

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting

September 14-18, 2020

Virtual Meeting

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. The Interior Region 8 (IR8) Executive Council led by Field Special Assistant Ray Suazo established the IR8 Collaborative Conservation Team to coordinate efforts to address quagga mussels. Under this team, Bureau of Land Management (BLM) contributed \$125,000 to support the establishment of an interagency agreement to fund watercraft inspection and decontamination data sharing system and watercraft inspection training. The agreement was signed by US Fish and Wildlife Service, BLM, Bureau of Reclamation, and the National Park Service.
2. BLM- Arizona developed an Aquatic Invasive Species (Quagga) Strategy (02-14-2020) with the goal to build a unified approach to addressing issues caused by quagga mussels on the lower Colorado River, including recreational experiences, water delivery, etc. This approach focuses on bringing in local city, county, and the public, and to provide a unified understanding of why addressing quagga mussels is priority for the Regional and each state that benefit from the Colorado River. This strategy provided direction in setting priorities.
3. In fiscal year 2020, BLM Arizona received an increase in funding from \$75,000 to one million dollars to address containment of quagga mussels at Lake Havasu and the lower Colorado River. The BLM awarded \$264,813 for two new projects received under the fiscal year 2020 funding announcement. An inter-agency panel was used to complete merit review of the two proposals received to ensure coordination with other agencies funding efforts.
  - BLM awarded a new agreement with the Chemehuevi Tribe to establish an education and outreach program to ensure that messages are consistent with national/regional guidance from the Aquatic Nuisance Species Task Force, Western Regional Panel, Building Consensus, and Uniform Minimum Protocols and Standards (UMPS). Incorporating the Chemehuevi Tribe will expand the existing Lake Havasu Quagga/AIS Coordination Team and address several priorities identified in the DOI- Safeguarding the West Strategy, BLM 2017 Lake Havasu Quagga Mussels Strategy, and Arizona BLM Aquatic Invasive Species (Quagga) Strategy (02/14/2020).

BLM- Arizona awarded a new agreement with the State of Arizona, Arizona Game and Fish Department that expands efforts to reach boaters on the using BLM facilities and Cooperative Management Areas in California to facilitate watercraft inspection and decontamination of high-risk boats. This new effort will also support research that will help understand the effects on quagga mussels on artificial fish habitat and current habitat restoration efforts on Lake Havasu.

- Funding was used to increase BLM capacity to implement an AIS program that supports ongoing WID efforts, and increase compacity on the California side of the Lower Colorado River. BLM Lake Havasu added three new term positions, purchasing a mobile decontamination unit, and additional outreach materials.

Outside the Lower, Colorado River Basin, BLM also contributed \$250,000 to address AIS.

4. Arizona Game and Fish Department completed the final year under a 5-year assistance agreement. The agreement supported education and outreach to over 4,900 individuals through several events. Also, supported over 218 inspections/decontamination and facilitated inspection and decontamination by Arizona Game and Fish Department contractor on 231 watercraft leaving Lake Havasu/lower Colorado River. A new agreement was initiated in 2019, to continue building on existing accomplishments.
5. BLM partnered with Wildlife Forever's Clean Drain Dry outreach initiative on invasive species prevention outreach. This initiative engages sportsmen and women in western states and has resulted in over 718,000,000 "impressions" of invasive species messaging. These "impressions" are in the form of outreach, education and providing resources to promote outcome to support behavior changes and best practices. This outreach increases public awareness and public lands stewardship by reducing and limiting the spread of aquatic and terrestrial invasive species on BLM-managed and other public, state, and private lands.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

In fiscal year 2021- BLM will continue to support and expand local partnership and working groups addressing AIS.

BLM anticipates continued funding of one million dollars to be used on the lower Colorado River Containment effort. These funds will be used to support BLM WID program implementations, seek new partners and projects, looking to expand efforts in California, and support IR8 AIS teams' priorities.

BLM will continue to partner with Wildlife Forever to maintain reach of over 3 million impressions as well as aiding local efforts through the distribution of outreach materials for use on-the-ground.

BLM Assessment, Inventory and Monitoring Program (AIM) has partnered with USDA Forest Service Pacific Northwest Research Station to explore expansion of multi-species eDNA methodology to include data collection on lotic systems throughout the western US. Current

methods are used extensively in the Pacific Northwest and this project will refine data collection techniques in other BLM systems. Coordination of efforts across Bureaus to focus funding on addressing the highest priorities in the Lower Colorado River.

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Reclamation's primary focus for the past year has been the implementation of the Fiscal Year 2020 Mussels Spend Plan. Since the 2017 launch of the Department of Interior's *Safeguarding the West from Invasive Species- Actions to Strengthen Federal, State, and Tribal Coordination to address Invasive Mussels* Reclamation has provided additional resources for mussel's management in the West. In 2020 as part the Safeguarding Initiative, Reclamation provided approximately \$2 million dollars to support various mussel's management activities across the West including support for watercraft inspection and decontamination in Arizona, Colorado, South Dakota, Nevada, Utah, Washington, Montana, Wyoming, Kansas, and New Mexico.
2. The finalization of Reclamation's Integrated Pest management and Invasive Species Policy and Directive and Standards. These Reclamation Manual documents assign program responsibility and establish and document Bureau of Reclamation-wide methods of doing business. Policy reflects the Commissioner's leadership philosophy and principles and defines the general framework in which Reclamation pursues its mission. Policy is structured to encourage innovation to accomplish implementation at the local level. Directives and Standards provide the level of detail necessary to ensure consistent application of Policy Reclamation-wide. Directives and Standards are also structured to provide flexibility to local offices, allowing the unique aspects of each Reclamation project and program to be taken into consideration.
3. The completion of Reclamation's [Invasive Mussel Research Road Map](#)
4. The release of a compilation and summary of the research Reclamation had conducted up to this point for the control of invasive mussels at hydropower facilities. [Compendium of Reclamation Mussel Control Research for Hydropower Facilities](#)

5. In 2019, Reclamation's Ecological Research Laboratory analyzed 1,505 invasive mussel early detection samples, and 294 of those samples were analyzed for environmental DNA (eDNA). No new mussel detections were discovered in 2019.

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- The implementation of Reclamation's Fiscal Year 2021 Spend Plan to support various mussel's management activities across the West
- Continued mussel monitoring
- Continued research on control technologies and early detection methodologies for mussels

## Member Update Reports for the Western Regional Panel Meeting

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Detection and removal of the invasive seaweed *Sargassum horneri*. This alga was detected by recreational divers at the Monterey breakwater in June 2020. On 6/23/2020 CA Department of Fish and Wildlife staff (David Osorio and Katie Grady) searched along the breakwater. Divers entered at 1500 hr, dove 65 min, and surveyed from Jetty Mark 5½ to approximately Mark 9. The outbound survey was mid-depth along the wall's slope, ranging from 12-25 ft deep. The inbound survey was closer to the sand/rock interface (bottom) ranging from 40-10 ft depth. One specimen (approx. 8 cm diameter) was located at 33 ft depth atop a boulder and below Jetty Mark 8½. No other specimens were observed. The collected specimen was pressed for conservation. NOAA divers are still not allowed to dive and were not able to participate in field operations.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Plans are in place for NOAA divers to survey the Monterey breakwater and adjacent open coast and marina. Once NOAA diving is allowed, we intend to hit the water immediately.

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Expended over \$2 million in FY20 base funds on Dreissenid mussel prevention and containment at eight western parks.
2. Obligated \$1 million in FY20 project funds for Dreissenid mussel prevention and containment in six western parks.
3. Signed an interagency agreement with other Department of Interior bureaus to contribute funds to support watercraft inspection / decontamination training and the watercraft inspection / decontamination data sharing system.
4. Reviewed and selected projects and activities for \$1 million in FY22 funding to prevent introduction and spread of Dreissenid mussels and other AIS in the west including funding for the IAA identified under #3.
5. Distributed the National Park Service *Quagga / Zebra Mussel Strategic Plan for Western Parks* for final review by the field.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- Finalize the NPS *Quagga / Zebra Mussel Strategic Plan for Western Parks*.
- Develop and implement a tracking system for activities conducted under the *Plan*.
- Obligate funds for FY21 Dreissenid mussel projects / activities in western parks; review and select FY23 proposals for Dreissenid mussel prevention containment.
- Continue to work with state and federal partners to improve the efficiency, effectiveness and sustainability of Dreissenid prevention and containment efforts in western parks.
- Identify / explore opportunities to expand current efforts to address the threat of other AIS.

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Coordinated Research with ERDC on Flowering Rush in hydrodynamic systems- Due to Covid travel restrictions and funding impacts from it. Only one 5 acre research water exchange and treatment was performed along with an established pool request to maintain elevation. With limited local staff the work was performed.
2. Watercraft Inspection station and Monitoring cost-share program was successful in getting CY'20 agreement in place and funded. State efforts though may have been inhibited due to Covid restrictions and funding necessary to perform efforts. Plan to have CRB expansion encompassing Wyoming and Nevada done this fall for the new CY21 agreement
3. Getting Flowering Rush cost share agreement in place for the four-state area to perform control treatments and monitoring of Flowering Rush, was unsuccessful in getting the program in place for this year due to various legality and review/approvals needed. Currently in final stage of approval and hope to have in place this fall to get agreement in place this winter.
4. Finalizing letter reports for three other watersheds authorized in WRDA for Cost-Shares programs for Watercraft Inspection Stations, Monitoring, and Rapid Response. Completion expected this fall.
5. Harmful Algal Blooms (HABs) ERDC research on maintenance and control techniques. Numerous studies and field trials delayed due to Covid; but additional research development occurring due to increased funding for ERDC. This programs funding has increased the last two years leading to additional efforts on HABs.

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1. Maintain Cost-Share Programs for Watercraft Inspection Stations and Monitoring for CRB, contingent on appropriated funding.
2. Finalize establishment of Flowering Rush Cost-Share and Mussel Rapid Response Cost-Share.
3. Future treatments and management of Flowering Rush in McNary Reservoir. -Summer '21 hope to be fully functional and perform two 5 acre treatments along with testing of bubble curtain technology both in large unit and small units.
4. Establishing additional cost share programs for Watercraft Inspection Stations, Monitoring, and Rapid Response in other watersheds authorized by WRDA and prepared if program is expanded again.
5. Continue HABs maintenance and control technique research contingent on appropriated funding, in FY20 additional national funding was provided and currently research projects are being developed for approval and implementation.
6. USACE ISLT developing and coordinating agency involvement and efforts in relation to Dingle Act, Protecting the West, and Western Governors' Association initiatives.

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### **National Coordination on Asian Carp Management**

FWS works with its Federal, State, Tribal and non-governmental partners to address the risk of Asian carp in our Nation's waters. In 2007, working with over 70 partners, FWS led development of the national Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States (National Plan). On an ongoing basis, FWS works closely with the Mississippi Interstate Cooperative Resources Association (MICRA) to support Asian carp partnership needs in major sub-basins of the Mississippi River, including the Upper Mississippi River Basin; Ohio River Basin (including the Tennessee and Cumberland rivers); Missouri River Basin; and the Lower Mississippi River Basin (including the Arkansas, Red, and White rivers). In FY2020, FWS received an increase of \$14.0M in its Asian carp appropriation to support implementation of the National Plan. FWS worked with MICRA and the sub-basin partnerships to identify and develop high-priority detection, prevention, and control projects for funding by FWS in FY2020. Selected projects will address the goals and recommendations of the individual sub-basin Asian carp strategies, and those of the overarching National Plan.

### **HQ - Branch of Aquatic Invasive Species – Craig Martin, Branch Chief (craig\_martin@fws.gov)**

#### ***Aquatic Nuisance Species Task Force***

The ANS Task Force held its last public meeting in Beltsville, Maryland on November 6-7, 2019. In response to concerns over COVID-19, the Spring meeting scheduled for May 5-7, 2020 was postponed. Committees of the ANS Task Force have continued to meet remotely to implement the highest priority actions within the work plans designed to advance the six goals of the ANS Task Force Strategic Plan (coordination, prevention, early detection rapid response, control and restoration, research, and education and outreach). These actions include assessing state needs and preparedness for rapid response, assessment of the effectiveness of national invasive species outreach campaigns, identifying priority research needs at national and regional levels, and evaluating the progress of ANS Task Force. A virtual meeting is being considered for Fall 2020.

#### ***State / Interstate ANS Management Plans***

USFWS received \$3.84 million in FY20 for the State and Interstate Aquatic Nuisance Species Management Plan Grant Program. The transition to GrantSolutions has been difficult and caused unexpected delays, however, the Notice of Funding Opportunity (NOFO) was posted on June 5th and closed on August 1st. If all 43 eligible ANSTF-approved plans successfully submit proposals this year, each plan will receive approximately \$89,000.

#### ***Nationally Coordinated Invasive Species Prevention MOU***

The Memorandum of Understanding drafted by FAC and the NWRS with The North American Invasive Species Management Association, Inc., Wildlife Forever, and National Park Service to strengthen invasive species

prevention activities on our lands and waters became effective on December 18, 2019. The partners will utilize the “Stop Aquatic Hitchhikers’ Clean, Drain, Dry Initiative”, and “PlayCleanGo: Stop Invasive Species In Your Tracks” campaigns to elevate cooperation between parties, increase public awareness through education, and create clear calls- to-actions that empower people to prevent the spread of invasive species. Additional DOI bureaus, such as BLM, will be able to join the partnership in the future.

**Region 1 (WA, OR, ID, HI, Pacific Islands) – Theresa Thom, AIS Coordinator** (theresa\_thom@fws.gov)

- The U.S. Fish and Wildlife Service has teamed up with the USGS Northwest Climate Adaptation Science Center and EcoAdapt to launch the Pacific Northwest Regional Invasive Species and Climate Change (PNW RISCC) Network. Modeled after a similar effort in the Northeast, PNW RISCC aims to help natural resource managers and biologists in Oregon, Washington, Idaho, and western Montana tackle the challenging nexus of climate change and biological invasions. More information can be found in [this recent article](https://nwcasc.uw.edu/2020/08/26/building-a-regional-network-focused-on-climate-change-invasive-species-in-the-northwest/). (<https://nwcasc.uw.edu/2020/08/26/building-a-regional-network-focused-on-climate-change-invasive-species-in-the-northwest/>). A paper summarizing climate-induced expansions of invasive species in the Pacific Northwest was published in March 2020 in Biological Invasions (<https://link.springer.com/article/10.1007%2Fs10530-020-02244-2>).
- FWS staff at the Western Washington Fish and Wildlife Conservation Office started a new research study with WDFW, King County, and the Muckleshoot Tribe to examine predation by non-native fishes in the Lake Washington basin on ESA listed Chinook Salmon. Introduced yellow perch were consuming juvenile Chinook as they migrated from Lake Washington to Puget Sound. We are working together to quantify the level of predation and the effects to this ESA listed population. WWFWCO established a cooperative agreement with the Chehalis Tribe to develop an aquatic invasive species plan in the Chehalis River Basin. FWS staff serve on the Washington Invasive Species Council.
- FWS staff in the Oregon Fish and Wildlife Office and the Columbia River Fish and Wildlife Conservation Office continue to serve on the Oregon Invasive Species Council supporting the OISC strategic plan, including consultation, habitat restoration and both technical and financial support. AIS monitoring was conducted throughout FY20 at National fish hatcheries. The Klamath Falls office (Region 8) is involved in brook trout control and eradication efforts in areas of important bull trout habitat.
- FWS staff based in Idaho participated in the Idaho Invasive Species Council. Staff conducted monthly AIS surveys for invasive species and pathogens at National Fish Hatcheries in the state. Biosecurity training and HACCP training was also provided to FWS, state, and tribal hatchery and field staff in FY20.
- FWS continues to be an active member on the Steering Committee on Landscape Scale Mosquito Control in Hawaii. Efforts are focused on an Insect Incompatibility Technique incorporating the ensymbiont Wolbachia, and on regulatory and community engagement actions needed to develop this biopesticide to address Avian Malaria that is impacting Hawaii's native forest birds.
- The Pacific Islands Fish and Wildlife Office continues to work with the State and partners to identify and strengthen biosecurity actions within the State of Hawaii and Pacific Island Region. The Hawaii Interagency BioSecurity Plan 2017-2027 continues to guide actions on minimizing new ANS introductions. The plan focuses on a range of pre-border, border, and post-border actions that can be taken to address invasive species. Financial assistance through the ANS State Management Plan continues to leverage critical support to better understand and address biofouling and ballast water as a pathway of introduction and dispersal for ANS. Focus in this area is even more critical with the passage of the Vessel Incidental Discharge Act passed in 2019. We continue to support partners in meetings such as the Western Regional Panel, Hawaii Invasive Species Council, Coordinating Group on Alien Pest Species and the Hawaii Alien Aquatic Organism Task Force.

**Region 2 (AZ, NM, OK, TX) –Barak Shemai, AIS Coordinator (barak\_shemai@fws.gov)**

- Region 2 will be awarding approximately \$1.9M in grant awards to address QZAP priorities in western waters.
- Region 2 led the development of and execution of an Interagency Agreement with BLM, BOR, NPS, and FWS to collectively support two Quagga/Zebra projects that benefit the greater western US including local governments, states, tribes and other federal agencies. These projects include watercraft inspection training, and watercraft inspection database.
- Region 2 awarded a grant modification to University of Montana, Flathead Lake Biological Station, to install the newly developed DNA Tracker, which is real-time eDNA machine, at our Inks Dam National Fish Hatchery in Marble Falls, Texas. This will serve as a demonstration of an early detection tool that can be used in concert with AIS control measures and sport fish production.
- Region 2 awarded a grant to Texas Parks and Wildlife for an extensive interstate project looking at the Distribution and Population Demographics of Asian Carp in the Lower Red River Basin.

**Region 6 (CO, KS, MT, ND, NE, SD, UT, WY) – Joanne Grady, AIS Coordinator (joanne\_grady@fws.gov)**

- Leads FWS HACCP Committee. Taught 2019/2020 HACCP courses in Georgia and Kansas, Hawaii, and working with the National Conservation Training Center (NCTC) to update training materials and webpage. Additional in person courses on hold due to COVID-19.
- First year of funding for Asian carp in the Missouri River. Coordinating internal programs for three FWS stations and grants to Kansas, Nebraska and South Dakota.
- Participate in DOI Committees for Safeguarding the West Initiative and DOI funding.
- R6 dive team supports state partners in diving for invasive mussels. Dive team diving fall 2020 to check settlement samplers in Fort Peck Reservoir on the Missouri River.
- Montana Fish & Wildlife Conservation Office assists Blackfoot Tribe with waterbody monitoring for quagga/zebra mussels.
- Represent FWS and provide funding support to the 100th Meridian Initiative Columbia River Basin and Missouri River Basin Teams. Prioritization and allocation of 100th Meridian Initiative grant funding. Annual grant competition largely focused on supporting efforts to collectively protect the Western U.S. from invasive species spread.
- Project funding and oversight for the following projects:
  - Don't Let it Loose pet store outreach program – Invasive Species Action Network
  - Research on the role of local municipalities and entities in AIS prevention efforts – National Sea Grant Law Center
  - Watercraft Inspection and Decontamination outreach – Pacific States Marine Fisheries Commission
  - In situ quagga detector – EQO
  - Industry AIS outreach and marketing – American Boat and Yacht Council

**Region 7 (Alaska) – Aaron Martin, AIS Coordinator (aaron\_e\_martin@fws.gov)**

- Forming a Shared Vision and Increasing Partner Capacity: Creation of a multi-agency Alaska Invasive Species Partnership (ASIP) that is developing an all taxa statewide strategic plan. Service hired two EDRR project managers stationed strategically within the region; increased financial assistance to the State of Alaska; currently converting a Directorate Resource Fellow (DFP) to be the Regional Invasive

Species Outreach Coordinator to implement multi-stakeholder communication strategy plan and awareness campaign.

- Administrative Streamlining Actions: Finalized Programmatic EA for managing aquatic invasive plants. This EA addresses two species of Elodea known to be in Alaska and three other submerged invasive plants that have not been detected in Alaska (i.e., Brazilian waterweed, hydrilla, and Eurasian watermilfoil).
- Rapid Response & Preparedness: Elodea and Northern Pike remain priority aquatic invasive species, and in FY20, the Service is dedicating over \$2.6 million for EDRR activities related to those species. Rapid response plans have been completed for rodents, terrestrial plants, Elodea (and other submerged aquatic plants), and mollusks (mussels and snails). A rapid response plan for invasive Northern Pike is in development.
- Early Detection and Interdiction: State and Federal collaboration on vector analyses to understand in-state watercraft movements and the number and level of risk of watercraft entering Alaska via marine pathways (e.g., ferries, barges). Launched full-time operations for the watercraft inspection and decontamination program at the US/Canada border – Alcan Port of Entry—in close collaboration with the U.S. Customs and Border Protection.
- Science-based Decision Support: There is commitment to develop and maintain open access, all taxa, statewide data management systems and storage. A multi-year agreement has been established with the University of Alaska to expand the capacity and accessibility of information in the Alaska Exotic Plant Information Clearinghouse. New data portals and mapping tools are planned.
- Priorities over the upcoming fiscal year include efforts to finalize AIS strategic plan and EDRR MOU between partnership organizations, finalize detection probability assessment for Elodea eDNA, conduct Rapid Response drills to enhance preparedness and response capacity, and to increase routine surveillance of target species, including maintain Alcan Port of Entry watercraft inspection and decontamination program and implement watercraft inspection & decontamination stations at other points of entry to Alaska.

#### **Region 8 (CA, NV) – Cesar Blanco, AIS Coordinator (cesar\_blanco@fws.gov)**

- Chinese Mystery Snail (CMS) – a suspected specimen of CMS was discovered May 2020 in Funks Creek, a tributary feeding into the Tehama Colusa Canal with connectivity to the Sacramento River. Prior to this sighting CMS was limited to parts of the Sacramento/San Joaquin River Delta. This recent sighting is well outside the known range of CMS in California, so the Regional AIS program will be funding and taking part in a survey to determine the extent of this invasion and response actions.
- Blue Killifish – In October 2017 bluefin killifish (*Lucania goodie*) were discovered by USFWS staff in the Sacramento-San Joaquin River Delta, and subsequently by both USFWS and State agencies indicating an established population. Summary of findings was published in 2020 in San Francisco Estuary and Watershed Science (<https://escholarship.org/uc/item/855742qk>). An Early Risk Screening Summary is available at: [https://www.fws.gov/Fisheries/ANS/erss/uncertainrisk/ERSS-Lucania-goodei\\_Final.pdf](https://www.fws.gov/Fisheries/ANS/erss/uncertainrisk/ERSS-Lucania-goodei_Final.pdf)
- Lahontan National Fish Hatchery continues to work with the Tahoe Regional Planning Agency (TRPA), Nevada Department of Wildlife (NDOW), University of Nevada Reno (UNR) to implement the Implementation Plan for the Control of Aquatic Invasive Species within Lake Tahoe and the Lake Tahoe Region Aquatic Invasive Species Management Plan. These plans are intended to guide the prioritization of key control strategies and are not intended to be a comprehensive treatment of all issues related to AIS in the Lake Tahoe region.

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

### **Region 1 (ID, MT, ND, SD, WA):**

- Dakota Prairie Grasslands (DPG)(ND) partners with the Army Corps of Engineers, ND Parks and Rec, ND Game and Fish, and Ransom County Park Board to ensure consistent AIS public education and outreach messages along the Sheyenne River Water Trail. DPG is working with ND Game and Fish to install AIS educational signage at four launch sites. DPG distributes information on AIS at the river festival event at Fort Ransom State Park.
- Bitterroot NF (MT) Darby District Ranger provides MT Fish, Wildlife, and Parks the Sula Work Center parking lot to manage an AIS inspection station.
- Flathead NF (MT) and RO are coordinating with Missoula County Weed Extension, MT Fish, Wildlife, and Parks, and Montana State University on fragrant water lily management – mapping both fragrant water lily and rare plants, manual removal with volunteers, testing herbicide application, and education and outreach. Flathead also works with the Missoula County AIS program to implement an AIS early detection and rapid response and prevention program.
- Custer-Gallatin NF (MT) is coordinating with MT Fish, Wildlife, and Parks in eradicating curlyleaf pondweed in recently required ponds.
- Lolo NF (MT) partners with Clearwater Resource Council out of Seeley Lake to conduct AIS education/outreach and veliger sampling throughout the chain of lakes.
- R1 is coordinating with MT Fish, Wildlife, and Parks for fire personnel during Initial Attack to use the state inspection station decontamination equipment until their decontamination equipment arrives. RO is working with regional resource advisors, GIS specialists, and technical experts to develop a region wide AIS geodatabase which will be housed and updated annually.
- R1 is coordinating with Recreation.gov to include AIS information in the “Need to Know” section of the reservation confirmation.

R1 is coordinating with ID, MT, and ND AIS leads to develop a color-coded map for READs to determine AIS risks and have the ability to modify the maps based on current local knowledge.

## **REGION 2 (CO, E. WY, SD, NE, KS)**

- USFS has a Cost Share Agreement with Colorado Parks and Wildlife (CPW) as well as other partnerships for boat inspection and decontamination programs on 10 reservoirs across 5 National Forests in the Region. In FY 2020, the FS cost-shared a total of \$154,000 with CPW for boat inspections and decontaminations on NFS waters across Colorado:
  - a. San Juan NF – McPhee Reservoir. 4-way partnership with CPW, FS, BOR, and Delores Water Users. FS Share = \$26,000K
  - b. Grand Mesa/Uncompahgre/Gunnison NF – Taylor Park Reservoir. FS share = \$28,000K
  - c. Pike/San Isabel NF – Turquoise and Twin Lakes. FS Share = \$15,000K
  - d. White River NF – Green Mountain and Ruedi Reservoirs. FS Share = \$30,000K
  - e. Arapaho Roosevelt NF – Colorado Big-Thompson System of Grand Lake, Shadow Mountain and Lake Granby. FS Share = \$55,000 of the \$100,000K needed with partners making up for FS deficit in cost share.
- The Black Hills National Forest has entered a new partnership agreement with South Dakota Fish, Game and Parks (SDGFP). SDGFP is currently staffing Watercraft Inspection and Decontamination (WID) stations to detect Aquatic Invasive Species (AIS) at Deerfield, Pactola, and Sheridan reservoirs all within the Black Hills NF.
- Regional personnel are working with the national fire organization to include equipment cleaning language in national fire contracts to protect against the spread of AIS.

## **REGION 3 (AZ & NM)**

- Tonto and Coronado NFs coordinate with AGFD to develop landscape level bullfrog removal projects for non-native American bullfrogs with a goal of bullfrog-free areas to assist in recovery actions for Chiricahua Leopard Frogs. This is a cooperative program with AGFD, USFWS, and several other partners. In 2020, both forests have coordinated with Back Country Anglers regarding a future volunteer partnership to assist in bullfrog removal. In addition, Tonto NF continues to assist in AGFD to remove a non-native salamander (*Ensatina* sp.) from the headwaters of Tonto Creek.
- Coconino NF is participating with Arizona Game and Fish, and Rocky Mountain Research Station for techniques to track and contain New Zealand Mudsnaills from springs and Oak Creek.
- Several forests in NM and AZ have ongoing projects for removing nonnative species from sensitive reaches that contain T&E species. Forests partner with AGFD each year to remove thousands of apple snails and their egg masses along the lower Salt River. There are also volunteer groups working to remove crayfish in springs with Gila topminnow.
- Tonto NF has an active public education program for quagga mussels, “Don’t move a mussel”, and AGFD and Reclamation operate and monitor boat wash stations and reservoirs on the lower Salt River Project.
- Continuing work in NM are working with NMDGF to explore use of YY-Brook Trout to skew sex ratios and mechanical Brook Trout removal to eradicate this non-native from areas suitable for native trout restoration. YY technology for other species is being investigated by various agencies including University of Arizona.

## **Region 4 (UT, NV, s. ID, w. WY)**

- The Regional Office continues to fund AIS inspection, decontamination, outreach, and AIS monitoring on high risk USFS waterbodies, through partnerships with Utah Department of Wildlife Resources (UDWR), Idaho Department of Agriculture, and Wyoming Department of Game & Fish (WDGF), with commitments that have totaled \$1.45 million across 12 years. State partners continue to interdict, inspect, and outreach numerous watercraft from infested waters requiring decontamination prior to launching boats. State partners also monitored twenty-eight NFS waterbodies multiple times each season for invasive mussels & plants. Funding has continued in FY2020, providing \$134,000 annually to state partners since 2008.
- Flaming Gorge Reservoir: Utah Department of Wildlife Resources (UDWR) is the lead on AIS management on Flaming Gorge Reservoir (Flaming Gorge National Refuge). The Regional Office funds technicians at Flaming Gorge Reservoir from April through October, on both the Utah and Wyoming sides to staff the check stations at boat ramps. The Region also provides portable two pressure hot water washer/decontamination units that Wyoming and Utah state crews to use.
- As watercraft are interdicted during the 2020 boating season, the states collected plankton samples from Flaming Gorge Reservoir in May, July, August, and September and to date, all samples were found to be negative for mussel veligers.
- In the event of dreissenid infestation, Flaming Gorge has a Rapid Response and Control Plan (2016) which lays out actions that agencies will take immediately upon mussel detection to improve reaction time. The Plan represents a collaborative effort between the USFS, BOR, WDGF, and UDWR and to merge Utah and Wyoming under one strategy. The plan will serve as the guiding document for initial decision making and containment, and will facilitate effective communication to the boating community on developments around the reservoir. The plan will be ready for implementation in FY21.
- State of Idaho: in 2020 law enforcement returned 2,321 watercraft, from 2,119 infested waters with 4,378 hot washed with a total of 124,084 watercraft inspected.  
<https://idaho.maps.arcgis.com/apps/opsdashboard/index.html#/ad679c90ae9f4979a49013985d28da8a>
- AIS boat inspection stations in cooperation with Idaho Department of Agriculture at Redfish Lake, Alturas Lake and Stanley Lake conducted in FY20 and planned for FY21. USFS provides funding to Idaho State Department of Agriculture (ISDA) to staff the station Thursday-Tuesday with state employees and REM providing staff for Wednesday. USFS also provides funds to help cover housing and station supplies. ISDA provides a little in-kind match funds to help support the station, supplies, oversight and training as needed.
- Numbers for 2020 – The Redfish Inspection Station (which includes the surrounding lakes on SNF) has inspected 2,201 boats, found 10 from infested waters and hot washed one boat. (data from 2020 Idaho Watercraft Inspection Station Dashboard).  
<https://idaho.maps.arcgis.com/apps/opsdashboard/index.html#/ad679c90ae9f4979a49013985d28da8a>
- This is a great partnership between ISDA and the FS with efficiencies gained. The forest service provides personnel, and volunteers and hot washing unit and hope to get additional funds in FY21 to purchase additional units. ISDA provides training, materials and funding. Both the state and forest service are quite proud of what was accomplished this year at Redfish, especially given the challenges surrounding the pandemic and the increase in recreationalist making this the busiest boating season at Redfish as well as statewide.



- Uinta Wasatch Cache (UWC) Nat'l Forest in partnership with Utah Division of Wildlife Resources to put in permanent wash stations at the three boat ramps at Pine View Reservoir , currently there is two portable boat ramps. NEPA completed, plans are in place and will be implemented when funds are available. UDWR will take the lead on implementation of this project.
- Caribou Targhee National Forest relies on the Idaho dept of AG and local counties to oversee AIS detection and control projects. The CT has been involved in the new State "Weed" EIS including options for controlling of Aquatic Invasives. Most Forests in the Region 4 rely heavily on the state agencies to oversee AIS detection and control

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. The Region is working with Western Regions (R6 Acting Assistant Fisheries Program Manager is the lead) to strengthen our Timber Sale Contracts to better protect our streams and waterbodies from Aquatic Invasive Species. The existing national B provision (B6.35 Equipment Cleaning) stipulates the required cleaning and inspection of logging equipment with a terrestrial invasive species emphasis. Recommend reference to the NWCG Guide to Preventing Aquatic Invasive Species Transport by Wildland Fire Operations (PMS 444) is available and addresses Best Management Practices (BMP's) in Chapter 3, Ground Operations in Chapter 4, and Aviation Operations in Chapter 5 to develop a C clause. Recommend a National C clause be developed with our current National two flagship targets of timber and fuels management.
2. Coordinating and providing funds to work with FS Research (National Genomics Lab, PNW, PSW, RMRS) a to develop 10-50 species meta bar coding "chips" to collect eDNA for identified AIS species across the West. These could be geographically developed for AIS. I recommend Dan Isaak & Mike Young of RMRS as contacts who lead a virtual meeting late August 2020 to discuss this opportunity. In addition, for Region 4 to tag onto R6's AIS eDNA strategy for opportunity and efficiency.
3. For Region 4 to follow actions that other regions are implementing in regard to fire operations, READs and general activities to assure that all AIS prevention BMP's and guidelines are followed:
4. I sent all the regional IS coordinators our VIPR language. Our fire contract CO initiated this on his own when the rocky mountain protocol came out a few years ago; it's a rocky mountain region-specific supplement to the PMS 444. Chris is also on the national VIPR agreement committee and is tracking the progress of the VIPR mod. The language is included in all R1 VIPR agreements. I'm finding the breakdown is with the team assigned to the fire.
5. I also sent the regional IS coordinators the READ AIS Rocky Mountain protocol webinar R1 offered. We invited R2, R4, and R6. I asked the WRP fire committee chair (MT DNRC employee) to lead the webinar. I'm also on the fire committee with Bill and we are going to update the protocol this fall based on comments I received from teams on two montana fires. We need to take this webinar to the logistics section chiefs because this protocol fell through the cracks on an incident this summer. Implementing COVID measures has impacted communication.
6. The WRP fire committee will be meeting again in September to review the rocky mountain AIS fire protocol and develop a training video.
7. I'm working with ID, MT, and ND AIS leads with the support of Scott and Dave (Callery) to develop a color coded map for READs to hand to ops on where they can draft water.

READs will have the ability to tweak maps based on local knowledge. Montana FWP and DNRC love the idea and have been really helpful. It'll be a webGIS map. It's a little stuck with RO GIS because of all the details and rearranging.

8. Still working on our agreement with MT FWP to use their inspection stations during initial attack – only for AIS. It's on us to get them photos of the types of equipment we'll need to clean.
9. Searching for funding to purchase additional hot water decon equipment for each unit for incidents or keep a few at RO they can check out.
10. Applying for the QZAP USFWS AIS grant with MT FWP and Wildlife Forever for education and outreach on state AIS regs.
11. As for eDNA, I coordinate with fish, wildlife, and parks in Montana, ID, ID Department of Ag, ND Fish and Game, USGS, and other entities (counties, biological stations) who conduct sampling. I've been asked to support another QZAP proposal to expand the eDNA program in Flathead Valley.
  - a. I haven't wrapped my brain around how RMRS is integrated into this program with USGS and others. I do know a few of our partners who follow the RMRS sampling protocol submit their samples to RMRS. I meet with our local RMRS folks quarterly (or at least we try). I put it on the agenda for our next call along with improving exchange of information from RMRS to the units.
12. To get additional funding for permanent wash stations across the region and specifically for Pineview reservoir in Utah and across the Region.

## **Region 5 (CA)**

- Regional level interagency coordination with states and other entities on AIS programs (i.e. prevention (watercraft inspections / decontamination), monitoring, control, eradication, and outreach / education programs) – including for quagga and zebra mussels.
- Forest level interagency coordination with partners on AIS programs. Projects included:
  - Lake Tahoe Basin Management Unit –invasive plant removal (using bottom barriers)
  - Angeles National Forest – non-native fishes removal
  - Plumas National Forest –bullfrog removal; non-native crayfish removal
- For FY21, it is expected to be similar to FY20 with the same level of coordination on AIS programs and continuation of forest level project work to remove AIS from stream and lake habitats.

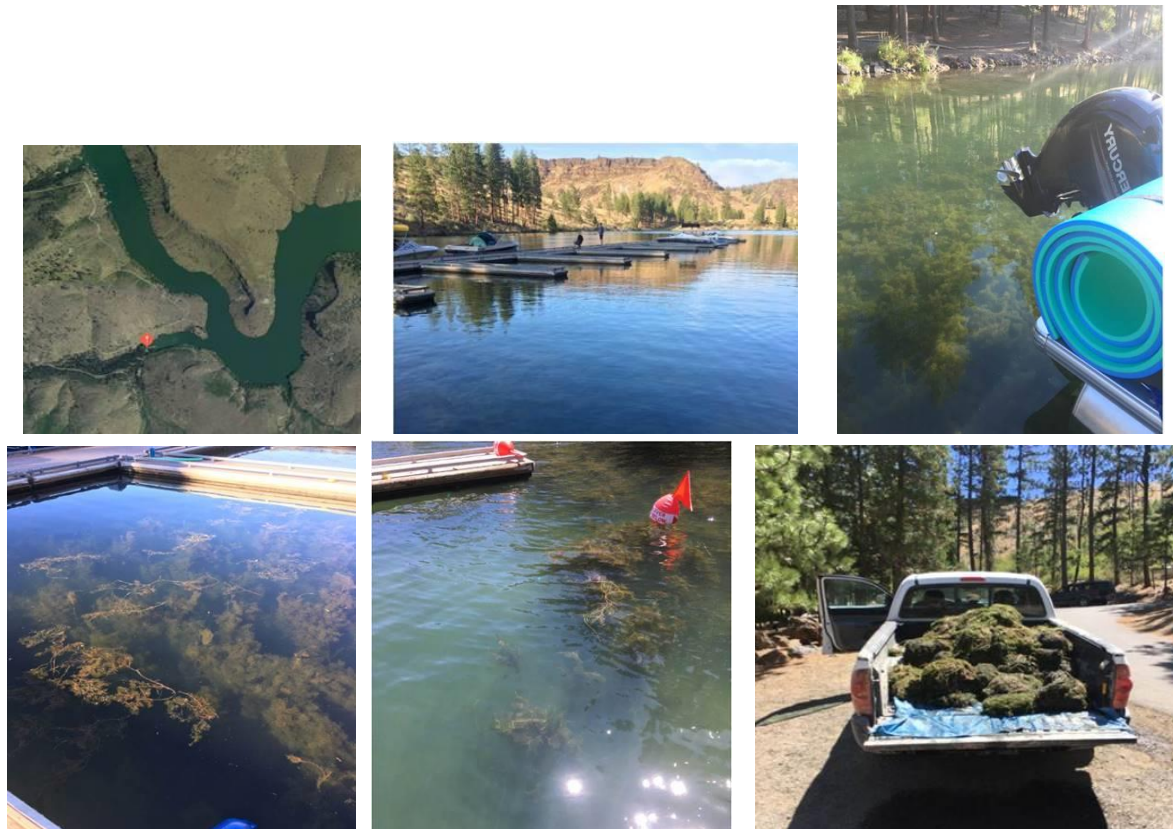
## **Region 6 (OR & WA)**

- The Pacific Northwest Region is preparing to fully implement a regionwide multispecies aquatic invasive species survey on NFS lands in 2021, utilizing personnel trained in the visual identification of priority species and eDNA sampling.
- Eurasian Milfoil Control at Coldwater Lake, Gifford Pinchot National Forest

The Regional Dive Team received good news from an early summer surveillance of an Eurasian Milfoil invasion area at the outlet of Coldwater Lake, on the Gifford Pinchot National Forest. The previous 3 years of control effort paid off because no milfoil was observed.

- Eurasian Milfoil Control at South Perry Boat Ramp on Lake Billy Chinook, Deschutes River

The Regional Dive Team spent a couple days controlling Eurasian Milfoil on a boat ramp/marina on Lake Billy Chinook (Deschutes River). They effectively cleared the plant from among the marina, being careful not to release plant fragments downstream. Photos follow:



- Suttle Lake, Deschutes National Forest, Eurasian Milfoil Survey

In early June, the Regional Dive Team surveyed the popular recreation destination Suttle Lake on the Deschutes National Forest for Eurasian Milfoil. Populations have been previously detected and control efforts are ongoing.



- Regional personnel are working with the national fire organization to include equipment cleaning language in national fire contracts to protect against the spread of AIS.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Fully implement the Regional AIS Monitoring Strategy
2. Amend Regional Equipment Contracts to include a cleaning phrase to protect against the spread of AIS.
3. Work with our Law Enforcement Officers to renew a CFR allowing them to stop individuals transporting AIS across NFS lands.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Accomplishment: Development of criteria to integrate eDNA sampling results into the USGS-NAS database
2. Accomplishment: Synthesis of climate-induced expansions of invasive species in the Pacific Northwest
3. Accomplishment: Critical assessment of the repeatability and reproducibility of eDNA assays for dreissenid mussels in USGS labs
4. Accomplishment: Decision-tree framework for integrating eDNA results into invasive species decision-making
5. Accomplishment: Integration of human and robotic eDNA sampling into the USGS streamgage network

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Complete assessment of eDNA field sampling protocols for dreissenid mussels
2. Develop metrics for assessing dreissenid mussel introduction and establishment risk in the Columbia River Basin; develop web tools for visualizing these risks
3. Develop statistical models to guide (traditional) plankton surveillance effort needed for high probability of detecting dreissenid mussel veligers.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Compiled water quality data to assess invasion risk of dreissenid mussels in the Columbia River Basin.
2. Summarized dreissenid mussel invasion risk associated with dissolved Calcium, pH, and spawning water temperatures at the sub-watershed scale for the CRB.
3. Summarized the number of boat ramps at the sub-watershed scale for the CRB.
4. Developing a database describing vehicle travel times between boat ramps in the Columbia River Basin.
5. Facilitated meetings of the Columbia River Basin Dreissenid Mussel Monitoring Forums as part of the 100<sup>th</sup> Meridian Columbia Basin Team meetings

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

*We will continue to work towards assessing the invasion risk of dreissenid mussels in the Columbia River Basin.*

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Blaine L. Parker

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Elected to WRP EXComm at the Missoula Meeting.
2. Coordinating with USFWS for a 2-day USFWS ANS workshop scheduled for March 2020 (subsequently canceled due to pandemic).
3. Initial planning with USGS and WSU for our 2019/2020 multi-ecoregion ANS prevention workshops with Columbia Basin tribal natural resource staff (subsequently canceled due to pandemic).
4. Submitted a joint proposal with USGS and WSU to continue ANS Prevention and Outreach with regional tribes continue efforts from previous grants. In June of 2020 we were awarded a grant for our joint submittal.
5. Maintained active status as member of the WRP ExComm.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.** Effort for the remainder of the year will focus on preparation for implementing our 2019 and 2020 grant monies, continued work with the WRP ExComm and formulation of 2021 grant proposal. In addition, elevate Commission's participation with the region on northern pike control, management and regional awareness of the threat this invasive species presents to recovery of the Columbia Basin's native anadromous and resident fish species.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Tammy Davis

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Invasive northern pike management in Southcentral, AK

Suppression Projects: Alexander Creek Pike Suppression (Gill-net removal of pike): ADF&G removed nearly 3,000 fish of multiple year classes, with several fish in the 500-800mm size range. This is ~2,000 more than netted in previous years. For several years the trend had been for significantly fewer fish to be removed. It is concerning that pike caught were post-spawn and assumed to have had high recruitment. Only 512 Chinook counted from Alexander Cr. surveys, in 2019 surveys 1,300 Chinook were counted. Chinook counts have been down by approx. half across all systems in the region 2020. No expected correlation between 2020 pike and Chinook numbers. Hydrologic conditions were such that some sloughs were able to be accessed this year and most years they are inaccessible.

Suppression continues in six smaller systems: 1. Deshka River: 260 pike removed (176 removed in 2019) from five sloughs, nearly twice as much netting effort; 2. Threemile Outlet, 107 pike and 1 rainbow trout. Rainbows had been abundant in the system yet have not been observed in recent years; 3. Chuitbuna: 25 pike with no bycatch. 4. Shell lake: Six years of intensive netting in the system, this year approx. one third the average number of pike removed, only 32 pike. There was an increase in bycatch, with a lot of coho and large suckers observed in the system; lake trout, burbot and rainbow trout numbers are up. Considering use of a flow control structures to control pike. 5. Whiskey Lake: 1,700 removed, and 6. Hewitt Lake: 1,000 were removed. Changes in funding options has eliminated suppression projects in some systems.

Eradication Projects: Completing the permit process, collecting water quality data, and collecting invertebrates, for treatments in Anderson and Kings lake in the Mat-Su. Project scheduled for Oct. Sticklebacks and suckers will be reintroduced to the lakes after treatment.

Vogel Lake the last remaining pike population on the Kenai Peninsula is being tackled by a partnership of state, federal and local entities with plan to treat in 2021.



2. Increased focus on communications about illegal release of non-native fish and aquatic invasive species in collaboration with the AK Fish and Wildlife Troopers using social media and department communications platforms. Presently, in the process of hiring a contractor to assist with developing an education campaign to target key audiences, including aquaria enthusiasts, with Alaska-focused messaging to fill outreach gaps.
3. ADF&G is collaborating with the AK Dept. of Natural Resources, USFWS and NOAA to develop a statewide all taxa invasive species strategic plan. A work group was hosted to bring together partners and stakeholders to provide input and provide feedback on drafts. The plan will provide guidance for partners to align on invasive species planning and management actions and begin to fill policy, research, and management gaps. Anticipate a fall 2020 completion.
4. GIS-based tool developed (and in refinement status) to prioritize waterbodies statewide to assist with establishing an AIS monitoring plan and implement citizen-based monitoring in high priority waters.
5. Active involvement with the Alaska Invasive Species Partnership (AKISP) to focus work products and formalize workflows, and committee structures. Active involvement with committees working on existing AIS – marine, northern pike & elodea, communications, etc.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Formalize outreach and communications
2. Implement community-based citizen monitoring network for AIS in prioritized waters.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Continued and Expanded Quagga Mussel Program (Lead Agency – Department of Fish and Wildlife)

The statewide program continued to work toward prevention through interdiction of watercraft, outreach and education, support to responsible parties implementing containment at infested waters, and prevention at uninfested waters. From September 1, 2019 - August 31, 2020, 135,830 watercraft were inspected, 26 watercraft were quarantined, 1 was denied entry at the California Department of Food and Agriculture's Border Protection Stations due to infestations of quagga/zebra mussels, and 2 in-transit notices were issued and affected states were notified of their impending arrival. In addition, CDFW and/or local agencies intercepted 4 mussel-infested watercraft within the state to date in 2020. CDFW conducted or partnered with agencies to conduct early detection monitoring for dreissenid mussels in 149 waterbodies.

The Department began implementing its 2019 SFRA Grant to expand prevention efforts in the state's highest risk Regions (Southern California and Bay-Delta). Six additional staff were hired to collect calcium samples and early-detection monitoring in waterbodies with suitable calcium. Additional staff will be hired to augment lab capacity analyzing plankton samples using cross polarized light microscopy and PCR.

2. Quagga and Zebra Mussel Infestation Prevention Grant Program (QZ Grant Program)(Lead Agency – State Parks Division of Boating and Waterways (DBW))

2019/20 Grants were solicited, reviewed, and will be awarded late September 2020, with work expected to commence October 2020, through 2022. Since the 2019 WRP meeting, the 2018/19 Grant Cycle funded 11 out of 16 applications, all implementation projects totaling \$3.14 M. These two-year grants will expire in November 2021. 2019 awards brought the total funds awarded since 2018/19 to approximately \$14.25 M statewide for mussel prevention efforts at uninfested reservoirs open to the public. These grants are funded by the mussel prevention sticker fee.

The 2020/21 grant cycle is anticipated to kick off in March 2021. To receive notifications visit [http://dbw.parks.ca.gov/?page\\_id=28822](http://dbw.parks.ca.gov/?page_id=28822) and scroll down to the middle of the page and click on “CLICK HERE to Subscribe to the QZ Grant Program Notifications”. QZ Grant Program information is available at [www.dbw.ca.gov/QZGrant](http://www.dbw.ca.gov/QZGrant) or via e-mail at [QZGrant@parks.ca.gov](mailto:QZGrant@parks.ca.gov).

3. Aquatic Invasive Plant Control Program (Lead Agency – State Parks Division of Boating and Waterways (DBW))

Increased flexibility and treatment of aquatic weeds in the Sacramento – San Joaquin Delta, including greater flexibility in methods and treatment areas, and collaborations with CA Department of Food and Agriculture and USDA. Increased use of electronic platforms to increase program efficiency, including Delta311, and app designed for the public to provide transparency of management actions, to receive reports of weed issues, and for citizen scientist to submit reports. In addition, the program upgraded its tablets and software (Survey123 and Collector) for improved data collection and management.

4. Continued *Nerodia* Eradication (Lead Agency – California Department of Fish and Wildlife)

Continued efforts to eradicate invasive populations of *Nerodia* in 2020 to reduce and prevent further impacts to California’s special status species. Since 2015, CDFW has been trapping *N. sipedon* in Roseville (Placer Co.). To date zero *Nerodia* have been captured; trapping continues through October. The absence of captures could indicate successful eradication, however several subsequent years of trapping will be necessary to confirm.

Since 2017 CDFW has trapped *N. fasciata* in Folsom (Sacramento Co.), and in 2020 has thus far removed 22 snakes. Increased captures are likely due to increased trapping effort. All *Nerodia* removed in 2020 were sampled for snake fungal disease, an emerging disease in California. Trapping continues through October.

5. Nutria Eradication (Lead Agency – Department of Fish and Wildlife)

Since last year, the Nutria Eradication Incident Command System (ICS) has:

- Completed assessments of an additional 298,000 acres (total 843,000 acres)
- Executed entry permits with an additional 250 landowners (total 2,750)
- Set up 2,554 cameras (791 currently active; total of 15,044 camera checks)
- Confirmed nutria within 178 additional sites (total 355)
- Conducted an additional 20,979 trap nights (total 44,686)
- Taken or accounted for the take of an additional 901 nutria (total since March 2017 1,621)

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

Dreissenid mussel prevention and control

Nutria eradication

Mute swan risk assessment and exploration of management options

Bullfrog control methods and measures to prevent establishment

## Member Update Reports for the Western Regional Panel Meeting

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. CPW & state leadership promoted outdoor recreation as a safe and effective method to achieve social distancing throughout the pandemic. While most businesses and even state park operations were suspended, CPW safely operated watercraft inspection & decontamination stations providing a much needed outlet for the residents of Colorado while still providing protection for our aquatic resources. CPW prioritized the safety of our inspectors and developed safety guidelines and provided personal protective equipment as well as sanitation supplies for each inspection location.
2. In response to restrictions on travel & gathering as well as social distancing requirements, CPW developed and implemented a virtual training program for watercraft inspectors & decontaminators in less than a week! Through this virtual training program, CPW certified more than 500 inspectors allowing watercraft inspection & decontamination stations to continue operating throughout the pandemic.
3. CPW continues to manage and add new users to the **Regional WID Data Collection System**. The workflow is based on Uniform Minimum Protocols and Standards (UMPS) and the Watercraft Inspection Training (WIT) Procedures. The system continues to be improved each year by the users. CPW encourages all entities performing WID to explore adoption of this system. There is no charge to use the system, but agencies must provide their own hardware and internet connection. Agencies currently using the Regional WID Data Collection System include CO, AZ, MT, NM, NE, NV, OR, SD, UT, WA, WY, Lake Tahoe, the National Park Service, numerous private industry locations, and various local waters in California.
4. CPW and our partners have recorded a record number of watercraft inspections & decontaminations in the 2020 season. While work is still very much ongoing, Colorado has recorded more than 500,000 inspections, 17,000 decontaminations and more than 75 interceptions of watercraft with confirmed Dreissenid mussels.
5. CPW utilized a grant from the Bureau of Reclamation to build the first "Off-Grid" watercraft inspection & decontamination station in Colorado. This inspection location consists of an office building with a covered front porch, a solar system that is capable of powering

everything needed for the inspection and decontamination process, a propane fueled heating system and an on-demand tankless water heater decontamination unit. This inspection & decontamination facility has been highly successful and is being used as a model for additional build-outs in remote locations that do not have access to the standard utilities that are needed for effective watercraft inspection & decontamination.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- Both the Invasive Species Program Manager and Invasive Species Administrative Assistant Positions have been vacated in 2020. It is a priority to have both of these positions filled and return the CPW Invasive Species program to full staffing levels.
- CPW is optimistic that at the conclusion of the 2020 sampling season we will be able to de-List Green Mountain Reservoir for quagga mussels. This will once again make Colorado a completely negative state for Dreissenid mussels!
- CPW is considering the pursuit of legislation to provide the authority to implement a pilot program for port of entry / roadside watercraft inspection & decontamination stations. It is hoped that adding this extra layer of protection at the borders will reduce pressure on boat ramp based inspection & decontamination facilities.
- CPW aims to be able to continue to obtain and prioritize funding for on-demand decontamination systems for WID stations in Colorado. There are currently 10 of these systems installed and being utilized with great success in the state of Colorado.
- CPW will finalize the Colorado Aquatic Nuisance Species Management Plan.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. **Initiated 3 new Asian Carp management projects** – in collaboration with the Missouri River and Arkansas-Red-White River Asian Carp Partnerships funds for the National Asian Carp Plan will be directed to Kansas for three Asian Carp projects. Two projects will focus on preventing the upstream movement of Asian Carp in the Kansas River, including studying the potential for a supplemental barrier at the Bowersock Dam and contract fishing below the dam. The third project will focus on better understanding the small (but reproducing) isolated population of Bighead Carp in the Neosho River – Grand Lake system with a focus on gathering information for future suppression efforts.
2. **Secured Bureau of Reclamation grant** – A grant was secured to conduct WID activities in Northwest Kansas at Cedar Bluff, Glen Elder (Waconda), Kirwin, Lovewell, Norton (Sebelius), and Webster Reservoirs. Funds will be used to hire and equip crews that will be stationed at these lakes through the 2021 peak boating season.
3. **Significant progress made toward acquiring funding through State Water Plan** – Multi-year efforts to obtain additional state funding through the Kansas Water Plan have made significant progress. For the first time ever, multiple Regional Advisory (River Basin) Committees included ANS in their priorities and goals documents. The Kansas Water Authority budget committee has stated that funds will be dedicated to ANS for FY 2021.
4. **Maintained and improved ANS detection sampling** – Bait Shop inspections were conducted at bait shops statewide. Dreissenid veliger samples were collected at 102 waterbodies. Data from sampling/inspection efforts are now collected electronically on iPads using newly completed apps. This has made these programs much more efficient and improves our ability to store and utilize the collected information.
5. **Asian Carp research project on Kansas River** – In May 2018, we initiated a master's level research project with University of Nebraska – Lincoln. The objectives of the project are to:

- Determine the origin and large-scale movements of invasive carps (i.e., black carp, grass carp, bighead carp, and silver carp) found throughout the lower Kansas River as water and otolith chemistry allow
- Attempt to identify invasive carp spawning aggregations, if and where they occur in the lower Kansas River, and relate potential recruitment events to climatic or hydrological variables
- Identify presence and upstream extent of black carp
- Determine flows required for successful upstream passage of Bowersock Dam

The field portion of the study is complete, the student is analyzing data and writing final report. Results from the study have already been used to guide subsequent Asian Carp work on the Kansas River system.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- 1. Increase capacity of Kansas ANS program – secure increased, stable funding**
  - a. Currently workshopping ANS stamp/sticker/fee for boats**
- 2. Establish a WID program within the state of Kansas**
- 3. Advance Asian Carp management and research in Kansas**
- 4. Implement ANS database to archive program efforts, activities, successes, and happenings.**

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Kimberly Fuller, Natalie Dunn

**Organization:** State of Hawai'i: Department of Land and Natural Resources: Division of Aquatic Resources

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. The State of Hawai'i Division of Aquatic Resources (DAR) Aquatic Invasive Species (AIS) team has continued controlling invasive algae in Kāne'ohe Bay by outplanting native sea urchins (*Tripneustes gratilla*) to keep invasive algae levels below 5% cover in a ~235 acre area of coral reef habitat. Annual surveys of Kāne'ohe Bay control areas were performed in June. The team recently expanded their urchin biocontrol efforts to an 18 acre area of the Waikīkī Marine Life Conservation District and are monitoring invasive algae bi-annually. For field work qualified as essential, special protocols have been developed to follow best practices amidst the COVID19 pandemic. Around 60,000 urchins have been released since November 2019, with a total of over 500,000 urchins being released since the inception of the Ānuenue Fisheries Research Center Urchin Hatchery.
2. DAR corresponds with shipping agents and operators and conducts risk assessments on commercial vessel arrivals based on ballast water reporting forms. In 2019, the AIS team was informed that a heavily fouled dry dock would be arriving from out of state. State and federal agencies in Hawai'i and Washington worked to minimize the biosecurity risk, and the shipping company cleaned the hull of the dry dock prior to entering Hawai'i waters. They consented to a hull survey upon its arrival, and the AIS team conducted joint dive operations with the National Oceanic and Atmospheric Administration (NOAA) to survey the hull for alien species. A total of 21 samples representing at least 13 different species were collected and sent to Bishop Museum for taxonomic and genetic identification. This event and species found will be documented and the data will help build the eDNA database for Hawaii. This event facilitated the development of an interagency hull survey SOP and increased the exchange of knowledge, strengthened partnerships, and maximized resources to prevent alien species introductions and protect marine resources in Hawaii.



3. A new report of a 3mx3m plot of non-native corals on a Kāneʻohe Bay patch reef were reported in May 2020 by a native Hawaiian community member. The non-native corals were obviously overgrowing native species of stony coral and thus could be considered invasive. Samples were given to Dr. Robert Toonen, a coral expert at the Hawaiʻi Institute for Marine Biology (HIMB), for genetic analysis. NOAA's Dr. Doug Fenner identified the corals as *Montipora foliosa*, *Montipora digitata* and third coral as either *Montipora stellata* or *Montipora carinita*. Bishop Museum received samples for its collection. The AIS team removed the corals in partnership with Heʻeia National Estuarine Research Reserve and the Waikīkī Aquarium in July 2020. The corals will now be on display at the Waikīkī Aquarium.
4. The team deployed 20 autonomous reef monitoring structures (ARMS) in commercial harbors in Hawaii in December 2018. The first ARMS unit was retrieved from Honolulu Harbor on August 12, 2019, sorting was completed March 1, 2020, and we hope to receive taxonomic data from Bishop Museum by the end of this year. The team retrieved the second ARMS unit from Barber's Point Harbor on July 13, 2020 and were joined by volunteers and interns outside following CDC guidelines for COVID19 precautions. This was the first time the team sorted, photographed, and tissue sampled live specimens to link genetic data with taxonomic identifications. The team plans to complete sorting the second unit by the end of this month and Bishop Museum will begin taxonomic and genetic analyses. The purpose of the project is to catalogue species present in harbors and continue building a Hawaii species database in coordination with Bishop Museum.
5. In November 2019, Hawaii Department of Transportation (HDOT) and DAR co-hosted a local stakeholder meeting on Aquatic Biosecurity and VIDA fact-finding. Participants included representatives from the University of Hawaiʻi, Coordinating Group on Alien Pest Species (CGAPS), United States Coast Guard (USCG), Hawaiʻi Harbors User Group, NOAA, and USFWS. The collaborative efforts in 2019 were significant in building trust and communication among stakeholders which supported solution development and implementation. DAR's BWBF team has also been in consultation with the USCG during quarterly working group meetings to discuss sharing ballast water reporting data in real-time with states. Lastly, in preparation for the comment period after VIDA EPA draft regulations are published, the BWBF team in coordination with CGAPS held a series of meetings to brief necessary agencies. The team held an internal DAR briefing, a meeting with HDOT and HDOH, and a meeting with the Governor's office to start building awareness and discuss needs.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

Our priorities for the upcoming year in are: 1) Moving forward with VIDA, DAR expects to continue consultation with the USCG. DAR expects to submit comments and hold further briefings for industry once standards are published. 2) Continue active management of invasive algae. 3) Rapidly respond to new incipient populations of aquatic invasive species. 4) Work with WRP Coastal Committee to develop outreach documents for largely unregulated vessels including recreational vessels, mobile marine infrastructure, and fishing vessels. 5) Influence import regulations in Hawaiʻi for aquatic species, to minimize new AIS introductions.

# Member Update Reports for the Western Regional Panel Meeting

Annual Meeting

September 14-18, 2020

Virtual Meeting

Name: Nic Zurfluh

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## **1. Watercraft Inspection Station Operation.**

18 watercraft inspection stations located throughout Idaho on major travel corridors into the state. YTD Data (9/1/2020): Total watercraft Inspections: 117,000. Hotwashes (140F) performed: 4,470. Weeds on boat: 410. Q/Z Fouled watercraft: 30. Idaho continued the expanded nighttime operations at Idaho stations which consisted of 24-hour operations at Cottrell (I-84W) inspection station, 18-hour operation at Cedars I-90 W, Jackpot Hwy 93-N and Malad I-15 N. "All daylight hours" operations at remaining stations. ISDA partners with local entities for inspection station operations through 14 cooperative agreements including an agreement with the Bear Lake Regional Commission to support two Utah stations.

ISDA partners with Law enforcement at both the local county level and state ISP level continue to provide emphasis patrols through 11 cooperative agreements for all watercraft inspection station. These patrols focus on both boater compliance for bypass and inspection station staff safety. ISDA staff have been in communication with law enforcement captains and lieutenants this season to focus patrols during high traffic. FY20 Budget included increased law enforcement from Idaho State Police Trooper to support nighttime operations at Cottrell I-84 W, Cedars I-90 W, Hwy 93 N and Malad I-15 N.

ISDA completed several site improvements projects this season. Projects include updating shed/shelter units, installing electrical utility services, lighting, surface ground work, footprint expansion, electronic message boards and station signage. These projects will continue through fall/winter 2020 in preparation for the upcoming 2021 season.

Watercraft inspection stations and law enforcement support continue to operate in Idaho while taking in account the CDC and Governor's Office recommendations concerning COVID-19. ISDA developed four training options to continue opening stations as scheduled. These options can be customized based on the station cooperator resources:

- (1) In-person training session to review PowerPoint and hands-on material. This option is limited to only 1<sup>st</sup> year inspectors in small groups and settings where social distancing can be followed.
- (2) Online webinar platform meeting to screen share WIT PowerPoints and knowledge reviews.
- (3) Online website video tutorials and knowledge reviews.
- (4) Printed PowerPoint and knowledge review material where ISDA provides WIT material (binder) and inspector works at own pace to complete the course.

## **2. Monitoring Operations:**

ISDA performs annual early detection monitoring at 80 waterbodies throughout Idaho utilizing over 1,500 plankton tow samples for microscopy analysis. Monitoring occurs during multiple sampling events, bi-monthly for each waterbody throughout the summer season. Samples are shipped overnight same

day with a two-week turnaround for lab analysis. Early detection monitoring also includes visual inspection of artificial substrate performed by Idaho Department of Environmental Quality and shoreline walks survey during reservoir low pool. Idaho Rapid Response Plan defines decision making, response, and communication in cases of suspect or positive results.

### **3. Education/outreach:**

ISDA continues to provide education and outreach on Invasive Species throughout various avenues including media new releases, watercraft inspection station staff, brochure material, interactive website and facebook page. Messages used to promote the Idaho invasive species program include "Clean, Drain, Dry" "Know what you grow", "Don't let it loose", and "Knock it off". Please visit our webpages at:

[www.invasivespecies.idaho.gov](http://www.invasivespecies.idaho.gov)

[www.invasivespecies.idaho.gov/watercraft-inspection-station/](http://www.invasivespecies.idaho.gov/watercraft-inspection-station/)

[www.invasivespecies.idaho.gov/edrr-monitoring/](http://www.invasivespecies.idaho.gov/edrr-monitoring/)

[www.invasivespecies.idaho.gov/maps/](http://www.invasivespecies.idaho.gov/maps/)

### **4. 2020 Legislation & Funding:**

Idaho legislature provided the ongoing \$3.14 M from the General Fund to continue enhanced operations of the state's watercraft inspection stations for FY20. This funding has made it possible to extend inspection station season duration and hours of operation. Funding also includes \$1 M from federal funds to enhance operations or equip watercraft inspection stations. The watercraft inspection budget for FY20 is \$1.4 M from the dedicated Watercraft Inspection Fund, \$3.14 M from the General Fund, and \$1.0 million from federal funds for a total of \$5.54 million. Intent Language: Encourage the use of roving stations where appropriate, the addition of staff on busy weekends, the collection of data regarding the number of watercraft bypassing inspection stations, and procurement of federal funds. Requires the department to report to JFAC, the House Agricultural Affairs Committee, and the Senate Agricultural Affairs Committee, during the legislative session, the results of the data gathering, securement of federal funds, and provide an operational review of the boat inspection stations.

Pacific States Marine Fisheries WRDA Funding agreement (\$1 M) to support watercraft inspection and monitoring efforts. USFWS ANS Task Force Grant for \$89,200 in federal funds for the statewide outreach program. The 2020 BLM AIS grant for \$20,000 to purchase an additional survey watercraft for the Twin Falls regional office.

### **5. Idaho Invasive Species Council**

Executive Order 2017-05 outlines the purpose of the Council to foster coordinated approaches that support local initiatives for the prevention and control of invasive species. The Council shall meet at least twice annually. Membership shall include: Governor's office, nine state agencies, member of the Idaho Senate, member of the Idaho House, representative of the Idaho Outfitters and Guides. Chaired by the ISDA Director or her designee. Other invitations by the Director. Provide policy level recommendations and planning assistance for combating harmful invasive species infestations throughout the state and preventing the introduction of others that may be potentially harmful. Serve as a nonpartisan forum for identifying and understanding invasive species issues. Identify opportunities for cooperating and coordination between departments, tribal governments, stakeholders, Idaho universities, private and not-for-profit organizations, other states, and the federal government. Recommend steps for implementing actions proposed in the Strategic Action Plan for Invasive Species. Take measures that will encourage control and prevention of harmful non-native species. Organize and streamline the process for identifying and controlling invasive species among all stakeholders. Consider ways to halt the spread of invasive species as well as finding possible ways to bring existing problems under control.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name: Thomas Woolf**

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**Title: AIS Bureau Chief**

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Adapted to COVID-19 challenges with new safety protocols.
2. Implemented new measures to improve quality control at watercraft inspection stations.
3. Trained and deployed an AIS dive team for targeted AIS survey and removal.
4. Deployed targeted enforcement to improve compliance at watercraft inspection stations.
5. Continued to build partnerships and increase partner involvement with AIS prevention, early detection and outreach efforts.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Increase partner involvement and participation with AIS prevention, early detection and outreach efforts at the local level.
2. Continue efforts to improve QA/QC at watercraft inspection stations.
3. Expand coordination efforts with Midwestern states and the Great Lakes Panel to identify strategies to address mussel fouled boat transport on recently purchased watercraft.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name: Allison Zach**

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year (October 2019-Present):**

1. The Nebraska Game and Parks Commission (NGPC) hired a full time AIS Coordinator that will begin at the end of August. Allison Zach, Nebraska Invasive Species Program, will continue to be Nebraska's voting member on the WRP and represent the state on WISCE. Allison will continue to administer the State's ANS plan USFWS grant funding through 2022. The new AIS Coordinator and Allison will work together on AIS initiatives.
2. The Nebraska Game and Parks Commission (NGPC) employed 3 seasonal aquatic invasive species technicians that conducted watercraft inspections at high risk waterbodies throughout the state in 2020. They conducted a total of 823 watercraft inspections (as of 8/24/20). Inspections in Nebraska found that 98% of drain plugs were removed on watercrafts. 93% of inspections found no risk factors and 95% of watercrafts were clean, drained and dry.
3. Nebraska used the Regional Watercraft Inspection & Decontamination (WID) Data Sharing System to log inspection and decontamination data. Nebraska started using the system in 2019.
4. The attempt to eradicate zebra mussels from Glenn Cunningham Reservoir (370-acre flood-control reservoir in Omaha, NE) via draining the reservoir over the winter of 2018-2019 appears to be successful. No live adults or positive veliger samples have been detected post draining. Additional monitoring continues. Construction activities involving upgrades to the recreational features around the reservoir are currently underway with a reopening date yet to be announced. Outreach and signage will be an emphasis upon reopening to help prevent a new infestation from occurring.
5. Nebraska Game and Parks Commission staff are conducting veliger sampling at 38 locations across the state. Sampling frequency at each location varies from once a week to once a month depending on the location and 'risk-level'. Sampling commenced in May and will run through September 2020. No positive samples have been detected to date.

**Please outline your priorities for the upcoming year:** Evaluate changes and updates to the WID form to document Nebraska watercraft inspector activities. Coordinate with other states regarding WRDA funding. Utilize USFWS Asian Carp grant funds to conduct research on Asian Carp demographics and spatial distribution in Nebraska.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting

September 14-18, 2020

Virtual Meeting

**Name:** James Dominguez

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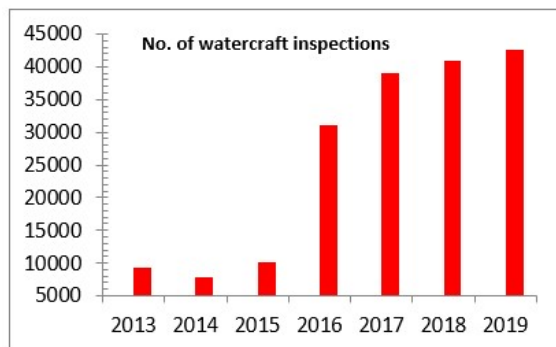
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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Since 2013, NMDGF and its partners (Bureau of Reclamation, NM State Parks, US Army Corps of Engineers and City of Farmington) have conducted over 180,000 watercraft inspections and decontaminated 906 conveyances to further reduce the risk of AIS introduction. The 2019 boating season continued to be busy for the prevention aspect of the New Mexico AIS program with 42,525 watercraft inspections performed, of which 209 required hot water decontamination. Based on data gathered during the inspection process, New Mexico received watercraft from 44 different states, plus the Islands of Samoa. Unfortunately, the number of mussel boats that arrived in New Mexico during 2019 also increased. Typically, New Mexico will receive 1-3 boats throughout the year but this past year a total of 13 mussel boats were intercepted prior to launch.



2. Expansion of the New Mexico AIS program is something that NMDGF is always looking to do. Like many other states, additional funding from the Department of Interior's "Safeguarding the West from Invasive Species" provided an opportunity to expand prevention activities. Sims Marina at Navajo Reservoir was able to expand operations from weekends only during the boating season, to seven day per week from March through September. At Elephant Butte Reservoir, additional funding allowed for the opening of a

new station at Rock Canyon Marina. These two waterbodies are the busiest in the state and expansion at each of these locations has further reduced the risk of a watercraft harboring AIS to launch without receiving an inspection.

3. With the help of the U.S. Fish and Wildlife Service and Invasive Species Action Network (ISAN), NMDGF began promoting the “Don’t Let It Loose!” program by providing stickers, posters and critter bags to 11 independent pet stores across the state of New Mexico. ISAN reached out to each of the 11 stores by conducting in person visits to discuss the program and drop off the initial order of critter bags. Throughout the year, staff from NMDGF re-supplied pet stores whenever requests were made. In total, over 60,000 critter bags were distributed to independent pet stores that are used for aquarium fish and cricket sales. Feedback from store owners was positive with several reporting that customers are inquiring about unwanted pet drop off options.
4. The New Mexico Department of Game and Fish AIS Coordinator participated regularly in regional workgroups such as “Decon Think Tank,” and “WISCE” to provide input on activities and protocols that western state AIS programs rely on for their programs. The NMDGF AIS coordinator was also appointed to the Western Invasive Species Council led by the Western Governors Association. Thus far the council has met a handful of times to develop council priorities and project ideas for both terrestrial and aquatic invasive species.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- Expand prevention activities to waterbodies on the eastern side of the state.
  - Federal or private partner funding
  - Use private contractors to conduct prevention activities similar to what is being done at Navajo and Elephant Butte Reservoir
- Learn from 2020 as it relates to COVID-19
  - Operational changes and safety
  - Examine state education/outreach and prevention program implemented for COVID-19 and see how AIS education/outreach, rapid response and prevention activities can be adapted to be as effective in getting a message out to public effectively



## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting

September 14-18, 2020

Virtual Meeting

**Name:** Ben Holen

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Personnel change and new hires- North Dakota had significant changes to its AIS staff this past year. We hired a new ANS coordinator (me) and a new ANS biologist. We look forward to being active participants in the AIS community!
2. Watercraft and equipment inspections- In 2020, we doubled our seasonal watercraft inspection efforts from the previous year and collected over 2,000 boater surveys. We inspected 5 bait facilities and over 50 pieces of industrial and commercial equipment.
3. Prevention- We are currently working with local partners to expand decontamination options on high use water bodies around the state. Hopefully, by the spring of 2021, we will have some portable decontamination units purchased and will be breaking ground to place permanent wash stations at a few locations.
4. Major findings and responses- We detected a new population of zebra mussels in Lake LaMoure. In response, we increased our inspection presence on the water body, partnered with the local sportsman's group to distribute ANS educational materials in the area, and are looking to improve decontamination options on the lake. We increased our zebra mussel early detection monitoring from 100 to 120 water bodies, doubled the number of adult traps set, and increased our adult sampling efforts.
5. Outreach- We partnered with sportsman's clubs to distribute zebra mussel prevention/decontamination education material to local areas. We also created an ANS dock lift brochure and distributed it to cabin owners on 83 water bodies around the state. As always, we continued public outreach efforts on multiple media fronts at both local and regional levels.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

ND priorities of 2020-2021:

1. Increase the watercraft inspection force in North Dakota.
2. Establish decontamination units at water bodies with high amounts of recreational usage.

3. Increase educational efforts that target water recreationist.
4. Continue to monitor hatcheries and develop BMP's for ANS infested hatcheries.
5. Train additional department staff and close partners on QZM inspection and decontamination.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name: Rick Boatner**

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. AIS Prevention Program –Watercraft Inspections. As of 8/25/2020 the inspection program has inspected 17,630 watercraft which includes 10 watercraft intercepted with quagga/zebra mussels and 183 watercraft with others types of aquatic bio-fouling.

This was a difficult season recruiting employees for the inspection stations due to the Covid lockdown around the nation and uncertain what the future restriction might be due to Covid. We were unable to open the Lakeview station and reduced staff by one member at two of the stations and two personal at one station this season.

The good news, we saved some funding this season, so next season is looking a little better for funding.

2. Rusty Crayfish removal in the upper Malheur Basin - In 2017, Rusty crayfish were discovered in a .55 acre pond located on the Malheur National Forest near Summit Creek which is one of the headwater streams for the Malheur River Basin. Previously in Oregon Rusty crayfish have only been found in the John Day River Basin, John Day River. Starting in the summer of 2018 we started trapping and seining to remove crayfish from the pond, in total 3,712 crayfish were removed. In August 2019, the pond was partially drained and treated with Copper sulfate. In October 2019 we conducted post treatment trapping efforts and did not trap any Rusty crayfish. The treatment appeared to be successful. In July 2020 when we went back to the pond to do monitoring of the treatment, we caught 14 Rusty crayfish. We believe that we drained the pond down too quickly with the assumption that the crayfish would follow the water level down and did not take into account that some of the crayfish may have sought refuge in the rocks, which appears to be the case. When the pond refilled over the winter and spring the remaining post treatment crayfish emerged from the rocks. Post treatment trapping in 2020 has resulted in 21 Rusty crayfish captured. Planning to retreat the pond in September of 2020.

This summer we observed in large number in all life stage of the Spotted frogs and Chorus frogs. Pre-treatment of the pond only a few adults of these species were observed in the pond.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Fully staffing the Watercraft inspection program.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Monica McGarrity

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### **Top five AIS activities/accomplishments/priorities for the past year:**

#### ***Aquatic Invasive Plant Management***

Aquatic invasive plant management continues to be a priority in Texas, with Giant Salvinia and Water Hyacinth the most problematic species. Giant and Common salvinias are currently being managed on 22 lakes using a combination of herbicide application and biological control methods. Approximately 400,000 salvinia weevils were released on Texas lakes since October 2019. Giant Salvinia was extirpated from Lake Athens, Brandy Branch Reservoir, Lake Fork, and Martin Creek Lake through rapid response efforts. Water Hyacinth is also being treated on 22 lakes in the state. Crested and Yellow Floating Hearts were introduced in Texas approximately five years ago and have spread to new lakes (CFH – 4 lakes; YFH – 2 lakes) where active management is ongoing. Crested Floating Heart was extirpated from Lake Athens. Hydrilla (4 lakes) and Alligatorweed (1 lake) are being managed in selected areas where they pose a significant impediment to boater access.

#### ***Riparian Invasive Plant Management***

Watershed-scale riparian plant management in key Native Fish Conservation Areas also continues to be a key priority. Since 2016, efforts are ongoing to manage saltcedar across the Upper Brazos River watershed in critical habitat for Smalleye and Sharpnose shiners to improve habitat, with more than 120 private landowners participating. Since 2015, the Healthy Creeks Initiative has partnered with more than 300 private landowners to treat Arundo (*Arundo donax*) infestations along streams and rivers in the Pedernales, Blanco, Guadalupe, Medina, and Nueces river watersheds, with expansion into the Llano River watershed planned for 2020-2021.

#### ***Public Outreach Campaign***

Public outreach on aquatic invasive species is a key component of Texas' ANS management strategy and is funded by TPWD and a group of partners. The 'Protect the Lakes You Love'

public awareness campaign made hundreds of millions of impressions through billboards; gas station advertising including clean, drain, and dry pump videos; digital pre-roll video ads; Facebook ads and posts; geofenced Pandora radio ads near infested and high-risk lakes; boater registration mailings; emails to registered boaters and marinas; print ads in outlets such as the Outdoor Annual, Texas Parks & Wildlife magazine, and the Marina Association of Texas newsletter; and posters distributed to over 1,700 license retailers like Academy, Wal-Mart, bait stores and gas stations.

### ***Exotic Species Regulations***

At the August 26<sup>th</sup>, 2020 Texas Parks and Wildlife Commission meeting, staff presented proposed changes to the regulations pertaining to exotic harmful or potentially harmful fish, shellfish, and exotic plants. The proposed rule changes largely seek to increase accessibility and address the changing needs of the regulated community. Four fishes listed as injurious under the Lacey Act are proposed for addition to the Texas controlled exotic species list—the stone moroko, Amur sleeper, European perch, and Wels catfish. Of the eight injurious aquatic species not currently on Texas’ list, these were identified as having potential to become established in the state (i.e., moderate to high climate match). The golden mussel and crested and yellow floating hearts are also proposed for addition. Other proposed changes would create a “conservation zone” where stockings of tilapia in private ponds (often creek impoundments) would require department authorization, whereas currently oversight is lacking. This zonal approach was identified through a spatial conservation assessment that sought to balance potential impacts of tilapia to 19 identified Fish Species of Greatest Conservation Need against the economic importance of the tilapia pond stocking trade, which was published in 2019 in the American Fisheries’ Society book ‘Multispecies and Watershed Scale Approaches to Freshwater Fish Conservation.’ The proposed rules would also explicitly state that zebra mussels, live or dead, cannot be possessed or transported on any watercraft or conveyance. The full Commission agenda item and rule text can be found at [https://tpwd.texas.gov/business/feedback/meetings/2020/0827/agenda/work\\_session/index.phtml#item\\_09](https://tpwd.texas.gov/business/feedback/meetings/2020/0827/agenda/work_session/index.phtml#item_09)

### ***Aquatic Invasive Species Research***

Texas is currently funding four AIS research projects in fiscal years 2020-2021. Two projects focus on zebra mussels—assessment of impacts of zebra mussels on native unionid mussels and evaluation of the effects of calcium on fertilization and early development. Research on aquatic plants focuses on evaluation of re-planting, in combination with hydrilla removal, as an integrated management strategy for hydrilla control to support endangered Texas wildrice reestablishment. The final study focuses on the live bait trade as a pathway for introduction of Gulf Killifish and Sheepshead Minnow outside their native range and assessment of their status in rivers where they may have detrimental impacts on native species.

**Priorities for the upcoming year.** The above key activities for the past year will remain the priorities for the upcoming year. One additional priority that may be addressed is conducting a new boater survey of AIS-related knowledge and behaviors.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name: Nathan Owens**

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Development, rollout, and full-scale implementation of a non-resident AIS boater fee program (\$20/boat) for all motorized boats used within Utah. This program also includes initial development of a QR code-based system that lays the groundwork for an expanded program in 2021.
2. Successful mandatory online AIS education for owners of non-Utah registered boats that are used within Utah.
3. New statewide regulation requiring drainage of all raw water systems onboard watercraft and removal of all drain plugs during transport on public roads within Utah. Prior to this year, this regulation only applied to watercraft coming from waterbodies where mussels had been detected.
4. Incorporation of eDNA testing into our invasive mussel early detection sampling program. Starting in spring of 2020, one sample from each sampling event at our highest priority waters was designated for additional eDNA testing, regardless of results from microscopy analysis. The decision matrix developed by the WRP eDNA Working Group was used to communicate with partners on what potential results may mean and the appropriate response (or lack thereof) to those results. Additional waterbodies will be tested using this method starting in 2021, pending buy-in from stakeholders.
5. Development and rollout of a private watercraft decontamination program. UDWR has partnered with four businesses located around the state to provide additional watercraft decontamination options to the boating public, including mobile decontamination options in certain areas. UDWR subsidizes these decontaminations, allowing for these services to remain free to boaters (assuming no mussel-encrustation exists). Boaters will pay the contractors an additional fee for mobile decontamination services. These businesses include boat dealerships with boat mechanics on staff.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Implementation of the Port Passport Pilot Program at Lake Powell. This program will be pursued in partnership with the National Park Service at Glen Canyon and will utilize four high-speed cameras at two launch ramps at Lake Powell to collect launch and retrieval information for boats using those ramps 24 hours per day, seven days per week. Records will be populated into the WID Regional Database, with the goal that all boats using those two launch ramps will be identified as such in the database, allowing for more accurate risk assessments at other locations.
2. Implementation of a pilot program testing watercraft decontamination through the use of a hot water dip tank. UDWR has a goal of starting this program in the fall, with the first decontamination performed starting in December 2020. The program has the goal of reducing the time and staff needed to perform decontaminations on boats up to 27' in length departing Lake Powell. The primary focus will be on wakeboard/wakesurf boats that contain multiple ballast tanks and require significant investments to properly decontaminate. If those reductions in time and staff can be realized, UDWR will significantly increase its capacity to decontaminate those more complex boats at Lake Powell, rather than having to direct those boats to other locations for decontamination.
3. Expansion of the new online AIS education requirement to resident boaters in Utah.
4. Further development and expansion of the QR-code program that was implemented as part of the non-resident boater AIS fee. UDWR believes this is a program that can quickly be expanded and more fully utilized to expedite and more accurately collect inspection and decontamination information for boats statewide.
5. Incorporation of eDNA testing into hatchery inspection protocols.



## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Josh Leonard

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Outreach outside boat inspections in 2020 was severely limited due to COVID-19 restrictions. However, AIS outreach and information was provided at boat shows in neighboring states including Denver, Lincoln, Rapid City and Salt Lake City. The boater appreciation raffle was again conducted to thank boaters for cooperation with watercraft inspections. As of mid-September, there were a total of 464 entries in the raffle survey. The majority of boaters (94%) indicated they were very satisfied (83%) or satisfied (11%) with their overall inspection experience.
2. Watercraft check stations operated from April 18 through September 12 at fifteen permanent check stations at port of entry, rest area, and other locations to intercept watercraft entering the state. Roving crews focused on inspections at major waters throughout the state to contact resident boaters. Through early September, a total of 69,815 inspections have been conducted, an increase of 42% thus far compared to 2019. Of these, 4,145 were high risk watercraft and 650 were decontaminated for water onboard or suspect AIS. Twenty-one boats were intercepted with mussels attached; on all vessels the mussels were dead and watercraft were thoroughly decontaminated and released.
3. Rapid response plans were completed for 23 major waters throughout the state that identified key stakeholders, communications strategies, and response/containment options in the event that Dreissenid mussels are detected in a Wyoming water. Plans were completed by June 30, 2020 and are currently being reviewed by partners. Several new changes to regulation have been identified to ensure the Department has the capacity to successfully inspect and decontaminate boats leaving a suspect/positive water.
4. Over 70 waters are being surveyed for aquatic invasive species during 2020. Results are still pending for some waters sampled late season, but to date no evidence of mussel veligers has been confirmed in a Wyoming water. Additionally no new populations of AIS currently in Wyoming have been documented in 2020.
5. More information can be found at [wgfd.wyo.gov/AIS](http://wgfd.wyo.gov/AIS)

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- **Incorporate new technology to become live and ability to print receipts with handheld PDAs**
- **Complete public commenting period and commission approval on rapid response plans**
- **Continue to update and revise inspector trainings to incorporate more online and video components.**
- **Develop AIS private hatchery inspection protocols and revise regulations authorizing inspections**

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name: Nicole Kimmel**

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Record setting season of mussel infested boats intercepted under COVID 19 operations. With US-Canada international borders closed, more travelers from Eastern Canada were come out West for travel and watercraft inspectors have intercepted a record setting amount in 2020, currently at 24 interceptions. Final count still to be determined, as stations are still operational.
2. Decontamination protocol adopted for industry use, while this document was spurred by Whirling Disease detection, it benefits minimizing the risk for all invasive species. Any industry now working in or near water will have to at a minimum Clean Drain Dry all equipment touching water, and higher risk zones will require chemical and/or temperature requirements for additional levels of decontamination.
3. Chinese Mystery Snail confirmed in one waterbody late last year and now working towards containment since there is no feasible control method. Collaborated with the University of Alberta to explore the potential effects this snail is having to food webs. Also looked at the entire lake and downstream to delineate the infestation scope.
4. Oriental Weather Loach seized from a pet store distributor in Alberta, despite being a prohibited species since 2015. Working with pet stores to educate and find out how prevalent this species is in pet store distribution. Looking to ensure pet stores are aware of prohibited species ensure they do not import any of the 52 prohibited fish, invertebrates or plants.
5. Monitoring and Response was still a priority despite COVID 19 protocols/restrictions. Monitoring continued thanks to our creative partnerships with internal and external agencies willing to conduct water sampling, substrate and shoreline inspections despite a pandemic. Alberta also still managed to utilize an emergency use aquatic herbicide registration obtained using Habitat Aqua (imazapyr) against populations of Flowering rush and invasive Phragmites.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

Alberta remains committed to supporting our five elements of programming: 1) Policy & Legislation 2) Education & Outreach 3) Monitoring 4) Watercraft Inspections and Decontamination 5) Response.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Martina Beck

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Ongoing watercraft inspection station operations as part of the Invasive Mussel Defense Program
2. Continued invasive mussel lake monitoring and management of associated grant program in partnership with the Habitat Conservation Trust Foundation.
3. Launch of a new internal mobile watercraft inspection App.
4. Obtaining funding and implementing a 4-year collaborative project on smallmouth bass in Cultus Lake.
5. Establishing working groups, work plans and management goals for regional AIS priorities (target species include yellow perch, goldfish, red swamp crayfish, Asian clam and Oriental weather loach).

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Ongoing watercraft inspection station operations as part of the Invasive Mussel Defense Program. Exploring regulatory tools to enhance invasive mussel prevention (e.g. pull the plug legislation) and further enhancements to new internal inspection App.
2. Continued invasive mussel lake monitoring and management of associated grant program in partnership with the Habitat Conservation Trust Foundation. Continued refinement of protocol and priority waterbodies.
3. The development of an operational eDNA early detection AIS survey program, targeting invasive mussels in partnership with the University of Victoria and continued support for National eDNA standards development.

4. Strengthen and develop partnerships with government, First Nations, local municipalities, regional groups and Universities to collaborate, coordinate and co-manage AIS priorities.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting

September 14-18, 2020

Virtual Meeting

**Name:** Stephen Phillips

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. **Watercraft Inspection Training (WIT):** PSMFC contractor D Davis continued watercraft inspection trainings in Fall 2019 and 2020. For the first time, beginning in Spring 2020, we conducted virtual Level 1, 2 and 3 trainings. We will continue virtual trainings through the 2020 Calendar year. See the "Training" tab @ <https://www.westernais.org/> for further information.

2. **Outreach and Education:** Produced and distributed "AIS News" - bi-weekly e-newsletter (Robyn Draheim, editor); continued to upgrade and add information to the PSMFC website <http://www.westernais.org/>; reprinted, redesigned and distributed "Western States Rack Card"; "Don't Move a Mussel 2011" "Biofouling Best Practices" "On the Lookout", and "Threats to the West" to ANS coordinators and others throughout the region. Attended sport/commercial fishing shows with AIS booth in Seattle, Portland, Boise, and Sacramento (with CDFW). Robyn Draheim and Brian Turner (PSU) helped staff the booth.

3. **WRDA:** In April 2017 The PSMFC entered into a cooperative agreement with the USACE (Walla Walla) to represent the 4 CRB states and administer the "WRDA" watercraft inspection station and monitoring funding. Again in 2020 PSMFC administered the WRDA funding watercraft inspection (MTFWP, ISDA, ODFW and WDFW) and monitoring matching programs ( MTFWP, WSU, ODFW, PSU and WDFW).

4. **Coordination/Other:** We hosted meetings of the Columbia River Basin Team of the 100th Meridian Initiative in January (PDX) and June (virtually) (<https://www.westernais.org/regional>); the PSMFC dreissenid monitoring database has been transferred to <http://www.westernais.org/monitoring>; a Columbia River Basin Monitoring Forum was held in June and chaired by Tim Counihan, USGS, and Robyn Draheim, PSMFC; continued coordination and meeting with DOI and WGA on mussel initiatives; hosted rapid response exercise supported by USFWS in Lake Billy Chinook, OR with ODFW/OMB/PGE/CTWS and others; and continued to maintain West911 "hotline" listserv and website, etc. With USFWS funding (PDX), completed [\*Dreissenid Mussel Rapid Response in the Columbia River Basin: Recommended Practices to Facilitate Endangered Species Act Section 7 Compliance\*](#) ( Lisa DeBruyckere, lead).

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. Hold dreissenid rapid response exercise in Montana (virtual?) and virtual meeting of CRB and MRB teams, EGC Committee and PBWG.
2. Complete UMPS IV
3. Continue administering Watercraft Inspection Training program (led by Quagga D). Conduct virtual trainings necessary.



## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name: Sam Chan**

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Understand the extent of *Polydora* spp. (a polychaete). Blister mudworm impacts on commercial oysters and native shellfish. Develop effective outreach on *Polydora* for growers and shellfish recreationists. Ongoing research from graduate student Megan Considine are finding that in two farms, pacific oyster on-bottom cultures are close to 100% infected in a northern Oregon Coast bay. Signs of infection in the native littleneck clam were also observed in the same bay.
2. Occurrences of the Asian jumping worm continues to be reported, often for the first time in western states. The reports are often accompanied by reports of spread through fishing bait and from the movement of soil, compost, wood chips and plants. Ongoing work by PhD student, Linda Tucker-Serniak are finding high impacts on soil organic matter where leaf litter and structural carbon are converted into tightly bound and often hydrophobic fecal pellets. This can have implications for riparian health, erosion and pollutants from heavy metals. Improving outreach among bait sellers, fishers and gardeners is an ongoing need
3. We are leading Don't Pack a Pest for Academic Travelers, a research guided education campaign to reduce the risks from spreading invasive species through international travel and shipping that will harm agriculture and natural resources. Our emphasis on the academic travelers because of the increasing incidences of items being packed or shipped by academic travellers that can harbor invasive species. The pandemic has temporarily stopped kost international travel, but package shipments have increased.
4. Enabling and improving IS outreach and education is a priority for individual and networks of the Sea Grant programs. Here in Oregon, as part of the OISC, our recent O&E RFP and subsequent submissions provided an unofficial survey of IS education needs, approaches, priority species/pathways and the types of partnerships involved. Youth education, learning through doing, capacity building in rural areas, desire for a broad range of education media to appeal to different users, strategic placement of messaging, restoration work parties, wanting

to advance partnerships (to broaden beyond catering to one Choir) are just some of the work proposed in the proposals. One area that seemed less developed was investments in online social media.

5. Coastal committee's development of effective hull fouling outreach

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- 1. Working together with the Coastal Committee on outreach for Polydora mud blister worm and completing our series of outreach on awareness and desired maintenance to minimize the spread of AIS through hull-fouling**
- 2. Strategize position statement and outreach to minimize the spread of the Asian Jumping worm**
- 3. Build partnerships with states on Don't Pack a Pest**
- 4. Contribute more actively to the WRP Education and Outreach Committee**

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name: Dennis Zabaglo**

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. In order to tackle the Tahoe Region's largest infestation on invasive aquatic plants, TRPA formed a collaborative stakeholder group to ensure transparency of the environmental review of the proposed use of herbicides in Lake Tahoe. Lake Tahoe has been designated as an Outstanding National Resource Water (ONRW) in which aquatic herbicides have never been used in any other ONRW. The environmental document evaluating impacts on this first of its kind analysis has been released in its draft form, serving as a significant step in the processes to treat this significant problem. The Proposed Project seeks to test the use of aquatic herbicides alongside of innovative approaches such as UV light and laminar flow aeration. The Final document is expected to be complete around the end of the calendar year.
2. The Lake Tahoe Watercraft Inspection Program is completing its 13<sup>th</sup> season, highlighted by its success with no new invasions since the program began in 2008. A reservation system was implanted this season to address COVID-19 protocols lack of available staffing. The program may integrate reservations in the future to ensure more efficient operations by being able to better forecast staffing needs.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

1. A project to treat Eurasian watermilfoil and curly-leaf pondweed is expected to begin in the Spring of 2021 at Taylor and Tallac Creeks and marsh areas. This infestation is near the southwest shore of Lake Tahoe and owned by the US Forest Service. This joint project will treat over 13 acres utilizing benthic bottom barriers and diver hand pulling, however the marsh system presents a difficult scenario as the use of watercraft to assist with the project will be limited if able to be used at all.
2. Implementation of a test project in the Tahoe Keys area of Lake Tahoe is anticipated to begin in the spring of 2021 that seeks to test multiple methods of invasive aquatic plant control. The test covers 41 acres of the total 170. Results will inform what methods may be most effective to treat the entire infestation.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Christine Moffitt

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Provided information on invasive mollusk control strategies to interested agencies and scientists. Helped Montana staff concerned about Asian clams in reservoir system, and provided reporting regarding potential control measures. Assisted British Columbia managers in understanding Asian Clam biology.
2. Participated as a member of the Oregon Invasive Species Council meetings and planning committees for education and outreach and legislative policy
3. Provided reviews of research proposals on invasive species control using potassium chloride and other reagents.
4. Provided zoom seminar to aquaculture students in Guatemala concerned with potential of invasive invertebrates and pathogens in system designs. Provided and outline of risk assessment tools, and criteria.
5. Continued to serve as member of graduate faculty for PhD student modeling HAB in reservoir and lake systems.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

Plans for the coming year include to continue as a resource for information on control measures for invasive mollusks especially Asian clams, quagga and zebra mussels, and New Zealand mudsnails. I will help as needed in research review panels and assessments for any agency or entity interested. I plan to continue to serve on the Coastal Committee and other pertinent committees within the WRP. I am also willing to serve to provide information on aquaculture risk assessments regarding pathogens and invasive species.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Leah Elwell

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Outreach programming – Non motorized boater outreach – One of our targeted outreach programs is to focus on non-motorized boating audiences to promote Clean Drain Dry actions and to educate on non-motorized boater responsibility to stop at watercraft inspection stations. By partnering with national non-motorized boating manufacturers, we have leveraged our ability to promote prevention messaging and actions by boaters. We have been able to expand our partnerships to include recognizable brands with significant reach. Another key aspect of our program has been to implement a targeted effort to include all national permitted river systems to include invasive species information, regulations and encourage Clean Drain Dry. This strategy focuses on traveling boaters to arrive with clean gear and clean again after leaving the permitted river.
2. Outreach programming – Don't let it Loose – This program has continued to expand across the western states. By working with independent pet stores and state fish and game/departments of agriculture agencies, we have been able to promote responsible pet ownership and provide information on the threats that released pets can pose when released to the wild. Currently the program has officially engaged independent pet stores MT, WY, SD, ND, AZ, UT, NV, NM, NE, KS and ID. Other state partners have also partially adopted the program including WA, OR, and HI. ISAN is currently forging new relationships in the pet industry to expand our ability to reach pet owners with DLIL. ISAN is in preliminary stages of expanding with partners in various highly populated states where significant pet release management is a major issue.
3. Professional services – QAQC – ISAN has been providing annual evaluations of watercraft inspection and decontamination programs with several states and entities for many years. 2020 was no exception. With a huge spike in participation in boating and outdoor recreation this year, watercraft inspection stations continue to be critical in preventing the spread of invasive species. Being able to provide third party review of programming has proven to be an effective way to improve and monitor WID programs. ISAN provides evaluations for MT, WY, Lake Tahoe and several Pacific Northwest states.

4. Professional services – Coordination and Rapid Response Planning – ISAN has been providing coordination services for the WRP now for 8 years! Serving the WRP has been a humbling and rewarding effort. ISAN is pleased to continue serving the WRP and being part of such a positive entity. We also coordinate for a variety of additional regional entities as well, including the Columbia River Basin Team, and the Columbia Basin Cooperative Weed Management Area. In these two capacities, we play a variety of roles in communication, facilitation and event execution. ISAN has been working closely with Pacific States Marine Fisheries Commission to plan, facilitate and report on dreissenid mussel rapid response exercises for the last several years. This year ISAN, PSMFC and Creative Resource Strategies were able to convert a planned in-person rapid response event to a 2-day virtual event to successfully reach the exercise goals.
5. Education – on-demand youth education programs – ISAN has been working in Montana classrooms for many years providing aquatic education. With the impacts of the pandemic on public education and major impacts to group gatherings, ISAN converted several of our educational offerings to short online videos and a virtual field trip. These were made available to educators that are typically served in Montana, but of course are available online to all. ISAN plans to add several more invasive species topics to the online education pieces over the coming year.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

Invasive Species Action Network will continue to expand our partnerships among non-motorized boating manufacturers and the pet business and manufacturing communities that continue to strengthen our outreach programs. Further, coordination with regional and national partners will continue to be a priority for ISAN.

ISAN is headquartered in southwestern Montana in a robust recreational community. There may be new opportunities in the coming year to extend many of our program activities and prevention strategies on invasive species in our local community.

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

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Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:

- 1. Developed the electrical settings to eradicate Round Goby from critical Lake trout spawning habitat in Lake Michigan.**

Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.

**Working collaboratively with Michigan DNR, The Nature Conservancy, and Central Michigan University we will apply the electrical technology as a management effort and evaluate goby colonization and Lake trout recruitment.**

## **Member Update Reports for the Western Regional Panel Meeting**

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Glenn Dolphin

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Oregon had two new AIS laws that became active in January 2020. The first requires all boaters to “pull the plug” and drain all standing water upon leaving a state waterway after boating and to also leave the plug out during transport of the boat. The second gives law enforcement officers the legal authority to send a boater back to an open AIS boat inspection station if they didn’t stop and are pulled over for doing so.
2. The Marine Board along with ODFW, ISAN, PSMFC and several other local and state agencies met virtually during May to implement a mock invasive mussel rapid response exercise. The exercise was deemed a success by all that participated but was much different than originally planned due to the COVID-19 pandemic. Oregon will continue to refine its rapid response plan based on some of the outcomes of the exercise and look to test the plan again during the next 3-5 years.
3. The agency continues to implement contracts with law enforcement agencies state-wide to enforce AIS boating laws, especially important is the monitoring of the boat inspection stations for compliance with our mandatory stopping requirement.
4. The Marine Board continues to be active on the WRP coastal committee along with being a member of the executive committee and participating in monthly conference calls.
5. The Marine Board continues to be an active participant as a member of the Oregon Invasive Species Council. However, drastic state funding cuts have created a challenging situation of having the council’s budget severely lowered and still trying to find ways to facilitate its important coordinating role of state-wide invasive species management programs.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**



1. This is a bit of an unknown due to the COVID-19 pandemic. Just hoping to get back to some type of normal working conditions as many events and activities from 2020 where cancelled.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting

September 14-18, 2020

Virtual Meeting

**Name:** Stephanie Otts

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**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. In 2019, the National Sea Grant Law Center received funding from the U.S. Fish and Wildlife Service to conduct a comparative analysis of current aquatic invasive species laws and regulations of the twenty-one federal, state, tribal, and local jurisdictions along the Lower Colorado River related to the watercraft pathway. The goal of this research was to identify existing legal authorities that could support state efforts to implement consensus watercraft inspection and decontamination policies. The final project report summarized the legal framework in the three states and examined the authority of the federal land management agencies, local governments, and tribal governments. Opportunities to increase coordination and cooperation are highlighted and discussed for each level of government. The report is available at: <http://nsglc.olemiss.edu/projects/model-legal-framework/files/lower-colorado-wid.pdf>.
2. The NSGLC is working with the Great Lakes Panel on Aquatic Nuisance Species (GLP), Great Lakes Commission (GLC), Great Lakes Law Enforcement Committee, and Great Lakes Fishery Commission (GLFC) to provide a legal assessment of variability in state and provincial regulated species lists and related authorities, and identify priority actions to address identified gaps and vectors of concern. To date, the NSGLC has inventoried and identify consistencies and gaps among the state and provincial lists and developed draft species-specific infographics to communicate the data. Due to COVID-19, presentation of the data to the various committees has been delayed to later this fall or early next year.
3. In 2019, the NSGLC and Creative Resource Strategies LLC received U.S. Fish and Wildlife Service funding to conduct research on the role of local municipalities and entities (e.g., counties) in aquatic invasive species (AIS) prevention efforts. This project involves the development of (1) local governance case studies to document a planning framework to effectively identify high-risk priority AIS and their pathways of introduction and (2) an online handbook/toolkit for local entities (municipalities and counties) that guides them through the process of identifying high-risk priority AIS and key next steps to advance interdiction efforts.

4. The NSGLC Director Stephanie Otts gave the presentation entitled “Thinking Beyond the Federal Framework: Legal and Policy Considerations from the International to Local Scale” during a special session on genetic biocontrol during the Midwest Fish and Wildlife Conference in Springfield, IL on January 27, 2020.
5. The City of Portland Bureau of Environmental Services initiated an effort in 2018 to audit and revise its 2008 Invasive Plants Strategy. The audit, conducted by Creative Resource Strategies, LLC, included a legal review of the key pathways of introduction undertaken by the National Sea Grant Law Center. For each pathway, the legal component of the audit describes the responsible City departments, state laws or regulations, local authorities, and recommendations the city has the authority to take to enhance prevention efforts. The findings of the audit were foundational to the development of Invasives 2.0, the City’s new 10-year invasive species strategy. The City of Portland officially adopted Invasives 2.0 on January 22, 2020. The entire City is now implementing the plan across all bureaus and all lands managed by the City. City employees use the audit to understand existing gaps in City authority and to move forward with concrete policy actions addressing those gaps.

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- Completing a comparative legal analysis of interstate boat sales at the request of Wisconsin Sea Grant that seeks to inform outreach and enforcement efforts to prevent the spread of mussels.
- Presenting the findings of the GL AIS gap analysis.
- Completing research on municipal role in AIS prevention and management.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      September 14-18, 2020                      Virtual Meeting

**Name:** Nicole Dobroski

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**Fax:** n/a

**Please provide a description of your top five AIS activities/accomplishments/priorities for the past year:**

1. Approval of regulatory amendments to require submission of mandatory *Annual Vessel Reporting Form* through the Marine Invasive Species Program's online portal, misp.io

On August 20, 2020, the California State Lands Commission (Commission) approved proposed amendments to the biofouling management regulations that will require all vessels to submit the Annual Vessel Reporting Form (AVRF) via the Commission's web-based user interface (misp.io). The AVRF is submitted by vessels 24 hours in advance of their first arrival of each calendar year. The form requests information about vessel operations, hull husbandry practices, and the use of ballast water treatment systems. The proposed regulation must still be approved by the Office of Administrative Law (OAL) prior to implementation. If approved by OAL, the proposed regulation will go into effect on January 1, 2021.

2. Settled 3 enforcement actions against vessels in violation of the Marine Invasive Species Act

During 2019, the Commission initiated 3 enforcement actions against vessels that violated the ballast water management provisions of the Marine Invasive Species Act and associated regulations. The enforcement actions were settled for a total of \$18,475, which will be deposited into the Marine Invasive Species Control Fund.

3. Onboarded five new inspectors to board vessels and assess compliance with ballast water and biofouling management requirements

During the summer of 2020, the Commission hired five new vessels inspectors (1 in N. CA and 4 in S. CA). These inspectors are cross trained in oil spill prevention monitoring activities and marine invasive species vessel inspection processes. Prior to onboarding the new inspectors, Commission staff overhauled the vessel inspection training materials. The Commission now has a very detailed inspection training and reference manual to train and support field staff.

4. Published research with the Smithsonian Environmental Research Center (SERC) on the impact of idle periods and vessel transit on biofouling communities

The Commission provided funds to SERC to investigate the impact of vessel idle or stationary periods at six durations ranging from three to 60 days on the development of biofouling communities. The experiments showed that panels exposed for longer durations accumulated more biofouling and confirmed the hypothesis that simulated vessel movement reduced biofouling on both antifouling and foul-release coatings. This study was published in the peer-reviewed journal *Biofouling* (see Davidson *et al.* 2020).

5. Published research through the Alliance for Coastal Technologies (ACT) on evaluating the efficacy of an in-water cleaning and capture technology for biofouling management

Commission staff collaborated with researchers from the University of Maryland, SERC, Naval Research Lab, and the Hawaii Department of Land and Natural Resources to evaluate the effectiveness of reactive in-water cleaning and capture technologies used to clean a vessel's hull. This project was summarized in a final report (see ACT/MERC 2019) and was published in the peer-reviewed journal *Frontiers in Marine Science* (see Tamburri *et al.* 2020).

**Please outline your priorities for the upcoming year. This will help us see who can work together moving forward.**

- Adopt and implement the federal ballast water discharge standards based on authority provided in California Assembly Bill 912 (2019).
- Work with vessel owners and operators to address questions about use of misp.io and encourage 100% compliance with the new requirement to submit the Annual Vessel Reporting Form vis misp.io (assuming final approval is received).
- Implement a weighted risk assessment to prioritize vessel boarding and inspection based on risk factors contained in pre-arrival reporting forms.
- Complete and submit the 2021 Biennial Report on California's Marine Invasive Program to the California Legislature (due by January 31, 2021).
- Publish a peer-reviewed journal article with collaborators from New Zealand on the compliance trends and lessons learned through the first year of implementing new biofouling management regulations in California and New Zealand.
- Publish a peer-reviewed journal article with a collaborator from the Smithsonian Environmental Research Center on a proxy-based approach to determine potential propagule pressure from ballast water and biofouling and establish a prioritization approach for inspections.