

Army Corps of Engineers: Better Data and Planning Needed to Combat Aquatic Invasive Species

GAO-24-105960

Report to Congressional Requesters

November 6, 2023

Why This Matters

Harmful non-native aquatic plants and animals, known as aquatic invasive species, can pose a significant threat to infrastructure, such as hydroelectric dams, and the environment. Quagga mussels and zebra mussels (see fig. 1) in particular are species of great concern in the U.S. because of their costly and destructive effects on infrastructure and the environment, including native species. These mussels can deplete the food source for certain fish and, in turn, the species that prey on those fish, creating an adverse domino effect in the food chain.

Figure 1: Zebra Mussels Colonizing the Surface of a Clam



Source: Minnesota Department of Natural Resources. | GAO-24-105960

Quagga and zebra mussels have spread rapidly across the country since they were first discovered in the Great Lakes in the late 1980s.¹ These mussels are now present in every major river basin in the U.S. except the Columbia River Basin in the northwest, according to officials in the U.S. Army Corps of Engineers (Corps), which is responsible for controlling and managing the spread of aquatic invasive species in the navigable waters it manages. The mussels typically are spread by recreational watercraft such as boats, canoes, and Jet Skis that have been in infested waters. They can also be spread by commercial watercraft such as barges. Once established in a water body, the mussels are extremely difficult to eradicate because they have no natural predators in the U.S. and reproduce rapidly. According to state officials, these mussels can attach to surfaces in about 30 days and colonize in little more than a year.

We were asked to examine efforts the Corps has undertaken to prevent the spread of aquatic invasive species into the Columbia River Basin by recreational watercraft. This report provides information on the Corps' Watercraft Inspection and Decontamination Program and its role in helping to prevent the introduction or spread of quagga and zebra mussels—one of the most significant aquatic invasive species of concern to the Corps—as well as program challenges and opportunities for improvement.

Key Takeaways

- The Corps funds watercraft inspection and decontamination efforts through cost share agreements with nonfederal partners, primarily states that participate in its Watercraft Inspection and Decontamination Program.² States perform all inspection and decontamination activities as well as manage and oversee inspection and decontamination stations.
- According to Corps and state officials, watercraft inspection and decontamination stations have been effective in preventing the introduction of quagga and zebra mussels into the Columbia River Basin. However, we could not determine the extent of any causal relationship between the absence of these mussels from the basin and the use of the stations because of limitations in the data the Corps provided.
- The Corps has experienced challenges collecting data from states, updating program guidance, and planning strategically for the Watercraft Inspection and Decontamination Program.
- We recommend that the Corps (1) in consultation with states, develop a system to collect timely, accurate, and consistent watercraft inspection and decontamination-related data from states in an effective and efficient manner, (2) update its internal guidance to better meet statutory requirements, including placing watercraft inspection and decontamination stations at locations with the highest likelihood of preventing the introduction or spread of aquatic invasive species, and (3) develop a strategic plan that incorporates all basins and waters the Corps is directed to protect under the Watercraft Inspection and Decontamination Program and that includes clear goals and objectives, measurable targets, and accountable milestones.

Background

Aquatic invasive species can damage infrastructure (see fig. 2). The Corps estimated in 2022 that the potential cost to protect hydroelectric facilities, salmon fisheries, and private watercrafts in the Columbia River Basin from quagga or zebra mussel infestation could total approximately \$185 million per year.

Figure 2: Zebra Mussels Clogging a Pipe

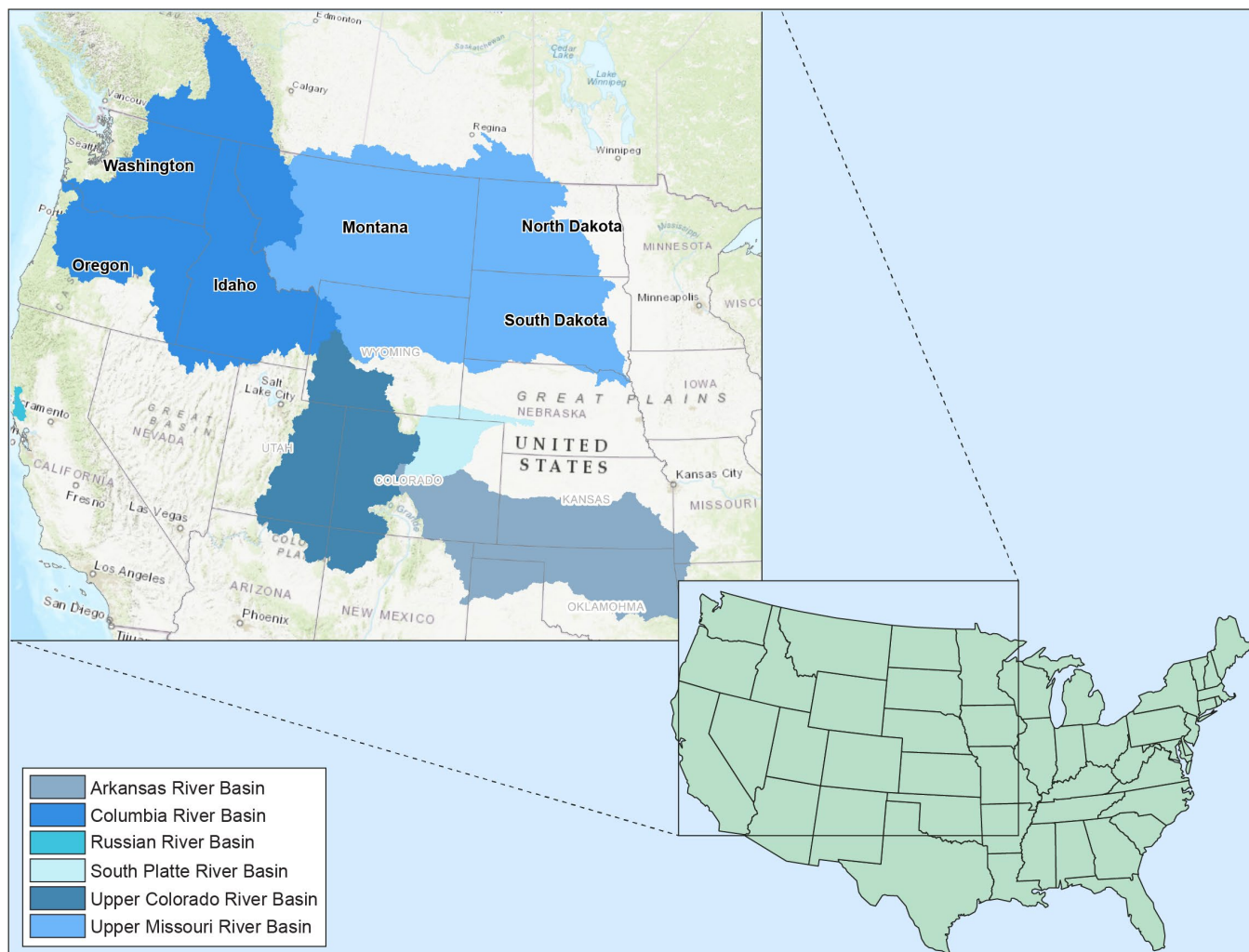


Source: Pro Farm Group. | GAO-24-105960

The Water Resources Reform and Development Act of 2014 amended section 104 of the River and Harbor Act of 1958 to authorize the Corps to use cost share agreements with states to fund the construction, management, and operation of watercraft inspection and decontamination stations in the Columbia River Basin.³ Under subsequent amendments, the Corps is responsible for ensuring these stations are placed at locations with the highest likelihood of preventing the introduction or spread of aquatic invasive species. To carry out its responsibilities, the Corps created its Watercraft Inspection and Decontamination Program.

Under the program, the Corps does not itself build or operate watercraft inspection and decontamination stations. Instead, it reimburses participating states for 50 percent of costs incurred under the cost share agreements.⁴ According to Corps officials, as of August 2023, the Corps had entered into cost share agreements with six states within the Columbia River Basin: Idaho, Montana, Nevada, Oregon, Washington, and Wyoming.⁵ Congress has expanded the Corps' authorization to include five other river basins in the western U.S. and watersheds that adjoin the U.S.-Canadian border (see fig. 3).⁶ Congress also increased funding authorization for the program, from \$20 million in fiscal year 2017 to \$130 million in fiscal year 2022.

Figure 3: River Basins under the Corps' Authority, per the River and Harbor Act of 1958, as Amended.



Source: GAO presentation of U.S. Army Corps of Engineers information. | GAO-24-105960

Congressional appropriators set aside \$20 million for the Corps in fiscal year 2022 for the Watercraft Inspection and Decontamination Program, as table 1 shows. Of that amount, the Corps spent approximately \$6 million—the bulk of which went toward cost share agreements to fund watercraft inspection and decontamination stations, according to Corps officials. They said the remaining balance, about \$14 million, would have been available for use if the Corps was able to finalize economic and environmental impact evaluations.⁷ According to Corps officials, completing these two evaluations can be a lengthy process that involves multiple formal internal agency reviews. Corps officials told us that in June 2023, they completed subsequent evaluations to allow them to add states from the South Platte, Upper Colorado, and Upper Missouri River Basins.

Table 1: Authorizations, Amounts Set Aside from Appropriations, and Expenditures for the U.S. Army Corps of Engineers Watercraft Inspection and Decontamination Program, Fiscal Years 2017-2022

(Dollars in millions)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Program authorizations	20.0	90.0	90.0	130.0	130.0	130.0
Amounts set aside for program from appropriations ^a	5.0	5.0	6.0	18.0	18.0	20.0
Program expenditures ^b	3.7	4.9	4.3	5.4	4.7	5.7

Source: GAO presentation of U.S. Army Corps of Engineers data. | GAO-24-105960

^aIn conference reports accompanying appropriations bills, appropriations committees often direct federal agencies to set aside funding amounts for specific programs or activities from within larger, congressionally approved appropriations. Such funding amounts are generally not legally binding unless incorporated by reference into an appropriations act.

^bProgram expenditures reflect reimbursements to the states within the Columbia River Basin, Corps administrative costs, and costs associated with developing economic and environmental impact evaluations for other basins the Corps is directed to protect (Arkansas, Russian, South Platte, Upper Colorado, and Upper Missouri River Basins).

What measures are being taken to prevent the introduction or spread of quagga and zebra mussels by recreational watercrafts?

Building, locating, and operating watercraft inspection and decontamination stations are the primary measures that states undertake, with financial assistance from the Corps, to prevent the introduction or spread of quagga and zebra mussels by recreational watercraft (see fig. 4). States also conduct public outreach and education to promote behaviors that help prevent the introduction or spread of these mussels.

Figure 4: Roadside Watercraft Inspection and Decontamination Stations and High-Pressure Decontamination Equipment in Idaho



Source: GAO. | GAO-24-105960

States typically locate permanent stations at major points of entry or other high-traffic locations. States may also operate roving stations for holiday weekends or events, such as fishing competitions, that are likely to attract large numbers of recreational watercraft. Authority to require inspections may vary by jurisdiction.

Under standard protocols, inspectors begin by collecting information from the person transporting the watercraft, such as the waterbody where it was last launched and its destination. A visual inspection of the watercraft then takes place, during which its hull, trailer, anchor, engine, and other parts are examined to detect possible infestation. Inspectors also look for standing water, which can contain mussel larvae, particularly in ballast tanks and live wells. They also examine recessed areas of the watercraft, where a rough texture could indicate that juvenile mussels have attached themselves but are not yet visible. Finally, inspectors in some states may use dogs that have been specifically trained to detect quagga and zebra mussels as well as other aquatic invasive species. See figure 5.

Figure 5: State Officials Demonstrating How They Inspect Watercraft for Aquatic Invasive Species



Sources: U.S. Army Corps of Engineers (images 1-3), GAO (image 4). | GAO-24-105960

According to state officials we interviewed, watercraft being transported between locations in Idaho, Montana, Oregon, and Washington are generally considered at low risk of being infested with quagga and zebra mussels. The officials told us that the mussels have not been detected in water samples from these states.⁸ In contrast, watercrafts coming from other parts of the country where mussels are already established are of greater risk, according to these officials.

Under standard protocols, high-risk or infested watercrafts are typically decontaminated using hot water power washes at a temperature and duration that kills mussels at all life cycle stages (see fig. 6).⁹ However, decontamination is not always available at a station, according to Corps officials. In these cases, officials may apply a tamper-evident band or seal placed around the watercraft and its trailer to indicate that it is under quarantine until it has been dry long enough to reliably kill any larval or mature mussels the watercraft may carry.

Figure 6: Inspector Power Washing Watercraft and Draining Standing Water



Source: Minnesota Department of Natural Resources. | GAO-24-105960

Depending on state law, officials may have the power to impound an infested watercraft. They told us that they prefer to do this only as a last resort. Depending on the state, identifying an infested or high-risk watercraft also generates an automated alert message on a shared database, or a phone call by a state official, to alert inspection personnel along its route that the risky watercraft is on its way.

Finally, states also perform public outreach and education to promote better boating practices, such as through their “clean, drain, and dry” campaign (see fig. 7).

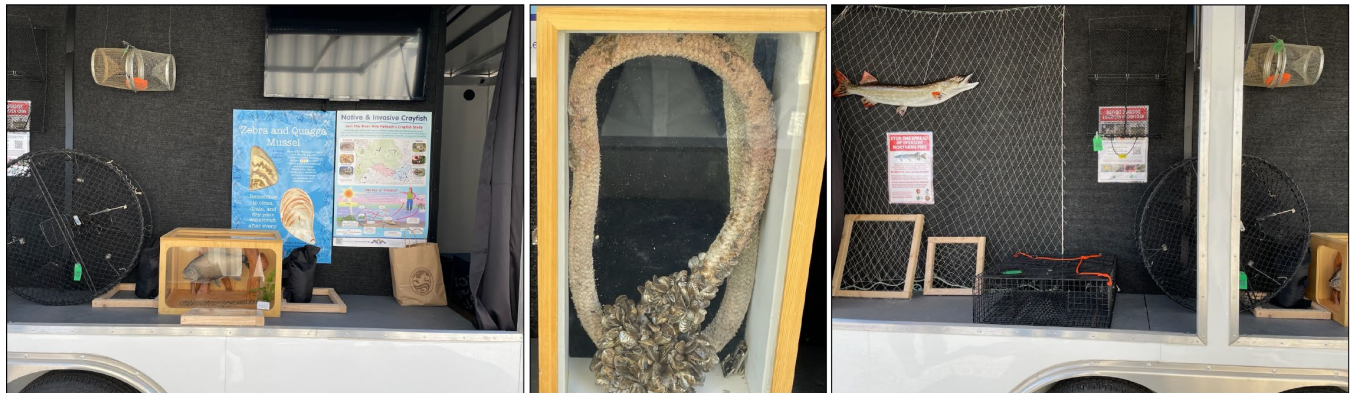
Figure 7: Idaho Signs Promoting Boating Practices to Combat the Spread of Aquatic Invasive Species, including Quagga and Zebra Mussels



Source: GAO. | GAO-24-105960

State officials also interact directly with the public at schools and boating events (see fig. 8). In addition, interactions between boaters and inspectors during inspections are other opportunities to advance public awareness and education about quagga and zebra mussels and other invasive species.

Figure 8: Part of a Touring Educational Exhibit Operated by the State of Washington’s Department of Fish and Wildlife



Source: GAO. | GAO-24-105960

What support does the Corps provide to the states with respect to watercraft inspection and decontamination stations?

The Corps has supported watercraft inspection and decontamination stations by providing 50 percent of the costs incurred through cost share agreements with participating states since 2017. In fiscal year 2022, the Corps spent about \$4.2 million for cost share agreements, as table 2 shows. As stated previously, the Corps does not build or operate the stations and does not provide day-to-day management or conduct oversight of station operations.

Table 2: Watercraft Inspection and Decontamination Program Cost Share Agreements by State, Fiscal Years 2017- 2022						
(Dollars in millions)						
State	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Idaho	0.9	1.2	0.7	1.4	0.5	0.9
Oregon	0.5	0.5	0.5	0.5	0.5	0.4
Montana	1.8	2.2	2.2	2.0	2.2	2.0
Washington	0.4	0.7	0.7	0.8	0.9	0.9
Total payments to states	3.6	4.6	4.1	4.7	4.2	4.2

Source: GAO presentation of U.S. Army Corps of Engineers data. | GAO-24-105960

Note: The Corps finalized new cost share agreements with Nevada and Wyoming in September 2022 and with Colorado, North Dakota, and South Dakota in September 2023, according to Corps officials. These states are not included in this table. Amounts may not sum to total due to rounding.

The cost share agreements have benefited watercraft inspection and decontamination stations in several ways. According to state officials, cost share agreements have helped to extend the operating hours and operating season of existing stations, increasing their ability to inspect more watercrafts for possible infestation. The agreements have also helped states retain personnel by providing benefits or keeping experienced staff on the payroll through the off-season. Finally, the agreements have helped improve worker safety, for example, by supporting the placement of traffic barriers to protect inspection areas at roadside stations.

To what extent have Corps-sponsored watercraft inspection and decontamination stations been effective in helping to reduce the introduction or spread of quagga and zebra mussels?

It is unclear how effective watercraft inspection and decontamination stations are in helping prevent the introduction or spread of quagga and zebra mussels. Both Corps and state officials told us that the continued absence of quagga and zebra mussels in the Columbia River Basin indicates that stations have been effective in preventing their spread. However, we could not determine the extent of any causal relationship between the absence of these mussels from the basin and the use of the stations because of limitations in the data the Corps provided us. For example, Corps officials told us that the Corps does not have readily available data on the exact locations of these stations, nor does it systematically collect inspection-related data, such as the number of interceptions of watercrafts infested with quagga or zebra mussels, which could help determine the effectiveness of the program.

Other factors, including environmental factors, can make it difficult to determine the effectiveness of the stations. For example, low levels of calcium in a waterbody may limit mussel spread. Changes in boater behavior—such as following clean, drain, and dry practices—may also reduce mussel spread.

To what extent does the Corps have the information it needs to implement its Watercraft Inspection and Decontamination Program and how does it plan to address related challenges?

The Corps does not readily have the information it needs to effectively implement its Watercraft Inspection and Decontamination Program, but it has actively discussed how it might address this and other challenges. Specifically, according to Corps officials, the Corps does not have a dedicated system that captures current data on station locations or related activities, such as inspections conducted or specific species identified. The officials said the Corps currently relies on states to provide certain information, but this information is not consistent because states own and manage their data systems, which can differ in the types of data being collected as well as the formats. For example, Corps officials told us that Montana, Oregon, and Washington share a dedicated data system, but these states do not necessarily input consistent data. Idaho uses its own data system, which is integrated with other data systems within Idaho, according to Idaho state officials. State officials stated that both systems predate the Corps program, which began in 2014.

According to Corps officials, the Corps is considering developing its own database to more efficiently collect the data it needs. Corps officials said they need to, among other things, resolve access issues and privacy concerns with states. Officials from one state we interviewed said their state may prefer to leave the Corps' program rather than adopt a new database.

Standards for Internal Controls in the Federal Government call for management to design the entity's information system and related control activities to achieve objectives and respond to risks—in this case, responding to program risks such as an inability to make sound and timely decisions or assess the program's effectiveness.¹⁰ Without a system to collect timely, accurate, and consistent data, the Corps is limited in its ability to assess the effectiveness of its program and respond to inquiries from Congress and others.

To what extent does the Corps have the guidance it needs to implement its Watercraft Inspection and Decontamination Program?

The Corps does not have the guidance it needs to effectively implement its Watercraft Inspection and Decontamination Program because, according to Corps officials, the Corps has not updated its guidance since 2019 to reflect changes as the program has expanded. For example, current guidance does not reflect new basins for which the Corps is responsible or a change in law calling for the Corps to locate stations in areas with the highest likelihood of preventing the spread of aquatic invasive species into and out of waters of the U.S. Additionally, the guidance does not specify how certain key activities, such as identifying prime locations for stations, are to be performed.

Standards for Internal Controls in the Federal Government call for management to implement control activities through policies.¹¹ Specifically, the standards state that management should periodically review policies, procedures, and control activities—such as guidance—for continued relevance and effectiveness in achieving an entity’s objectives or addressing related risk. By updating its program guidance, Corps officials would help ensure the program operates as Congress intended and meets its primary goal of preventing the introduction or spread of aquatic invasive species into waters of the U.S.

How has the Corps strategically planned to achieve the goals for its Watercraft Inspection and Decontamination Program and how does it plan to measure success?

The Corps has begun taking steps to evaluate its Watercraft Inspection and Decontamination Program but has not developed a broader strategic approach for managing the program. For example, in June 2022, the Corps completed an evaluation of new economic and environmental impacts to determine that the states of Nevada and Wyoming should be added to the program within the Columbia River Basin, according to Corps officials.¹² In October 2022, the Corps completed another study to better assess the operational effectiveness and efficiency of the program.¹³ In June 2023, Corps officials informed us that they had completed additional economic and environmental impact evaluations that allowed for the addition of states in the South Platte, Upper Colorado, and Upper Missouri River Basins in the program and that they were working on cost share agreements with these states. Moreover, based in part on our data request for this report, the Corps has started to (1) identify the type of data it needs to better manage its program and (2) standardize states’ reporting so the Corps can better measure the program’s effectiveness.

However, the Corps does not have a strategic approach for managing its Watercraft Inspection and Decontamination Program or for expanding the program across all the river basins and waterways it is to protect under section 104 of the River and Harbor Act of 1958, as amended. For example, the Corps has not defined goals for all activities, identified long-term outcomes and near-term measurable results, or aligned goals across organizational levels. Prior GAO work has highlighted the importance of such steps for agencies to plan for results.¹⁴ This absence of strategic planning is largely due to the Corps’ initial focus on program implementation rather than documentation and accountability, according to Corps officials. By taking a more strategic approach, the Corps would improve its ability to successfully expand its program to all the river basins and waters it is to protect under section 104 of the River and Harbor Act of 1958, as amended, and prevent the spread of quagga and zebra mussels.

Conclusions

The Corps plays an important role in helping prevent the introduction or spread of aquatic invasive species, particularly quagga and zebra mussels, in U.S. waters. Infestation by these species in the Columbia River Basin would be extremely costly, both in terms of damage to infrastructure, such as hydroelectric dams, and the environment. While the Corps has supported states in preventing such an infestation, we identified several areas of concern in the Corps’ Watercraft Inspection and Decontamination Program. Specifically, we identified limited and inconsistent data, in part due to the reliance on state-owned and managed databases, outdated program guidance, and insufficient strategic planning.

By developing its own system, in consultation with states, the Corps could collect reliable data that it can then use in making sound and timely decisions as it expands the program. Updating its program guidance would help the Corps ensure its program operates as Congress intended and meets its statutory goals. Finally, by developing a strategic plan, the Corps would increase its prospects of successfully expanding the program to all river basins and waterways it is to protect.

Recommendations

We are making the following three recommendations to the Department of Defense.

The Assistant Secretary of the Army for Civil Works should ensure that the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers develop a system, in consultation with states, to collect timely, accurate, and consistent watercraft inspection and decontamination-related data from states in an effective and efficient manner. (Recommendation 1)

The Assistant Secretary of the Army for Civil Works should ensure that the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers update the Corps' internal guidance to better meet statutory requirements, including placing watercraft inspection and decontamination stations at locations with the highest likelihood of preventing the introduction or spread of aquatic invasive species. (Recommendation 2)

The Assistant Secretary of the Army for Civil Works should ensure that the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers develop a strategic plan that incorporates all basins and waters the Corps is directed to protect under the Watercraft Inspection and Decontamination Program and that includes clear goals and objectives, measurable targets, and accountable milestones. (Recommendation 3)

Agency Comments

We provided a draft of this report to the Department of Defense for review and comment. In its comments, reproduced in appendix I, the department concurred with our recommendations, noting that it would be addressing the substance of our recommendations by developing a program management plan that would, among other things, (1) ensure that accurate and uniform data is collected and maintained, (2) improve the execution of future related processes, and (3) provide strategic direction to its Watercraft Inspection and Decontamination Program by including goals, objectives, milestones, and oversight of cost share partners. The department also provided technical comments that we incorporated, as appropriate.

How GAO Did This Study

To provide information on the Watercraft Inspection and Decontamination Program, we reviewed relevant laws, particularly section 104 of the River and Harbor Act of 1958, as amended, to identify Corps authorities aimed at helping to prevent the spread of quagga and zebra mussels in river basins and waters under the Corps' authority, including its authority to use cost share agreements. Specifically, we reviewed the Corps' fiscal authorizations, appropriations, and expenditures for the Corps Watercraft Inspection and Decontamination Program for fiscal years 2017 through 2022. We also reviewed the Corps' cost share agreements with state partners—Idaho, Montana, Oregon, and Washington—from 2017, when the Corps implemented its first cost share agreement under section 104 of the River and Harbor Act of 1958, as amended, through 2022, to learn about actions taken by the Corps in helping to fund watercraft inspection and decontamination-related activities carried out by its state partners at Corps-sponsored inspection and decontamination stations.¹⁵

We reviewed authorizing legislation and related amendments to identify activities authorized or mandated for the Corps' Watercraft Inspection and Decontamination Program. We also assessed Corps reporting documents, such as annual work plans for state partners, to identify program-related priorities, planned activities, and anticipated resource allocations. Further, we analyzed program guidance, directives, and protocols to identify program requirements

and steps in implementation, as well as cost share agreements with state sponsors to identify responsibilities, targets, and projected outcomes.

We interviewed Corps Watercraft Inspection and Decontamination Program officials, state officials, and selected watercraft inspection and decontamination station managers to learn more about the Corps' role and responsibilities related to the stations. We selected station managers based on station location and the decontamination methods used, among other factors.

To examine program challenges and opportunities for improvement, we interviewed Corps Watercraft Inspection and Decontamination Program headquarters and district officials about information the Corps collected from state partners and how it uses these data to assess the effectiveness of the program. We also interviewed selected state officials, particularly in Idaho and Washington, about challenges they face in operating and managing Corps-sponsored watercraft inspection and decontamination stations and how these challenges could be overcome. Additionally, we analyzed Corps and state partners' plans, reports, and recent studies to identify challenges and possible solutions.

We analyzed current Corps guidance for the Watercraft Inspection and Decontamination Program and watercraft inspection and decontamination-related reports to assess the potential addition of states in the program and their relative economic and environmental impact. We also analyzed a recent study on the Corps program that assessed its effectiveness and efficiency. Finally, we interviewed Corps program headquarters and district officials about future efforts to improve the efficacy of the program. We reviewed authorizing laws and Corps watercraft inspection and decontamination planning, guidance, policies, and cost-sharing documents from June 2014, when the Corps program was first authorized, through August 2023, to learn about actions the Corps has taken to help prevent the introduction or spread of quagga and zebra mussels by using watercraft inspection and decontamination stations.

List of Addressees

The Honorable Thomas R. Carper
Chair
Committee on Environment and Public Works
United States Senate

The Honorable John Barrasso
Ranking Member
Committee on Energy and Natural Resources
United States Senate

The Honorable Sam Graves
Chair
The Honorable Rick Larsen
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Assistant Secretary of the Army for Civil Works, the Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers, and other interested parties. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

GAO Contact Information

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Appendix I: Comments from the Department of Defense



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
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WASHINGTON, DC 20310-0108

October 20, 2023

Mr. Cardell Johnson
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Johnson:

On behalf of the Department of Defense, I am providing the Department's response and associated comments on the GAO Draft Report, GAO-24-105960, "Army Corps of Engineers: Better Data and Planning Needed to Combat Aquatic Invasive Species," dated September 22, 2023 (GAO Code 105960). The Army's Comments to the GAO recommendations (Enclosure 1) and technical comments (Enclosure 2) are included within this response.

We welcome this opportunity to review and comment on the draft report. We further value the GAO staff's professionalism, collaboration, and insights during this project.

Thank you for your consideration of our response and comments. My point of contact is Ms. Elaine Newbaker-London, elaine.e.newbaker-london.civ@army.mil, or 571-274-1942.

Thank you for your long-standing support of the Army's Civil Works program.

A handwritten signature in black ink, appearing to read "Michael L. Connor", is positioned above the typed name.

Michael L. Connor
Assistant Secretary of the Army
(Civil Works)

ENCLOSURE 1

**GAO Draft Report
Dated September 22, 2023
GAO-24-105960 (GAO CODE 105960)**

**“ARMY CORPS OF ENGINEERS: BETTER DATA AND PLANNING NEEDED TO
COMBAT AQUATIC INVASIVE SPECIES”**

**ARMY COMMENTS
TO THE GAO RECOMMENDATIONS**

RECOMMENDATION 1: The Assistant Secretary of the Army for Civil Works should ensure that the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers develop a system, in consultation with states, to collect timely, accurate, and uniform data to inform the Corps' Watercraft Inspection and Decontamination Program.

DoD RESPONSE: The DoD concurs with comments on the GAO recommendation. Army will develop a program management plan (PGMP) to improve program execution and ensure accurate and uniform data is collected and maintained. In addition, Army is currently working to evaluate options to automate data collection with existing cost share partners.

RECOMMENDATION 2: The Assistant Secretary of the Army for Civil Works should ensure that the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers update the Corps' internal guidance to better meet statutory requirements related to its Watercraft Inspection and Decontamination Program, including placing stations at locations with the highest likelihood of preventing the introduction or spread of aquatic invasive species.

DoD RESPONSE: The DoD concurs with comments on the GAO recommendation. The development of the PGMP will support improved execution of future letter reports and streamlining of environmental compliance processes. In addition, the PGMP and improved data management will support efforts to ensure watercraft inspection and decontamination stations are placed in effective locations to optimize prevention efforts.

RECOMMENDATION 3: The Assistant Secretary of the Army for Civil Works should ensure that the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers develop a strategic plan that incorporates all basins and waters the Corps is directed to protect under the Watercraft Inspection and Decontamination Program and includes clear goals and objectives, measurable targets, and accountable milestones.

DoD RESPONSE: The DoD concurs with comments on the GAO recommendation. The development of the PGMP will provide strategic direction to Watercraft Inspection and Decontamination Program (WID), including goals, objectives, milestones, and oversight of cost share partners. USACE is currently updating ER 1130-2-500 to ensure the regulation accurately reflects the Aquatic Plant Control program direction and cost share process in 33 USC 610, as amended. These actions will support informed decision making and streamlined efforts to manage annual work plans and coordination with cost share partners.

Endnotes

¹Quagga and zebra mussels were first discovered in the Great Lakes in the late 1980s. It is believed that they were unintentionally introduced into the lakes through the discharge of contaminated cargo ship ballast water. They are native to areas around the Black Sea.

²As stated in section 104 of the River and Harbor Act of 1958, as amended, the non-federal share of the cost for an inspection station shall be provided by the state or local governmental entity in which the inspection station is located. For this report, we refer to nonfederal partners as states since the Corps only has cost share agreements with state governmental entities.

³Pub. L. No. 113-121 § 1039(d)(3) (codified as amended at 33 U.S.C. § 610(d)(1), (2)).

⁴Although the law might allow the Corps to construct and operate watercraft inspection and decontamination stations, the Corps instead reimburses states for 50 percent of the costs incurred under the agreement.

⁵The Corps has a cost share agreement with the Pacific States Marine Fisheries Commission, an interstate compact agency that helps resource agencies and the fishing industry sustainably manage resources in several western states. As part of this agreement, the commission has sub-agreements with the states of Idaho, Montana, Nevada, Oregon, Washington, and Wyoming to establish and operate watercraft inspection and decontamination stations.

⁶ The Corps is directed to establish, operate, and maintain inspection stations to protect the following river basins: Arkansas, Columbia, Russian, South Platte, Upper Colorado, and Upper Missouri River Basins, as well as basins and watersheds that adjoin an international border between the United States and Canada. 33 U.S.C. § 610(b)(1), (d).

⁷Economic and environmental impact evaluations (referred to as Integrated Letter Report and Programmatic Environmental Assessment) are used to determine if the federal government should add certain states to the Corps' Watercraft Inspection and Decontamination Program.

⁸The Corps, after receiving a draft of this report, commented that a water sample taken near Twin Falls, Idaho tested positive for the presence of Quagga Mussel veligers (larva). Agency officials reported that Idaho is executing a rapid response action to manage and potentially eradicate the infestation.

⁹Alternative decontamination methods, such as chemical washing, are in limited use in the U.S., though not at stations operated under the Corps' cost share agreement, according to Corps officials. Corps officials told us that hot water washing is cheap, effective, familiar to boaters, and requires minimal training to carry out. They said that, in most cases, chemical washing does not offer significant advantages over hot water washing.

¹⁰GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: September 2014).

¹¹[GAO-14-704G](#).

¹²U.S. Army Corps of Engineers, Walla Walla District, *Updated Integrated Letter Report and Programmatic Environmental Assessment* (June 2022).

¹³Motivf, *Watercraft Inspection Program Recommendations*, prepared for the U.S. Army Corps of Engineers Northwest Division, Walla Walla District (Oct. 16, 2022).

¹⁴GAO, *Evidence-Based Policymaking: Practices to Help Manage and Assess the Results of Federal Efforts*, [GAO-23-105460](#) (Washington, D.C.: July 12, 2023).

¹⁵Nevada and Wyoming were added in September 2022; Colorado, North Dakota, and South Dakota were added in September 2023. We did not include these states in our review.