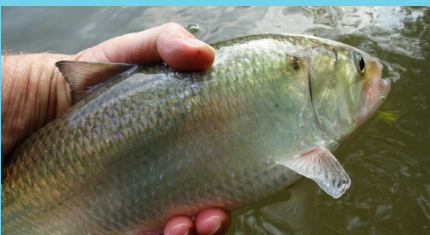


# BRINGING BACK AMERICAN SHAD

After more than a year of collaborative efforts, the James River Association is encouraged to share *A Framework for the Recovery of American Shad (Alosa sapidissima) in the James River, Virginia*; a recovery plan and guide for the long-term effort toward restoration of the American shad population in the James.

## AMERICAN SHAD HISTORY AND DECLINE

The American shad was once a major commercial fishery along the Atlantic coast, holding economic, cultural, and ecological significance in Virginia's rivers and the Chesapeake Bay. Due to a significant drop in the American shad population in the James River in the 1980s, a fishing ban was imposed in 1992, followed by years of attempts to boost American shad in the James through stocking; however, these efforts proved unsuccessful, leading to their discontinuation in 2017. Recently, a 2021 VIMS assessment revealed that the American shad population in the James River had fallen to 0% of its targeted goal, underscoring the need for an American shad recovery plan in the James.



## OVERVIEW OF PLAN CONCLUSIONS

- The recovery plan identifies several principal factors likely responsible for the decline of American shad in the James, including limitations in habitat access, impacts from invasive species, and challenges with surface water intakes.
- This recovery plan provides recommendations to enhance American shad stocks in the James River; notably, a need for further study of American shad early life history and a suitability assessment of existing habitats before significant restoration efforts can begin.
- The proposed recommendations in the plan can benefit American shad stocks and other fish species in the James River, such as other river herring species, striped bass, sturgeon, and more.
- Climate change is identified as a contributing factor, affecting shad and other species during the spawning season as well as in early life-stage development and beyond. Addressing this complex issue requires a strong and unified effort from partners and agencies.



# NEXT STEPS



Scan to learn more about  
American shad

- **Fund American Shad Projects in the James:**
  - Existing Spawning Habitat Assessment (\$678k, VIMS)
  - Evaluate Impacts of Climate Change on American shad (\$77k VIMS)
  - Continue & Expand American Shad Sampling Efforts (\$258k+, DWR)
  - Over \$1M for other necessary projects called for in the recovery plan\*
- **Ensure DEQ requires assessments of the cumulative impacts of existing and proposed water intakes on the river ecosystem and fragile species like American shad.**
- **Establish FDA regulation for Blue Catfish Processing, as opposed to the current costly and cumbersome USDA oversight for the fledgling industry.**

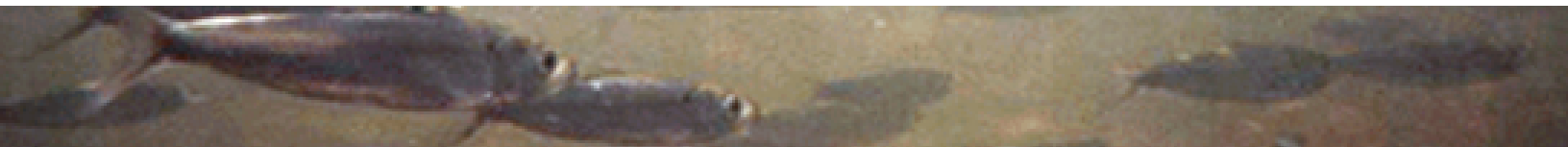
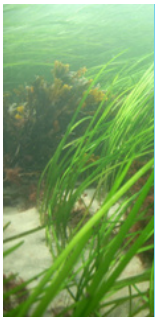


Photo: U.S. Fish and Wildlife Service

## HABITAT ACCESS & SPAWNING GROUNDS



American shad are anadromous, migrating from the ocean to inland waters for spawning, and predominantly return to the waters they were born in. They largely spawn in the main stem of rivers and favor gravelly and rocky river bottoms for their eggs. Despite the opening of several dams with fish passages on the James River in the last two decades, a significant portion of the historical shad habitat remains challenging or wholly inaccessible for them. Furthermore, the accessible habitat is increasingly at risk due to stressors like sediment pollution, which plagues the James River in particular.

Photo: NOAA

## INCREASED RISK IN THE JAMES RIVER



For American shad that call the James River home, there are additional threats that hinder the species' ability to bounce back from other obstacles. Industrial water intake structures, several of which take in 100 million gallons a day or more from the river, can capture and kill aquatic organisms, including juvenile fish and fish eggs. Predator species like the invasive and troublingly abundant Blue catfish can be high sources of mortality for American shad at these fragile life stages as well.

Photo: U.S. Environmental Protection Agency

## CLIMATE CHANGE IMPACTS & AMERICAN SHAD



Climate change is affecting the ocean and causing problems for aquatic wildlife. The rise in ocean temperatures is impacting the growth and health of many fish, as well as changing their migration patterns. In the Chesapeake Bay, American shad, one of these anadromous fish, are now migrating earlier than before, and their size and age structure are shifting, which can negatively affect their reproductive success, further contributing to the “death by a thousand cuts” for the species in the James River.