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IN FOCUS

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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*.

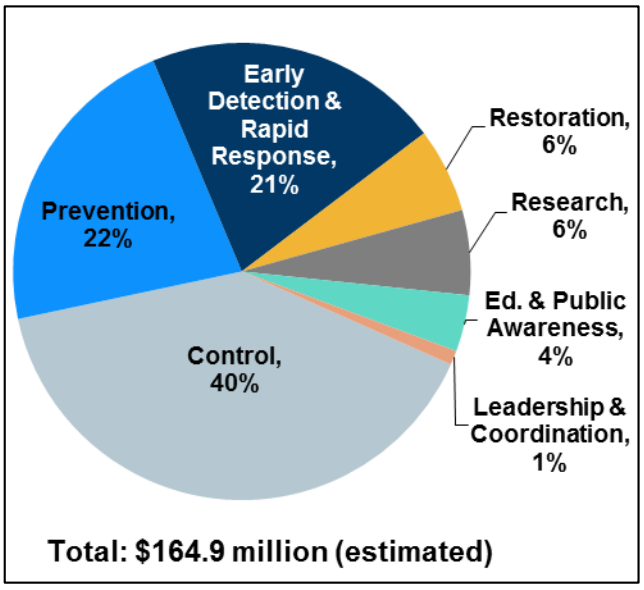
The U.S. Army Corps of Engineers (USACE), part of the Department of Defense, develops and maintains civil works projects in the United States principally to improve navigable channels, reduce flood and storm damage, and restore aquatic ecosystems. USACE is the steward of approximately 12 million acres 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. 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. Other USACE activities (e.g., regulatory activities) also may take invasive species into consideration.

USACE spent an estimated $164.9 million on invasive species activities in FY2020. Spending for invasive species is included in many USACE activities; for example, 65% of USACE's spending on invasive species was included in activities focused on navigation, 25% was included in activities for ecosystem restoration, and 10% was included in other activities. Invasive species spending also 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: 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. These programs receive funding annually.

Aquatic Plant Control Program. The River and Harbor Act of 1958, as amended (33 U.S.C. §610), authorizes the Aquatic Plant Control Program, a comprehensive program for the prevention, control, and progressive eradication of noxious aquatic plant growths and aquatic invasive species in U.S. waters. The program undertakes 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 (including 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 (P.L. 115-270) authorized annual appropriations of $110 million, designating $90 million for watercraft inspection stations in five selected river basins in the western United States. In FY2020, Congress appropriated $24 million for the Aquatic Plant Control Program in the Construction account, including $15 million for watercraft inspections 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 researches 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. The program then disseminates this information to USACE field offices. Program activities do not require a nonfederal cost share. Following enactment of the America's Water Infrastructure Act of 2018, which directed USACE to implement a five-year harmful algal bloom technology development demonstration program under the Aquatic Nuisance Research Program, Congress increased appropriations for the program in the O&M account from $650,000 per year in FY2015 through FY2018 to $3 million in FY2019 and $16 million in FY2020 (with explicit explanatory language directing the increased funding to address harmful algal blooms).

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. USACE reported in 2019 that the program has provided approximately $6 million, annually, for work primarily conducted 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. One notable 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. For example, Congress first authorized and funded USACE's construction and operation of underwater electric barriers in the Chicago Sanitary and Ship Canal, which is a navigable 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. Congress has yet to authorize this 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 a substantive annual net reduction of invasive species populations on land or water managed by USACE. The amendment also directed the Secretary of the Army to carry out activities on land and water directly managed by USACE. America's Conservation Enhancement Act (S. 3051) would amend 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 (H.R. 7575) and the America's Water Infrastructure Act of 2020 (S. 3591) include provisions related to USACE invasive species efforts. Among other provisions, both bills would authorize the GLMRIS Brandon Road project as described above. H.R. 7575 would set the Administration's federal construction cost share at 80% (compared with 65%, as recommended in the Chief of Engineer's report) and allow for the addition or substitution of technologies or measures not described in the feasibility report. S. 3591 would set the federal construction cost share at 75%. Both H.R. 7575 and S. 3591 also contain other invasive species-related provisions. H.R. 7575 would direct the Secretary of the Army to periodically update USACE's Invasive Species Policy, with specific consideration given to updates related to high-altitude lakes and the Tennessee and Cumberland River basins. S. 3591 includes provisions related to invasive species activities at various agencies, including USACE. The bill would amend the authority from P.L. 115-270 directing USACE to conduct and report on aquatic invasive species research. It also would amend the authority for the South Florida Ecosystem Restoration Task Force (Section 528 of the Water Resources Development Act of 1996; P.L. 104-303) to include research and implementation of management, control, and eradication activities to reduce or neutralize the impacts of a priority list of invasive species. The bill would increase the annual authorization of appropriations for the Aquatic Plant Control Program from $110 million to $120 million in each fiscal year, of which $100 million annually would be authorized for watercraft inspection stations in specified regions. The bill also would authorize USACE to enter into partnerships to control or eradicate invasive species that adversely impact water quantity or quality in certain western river basins and authorize several pilot programs, including an Asian carp prevention and control pilot program using innovative technologies.

Anna E. Normand, Analyst in Natural Resources Policy
R. Eliot Crafton, Analyst in Natural Resources Policy

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