



# Boshers Dam Fishway Facts



- Boshers Dam was built circa 1823.
- Historically, the dam served as part of the canal navigation system as well as water power for a mill site, but it effectively blocked the spawning run migration of American Shad and other fish species.
- Currently, the dam provides pool depth for a Henrico County drinking water intake as well as an alternate source of drinking water for the City of Richmond.
- There are two Dept. of Wildlife Resources (formerly DGIF) public boat access sites along the 9-mile-long impoundment. There are multiple private ramps and docks as well.
- Dam removal was not an option for fish passage in this case.
- The elevation of the crest of the dam is 113' and the dam is in the 114<sup>th</sup> river mile.
- The dam is 10' high.
- Boshers Dam is 900' wide and while it's in Henrico County it's owned by the City of Richmond.
- The Vertical Slot Fishway was built in 1998 and opened for its inaugural season in 1999.
- For the first time in almost 200 years fish could freely swim upstream!
- The major partner group consisted of the Virginia Department of Game and Inland Fisheries (now DWR), the City of Richmond and the James River Association.
- The USFWS provided critical design conception and consultation.
- Timmons Group provided final design of the fishway.
- English Construction built the fishway.
- Multiple private, government, corporate and NGO supporters helped make this project possible.
- Total cost for design and construction was approximately \$1.5 million.
- Additional attraction flow up to 150 cubic feet per second passes through a pipe under the fishway and mixes with fishway flow (about 30 cfs) at the entrance to help fish find the fishway.
- Each pool is 12' long by 10' wide and the floor slope is a gentle 16:1 (6.25%).
- Fish do not have to jump as they swim through the vertical slots between pools and gain 9" in elevation with each pass up to the next pool ultimately exiting the fishway back into the James.
- The vertical slot design makes the fishway self-regulating during spring flows.
- The Boshers fishway completed passage through the James River Fall Zone at Richmond and provided access to 137 miles of the James River plus over 150 miles of major tributaries.
- Access to critical spawning habitat for species like American Shad is vitally important to giving migratory species a chance to recover.
- Digital video collected by DWR at the viewing window during the spring migration is reviewed post season to generate a run count estimate for all the species of fish that use the fishway.
- At least 30 species of fish pass through the fishway including American Shad, Striped Bass, Sea Lamprey (actually native to VA), Gizzard Shad, Smallmouth Bass, Longnose Gar, Quillback (sucker family), Blue Catfish and American Eel.
- More than 200,000 Gizzard Shad, an important forage fish, have passed through the fishway in some seasons at a rate as high as >3,000 per hour! An estimated 2.3 million fish have used the fishway since 1999.
- **Shad Cam** provides an opportunity for the public to get a glimpse of the fish as they continue their migratory journey up the James River ([dwr.virginia.gov/shad-cam/](http://dwr.virginia.gov/shad-cam/)).
- There is a portage pathway around the dam available to paddlers, but the fishway and dam is off limits to the public outside of guided tours.