

**Recommendation for the Designation of  
Virginia Spiraea  
*Spiraea virginiana* Britt.  
as a Virginia Species of Greatest Conservation Need**

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The Virginia Department of Wildlife Resources, with support from the Virginia Department of Conservation and Recreation-Division of Natural Heritage, recommends the addition of Virginia Spiraea (*Spiraea virginiana* L.) to Virginia's list of Species of Greatest Conservation Need as a tier **L-B\*** species (Appendix 1).

Justification

Species Summary

*Spiraea virginiana* (Virginia Spiraea; G2/S1, Fed LT/State LE) (Appendix 2) was listed as Federally Threatened by the U.S. Fish and Wildlife Service on June 15, 1990 due to existing and projected habitat impacts as well as its limited reproductive capability and small, isolated populations (USFWS, 1990). *Spiraea virginiana* is ranked G2 (imperiled) by NatureServe and the Natural Heritage Network, meaning that it is at high risk of extinction on a global scale (NatureServe, 2023). This shrub in the Rose family (Rosaceae) is restricted to high-energy scour habitats along the margins of rivers and streams in seven states ranging from Ohio south to Georgia. It has extremely reduced reproductive potential due to low seed production and viability; it spreads largely by vegetative means. Most populations are therefore suspected of being clones and are often well isolated from other populations (USFWS 1992). Alteration of the dynamic flood regime found in free-flowing rivers is the main threat to the species. Since *Spiraea* is a poor competitor and not tolerant of shade, occasional removal of other vegetation by drastic flooding is needed. Exotic species are a particular problem due to their increased ability to outcompete *S. virginiana* for space and light. Colonies of *Spiraea* may expand due to the clearing of adjacent vegetation, such as in rights-of-way, but such increases are subject to the whims of management and may not be permanent.

Trends

There are five extant occurrences of *Spiraea virginiana* in Virginia, two of which have poor estimated viability (VA DCR 2023). Nearly 80 extant occurrences are known range-wide, of which four are historical and two extirpated, including the Alabama and Pennsylvania populations. About half of the extant occurrences have poor viability which may indicate small population size, declining habitat quality, or ongoing threats. During the most recent survey, 13 populations were not found. This could be due to normal logistical challenges, or it could indicate declines in plant numbers or extirpation of populations (Natureserve 2023). Survey data from all seven states allows a comparison of population data between 1992 and 2019. Despite an incomplete census, most state experts characterized their populations as stable based on field surveys, with a far lesser number characterizing them as decreasing. At the population level, there are no standardized methods for determining absolute or relative abundance, allowing for only coarse measures of change, even at this small scale. This is largely due to the growth strategy of the plant (USFWS 2021).

### Conservation Action

The main conservation action recommended for *Spiraea virginiana* is protecting its habitat, which means protecting free-flowing rivers from being impounded and by curbing erosion and sedimentation. In the case of legacy dams or other man-made impediments, they should be removed where feasible to restore formerly suitable habitat. Invasive exotics should be removed as needed and impacts from trampling should be mitigated.

High-energy river habitats in Virginia are under surveyed and it is likely that more populations exist. Populations have been discovered on foot, but large amounts of habitat are not accessible over land and need to be searched for by boat. The ability to detect *Spiraea* relies on the presence of fertile colonies, so any surveys will need to be timed correctly. Finding these populations will increase the chances for their conservation.

### Summary

*Spiraea virginiana* (Virginia Spiraea) is proposed for inclusion in the Virginia State Wildlife Action Plan as a tier 1-B species due to its threatened habitat, restricted range, and susceptibility to water quality impacts.

**This species is found in the LENOWISCO, Cumberland Plateau and Mount Rogers Planning District Commissions.**

### References

NatureServe. 2023. NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.135631/Spiraea\\_virginiana](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.135631/Spiraea_virginiana) [Accessed: Apr. 19, 2023].

United States Fish and Wildlife Service (USFWS). June 15, 1990. Threatened status determined for *Spirea virginiana* (Virginia Spiraea). Federal Register Vol 55 (Number 116): 24241-24247.

U.S. Fish and Wildlife Service. 1992. Virginia Spiraea (*Spiraea virginiana* Britton) recovery plan. Newton Corner, Massachusetts. 47 pp.

U.S. Fish and Wildlife Service. 2021. Virginia Spiraea (*Spiraea virginiana* Britt.) 5-Year Review: Summary and Evaluation. Virginia Field Office, Gloucester. Online. [Available: [https://ecos.fws.gov/docs/tess/species\\_nonpublish/3626.pdf](https://ecos.fws.gov/docs/tess/species_nonpublish/3626.pdf)]

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\*Rank Tier 1-B based on State Endangered status, G2/S1 rank, and Very High RSGCN conservation concern; as far as the B rank, on the ground conservation strategies have been identified but they involve large scale and perhaps unrealistic hydrologic protections