

# Safeguarding the West from Invasive Species

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



**PROGRESS REPORT  
FEBRUARY 2019**



# Progress Report

In June 2017, the U.S. Department of the Interior (DOI) announced a set of actions that it is undertaking to protect western waters from invasive quagga and zebra mussels (*Dreissana rostriformis bugensis* and *D. polymorpha*). Invasive mussels pose significant threats to water-based recreation, hydropower, water delivery, fisheries, and aquatic ecosystems. DOI led this call-to-action in the spring of 2017 in collaboration with the Western Governors' Association (WGA), and federal, state, and tribal representatives. This intergovernmental process resulted in the report, *Safeguarding the West from Invasive Species: Actions to Strengthen Federal, State, and Tribal Coordination to Address Invasive Mussels* [hereafter, *Safeguarding the West*], which describes DOI commitments to prevent, contain, and control invasive mussels in the West.

The *Safeguarding the West* initiative builds on decades of federal-state collaboration and advances priorities identified in interagency plans, including the *Quagga-Zebra Mussel Action Plan (QZAP) for Western U.S. Waters* developed by the Western Regional Panel on Aquatic Nuisance Species. Through *Safeguarding the West*, DOI leveraged investments to address invasive mussels, strengthened relationships with WGA, states, tribes, and partners, and increased DOI engagement at national, regional, and field levels on policy and program initiatives.

This is DOI's second *Safeguarding the West* progress report and provides a status update on activities that occurred in 2018. DOI released its first progress report in February 2018. While much has been accomplished, more work needs to be done. DOI will continue to fulfill its commitments in *Safeguarding the West* and work with partners to meet the most pressing needs to protect western waters from invasive mussels and other aquatic invasive species.

## **DOI Fiscal Year 2018 Investments**

DOI spent \$13.8 million in FY 2018 to prevent, contain, and control invasive mussels nationwide; this included an additional \$3.6 million for the Bureau of Reclamation (Reclamation). In particular, Reclamation's increase supported a variety of activities that emphasized containment of mussels in the Lower Colorado Region and prevention in the Pacific Northwest such as:

- ▶ Purchasing mobile decontamination stations for staff to decontaminate boats leaving the lower Colorado River in California and Nevada, including

supporting the National Park Service (NPS) at Lake Mead National Recreation Area.

- ▶ Supporting the Confederated Salish Kootenai Tribes' Flathead Lake Aquatic Invasive Species Program.
- ▶ Completing vulnerability assessments for select facilities and infrastructure at risk of mussel infestation in the Columbia River Basin.
- ▶ Continuing and enhancing water quality and quagga mussel monitoring programs at high-priority programs and locations in the Pacific Northwest, and various reservoirs in the Upper Colorado River Basin.

In 2018, to meet its commitments under *Safeguarding the West*, NPS made an additional \$1.2 million available to western parks to address the threat of quagga and zebra mussels. These funds were allocated to agreements with state and tribal partners, housing and shelter for boat ramp crews, watercraft decontamination equipment, and a contract for mussel detection dog services at multiple parks. NPS plans to continue to direct an additional \$1 million annually to park prevention and containment programs and developed a process to distribute these funds competitively through 2021.

## ACTION ITEM HIGHLIGHTS

*Safeguarding the West* includes more than four dozen action items generated by six *ad hoc* committees composed of federal, state, and tribal representatives that formed in the spring of 2017. The committees identified opportunities to strengthen work across the following focal areas: watercraft inspection and decontamination, monitoring, research and innovation, aquatic infrastructure, education and outreach, and policy and coordination. Each action item has a lead agency and point of contact. Many actions have been completed, and some are still in progress. Highlights of select actions are summarized below by bureau, followed by the implementation status of all actions.

### **BUREAU OF INDIAN AFFAIRS**

Invasive mussels pose significant risks to native ecosystems as well as threaten cultural and economic resources of importance to tribes in the West. The Bureau of Indian Affairs (BIA) provides annual funding to tribes to undertake projects focused on the prevention, control, and management of invasive species. In 2018, BIA awarded \$485,432 to the Columbia River Inter-Tribal Fish Commission,

Blackfeet Tribe of the Blackfeet Indian Reservation, and the Pyramid Lake Paiute Tribe of the Pyramid Lake Indian Reservation on the Truckee River. These funds support tribal programs in their efforts to prevent the spread of invasive mussels to the Columbia River Basin and to the Lower Truckee Watershed. Tribal invasive species management initiatives for FY 2018 included developing comprehensive aquatic invasive species management plans, establishing monitoring sites, providing public outreach including organizing workshops and meetings, and implementing and maintaining boat inspection and decontamination stations. In 2018, Blackfeet inspected over 6,800 vehicles at inspection stations and added a fourth station to protect the entirety of the reservation from contaminated vehicles entering the reservation. The Columbia River Inter-Tribal Fish Commission conducted environmental DNA (eDNA) analysis using plankton tow veliger samples from the Columbia River with no mussel veligers detected. Projects initiated in 2017 continued into 2018 and are still in progress. Projects initiated in 2018 will continue into 2019.

#### **BUREAU OF LAND MANAGEMENT**

On December 6-7, 2017, the Bureau of Land Management (BLM) hosted a workshop in Lake Havasu City, Arizona to identify potential actions to contain quagga mussels on the Lower Colorado River from Lake Havasu downstream and from the Davis Dam to Yuma. In addition to BLM, workshop participants included key partners, such as the Arizona Game and Fish Department, California Department of Fish and Wildlife, California Department of Food and Agriculture, Arizona State Parks, U.S. Fish and Wildlife Service (USFWS), Reclamation, Colorado River Indian Tribes, and Lake Havasu Marine Association. The workshop informed the development of a Lower Colorado River invasive mussel containment strategy that was finalized in 2018.

To continue the discussions from the workshop in Lake Havasu City, BLM's Arizona Deputy State Director for Renewable Resources and Planning hosted a call in July 2018 and an in-person meeting in October 2018 with line managers from Arizona Game and Fish Department, California Department of Fish and Wildlife, Reclamation, and USFWS. The group discussed next steps and identified opportunities to align current agency efforts. This group will reconvene in the beginning of 2019. Also, in 2018, BLM awarded \$40,000 to the Arizona Game and Fish Department under a cooperative agreement to support containment through outreach efforts, mobile decontamination, and local work groups.

## **BUREAU OF RECLAMATION**

As part of *Safeguarding the West*, Reclamation engaged in a range of activities to prevent and control invasive mussels. Activities included extensive water sampling and monitoring with more than 1,000 samples processed in the 2018 season, 10 facility vulnerability assessments completed in Reclamations' Pacific Northwest Region, and support for watercraft inspection and decontamination through various partnerships including with NPS at Lake Mead National Recreation Area. In 2018, Reclamation also collaborated with the U.S. Geological Survey (USGS), U.S. Army Corps of Engineers, and Molloy & Associates on a prize challenge seeking innovative theoretical solutions to eradicate mussels from large reservoirs, lakes, and rivers in a cost-effective and environmentally sound manner. Reclamation selected three submissions to receive awards. One submission received a full award of \$80,000, and two submissions received partial prizes of \$10,000 each. These solutions demonstrate innovative, promising approaches. Substantive development of the theoretical solutions will be necessary prior to potential implementation.

## **NATIONAL PARK SERVICE**

NPS is responsible for managing the waterbodies within its boundaries for the enjoyment of visitors while ensuring they remain unimpaired for future generations. Aquatic invasive species, including quagga and zebra mussels, impact and may lead to the impairment of visitor experience, infrastructure, and both natural and cultural resources. Beginning in 2014, NPS dedicated \$2 million annually in park base funds to quagga and zebra mussel containment and prevention programs in eight western parks. The largest of these programs are aimed at containing quagga mussels in Glen Canyon National Recreation Area (Lake Powell) and Lake Mead National Recreation Area (Lakes Mead and Mohave). NPS also maintains a prevention program in seven parks, four of which are located within the Columbia River Basin. NPS conducts its prevention and containment programs in cooperation with state, federal, and tribal partners. In addition to the investments and actions described above (DOI Fiscal Year 2018 Investments), NPS held a western parks Aquatic Invasive Species Workshop in Lakewood, Colorado, which resulted in agreement on standard practices and minimum standards, a communications plan, and a draft Quagga and Zebra Mussel Strategy for western parks. A follow-up workshop is planned for 2019.

## **U.S. FISH AND WILDLIFE SERVICE**

The USFWS supported state watercraft inspection and decontamination as well as partner outreach programs across western states through the QZAP grant program. Financial assistance grants were also awarded to the Pacific States Marine Fisheries Commission (PSMFC) to continue a watercraft inspection and decontamination training program and to the University of Montana to advance DNA surveillance technologies. The USFWS also continues to support a dive team to assist States with sampling to determine if adult mussels are present. In 2018, the dive team surveyed Montana's Tiber Reservoir and participated in the Columbia River Basin Team's rapid response tabletop exercise. To reduce the regulatory burden on agencies and streamline decision processes, the USFWS also continued work with PSMFC and the National Oceanic and Atmospheric Administration (NOAA) to finalize a reference manual to assist in and expedite Endangered Species Act Section 7 consultations for invasive mussel rapid response.

In 2018, the Aquatic Nuisance Species Task Force (ANSTF), co-chaired by USFWS and NOAA, explored options to evaluate existing outreach and education campaigns for message consistency and delivery strategies and is including this work element in their next Strategic Plan. The USFWS also continues to provide financial and technical support to the ANSTF regional panels as well as 44 State and Interstate ANS Management Plans approved by the ANSTF. The USFWS has also partnered with the Columbia River Inter-Tribal Fish Commission with the intent of laying a foundation for an Interstate ANS Plan.

## **U.S. GEOLOGICAL SURVEY**

Three USGS Science Centers conducted research projects in support of the Safeguarding the West initiative. The Northern Rocky Mountain Science Center is leading a collaborative effort to evaluate molecular eDNA assays currently being used for quagga and zebra mussel detection. This evaluation will result in laboratory-based protocol standards and guidelines for USGS quagga and zebra mussel eDNA surveillance. The Northern Rocky Mountain Science Center is also assisting USGS Water Science Centers in the Northwest to add early detection surveillance capacity for invasive mussels to USGS stream gaging networks. In 2018, hydrological technicians collected eDNA water samples at eight USGS stream gages downstream of Reclamation reservoirs with high suitability for invasive mussels.

The Upper Midwest Environmental Science Center is developing rapid response control technology and collaborating with USGS researchers in the Northwest to

assist with eDNA analyses. Major highlights for the rapid response control technology include the publication of a manuscript on temperature-dependent toxicity of four molluscicides and a manuscript on the use of carbon dioxide for quagga and zebra mussel control.




The Western Fisheries Research Center, in collaboration with regional stakeholders, convened the Columbia River Basin Dreissenid Mussel Monitoring Forum (CBMMF) that is coordinating quagga and zebra mussel early detection monitoring in the Columbia River Basin. The CBMMF is comprised of provincial, federal, state, and tribal entities and includes subject matter experts from across the United States and Canada. A CBMMF workshop was held in conjunction with the 100<sup>th</sup> Meridian Columbia Basin Team meeting in Portland in June of 2018. The workshop results are available at: <https://pubs.er.usgs.gov/publication/70199102>.

## ACTION ITEM STATUS

The status of implementation of all action items in *Safeguarding the West* is color-coded below. The agency listed in parentheses has the lead, but most items involve close coordination with others. Fifteen actions were completed in 2017 and an additional 17 were completed in 2018; 15 are still in progress; one is temporarily on hold; one changed focus in 2017 and three changed focus in 2018 to be responsive to current needs. For completed actions, outcomes are listed in parentheses. Though actions are listed as completed, many are ongoing from year to year, pending appropriations, as part of core programming.

### PREVENTION

#### RISK ASSESSMENT AND IDENTIFICATION

-  Develop vulnerability assessments for facilities and infrastructure at risk of mussel infestation in the Columbia River Basin (Reclamation) (*Identified high and medium risk facilities and completed assessments*) [Columbia River Basin]
-  Predict the fate and transport of invasive mussel veligers in the Columbia and Snake River reservoir system (USGS) (*Refocused to refine regional risk assessment criteria*) † [Columbia River Basin]
-  Conduct a physical based risk analysis for invasive mussels in the Columbia and Snake River reservoir system (USGS/Reclamation/NPS) † [Columbia River Basin]

 Complete    In Progress    On Hold Temporarily    Refocused

\*Completed; will continue in FY2019 pending appropriations

† Action item separated from a broader action item in the original report



#### **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) (*Student intern participation in education, monitoring, and watercraft inspections and decontaminations throughout the Flathead Lake Basin*) [Montana]
- ▣ Support watercraft inspection stations and K-9 inspection units on the Blackfeet Indian Reservation, through BIA project funding (BIA) [Montana]
- Maintain or enhance mussel prevention programs at vulnerable National Parks in the Columbia River Basin, and evaluate existing programs for effectiveness (NPS) (*Prevention programs enhanced in many ways. Examples include boater self-certification program at Lake Roosevelt National Recreation Area, development of Aquatic Invasive Species Panel recommendations at Yellowstone National Park, rapid response exercise at Grand Teton National Park, and agreements with tribal partners to enhance prevention at Glacier National Park*)\* [Columbia River Basin]
- Assess establishing watercraft inspection and decontamination programs at Lake Chelan National Recreation Area in the North Cascades Complex (NPS) (*Assessment of NPS managed sections of Lake Chelan initiated in 2018; watercraft decontamination units purchased*) [Washington]
- 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 in 2017*) [Washington]

#### **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) [Westwide]
- 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 by USFWS to the State of Colorado in FY 2017; funding awarded by Reclamation to State of Colorado in FY 2018*)\* [Westwide]



## WESTWIDE 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; National Sea Grant Law Center finalized model Memorandum of Understanding for state agencies to collaborate on watercraft inspection and decontamination programs*)\* [Westwide]
- Continue teaching regional standardized watercraft inspection and decontamination in series of free classes to western partners and maintain information at [www.westernais.org](http://www.westernais.org) (USFWS) (*Funding awarded to PSMFC in FY 2017 and FY 2018*)\* [Westwide]

## 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) [Nationwide]
- Develop and validate a portable eDNA detector tool for mussels (USGS) (*Tool developed and validated using eDNA samples*) [Nationwide]
- Develop, apply, and evaluate eDNA and microscopy technologies to support sampling and detection efforts (Reclamation) (*775 samples analyzed for invasive mussel DNA and 1,623 samples analyzed microscopically in 2017; 569 samples analyzed for invasive mussel DNA and 1,582 samples analyzed microscopically in 2018; no new mussel detections in 2018*)\* [Westwide]
- ▣ Conduct eDNA sampling efforts in high risk waters on the Blackfeet Indian Reservation, through BIA project funding (BIA) [Montana]
- Develop and implement a next-generation, field-detection technology for rapid, on-site monitoring eDNA, and quantify lowest natural abundance of invasive mussels observable using technology (USFWS) (*Funding awarded to the University of Montana in FY 2017 and FY 2018*) [Westwide]

### 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 and FY 2018*)\* [Westwide]
- Continue to analyze water samples from across the western United States and provide results to staff and stakeholders (Reclamation) (*Samples analyzed in 16 states in FY 2017 and FY 2018; no new mussel detections*)\* [Westwide]

### 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; 14 designated sites sampled once per month during May-September 2018; sample analysis performed by Washington Department of Fish and Wildlife and Reclamation; no detections*)\* [Washington]
- ▣ 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) [Columbia River Basin]
- 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) (*Developed joint lessons learned document and continued monitoring activities*)\* [Colorado River Basin]
- Continue monitoring for mussels in Bureau of Reclamation waters and facilities, as well as connected waters (Reclamation) (*1,582 samples received from Reclamation waters and facilities and connected waters in 2017; 1,623 samples received in 2018; no new mussel detections in 2018*)\* [Westwide]

### 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) (*Workshop held in June 2018 and multi-jurisdictional committee established*) [Columbia River Basin]

## 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) [Nationwide]

### 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 and participated in rapid response tabletop exercises in Washington and Flathead Lake, Montana in FY 2018*)\* [Montana, Washington]
- Test Columbia River Basin Rapid response plan via a tabletop theoretical exercise. Annual event rotates through the Columbia River Basin states and is coordinated by PSMFC (USFWS) (*Funding awarded to PSMFC to support exercises in Washington in FY 2017 and in Flathead Lake, Montana in FY 2018*)\* [Columbia River Basin]

### PREPAREDNESS PLANNING

- Prepare and implement Rapid Response Plan for Jackson Lake for implementation as needed (NPS) [Wyoming]
- Hold a mock infestation rapid response exercise in Yellowstone National Park to inform the development of Rapid Response Plan (NPS) [Wyoming]

## CONTAINMENT AND CONTROL

### FACILITIES AND INFRASTRUCTURE PROTECTION

- Compile best practices, strategies, and technologies used at infested facilities to minimize risks and impacts (Reclamation) [Nationwide]
- 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) (*Refocused to support additional watercraft and inspection decontamination activities*) [Columbia River Basin]

### 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) *(238 solvers signed up for challenge; three submissions selected for prizes)* [Westwide]

### 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) *(Watercraft inspection and decontamination ongoing at Lakes Powell, Mead, and Mohave in cooperation with States of Utah, Nevada, and Arizona; operational refinements made based on communication with WGA and States; additional funding awarded to bolster program operations)\** [Colorado River Basin]
- Explore options for housing near areas with federal watercraft inspection and decontamination stations at Glen Canyon National Recreation Area (NPS) *(Options identified and implementation of solutions in progress)\** [Utah]
- Identify approaches to develop commercial inspection and decontamination capacity for recreational watercraft, in collaboration with the private sector (NPS) *(Private companies invited to an Advanced Decontamination Training in November 2018; Arizona Game and Fish Department continues to work through its request for proposals process for commercial decontamination)\** [Colorado River Basin]
- 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) *(Multi-stakeholder workshop held and strategy developed; discussion on next steps in process with partners)* [Colorado River Basin]
- Support state watercraft inspection/decontamination programs and partner outreach programs in the Lower Colorado River (USFWS) *(Funding awarded to Nevada, Utah, Arizona, and Lake Havasu Marine Association in FY 2017; funding awarded to Nevada, Utah, Arizona, and partner organizations in FY 2018)\** [Colorado River Basin]

## 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) [Nationwide]

### MULTI-STATE MARKETING EVALUATION




-  Explore options to evaluate existing outreach and education campaigns for message consistency, target audiences, delivery strategies, and gaps (ANSTF) (*Discussed at ANSTF meeting in June 2018; members supported including it in Strategic Plan 2019-2024*)\* [Nationwide]

### 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/USFWS) (*Integrated into Multi-state Marketing Evaluation action item*) [Nationwide]

## 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) (*Science & Technology mussel research projects awarded in FY 2018, <https://www.usbr.gov/research/invasive-mussels.html>*)\* [Westwide]
-  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) [Utah]
-  Examine survivability of invasive mussel juveniles and veligers in antifreeze used to overwinter watercraft to determine management recommendations for spring boaters (USFWS) (*Grant awarded to KASF Consulting in FY 2017; project completed and report distributed in FY 2018*) [Westwide]

## 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) (*Notice of Opportunity for Funding published on grants.gov April 2018; each panel received \$40,000 to assist operations in FY 2018*)\* [Nationwide]
- Continue to provide cost-share grants to states, regional organizations, and tribes, for the implementation of Aquatic Nuisance Species Management Plans (USFWS) (*Funding awarded for implementation of state Aquatic Nuisance Species Management Plans in FY 2017 (most entities received \$46,715) and in FY 2018 (most entities received \$47,695)*)\* † [Nationwide]
- Continue to provide competitive grants to meet the goals of the Quagga-Zebra Mussel Action Plan (USFWS) (*\$930,000 awarded in FY 2017 and again in FY 2018*)\* † [Westwide]
- ▣ Assist states and tribal governments to draft interstate aquatic invasive species plans (USFWS) [Westwide]

### 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 in FY 2017 to support inspection and decontamination and engagement in existing partnership networks*) [Columbia River Basin]
- ▣ Explore options, in partnership with WGA, to enhance policy level coordination among federal, state, and tribal leaders (DOI) [Westwide]

### 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) [Nationwide]

### REGULATORY IMPROVEMENTS

- ▣ Evaluate NPS invasive species policy on watercraft inspection and decontamination to determine its adequacy for protecting NPS resources

■ Complete   ▣ In Progress   ▣ On Hold Temporarily   ◼ Refocused

\*Completed; will continue in FY2019 pending appropriations

† Action item separated from a broader action item in the original report

and working effectively with state, federal, and other partners, and if necessary, explore options to improve it (NPS) [Westwide]

- ☑ 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) [Columbia River Basin]

*Safeguarding the West* identifies actions for DOI to implement in coordination with others to address invasive mussels. The network of partnerships across the West is well-established, and effective. Solutions are evolving with technological advancements, policy improvements, and increased collaboration for strategic delivery of coordinated programs. DOI is committed to continuing its engagement 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
CBMMF	Columbia River Basin Dreissenid Mussel Monitoring Forum
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
Reclamation	Bureau of Reclamation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WGA	Western Governors' Association

U.S. Department of the Interior. 2019. Safeguarding the West from Invasive Species: Actions to Strengthen Federal, State, and Tribal Coordination to Address Invasive Mussels – Progress Report, February 2019.

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For 2017 Report, see: <https://go.usa.gov/xEE6u>

For 2018 Report, see: <https://go.usa.gov/xEEFa>



