

Updated January 4, 2021

U.S. Army Corps of Engineers Invasive Species Efforts

An *invasive species* is a nonnative species that does or is likely to cause economic or environmental harm or harm to human health. Invasive species impact terrestrial and aquatic—including marine and freshwater—systems. As society has become more connected, opportunities for the spread of invasive species have increased (e.g., navigation activities can transport species and introduce them to multiple different watersheds and waterbodies). After introduction, invasive species may become established and spread; it can be costly and difficult (or impossible, in some cases) to control or eradicate them. Many federal and nonfederal agencies managing land and water undertake efforts to prevent the introduction and spread of invasive species or, upon detection of an invasive species, devote resources to control and eradication efforts. For more information on invasive species, see CRS In Focus IF11011, *Invasive Species: A Brief Overview*.

The U.S. Army Corps of Engineers (USACE), part of the Department of Defense, develops and maintains civil works projects in the United States principally to improve navigable channels, reduce flood and storm damage, and restore aquatic ecosystems. USACE is the steward of approximately 12 million acres of public lands and waters at hundreds of water resources projects nationwide. Invasive species can impact USACE projects by outcompeting native species, clogging water pipes, and affecting water quality and recreation. Invasive species affecting USACE projects include Asian carp, zebra and quagga mussels, feral hogs, and hydrilla, among others. USACE projects also can serve as a vector for transporting invasive species that damage other water bodies. Congress has authorized various programs for USACE invasive species activities and, starting in recent years, has increased the scope of the authorizations as well as appropriations for these activities. This In Focus presents information on USACE invasive species funding and selected authorities, programs, and projects, as well as related legislative action in the 116th Congress.

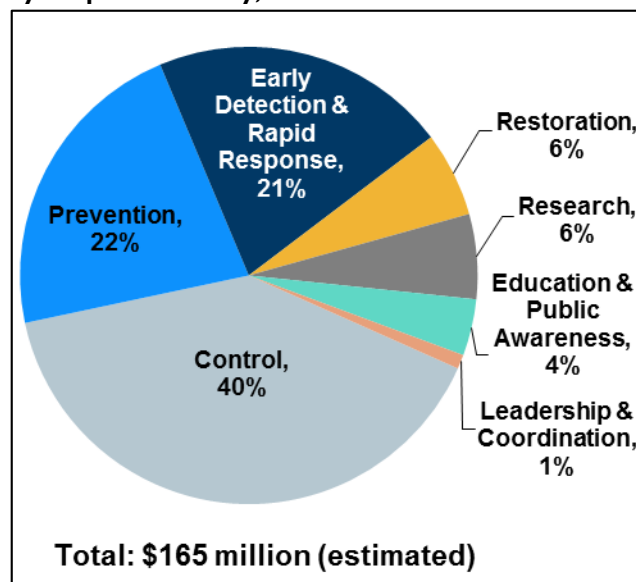
USACE Invasive Species Activities

USACE generally undertakes efforts to prevent or reduce the introduction and establishment of invasive species at its projects, pursuant to its nationwide invasive species policy, engineering regulations, and project and programmatic authorizations (some of which authorize specific invasive species control and eradication activities). USACE typically funds invasive species work for individual projects through project funding lines in the Operation and Maintenance (O&M) account; project planning documents address the nature of work at the project level. USACE also pursues invasive species research that may involve field studies at USACE projects. As part of its regulatory responsibilities,

USACE also may require applicants to consider invasive species control.

USACE spent an estimated \$164.9 million on invasive species activities in FY2020. Invasive species spending can be divided by response type. **Figure 1** shows the spending breakdown for the type of USACE invasive species work in FY2020.

Figure 1. USACE Invasive Species Estimated Spending by Response Activity, FY2020



Source: CRS, with data from USACE, Engineer Research and Development Center.

Note: USACE estimates spending for fiscal years based on previous fiscal year expenditures, projections of work, and any known additions of funding.

USACE Invasive Species Programs

USACE has several programs that direct specific invasive species activities. Congress funds these programs annually.

Aquatic Plant Control Program. Section 104 of the River and Harbor Act of 1958, as amended (33 U.S.C. §610), authorizes the Aquatic Plant Control Program, a program for the prevention, control, and progressive eradication of noxious aquatic plant growths and aquatic invasive species in U.S. waters. The program supports research and development of management solutions for invasive aquatic plants that affect USACE missions. The Water Resources Reform and Development Act of 2014 (P.L. 113-121) amended this authority to also allow for USACE to establish watercraft inspections stations in selected river basins to prevent the spread of aquatic invasive species, including plants and animals (such as quagga and zebra

mussels) at USACE reservoirs. These watercraft inspection stations are to be constructed, operated, and maintained with a 50% federal cost share. The America's Water Infrastructure Act of 2018 (AWIA 2018; P.L. 115-270) authorized annual appropriations of \$110 million, designating \$90 million for watercraft inspection stations in selected river basins in the western United States. This program was further amended in the 116th Congress (see "Legislative Action in the 116th Congress"). For FY2021, Congress appropriated \$25 million for the Aquatic Plant Control Program in the Construction account, including \$15 million for watercraft inspection stations.

Aquatic Nuisance Research Program. The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, as amended by the National Invasive Species Act of 1996, authorized the Aquatic Nuisance Species Research Program (16 U.S.C. §4722). An expansion of the former Zebra Mussel Research Program, the program supports research on new methods for prevention, detection, monitoring, and control of invasive aquatic animals, as well as harmful algae and cyanobacteria, that impact navigable waters, infrastructure, and associated water resources. USACE then disseminates this information to USACE field offices. Program activities do not require a nonfederal cost share. AWIA 2018 directed USACE to implement a five-year harmful algal bloom (HAB) technology development demonstration program under the Aquatic Nuisance Research Program. Congress has appropriated funding for the program in the O&M account at \$16 million in FY2020 and \$17 million in FY2021; explanatory language accompanying the appropriations acts directed the majority of the funding to address HABs.

Removal of Aquatic Growth Program. The Removal of Aquatic Growth Program is a navigation O&M authority as provided in several public laws to control both invasive and nuisance native plants that are negatively impacting USACE navigation projects in Gulf Coast states, Georgia, and South Carolina. In FY2021, Congress provided \$4.6 million for USACE to remove aquatic growth in Louisiana and Florida at full federal expense.

Example USACE Invasive Species Projects

In some cases, Congress has authorized USACE to undertake invasive species control efforts at specific federal water resource projects. An example is USACE efforts in the Chicago area to control the transfer of aquatic invasive species, including Asian carp, between the Great Lakes basin and the Mississippi River basin. Congress funded USACE's construction and operation of underwater electric barriers in the Chicago Sanitary and Ship Canal, which is a hydrologic link between the Great Lakes and the Mississippi River, to help prevent the spread of invasive species. Congress further authorized a larger USACE study of potential methods to prevent the aquatic invasive species transfer between the basins, known as the Great Lakes and Mississippi River Interbasin Study (GLMRIS). GLMRIS recommendations included a "Technology Alternative," which would provide nonstructural measures, an acoustic fish deterrent, an air bubble curtain, an engineered channel, an electric barrier, a flushing lock, and boat launches, at Brandon Road Lock and Dam. In 2019, the USACE Chief

of Engineers signed a report recommending the Technology Alternative with a cost of \$830.8 million (FY2019 levels) at a 65% federal cost share for construction and an 80% federal cost share for operation, maintenance, repair, rehabilitation, and replacement. (See "Legislative Action in the 116th Congress" for authorization of the project.)

Legislative Action in the 116th Congress

The John D. Dingell, Jr. Conservation, Management, and Recreation Act (P.L. 116-9) amended the Fish and Wildlife Coordination Act (16 U.S.C. §§661 et seq.) to direct the Secretary of the Army to develop a strategic plan for the implementation of an invasive species program to achieve an annual net reduction of invasive species populations on land or water managed by USACE. The amendment also directed the Secretary to carry out activities on land and water directly managed by USACE. The America's Conservation Enhancement Act (P.L. 116-188) amended the Fish and Wildlife Coordination Act to authorize \$2.5 million annually for FY2021 through FY2025 for USACE invasive species activities authorized by P.L. 116-9.

The Water Resources Development Act of 2020 (WRDA 2020; Division AA of P.L. 116-260) included provisions related to USACE invasive species efforts. WRDA 2020 authorized the Brandon Road Project, described above, with the federal construction cost share at 80% (compared with 65%, as recommended in the Chief of Engineer's report).

WRDA 2020 called for periodic updates to USACE's invasive species policy and amended an aquatic invasive species research provision enacted in AWIA 2018 (33 U.S.C. 2263a). The law also authorized the South Florida Ecosystem Restoration Task Force to research and implement actions on priority invasive species, and it amended the authority for a multiagency effort combat the spread of Asian carp in the Upper Mississippi and Ohio River basins (16 U.S.C. §4701 note) to include the entire Mississippi River and its six sub-basins.

WRDA 2020 increased the annual authorization of appropriations for the Aquatic Plant Control Program from \$110 million to \$130 million, which is to be allocated among watercraft inspection and decontamination stations in specified regions. The law also amended the authority to authorize \$50 million annually from FY2021 through FY2024 for USACE to enter into partnerships to control or eradicate invasive species in certain western river basins and to authorize a pilot program for management of invasive species at public facilities associated with USACE reservoirs in the Upper Missouri River Basin. The law authorized several other pilot programs, including an Asian carp prevention and control pilot program using innovative technologies and a terrestrial exotic weed pilot program.

USACE may develop guidance that describes how the agency will implement WRDA 2020 provisions. Through the appropriations process, Congress may consider which authorized programs to fund and at what level. Congress also may engage in oversight of the implementation of new or amended authorities and review the effectiveness, efficiency, and priorities of USACE invasive species activities.

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