands	7.3.2, 11, 8.2.1	Vegetation Succession / Climate Change and Severe Weather / Habitat Alteration by Beavers	Natural vegetation succession causing habitat loss for species of early successional habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Flooding/drainage of habitats caused by beavers	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-term habitat restoraton (8.2.1).		
156	Stereocaulon glaucescens	Bony foam lichen	Plant	Plant	II	b	Cliff and Talus	6.1.3, 9.5,	Recreational Use of Cliffs and Rock Faces / Airborne Pollutants /	e.g., rock climbing, hang-gliding / Air contaminant emissions from a point or non-point source. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
157	Oldenlandia boscii	Bosc's bluets	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Urban Lands	7.2.1, 8.1.2,	Water Level Management Using Dams / Terrestrial Plants /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibitthe sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
158	Gaylussacia brachycera	Box huckleberry	Plant	Plant	I	b	Forests and Woodlands, Savannas	5.3, 1, 7.1.2	Logging and Wood Harvesting / Residential and Commercial Development / Suppression in the Fire Regime	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
159	Asplenium bradleyi	Bradley's spleenwort	Plant	Plant	II	b	Forests and Woodlands, Glades and Barrens, Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
160	Dicliptera brachiata	Branched dicliptera	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Shorelines, Non-tidal Wetlands	8.1.2, 7.2.1, 7.2.5	Terrestrial Plants / Water Level Management Using Dams / Drainage in Forest Environments	/ Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
161	Gratiola ramosa	Branched hedge-hyssop	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	8.1.2, 7.3.2, 4.2	Terrestrial Plants / Vegetation Succession / Utility and Service Lines	/ Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
162	Rubus setosus	Bristly blackberry	Plant	Plant	I	a	Non-tidal Wetlands	7.3.2, 7.2.5, 8.2.1	Vegetation Succession / Drainage in Forest Environments / Habitat Alteration by Beavers	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoration (8.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
163	Aralia hispida	Bristly sarsaparilla	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 6.1, 11	Suppression in the Fire Regime / Recreational Activities / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
164	Solidago lancifolia	Broadleaf goldenrod	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Grasslands, Savannas	11, 8.1.2,	Climate Change and Severe Weather / Terrestrial Plants /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages Positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
165	Stachys latidens	Broad-tooth hedge-nettle	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Shrublands	5.3, 11, 8.1.2	Logging and Wood Harvesting / Climate Change and Severe Weather / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
166	Carex bromoides ssp. montana	Brome-like sedge	Plant	Plant	III	b	Forests and Woodlands, Boreal Forests, Riparian and Floodplains, Non-tidal Wetlands	11, 8.2.1, 5.3	Climate Change and Severe Weather / Habitat Alteration by Beavers / Logging and Wood Harvesting	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Flooding/drainage of habitats caused by beavers / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
167	Carex buxbaumii	Brown bog sedge	Plant	Plant	II	b	Forests and Woodlands, Ponds, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
168	Sphagnum fuscum	Brown peatmoss	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1)		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
169	Juncus pelocarpus	Brown-fruited rush	Plant	Plant	II	a	Savannas, Non-tidal Wetlands, Croplands	7.1.2, 11.1.1, 3.2.3	Suppression in the Fire Regime / Changes in Vegetation Communities / Quarries and Sand Pits	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
170	Bryoerythrophyllum ferruginascens	Bryoerythrophyllum moss	Plant	Plant	I	b	Riparian and Floodplains, Headwater Streams, Creeks and Rivers	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
171	Menyanthes trifoliata	Buckbean	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5, 7.3.2, 8.2.1	Drainage in Forest Environments / Vegetation Succession / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
172	Pediomelum canescens	Buckroot	Plant	Plant	I	a	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
173	Sideroxylon lycioides	Buckthorn bumelia	Plant	Plant	IV	b	Forests and Woodlands, Shrublands, Cliff and Talus	5.3, 11.1.1,	Logging and Wood Harvesting / Changes in Vegetation Communities /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
174	Imbribryum gemmiparum	Bud-tipped bryum	Plant	Plant	I	b	Forests and Woodlands	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
175	Trifolium reflexum	Buffalo clover	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
176	Cicuta bulbifera	Bulb-bearing water-hemlock	Plant	Plant	I	b	Non-tidal Wetlands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoration (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
177	Paspalum boscianum	Bull paspalum	Plant	Plant	IV	b	Grasslands, Non-tidal Wetlands, Urban Lands	7.3.2, 4.2, 7.2.5	Vegetation Succession / Utility and Service Lines / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
178	Cornus canadensis	Bunchberry	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
179	Quercus macrocarpa	Bur oak	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Riparian and Floodplains, Non-tidal Wetlands	5.3	Logging and Wood Harvesting / /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
180	Muhlenbergia bushii	Bush's muhly	Plant	Plant	I	b	Forests and Woodlands, Savannas, Riparian and Floodplains, Ponds, Non-tidal Wetlands	5.3, 7.2.5,	Logging and Wood Harvesting / Drainage in Forest Environments /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
181	Polygonum ramosissimum	Bushy knotweed	Plant	Plant	IV	c	Glades and Barrens, Shorelines, Tidal Wetlands	11.1.1, 6.1.1, 6.1	Changes in Vegetation Communities / Motor Vehicles / Recreational Activities	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Using recreational motor vehicles. E.g., ATVs, motocross motorcycles, snowmobiles. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit motor vehicle use in natural areas. Minimize construction of ORV trails in natural areas (6.1.1), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
182	Phacelia covillei	Buttercup scorpionweed	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	4.1, 8.1.2, 5.3	Roads and Railroads / Terrestrial Plants / Logging and Wood Harvesting	Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
183	Juglans cinerea	Butternut	Plant	Plant	II	c	Forests and Woodlands, Riparian and Floodplains	5.3, 8.2.4,	Logging and Wood Harvesting / Insect Pest Epidemics /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
184	Cuscuta cephalanthi	Buttonbush dodder	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands, Tidal Wetlands	11.1.1, 8.1.2, 7.2.1	Changes in Vegetation Communities / Terrestrial Plants / Water Level Management Using Dams	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and functiom (7.2.1).		
185	Penstemon calycosus	Calico beard-tongue	Plant	Plant	I	b	Forests and Woodlands, Savannas	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
186	Calliergon cordifolium	Calliergon moss	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.2.4, 11	Logging and Wood Harvesting / Insect Pest Epidemics / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
187	Anemonastrum canadense	Canada anemone	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
188	Houstonia canadensis	Canada bluets	Plant	Plant	II	b	Forests and Woodlands, Glades and Barrens, Cliff and Talus	7.1.2, 3.2.2, 8.1.2	Suppression in the Fire Regime / Open-Pit Mines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
189	Sanguisorba canadensis	Canada burnet	Plant	Plant	II	b	Non-tidal Wetlands	7.3.2, 7.2.5, 8.2.1	Vegetation Succession / Drainage in Forest Environments / Habitat Alteration by Beavers	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
190	Glyceria canadensis	Canada mannagrass	Plant	Plant	IV	b	Ponds, Non-tidal Wetlands	8.2.1, 8.1.2,	Habitat Alteration by Beavers / Terrestrial Plants /	Flooding/drainage of habitats caused by beavers / /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
191	Prunus nigra	Canada plum	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.3.2, 4.2, 4.1	Vegetation Succession / Utility and Service Lines / Roads and Railroads	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
192	Taxus canadensis	Canada yew	Plant	Plant	IV	b	Forests and Woodlands, Cliff and Talus, Non-tidal Wetlands	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
193	Schoenoplectus etuberculatus	Canby's bulrush	Plant	Plant	I	c	Ponds	7.2.5, 8.2.1 ,	Drainage in Forest Environments / /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
194	Paxistima canbyi	Canby's mountain-lover	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens, Cliff and Talus	3.2.2, 5.3,	Open-Pit Mines / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
195	Carex austrodeflexa	Canebrake sedge	Plant	Plant	II	b	Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	8.2.1, 7.1.2,	Habitat Alteration by Beavers / Suppression in the Fire Regime /	Flooding/drainage of habitats caused by beavers / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2)		
196	Nuphar lutea ssp. sagittifolia	Cape fear spatterdock	Plant	Plant	I	c	Shorelines, Tidal Creeks and Rivers, Large Tidal Rivers, Urban Lands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
197	Rhynchospora cephalantha var. attenuata	Capitate beakrush	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
198	Micranthes careyana	Carey's saxifrage	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3, 8.1.2, 11	Logging and Wood Harvesting / Terrestrial Plants / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
199	Carex careyana	Carey's sedge	Plant	Plant	III	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
200	Heuchera caroliniana	Carolina alumroot	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
201	Fraxinus caroliniana	Carolina ash	Plant	Plant	I	c	Large Tidal Rivers, Tidal Wetlands	8.2.4, 5.3, 11.1.1	Insect Pest Epidemics / Logging and Wood Harvesting / Changes in Vegetation Communities	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
202	Pseudolycopodiella caroliniana	Carolina bog clubmoss	Plant	Plant	I	a	Non-tidal Wetlands	7.1.2, 4.1, 8.1.2	Suppression in the Fire Regime / Roads and Railroads / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
203	Phalaris caroliniana	Carolina canary grass	Plant	Plant	I	b	Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
204	Cocculus carolinus	Carolina coralbead	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus, Croplands	6.1.3, 8.1.2,	Recreational Use of Cliffs and Rock Faces / Terrestrial Plants /	e.g., rock climbing, hang-gliding / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
205	Cabomba caroliniana	Carolina fanwort	Plant	Plant	I	c	Tidal Headwaters, Tidal Creeks and Rivers, Large Tidal Rivers, Non-tidal Wetlands, Tidal Wetlands, Urban Lands, Croplands	8.1.4, 7.2.5,	Aquatic Plants / Drainage in Forest Environments /	/ Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
206	Chrysogonum virginianum var. brevistolon	Carolina green-and-gold	Plant	Plant	IV	b	Forests and Woodlands	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
207	Tsuga caroliniana	Carolina hemlock	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	8.2.4, 11,	Insect Pest Epidemics / Climate Change and Severe Weather /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
208	Kalmia carolina	Carolina laurel	Plant	Plant	II	a	Ponds, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
209	Lilaeopsis carolinensis	Carolina lilaeopsis	Plant	Plant	I	b	Shorelines, Beacehs and Dunes, Ponds, Tidal Wetlands, Croplands	11.1.1, 6.1, 1	Changes in Vegetation Communities / Recreational Activities / Residential and Commercial Development	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
210	Sphagnum carolinianum	Carolina peatmoss	Plant	Plant	II	b	Ponds, Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1)		
211	Acmispon helleri	Carolina prairie-trefoil	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savanas, Glades and Barrens	7.1.2, 4.2, 7.3.2	Suppression in the Fire Regime / Utility and Service Lines / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
212	Lasallia caroliniana	Carolina Rocktripe lichen	Plant	Plant	I	b	Cliff and Talus	6.1.3, 9.5,	Recreational Use of Cliffs and Rock Faces / Airborne Pollutants /	e.g., rock climbing, hang-gliding / Air contaminant emissions from a point or non-point source. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
213	Minuartia caroliniana	Carolina sandwort	Plant	Plant	I	a	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
214	Micranthes caroliniana	Carolina saxifrage	Plant	Plant	II	b	Forests and Woodlands, Cliff and Talus	5.3, 8.1.2, 11	Logging and Wood Harvesting / Terrestrial Plants / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
215	Carya carolinae-septentrionalis	Carolina shagbark hickory	Plant	Plant	I	b	Forests and Woodlands	5.3, 7.1.2, 1	Logging and Wood Harvesting / Suppression in the Fire Regime / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
216	Cirsium carolinianum	Carolina thistle	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
217	Xyris caroliniana	Carolina yellow-eyed grass	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
218	Calystegia catesbeiana	Catesby's false bindweed	Plant	Plant	I	b	Forests and Woodlands, Savannas	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
219	Stylophorum diphyllum	Celandine poppy	Plant	Plant	II	b	Forests and Woodlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
220	Centunculus minimus	Chaffweed	Plant	Plant	I	b	Forests and Woodlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
221	Tridens chapmanii	Chapman's purpletop	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas	7.1.2, 3.2.3,	Suppression in the Fire Regime / Quarries and Sand Pits /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
222	Myriopteris rufa	Chestnut lip fern	Plant	Plant	II	b	Cliff and Talus	6.1.3, 7.3.2, 8.1.2	Recreational Use of Cliffs and Rock Faces / Vegetation Succession / Terrestrial Plants	e.g., rock climbing, hang-gliding / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
223	Cirriphyllum piliferum	Cirriphyllum moss	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
224	Pseudognaphalium macounii	Clammy everlasting	Plant	Plant	I	b	Grasslands	7.1.2, 4.1, 8.1.2	Suppression in the Fire Regime / Roads and Railroads / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
225	Adlumia fungosa	Climbing fumitory	Plant	Plant	III	b	Forests and Woodlands, Cliff and Talus	5.3, 11, 8.1.2	Logging and Wood Harvesting / Climate Change and Severe Weather / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests,use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
226	Rosa setigera	Climbing prairie rose	Plant	Plant	I	c	Grasslands, Shrublands, Riparian and Floodplains, Croplands	7.3.2, 4.1, 8.1.2	Vegetation Succession / Roads and Railroads / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
227	Dryopteris clintoniana	Clinton's wood fern	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 8.2.1, 8.1.2	Logging and Wood Harvesting / Habitat Alteration by Beavers / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
228	Viola brittoniana	Coast violet	Plant	Plant	III	b	Non-tidal Wetlands	7.3.2, 4.2, 7.2.5	Vegetation Succession / Utility and Service Lines / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
229	Galium bermudense	Coastal bedstraw	Plant	Plant	IV	c	Forests and Woodlands, Shrublands, Savannas, Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
230	Rhynchospora stenophylla	Coastal bog beaksedge	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
231	Triantha racemosa	Coastal false asphodel	Plant	Plant	I	b	Savannas, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
232	Polygonella articulata	Coastal jointweed	Plant	Plant	IV	c	Forests and Woodlands, Grasslands, Shrublands, Savannas, Beaches and Dunes	7.1.2, 7.3.2, 11.1.1	Suppression in the Fire Regime / Vegetation Succession / Changes in Vegetation Communities	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
233	Sisyrinchium fuscatum	Coastal plain blue-eyed-grass	Plant	Plant	IV	b	Grasslands, Savannas,Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
234	Sabatia calycina	Coastal rose-pink	Plant	Plant	IV	b	Shorelines, Ponds, Urban Lands	7.2.1, 8.1.4, 7.2.5	Water Level Management Using Dams / Aquatic Plants / Drainage in Forest Environments	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
235	Cenchrus incertus	Coastal sandbur	Plant	Plant	III	c	Grasslands, Shrublands, Glades and Barrens, Riparian and Floodplains, Shorelines, Transportation Networks, Croplands	7.3.2	Vegetation Succession / /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
236	Bacopa monnieri	Coastal water-hyssop	Plant	Plant	IV	c	Grasslands, Beaches and Dunes, Ponds, Non-tidal Wetlands, Tidal Wetlands, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Urban Lands	7.2.1, 11, 8.1.4	Water Level Management Using Dams / Climate Change and Severe Weather / Aquatic Plants	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
237	Hydrocotyle bonariensis	Coastal water-pennywort	Plant	Plant	II	c	Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
238	Carex collinsii	Collins's sedge	Plant	Plant	III	b	Forests and Woodlands, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
239	Wolffia columbiana	Columbian watermeal	Plant	Plant	I	c	Ponds, Tidal Wetlands, Urban Lands	7.2.1, 7.2.2, 8.2.1	Water Level Management Using Dams / Beaver Dam Management / Habitat Alteration by Beavers	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. / Flooding/drainage of habitats caused by beavers	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
240	Sphenolobus minutus	Comb notchwort	Plant	Plant	I	b	Boreal Forests	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
241	Coleataenia longifolia ssp. combsii	Combs' panic grass	Plant	Plant	IV	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
242	Utricularia macrorhiza	Common bladderwort	Plant	Plant	IV	b	Ponds, Tidal Wetlands	9, 8.1.4, 7.2.5	Pollution / Aquatic Plants / Drainage in Forest Environments	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
243	Lachnocaulon anceps	Common bog-buttons	Plant	Plant	I	a	Ponds, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
244	Rhynchospora cephalantha var. cephalantha	Common bunched beaksedge	Plant	Plant	IV	b	Forests and Woodlands, Ponds, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
245	Polanisia dodecandra var. dodecandra	Common clammy-weed	Plant	Plant	II	b	Riparian and Floodplains, Shorelines	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
246	Pyxidanthera barbulata	Common pyxie-moss	Plant	Plant	I	a	Shrublands, Savannas, Glades and Barrens, Shorelines, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
247	Symphoricarpos albus var. albus	Common snowberry	Plant	Plant	I	b	Forests and Woodlands, Savannas	5.3, 7.1.2,	Logging and Wood Harvesting / Suppression in the Fire Regime /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
248	Eleocharis palustris	Common spikerush	Plant	Plant	IV	b	Riparian and Floodplains, Shorelines, Ponds, Tidal Wetlands, Urban Lands	7.2.1, 7.2.5, 11.1.1	Water Level Management Using Dams / Drainage in Forest Environments / Changes in Vegetation Communities	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
249	Erianthus coarctatus	Compressed plumegrass	Plant	Plant	I	a	Ponds, Non-tidal Wetlands, Croplands	7.1.2, 4.1, 4.2	Suppression in the Fire Regime / Roads and Railroads / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
250	Arctoparmelia centrifuga	Concentric-ring lichen	Plant	Plant	I	b	Cliff and Talus	6.1, 11, 7.3.2	Recreational Activities / Climate Change and Severe Weather / Vegetation Succession	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
251	Astragalus neglectus	Cooper's milkvetch	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
252	Hypericum denticulatum	Coppery St. John's-wort	Plant	Plant	I	b	Shorelines, Ponds, Non-tidal Wetlands	4.2, 1, 7.3.2	Utility and Service Lines / Residential and Commercial Development / Vegetation Succession	Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
253	Chrysopsis gossypina	Cottony golden-aster	Plant	Plant	I	c	Forests and Woodlands, Grasslands, Shrublands, Savannas, Beaches and Dunes,	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
254	Carex crawei	Crawe's sedge	Plant	Plant	II	b	Glades and Barrens, Non-tidal Wetlands	7.1.2, 7.3.2, 3.2.2	Suppression in the Fire Regime / Vegetation Succession / Open-Pit Mines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2).		
255	Packera crawfordii	Crawford's ragwort	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.2.5, 5.3,	Drainage in Forest Environments / Logging and Wood Harvesting /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
256	Desmodium ochroleucum	Cream tick-trefoil	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Croplands	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
257	Eurybia surculosa	Creeping aster	Plant	Plant	I	b	Forests and Woodlands, Savannas, Cliff and Talus	7.1.2, 11, 6.1.3	Suppression in the Fire Regime / Climate Change and Severe Weather / Recreational Use of Cliffs and Rock Faces	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / e.g., rock climbing, hang-gliding	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3).		
258	Vaccinium crassifolium	Creeping blueberry	Plant	Plant	I	a	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
259	Echinodorus cordifolius	Creeping burhead	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands, Croplands	7.2.1, 7.2.2,	Water Level Management Using Dams / Beaver Dam Management /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2).		
260	Hypericum adpressum	Creeping St. John's-wort	Plant	Plant	I	b	Shorelines, Ponds, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
261	Hexalectris spicata	Crested coralroot	Plant	Plant	IV	b	Forests and Woodlands, Savannas	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
262	Carex cristatella	Crested sedge	Plant	Plant	I	b	Riparian and Floodplains, Creeks and Rivers, Large Rivers, Non-tidal Wetlands, Croplands	8.2.1, 7.3.2,	Habitat Alteration by Beavers / Vegetation Succession /	Flooding/drainage of habitats caused by beavers / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
263	Carex crus-corvi	Crowfoot sedge	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
264	Cardamine pratensis var. palustris	Cuckoo-flower	Plant	Plant	I	b	Riparian and Floodplains, Ponds, Non-tidal Wetlands, Tidal Wetlands	11.1.1, 7.2.2, 7.2.1	Changes in Vegetation Communities / Beaver Dam Management / Water Level Management Using Dams	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
265	Rhododendron cumberlandense	Cumberland azalea	Plant	Plant	III	b	Forests and Woodlands, Tidal Headwater Streams	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
266	Hypoxis curtissii	Curtiss' yellow stargrass	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.2.1, 7.2.5	Logging and Wood Harvesting / Habitat Alteration by Beavers / Drainage in Forest Environments	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
267	Xyris curtissii	Curtiss' yellow-eyed grass	Plant	Plant	I	a	Ponds, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
268	Tritomaria exsecta	Cut notchwort	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Cliff and Talus	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
269	Chelone cuthbertii	Cuthbert's turtlehead	Plant	Plant	II	a	Non-tidal Wetlands, Croplands	7.1.2, 4.2, 7.3.2	Suppression in the Fire Regime / Utility and Service Lines / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
270	Myriophyllum pinnatum	Cut-leaf water-milfoil	Plant	Plant	IV	b	Shorelines, Ponds, Non-tidal Wetlands, Urban Lands, Croplands	8.1.4, 9,	Aquatic Plants / Pollution /	/ Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. (8.1.4), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9).		
271	Muhlenbergia expansa	Cut-over muhly	Plant	Plant	I	b	Non-tidal Wetlands, Urban Lands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
272	Ludwigia glandulosa	Cylindric-fruited primrose-willow	Plant	Plant	IV	b	Riparian and Floodplains, Ponds, Non-tidal Wetlands, Croplands	8.1.2, 4.1,	Terrestrial Plants / Roads and Railroads /	/ Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
273	Carex decomposita	Cypress-knee sedge	Plant	Plant	I	b	Riparian and Floodplains, Creeks and Rivers, Large Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Ponds, Non-tidal Wetlands, Tidal Wetlands, Urban Lands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
274	Carex venusta var. venusta	Dark green sedge	Plant	Plant	IV	b	Non-tidal Wetlands, Croplands	7.3.2, 8.2.1, 4.2	Vegetation Succession / Habitat Alteration by Beavers / Utility and Service Lines	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
275	Carex davisii	Davis's sedge	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands, Tidal Wetlands	7.2.1, 5.3,	Water Level Management Using Dams / Logging and Wood Harvesting /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
276	Acalypha deamii	Deam's copperleaf	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains, Shorelines, Non-tidal Wetlands	5.3, 7.2.1, 8.2.1	Logging and Wood Harvesting / Water Level Management Using Dams / Habitat Alteration by Beavers	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3),Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
277	Andropogon virginicus var. decipiens	Deceptive bluestem	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Beaches and Dunes, Ponds, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
278	Stenanthium densum	Dense-flowered camas	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
279	Rubus repens	Dewdrop	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	7.2.5, 8.2.1, 4.1	Drainage in Forest Environments / Habitat Alteration by Beavers / Roads and Railroads	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
280	Dichanthelium harvillii	Difficult creek witchgrass	Plant	Plant	I	a	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
281	Crataegus mollis var. mollis	Downy hawthorn	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands	5.3, 7.3.2, 8.1.2	Logging and Wood Harvesting / Vegetation Succession / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
282	Phlox pilosa	Downy phlox	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
283	Arethusa bulbosa	Dragon's-mouth	Plant	Plant	I	b	Non-tidal Wetlands	8.2.1, 8.1.4, 7.3.2	Habitat Alteration by Beavers / Aquatic Plants / Vegetation Succession	Flooding/drainage of habitats caused by beavers / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
284	Poa languida	Drooping bluegrass	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
285	Scirpus lineatus	Drooping bulrush	Plant	Plant	III	b	Ponds, Non-tidal Wetlands, Croplands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
286	Trillium flexipes	Drooping trillium	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
287	Physalis walteri	Dune ground-cherry	Plant	Plant	III	c	Grasslands, Shrublands, Savannas, Beaches and Dunes	7.3.2, 11.1.1, 1	Vegetation Succession / Changes in Vegetation Communities / Residential and Commercial Development	Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
288	Iva imbricata	Dune marsh-elder	Plant	Plant	I	c	Shorelines	6.1, 11.1.1, 1	Recreational Activities / Changes in Vegetation Communities / Residential and Commercial Development	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
289	Zenobia pulverulenta	Dusty zenobia	Plant	Plant	I	a	Non-tidal Wetlands	7.1.2, 7.2.2,	Suppression in the Fire Regime / Beaver Dam Management /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2).		
290	Anemone quinquefolia var. minima	Dwarf anemone	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
291	Utricularia olivacea	Dwarf bladderwort	Plant	Plant	I	b	Urban Lands	7.2.1, 1, 8.1.4	Water Level Management Using Dams / Residential and Commercial Development / Aquatic Plants	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
292	Helanthium tenellum	Dwarf burhead	Plant	Plant	I	b	Shorelines, Beaches and Dunes, Ponds, Non-tidal Wetlands	7.2.1, 1, 8.1.2	Water Level Management Using Dams / Residential and Commercial Development / Terrestrial Plants	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
293	Quercus prinoides	Dwarf chinquapin oak	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Croplands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
294	Digitaria serotina	Dwarf crabgrass	Plant	Plant	I	b	Urban Lands	7.3.2, 7.2.5, 7.2.1	Vegetation Succession / Drainage in Forest Environments / Water Level Management Using Dams	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
295	Botrychium simplex var. simplex	Dwarf grape fern	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Shrublands, Glades and Barrens	5.3, 8.1.2, 7.3.2	Logging and Wood Harvesting / Terrestrial Plants / Vegetation Succession	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
296	Asimina parviflora	Dwarf pawpaw	Plant	Plant	IV	b	Forests and Woodlands, Cliff and Talus	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
297	Goodyera repens	Dwarf rattlesnake-plantain	Plant	Plant	I	b	Forests and Woodlands	8.2.4, 5.3, 1	Insect Pest Epidemics / Logging and Wood Harvesting / Residential and Commercial Development	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
298	Scutellaria parvula	Dwarf skullcap	Plant	Plant	I	b	Glades and Barrens, Cliff and Talus	3.2.2, 8.1.2, 6.1	Open-Pit Mines / Terrestrial Plants / Recreational Activities	/ / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
299	Drosera brevifolia	Dwarf sundew	Plant	Plant	IV	b	Non-tidal Wetlands	7.2.1, 7.3.2, 4.2	Water Level Management Using Dams / Vegetation Succession / Utility and Service Lines	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
300	Morella pumila	Dwarf wax myrtle	Plant	Plant	I	a	Forests and Woodlands, Shrublands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
301	Agalinis auriculata	Earleaf false foxglove	Plant	Plant	I	b	Grasslands, Shrublands, Glades and Barrens	7.1.2, 4.2, 8.1.2	Suppression in the Fire Regime / Utility and Service Lines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plant (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
302	Corallorhiza trifida	Early coralroot	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Headwater Creeks, Non-tidal Wetlands	5.3, 11, 8.1.2	Logging and Wood Harvesting / Climate Change and Severe Weather / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
303	Paspalum praecox	Early paspalum	Plant	Plant	I	a	Ponds, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
304	Puccinellia fasciculata	Eastern alkali grass	Plant	Plant	I	b	Beaches and Dunes, Tidal Wetlands	11.1.1, 7.3.2, 8.1.4	Changes in Vegetation Communities / Vegetation Succession / Aquatic Plants	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
305	Iresine rhizomatosa	Eastern bloodleaf	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Riparian and Floodplains, Non-tidal Wetlands, Tidal Wetlands	11.1.1, 7.3.2,	Changes in Vegetation Communities / Vegetation Succession /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
306	Collinsia verna	Eastern blue-eyed mary	Plant	Plant	I	b	Forests and Woodlands	8.1.2, 5.3, 1	Terrestrial Plants / Logging and Wood Harvesting / Residential and Commercial Development	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
307	Amsonia tabernaemontana var. tabernaemontana	Eastern blue-star	Plant	Plant	IV	b	Forests and Woodlands, Beaches and Dunes, Non-tidal Wetlands, Urban Lands	7.1.2, 1, 5.3	Suppression in the Fire Regime / Residential and Commercial Development / Logging and Wood Harvesting	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
308	Boltonia asteroides var. glastifolia	Eastern doll's-daisy	Plant	Plant	II	c	Shorelines, Creeks and Rivers, Large Tidal Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-traappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
309	Agave virginica	Eastern false-aloe	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Croplands	7.1.2, 4.2, 4.1	Suppression in the Fire Regime / Utility and Service Lines / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
310	Tsuga canadensis	Eastern hemlock	Plant	Plant	II	c	Forests and Woodlands, Cliff and Talus, Riparian and Floodplains	8.2.4, 5.3,	Insect Pest Epidemics / Logging and Wood Harvesting /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
311	Castilleja coccinea	Eastern indian paintbrush	Plant	Plant	IV	b	Savannas, Glades and Barrens, Non-tidal Wetlands	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
312	Anemone berlandieri	Eastern prairie anemone	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
313	Platanthera leucophaea	Eastern prairie white-fringed orchid	Plant	Plant	I	b	Riparian and Floodplains	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
314	Dichanthelium spretum	Eaton's witchgrass	Plant	Plant	I	a	Shorelines, Ponds, Non-tidal Wetlands, Urban Lands, Croplands	7.1.2, 4.2, 5.3	Suppression in the Fire Regime / Utility and Service Lines / Logging and Wood Harvesting	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
315	Symphyotrichum elliottii	Elliott's aster	Plant	Plant	I	c	Grasslands, Beaches and Dunes, Tidal Wetlands, Croplands	11.1.1, 4.2, 8.1.2	Changes in Vegetation Communities / Utility and Service Lines / Terrestrial Plants	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
316	Solidago latissimifolia	Elliott's goldenrod	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
317	Sida elliottii var. elliottii	Elliott's sida	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Riparian and Floodplains, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
318	Eleocharis elliptica	Elliptic spikerush	Plant	Plant	I	b	Headwater Streams, Non-tidal Wetlands	7.3.2, 7.2.5, 8.2.1	Vegetation Succession / Drainage in Forest Environments / Habitat Alteration by Beavers	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
319	Ophioglossum engelmannii	Engelmann's adder's-tongue	Plant	Plant	IV	b	Forests and Woodlands, Savannas, Glades and Barrens, Cliff and Talus	5.3, 8.1.2, 7.3.2	Logging and Wood Harvesting / Terrestrial Plants / Vegetation Succession	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
320	Sagittaria engelmanniana	Engelmann's arrowhead	Plant	Plant	I	c	Lakes, Non-tidal Wetlands	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
321	Stachys eplingii	Epling's hedge-nettle	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
322	Carex lupuliformis	False hop sedge	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Headwater Streams, Creeks and Rivers, Large Rivers, Ponds, Non-tidal Wetlands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
323	Floerkea proserpinacoides	False mermaid	Plant	Plant	IV	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
324	Enemion biternatum	False rue-anemone	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.1.2, 5.3, 7.2.1	Terrestrial Plants / Logging and Wood Harvesting / Water Level Management Using Dams	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
325	Rhynchospora fascicularis	Fasciculate beaksedge	Plant	Plant	II	b	Beaches and Dunes, Ponds, Tidal Wetlands, Urban Lands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
326	Rhynchospora oligantha	Feather-bristled beaksedge	Plant	Plant	I	c	Tidal Wetlands	11.1.1, 7.3.2, 7.2.5	Changes in Vegetation Communities / Vegetation Succession / Drainage in Forest Environments	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
327	Hottonia inflata	Featherfoil	Plant	Plant	III	b	Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Rivers, Ponds, Non-tidal Wetlands, Croplands	7.2.2, 7.2.1,	Beaver Dam Management / Water Level Management Using Dams /	Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
328	Desmodium fernaldii	Fernald's tick-trefoil	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Savannas	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
329	Asclepias lanceolata	Few-flower milkweed	Plant	Plant	IV	b	Tidal Headwaters, Tidal Creeks and Rivers, Tidal Large Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
330	Rhynchospora rariflora	Few-flowered beaksedge	Plant	Plant	IV	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
331	Utricularia striata	Fibrous bladderwort	Plant	Plant	I	b	Headwater Streams, Ponds, Croplands	9, 8.1.4, 7.2.5	Pollution / Aquatic Plants / Drainage in Forest Environments	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
332	Cerastium velutinum var. velutinum	Field chickweed	Plant	Plant	I	b	Cliff and Talus, Riparian and Floodplains, Shorelines	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
333	Carex conoidea	Field sedge	Plant	Plant	I	b	Grasslands, Non-tidal Wetlands	7.2.1, 8.1.2, 7.1.2	Water Level Management Using Dams / Terrestrial Plants / Suppression in the Fire Regime	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
334	Carex leptonervia	Finely-nerved sedge	Plant	Plant	IV	b	Forests and Woodlands, Boreal Forests, Non-tidal Wetlands,	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
335	Potamogeton robbinsii	Flatleaf pondweed	Plant	Plant	I	c	Headwater Streams, Creeks and Rivers, Large Rivers, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Non-tidal Wetlands, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
336	Potamogeton zosteriformis	Flatstem pondweed	Plant	Plant	I	c	Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Non-tidal Wetlands	9, 8.1.4, 7.2.5	Pollution / Aquatic Plants / Drainage in Forest Environments	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
337	Eleocharis compressa var. compressa	Flattened spikerush	Plant	Plant	II	b	Forests and Woodlands, Glades and Barrens, Riparian and Floodplains, Shorelines, Headwater Streams, Non-tidal Wetlands	7.2.1, 8.2.1, 3.2.3	Water Level Management Using Dams / Habitat Alteration by Beavers / Quarries and Sand Pits	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
338	Crataegus succulenta var. succulenta	Fleshy hawthorn	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Croplands	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
339	Utricularia radiata	Floating bladderwort	Plant	Plant	III	b	Headwater Streams, Ponds, Non-tidal Wetlands, Urban Lands, Croplands	9, 8.1.4, 7.2.5	Pollution / Aquatic Plants / Drainage in Forest Environments	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
340	Malaxis spicata	Florida adder's-mouth	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 7.2.5,	Logging and Wood Harvesting / Drainage in Forest Environments /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
341	Carex floridana	Florida sedge	Plant	Plant	IV	b	Forests and Woodlands	7.1.2, 7.3.2, 3.2.3	Suppression in the Fire Regime / Vegetation Succession / Quarries and Sand Pits	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
342	Chenopodium foggii	Fogg's goosefoot	Plant	Plant	I	b	Boreal Forests, Savannas, Glades and Barrens	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
343	Cardamine dissecta	Fork-leaf toothwort	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	11, 5.3, 8.1.2	Climate Change and Severe Weather / Logging and Wood Harvesting / Terrestrial Plants	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
344	Poa palustris	Fowl bluegrass	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Headwater Streams, Creeks and Rivers, Ponds, Non-tidal Wetlands	7.2.5, 7.3.2, 8.2.1	Drainage in Forest Environments / Vegetation Succession / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
345	Hordeum jubatum ssp. jubatum	Foxtail barley	Plant	Plant	I	b	Tidal Wetlands, Croplands	3.2.3, 8.1.2, 6.1	Quarries and Sand Pits / Terrestrial Plants / Recreational Activities	/ / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
346	Spiranthes odorata	Fragrant ladies'-tresses	Plant	Plant	IV	c	Tidal Wetlands, Non-tidal Wetlands, Croplands	7.3.2, 7.2.5, 11.1.1	Vegetation Succession / Drainage in Forest Environments / Changes in Vegetation Communities	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
347	Abies fraseri	Fraser fir	Plant	Plant	I	b	Boreal Forests	11, 8.2.4, 5.3	Climate Change and Severe Weather / Insect Pest Epidemics / Logging and Wood Harvesting	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
348	Triadenum fraseri	Fraser's marsh St. John's-wort	Plant	Plant	II	b	Ponds, Non-tidal Wetlands	7.2.5, 8.2.1, 8.1.2	Drainage in Forest Environments / Habitat Alteration by Beavers / Terrestrial Plants	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoration (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
349	Carex fraseriana	Fraser's sedge	Plant	Plant	III	b	Forests and Woodlands	8.2.4, 5.3,	Insect Pest Epidemics / Logging and Wood Harvesting /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
350	Hypogymnia krogiae	Freckled tube lichen	Plant	Plant	I	b	Boreal Forests	11, 5.3, 8.2.4	Climate Change and Severe Weather / Logging and Wood Harvesting / Insect Pest Epidemics	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
351	Spartina pectinata	Freshwater cordgrass	Plant	Plant	II	b	Riparian and Floodplains, Shorelines, Non-tidal Wetlands	7.3.2, 7.2.5, 11.1.1	Vegetation Succession / Drainage in Forest Environments / Changes in Vegetation Communities	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
352	Potamogeton friesii	Fries' pondweed	Plant	Plant	I	c	Creeks and Rivers	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
353	Fallopia cilinodis	Fringed bindweed	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 8.1.2, 11	Suppression in the Fire Regime / Terrestrial Plants / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
354	Bromus ciliatus	Fringed brome grass	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.2.1, 8.1.2,	Water Level Management Using Dams / Terrestrial Plants /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2). \		
355	Rhexia petiolata	Fringed meadow beauty	Plant	Plant	I	a	Forests and Woodlands, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
356	Phacelia fimbriata	Fringed phacelia	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Riparian and Floodplains	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
357	Xyris fimbriata	Fringed yellow-eyed grass	Plant	Plant	I	b	Forests and Woodlands, Lakes, Non-tidal Wetlands	7.1.2, 4.2, 7.2.4	Suppression in the Fire Regime / Utility and Service Lines / Drainage in Agricultural Environments	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Construction and maintenance of channels that drain surface waters in agricultural environments. Excludes the use/management of culverts (Threat 7.2.3). Excludes erosion/sedimentation that are associated with the drainage system (Threat 9.3.2).	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Minimize drainage of agricultural habitats and adjacent non-arable lands to the extent possible. A broader perspective of the effects of drainage on agricultural regions should be taken since regional water table changes are possible. Water withdrawl for irrigation can also lower water tables on a regional scale, leading to wetland habitat loss (7.2.4).		
358	Steinchisma hians	Gaping panic grass	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.1.2, 7.3.2, 7.2.1	Suppression in the Fire Regime / Vegetation Succession / Water Level Management Using Dams	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.2.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
359	Sparganium eurycarpum	Giant bur-reed	Plant	Plant	IV	c	Non-tidal Wetlands, Tidal Wetlands	11.1.1, 7.2.1, 7.2.5	Changes in Vegetation Communities / Water Level Management Using Dams / Drainage in Forest Environments	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
360	Sphagnum girgensohnii	Girgensohn's peatmoss	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1)		
361	Houstonia nigricans var. nigricans	Glade bluets	Plant	Plant	I	b	Glades and Barrens	7.1.2, 3.2.2, 8.1.2	Suppression in the Fire Regime / Open-Pit Mines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
362	Napaea dioica	Glade mallow	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Non-tidal Wetlands	7.3.2, 7.2.5, 8.2.1	Vegetation Succession / Drainage in Forest Environments / Habitat Alteration by Beavers	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
363	Euphorbia purpurea	Glade spurge	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains , Non-tidal Wetlands	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
364	Parthenium auriculatum	Glade wild quinine	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
365	Osmundastrum cinnamomeum var. glandulosum	Glandular cinnamon fern	Plant	Plant	I	b	Ponds, Non-tidal Wetlands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
366	Ludwigia sphaerocarpa	Globe-fruited seedbox	Plant	Plant	IV	b	Ponds, Non-tidal Wetlands, Tidal Wetlands, Croplands	7.3.2, 11.1.1, 8.1.4	Vegetation Succession / Changes in Vegetation Communities / Aquatic Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
367	Hypoxis sessilis	Glossy-seed star-grass	Plant	Plant	I	b	Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
368	Minuartia godfreyi	Godfrey's stitchwort	Plant	Plant	I	b	Non-tidal Wetlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
369	Aletris aurea	Golden colicroot	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 4.2, 7.3.2	Suppression in the Fire Regime / Utility and Service Lines / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
370	Lithospermum caroliniense	Golden puccoon	Plant	Plant	I	a	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
371	Hydrastis canadensis	Goldenseal	Plant	Plant	II	a	Forests and Woodlands, Riparian and Floodplains	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
372	Valerianella chenopodiifolia	Goosefoot corn-salad	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Croplands	7.3.2, 8.1.2, 4.1	Vegetation Succession / Terrestrial Plants / Roads and Railroads	Natural vegetation succession causing habitat loss for species of early successional habitats. / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
373	Solidago faucibus	Gorge goldenrod	Plant	Plant	II	b	Forests and Woodlands	5.3, 8.1.2, 11	Logging and Wood Harvesting / Terrestrial Plants / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
374	Leptodontium viticulosoides var. sulphureum	Grandfather mountain leptodontium moss	Plant	Plant	I	b	Boreal Forests	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
375	Cyperus granitophilus	Granite-loving flatsedge	Plant	Plant	I	b	Glades and Barrens	6.1, 8.1.2, 3.2.3	Recreational Activities / Terrestrial Plants / Quarries and Sand Pits	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
376	Sagittaria weatherbiana	Grassleaf arrowhead	Plant	Plant	II	c	Riparian and Floodplains, Non-tidal Wetlands, Tidal Wetlands	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
377	Cuthbertia graminea	Grasslike roselings	Plant	Plant	I	a	Forests and Woodlands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
378	Betula populifolia	Gray birch	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
379	Rhynchospora grayi	Gray's beaksedge	Plant	Plant	I	b	Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
380	Lilium grayi	Gray's lily	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Grasslands, Non-tidal Wetlands	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
381	Arnoglossum reniforme	Great indian-plantain	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shurblands, Savannas, Glades and Barrens, Riparian and Floodplains, Shorelines, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
382	Spiranthes magnicamporum	Great plains ladies'-tresses	Plant	Plant	I	b	Grasslands, Shrublands, Savannas, Croplands	7.1.2, 3.2.3, 4.2	Suppression in the Fire Regime / Quarries and Sand Pits / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
383	Gentianopsis crinita	Greater fringed gentian	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
384	Fraxinus pennsylvanica	Green ash	Plant	Plant	I	c	Forests and Woodlands, Grasslands, Shrublands, Savannas, Riparian and Floodplains, Shorelines, Ponds, Non-tidal Wetlands, Tidal Wetlands	8.2.4, 5.3, 8.2.1	Insect Pest Epidemics / Logging and Wood Harvesting / Habitat Alteration by Beavers	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
385	Pyrola chlorantha	Green pyrola	Plant	Plant	I	b	Forests and Woodlands	5.3, 1,	Logging and Wood Harvesting / Residential and Commercial Development /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
386	Linum sulcatum	Grooved yellow flax	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 7.3.2, 3.2.2	Suppression in the Fire Regime / Vegetation Succession / Open-Pit Mines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2).		
387	Juniperus communis var. depressa	Ground juniper	Plant	Plant	I	b	Forests and Woodlands, Savannas	6.1, 11, 8.1.2	Recreational Activities / Climate Change and Severe Weather / Terrestrial Plants	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
388	Moehringia lateriflora	Grove sandwort	Plant	Plant	I	a	Grasslands, Savannas, Croplands	4.2, 7.3.2, 8.1.2	Utility and Service Lines / Vegetation Succession / Terrestrial Plants	Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1).		
389	Synandra hispidula	Gyandotte beauty	Plant	Plant	II	b	Forests and Woodlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
390	Penstemon hirsutus	Hairy beard-tongue	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Urban Lands	6.1, 8.1.2, 3.2.2	Recreational Activities / Terrestrial Plants / Open-Pit Mines	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2).		
391	Fimbristylis puberula var. puberula	Hairy fimbry	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	7.2.1, 8.1.2, 5.3	Water Level Management Using Dams / Terrestrial Plants / Logging and Wood Harvesting	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
392	Solidago hispida var. hispida	Hairy goldenrod	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Savannas	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
393	Stachys arenicola	Hairy hedge-nettle	Plant	Plant	I	b	Ponds, Non-tidal Wetlands, Croplands	7.3.2, 7.2.5, 7.1.2	Vegetation Succession / Drainage in Forest Environments / Suppression in the Fire Regime	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
394	Philadelphus hirsutus	Hairy mock orange	Plant	Plant	IV	b	Forests and Woodlands, Savannas, Cliff and Talus	6.1.3, 8.1.2,	Recreational Use of Cliffs and Rock Faces / Terrestrial Plants /	e.g., rock climbing, hang-gliding / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
395	Scleria ciliata var. ciliata	Hairy nutrush	Plant	Plant	I	a	Grasslands, Savannas, Glades and Barrens, Croplands	7.1.2, 4.2, 8.1.2	Suppression in the Fire Regime / Utility and Service Lines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
396	Arabis adpressipilis	Hairy rock cress	Plant	Plant	I	b	Grasslands, Glades and Barrens, Cliff and Talus	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
397	Ludwigia pilosa	Hairy seedbox	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
398	Hypericum setosum	Hairy St. John's-wort	Plant	Plant	I	a	Forests and Woodlands, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
399	Helianthus hirsutus	Hairy sunflower	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 6.1, 11	Suppression in the Fire Regime / Recreational Activities / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
400	Baptisia cinerea	Hairy wild indigo	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
401	Blephilia hirsuta	Hairy wood mint	Plant	Plant	IV	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
402	Erigenia bulbosa	Harbinger-of-spring	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.1.2, 5.3, 7.2.1	Terrestrial Plants / Logging and Wood Harvesting / Water Level Management Using Dams	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
403	Schoenoplectus acutus var. acutus	Hard-stem bulrush	Plant	Plant	I	c	Non-tidal Wetlands, Tidal Wetlands	7.2.5, 11.1.1, 8.2.1	Drainage in Forest Environments / Changes in Vegetation Communities / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
404	Campanula rotundifolia	Harebell	Plant	Plant	I	b	Cliff and Talus	6.1.3, 3.2.3, 8.1.2	Recreational Use of Cliffs and Rock Faces / Quarries and Sand Pits / Terrestrial Plants	e.g., rock climbing, hang-gliding / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
405	Harperella nodosa	Harperella	Plant	Plant	I	c	Riparian and Floodplains, Shorelines, Headwater Creeks, Creeks and Rivers	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
406	Fimbristylis perpusilla	Harper's fimbry	Plant	Plant	I	c	Shorelines, Ponds	7.2.1, 1, 8.1.2	Water Level Management Using Dams / Residential and Commercial Development / Terrestrial Plants	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
407	Rhynchospora harveyi	Harvey's beaksedge	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Ponds, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
408	Cuscuta coryli	Hazel dodder	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Non-tidal Wetlands, Tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2)		
409	Pseudognaphalium helleri	Heller's cudweed	Plant	Plant	I	b	Grasslands, Shrublands, Savannas	7.1.2, 7.3.2, 1	Suppression in the Fire Regime / Vegetation Succession / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
410	Crossocalyx hellerianus	Heller's notchwort	Plant	Plant	I	b	Forests and Woodlands	8.2.4, 5.3,	Insect Pest Epidemics / Logging and Wood Harvesting /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
411	Dichanthelium portoricense ssp. patulum	Hemlock panic grass	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Savannas, Beaches and Dunes	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
412	Conioselinum chinense	Hemlock parsley	Plant	Plant	I	c	Cliff and Talus, Non-tidal Wetlands	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
413	Geranium robertianum	Herb robert	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Croplands	5.3, 6.1,	Logging and Wood Harvesting / Recreational Activities /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1)		
414	Zanthoxylum clava-herculis	Hercules'-club	Plant	Plant	III	c	Forests and Woodlands, Shrublands, Savannas, Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
415	Dendrolycopodium hickeyi	Hickey's tree-clubmoss	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Non-tidal Wetlands	11, 7.3.2,	Climate Change and Severe Weather / Vegetation Succession /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
416	Dichanthelium cryptanthum	Hidden-flowered panic grass	Plant	Plant	I	a	Forests and Woodlands, Non-tidal Wetlands	4.2, 7.3.2, 7.2.5	Utility and Service Lines / Vegetation Succession / Drainage in Forest Environments	Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
417	Leucothoe fontanesiana	Highland dog-hobble	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Riparian and Floodplains	5.3	Logging and Wood Harvesting / /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
418	Oreojuncus trifidus	Highland rush	Plant	Plant	I	b	Cliff and Talus	6.1.3, 6.1, 11	Recreational Use of Cliffs and Rock Faces / Recreational Activities / Climate Change and Severe Weather	e.g., rock climbing, hang-gliding / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
419	Juncus trifidus ssp. carolinianus	Highland rush	Plant	Plant	I	b	Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed source (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
420	Potamogeton hillii	Hill's pondweed	Plant	Plant	I	c	Riparian and Floodplains, Non-tidal Wetlands	9, 7.2.5,	Pollution / Drainage in Forest Environments /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
421	Malvastrum hispidum	Hispid false mallow	Plant	Plant	I	b	Grasslands, Glades and Barrens	7.3.2, 7.3.3,	Vegetation Succession / Natural Erosion and Sedimentation /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and regulations to improve water quality and create healthy watersheds (7.3.3).		
422	Scutellaria incana	Hoary skullcap	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
423	Hierochloe hirta	Holy grass	Plant	Plant	I	a	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
424	Scutellaria galericulata	Hooded skullcap	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
425	Rhynchospora macrostachya	Horned beaksedge	Plant	Plant	III	b	Beaches and Dunes, Lakes, Ponds, Tidal Wetlands	11.1.1, 7.2.1, 7.2.2	Changes in Vegetation Communities / Water Level Management Using Dams / Beaver Dam Management	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream.	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2).		
426	Sphenolobopsis pearsonii	Horsehair threadwort	Plant	Plant	I	b	Boreal Forests, Cliff and Talus	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
427	Eleocharis equisetoides	Horsetail spikerush	Plant	Plant	I	b	Ponds, Urban Lands, Croplands	7.2.1, 7.2.2,	Water Level Management Using Dams / Beaver Dam Management /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2).		
428	Cyperus houghtonii	Houghton's flatsedge	Plant	Plant	I	b	Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
429	Stachys hyssopifolia var. hyssopifolia	Hyssop-leaf hedge-nettle	Plant	Plant	IV	b	Grasslands, Beaches and Dunes, Ponds, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
430	Carex vesicaria	Inflated sedge	Plant	Plant	I	b	Headwater Streams, Ponds, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
431	Muhlenbergia glabriflora	Inland muhly	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 7.2.5,	Logging and Wood Harvesting / Drainage in Forest Environments /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
432	Carex interior	Inland sedge	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
433	Hypericum interior	Interior bushy St. John's-wort	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.1.2, 8.2.1	Vegetation Succession / Terrestrial Plants / Habitat Alteration by Beavers	Natural vegetation succession causing habitat loss for species of early successional habitats. / / Flooding/drainage of habitats caused by beavers	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
434	Xyris iridifolia	Iris-leaf yellow-eyed grass	Plant	Plant	I	c	Ponds, Tidal Wetlands, Croplands	11.1.1, 4.1,	Changes in Vegetation Communities / Roads and Railroads /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
435	Ranunculus hederaceus	Ivy-leaved water crowfoot	Plant	Plant	I	b	Shorelines, Ponds, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
436	Schistochilopsis incisa	Jagged notchwort	Plant	Plant	I	b	Boreal Forests	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
437	Paspalum distichum	Joint paspalum	Plant	Plant	I	b	Beaches and Dunes, Ponds, Non-tidal Wetlands, Urban Lands	7.3.2, 7.2.5, 8.1.4	Vegetation Succession / Drainage in Forest Environments / Aquatic Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
438	Juncus articulatus	Jointed rush	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Headwater Streams, Creeks and Rivers, Lakes, Ponds, Non-tidal Wetlands	7.3.2, 7.2.5, 8.1.4	Vegetation Succession / Drainage in Forest Environments / Aquatic Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4)		
439	Carex juniperorum	Juniper sedge	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens, Non-tidal Wetlands	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
440	Iliamna remota	Kankakee globemallow	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Croplands	7.3.2, 4.2, 4.1	Vegetation Succession / Utility and Service Lines / Roads and Railroads	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
441	Trifolium virginicum	Kate's mountain clover	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 11, 1	Suppression in the Fire Regime / Climate Change and Severe Weather / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
442	Orthotrichum keeverae	Keever's bristle-moss	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens	5.3, 8.2.4,	Logging and Wood Harvesting / Insect Pest Epidemics /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3)		
443	Gymnocladus dioicus	Kentucky coffeetree	Plant	Plant	IV	b	Forests and Woodlands, Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
444	Carex reniformis	Kidney sedge	Plant	Plant	I	b	Riparian and Floodplains, Beaches and Dunes, Ponds, Non-tidal Wetlands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
445	Listera smallii	Kidney twayblade	Plant	Plant	III	b	Forests and Woodlands	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
446	Plantago cordata	King-root	Plant	Plant	I	c	Shorelines, Tidal Headwaters, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 11	Changes in Vegetation Communities / Aquatic Plants / Climate Change and Severe Weather	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. (8.1.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
447	Juncus nodosus	Knotted rush	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
448	Spiranthes laciniata	Lace-lip ladies'-tresses	Plant	Plant	I	b	Shrublands, Shorelines, Croplands	7.2.1	Water Level Management Using Dams / /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1)		
449	Rorippa aquatica	Lake cress	Plant	Plant	I	c	Riparian and Floodplains, Non-tidal Wetlands	7.2.5, 8.2.1, 7.2.1	Drainage in Forest Environments / Habitat Alteration by Beavers / Water Level Management Using Dams	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
450	Isoetes lacustris	Lake quillwort	Plant	Plant	I	c	Headwater Streams, Creeks and Rivers	7.2.1, 8.2.1, 7.2.5	Water Level Management Using Dams / Habitat Alteration by Beavers / Drainage in Forest Environments	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
451	Carex lacustris	Lake-shore sedge	Plant	Plant	I	b	Headwater Streams, Non-tidal Wetlands, Tidal Wetlands, Tidal Headwater Streams	8.2.1, 11.1.1,	Habitat Alteration by Beavers / Changes in Vegetation Communities /	Flooding/drainage of habitats caused by beavers / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
452	Endotropis lanceolata	Lance-leaf buckthorn	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
453	Orbexilum onobrychis	Lance-leaf scurfpea	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.1.2, 8.1.2, 7.3.2	Suppression in the Fire Regime / Terrestrial Plants / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
454	Sabatia difformis	Lance-leaved rose-gentian	Plant	Plant	I	b	Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
455	Vaccinium macrocarpon	Large cranberry	Plant	Plant	II	a	Beaches and Dunes, Ponds, Non-tidal Wetlands	7.1.2, 7.2.2, 11	Suppression in the Fire Regime / Beaver Dam Management / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
456	Zigadenus glaberrimus	Large death-camas	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
457	Sabatia dodecandra	Large marsh-pink	Plant	Plant	IV	c	Tidal Wetlands	11.1.1, 8.1.4, 7.2.5	Changes in Vegetation Communities / Aquatic Plants / Drainage in Forest Environments	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
458	Platanthera grandiflora	Large purple fringed orchid	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains	5.3, 8.2.1,	Logging and Wood Harvesting / Habitat Alteration by Beavers /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
459	Cleistesiopsis divaricata	Large spreading pogonia	Plant	Plant	I	a	Shrublands, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
460	Parnassia grandifolia	Largeleaf grass-of-parnassus	Plant	Plant	II	a	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
461	Sphagnum macrophyllum var. macrophyllum	Large-leaf peatmoss	Plant	Plant	II	b	Ponds, Non-tidal Wetlands	7.2.5, 9,	Drainage in Forest Environments / Pollution /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
462	Phlox amplifolia	Large-leaf phlox	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
463	Iris versicolor	Larger blue flag	Plant	Plant	IV	b	Beaches and Dunes, Ponds, Non-tidal Wetlands, Tidal Wetlands	7.2.5, 7.3.2, 11.1.1	Drainage in Forest Environments / Vegetation Succession / Changes in Vegetation Communities	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
464	Coreopsis delphiniifolia	Larkspur tickseed	Plant	Plant	I	b	Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
465	Mitreola petiolata	Lax hornpod	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Headwater Streams, Creeks and Rivers, Large Rivers, Ponds, Non-tidal Wetlands, Urban Lands, Croplands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
466	Sceptridium multifidum	Leathery grape fern	Plant	Plant	I	a	Grasslands	7.3.2, 11,	Vegetation Succession / Climate Change and Severe Weather /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
467	Triadenum tubulosum	Lesser marsh St. John's-wort	Plant	Plant	II	b	Forests and Woodlands, Ponds, Non-tidal Wetlands	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
468	Hexastylis lewisii	Lewis' heartleaf	Plant	Plant	II	b	Forests and Woodlands, Savannas, Non-tidal Wetlands	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
469	Allium oxyphilum	Lillydale onion	Plant	Plant	I	b	Forests and Woodlands	7.1.2, 8.1.2, 4.1	Suppression in the Fire Regime / Terrestrial Plants / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
470	Homalia trichomanoides var. trichomanoides	Lime homalia moss	Plant	Plant	I	b	Cliff and Talus	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
471	Clinopodium arkansanum	Limestone calamint	Plant	Plant	I	b	Grasslands, Savannas, Glades and Barrens	7.1.2, 3.2.3, 8.1.2	Suppression in the Fire Regime / Quarries and Sand Pits / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
472	Carex superata	Limestone forest sedge	Plant	Plant	III	b	Forests and Woodlands	11, 5.3, 8.1.2	Climate Change and Severe Weather / Logging and Wood Harvesting / Terrestrial Plants	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
473	Carex purpurifera	Limestone purple sedge	Plant	Plant	III	b	Forests and Woodlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
474	Mimosa microphylla	Little-leaf sensitive-brier	Plant	Plant	I	a	Forests and Woodlands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
475	Quercus virginiana	Live oak	Plant	Plant	IV	b	Shrublands, Savannas, Beaches and Dunes	5.3, 11.1.1,	Logging and Wood Harvesting / Changes in Vegetation Communities /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
476	Ludwigia brevipes	Long beach seedbox	Plant	Plant	I	b	Beaches and Dunes, Ponds, Non-tidal Wetlands, Urban Lands	7.3.2, 11.1.1, 7.2.5	Vegetation Succession / Changes in Vegetation Communities / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
477	Rhynchospora scirpoides	Long-beaked beaksedge	Plant	Plant	I	b	Shorelines, Beaches and Dunes, Lakes, Ponds, Urban Lands	7.3.2, 7.2.5, 8.1.4	Vegetation Succession / Drainage in Forest Environments / Aquatic Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
478	Ranunculus longirostris	Long-beaked buttercup	Plant	Plant	I	c	Headwater Streams, Ponds	7.2.1, 8.1.4, 7.2.5	Water Level Management Using Dams / Aquatic Plants / Drainage in Forest Environments	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
479	Lobelia elongata	Long-leaf lobelia	Plant	Plant	I	b	Riparian and Floodplains, Creeks and Rivers, Large Rivers, Tidal Creeks and River, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
480	Asclepias longifolia	Long-leaf milkweed	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
481	Pinus palustris	Longleaf pine	Plant	Plant	I	a	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 5.3	Suppression in the Fire Regime / Vegetation Succession / Logging and Wood Harvesting	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
482	Sphenopholis filiformis	Long-leaf wedgegrass	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
483	Sagittaria calycina	Long-lobed arrowhead	Plant	Plant	I	c	Shorelines, Ponds, Non-tidal Wetlands, Urban Lands	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
484	Juncus longii	Long's rush	Plant	Plant	II	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
485	Ilex collina	Long-stalk holly	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Riparian and Floodplains, Non-tidal Wetlands	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
486	Carex pedunculata var. pedunculata	Long-stalk sedge	Plant	Plant	IV	b	Forests and Woodlands, Cliff and Talus	8.2.4, 5.3, 8.1.2	Insect Pest Epidemics / Logging and Wood Harvesting / Terrestrial Plants	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
487	Ophioglossum petiolatum	Long-stem adder's-tongue	Plant	Plant	I	b	Beaches and Dunes, Transportation Network, Croplands	5.3, 8.1.2, 7.3.2	Logging and Wood Harvesting / Terrestrial Plants / Vegetation Succession	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
488	Myriophyllum laxum	Loose water-milfoil	Plant	Plant	I	b	Lakes, Ponds, Urban Lands	8.1.4, 9,	Aquatic Plants / Pollution /	/ Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. (8.1.4), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
489	Gnaphalium uliginosum	Low cudweed	Plant	Plant	I	b	Boreal Forests, Grasslands, Shrublands, Savannas, Glades and Barrens, Ponds, Non-tidal Wetlands, Croplands	11, 4.1, 7.3.2	Climate Change and Severe Weather / Roads and Railroads / Vegetation Succession	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
490	Crocanthemum propinquum	Low frostweed	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 1, 7.3.2	Suppression in the Fire Regime / Residential and Commercial Development / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
491	Polygala ramosa	Low pine barren milkwort	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
492	Eurybia radula	Low rough aster	Plant	Plant	I	b	Non-tidal Wetlands	7.2.1, 8.1.2,	Water Level Management Using Dams / Terrestrial Plants /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
493	Myriophyllum humile	Low water-milfoil	Plant	Plant	I	b	Urban Lands	8.1.4, 9,	Aquatic Plants / Pollution /	/ Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. (8.1.4), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9).		
494	Ruellia humilis	Low wild-petunia	Plant	Plant	IV	b	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
495	Steironema hybridum	Lowland loosestrife	Plant	Plant	II	b	Ponds, Non-tidal Wetlands	7.2.1	Water Level Management Using Dams / /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
496	Plagiothecium latebricola	Lurking leskea	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5	Drainage in Forest Environments / /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
497	Parthenium integrifolium var. mabryanum	Mabry's wild quinine	Plant	Plant	III	b	Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
498	Cladonia coccifera	Madame's pixie-cup	Plant	Plant	I	b	Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
499	Hymenachne hemitomon	Maidencane	Plant	Plant	II	b	Ponds, Non-tidal Wetlands, Croplands	8.2.1, 4.1, 7.2.5	Habitat Alteration by Beavers / Roads and Railroads / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
500	Chenopodiastrum simplex	Maple-leaf goosefoot	Plant	Plant	IV	b	Forests and Woodlands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 8.1.2,	Suppression in the Fire Regime / Terrestrial Plants /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
501	Atriplex glabriuscula	Maritime orach	Plant	Plant	I	b	Non-tidal Wetlands	3.2.3, 7.2.1, 8.1.2	Quarries and Sand Pits / Water Level Management Using Dams / Terrestrial Plants	/ Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
502	Euphorbia exserta	Maroon sandhills spurge	Plant	Plant	I	b	Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
503	Muhlenbergia glomerata	Marsh muhly	Plant	Plant	II	a	Forests and Woodlands, Savannas, Glades and Barrens, Cliff and Talus, Non-tidal Wetlands	5.3, 7.1.2, 7.2.5	Logging and Wood Harvesting / Suppression in the Fire Regime / Drainage in Forest Environments	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
504	Lathyrus palustris	Marsh pea	Plant	Plant	I	a	Non-tidal Wetlands, Tidal Wetlands	11.1.1, 7.3.2, 7.2.5	Changes in Vegetation Communities / Vegetation Succession / Drainage in Forest Environments	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
505	Veronica scutellata	Marsh speedwell	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands, Tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
506	Clematis crispa	Marsh swamp leatherflower	Plant	Plant	IV	b	Riparian and Floodplains, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Non-tidal Wetlands, Tidal Wetlands	7.2.5, 11.1.1,	Drainage in Forest Environments / Changes in Vegetation Communities /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
507	Isoetes mattaponica	Mattaponi quillwort	Plant	Plant	II	c	Shorelines, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers	11.1.1, 8.1.4,	Changes in Vegetation Communities / Aquatic Plants /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. (8.1.4)		
508	Eleocharis intermedia	Matted spikerush	Plant	Plant	I	b	Ponds, Non-tidal Wetlands, Croplands	7.3.2, 7.2.5, 3.2.3	Vegetation Succession / Drainage in Forest Environments / Quarries and Sand Pits	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
509	Carex meadii	Mead's sedge	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Non-tidal Wetlands	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
510	Meehania cordata	Meehan's mint	Plant	Plant	IV	b	Forests and Woodlands, Cliff and Talus	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
511	Phacelia purshii	Miami-mist	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
512	Rhus michauxii	Michaux's sumac	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
513	Sagittaria brevirostra	Midwestern arrowhead	Plant	Plant	I	c	Riparian and Floodplains, Shorelines	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
514	Nabalus crepidineus	Midwestern rattlesnake-root	Plant	Plant	I	b	Forests and Woodlands	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
515	Symphyotrichum schistosum	Millboro aster	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.1.2, 8.1.2, 4.1	Suppression in the Fire Regime / Terrestrial Plants / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
516	Clematis viticaulis	Millboro leatherflower	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus, Croplands	7.1.2, 4.1, 8.1.2	Suppression in the Fire Regime / Roads and Railroads / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
517	Rhynchospora miliacea	Millet beaksedge	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5, 8.2.1, 7.2.1	Drainage in Forest Environments / Habitat Alteration by Beavers / Water Level Management Using Dams	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
518	Ranunculus laxicaulis	Mississippi buttercup	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Tidal Creeks and Rivers, Large Tidal Rivers, Ponds, Non-tidal Wetlands	7.2.1, 8.1.4, 7.2.5	Water Level Management Using Dams / Aquatic Plants / Drainage in Forest Environments	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
519	Andropogon mohrii	Mohr's bluestem	Plant	Plant	I	b	n/a	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
520	Stewartia ovata	Mountain camellia	Plant	Plant	II	b	Forests and Woodlands, Cliff and Talus	5.3, 7.1.2,	Logging and Wood Harvesting / Suppression in the Fire Regime /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
521	Solidago flaccidifolia	Mountain goldenrod	Plant	Plant	IV	b	Forests and Woodlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
522	Leptoloma cognatum	Mountain hairgrass	Plant	Plant	I	b	Grasslands, Glades and Barrens, Croplands	7.3.2, 4.1, 1	Vegetation Succession / Roads and Railroads / Residential and Commercial Development	Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
523	Trillium pusillum var. monticulum	Mountain loving least trillium	Plant	Plant	I	b	Forests and Woodlands, Croplands	11, 5.3, 1	Climate Change and Severe Weather / Logging and Wood Harvesting / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
524	Minuartia groenlandica	Mountain sandwort	Plant	Plant	I	b	Cliff and Talus	11, 6.1, 7.3.2	Climate Change and Severe Weather / Recreational Activities / Vegetation Succession	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
525	Dicranoweisia crispula	Mountain thatch moss	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
526	Dryopteris campyloptera	Mountain wood fern	Plant	Plant	IV	b	Forests and Woodlands, Boreal Forests	11, 8.2.4, 5.3	Climate Change and Severe Weather / Insect Pest Epidemics / Logging and Wood Harvesting	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
527	Viola glaberrima	Mountain yellow violet	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
528	Limosella australis	Mudwort	Plant	Plant	I	c	Beaches and Dunes, Ponds	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
529	Dasistoma macrophyllum	Mullein foxglove	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 8.1.2,	Suppression in the Fire Regime / Terrestrial Plants /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
530	Erythranthe moschata	Muskflower	Plant	Plant	I	b	Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	8.1.2, 8.2.1,	Terrestrial Plants / Habitat Alteration by Beavers /	/ Flooding/drainage of habitats caused by beavers /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
531	Viburnum lentago	Nannyberry	Plant	Plant	I	b	Grasslands, Shrublands, Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 8.1.2,	Vegetation Succession / Terrestrial Plants /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2)		
532	Amelanchier nantucketensis	Nantucket shadbush	Plant	Plant	I	b	Cliff and Talus, Riparian and Floodplains, Large Tidal Rivers	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
533	Trisetum spicatum	Narrow false oats	Plant	Plant	I	c	Cliff and Talus	6.1.3, 6.1, 11	Recreational Use of Cliffs and Rock Faces / Recreational Activities / Climate Change and Severe Weather	e.g., rock climbing, hang-gliding / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
534	Rhynchospora distans	Narrow-fruited fasciculate beaksedge	Plant	Plant	I	a	Savannas, Ponds, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
535	Trichostema setaceum	Narrow-leaf blue curls	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
536	Sparganium acaule	Narrow-leaf bur-reed	Plant	Plant	I	b	Ponds, Non-tidal Wetlands	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
537	Eupatorium linearifolium	Narrow-leaf bushy thoroughwort	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
538	Gentiana linearis	Narrowleaf gentian	Plant	Plant	I	b	Boreal Forests, Grasslands	11, 7.3.2, 8.1.2	Climate Change and Severe Weather / Vegetation Succession / Terrestrial Plants	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
539	Pityopsis microcephala	Narrowleaf golden-aster	Plant	Plant	I	b	Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
540	Sphagnum angustifolium	Narrowleaf peatmoss	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5, 8.2.1, 11	Drainage in Forest Environments / Habitat Alteration by Beavers / Climate Change and Severe Weather	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
541	Sabatia brachiata	Narrow-leaf rose-pink	Plant	Plant	IV	b	Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
542	Rhynchospora colorata	Narrow-leaf whitetop sedge	Plant	Plant	I	b	Beaches and Dunes, Ponds, Tidal Wetlands, Urban Lands	7.1.2, 7.2.1, 11.1.1	Suppression in the Fire Regime / Water Level Management Using Dams / Changes in Vegetation Communities	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
543	Andropogon perangustatus	Narrow-leaved bluestem	Plant	Plant	IV	b	Forests and Woodlands, Savannas, Ponds, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
544	Juncus brevicaudatus	Narrow-panicled rush	Plant	Plant	II	b	Cliff and Talus, Lakes, Ponds, Non-tidal Wetlands	7.2.2, 11,	Beaver Dam Management / Climate Change and Severe Weather /	Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
545	Baptisia albescens	Narrow-pod white wild indigo	Plant	Plant	I	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
546	Carex ormostachya	Necklace spike sedge	Plant	Plant	I	b	Forests and Woodlands	11, 5.3, 8.1.2	Climate Change and Severe Weather / Logging and Wood Harvesting / Terrestrial Plants	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
547	Rhynchospora capillacea	Needle beaksedge	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1,	Vegetation Succession / Habitat Alteration by Beavers /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1)		
548	Nestronia umbellula	Nestronia	Plant	Plant	I	b	Forests and Woodlands	5.3, 7.1.2, 7.3.2	Logging and Wood Harvesting / Suppression in the Fire Regime / Vegetation Succession	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
549	Tragia urticifolia	Nettle-leaf noseburn	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
550	Bolboschoenus novae-angliae	New England bulrush	Plant	Plant	II	c	Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Tidal Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
551	Juncus caesariensis	New Jersey rush	Plant	Plant	I	b	Ponds, Non-tidal Wetlands, Croplands	7.1.2, 8.2.1, 4.2	Suppression in the Fire Regime / Habitat Alteration by Beavers / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Flooding/drainage of habitats caused by beavers / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
552	Crataegus succulenta var. neofluvialis	New River hawthorn	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	5.3, 7.3.2, 8.1.2	Logging and Wood Harvesting / Vegetation Succession / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
553	Hypericum drummondii	Nits-and-lice	Plant	Plant	IV	b	Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
554	Trillium cernuum	Nodding trillium	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
555	Elymus canadensis var. canadensis	Nodding wild rye	Plant	Plant	I	b	Grasslands, Riparian and Shorelines, Non-tidal Wetlands	7.3.2, 8.1.2,	Vegetation Succession / Terrestrial Plants /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
556	Scirpus ancistrochaetus	Northeastern bulrush	Plant	Plant	I	b	Ponds	7.2.5, 7.2.7,	Drainage in Forest Environments / Withdrawal of Groundwater /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Withdrawal of groundwater for human consumption, crop production or other purposes. E.g., pumping water from the water table. /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Limit the effects of groundwater withdrawl in sensitive areas. Hydrologic changes could occur over broad areas due to water withdrawl for agricultural or industrial use. Regional management efforts or legislation may be necessary to lessen these negative impacts (7.2.7).		
557	Ophioglossum pusillum	Northern adder's-tongue	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	5.3, 8.1.2, 7.3.2	Logging and Wood Harvesting / Terrestrial Plants / Vegetation Succession	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
558	Galium boreale	Northern bedstraw	Plant	Plant	IV	b	Forests and Woodlands, Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
559	Lycopodiella inundata	Northern bog clubmoss	Plant	Plant	I	b	Lakes, Ponds, Non-tidal Wetlands, Urban Lands	7.3.2, 7.2.5,	Vegetation Succession / Drainage in Forest Environments /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
560	Scirpus hattorianus	Northern bulrush	Plant	Plant	IV	b	Ponds, Non-tidal Wetlands, Croplands	7.2.1, 7.2.5,	Water Level Management Using Dams / Drainage in Forest Environments /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
561	Rudbeckia laciniata var. bipinnata	Northern cut-leaf coneflower	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	7.3.2, 4.2,	Vegetation Succession / Utility and Service Lines /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
562	Glyceria laxa	Northern mannagrass	Plant	Plant	I	b	Ponds, Non-tidal Wetlands	8.2.1, 8.1.2,	Habitat Alteration by Beavers / Terrestrial Plants /	Flooding/drainage of habitats caused by beavers / /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
563	Eryngium yuccifolium var. yuccifolium	Northern rattlesnake-master	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Riparian and Floodplains	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
564	Hypericum boreale	Northern St. John's-wort	Plant	Plant	II	b	Beaches and Dunes, Ponds	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
565	Rhynchospora alba	Northern white beaksedge	Plant	Plant	II	a	Ponds, Non-tidal Wetlands, Urban Lands	7.1.2, 7.3.2, 11.1.1	Suppression in the Fire Regime / Vegetation Succession / Changes in Vegetation Communities	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
566	Lythrum alatum	Northern winged loosestrife	Plant	Plant	II	a	Riparian and Floodplains, Shorelines, Non-tidal Wetlands	7.1.2, 8.1.2, 7.3.2	Suppression in the Fire Regime / Terrestrial Plants / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
567	Micranthemum micranthemoides	Nuttall's micranthemum	Plant	Plant	I	c	Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Rivers, Tidal Creeks and River, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.2	Changes in Vegetation Communities / Aquatic Plants / Vegetation Succession	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. (8.1.4), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
568	Cirsium nuttallii	Nuttall's thistle	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
569	Marshallia legrandii	Oak barrens Barbara's-buttons	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
570	Potamogeton oakesianus	Oakes' pondweed	Plant	Plant	I	c	Ponds, Urban Lands	9, 7.2.5,	Pollution / Drainage in Forest Environments /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
571	Polygonella polygama	October flower	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 3.2.3	Suppression in the Fire Regime / Vegetation Succession / Quarries and Sand Pits	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
572	Matelea decipiens	Old-field milkvine	Plant	Plant	I	b	Forests and Woodlands	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
573	Sclerolepis uniflora	One-flowered sclerolepis	Plant	Plant	I	c	Non-tidal Wetlands, Tidal Wetlands	7.1.2, 11.1.1,	Suppression in the Fire Regime / Changes in Vegetation Communities /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
574	Eleocharis uniglumis	One-scale spikerush	Plant	Plant	I	b	Beaches and Dunes, Ponds, Urban Lands	7.2.1, 8.1.4, 1	Water Level Management Using Dams / Aquatic Plants / Residential and Commercial Development	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
575	Orthilia secunda	One-sided shinleaf	Plant	Plant	I	b	Forests and Woodlands	5.3, 1,	Logging and Wood Harvesting / Residential and Commercial Development /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
576	Hypotrachyna oostingii	Oosting's loop lichen	Plant	Plant	I	b	Boreal Forests	11, 5.3, 8.2.4	Climate Change and Severe Weather / Logging and Wood Harvesting / Insect Pest Epidemics	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
577	Triosteum aurantiacum var. aurantiacum	Orange-fruited horse-gentian	Plant	Plant	IV	b	Forests and Woodlands, Savannas	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5;3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
578	Matteuccia struthiopteris var. pensylvanica	Ostrich fern	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains	5.3, 8.1.2, 7.2.5	Logging and Wood Harvesting / Terrestrial Plants / Drainage in Forest Environments	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
579	Dichanthelium ovale var. ovale	Oval-flowered panic grass	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 1	Suppression in the Fire Regime / Vegetation Succession / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
580	Silene ovata	Ovate catchfly	Plant	Plant	I	b	Forests and Woodlands, Savannas	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
581	Justicia ovata	Ovate water-willow	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
582	Sporobolus ozarkanus	Ozark dropseed	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.3.2, 6.1, 8.1.2	Vegetation Succession / Recreational Activities / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
583	Astragalus distortus var. distortus	Ozark milkvetch	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Croplands	7.1.2, 8.1.2, 4.1	Suppression in the Fire Regime / Terrestrial Plants / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
584	Calopogon pallidus	Pale grass-pink	Plant	Plant	I	a	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
585	Carex pallescens	Pale sedge	Plant	Plant	I	b	Grasslands, Shrublands, Glades and Barrens, Riparian and Floodplains, Large Rivers	11, 7.3.2, 8.1.2	Climate Change and Severe Weather / Vegetation Succession / Terrestrial Plants	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
586	Hypericum ellipticum	Pale St. John's-wort	Plant	Plant	I	b	Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	11, 7.3.2,	Climate Change and Severe Weather / Vegetation Succession /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
587	Physconia subpallida	Pale-bellied Frost Lichen	Plant	Plant	I	b	Forests and Woodlands	5.3, 11, 9.5	Logging and Wood Harvesting / Climate Change and Severe Weather / Airborne Pollutants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Air contaminant emissions from a point or non-point source.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5).		
588	Betula papyrifera	Paper birch	Plant	Plant	II	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 11	Suppression in the Fire Regime / Vegetation Succession / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
589	Eriocaulon parkeri	Parker's pipewort	Plant	Plant	II	c	Riparian and Floodplains, Shorelines, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 7.3.1,	Changes in Vegetation Communities / Shoreline Alteration /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
590	Crataegus calpodendron	Pear hawthorn	Plant	Plant	I	b	Forests and Woodlands, Shrublands, Savannas, Glades and Barrens, Riparian and Floodplains	5.3, 7.3.2, 8.1.2	Logging and Wood Harvesting / Vegetation Succession / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
591	Anaphalis margaritacea	Pearly everlasting	Plant	Plant	I	b	Grasslands, Shrublands, Savannas, Non-tidal Wetlands, Croplands	7.3.2, 11, 1	Vegetation Succession / Climate Change and Severe Weather / Residential and Commercial Development	Natural vegetation succession causing habitat loss for species of early successional habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	(7.3.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
592	Crataegus pennsylvanica	Pennsylvania hawthorn	Plant	Plant	III	b	Forests and Woodlands, Savannas, Riparian and Floodplains	5.3, 7.3.2, 8.1.2	Logging and Wood Harvesting / Vegetation Succession / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
593	Potamogeton perfoliatus	Perfoliate pondweed	Plant	Plant	IV	b	Headwater Streams, Creeks and Rivers, Large Rivers, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Non-tidal Wetlands, Tidal Wetlands	9, 8.1.4,	Pollution / Aquatic Plants /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
594	Iliamna corei	Peters mountain mallow	Plant	Plant	I	a	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 6.1, 8.1.2	Suppression in the Fire Regime / Recreational Activities / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2) .		
595	Marshallia obovata var. obovata	Piedmont Barbara's-buttons	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
596	Phemeranthus piedmontanus	Piedmont fameflower	Plant	Plant	I	b	Glades and Barrens, Cliff and Talus	6.1, 8.1.2, 3.2.2	Recreational Activities / Terrestrial Plants / Open-Pit Mines	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2).		
597	Isoetes piedmontana	Piedmont quillwort	Plant	Plant	I	b	Cliff and Talus, Ponds, Non-tidal Wetlands	6.1, 8.1.2, 3.2.3	Recreational Activities / Terrestrial Plants / Quarries and Sand Pits	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
598	Solidago stricta	Pine barren bog goldenrod	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Non-tidal Wetlands, Croplands	7.1.2, 4.2, 8.1.2	Suppression in the Fire Regime / Utility and Service Lines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2),Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
599	Gentiana autumnalis	Pine barren gentian	Plant	Plant	I	b	Forests and Woodlands, Savannas, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
600	Calamovilfa brevipilis	Pine barren sandreed	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
601	Lilium catesbaei	Pine lily	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
602	Stenanthium leimanthoides	Pinebarrens death-camas	Plant	Plant	I	b	Forests and Woodlands, Savannas, Non-tidal Wetlands	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
603	Amphicarpum amphicarpon	Pine-barrens peanut grass	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 4.2, 5.3	Suppression in the Fire Regime / Utility and Service Lines / Logging and Wood Harvesting	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
604	Rhynchospora perplexa	Pineland beaksedge	Plant	Plant	IV	b	Forests and Woodlands, Ponds, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
605	Stipulicida setacea	Pineland scalypink	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Beaches and Dunes	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
606	Desmodium strictum	Pineland tick-trefoil	Plant	Plant	II	a	Forests and Woodlands, Savannas, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
607	Drosera capillaris	Pink sundew	Plant	Plant	IV	b	Non-tidal Wetlands	7.2.1, 7.3.2, 4.2	Water Level Management Using Dams / Vegetation Succession / Utility and Service Lines	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
608	Fleischmannia incarnata	Pink thoroughwort	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2.		
609	Valeriana pauciflora	Pink valerian	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
610	Rudbeckia triloba var. beadlei	Pinnate-lobed coneflower	Plant	Plant	I	b	Cliff and Talus	3.2.2, 8.1.2,	Open-Pit Mines / Terrestrial Plants /	/ /	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
611	Buckleya distichophylla	Piratebush	Plant	Plant	II	b	Forests and Woodlands	7.1.2, 5.3, 8.2.4	Suppression in the Fire Regime / Logging and Wood Harvesting / Insect Pest Epidemics	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
612	Minuartia patula	Pitcher's stitchwort	Plant	Plant	III	b	Forests and Woodlands, Savannas, Glades and Barrens, Cliff and Talus	7.3.2, 6.1, 8.1.2	Vegetation Succession / Recreational Activities / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
613	Paspalum bifidum	Pitchfork paspalum	Plant	Plant	I	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
614	Crocanthemum bicknellii	Plains frostweed	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 6.1, 7.3.2	Suppression in the Fire Regime / Recreational Activities / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
615	Muhlenbergia cuspidata	Plains muhly	Plant	Plant	II	b	Cliff and Talus	3.2.2, 8.1.2,	Open-Pit Mines / Terrestrial Plants /	/ /	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
616	Cyperus plukenetii	Plukenet's flatsedge	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
617	Taxodium ascendens	Pondcypress	Plant	Plant	I	b	Headwater Streams, Non-tidal Wetlands	7.1.2, 7.2.4, 7.3.2	Suppression in the Fire Regime / Drainage in Agricultural Environments / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Construction and maintenance of channels that drain surface waters in agricultural environments. Excludes the use/management of culverts (Threat 7.2.3). Excludes erosion/sedimentation that are associated with the drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Minimize drainage of agricultural habitats and adjacent non-arable lands to the extent possible. A broader perspective of the effects of drainage on agricultural regions should be taken since regional water table changes are possible. Water withdrawl for irrigation can also lower water tables on a regional scale, leading to wetland habitat loss (7.2.4), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
618	Litsea aestivalis	Pondspice	Plant	Plant	I	b	Ponds, Non-tidal Wetlands	7.1.2, 8.2.4,	Suppression in the Fire Regime / Insect Pest Epidemics /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
619	Coreopsis falcata	Pool coreopsis	Plant	Plant	I	b	Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	7.1.2, 11.1.1, 8.1.4	Suppression in the Fire Regime / Changes in Vegetation Communities / Aquatic Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
620	Teloschistes flavicans	Powdered orange bush lichen	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3, 9.5,	Logging and Wood Harvesting / Airborne Pollutants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Air contaminant emissions from a point or non-point source. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment. (9.5).		
621	Sporobolus heterolepis	Prairie dropseed	Plant	Plant	I	b	Savannas	7.1.2, 3.2.3,	Suppression in the Fire Regime / Quarries and Sand Pits /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3)		
622	Steironema quadriflorum	Prairie loosestrife	Plant	Plant	I	c	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
623	Silphium terebinthinaceum	Prairie rosin weed	Plant	Plant	I	b	Savannas, Glades and Barrens	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
624	Carex prairea	Prairie sedge	Plant	Plant	I	b	Headwater Streams, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
625	Carex suberecta	Prairie straw sedge	Plant	Plant	III	b	Headwater Streams, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
626	Croton monanthogynus	Prairie tea	Plant	Plant	IV	b	Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus, Croplands	7.1.2, 3.2.2, 1	Suppression in the Fire Regime / Open-Pit Mines / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
627	Dendrolycopodium dendroideum	Prickly tree-clubmoss	Plant	Plant	IV	b	Forests and Woodlands, Boreal Forests, Grasslands, Non-tidal Wetlands	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
628	Viola walteri	Prostrate blue violet	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus, Non-tidal Wetlands, Croplands	8.1.2, 4.1,	Terrestrial Plants / Roads and Railroads /	/ Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
629	Crotalaria rotundifolia	Prostrate rattlebox	Plant	Plant	I	b	Forests and Woodlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2)		
630	Sphagnum portoricense	Puerto Rico peatmoss	Plant	Plant	I	b	Urban Lands	7.2.5	Drainage in Forest Environments / /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
631	Fraxinus profunda	Pumpkin ash	Plant	Plant	I	c	Riparian and Floodplains, Creeks and Rivers, Large Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Non-tidal Wetlands, Tidal Wetlands	8.2.4, 5.3, 11.1.1	Insect Pest Epidemics / Logging and Wood Harvesting / Changes in Vegetation Communities	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
632	Heuchera hispida	Purple alumroot	Plant	Plant	III	b	Forests and Woodlands, Savannas, Cliff and Talus	3.2.2, 5.3, 8.1.2	Open-Pit Mines / Logging and Wood Harvesting / Terrestrial Plants	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
633	Utricularia purpurea	Purple bladderwort	Plant	Plant	II	b	Headwater Streams, Ponds, Non-tidal Wetlands, Croplands	9, 7.2.5,	Pollution / Drainage in Forest Environments /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
634	Clematis occidentalis var. occidentalis	Purple clematis	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Glades and Barrens, Cliff and Talus, Non-tidal Wetlands, Croplands	7.1.2, 4.1, 11	Suppression in the Fire Regime / Roads and Railroads / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
635	Cardamine douglassii	Purple cress	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands, Tidal Wetlands	5.3, 7.2.1, 8.1.2	Logging and Wood Harvesting / Water Level Management Using Dams / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
636	Sporobolus junceus	Purple dropseed	Plant	Plant	I	b	Grasslands, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
637	Platanthera peramoena	Purple fringeless orchid	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
638	Asclepias purpurascens	Purple milkweed	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Ponds, Non-tidal Wetlands, Croplands	7.3.2, 1, 4.1	Vegetation Succession / Residential and Commercial Development / Roads and Railroads	Natural vegetation succession causing habitat loss for species of early successional habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
639	Schizachne purpurascens	Purple oatgrass	Plant	Plant	I	c	Forests and Woodlands, Boreal Forests, Grasslands, Shrublands, Savannas, Tidal Wetlands	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
640	Sarracenia purpurea	Purple pitcher plant	Plant	Plant	II	a	Savannas, Headwater Streams, Ponds, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
641	Crotalaria purshii	Pursh's rattlebox	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2)		
642	Ruellia purshiana	Pursh's wild petunia	Plant	Plant	II	b	Forests and Woodlands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
643	Salix discolor	Pussy willow	Plant	Plant	I	b	Non-tidal Wetlands	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
644	Populus tremuloides	Quaking aspen	Plant	Plant	I	b	Grasslands, Shrublands, Savannas, Cliff and Talus, Croplands	7.3, 7.1.2,	Other Ecosystem Modifications / Suppression in the Fire Regime /	Other activities that contribute to habitat alteration or loss by redeveloping natural systems to improve human welfare. To be distinguished from the development and maintenance of urban parks (Threats 1.3). / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.2.1).		
645	Filipendula rubra	Queen-of-the-prairie	Plant	Plant	II	a	Non-tidal Wetlands, Croplands	8.2.1, 7.2.1, 7.2.4	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Agricultural Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in agricultural environments. Excludes the use/management of culverts (Threat 7.2.3). Excludes erosion/sedimentation that are associated with the drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Minimize drainage of agricultural habitats and adjacent non-arable lands to the extent possible. A broader perspective of the effects of drainage on agricultural regions should be taken since regional water table changes are possible. Water withdrawl for irrigation can also lower water tables on a regional scale, leading to wetland habitat loss (7.2.4).		
646	Stillingia sylvatica ssp. sylvatica	Queen's-delight	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 3.2.3, 7.3.2	Suppression in the Fire Regime / Quarries and Sand Pits / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
647	Ludwigia hirtella	Rafinesque's seedbox	Plant	Plant	II	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
648	Solidago randii	Rand's goldenrod	Plant	Plant	II	c	Glades and Barrens, Cliff and Talus	6.1, 11, 7.3.2	Recreational Activities / Climate Change and Severe Weather / Vegetation Succession	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
649	Oncophorus rauei	Rau's spur moss	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	5.3, 11 ,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
650	Dichanthelium ravenelii	Ravenel's panic grass	Plant	Plant	IV	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
651	Ludwigia ravenii	Raven's seedbox	Plant	Plant	I	b	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
652	Scirpus flaccidifolius	Reclining bulrush	Plant	Plant	I	b	Non-tidal Wetlands	7.2.1, 7.2.5,	Water Level Management Using Dams / Drainage in Forest Environments /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
653	Asclepias rubra	Red milkweed	Plant	Plant	II	a	Forests and Woodlands, Savannas, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
654	Sphagnum rubellum	Red peatmoss	Plant	Plant	II	b	Cliff and Talus, Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1)		
655	Rubus idaeus var. strigosus	Red raspberry	Plant	Plant	II	b	Forests and Woodlands, Boreal Forests, Grasslands, Cliff and Talus, Ponds, Croplands	5.3, 8.1.2, 4.1	Logging and Wood Harvesting / Terrestrial Plants / Roads and Railroads	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
656	Chelone obliqua var. obliqua	Red turtlehead	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
657	Lachnanthes caroliniana	Redroot	Plant	Plant	I	a	Shorelines, Lakes, Ponds, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
658	Cyperus refractus	Reflexed flatsedge	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Rivers	7.1.2, 7.2.1,	Suppression in the Fire Regime / Water Level Management Using Dams /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
659	Carex tetanica	Rigid sedge	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
660	Dichanthelium annulum	Ringed panic grass	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
661	Bolboschoenus fluviatilis	River bulrush	Plant	Plant	II	c	Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Tidal Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
662	Pseudobryum cinclidioides	River thyme moss	Plant	Plant	I	b	Ponds, Non-tidal Wetlands	7.2.5, 7.3.2, 8.2.1	Drainage in Forest Environments / Vegetation Succession / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
663	Oenothera riparia	Riverbank evening-primrose	Plant	Plant	I	c	Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
664	Solidago rupestris	Riverbank goldenrod	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus, Riparian and Floodplains, Shorelines	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
665	Houstonia montana	Roan mountain bluets	Plant	Plant	I	b	Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
666	Prenanthes roanensis	Roan mountain rattlesnake-root	Plant	Plant	II	a	Forests and Woodlands, Boreal Forests, Grasslands, Glades and Barrens, Savannas	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
667	Carex roanensis	Roan mountain sedge	Plant	Plant	II	b	Forests and Woodlands	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
668	Eleocharis robbinsii	Robbins' spikerush	Plant	Plant	I	c	Ponds, Urban Lands	7.2.1, 1,	Water Level Management Using Dams / Residential and Commercial Development /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
669	Huperzia porophila	Rock clubmoss	Plant	Plant	I	b	Cliff and Talus	6.1.3, 5.3, 11	Recreational Use of Cliffs and Rock Faces / Logging and Wood Harvesting / Climate Change and Severe Weather	e.g., rock climbing, hang-gliding / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
670	Cetradonia linearis	Rock gnome lichen	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	11, 8.1.2, 8.2.4	Climate Change and Severe Weather / Terrestrial Plants / Insect Pest Epidemics	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
671	Vitis rupestris	Rock grape	Plant	Plant	I	c	Riparian and Floodplains, Shorelines	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
672	Scutellaria saxatilis	Rock skullcap	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
673	Eleocharis radicans	Rooted spikerush	Plant	Plant	I	b	Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
674	Pogonia ophioglossoides	Rose pogonia	Plant	Plant	IV	b	Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
675	Geum laciniatum	Rough avens	Plant	Plant	I	b	Non-tidal Wetlands	8.1.2, 7.3.2, 7.2.4	Terrestrial Plants / Vegetation Succession / Drainage in Agricultural Environments	/ Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in agricultural environments. Excludes the use/management of culverts (Threat 7.2.3). Excludes erosion/sedimentation that are associated with the drainage system (Threat 9.3.2).	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Minimize drainage of agricultural habitats and adjacent non-arable lands to the extent possible. A broader perspective of the effects of drainage on agricultural regions should be taken since regional water table changes are possible. Water withdrawl for irrigation can also lower water tables on a regional scale, leading to wetland habitat loss (7.2.4).		
676	Stachys aspera	Rough hedge-nettle	Plant	Plant	II	b	Ponds, Non-tidal Wetlands, Tidal Wetlands	11.1.1, 7.2.5,	Changes in Vegetation Communities / Drainage in Forest Environments /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
677	Verbena scabra	Rough vervain	Plant	Plant	I	b	Cliff and Talus, Riparian and Floodplains, Ponds, Non-tidal Wetlands, Tidal Wetlands, Urban Lands, Croplands	11.1.1, 7.2.1, 7.3.3	Changes in Vegetation Communities / Water Level Management Using Dams / Natural Erosion and Sedimentation	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6).	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and regulations to improve water quality and create healthy watersheds (7.3.3).		
678	Dichanthelium strigosum var. strigosum	Rough-hair panic grass	Plant	Plant	I	b	Grasslands, Non-tidal Wetlands	1, 7.3.2, 7.2.5	Residential and Commercial Development / Vegetation Succession / Drainage in Forest Environments	This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
679	Oryzopsis asperifolia	Rough-leaved ricegrass	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens	5.3, 11, 8.1.2	Logging and Wood Harvesting / Climate Change and Severe Weather / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
680	Lechea intermedia var. intermedia	Round-fruit pinweed	Plant	Plant	I	b	Grasslands, Shrublands, Savannas, Glades and Barrens, Beaches and Dunes	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
681	Silene rotundifolia	Round-leaf catchfly	Plant	Plant	II	b	Cliff and Talus	6.1, 5.3,	Recreational Activities / Logging and Wood Harvesting /	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
682	Cornus rugosa	Round-leaf dogwood	Plant	Plant	I	b	Forests and Woodlands	8.2.4, 5.3,	Insect Pest Epidemics / Logging and Wood Harvesting /	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
683	Amelanchier sanguinea	Roundleaf serviceberry	Plant	Plant	IV	b	Forests and Woodlands, Savannas, Glades and Barrens	6.1.3, 6.1, 8.1.2	Recreational Use of Cliffs and Rock Faces / Recreational Activities / Terrestrial Plants	e.g., rock climbing, hang-gliding / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
684	Bacopa rotundifolia	Round-leaf water-hyssop	Plant	Plant	I	c	Riparian and Floodplains, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
685	Trifolium calcaricum	Running glade clover	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	6.1, 7.3.2, 8.1.2	Recreational Activities / Vegetation Succession / Terrestrial Plants	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
686	Carex ruthii	Ruth's sedge	Plant	Plant	II	b	Riparian and Floodplains, Non-tidal Wetlands	8.2.1, 11,	Habitat Alteration by Beavers / Climate Change and Severe Weather /	Flooding/drainage of habitats caused by beavers / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
687	Viola edulis	Salad violet	Plant	Plant	III	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
688	Quercus hemisphaerica	Sand laurel oak	Plant	Plant	I	b	Forests and Woodlands, Shrublands, Glades and Barrens, Beaches and Dunes, Croplands	5.3, 11.1.1, 3.2.3	Logging and Wood Harvesting / Changes in Vegetation Communities / Quarries and Sand Pits	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
689	Quercus margarettae	Sand post oak	Plant	Plant	IV	b	Forests and Woodlands, Shrublands, Savannas, Glades and Barrens, Croplands	5.3, 7.1.2, 3.2.3	Logging and Wood Harvesting / Suppression in the Fire Regime / Quarries and Sand Pits	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
690	Desmodium lineatum	Sand tick-trefoil	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Savannas, Croplands	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
691	Salix interior	Sandbar willow	Plant	Plant	I	c	Riparian and Floodplain, Shorelines	8.2.1, 11, 7.2.1	Habitat Alteration by Beavers / Climate Change and Severe Weather / Water Level Management Using Dams	Flooding/drainage of habitats caused by beavers / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.2.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
692	Solidago tarda	Sandhill goldenrod	Plant	Plant	III	b	Forests and Woodlands, Savannas, Glades and Barrens, Riparian and Floodplains	7.1.2, 7.3.2, 3.2.3	Suppression in the Fire Regime / Vegetation Succession / Quarries and Sand Pits	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
693	Hexastylis sorriei	Sandhill Heartleaf	Plant	Plant	I	a	Grasslands, Savannas, Non-tidal Wetlands	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
694	Hypericum lloydii	Sandhill St. John's-wort	Plant	Plant	I	b	Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
695	Cirsium repandum	Sandhill thistle	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Non-tidal Wetlands	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
696	Asclepias tuberosa var. rolfsii	Sandhills butterfly-weed	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.3.2, 1, 4.1	Vegetation Succession / Residential and Commercial Development / Roads and Railroads	Natural vegetation succession causing habitat loss for species of early successional habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
697	Lilium pyrophilum	Sandhills lily	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
698	Carphephorus bellidifolius	Sandy-woods chaffhead	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
699	Clematis catesbyana	Satin-curls	Plant	Plant	I	b	n/a	7.1.2, 4.1 7, 3.2	Suppression in the Fire Regime / / Mining and Quarrying	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Exploring for, developing and producing minerals, rocks and various other substrates (sand, gravel, etc.). Includes trialing treatment (settling and tailings ponds), site expansion and site reclamation after development. This threat does not include the transportation of resources (threat 4) and acid mine drainage (treat 9.2). Although not a mineral resource, peat harvesting induces impacts on the ecosystem that are similar to quarries and sandpits due to the use of similar excavation machinery. E.g., coal mines, mining of various sources of metals (gold, copper, nickel, magnesium, etc.), quarries, sand pits.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
700	Rhynchospora debilis	Savanna beaksedge	Plant	Plant	I	b	Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
701	Campylopus carolinae	Savanna campylopus moss	Plant	Plant	I	b	Forests and Woodlands, Croplands	7.1.2, 5.3, 3.2.3	Suppression in the Fire Regime / Logging and Wood Harvesting / Quarries and Sand Pits	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
702	Coreopsis linifolia	Savanna coreopsis	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

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703	Oxypolis ternata	Savanna cowbane	Plant	Plant	I	b	Non-tidal Wetlands	7.1.2, 8.2.1, 7.2.5	Suppression in the Fire Regime / Habitat Alteration by Beavers / Drainage in Forest Environments	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
704	Phanopyrum gymnocarpon	Savanna panic grass	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5, 8.2.1, 7.2.1	Drainage in Forest Environments / Habitat Alteration by Beavers / Water Level Management Using Dams	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
705	Ludwigia virgata	Savanna seedbox	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 4.2, 7.2.5	Vegetation Succession / Utility and Service Lines / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
706	Cladium jamaicense	Sawgrass	Plant	Plant	I	b	Riparian and Floodplains, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands, Urban Lands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trapping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
707	Phyla nodiflora var. nodiflora	Sawtooth frogfruit	Plant	Plant	I	b	Beaches and Dunes, Ponds, Non-tidal Wetlands, Urban Lands, Transportation Networks	7.3.2, 11.1.1,	Vegetation Succession / Changes in Vegetation Communities /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
708	Carex schweinitzii	Schweinitz's sedge	Plant	Plant	I	b	Headwater Streams, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
709	Uniola paniculata	Sea oats	Plant	Plant	IV	c	Grasslands, Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
710	Amaranthus pumilus	Seabeach amaranth	Plant	Plant	I	c	Beaches and Dunes	6.1, 11.1.1, 6.1.1	Recreational Activities / Changes in Vegetation Communities / Motor Vehicles	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Using recreational motor vehicles. E.g., ATVs, motocross motorcycles, snowmobiles.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit motor vehicle use in natural areas. Minimize construction of ORV trails in natural areas (6.1.1).		
711	Polygonum glaucum	Seabeach knotweed	Plant	Plant	II	c	Beaches and Dunes	11.1.1, 6.1.1, 6.1	Changes in Vegetation Communities / Motor Vehicles / Recreational Activities	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Using recreational motor vehicles. E.g., ATVs, motocross motorcycles, snowmobiles. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit motor vehicle use in natural areas. Minimize construction of ORV trails in natural areas (6.1.1), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
712	Aristida tuberculosa	Sea-beach needlegrass	Plant	Plant	IV	c	Forests and Woodlands, Grasslands, Shrublands, Savannas, Beaches and Dunes	11, 1, 11.1.1	Climate Change and Severe Weather / Residential and Commercial Development / Changes in Vegetation Communities	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Retrieving data. Wait a few seconds and try to cut or copy again (1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
713	Honckenya peploides ssp. robusta	Sea-beach sandwort	Plant	Plant	I	b	Beaches and Dunes	6.1, 11.1.1, 6.1.1	Recreational Activities / Changes in Vegetation Communities / Motor Vehicles	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Using recreational motor vehicles. E.g., ATVs, motocross motorcycles, snowmobiles.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit motor vehicle use in natural areas. Minimize construction of ORV trails in natural areas (6.1.1).		

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714	Carex silicea	Sea-beach sedge	Plant	Plant	I	b	Beaches and Dunes	6.1, 11.1.1, 6.1.1	Recreational Activities / Changes in Vegetation Communities / Motor Vehicles	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Using recreational motor vehicles. E.g., ATVs, motocross motorcycles, snowmobiles.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit motor vehicle use in natural areas. Minimize construction of ORV trails in natural areas (6.1.1).		
715	Heliotropium curassavicum var. curassavicum	Seaside heliotrope	Plant	Plant	I	c	Beaches and Dunes, Tidal Wetlands	7.3.2, 11.1.1, 6.1	Vegetation Succession / Changes in Vegetation Communities / Recreational Activities	Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
716	Plantago maritima var. juncoides	Seaside plantain	Plant	Plant	I	c	Beaches and Dunes, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
717	Eupatorium maritimum	Seaside thoroughwort	Plant	Plant	I	c	Grasslands, Shrublands, Savannas, Shorelines, Beaches and Dunes, Ponds, Non-tidal Wetlands, Croplands	11, 4.1, 6.1	Climate Change and Severe Weather / Roads and Railroads / Recreational Activities	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
718	Seymeria cassioides	Senna seymeria	Plant	Plant	I	a	Grasslands, Shrublands, Savannas, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
719	Aeschynomene virginica	Sensitive joint-vetch	Plant	Plant	I	c	Creeks and Rivers, Large Rivers, Tidal Creeks and Rivers, Tidal Large Rivers, Non-tidal Wetlands, Tidal Wetlands, Tidal Headwaters, Urban Lands, Croplands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
720	Sagittaria rigida	Sessile-fruited arrowhead	Plant	Plant	I	b	Ponds, Non-tidal Wetlands, Tidal Wetlands	8.2.1, 7.2.1, 7.2.5	Habitat Alteration by Beavers / Water Level Management Using Dams / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
721	Desmodium sessilifolium	Sessile-leaf tick-trefoil	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
722	Eriocaulon aquaticum	Seven-angled pipewort	Plant	Plant	I	b	Riparian and Floodplains, Ponds, Urban Lands	7.2.1	Water Level Management Using Dams / /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
723	Micranthemum umbrosum	Shade mudflower	Plant	Plant	II	c	Riparian and Floodplains, Shorelines, Headwater Streams, Creeks and Rivers, Tidal Headwater Streams, Tidal Creeks and Rivers, Ponds, Non-tidal Wetlands	7.2.1, 8.1.4, 7.2.5	Water Level Management Using Dams / Aquatic Plants / Drainage in Forest Environments	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
724	Ponthieva racemosa	Shadow witch orchid	Plant	Plant	IV	b	Forests and Woodlands, Non-tidal Wetlands	5.3, 8.2.1, 7.2.5	Logging and Wood Harvesting / Habitat Alteration by Beavers / Drainage in Forest Environments	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
725	Oenothera argillicola	Shale barren evening-primrose	Plant	Plant	II	a	Forests and Woodlands, Savannas, Glades and Barrens, Cliff and Talus, Croplands	7.1.2, 8.1.2, 4.1	Suppression in the Fire Regime / Terrestrial Plants / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
726	Boechera serotina	Shale barren rock cress	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus, Croplands	7.1.2, 8.1.2, 7.3.1	Suppression in the Fire Regime / Terrestrial Plants / Shoreline Alteration	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
727	Hypericum virgatum	Sharp-leaf St. John's-wort	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Ponds, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
728	Blindia acuta	Sharp's blindleaf moss	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	7.2.1, 8.1.2, 8.2.4	Water Level Management Using Dams / Terrestrial Plants / Insect Pest Epidemics	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
729	Homaliadelphus sharpii	Sharp's homaliadelphus moss	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
730	Glyceria acutiflora	Sharp-scaled mannagrass	Plant	Plant	IV	b	Ponds, Non-tidal Wetlands, Urban Lands	7.2.1, 1,	Water Level Management Using Dams / Residential and Commercial Development /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
731	Cyperus haspan	Sheathed flatsedge	Plant	Plant	IV	c	Riparian and Floodplains, Headwater Streams, Creeks and Rivers, Large Rivers, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands, Urban Lands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
732	Kalmia angustifolia	Sheep laurel	Plant	Plant	II	a	Forests and Woodlands, Savannas, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
733	Spiranthes lucida	Shining ladies'-tresses	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Non-tidal Wetlands, Croplands	7.3.2, 7.2.1, 7.2.5	Vegetation Succession / Water Level Management Using Dams / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
734	Pyrola elliptica	Shinleaf	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests	5.3, 1, 11	Logging and Wood Harvesting / Residential and Commercial Development / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
735	Rhynchospora nitens	Short-beaked beaksedge	Plant	Plant	I	b	Urban Lands	7.3.2, 7.2.5, 8.1.4	Vegetation Succession / Drainage in Forest Environments / Aquatic Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
736	Fuirena breviseta	Short-bristled umbrella-sedge	Plant	Plant	I	b	Non-tidal Wetlands	7.1.2, 4.2, 8.1.2	Suppression in the Fire Regime / Utility and Service Lines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
737	Gymnopogon brevifolius	Short-leaf beard grass	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
738	Helenium brevifolium	Short-leaf sneezeweed	Plant	Plant	II	a	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
739	Dichanthelium curtifolium	Short-leaved witchgrass	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
740	Symphyotrichum shortii	Short's aster	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
741	Boechera dentata	Short's rock cress	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
742	Carex shortiana	Short's sedge	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Riparian and Floodplains, Beaches and Dunes, Non-tidal Wetlands	8.2.1, 7.2.5, 8.1.2	Habitat Alteration by Beavers / Drainage in Forest Environments / Terrestrial Plants	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
743	Chaerophyllum procumbens var. shortii	Short's spreading chervil	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Glades and Barrens, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 7.2.1	Logging and Wood Harvesting / Terrestrial Plants / Water Level Management Using Dams	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
744	Eurybia spectabilis	Showy aster	Plant	Plant	IV	b	Grasslands, Shrublands, Savannas, Non-tidal Wetlands, Croplands	7.1.2, 4.1, 7.3.2	Suppression in the Fire Regime / Roads and Railroads / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
745	Cypripedium reginae	Showy lady's-slipper	Plant	Plant	I	b	Forests and Woodlands, Non-tidal Wetlands	8.2.2, 7.3.2, 8.1.2	Increased Grazing by Vertebrates / Vegetation Succession / Terrestrial Plants	e.g., increased grazing by white-tailed deer and snow geese. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Encourage proper deer herd management through legislation and engagement with hunters. The latter may include incentives, higher bag limits, and manipulation of sex ratios through harvest. Control populations using more aggressive methods in areas where hunting is not normally allowed but lethal methods are still deemed practical (8.2.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
746	Desmodium canadense	Showy tick-trefoil	Plant	Plant	I	b	Grasslands, Riparian and Floodplains, Shorelines, Non-tidal Wetlands	7.3.2, 8.1.2,	Vegetation Succession / Terrestrial Plants /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
747	Platanthera shriveri	Shriver's frilly orchid	Plant	Plant	I	b	Forests and Woodlands, Savannas, Non-tidal Wetlands	5.3, 4.1,	Logging and Wood Harvesting / Roads and Railroads /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
748	Stewartia malacodendron	Silky camellia	Plant	Plant	III	b	Forests and Woodlands, Cliff and Talus, Non-tidal Wetlands	5.3	Logging and Wood Harvesting / /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
749	Cornus obliqua	Silky dogwood	Plant	Plant	I	b	Cliff and Talus, Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Rivers	8.2.4, 11, 7.2.1	Insect Pest Epidemics / Climate Change and Severe Weather / Water Level Management Using Dams	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
750	Carex canescens var. disjuncta	Silvery sedge	Plant	Plant	IV	b	Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Ponds, Non-tidal Wetlands, Tidal Wetlands	8.2.1, 7.2.1, 11.1.1	Habitat Alteration by Beavers / Water Level Management Using Dams / Changes in Vegetation Communities	Flooding/drainage of habitats caused by beavers / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		
751	Ribes glandulosum	Skunk currant	Plant	Plant	IV	b	Forests and Woodlands, Boreal Forests	5.3, 11, 8.1.2	Logging and Wood Harvesting / Climate Change and Severe Weather / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
752	Chamaecrista fasciculata var. macrosperma	Sleepingplant	Plant	Plant	III	c	Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
753	Iris prismatica	Slender blue iris	Plant	Plant	III	b	Forests and Woodlands, Headwater Streams, Creeks and Rivers, Tidal Headwater Streams, Tidal Creeks and Rivers, Ponds, Non-tidal Wetlands, Croplands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
754	Myriopteris gracilis	Slender lip fern	Plant	Plant	I	b	Cliff and Talus	6.1, 6.1.3, 8.1.2	Recreational Activities / Recreational Use of Cliffs and Rock Faces / Terrestrial Plants	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / e.g., rock climbing, hang-gliding /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
755	Sabatia campanulata	Slender marsh-pink	Plant	Plant	II	a	Non-tidal Wetlands, Tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
756	Scleria minor	Slender nutrush	Plant	Plant	II	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
757	Nabalus autumnalis	Slender rattlesnake-root	Plant	Plant	I	a	Grasslands, Shrublands, Savannas, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
758	Cyperus odoratus var. engelmannii	Slender sand sedge	Plant	Plant	I	b	Shorelines, Beaches and Dunes, Ponds, Non-Tidal Wetlands, Urban Lands	7.2.1, 7.2.2,	Water Level Management Using Dams / Beaver Dam Management /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2).		
759	Carex lasiocarpa var. americana	Slender sedge	Plant	Plant	I	b	Headwater Streams, Ponds, Non-tidal Wetlands	8.2.1, 7.2.5,	Habitat Alteration by Beavers / Drainage in Forest Environments /	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
760	Elymus trachycaulus ssp. trachycaulus	Slender wheatgrass	Plant	Plant	I	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
761	Cinna latifolia	Slender wood reedgrass	Plant	Plant	IV	b	Forests and Woodlands, Boreal Forests, Non-tidal Wetlands	11, 8.2.4, 1	Climate Change and Severe Weather / Insect Pest Epidemics / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
762	Physostegia leptophylla	Slender-leaf false dragonhead	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands, Tidal Wetlands	7.2.1, 8.1.4, 7.2.5	Water Level Management Using Dams / Aquatic Plants / Drainage in Forest Environments	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
763	Desmodium tenuifolium	Slim-leaf tick-trefoil	Plant	Plant	I	a	Forests and Woodlands, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
764	Cleistesiopsis oricamporum	Small dragonhead pogonia	Plant	Plant	I	b	Grasslands, Savannas, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
765	Sporobolus neglectus	Small dropseed	Plant	Plant	I	b	Grasslands, Glades and Barrens, Cliff and Talus	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
766	Cardamine clematitis	Small mountain bittercress	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Riparian and Floodplains, Headwater Streams, Creeks and Rivers, Non-tidal Wetlands	6.1.3, 9.5,	Recreational Use of Cliffs and Rock Faces / Airborne Pollutants /	e.g., rock climbing, hang-gliding / Air contaminant emissions from a point or non-point source. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support legislation efforts aimed at regulating and reducing air pollution. This includes industrial sources as well as more dispersed sources such as personal vehicles and equipment (9.5)		
767	Pseudognaphalium helleri ssp. micradenium	Small rabbit tobacco	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 1	Suppression in the Fire Regime / Vegetation Succession / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
768	Sesuvium maritimum	Small sea-purslane	Plant	Plant	IV	c	Beaches and Dunes	6.1, 11.1.1, 6.1.1	Recreational Activities / Changes in Vegetation Communities / Motor Vehicles	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Using recreational motor vehicles. E.g., ATVs, motocross motorcycles, snowmobiles.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit motor vehicle use in natural areas. Minimize construction of ORV trails in natural areas (6.1.1).		
769	Elatine minima	Small waterwort	Plant	Plant	I	c	Shorelines	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
770	Platanthera blephariglottis	Small white fringed orchid	Plant	Plant	II	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
771	Cypripedium candidum	Small white lady's-slipper	Plant	Plant	I	b	Grasslands, Glades and Barrens	7.1.2, 3.2.2, 8.1.2	Suppression in the Fire Regime / Open-Pit Mines / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
772	Isotria medeoloides	Small whorled pogonia	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
773	Platydictya minutissima	Small willow moss	Plant	Plant	I	b	Cliff and Talus	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
774	Cardamine micranthera	Small-anther bittercress	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Headwater Streams, Creeks and Rivers, Non-tidal Wetlands	9.3.2, 8.1.2,	Soil Erosion, Sedimentation / Terrestrial Plants /	Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5). / /	Support efforts to limit the environmental impacts of construction and maintenance of rights-of-way. Improve erosion and sedimentation standards to minimize impacts to water quality. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid planting non-native seed mixes when stabilizing soils after disturbance (9.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
775	Cyperus subsquarrosus	Small-flower halfchaff sedge	Plant	Plant	II	b	Riparian and Floodplains, Shorelines, Creeks and Rivers, Large Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Ponds, Urban Lands	8.1.4, 8.1.2,	Aquatic Plants / Terrestrial Plants /	/ /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
776	Heuchera parviflora var. parviflora	Small-flowered alumroot	Plant	Plant	IV	b	Cliff and Talus	6.1.3, 5.3,	Recreational Use of Cliffs and Rock Faces / Logging and Wood Harvesting /	e.g., rock climbing, hang-gliding / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
777	Carex aestivaliformis	Small-fruited summer sedge	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Non-tidal Wetlands	7.2.2, 8.2.1, 11	Beaver Dam Management / Habitat Alteration by Beavers / Climate Change and Severe Weather	Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. / Flooding/drainage of habitats caused by beavers / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
778	Juncus brachycephalus	Small-headed rush	Plant	Plant	II	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
779	Thalictrum macrostylum	Small-leaf meadowrue	Plant	Plant	I	b	Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
780	Portulaca smallii	Small's purslane	Plant	Plant	I	b	Cliff and Talus	6.1, 8.1.2, 3.2.3	Recreational Activities / Terrestrial Plants / Quarries and Sand Pits	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
781	Diamorpha smallii	Small's stonecrop	Plant	Plant	I	b	Tidal Creeks and Rivers, Large Tidal Rivers	6.1, 8.1.2, 3.2.3	Recreational Activities / Terrestrial Plants / Quarries and Sand Pits	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
782	Cuscuta polygonorum	Smartweed dodder	Plant	Plant	I	b	Ponds, Non-tidal Wetlands, Urban Lands	7.3.2	Vegetation Succession / /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2),		
783	Schoenoplectiella smithii	Smith's bulrush	Plant	Plant	I	c	Riparian and Floodplains, Shorelines, Tidal Wetlands	11.1.1, 9,	Changes in Vegetation Communities / Pollution /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9).		
784	Monarda brevis	Smoke hole bergamot	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens	3.2.2, 8.1.2,	Open-Pit Mines / Terrestrial Plants /	/ /	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
785	Parmelia omphalodes	Smoky crottle	Plant	Plant	II	b	Cliff and Talus	6.1, 3.1.1,	Recreational Activities / Onshore Oil Development /	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
786	Pellaea glabella ssp. glabella	Smooth cliff-brake	Plant	Plant	IV	b	Cliff and Talus, Transportation Networks	6.1.3, 6.1,	Recreational Use of Cliffs and Rock Faces / Recreational Activities /	e.g., rock climbing, hang-gliding / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
787	Spermacoce glabra	Smooth false buttonweed	Plant	Plant	I	c	Riparian and Floodplains, Shorelines	7.2.1, 8.1.2,	Water Level Management Using Dams / Terrestrial Plants /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
788	Echinacea laevigata	Smooth purple coneflower	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
789	Viola pallens	Smooth white violet	Plant	Plant	IV	b	Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 11	Logging and Wood Harvesting / Terrestrial Plants / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
790	Potamogeton bicupulatus	Snailseed pondweed	Plant	Plant	I	c	Ponds	9, 7.2.5,	Pollution / Drainage in Forest Environments /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
791	Trillium nivale	Snow trillium	Plant	Plant	I	b	Forests and Woodlands	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
792	Silene nivea	Snowy campion	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Headwater Streams	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
793	Carex conjuncta	Soft fox sedge	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Riparian and Floodplains, Non-tidal Wetlands	5.3, 7.2.1, 8.2.1	Logging and Wood Harvesting / Water Level Management Using Dams / Habitat Alteration by Beavers	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
794	Solidago rigida var. glabrata	Southeastern stiff goldenrod	Plant	Plant	I	b	Grasslands, Glades and Barrens, Croplands	7.1.2, 4.2, 7.3.2	Suppression in the Fire Regime / Utility and Service Lines / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
795	Triglochin striata	Southern arrowgrass	Plant	Plant	IV	c	Shorelines, Non-tidal Wetlands, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
796	Penstemon australis	Southern beard-tongue	Plant	Plant	I	b	Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
797	Utricularia juncea	Southern bladderwort	Plant	Plant	I	b	Shorelines, Ponds, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
798	Typha domingensis	Southern cattail	Plant	Plant	III	c	Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
799	Leersia hexandra	Southern cutgrass	Plant	Plant	I	b	Shorelines, Ponds, Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
800	Hexastylis contracta	Southern heartleaf	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.2.4, 1	Logging and Wood Harvesting / Insect Pest Epidemics / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
801	Cypripedium kentuckiense	Southern lady's-slipper	Plant	Plant	I	b	Forests and Woodlands, Savannas, Non-tidal Wetlands	8.2.1, 5.3, 7.2.5	Habitat Alteration by Beavers / Logging and Wood Harvesting / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.1), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
802	Platanthera flava	Southern rein-orchis	Plant	Plant	III	b	Forests and Woodlands, Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	7.2.1, 8.1.4, 7.2.5	Water Level Management Using Dams / Aquatic Plants / Drainage in Forest Environments	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
803	Solidago saticina	Southern rough-leaved goldenrod	Plant	Plant	I	b	Non-tidal Wetlands	7.1.2, 8.2.1,	Suppression in the Fire Regime / Habitat Alteration by Beavers /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Flooding/drainage of habitats caused by beavers /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
804	Euphorbia bombensis	Southern seaside spurge	Plant	Plant	II	c	Savannas, Glades and Barrens, Beaches and Dunes	6.1, 11.1.1, 11	Recreational Activities / Changes in Vegetation Communities / Climate Change and Severe Weather	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
805	Yucca aloifolia	Spanish dagger	Plant	Plant	I	c	Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
806	Tillandsia usneoides	Spanish-moss	Plant	Plant	I	b	Forests and Woodlands, Lakes, Non-tidal Wetlands, Tidal Wetlands	5.3, 1,	Logging and Wood Harvesting / Residential and Commercial Development /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
807	Alnus rugosa	Speckled alder	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.2.1, 8.1.2, 11	Habitat Alteration by Beavers / Terrestrial Plants / Climate Change and Severe Weather	Flooding/drainage of habitats caused by beavers / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
808	Dichanthelium fusiforme	Spindle-fruited panic grass	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Savannas	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
809	Potamogeton spirillus	Spiral pondweed	Plant	Plant	I	c	Headwater Streams, Creeks and Rivers, Large Rivers, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands, Urban Lands	9, 8.1.4,	Pollution / Aquatic Plants /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
810	Eutrochium maculatum var. maculatum	Spotted joe-pye-weed	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.2.1, 8.1.2, 7.3.2	Water Level Management Using Dams / Terrestrial Plants / Vegetation Succession	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / Natural vegetation succession causing habitat loss for species of early successional habitats.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
811	Prosartes maculata	Spotted mandarin	Plant	Plant	III	b	Forests and Woodlands	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
812	Scirpus divaricatus	Spreading bulrush	Plant	Plant	III	b	Non-tidal Wetlands	7.2.1, 7.2.5,	Water Level Management Using Dams / Drainage in Forest Environments /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
813	Arabis patens	Spreading rockcress	Plant	Plant	I	b	Forests and Woodlands, Glades and Barrens, Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
814	Arenaria lanuginosa var. lanuginosa	Spreading sandwort	Plant	Plant	I	b	Forests and Woodlands	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
815	Bartonia verna	Spring bartonia	Plant	Plant	I	b	Beaches and Dunes, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
816	Corallorhiza wisteriana	Spring coralroot	Plant	Plant	IV	b	Forests and Woodlands	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
817	Tetragonotheca helianthoides	Squarehead	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
818	Rorippa sessiliflora	Stalkless yellow cress	Plant	Plant	II	b	Shorelines, Urban Lands	7.3.2, 7.2.1,	Vegetation Succession / Water Level Management Using Dams /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
819	Lemna trisulca	Star duckweed	Plant	Plant	I	c	Headwater Streams, Creeks and Rivers, Ponds, Non-tidal Wetlands	7.2.5, 9, 7.3.3	Drainage in Forest Environments / Pollution / Natural Erosion and Sedimentation	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6).	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Support legislation and regulations to improve water quality and create healthy watersheds (7.3.3).		
820	Maianthemum stellatum	Starry solomon's-plume	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Shorelines, Non-tidal Wetlands	7.3.2, 7.2.5, 8.1.2	Vegetation Succession / Drainage in Forest Environments / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
821	Carex sterilis	Sterile sedge	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
822	Triantha glutinosa	Sticky false asphodel	Plant	Plant	I	b	Non-tidal Wetlands	7.1.2, 7.2.1, 7.2.4	Suppression in the Fire Regime / Water Level Management Using Dams / Drainage in Agricultural Environments	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in agricultural environments. Excludes the use/management of culverts (Threat 7.2.3). Excludes erosion/sedimentation that are associated with the drainage system (Threat 9.3.2).	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.4), Minimize drainage of agricultural habitats and adjacent non-arable lands to the extent possible. A broader perspective of the effects of drainage on agricultural regions should be taken since regional water table changes are possible. Water withdrawl for irrigation can also lower water tables on a regional scale, leading to wetland habitat loss (7.2.4).		
823	Solidago racemosa	Sticky goldenrod	Plant	Plant	I	b	Savannas, Cliff and Talus, Riparian and Floodplains, Shorelines	6.1, 7.3.2, 7.2.1	Recreational Activities / Vegetation Succession / Water Level Management Using Dams	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
824	Spinulum annotinum	Stiff clubmoss	Plant	Plant	IV	b	Forests and Woodlands, Boreal Forests, Grasslands, Shrublands, Non-tidal Wetlands	11	Climate Change and Severe Weather / /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
825	Solidago rigida var. rigida	Stiff goldenrod	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus	7.1.2, 4.2, 7.3.2	Suppression in the Fire Regime / Utility and Service Lines / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
826	Stenanthium gramineum var. robustum	Stout featherbells	Plant	Plant	III	b	Non-tidal Wetlands	7.3.2, 7.2.5,	Vegetation Succession / Drainage in Forest Environments /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
827	Potamogeton strictifolius	Straightleaf pondweed	Plant	Plant	I	c	Headwater Streams, Tidal Rivers	9, 8.1.4,	Pollution / Aquatic Plants /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
828	Carex straminea	Straw sedge	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Large Rivers, Ponds, Non-tidal Wetlands	7.2.1, 7.3.2, 8.2.1	Water Level Management Using Dams / Vegetation Succession / Habitat Alteration by Beavers	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
829	Sullivantia sullivantii	Sullivantia	Plant	Plant	I	b	Cliff and Talus	11	Climate Change and Severe Weather / /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
830	Plagiochila sullivantii	Sullivant's leafy liverwort	Plant	Plant	I	b	Forests and Woodlands	5.3, 8.2.4, 11	Logging and Wood Harvesting / Insect Pest Epidemics / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
831	Entodon sullivantii	Sullivant's silk moss	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
832	Rudbeckia heliopsidis	Sun-facing coneflower	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Croplands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
833	Prunus susquehanae	Susquehanna sand cherry	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Cliff and Talus	7.3.2, 4.2, 6.1	Vegetation Succession / Utility and Service Lines / Recreational Activities	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
834	Mitreola sessilifolia	Swamp hornpod	Plant	Plant	I	a	Lakes, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
835	Pedicularis lanceolata	Swamp lousewort	Plant	Plant	IV	b	Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 7.2.5, 8.1.2	Vegetation Succession / Drainage in Forest Environments / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
836	Asclepias incarnata var. incarnata	Swamp milkweed	Plant	Plant	IV	b	Riparian and Floodplains, Non-tidal Wetlands	8.1.4, 7.2.1, 8.2.1	Aquatic Plants / Water Level Management Using Dams / Habitat Alteration by Beavers	/ Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
837	Helonias bullata	Swamp-pink	Plant	Plant	I	b	Non-tidal Wetlands	8.2.1, 7.2.5, 5.3	Habitat Alteration by Beavers / Drainage in Forest Environments / Logging and Wood Harvesting	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1),. Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
838	Rhododendron arborescens	Sweet azalea	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Shorelines, Creeks and Rivers	7.2.1, 5.3, 8.1.2	Water Level Management Using Dams / Logging and Wood Harvesting / Terrestrial Plants	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1),. Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
839	Myrica gale	Sweet gale	Plant	Plant	I	b	Non-tidal Wetlands	7.2.5, 7.3.2,	Drainage in Forest Environments / Vegetation Succession /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
840	Monotropsis odorata	Sweet pinesap	Plant	Plant	II	b	Forests and Woodlands	5.3, 1,	Logging and Wood Harvesting / Residential and Commercial Development /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
841	Senecio suaveolens	Sweet-scented indian-plantain	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Shorelines, Non-tidal Wetlands	7.2.1, 7.3.2, 8.1.2	Water Level Management Using Dams / Vegetation Succession / Terrestrial Plants	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
842	Calycanthus floridus	Sweet-shrub	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands, Transportation Networks, Croplands	5.3, 1,	Logging and Wood Harvesting / Residential and Commercial Development /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
843	Phlox buckleyi	Swordleaf phlox	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Croplands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
844	Drymocallis arguta	Tall cinquefoil	Plant	Plant	I	c	Forests and Woodlands, Savannas, Glades and Barrens	6.1, 11, 8.1.2	Recreational Activities / Climate Change and Severe Weather / Terrestrial Plants	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
845	Sporobolus compositus var. compositus	Tall dropseed	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 4.2,	Suppression in the Fire Regime / Utility and Service Lines /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
846	Delphinium exaltatum	Tall larkspur	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Croplands	7.1.2, 5.3, 8.1.2	Suppression in the Fire Regime / Logging and Wood Harvesting / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
847	Milium effusum var. cisatlanticum	Tall millet grass	Plant	Plant	IV	b	Forests and Woodlands	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
848	Suaeda linearis	Tall sea-blite	Plant	Plant	IV	c	Beaches and Dunes, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	6.1, 11.1.1, 6.1.1	Recreational Activities / Changes in Vegetation Communities / Motor Vehicles	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Using recreational motor vehicles. E.g., ATVs, motocross motorcycles, snowmobiles.	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Support efforts to limit motor vehicle use in natural areas. Minimize construction of ORV trails in natural areas (6.1.1).		
849	Dichanthelium scabriusculum	Tall swamp panic grass	Plant	Plant	III	b	Forests and Woodlands, Non-tidal Wetlands, Tidal Wetlands	4.2, 7.3.2, 7.2.5	Utility and Service Lines / Vegetation Succession / Drainage in Forest Environments	Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
850	Cirsium altissimum	Tall thistle	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Riparian and Floodplains, Non-tidal Wetlands	4.1, 7.3.2, 1	Roads and Railroads / Vegetation Succession / Residential and Commercial Development	Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Natural vegetation succession causing habitat loss for species of early successional habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
851	Xyris platylepis	Tall yellow-eyed grass	Plant	Plant	II	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
852	Cyperus acuminatus	Taper-tip flatsedge	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 8.1.2,	Vegetation Succession / Terrestrial Plants /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2)		
853	Eriophorum virginicum	Tawny cottongrass	Plant	Plant	IV	b	Non-tidal Wetlands, Croplands	7.2.2, 7.3.2, 7.1.2	Beaver Dam Management / Vegetation Succession / Suppression in the Fire Regime	Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
854	Eriocaulon decangulare var. decangulare	Ten-angled pipewort	Plant	Plant	II	a	Non-tidal Wetlands, Tidal Wetlands	11.1.1, 7.2.1, 8.1.2	Changes in Vegetation Communities / Water Level Management Using Dams / Terrestrial Plants	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
855	Cystopteris tennesseensis	Tennessee bladder fern	Plant	Plant	I	b	Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
856	Potamogeton tennesseensis	Tennessee pondweed	Plant	Plant	I	c	Headwater Streams	9, 8.1.4,	Pollution / Aquatic Plants /	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / /	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
857	Stellaria corei	Tennessee starwort	Plant	Plant	III	b	Forests and Woodlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
858	Sagittaria filiformis	Threadleaf Arrowhead	Plant	Plant	I	c	Ponds, Tidal Wetlands	11.1.1, 8.1.4,	Changes in Vegetation Communities / Aquatic Plants /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
859	Rhynchospora filifolia	Thread-leaved beaksedge	Plant	Plant	I	b	Shorelines, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
860	Triphora trianthophora var. trianthophora	Three birds orchid	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands, Croplands	5.3, 8.2.4, 8.1.2	Logging and Wood Harvesting / Insect Pest Epidemics / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
861	Eleocharis tricostata	Three-angled spikerush	Plant	Plant	I	b	Ponds, Urban Lands	7.2.1, 1,	Water Level Management Using Dams / Residential and Commercial Development /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
862	Melica nitens	Three-flower melic	Plant	Plant	I	b	Forests and Woodlands, Savannas, Cliff and Talus	8.1.2, 7.1.2, 5.3	Terrestrial Plants / Suppression in the Fire Regime / Logging and Wood Harvesting	/ Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known. (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
863	Carex trisperma	Three-seed sedge	Plant	Plant	IV	b	Ponds, Non-tidal Wetlands	8.2.1, 11,	Habitat Alteration by Beavers / Climate Change and Severe Weather /	Flooding/drainage of habitats caused by beavers / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
864	Sibbaldiopsis tridentata	Three-toothed cinquefoil	Plant	Plant	II	c	Grasslands, Glades and Barrens, Cliff and Talus	6.1, 11,	Recreational Activities / Climate Change and Severe Weather /	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
865	Bazzania tricrenata	Three-toothed whip liverwort	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Cliff and Talus	6.1.3, 11, 8.1.2	Recreational Use of Cliffs and Rock Faces / Climate Change and Severe Weather / Terrestrial Plants	e.g., rock climbing, hang-gliding / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
866	Sagittaria spatulata	Tidal arrowhead	Plant	Plant	I	c	Shorelines, Tidal Wetlands, Urban Lands	11.1.1, 8.1.4,	Changes in Vegetation Communities / Aquatic Plants /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
867	Ctenium aromaticum	Toothache grass	Plant	Plant	I	a	Savannas, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
868	Zanthoxylum americanum	Toothache tree	Plant	Plant	IV	b	Forests and Woodlands, Savannas	8.1.2, 7.3.2,	Terrestrial Plants / Vegetation Succession /	/ Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
869	Cyperus dentatus	Toothed flatsedge	Plant	Plant	I	b	Shorelines, Ponds	7.2.1, 1 ,	Water Level Management Using Dams / Residential and Commercial Development /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
870	Desmodium cuspidatum	Toothed tick-treefoil	Plant	Plant	II	b	Forests and Woodlands, Savannas, Glades and Barrens, Riparian and Floodplains	6.1.3, 8.1.2, 3.2.3	Recreational Use of Cliffs and Rock Faces / Terrestrial Plants / Quarries and Sand Pits	e.g., rock climbing, hang-gliding / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3).		
871	Schoenoplectus torreyi	Torrey's bulrush	Plant	Plant	I	b	Ponds	7.2.1, 1,	Water Level Management Using Dams / Residential and Commercial Development /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
872	Pycnanthemum torrei	Torrey's mountainmint	Plant	Plant	I	b	Grasslands, Savannas, Glades and Barrens, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
873	Juncus torreyi	Torrey's rush	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 7.2.5, 8.1.4	Vegetation Succession / Drainage in Forest Environments / Aquatic Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
874	Turritis glabra	Tower mustard	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Croplands	8.1.2, 4.1, 7.3.2	Terrestrial Plants / Roads and Railroads / Vegetation Succession	/ Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
875	Steironema radicans	Trailing loosestrife	Plant	Plant	I	b	Riparian and Floodplains, Ponds, Non-tidal Wetlands	7.2.1, 7.2.5,	Water Level Management Using Dams / Drainage in Forest Environments /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
876	Phlox nivalis ssp. hentzii	Trailing phlox	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Cliff and Talus, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
877	Botrychium angustisegmentum	Triangle grape fern	Plant	Plant	I	b	Forests and Woodlands, Boreal Forests, Grasslands, Riparian and Floodplains	11, 7.3.2, 5.3	Climate Change and Severe Weather / Vegetation Succession / Logging and Wood Harvesting	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
878	Bacopa innominata	Tropical water-hyssop	Plant	Plant	II	c	Shorelines, Tidal Headwater Streams, Tidal Creeks and Rivers, Large Tidal Rivers, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
879	Platanthera herbiola	Tubercled rein orchid	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.2.1, 8.1.4, 7.2.5	Habitat Alteration by Beavers / Aquatic Plants / Drainage in Forest Environments	Flooding/drainage of habitats caused by beavers / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
880	Calopogon tuberosus var. tuberosus	Tuberosus grass-pink	Plant	Plant	I	a	Shrublands, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
881	Lithospermum tuberosum	Tuberous gromwell	Plant	Plant	III	b	Forests and Woodlands, Savannas	7.1.2, 5.3,	Suppression in the Fire Regime / Logging and Wood Harvesting /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
882	Deschampsia cespitosa	Tufted hairgrass	Plant	Plant	I	b	Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 8.1.2, 6.1.3	Vegetation Succession / Terrestrial Plants / Recreational Use of Cliffs and Rock Faces	Natural vegetation succession causing habitat loss for species of early successional habitats. / / e.g., rock climbing, hang-gliding	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3).		
883	Quercus laevis	Turkey oak	Plant	Plant	IV	b	Forests and Woodlands, Savannas	7.1.2, 5.3,	Suppression in the Fire Regime / Logging and Wood Harvesting /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
884	Bartonia paniculata ssp. paniculata	Twining bartonia	Plant	Plant	IV	b	Forests and Woodlands, Shrublands, Riparian and Floodplains, Ponds, Non-tidal Wetlands	7.2.4, 4.2, 7.2.2	Drainage in Agricultural Environments / Utility and Service Lines / Beaver Dam Management	Construction and maintenance of channels that drain surface waters in agricultural environments. Excludes the use/management of culverts (Threat 7.2.3). Excludes erosion/sedimentation that are associated with the drainage system (Threat 9.3.2). / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Structures (dams) built by beavers create habitats for a number of species; however, these dams may be dismantled by humans. Dismantling of dams result in habitat loss by drying-out the beaver-created basin and flooding lands downstream. It could also potentially cause loss of accumulated sediments due to increased flow in streams farther downstream.	Minimize drainage of agricultural habitats and adjacent non-arable lands to the extent possible. A broader perspective of the effects of drainage on agricultural regions should be taken since regional water table changes are possible. Water withdrawl for irrigation can also lower water tables on a regional scale, leading to wetland habitat loss (7.2.4), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Avoid destruction of beaver dams and do not remove beavers from the area (7.2.2).		
885	Sphagnum contortum	Twisted peatmoss	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.2.5, 8.2.1,	Drainage in Forest Environments / Habitat Alteration by Beavers /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1)		
886	Solidago tortifolia	Twisted-leaf goldenrod	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Croplands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2),Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
887	Utricularia geminiscapa	Two-flowered bladderwort	Plant	Plant	III	b	Ponds, Non-tidal Wetlands, Croplands	9, 8.1.4, 7.2.5	Pollution / Aquatic Plants / Drainage in Forest Environments	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
888	Cyperus diandrus	Umbrella flatsedge	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Beaches and Dunes, Creeks and Rivers, Large Rivers, Tidal Creeks and Rivers, Large Tidal Rivers, Ponds, Non-tidal Wetlands, Tidal Wetlands	11	Climate Change and Severe Weather / /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
889	Diphylleia cymosa	Umbrella leaf	Plant	Plant	III	b	Forests and Woodlands, Non-tidal Wetlands	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
890	Smilax ecirrata	Upright carrion-flower	Plant	Plant	I	b	Boreal Forests	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
891	Boltonia montana	Valley doll's-daisy	Plant	Plant	I	b	Riparian and Floodplains, Creeks and Rivers, Ponds, Non-tidal Wetlands	7.1.2, 1, 11	Suppression in the Fire Regime / Residential and Commercial Development / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
892	Carex polymorpha	Variable sedge	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.1.2, 1, 7.3.2	Suppression in the Fire Regime / Residential and Commercial Development / Vegetation Succession	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
893	Carex vestita	Velvet sedge	Plant	Plant	II	b	Forests and Woodlands, Non-tidal Wetlands	7.1.2, 7.3.2, 4.1	Suppression in the Fire Regime / Vegetation Succession / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
894	Vaccinium myrtilloides	Velvetleaf blueberry	Plant	Plant	I	b	Forests and Woodlands, Savannas, Cliff and Talus	11, 7.3.2,	Climate Change and Severe Weather / Vegetation Succession /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
895	Adiantum capillus-veneris	Venus'-hair fern	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3, 3.2.3, 8.1.2	Logging and Wood Harvesting / Quarries and Sand Pits / Terrestrial Plants	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prohibit the creation of quarries and sand pits in natural areas and discourage their placement in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
896	Callitriche palustris	Vernal water-starwort	Plant	Plant	IV	b	Headwater Streams, Lakes, Ponds, Urban Lands	7.2.1, 8.2.1, 11.1.1	Water Level Management Using Dams / Habitat Alteration by Beavers / Changes in Vegetation Communities	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
897	Burmannia biflora	Violet burmannia	Plant	Plant	I	a	Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
898	Zornia bracteata	Viperina	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
899	Silphium perfoliatum var. connatum	Virginia cup-plant	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Riparian and Floodplains	7.2.5, 8.1.2,	Drainage in Forest Environments / Terrestrial Plants /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
900	Lithospermum virginianum	Virginia false gromwell	Plant	Plant	II	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
901	Trillium pusillum var. virginianum	Virginia least trillium	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
902	Ripariosida hermaphrodita	Virginia mallow	Plant	Plant	I	c	Riparian and Floodplains, Shorelines, Croplands	7.3.2, 4.2, 4.1	Vegetation Succession / Utility and Service Lines / Roads and Railroads	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
903	Isoetes virginica	Virginia quillwort	Plant	Plant	I	b	Shorelines, Ponds, Non-tidal Wetlands	9.3.2, 7.3.3,	Soil Erosion, Sedimentation / Natural Erosion and Sedimentation /	Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5). / Removal, transport and deposition of sediments that is caused by natural erosional processes. To be distinguished from the transport of sediments that is associated with tides (Threat 4.3.1), or by drainage systems in agriculture (Threat 7.2.5) and forestry (Threat 7.2.6). /	Support efforts to limit the environmental impacts of construction and maintenance of rights-of-way. Improve erosion and sedimentation standards to minimize impacts to water quality. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid planting non-native seed mixes when stabilizing soils after disturbance (9.3.2), Support legislation and regulations to improve water quality and create healthy watersheds (7.3.3).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
904	Rosa virginiana	Virginia rose	Plant	Plant	I	b	Grasslands, Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 1,	Vegetation Succession / Residential and Commercial Development /	Natural vegetation succession causing habitat loss for species of early successional habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
905	Betula lenta var. uber	Virginia roundleaf birch	Plant	Plant	I	a	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	7.1.2, 5.3,	Suppression in the Fire Regime / Logging and Wood Harvesting /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
906	Helenium virginicum	Virginia sneezeweed	Plant	Plant	I	b	Ponds, Non-tidal Wetlands	7.2.1, 1,	Water Level Management Using Dams / Residential and Commercial Development /	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
907	Spiraea virginiana	Virginia spiraea	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Tidal Creeks and Rivers, Large Tidal Rivers	8.1.2, 11, 7.2.1	Terrestrial Plants / Climate Change and Severe Weather / Water Level Management Using Dams	/ Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
908	Cirsium virginianum	Virginia thistle	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
909	Clematis coactilis	Virginia white-hair leatherflower	Plant	Plant	II	b	Foredsts and Woodlands, Savannas, Glades and Barrens, Cliff and Talus	6.1.3, 3.2.3, 8.1.2	Recreational Use of Cliffs and Rock Faces / Quarries and Sand Pits / Terrestrial Plants	e.g., rock climbing, hang-gliding / /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
910	Lechea maritima var. virginica	Virginian beach pinweed	Plant	Plant	III	c	Grasslands, Shrublands, Savannas, Glades and Barrens, Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
911	Eleocharis vivipara	Viviparous spikerush	Plant	Plant	I	b	Beaches and Dunes, Ponds, Urban Lands	7.2.1, 8.1.4, 1	Water Level Management Using Dams / Aquatic Plants / Residential and Commercial Development	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
912	Paspalum dissectum	Walter's paspalum	Plant	Plant	II	a	Riparian and Floodplains, Shorelines, Beaches and Dunes, Ponds, Non-tidal Wetlands, Croplands	7.3.2, 7.2.5,	Vegetation Succession / Drainage in Forest Environments /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
913	Carex striata var. brevis	Walter's sedge	Plant	Plant	IV	b	Forests and Woodlands, Riparian and Floodplains, Beaches and Dunes, Ponds, Non-tidal Wetlands	8.2.1, 7.2.5, 7.3.2	Habitat Alteration by Beavers / Drainage in Forest Environments / Vegetation Succession	Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Natural vegetation succession causing habitat loss for species of early successional habitats.	Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
914	Schoenoplectus subterminalis	Water bulrush	Plant	Plant	I	c	Ponds, Non-tidal Wetlands	7.2.5, 8.2.1 ,	Drainage in Forest Environments / /	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
915	Equisetum fluviatile	Water horsetail	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
916	Didiplis diandra	Water purslane	Plant	Plant	I	b	Riparian and Floodplains, Shorelines, Ponds, Non-tidal Wetlands, Tidal Wetlands, Urban Lands	7.2.1, 8.2.1, 8.1.4	Water Level Management Using Dams / Habitat Alteration by Beavers / Aquatic Plants	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Flooding/drainage of habitats caused by beavers /	Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
917	Drosera intermedia	Water sundew	Plant	Plant	IV	b	Shorelines, Beaches and Dunes, Ponds, Non-tidal Wetlands	7.2.1, 7.3.2, 4.2	Water Level Management Using Dams / Vegetation Succession / Utility and Service Lines	Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.) / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
918	Peltigera hydrothyria	Waterfan	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Headwater Streams, Creeks and Rivers	5.3, 7.2.5, 8.2.1	Logging and Wood Harvesting / Drainage in Forest Environments / Habitat Alteration by Beavers	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Flooding/drainage of habitats caused by beavers	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
919	Ranunculus ambigens	Water-plantain crowfoot	Plant	Plant	I	b	Headwater Streams, Tidal Headwater Streams, Ponds, Tidal Wetlands	7.2.5, 11.1.1, 8.1.4	Drainage in Forest Environments / Changes in Vegetation Communities / Aquatic Plants	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4).		
920	Poa saltuensis	Weak bluegrass	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	11, 5.3,	Climate Change and Severe Weather / Logging and Wood Harvesting /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
921	Yucca flaccida	Weakleaf yucca	Plant	Plant	I	b	Forests and Woodlands, Savannas, Glades and Barrens, Cliff and Talus	6.1.3, 7.3.2,	Recreational Use of Cliffs and Rock Faces / Vegetation Succession /	e.g., rock climbing, hang-gliding / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
922	Leptoscyphus cuneifolius	Wedge flapwort	Plant	Plant	I	b	Boreal Forests	11, 8.2.4,	Climate Change and Severe Weather / Insect Pest Epidemics /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4).		
923	Toxicodendron rydbergii	Western poison ivy	Plant	Plant	I	b	Forests and Woodlands, Savannas, Cliff and Talus	11	Climate Change and Severe Weather / /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
924	Symphyotrichum pratense	Western silvery aster	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
925	Corallorhiza maculata var. occidentalis	Western spotted coralroot	Plant	Plant	I	b	Forests and Woodlands	8.2.4, 5.3, 11	Insect Pest Epidemics / Logging and Wood Harvesting / Climate Change and Severe Weather	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
926	Gentianella quinquefolia var. occidentalis	Western stiff gentian	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	3.2.2, 5.3, 8.1.2	Open-Pit Mines / Logging and Wood Harvesting / Terrestrial Plants	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
927	Helianthus occidentalis ssp. occidentalis	Western sunflower	Plant	Plant	I	b	Riparian and Floodplains, Shorelines	6.1, 6.1.3, 8.1.2	Recreational Activities / Recreational Use of Cliffs and Rock Faces / Terrestrial Plants	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / e.g., rock climbing, hang-gliding /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
928	Descurainia pinnata var. brachycarpa	Western tansy mustard	Plant	Plant	IV	b	Grasslands, Shrublands,. Savannas, Glades and Barrens, Croplands	8.1.2, 4.1,	Terrestrial Plants / Roads and Railroads /	/ Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
929	Erysimum capitatum var. capitatum	Western wallflower	Plant	Plant	II	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 8.1.2, 11	Suppression in the Fire Regime / Terrestrial Plants / Climate Change and Severe Weather	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
930	Metzgeria consanguinea	Whiskered veilwort	Plant	Plant	I	b	Boreal Forests	5.3, 11,	Logging and Wood Harvesting / Climate Change and Severe Weather /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
931	Heuchera alba	White alumroot	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus, Croplands	6.1, 11, 8.1.2	Recreational Activities / Climate Change and Severe Weather / Terrestrial Plants	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
932	Fraxinus americana	White ash	Plant	Plant	I	c	Forests and Woodlands, Savannas, Cliff and Talus, Riparian and Floodplains, Non-tidal Wetlands	8.2.4, 5.3, 8.2.1	Insect Pest Epidemics / Logging and Wood Harvesting / Habitat Alteration by Beavers	Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers	Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoration (8.2.1).		
933	Sisyrinchium albidum	White blue-eyed-grass	Plant	Plant	II	a	Savannas, Glades and Barrens	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1).		
934	Verbesina virginica var. virginica	White crownbeard	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Savannas	5.3, 7.1.2, 1	Logging and Wood Harvesting / Suppression in the Fire Regime / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
935	Anticlea glauca	White death-camas	Plant	Plant	IV	b	Forests and Woodlands, Glades and Barrens, Cliff and Talus	7.1.2, 6.1, 8.1.2	Suppression in the Fire Regime / Recreational Activities / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
936	Symphyotrichum ericoides var. ericoides	White heath aster	Plant	Plant	IV	b	Grasslands, Shrublands, Croplands	7.3.2, 4.2, 8.1.2	Vegetation Succession / Utility and Service Lines / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
937	Streptopus amplexifolius	White mandarin	Plant	Plant	I	c	Cliff and Talus, Shorelines	11, 6.1,	Climate Change and Severe Weather / Recreational Activities /	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. /	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
938	Aconitum reclinatum	White monkshood	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands, Non-tidal Wetlands	5.3, 8.2.1, 11	Logging and Wood Harvesting / Habitat Alteration by Beavers / Climate Change and Severe Weather	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
939	Eleocharis albida	White spikerush	Plant	Plant	III	b	Shorelines, Beaches and Dunes, Tidal Wetlands, Urban Lands	7.3.2, 11.1.1, 7.2.5	Vegetation Succession / Changes in Vegetation Communities / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
940	Erythronium albidum	White trout lily	Plant	Plant	II	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	8.1.2, 5.3, 7.2.1	Terrestrial Plants / Logging and Wood Harvesting / Water Level Management Using Dams	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Construction, operation and water management using non-power dams. Includes the dismantling of man-made dams and excludes dams used for power generation (Threat 3.3.1) but excludes lock system (Threat 4.3.3.)	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Manage water levels in such a way as to maintain suitable habitat. Conversely, remove dams as necessary to restore original water levels and function (7.2.1).		
941	Erigeron vernus	White-top fleabane	Plant	Plant	II	b	Forests and Woodlands, Beaches and Dunes, Non-tidal Wetlands, Croplands	11.1.1, 7.1.2,	Changes in Vegetation Communities / Suppression in the Fire Regime /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2).		
942	Collinsonia verticillata	Whorled horsebalm	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	5.3, 8.1.2,	Logging and Wood Harvesting / Terrestrial Plants /	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / /	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
943	Scleria verticillata	Whorled nutrush	Plant	Plant	II	a	Beaches and Dunes, Non-tidal Wetlands, Croplands	11.1.1, 7.3.2,	Changes in Vegetation Communities / Vegetation Succession /	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
944	Sedum pulchellum	Widow's-cross	Plant	Plant	I	b	Glades and Barrens, Cliff and Talus	3.2.2, 8.1.2, 6.1	Open-Pit Mines / Terrestrial Plants / Recreational Activities	/ / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats.	Prohibit open pit mining in natural areas. Avoid siting mines in adjoining areas where excavation could lead to unintended effects. The latter could include alteration of the water table, loss of springs or overland flow, and pollution (3.2.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1).		
945	Ribes americanum	Wild black currant	Plant	Plant	I	b	Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 7.2.5, 8.1.2	Vegetation Succession / Drainage in Forest Environments / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
946	Echinocystis lobata	Wild cucumber	Plant	Plant	I	b	Forests and Woodlands, Riparian and Floodplains, Non-tidal Wetlands	7.3.2, 7.2.5,	Vegetation Succession / Drainage in Forest Environments /	Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
947	Camassia scilloides	Wild hyacinth	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Riparian and Floodplains, Croplands	7.1.2, 8.1.2, 5.3	Suppression in the Fire Regime / Terrestrial Plants / Logging and Wood Harvesting	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
948	Cartrema americanum	Wild olive	Plant	Plant	I	b	Forests and Woodlands	6.1, 1,	Recreational Activities / Residential and Commercial Development /	Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues. /	Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
949	Symphyotrichum praealtum var. angustior	Willow-leaf aster	Plant	Plant	I	b	Riparian and Floodplains, Headwater Streams, Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
950	Ludwigia alata	Winged seedbox	Plant	Plant	I	b	Non-tidal Wetlands, Tidal Wetlands	11.1.1, 8.1.4, 7.3.1	Changes in Vegetation Communities / Aquatic Plants / Shoreline Alteration	Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. / / e.g., shoreline hardening, riprap along shorelines, breakwaters, concrete walls, shoreline filling	Educate the public on the importance of sea level rise in protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11.1.1), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Educate the public on the importance of protecting natural habitats. Support legislation and efforts to limit shoreline development. Encourage alternatives to shoreline hardening projects. Alternatives include living shorelines and larger restoration projects that could negate the need for shoreline alteration in the first place (7.3.1).		
951	Isoetes hyemalis	Winter quillwort	Plant	Plant	I	b	Riparian and Floodplains, Headwater Streams, Creeks and Rivers, Large Rivers, Ponds, Non-tidal Wetlands	7.2.5, 5.3, 8.2.1	Drainage in Forest Environments / Logging and Wood Harvesting / Habitat Alteration by Beavers	Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Flooding/drainage of habitats caused by beavers	Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1).		
952	Alectoria fallacina	Witch's-hair lichen	Plant	Plant	I	b	Boreal Forests	11, 8.2.4, 5.3	Climate Change and Severe Weather / Insect Pest Epidemics / Logging and Wood Harvesting	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Increased in insect pest density, resulting in large-scale impacts on the ecosystem. To distinguished from localized increases in invertebrate grazing (Threat 8.2.3). / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3)	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Support early detection efforts to discover and target new invasive pests for control. For established invasive pest populations, minimize damage to host species through detection and Integrated Pest Management (IPM) methods. Substantial funding is needed to achieve effective detection and control, even at small scales (8.2.4), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
953	Eleocharis wolfii	Wolf's spikerush	Plant	Plant	I	b	Forests and Woodlands, Ponds, Non-tidal Wetlands	7.1.2, 5.3, 1	Suppression in the Fire Regime / Logging and Wood Harvesting / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
954	Lilium philadelphicum	Wood lily	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	7.1.2, 7.3.2, 8.1.2	Suppression in the Fire Regime / Vegetation Succession / Terrestrial Plants	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
955	Equisetum sylvaticum	Woodland horsetail	Plant	Plant	I	b	Non-tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
956	Fragaria vesca var. americana	Woodland strawberry	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Savannas, Glades and Barrens	8.1.2, 5.3,	Terrestrial Plants / Logging and Wood Harvesting /	/ Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) /	Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3).		
957	Carphephorus tomentosus	Woolly chaffhead	Plant	Plant	I	a	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
958	Carex pellita	Woolly sedge	Plant	Plant	IV	b	Forests and Woodlands, Ponds, Non-tidal Wetlands, Tidal Wetlands	7.3.2, 8.2.1, 7.2.5	Vegetation Succession / Habitat Alteration by Beavers / Drainage in Forest Environments	Natural vegetation succession causing habitat loss for species of early successional habitats. / Flooding/drainage of habitats caused by beavers / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Prevent beavers from constructing dams and remove existing dams as needed to restore original hydrology. Trapping of beavers is often necessary to achieve long-tem habitat restoraton (8.2.1), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
959	Aristida lanosa	Woolly three-awn grass	Plant	Plant	IV	b	Forests and Woodlands, Grasslands, Shrublands, Savannas	7.1.2, 4.1, 1	Suppression in the Fire Regime / Roads and Railroads / Residential and Commercial Development	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
960	Rhynchospora wrightiana	Wright's beaksedge	Plant	Plant	I	a	Forests and Woodlands, Savannas, Shorelines, Ponds, Non-tidal Wetlands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		
961	Dichanthelium wrightianum	Wright's panic grass	Plant	Plant	III	b	Ponds, Non-tidal Wetlands, Urban Lands	4.2, 7.3.2, 7.2.5	Utility and Service Lines / Vegetation Succession / Drainage in Forest Environments	Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
962	Mnesithea rugosa	Wrinkled jointgrass	Plant	Plant	I	a	Forests and Woodlands, Savannas, Riparian and Floodplains, Shorelines, Non-tidal Wetlands, Croplands	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

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1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
963	Stachys matthewsii	Yadkin hedge-nettle	Plant	Plant	I	b	Forests and Woodlands, Grasslands, Shrublands, Non-tidal Wetlands	7.3.2, 4.2, 8.1.2	Vegetation Succession / Utility and Service Lines / Terrestrial Plants	Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. /	Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2),Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2).		
964	Ilex vomitoria	Yaupon	Plant	Plant	IV	b	Forests and Woodlands, Shrublands, Savannas, Beaches and Dunes	11, 6.1, 1	Climate Change and Severe Weather / Recreational Activities / Residential and Commercial Development	Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change. / Activities with generally low ecological impact that are conducted in natural areas for recreational purposes away from road networks (Threat 4). To be distinguished from Threat 1.3, which is a source of pressure primarily on habitats, whereas recreational activities have a more impact on individuals of a species (disturbance, mortality) and, to a lesser extent, habitats. / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11), Educate the public on the importance of recreational impacts in protecting natural areas. Support legislation and implement strategies to reduce the negative impacts of recreation in natural areas. Carefully plan recreational infrastructure such as trails to avoid imapcts to sensitive species (6.1), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
965	Geum aleppicum	Yellow avens	Plant	Plant	I	b	Forests and Woodlands, Savannas, Riparian and Floodplains, Non-tidal Wetlands	5.3, 8.1.2, 1	Logging and Wood Harvesting / Terrestrial Plants / Residential and Commercial Development	Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / / This threat refers to all human settlements (cities, towns, etc.) or non-agricultural land uses with a substantial ecological footprint. It includes habitat conversion that is associated with early phases of development (deforestation, filling/excavation, drainage, etc.), as well as infrastructure use, maintenance and subsequent impacts that are related to the presence of infrastructure (e.g., birds flying into window) Excludes transportation- and pollution-related issues.	Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support legislation and efforts to protect high-quality natural areas from development. Provide detailed data on the locations of sensitive species to planners and regulatory agencies so these resources can be avoided (1).		
966	Paronychia virginica var. virginica	Yellow nailwort	Plant	Plant	I	b	Glades and Barrens, Cliff and Talus	7.1.2, 8.1.2, 4.1	Suppression in the Fire Regime / Terrestrial Plants / Roads and Railroads	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / / Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and about the mechanisms of spread. Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species. Support efforts to increase the availability of locally native seeds and plants (8.1.2), Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1).		
967	Spiranthes ochroleuca	Yellow nodding ladies'-tresses	Plant	Plant	III	b	Forests and Woodlands, Grasslands, Shrublands, Savannas, Glades and Barrens	4.2, 7.1.2, 7.3.2	Utility and Service Lines / Suppression in the Fire Regime / Vegetation Succession	Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions. / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats.	Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2), Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
968	Sarracenia flava	Yellow pitcher plant	Plant	Plant	I	b	Savannas, Non-tidal Wetlands, Savannas	7.1.2, 7.3.2, 4.2	Suppression in the Fire Regime / Vegetation Succession / Utility and Service Lines	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. / Linear networks for transportation energy and various resources, including their rights-of-way. Possible impacts: electrocution, barrier to dispersal, habitat modification/loss, fatal collisions.	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2), Manage utility rights-of-way in a manner that preserves native plant communities as much as possible. This may include mechanical methods (mowing) as well as the targeted use of herbicide to control saplings. Care must be used with herbicide to avoid impacts to rare species (4.2).		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	**Scientific_Name**	**Common_Name**	**Grouping**	**Type**	**Tier**	**COR**	**Habitats**	**Threat_Code**	**Threat_Description**	**Threat_Long**	**Actions**	**Working_Lands**	**Notes**
969	Carex flava	Yellow sedge	Plant	Plant	I	b	Non-tidal Wetlands	4.1, 7.3.2,	Roads and Railroads / Vegetation Succession /	Development, maintenance, and presence of the surface transportation network. The impact of rights-of-way may vary according to their size. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Support efforts to limit the environmental impacts of construction and maintenance of transportation corridors. Avoid broad-scale herbicide treatments along transportation rights-of-way. Avoid using non-native seed mixes. Plant only locally native species (4.1), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		
970	Ranunculus flabellaris	Yellow water crowfoot	Plant	Plant	II	c	Riparian and Floodplains, Headwater Streams, Ponds, Non-tidal Wetlands, Urban Lands	9, 8.1.4, 7.2.5	Pollution / Aquatic Plants / Drainage in Forest Environments	Threats that are associated with the introduction of foreign or excess material/energy from point and non-point sources. Threats that are posed by pollution are typically correlated with other human activities listed in the other sections (e.g., air pollution from cars, water pollution from sewage, agricultural effluents). Although there is a direct correlation between pollution and these other threats, their impact (scope and severity) is often evaluated separately from the sources activity. / / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Support legislation efforts aimed at regulating and reducing water pollution. Increase funding and staff for water quality compliance. Increase funding for the repair of malfunctioning infrastructure and lessening pollution through projects such as stormwater treatment facility upgrades (9), Educate the public about the negative impacts that exotic and invasive species have on ecosystems and mechanisms of spread (boats, aquarium plants, etc.). Support efforts to prevent the introduction and spread of exotic and invasive species. Prohibit the sale of invasive species. Support efforts to eradicate exotic and invasive species (8.1.4), Discourage the drainage of wetlands and associated saturated habitats and restore original hydrologic conditions to those habitats previously drained. In many cases, hydrologic manipulation is done in areas not classified as jurisdictional wetlands and therefore with a lesser degree of protection. Policies that enhance protection of such non-jurisdictional areas should be considered (7.2.5).		
971	Diplophyllum taxifolium	Yew-leaved earwort	Plant	Plant	I	b	Forests and Woodlands, Cliff and Talus	6.1.3, 5.3, 11	Recreational Use of Cliffs and Rock Faces / Logging and Wood Harvesting / Climate Change and Severe Weather	e.g., rock climbing, hang-gliding / Harvesting trees/other forest species in natural environments for timber or fiber outside of plantations (Threat 2.2). Includes cutting and the use of machinery, as well as wood storage and debris management, excluding their transport (Threat 4.1) and associated erosion (Threat 9.3) / Threats from major changes in ecosystems and severe climate/weather events outside of the natural range of variation that could harm species or habitats. May or may not be related to climate change.	Limit rock climbing in sensitive natural areas. Educate the rock climbing community on the fragility of cliff habitats and the sensitive species they support (6.1.3), Support efforts to harvest timber sustainably. Avoid logging mature forests. During timber harvests, use low-impact logging methods that are designed to reduce soil compaction/rutting and erosion. Minimize the spread of invasive species along roads and skid trails through post-harvest monitoring and control (5.3), Educate the public on the importance of protecting natural habitats. Advocate for and support efforts to address the climate crisis. Support legislation that reduces the production of heat-trappping particulates and encourages positive lifestyle choices through monetary incentives. Large-scale, industrial emissions should be targeted along with more dispersed sources (11).		
972	Tradescantia subaspera	Zigzag spiderwort	Plant	Plant	IV	b	Forests and Woodlands, Savannas	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Educate the public on the necessity of fire to restore and maintain healthy ecosystems. Support efforts to increase prescribed burning and reduce unecessary fire suppression. The use of prescribed fire as a wildfire preventative measure should also be made more widely known (7.1.2), Implement prescribed burning and thinning in natural areas at risk of succession. Increase the level of sunlight reaching the understory (7.3.2).		