Safeguarding the West from Invasive Species

Actions to Strengthen Federal, State, and Tribal Coordination to Address Invasive Mussels

PROGRESS REPORT
FEBRUARY 2018

Invasive species are among the top threats facing the lands and waters of the Nation. The Department of the Interior (DOI), our sister federal agencies, our state and local government counterparts, and private land owners need to collaborate to effectively address this threat. At the beginning of this Administration, Idaho Governor Butch Otter contacted Secretary Ryan Zinke about the serious threat to the Western economy and ecosystems posed by quagga and zebra mussels to the Columbia River Basin in particular, and across the West more generally. The Governor requested DOI's leadership on this issue and recommended working closely with the Western Governors' Association (WGA). We agreed.

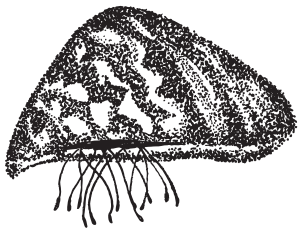
In response, we started a process in spring 2017 with WGA, states, tribes, and other federal agencies to lay out a plan of action. In June 2017, Secretary Zinke announced a set of actions that DOI is undertaking in conjunction with others to protect western waters from the economic and ecological impacts of invasive mussels.

This interim report summarizes progress since June to prevent, contain, and control invasive mussels in the West. This includes investments we are making—an additional $1 million in Fiscal Year 2017 and a further $3.3 million requested by the President in Fiscal Year 2018—and dialogues we are having with partners in the Columbia River Basin, Colorado River Basin, and across the West. Our focus is on how federal agencies can be better partners, and what we can do to collectively address invasive mussels. Importantly, this work builds on effective state-federal partnerships and initiatives in process for decades. This work also involves tribal collaboration and participation.

We recognize that many state legislatures and governors have significantly increased funding and activities to protect states from invasive mussels. At the federal level, we are committed to working with states, tribes, and all of our partners in this effort. We also understand that one of the most effective ways to keep invasive mussels from spreading is to contain them at their source. While invasive mussels first entered North America through the Great Lakes, state partners in the West now indicate that the greatest current threat is the spread of invasive mussels from infested waters in the Colorado River Basin. Through this initiative, we are working to strengthen our efforts to manage the risk of spread from Lake Powell, Lake Mead, Lake Havasu, Lake Mohave, and other affected waterbodies in the Colorado system.

Healthy lands and waters contribute immeasurably to the ecological, recreational, and economic values of the Western States and the American people. We look forward to continued collaboration and being a good neighbor to address invasive mussels and other invasive species in substantive and lasting ways.

Scott J. Cameron
Principal Deputy Assistant Secretary
for Policy, Management and Budget
Exercising the Authority of the Assistant
Secretary for Policy, Management and Budget



Progress Report

Invasive quagga and zebra mussels (*Dreissena rostriformis bugensis* and *D. polymorpha*, collectively referred to as Dreissenids) significantly threaten America's waters, causing substantial impacts to water infrastructure and aquatic ecosystems and threatening power generation, water supply, fisheries, and recreation. In June 2017, the U.S. Department of the Interior (DOI) Secretary Ryan Zinke announced that DOI is undertaking actions in coordination with the Western Governors' Association (WGA), states, tribes, federal agencies, and other partners to strengthen existing efforts to address Dreissenid mussels. The actions described in the 2017 report, *Safeguarding the West from Invasive Species, Actions to Strengthen Federal, State, and Tribal Coordination to Address Invasive Mussels* [hereafter, *Safeguarding the West*], vary from policy and program reviews to on-the-ground efforts.[1] This summary describes an overview of progress of *Safeguarding the West* since June 2017.

Safeguarding the West stimulated broader coordination and additional action through several mechanisms.

Strengthening Partnerships: Invasive species infestations often cross jurisdictional boundaries, necessitating coordination across all levels of government and with partners. Fortunately, effective partnerships exist across the West, such as through the Aquatic Nuisance Species Task Force's Western Regional Panel, the Building Consensus in the West Initiative, and the 100th Meridian Initiative's Columbia River Basin Team. Such partnerships have been funded by the U.S. Fish and Wildlife Service (USFWS) for two decades and involve participants from federal, regional, state, and tribal organizations. These partnerships continue to provide a strong foundation for coordination to address aquatic invasive species, and are crucial for success going forward. *Safeguarding the West* brought renewed focus from DOI on these important public-private and state-federal partnerships as well as their priorities, and helped leverage greater DOI engagement at the national, regional, and field levels by both program staff and executive leaders.

Improving Communication: As part of *Safeguarding the West*, DOI established new lines of communication with staff of WGA, partners, and regional coordination networks. Since June 2017, DOI and WGA have met regularly on invasive mussels and other invasive species issues. DOI also participated in meetings of the Columbia River Basin Team led by the Pacific States Marine Fisheries Commission (PSMFC), the Western Aquatic Invasive Species Summit, the Pacific NorthWest Economic Region, and others to share progress on *Safeguarding the West* activities and learn what additional needs exist. In addition, DOI participates in state invasive species councils in the Pacific Northwest as well as the Upper Columbia River Conservation Commission led by the state of Montana. Staying connected in these and other efforts, such as convening partners at Lake Mead and Lake Havasu to explore options for strengthening invasive mussel containment strategies, enhances understanding of current work and gaps, fosters future collaboration, and complements DOI's long-standing commitment to aquatic invasive species issues.

1 https://www.doi.gov/sites/doi.gov/files/uploads/safeguarding_the_west_from_invasive_species.pdf

Leveraging Investments: Through *Safeguarding the West,* DOI leveraged existing investments and brought additional resources to bear in Fiscal Year (FY) 2017. DOI spent $8.6 million in FY 2017 to prevent, contain, and control invasive mussels, including an additional $1 million for the Bureau of Reclamation to support implementation of *Safeguarding the West*. The 2018 President's budget requests a total of $11.9 million for DOI for invasive mussels, including a $3.4 million increase above the 2017 enacted appropriation for the Bureau of Reclamation. Allocation of these resources is informed by priorities set by DOI and its partners, including states and tribes.

ACTION ITEM HIGHLIGHTS

Safeguarding the West includes more than 40 action items identified by committees composed of federal, state, and tribal representatives that formed in the spring of 2017. Some actions have been completed, and most are in progress. Highlights from select actions are described below, followed by the implementation status of all actions. The agency listed in parentheses has the lead but most items involve close coordination with others.

PREVENTION: Support Tribal partnerships for prevention and early detection monitoring (BIA)

Invasive mussels pose significant risks to native ecosystems as well as threaten cultural and economic resources of importance to tribes in the Pacific Northwest. The Bureau of Indian Affairs (BIA) provides annual funding to tribes to prevent, eradicate, and control invasive species that threaten tribal trust resources. In 2017, BIA awarded $638,000 for invasive mussel projects to the Columbia River Inter-Tribal Fish Commission, Confederated Salish and Kootenai Tribes of the Flathead Reservation, and the Blackfeet Tribe of the Blackfeet Indian Reservation of Montana Fish and Wildlife Department. These funds support tribal programs in their efforts to prevent the spread of invasive mussels to the Columbia River Basin. Tribal initiatives include establishing watercraft inspection and decontamination stations, expanding monitoring programs, and enhancing detection tools and techniques, such as environmental DNA (eDNA) sampling and K-9 detection dogs. Tribes initiated activities in 2017 that will continue into 2018.

EARLY-DETECTION MONITORING: Assess various eDNA methodologies and develop criteria, guidelines, and decision-support tools for using eDNA in concert with other tools to increase the probability of detecting mussel populations (USGS/Reclamation), and **Establish a committee to explore the establishment of a regionally coordinated early detection monitoring program for mussels in the Columbia River Basin, with the potential for expansion to other aquatic invasive species and regions (USGS)**

Groups conducting early detection monitoring in the Pacific Northwest benefit significantly from the coordination provided by the Western Regional Panel and the 100th Meridian Initiative Columbia River Basin Team. Current efforts typically focus within jurisdictional boundaries, yet mussel

infestations often cross jurisdictions. For that reason, there is a need for a regionally coordinated early detection monitoring program that considers regional priorities in addition to jurisdiction specific priorities. In November 2017, the U.S. Geological Survey (USGS), in cooperation with PSMFC, organized a workshop at the Columbia River Basin Team's meeting in Portland, Oregon. Federal, state, tribal, and nongovernmental representatives attended and agreed to work together to scope the formation of a regional early detection monitoring program. USGS chairs the newly formed Columbia River Basin Monitoring Committee, in cooperation with PSMFC and others. The committee is developing goals and objectives to undertake in 2018. As part of these regional coordination efforts, USGS is working with the Bureau of Reclamation (Reclamation), the Confederated Salish and Kootenai Tribes, and the state of Montana to assess eDNA as an early detection tool. In FY 2017, USGS and Confederated Salish and Kootenai Tribes used eDNA to monitor 13 waters in the Flathead Basin, and USGS and the state of Montana used eDNA with other tools to monitor Tiber Reservoir in the Upper Missouri River Basin. In FY 2018, USGS will assess the efficacy of integrating eDNA surveillance for mussels into their streamgage networks that are downstream of Reclamation-managed reservoirs in the Columbia River Basin. In addition, USGS will continue working with Reclamation and partners, such as the state of Montana, to establish criteria and guidelines for eDNA methodologies and develop decision-support tools for using eDNA to inform management decisions.

CONTAINMENT: Maintain or enhance existing mussel containment programs at contaminated NPS waters on the Colorado River, and evaluate existing programs for effectiveness (NPS)

Within the Colorado River Basin, existing mussel containment programs, conducted in cooperation with the states of Arizona, Nevada, and Utah, continue at Glen Canyon National Recreation Area and Lake Mead National Recreation Area. Federal and state partners convened at Lake Mead National Recreation Area in December 2017 to conduct an assessment of the National Park Service (NPS) and Nevada Department of Wildlife (NDOW) quagga mussel control programs within Lake Mead National Recreation Area. Partners also shared information and identified potential programmatic gaps and barriers. The team identified action items and collaborative efforts to further enhance existing containment efforts. The team unanimously agreed that continued emphasis needs to be placed on high-risk slipped and moored vessels within the park. Inspection and decontamination of vessels leaving during the snowbird season was identified as a potential gap needing further investigation. The team also recognized the value of a broader coordinated strategy across the Lower Colorado River Basin to prevent, contain, and control invasive mussels. The team will advance recommendations made at this meeting in the coming year, such as creating efficiency in communications and data sharing, and strengthening mandatory inspection and decontamination of high-risk vessels. The state of Idaho also refined their boat inspection and quarantine data based on the meeting's recommendations and shared these data with NPS and NDOW. Based on these data, both NPS and NDOW are reviewing staffing needs in order to provide additional coverage during the snowbird season for this area. NPS is also reviewing processes by which concession operations notify state partners if a slipped or moored vessel has left the park without mandatory inspection or decontamination as currently required.

CONTAINMENT: Convene an interagency workshop to develop a multi-jurisdictional strategy to contain the spread of invasive mussels in the Lower Colorado River, from Lake Havasu and downstream (BLM)

The Lower Colorado River, referring here to Lake Havasu and downstream, from Davis Dam to Yuma, is a highly inter-jurisdictional management area, with various management authorities held by the Arizona Game and Fish Department, California Department of Fish and Wildlife, Bureau of Land Management (BLM), Arizona State Parks, USFWS, Reclamation, Chemeuevi Reservation, Colorado River Indian Tribes, and numerous private marinas. Data on the interception of contaminated watercraft indicate that existing watercraft inspection and decontamination efforts are not sufficient to contain the spread of quagga mussels from the Lower Colorado River. In December 2017, BLM hosted a workshop in Lake Havasu City to bring partners together to identify potential actions to improve containment in the Lower Colorado River. At the workshop, participants from the Arizona Game and Fish Department, California Department of Fish and Wildlife, California Department of Food and Agriculture, Arizona State Parks, BLM, USFWS, Reclamation, Colorado River Indian Tribes, and Lake Havasu Marine Association reviewed existing efforts, discussed current regulations and policies, and brainstormed on how to fill the gaps in containment. A steering committee (Arizona Game and Fish Department, California Department of Fish and Wildlife, USFWS, Reclamation, and BLM) is drafting the potential options for review this winter and will further refine to include a risk/benefit analysis. A final document should be available this spring.

CONTAINMENT AND CONTROL: Launch a prize competition to identify innovative concepts to eradicate or prevent mussel infestations in open waters, including large reservoirs and lakes (Reclamation)

Currently, no practical methods exist for large-scale, open-water control of invasive mussel populations once they become established. In December 2017, Reclamation, in collaboration with the U.S Army Corps of Engineers, USGS, and Molloy and Associates, LLC launched a "theoretical" prize competition, to seek innovative solutions to eradicate invasive zebra and quagga mussels from large reservoirs, lakes, and rivers in a cost effective and environmentally sound manner. This is Stage 1 of a 3-Stage challenge in which Reclamation aims to produce viable prototypes by Stage 3. The Grand Prize of $100,000 may be shared with up to five participants. Additional details can be found online: http://bit.ly/2BBPO7y.

REGULATORY IMPROVEMENTS: Work with partners and other action agencies to identify steps to complete Endangered Species Act consultation, including the development of a reference manual, to facilitate rapid response activities in response to mussel introductions in the Columbia River Basin (USFWS)

USFWS contracted with PSMFC to develop a manual that will inform, expedite, and facilitate Endangered Species Act Section 7 consultations to include response actions that will minimize impacts of invasive mussels on listed species and their designated critical habitats. A leadership team of USFWS, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and PSMFC staff created an action plan to inform the development of the manual in collaboration

with other federal and state agencies, tribes, and other jurisdictions and entities that would likely be involved in any type of a response action. The Action Plan was presented at the 100th Meridian Initiative meeting in November 2017 in Portland, Oregon where state, federal, and local agency representatives, tribes, non-governmental organizations, and power utilities attended. PSMFC also led a webinar in December 2017 with state and federal agency partners to discuss the Action Plan and key next steps. In 2018, PSMFC will initiate the Action Plan, convening entities within four states (Washington, Oregon, Montana, and Idaho) to compile information on water body sites where the risk of invasive mussel introduction and establishment is high. The ancillary outcomes of the effort include improved coordination, collaboration, and preparedness among the many entities that would be engaged in invasive mussel rapid response actions in the Columbia River Basin.

DOI FISCAL YEAR 2017 INVESTMENTS

DOI spent $8.6 million in FY 2017 to prevent, contain, and control invasive mussels nationwide; this includes an additional $1 million for Reclamation. In particular, Reclamation's increase helped to support a variety of activities, including those that meet state needs and advance existing partnerships, such as:

- Mobile watercraft decontamination stations, staffing, and outreach materials for the Arizona Game and Fish Department for use at Lakes Havasu and Pleasant;
- Watercraft decontamination stations, staffing, and outreach for NPS at launch ramps in the Lake Mead National Recreation Area;
- Watercraft inspection and decontamination programs for Utah and New Mexico; and
- Early detection monitoring and reporting by USGS at its streamgage network in the Pacific Northwest.

ACTION ITEM STATUS

The status of implementation of all action items in *Safeguarding the West* is listed below. Nine new actions have been added since its release. Fifteen actions have been completed; thirty are in progress; four are on-hold awaiting leadership decisions; and one changed focus. For completed actions, outcomes are listed in parentheses.

PREVENTION

RISK ASSESSMENT AND IDENTIFICATION

- Develop vulnerability assessments for facilities and infrastructure at risk of mussel infestation in the Columbia River Basin (Reclamation)
- Improve predictive models and methodologies for identifying waterbodies at risk of mussel infestation in the West, with a focus on the Columbia and Snake River reservoir systems (USGS/Reclamation/NPS)

WATERCRAFT INSPECTION/DECONTAMINATION – COLUMBIA RIVER BASIN

- Support Salish Kootenai College students to assist with watercraft inspections and other prevention, detection, and outreach efforts at tribal and public waters, through BIA project funding (BIA)
- Support watercraft inspection stations and K-9 inspection units on the Blackfeet Indian Reservation, through BIA project funding (BIA)
- Maintain or enhance mussel prevention programs at vulnerable National Parks in the Columbia River Basin, and evaluate existing programs for effectiveness (NPS)
- Assess establishing watercraft inspection and decontamination programs at Lake Chelan National Recreation Area in the North Cascades Complex (NPS)
- Establish a Memorandum of Understanding between Lake Roosevelt National Recreation Area and the Washington Division of Fish and Wildlife to provide "ex officio fish and wildlife officer" status for NPS commissioned law enforcement officers, authorizing their utilization of State regulations on invasive species (NPS) (*Memorandum of Understanding signed*)†

WATERCRAFT INSPECTION/DECONTAMINATION – DATA-SHARING

- Explore options for sharing information on trailered boats that are putting in and taking out of NPS managed waters, for inclusion in a database developed by the State of Colorado and used by western states (NPS)
- Support the continued development, maintenance, and administration of the trailered boat database developed by the State of Colorado and used by western states (USFWS) (*Funding awarded through the Quagga Zebra Mussel Action Plan (QZAP) to the State of Colorado in FY 2017*)†*

WEST-WIDE WATERCRAFT INSPECTION/DECONTAMINATION COORDINATION

- Better coordinate and harmonize agency watercraft inspection and decontamination policies and protocols through the Building Consensus in the West Initiative (USFWS) (*Funding awarded to PSMFC and National Sea Grant Law Center in FY 2017*)*
- Continue teaching regional standardized watercraft inspection and decontamination in series of free classes to western partners and maintain information at www.westernais.org (USFWS) (*Funding awarded to PSMFC in FY 2017*)†*

EARLY-DETECTION MONITORING

ENVIRONMENTAL DNA AND OTHER DETECTION TECHNOLOGIES

- Assess various eDNA methodologies and develop criteria, guidelines, and decision-support tools for using eDNA in concert with other tools to increase the probability of detecting mussel populations (USGS/Reclamation)
- Develop and validate a portable eDNA detector tool for mussels, which could be used at boat inspection stations and by other monitoring efforts (e.g., citizen scientists) (USGS)

- Develop, apply, and evaluate eDNA and microscopy technologies to support sampling and detection efforts (Reclamation) (*660 samples analyzed for invasive mussel DNA and 1,481 samples analyzed microscopically*)*
- Conduct eDNA sampling efforts in high risk waters on the Blackfeet Indian Reservation, through BIA project funding (BIA)
- Develop and implement a next-generation, field-detection technology for rapid, on-site monitoring eDNA (USFWS) (*Funding awarded through QZAP to the University of Montana in FY 2017*)†

SAMPLE ANALYSIS AND CONFIRMATION

- Support the mussel detection lab at Montana Fish, Wildlife and Parks (MTFWP) to process samples received throughout the Missouri River Basin and from National Fish Hatcheries at no charge to states (USFWS) (*Funding awarded to MTFWP in FY 2017*)*
- Continue to analyze water samples from across the western United States and provide results to staff and stakeholders (Reclamation) (*Samples analyzed from locations in 16 states*)*

REGIONAL AND SITE-SPECIFIC MONITORING

- Continue monitoring efforts throughout Lake Roosevelt National Recreational Area, in conjunction with the Spokane Tribe of Indians and the Washington Department of Fish and Wildlife (NPS) (*Four designated sites sampled once per month during May-October 2017*)*
- Enhance capacity of tribes to monitor for mussels and other aquatic invasive species in the Columbia and Snake Rivers, through the Columbia River Inter-Tribal Fish Commission and in coordination with USGS, Washington State University, and other partners, through BIA project funding (BIA)
- Continue or expand monitoring activities at Lake Mead and Glen Canyon National Recreation Areas and share lessons learned from implementing a large-scale aquatic invasive species program (NPS)
- Continue monitoring for mussels in Bureau of Reclamation waters and facilities, as well as connected waters (Reclamation) (*1,551 samples received from Reclamation waters and facilities, and connected waters*)*

REGIONAL MONITORING COORDINATION

- Establish a committee to explore the establishment of a regionally coordinated early detection monitoring program for mussels in the Columbia River Basin, with the potential for expansion to other aquatic invasive species and regions (USGS)

RAPID RESPONSE

TECHNOLOGIES FOR RAPID RESPONSE AND CONTROL

- Identify and assess available tools that can be used for rapid response and control within the Columbia River Basin (USGS)

RAPID RESPONSE TEAM

- Continue to support a dive team that is "on call" to assist States with sampling to determine if adult mussels are present (USFWS) (*Dive team dove the Tiber Reservoir in August 2017, offered assistance to Colorado, and participated in rapid response planning exercise in Washington*)*
- Test Columbia River Basin Rapid response plan via a table top theoretical exercise. Annual event rotates through the Columbia River Basin states and is coordinated by PSMFC (USFWS) (*Funding awarded to PSMFC to support theoretical exercise in Washington in FY 2017*)†*

PREPAREDNESS PLANNING

- Prepare and implement Rapid Response Plan for Jackson Lake (NPS)†
- Hold a mock infestation rapid response exercise in Yellowstone National Park to inform the development of Rapid Response Plan in 2018 (NPS)†

CONTAINMENT AND CONTROL

FACILITIES AND INFRASTRUCTURE PROTECTION

- Compile best practices, strategies, and technologies used at infested facilities to minimize risks and impacts (Reclamation)
- Convene a multi-stakeholder workshop in the Columbia River Basin to share information on budgeting for and implementing control technologies to increase preparedness and protect water infrastructure (Reclamation)

PRIZE COMPETITION

- Launch a prize competition to identify innovative concepts to eradicate or prevent mussel infestations in open waters, including large reservoirs and lakes (Reclamation)

COLORADO RIVER BASIN CONTAINMENT ACTIVITIES

- Maintain or enhance existing mussel containment programs at contaminated NPS waters on the Colorado River, and evaluate existing programs for effectiveness (NPS)
- Explore options for housing near areas with federal watercraft inspection and decontamination stations at Glen Canyon National Recreation Area (NPS)
- Identify approaches to develop commercial inspection and decontamination capacity for recreational watercraft, in collaboration with the private sector (NPS)
- Convene an interagency workshop to develop a multi-jurisdictional strategy to contain the spread of invasive mussels in the Lower Colorado River, from Lake Havasu and downstream (BLM)
- Support state watercraft inspection/decontamination programs and partner outreach programs in the Lower Colorado River (USFWS) (*Funding awarded through QZAP to Nevada, Utah, Arizona, and Lake Havasu Marine Association in FY 2017*)†*

OUTREACH AND EDUCATION

STOP AQUATIC HITCHHIKERS! (SAH!) WEBSITE

- Expand the SAH! Website to include an interactive portal that will enable sharing and tracking of outreach materials (USFWS)

MULTI-STATE MARKETING EVALUATION

- Explore options to evaluate existing outreach and education campaigns for message consistency, target audiences, delivery strategies, and gaps (ANSTF)

EFFECTIVENESS OF OUTREACH CAMPAIGNS

- Develop a research proposal to assess the efficacy of existing public outreach and refine specific recreational user behavior change goals (USGS/ANSTF)

RESEARCH

RESEARCH AND DEVELOPMENT PROGRAM ACTIVITIES

- Continue research on effective technologies for the detection, prevention, control, and management of invasive mussels in lab and field settings (Reclamation)
- Identify options to pilot the use of dip tank technology, a potential tool for reducing watercraft decontamination times, at a site in Glen Canyon National Recreation Area, and evaluate the potential to expand dip tank technology to other sites (NPS)
- Examine survivability of invasive mussel juveniles and veligers in antifreeze used to over winter watercraft to determine management recommendations for spring boaters (USFWS) (*Grant awarded to KASF Consulting in FY 2017*)†

INCREASING CAPACITY

REGIONAL, STATE, AND TRIBAL SUPPORT

- Continue to support regional panels of the Aquatic Nuisance Species Task Force that help to identify regional priorities and coordinate regional aquatic invasive species activities (USFWS)
- Continue to provide cost-share grants to states, regional organizations, and tribes, for the implementation of Aquatic Nuisance Species Management Plans and the Quagga-Zebra Mussel Action Plan (USFWS) (*Funding awarded for implementation of state Aquatic Nuisance Species Management Plans in FY 2017 (most entities received $46,715); $930,000 awarded through QZAP in FY 2017*)*
- Assist states and tribal governments to draft interstate aquatic invasive species plans (USFWS)

LEADERSHIP ENGAGEMENT AND COORDINATION

- Convene federal, state, and tribal leaders in the Pacific Northwest to discuss current and future actions to address aquatic invasive species (Reclamation) (*Refocused to support inspection and decontamination and engagement in existing partnership networks*)
- Explore options, in partnership with WGA, to enhance policy level coordination among federal, state, and tribal leaders (DOI)

DEPARTMENT AND AGENCY POLICIES AND PLANS

- Improve DOI's Invasive Species Policy, to include emphasis of the importance of federal-state-tribal coordination, harmonization of policies and procedures, and reduction of regulatory impediments to effective and timely invasive species management (DOI)

REGULATORY IMPROVEMENTS

- Evaluate NPS invasive species policy on watercraft inspection and decontamination to determine its adequacy for protecting NPS resources and working effectively with state, federal, and other partners, and if necessary, explore options to improve it (NPS)
- Work with partners and other action agencies to identify steps to complete Endangered Species Act consultation, including the development of a reference manual, to facilitate rapid response activities in response to mussel introductions in the Columbia River Basin (USFWS)

Safeguarding the West identifies actions for DOI to implement in coordination with others to address invasive mussels. Other federal agencies also are involved in numerous activities. For example, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service is working closely with USFWS and partners on the development of the manual for Endangered Species Act consultation to facilitate rapid response activities in the Columbia River Basin. The U.S. Army Corps of Engineers conducts monitoring and provides funding to states in the Pacific Northwest for watercraft inspection and decontamination stations and monitoring. In addition, the U.S. Forest Service serves on numerous coordinating bodies and provides expertise, personnel, and funding for efforts such as aquatic invasive species eDNA sampling/testing, watercraft and vehicle inspection and decontamination, and the design of technologically advanced mobile vehicle/equipment decontamination systems. DOI is committed to coordinating with other federal agencies, states, tribes, and partners to address invasive mussels and other invasive species and safeguard the Nation's lands and waters for generations to come.

ACRONYMS

ANSTF	Aquatic Nuisance Species Task Force
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
Reclamation	Bureau of Reclamation
DOI	United States Department of the Interior
eDNA	Environmental Deoxyribonucleic Acid
FY	Fiscal Year
MTFWP	Montana Fish, Wildlife and Parks
NDOW	Nevada Department of Wildlife
NPS	National Park Service
PSMFC	Pacific States Marine Fisheries Commission
QZAP	Quagga-Zebra Mussel Action Plan
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WGA	Western Governors' Association