

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      October 9-11, 2019                      Missoula, Montana

Please fill out this form to provide a **brief** written report that highlights your top five priority program activities or accomplishments since September of 2018. Please include any legislative updates or the link to your website where more information can be found. Reports will be distributed at the 2019 WPR Annual Meeting in Missoula, MT and added to the meeting minutes. **Please limit your entry to 2 pages total. Your report will not be edited. There will not be verbal reports at the 2019 meeting.** Non-Member participants are also welcome to submit an activity report.

Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name:** Erin Raney

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

1. Priority: Seeking contractors for inspections and decontaminations of watercraft
2. Priority: Entering agreements with AZ Dept of Transportation to use existing right-of-ways for inspection stations
3. Accomplishment: AZGFD and authorized partners decontaminated 233 boats, most of which were highest risk (slipped and moored and/or infested with mussels)
4. Accomplishment: AZGFD and partners performed over 17 applesnail removal events and destroyed over 20,000 egg masses and removed over 1600 adults from infested waters.
5. Implemented an online decontamination request form which captures data before decontamination to streamline the scheduling and decontamination process while also providing information should the boater transport without receiving inspection/decontamination.

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

Our priorities continue to include finding a way to implement watercraft inspection and decontamination stations and to increase the demand and capacity for decontaminating long-term/infested watercraft. This largely depends on the ability to find temporary staffing in the form of private contractor(s). We are also continuing to identify the best locations to implement inspection stations and enter agreements for the use of these spaces, if necessary. A lot of focus in 2019-2020 will be on trying to set up formalized process for inspecting and decontaminating boats to contain infestations from the Lower Colorado River.

We are additionally seeking to create an online scheduling system to help expedite decontaminations of long-term slipped and moored and infested boats.

Another upcoming priority will be research of economic or human dimension focus.

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

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

The statewide program continued to work toward prevention through interdiction of watercraft and outreach and education, and by providing support to responsible parties implementing containment efforts at infested waters, and prevention efforts at uninfested waters. From September 1, 2018 - August 31, 2019, 154,456 watercraft were inspected, 43 watercraft were quarantined, 7 were denied entry at the California Department of Food and Agriculture's Border Protection Stations due to infestations of quagga/zebra mussels, and 4 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. CDFW conducted or partnered with agencies to conduct early detection monitoring for dreissenid mussels in 159 waterbodies.

The Department was awarded a Sport Fish Restoration Act Boating Access Grant to expand mussel prevention efforts in the state's highest risk Regions (Southern California and Bay-Delta). Funds will be used to hire additional staff to collect water samples to evaluate risk for mussel establishment in waters with unknown calcium concentrations, and to conduct

early-detection monitoring in waterbodies with suitable calcium. In addition, an 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))

For the 2018/19 Grant Cycle, 16 applications were received from 13 applicants, all for Tier 2 implementation projects. \$4.7 million was requested from the applicants, with \$3.75 million available. CDFW reviewed and scored the applications by task, while DBW reviewed the applications for eligibility and programmatic requirements. Award determinations and notifications are wrapping up in October 2019, with DBW management’s approval.

Since the first grant cycle in 2014/15 through the previous grant cycle for 2017/18, approximately \$11 million has been awarded statewide to reservoir owners and managers for the prevention of quagga and zebra mussel infestation at uninfested publicly accessible reservoirs. This funding total will rise, once the 2018/19 award determinations are final. Funding for this program originates from the quagga and zebra mussel prevention sticker fees, collected by the California Department of Motor Vehicles, from registered boaters.

The next grant cycle for 2019/20, is anticipated to kick off in March 2020. To sign up for notifications regarding this grant program, visit [http://dbw.parks.ca.gov/?page\\_id=28822](http://dbw.parks.ca.gov/?page_id=28822) (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).

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

Since implementing the Nutria Eradication Incident Command System (ICS) in March 2018, the California Department of Fish and Wildlife’s (CDFW) redirected field crews, along with three USDA-Wildlife Services trappers and the California Department of Food and Agriculture’s delimitation crews, have:

- Completed full and/or rapid assessments on over 545K acres
- Executed entry permits with over 2500 landowners
- Set up 1022 camera stations and conducted 4754 camera checks
- Confirmed nutria within 177 sites
- Deployed 1670 trap sets for a total of 20,979 trap nights
- Taken or accounted for the take of 720 nutria (since Mar 2017)(Merced County 591; San Joaquin County 78; Stanislaus County 39; Mariposa County 11; Fresno County

Operations under the ICS have been an emergency response attempting to suppress the growth of the population, while adequate and long-term resources were pursued. With the funding from the 2019-2020 Governor’s Budget and the [3-yr] grants the project has received, CDFW is currently transitioning from the ICS to a dedicated eradication program that will effectively triple to quadruple the scale (staffing) of our efforts over the next 3 years.

4. Invasive Species Council of California (Lead Agency – Department of Food and Agriculture)

The Council was created in 2019 to coordinate invasive species efforts in the state and to advise state agencies how to facilitate coordinated, complementary, and cost-effective control or eradication of invasive species that have entered or are already established. The Council may establish an advisory committees and ad hoc working groups to advise the Council. In addition the Council is tasked with developing a plan for the cure or suppression of diseases associated with the spread of invasive shot hole borers.

Over the past year the CDFA has continued convening workgroups to develop a shot hole borer management plan and grant out funds for shot hole borer research and outreach/education.

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

CDFW continued efforts to eradicate invasive populations of *N. sipedon* and *N. fasciata pictiventris* to reduce and prevent further impacts to California's special status species. In the 2019 trapping season six *N. sipedon* and seven *N. f. pictiventris* were removed. Trapping and removal will continue into future years.

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

Nutria eradication

Mute swan risk assessment and exploration of management options

Bullfrog control methods and measures to prevent establishment

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

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

1. Completion of report to California Legislature “2018 Assessment of the Efficacy, Availability, and Environmental Impacts of Ballast Water Treatment Technologies for Use in California”

On December 3, 2018, the California State Lands Commission (Commission) approved a report to the California Legislature assessing the availability of ballast water treatment technologies to meet California’s performance standards for the discharge of ballast water. The report examined the use of shipboard ballast water management systems, shore-based ballast water reception and treatment facilities, and the combination of ballast water exchange plus ballast water treatment. Staff concluded that no technologies are available to enable implementation of California interim ballast water discharge standards. The report includes recommendation to the Legislature on next steps to implement discharge standards and protect California waters. The report is available at [www.slc.ca.gov](http://www.slc.ca.gov).

2. Assembly Bill (AB) 912

In response to the recommendations in the 2018 ballast water treatment technology assessment report, the Commission proposed legislation in 2019 to enable the Commission to enforce the federal ballast water discharge performance standards as of January 1, 2020. AB 912 also includes a provision to allow the Commission to sample ballast water discharge

and biofouling for research purposes (previously the Commission only had authority to sample for compliance assessment). The bill was approved by the Senate and Assembly and has been presented to the Governor for his signature.

3. Completion of report to the California Legislature “2019 Biennial Report on the California Marine Invasive Species Program”

On February 4, 2019, the Commission approved a report to the California Legislature summarizing the activities and accomplishments of the California Marine Invasive Species Program during the period from July 1, 2016 through June 30, 2018. The report includes a summary of data collected through vessel-submitted reporting forms, Commission-funded research to prevent marine invasive species introductions, a review of recent literature on marine invasive species science and technology, and a list of next steps that the Marine Invasive Species Program will take to continue to prevent species introductions in California. The report is available at [www.slc.ca.gov](http://www.slc.ca.gov).

4. Protection of some state authorities in the federal Vessel Incidental Discharge Act

In December 2018, the Vessel Incidental Discharge Act (VIDA) was signed into law as part of the Frank Lobiando Coast Guard Authorization Act of 2018. VIDA will eventually preempt state authority to establish and implement state-specific requirements for the regulation of discharges incidental to the normal operation of a vessel, including ballast water.

Commission staff, working with the Governor’s office, California Congressional staff, the Attorney General’s office, and state agency staff from throughout the U.S., were able to include provisions in VIDA that retain state authority to conduct vessel inspections and enforcement actions, collect reporting forms and fees, and to petition the U.S. EPA to strengthen standards.

5. Success in implementation of biofouling management regulations

After almost two years of implementation, Commission staff are seeing a positive shift in the shipping industry reporting and recordkeeping of biofouling management practices. Staff has engaged in extensive outreach to vessel owners, operators, and crew, and as a result have seen a decrease in violations of reporting/recordkeeping requirements and have heard from shipyards that industry is altering their practices to adhere to our requirements.

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

1. Develop and implement a weighted risk assessment that will address ballast water and biofouling risk for vessels arriving at California ports that will enable more effective prioritization of vessels for inspection.
2. Implement the provisions in AB 912, including ballast water discharge performance standards
3. Expand enforcement authorities to include biofouling violations (currently enforcement is limited to ballast water violations)
4. Fund research to evaluate the performance of shipboard ballast water management systems

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

1. The Colorado General Assembly passed the Mussel Free Colorado Act (HB18-1008), which created a long-term stable source of funding for the ANS Program through the creation of an ANS Stamp for resident (\$25) and non-resident (\$50) motorboats and sailboats to fund a portion of the ANS Program long term. CPW began implementation of the bill on January 1, 2019. This new funding source will provide approximately \$2M of the \$5M needed to operate the State ANS Program annually.
2. CPW is focused on the collaborative and strategic implementation of the 2018 Water Resources Reform and Development Act (S. 3021). Section 1170 directs the U.S. Army Corps of Engineers prevent the spread of aquatic invasive species in three basins in Colorado - Upper Colorado, South Platte and Arkansas River Basins. CPW is engaged with the Army Corps and other basin states, and have made this top priority
3. The number of infested boats intercepted with zebra and quagga mussels continues to rise dramatically. Colorado has intercepted a record number of 93 mussel boats to date this year. There were 51 in 2018 and 26 in 2017. The annual average before that was 16 per year. More boats are needing professional marine servicing and quarantine also.



4. CPW continues to operate a containment program at Green Mountain Reservoir, which is suspect for quagga mussels per the WRP BC standards following an August 2017 detection of veligers by the Bureau of Reclamation. Subsequent scuba dives and bi-weekly sampling has revealed no further detection or confirmation of quagga mussels and there has been no evidence of adults in the samples. No adult zebra or quagga mussels have ever been found in the State of Colorado.
5. CPW continues to manage the Regional Watercraft Inspection and Decontamination Data Sharing System (established in 2014) utilizing federal grants to ensure free use to states and local partners. This system provides crucial timely information about watercraft leaving infested waters and traveling towards uninfested locations and has become a foundational element of western state risk assessment and communications. The system is in full use by ten western states, Tahoe Regional Planning Agency, numerous local governments and several National Parks. It is a collaborative product of western state ANS programs. All entities performing WID are encouraged to adopt this system. For more information, contact [invasive.species@state.co.us](mailto:invasive.species@state.co.us).

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

1. Gaining ANSTF and CO approval for the *Colorado ANS Management Plan*
2. Drafting and gaining WRP and ANSTF approval on the *Updated Recommendations for the Future Implementation of the Quagga Zebra Action Plan for Western Waters*
3. WRDA-2018 Implementation in South Platte, Upper CO and Arkansas Basins

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**Name: Blaine Parker**

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

1. Completed my 3 year volunteer post with ISAC (Invasive Species Advisory Committee).
2. Initiated tribal participation and awareness with the invite and attendance of 3 tribal staff to the June 2019 100<sup>th</sup> Meridian Columbia Basin Working Group meeting in Spokane, Washington.
3. Grant funding received from BIA to provide outreach, education, and capacity building for Columbia Basin Tribes.
4. Planning and preparation of the first tribal Aquatic Invasive Species workshop (Sept 24-25, 2019).
5. Coordination with USFWS to provide HACCP training for AIS prevention for Columbia Basin Tribal staff (March 2020).

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

**Goals for 2020**

- Serve on the ExCom of the WRP
- Continue efforts to build capacity among member tribes for AIS prevention, management and control in the Columbia River Basin.
- Strive for additional funding opportunities for tribal AIS capacity building.

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**Name:** Kimberly Fuller

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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' (HDAR) Aquatic Invasive Species (AIS) Team has retrieved the first of twenty autonomous reef monitoring structures (ARMS) that were deployed throughout the main Hawaiian Islands in May of 2018. ARMS were placed in commercial harbors that included: Nawiliwili, Kauai; Kahului, Maui; Honolulu, Oahu; Kalaheo/Barbers point, Oahu; Hilo, Big Island. The first ARMS unit was pulled from Honolulu Harbor on August 12 and brought to the Bishop Museum for analysis and organism preservation. In collaboration with the Bishop Museum, DAR hopes to expand on the baseline of aquatic non-indigenous species present in and nearby commercial harbors and supplement genetic databases with confirmed taxonomic samples. Robust genetic databases are important for future genetic monitoring efforts of harbors and nearby waters. Genetic monitoring efforts may be more time and cost effective than traditional forms of monitoring.
2. HDAR's Ballast Water and Biofouling Program is beginning trials for validating a commercially available ballast water rapid assessment tool against the Environmental Protection Agency's (EPA) approved testing method to investigate its reliability, portability, and rapidity in measuring viability in ballast water discharge. Ballast Water is used to manage ship stability; harbor water is typically

pumped into ballast tanks onboard a vessel during cargo offloading operations, carried during the voyage to another port and then discharged during cargo loading operations. This transfer of water between ports has the potential to transfer harmful and invasive organisms and pathogens. Monitoring ballast water discharge to ensure adherence to United States Coast Guard's (USCG) standards is an integral part of making sure ships are managing their ballast in a responsible way. Currently, ballast water is tested with protocols approved by the EPA. Though reliable, these protocols are tedious and time-consuming to perform as well as require highly trained professionals and expensive instrumentation.

3. The Ballast Water and Biofouling Program continues to advise on best management practices for biofouling and ballast water and is active in influencing upcoming legislation on these items. With funding from the United States Fish and Wildlife Service (US FWS), HDAR in collaboration with the Western Regional Panel (WRP) produced an outreach document on best management practices for biofouling on vessels.
4. HDAR's AIS Field Team rapidly responded to a new report of an alien anemone: *Bartholomea annulata*. In April 2019, the AIS team received a report of a new alien anemone from local marine life expert Keoki Stender, in Kāneʻohe Bay near Heʻeia-Kea Small Boat Harbor. A site assessment was performed, and the anemone was confirmed as the Caribbean Corkscrew Anemone (*Bartholomea annulata*), which has not been reported in Hawaiʻi previously. *B. annulata* presence was found to span a Cartesian distance of 1.1 km at a minimum, present north and south of Heʻeia-Kea Small Boat Harbor. The alien anemone also was found on other patch and fringing reefs in Kāneʻohe Bay. Rubble and silty sand areas are the dominant habitat that the alien anemone has been found on. The State of Hawaiʻi AIS team is currently pilot testing control options for the anemone in collaboration with the United States Geological Survey (USGS) and the US FWS.
5. HDAR's AIS Field Team has continued Kāneʻohe Bay invasive species control, monitoring, and restoration efforts. Invasive algae management continues in the bay in the form of monitoring and sea urchin out-plantings. Annual Long-Term Reef monitoring was completed in March on priority patch reefs and is expected to be completed in October for control, reference and treatment reefs. Stocking of sea urchins continues on priority reefs to maintain invasive algae at levels below 5% coverage.

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Our priorities for the upcoming year in are: 1) Continue to influence federal and state legislation for the effective management of biofouling and ballast water as vectors of aquatic invasive species. This includes shaping the Vessel Incidental Discharge Act to the degree possible and increasing HDAR and its partner agencies' ability to regulate biofouling. 2) Continue active management of invasive algae in the State of Hawaiʻi. 3) Rapidly respond to new incipient populations of aquatic invasive species in the State of Hawaiʻi. 4) Expand our tool-box for rapid detection as well as control technology. 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

October 9-11, 2019

Missoula, Montana

Name: Nic Zurfluh

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

20 watercraft inspection stations located throughout Idaho on major travel corridors into the state. YTD Data (9/27/2019): Total watercraft Inspections: 116,200. Hotwashes (140F) performed: 6,343. Weeds on boat: 707. Q/Z Fouled watercraft: 44. 24Hour operations at Cotterell (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. Idaho State Police support, increased lighting around station, electronic message board and great cooperators make night operations a success.

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 2019 in preparation for the upcoming 2020 season.

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, six roving AIS inspection crews based in Boise, Twin Falls, Bonners Ferry, Post Falls, Sandpoint and Idaho Falls. 11 cooperative law enforcement support agreements for all watercraft inspection station locations representing at 35 hours per week of support for each station. FY 2019 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.

Pacific States Marine Fisheries WRDA Funding agreement (\$1 M) to support watercraft inspection and monitoring efforts. USFWS ANS Task Force Grant for \$47,000 in federal funds install new regulatory signage at border entrances. BLM grant for \$20,000 to purchase additional watercraft decontamination units.

## **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.

Idaho held a joint rapid response exercise with the State of Oregon in the Hells Canyon area of the Snake River in May of 2019. This exercise was a collaborative event designed to exercise the steps to be taken should ISDA, Oregon and Idaho power have a Dreissenid detection in the Hells Canyon complex. The exercise scenario focused on hypothetical containment and control options after the initial and delimiting surveys were complete. These actions included boat ramp closures, and possible chemical control treatment of a one-acre area. This exercise included stakeholders from ISDA, PSMFC, OSMB, ODFW, ODA, Idaho Power, USFWS, NMFS and ISAN.

### **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. 2019 Legislation:**

Idaho legislature provided the ongoing \$3.14 M from the General Fund to continue enhanced operations of the state's watercraft inspection stations for FY 2020. 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 FY 2020 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.

### **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.

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**Name: Michael Stephenson**

**Organization: Idaho Power Company**

**Title: Senior Biologist**

**Mailing address: 1221 West Idaho Street**

**City: Boise**

**State: Idaho**

**Zip: 83702**

**Email address: [mstephenson@idahopower.com](mailto:mstephenson@idahopower.com)**

**Phone: 208 859 9021**

**Fax:**

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

1. Hosted state of Idaho's Rapid Response Exercise in Hells Canyon in May 2019. Participants were from the states of Idaho and Oregon; as well as multiple federal agencies.
2. Continued collecting samples in HC area to support Idaho Department of Agriculture's sampling efforts.
3. Attended Columbia River Basin Team meeting.
4. Participated in WRP's eDNA committee calls and webinar.
5. Attend WRP annual meeting.

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

My 2020 plan is to complete the remaining vulnerability assessments on IPC facilities.



## Member Update Reports for the Western Regional Panel Meeting

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Leah Elwell**

**Organization: Invasive Species Action Network**

**Title: Executive Director**

**Mailing address: 215 East Lewis St. Suite 202**

**City: Livingston**

**State: MT**

**Zip: 59047**

**Email address: leah@stopais.org**

**Phone: 406-222-7270**

**Fax: n/a**

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

1. Non-motorized boater outreach – ISAN has a comprehensive outreach program that targets non-motorized boaters with AIS outreach, with grant support from the USFWS. The program aims to educate non-motorized boaters on their role in clean, drain and dry and in stopping at boat inspection stations. Last year we reached more than 300,000 purchasers of boating/paddling gear with a prevention message through a partnership with a variety of boating and boating accessory companies.
2. Don't Let it Loose – ISAN continues to expand and support the Don't Let it Loose effort across many western states. By working with independent pet stores we are able to bring a powerful message to them, as well as encourage re-homing through the businesses. We successfully added New Mexico, Arizona and Nevada to the program in early 2019. With USFWS support, we anticipate being able to include Idaho next into the program. There are a variety of program aspects that we hope to explore that could take the DLIL message beyond the pet store, including the vet office and specialty pet supply store.
3. Education – ISAN has a well-developed youth education program that provides classroom lessons and training workshops. In the past year, we reached over 7500 students with our

work with most of the students reached between kindergarten and fifth grade. Many of the lessons focus on aquatic education, but always include a prevention message on invasive species. We partnered with the State of Montana to provide multiple training workshops to adults on how to teach about invasive species. This one-day workshop has enabled many to take an invasive species education message to new school groups or events.

4. Watercraft Inspection Station Quality Assurance and Quality Control – ISAN continues to provide quality assurance quality control (QAQC) assessments of operators of watercraft inspection stations. In 2019, we evaluated inspection stations for Wyoming, Montana, Lake Tahoe, and a composite of Pacific Northwest states for Pacific States Marine Fisheries Commission. Our evaluators pose as recreational boaters and perform an assessment while inspection is taking place.
5. Professional Services – ISAN provides a variety of professional services for many AIS community partners including technical writing, meeting planning, facilitation and rapid response exercise planning. For example, this past year we assisted in the completion of the Columbia Basin Flowering Rush Management Plan, and facilitated a ID-based rapid response exercise. ISAN provides organizational coordination for the WRP and the Columbia Basin Cooperative Weed Management Area.

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

ISAN will continue or expand our work on the programs that are mentioned above. However, ISAN is always looking for unique ways to reach people with an invasive species prevention message and to provide excellence to new professional opportunities.

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Chris Steffen**

**Organization: Kansas Department of Wildlife, Parks and Tourism**

**Title: ANS Coordinator**

**Mailing address: 1830 Merchant St.**

**City: Emporia**

**State: KS**

**Zip: 66801**

**Email address: chris.steffen@ks.gov**

**Phone: 620-342-0658**

**Fax:**

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

- 1. Increased capacity (personnel) of ANS program** – added 1 new FTE (60% of time devoted to ANS duties) to establish and manage WID program. Position will also address aquatic vegetation concerns and have education and outreach duties.
- 2. Continued 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

**3. Geo-targeted Facebook Ads (and comparison)** – Geo-targeting was used to increase the likelihood that users at (or near) a lake would see ANS ads when they opened their Facebook account. As part of a larger goal to improve the efficiency of our education and outreach efforts, we compared targeting ANS Facebook ads at zebra mussel infested lakes vs. non-infested lakes. Users at infested lakes had significantly higher click rates than those at uninfested lakes. Our interpretation is that ANS education at outreach efforts should be continued (or possibly increased) even after a lake becomes infested with zebra mussels.

**4. Regulatory Changes –**

- Added Marbled Crayfish to Prohibited Species list.
- Prohibited the movement of live crayfish, leeches, amphibians and mussels. They may only be used within the common drainage where caught and cannot be transported above any upstream dam or barrier. This rule now aligns the regulations for all aquatic bait with our rules for the movement of fish.
- Updated and clarified ANS designated waters. Asian Carp section previously noted “tributaries of the MO River,” which was not specific enough for law enforcement needs. Now all individual streams are named.

**5. Bait Shop Inspections** – Inspections were conducted at bait shops statewide. Red Swamp Crayfish were detected in 1 baitshop. An investigation (in conjunction with law enforcement) determined that the crayfish were sourced from a population established in a private pond in Butler County, KS. Unfortunately the population has been established for 5+ years and has spread into a nearby creek; eradication will not be attempted.

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

- 1. Establish a WID program within the state of Kansas**
- 2. Initiate an aquatic vegetation sampling/management program**
- 3. Improve efficiency and efficacy of education and outreach efforts**
- 4. Complete research project on crayfish sampling methods for lentic systems**
  - a. The ultimate goal is to begin a statewide crayfish survey in 2021**

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Dennis Zabaglo**

**Organization: Tahoe Regional Planning Agency**

**Title: Aquatic Resources Program Manager**

**Mailing address: PO Box 5310**

**City: Stateline**

**State: NV**

**Zip: 89449**

**Email address: dzabaglo@trpa.org**

**Phone: 775-589-5255**

**Fax:**

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

1. The Tahoe Regional Planning Agency (TRPA) has been awarded \$3.088M dollars from the US Fish & Wildlife Service made possible by appropriations through the Lake Tahoe Restoration Act. Funds are available for AIS program activities that include prevention, control and monitoring.
2. In 2019, TRPA passed new ordinances that require all marinas on Lake Tahoe to develop and implement AIS management plans. Plans need to include monitoring efforts, skimming for weed fragments and efforts to reduce the likelihood of AIS becoming established within the marina.
3. TRPA and its partners have completed the development of an AIS Action Agenda that describes a suite of control actions, resources necessary and metrics for success to combat AIS in Lake Tahoe. One of the main goals of the agenda is to achieve a 90% reduction or eradication of all existing invasive aquatic plant species in Lake Tahoe. This 10 year plan is bold, but achievable, and important for protecting the unique resources of Lake Tahoe.
4. The Tahoe Keys area of Lake Tahoe is considered ground zero for invasive aquatic plant species in the lake with the infestation more than 30x larger than any other infestation

treated. Aquatic herbicides have been proposed for use, however they have never been used before in Lake Tahoe and until recently were expressly prohibited. The scoping period for the environmental document has recently been completed and the finalizing of the project description and alternatives is underway for an analysis to start in the Fall of 2018. Draft documents are expected in the summer of 2020.

5. The Lake Tahoe AIS Program ended its 11<sup>th</sup> season with no detections of new AIS since program inception.

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

1. Continue planning and conducting the environmental analysis for controlling invasive aquatic plants in the Tahoe Keys area of Lake Tahoe.
2. Identify locations for permanent off-ramp watercraft inspection stations.

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Thomas Woolf**

**Organization: Montana Fish Wildlife and Parks**

**Title: AIS Bureau Chief**

**Mailing address: PO Box 200701**

**City: Helena**

**State: MT**

**Zip: 59620**

**Email address: Thomas.woolf@mt.gov**

**Phone: 406-444-1230**

**Fax:**

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

1. Expanded partner involvement with the operation of watercraft inspection stations, AIS early detection survey and outreach / education.
2. Over 40 locations conducting watercraft inspections in the state employing over 200 FWP and partner staff and inspecting over 110,000 watercraft. A record number of inspections for the state.
3. Intercepted and decontaminated 14 watercraft transporting invasive mussels into the state.
4. Promoted standardized protocols, materials and data collection state-wide.
5. To date, no further evidence of dreissenid mussels in Montana waters.

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

- Identify strategies to improve quality control and staff retention at watercraft inspection stations.
- Expand investigation into challenges and barriers associated with integrating eDNA into dreissenid early detection survey.

**Name:** Jessica Howell

**Organization:** North Dakota Game and Fish Department

**Title:** Aquatic Nuisance Species Coordinator

**Mailing address:** 3320 E. Lakeside Road

**City:** Jamestown

**State:** North Dakota

**Zip:** 58401

**Email address:** jmhowell@nd.gov

**Phone:** (701) 368-8368

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

1. Legislation – a new bill passed that allows for 2 new FTE positions (one warden and one ANS biologist), license surcharges on resident fishing (\$2) and non-resident fishing and waterfowl (\$3) as well as boat registrations for boats in-state (\$15/3 year) and out-of-state (\$15/year with sticker). Surcharges go into effect in 2020, though emergency provisions in the legislation allowed for the immediate hiring of staff (warden started June 1, ANS biologist position closes Sept 29) and spending of up to ~\$450,000. Estimated profits are \$1.5 M per biennium, to be deposited into a special ANS fund.
2. Major findings and responses – we detected bighead carp for the first time in North Dakota in June 2019; we also detected a new population of zebra mussels in Lake Ashtabula, which is also the water source for Valley City and Baldhill Dam National Fish hatcheries. In response, we are working with USFWS to establish protocols for the hatcheries and secure water sources long-term. We also increased our zebra mussel early detection monitoring from approximately 30 waters to over 100 and from once a year to twice a year, also adding some adult traps and adult sampling.
3. Outreach – we engaged North Dakota public schools through a classroom engagement program for the first time in 2019; continued to contract public outreach on a regional level, are updating our ANS materials internally, and continue to engage the public on multiple fronts.
4. Coordination – we hosted the 2019 100 Meridian Initiative, Missouri River Basin Team meeting, as well as participated in WGA invasive species events; MRBP meeting; Asian carp sampling workshop; WISCE calls; International Souris River Basin Board meetings; Missouri River Basin Asian carp meetings; various regional fisheries meetings; in-state ANS coordination meetings; and other regional and statewide/agency coordination meetings.
5. Equipment inspections – in 2019, we inspected 5 bait importer facilities in Minnesota; >65 pieces of commercial, industrial, and military equipment; >1,000 boater surveys and inspections; and received inspection reports from >40 tournaments to date.

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

ND priorities for 2019-2020:

1. Hire and train new ANS biologist.
2. Program expansion planning.
3. Continue to research and develop BMPs for infested hatcheries.



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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Laura Megill**

**Organization: Nevada Department of Wildlife**

**Title: AIS Coordinator**

**Mailing address: 6980 Sierra Center Parkway Suite 120**

**City: Reno**

**State: NV**

**Zip: 89523**

**Email address: Imegill@ndow.org**

**Phone: 775.688.1532**

**Fax: 775.688.1697**

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

1. NDOW was able to increase capacity to hire a permanent, full-time northern lead position for the AIS Program. He has over thirty years of experience as vessel mechanic with four master certifications (Westerbeke, Evinrude/Johnson, Kohler, and Mercruiser) in vessel systems and repair including completion of several trade schools and owner/operator of boat mechanic facility. Also, Mr. Allen was recently voted as Carson Valley's number one boat mechanic (The Boat Guy) for 2019. Please welcome Wayne Allen to the NDOW team.
2. Successful implementation of better working conditions for staff at Lake Mead and Lake Mohave. NDOW with support from its partner agencies (NPS and FWS), purchased two air conditioned work trailers for ramp staff to ameliorate up to 120° F weather conditions earlier this season. NDOW is in the process of purchasing a third work trailer at a cost \$41,138.00 through Complete Trailers.
3. NDOW implemented the Mechanic Wash pilot program at the end of January of 2019 at Lake Mead NRA. The mechanic wash program was created to track fouled watercraft that left Lake Mead NRA for repairs. NDOW worked with local repair facilities and rental concessionaires to develop an equitable solution to insure State law was being followed while also not

requiring hours of decontamination services for vessels returning to the Park. Vessels being transported for repair are required to visit an AIS station and have the outdrives lowered, bilge plug removed, and an exterior wash of the vessel performed to remove any live mussels which takes approximately 15 to 20 minutes per vessel. The mechanic wash does not include pumps, systems, or motors. The mechanic/transporter must complete a form similar to the decontamination form. Once the mechanic wash is complete, NDOW staff attach an orange NV Mech Wash seal, and the transporter is informed that when the vessel returns to the Park, NDOW staff will remove the seal and check the vessel back into the Park. Since implementation of the pilot program, NDOW staff have performed 25 mechanic washes to date. Of the 25, nine (20) vessels have been returned to LMNRA, four (4) vessels are still being repaired, and one (1) vessel was scrapped. To date, 100 percent compliance on vessel return and seal removal by NDOW staff has occurred.

4. Currently, there are no new detections of quagga/zebra mussels into the State of Nevada waterbodies. The only infested waterbodies are Lake Mead, Lake Mohave, and the Lower Colorado River.
5. The State of Nevada implemented the **Don't Let It Loose** program during April of 2019. Bob Wiltshire of the ISAN took lead and currently there are 18 stores participating in the program. NDOW plans to contact the participants semi-annually and will provide enrollment to pet stores not currently involved with the program.

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

1. Create and implement a non-motorized CDD and Nevada AIS Decal campaign for the State of Nevada which will include social media, billboards, ads, press releases, brochures, rack cards, stickers, event attendance, etc.
2. Create a GIS database of AIS occurrences for the State of Nevada.
3. Initiate pilot bullfrog removal project for the Owyhee River pond located 2.5 miles south of Mountain City, Nevada. Previously the pond supported an important population of Columbia spotted frog, a priority conservation species, but the native amphibian has been displaced by the American bullfrog, a non-native species. The bullfrog population represents an existential threat to other spotted frog populations in the Owyhee River drainage.
4. Host a Rapid Response Exercise for Wildhorse Reservoir for fall of 2020 in cooperation with Pacific States Marine Fisheries Commission.
5. Create Hazard Analysis & Critical Control Point (HACCP) plans for the Nevada State Fish Hatcheries to prevent the spread of Invasive Species.

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name:** Glenn Dolphin

**Organization:** Oregon State Marine Board

**Title:** AIS Program Coordinator

**Mailing address:** 435 Commercial St. NE

**City:** Salem

**State:** Oregon

**Zip:** 97309

**Email address:** glenn.dolphin@oregon.gov

**Phone:** 503-378-2625

**Fax:** 503-378-4597

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

1. In Oregon the issue of Climate Change has become a big environmental problem that the State is trying to figure out how to manage. During this past year there was a multiagency working group put together to draft what is being referred to as "The Climate Change Adaptation Framework Plan" that includes planning and response for all the aspects of our environment that will be likely impacted by our changing climate. This has been a huge undertaking (many planning meetings and conference calls) and is essentially a first step that Oregon is taking to try and be prepared for the future changing environment. The Marine Board was a member of this work group and took the lead on representing aquatic invasive species as an environmental issue to make sure it was included in the plan for future consideration of management decisions and possible funding. A cap and trade legislative bill to provide funding for environmental projects (similar to what California has in-place) was intensely debated this past year and became very controversial. It unfortunately died due to political indifferences.
2. During the 2019 Oregon Legislative Session the Marine Board introduced (for the second time) a bill that would require boaters to drain all the standing water after removing their

boat from a waterway and to leave the bilge plug out (if one is present) during transport of the vessel. After many committee meetings and public testimony, the bill passed! This new law will become active as of January 1<sup>st</sup> 2020.

3. The Marine Board was awarded a grant this past year from the USBOR in the amount of \$60,000. We will use those funds during 2020 and 2021 to increase the amount of time that law enforcement officers will work at our AIS boat inspection stations to monitor and enforce the mandatory stopping requirement for boaters that are traveling past the stations when they are open.
4. This past summer staff supervised an Oregon State University Sea Grant Fellow who worked with the agency on multiple research/outreach projects. One of those projects was to develop outreach materials that are targeted towards coastal boatyard employees. This has resulted in an 11" x 17" poster being created including photos of 16 targeted early detection marine species with an accompanying 5" x 7" informational card booklet for individual species information. At the time of this report, the OSU Fellow was in the final stages of the project with an anticipated completion date of November 1<sup>st</sup>.
5. The Marine Board continues to be an active participant as a member of the Oregon Invasive Species Council and due to a great deal of work by all of the Council members, we were awarded \$450,000 by the state legislature to continue our work state-wide. Funds will be set aside into the Councils emergency control account (for future EDRR activities), a small grant program will be implemented for education and outreach projects and the Coordinator team will be able to continue on for another two year budget cycle.

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

1. The Marine Board is planning to be the lead agency in 2020 to organize and implement with our many partners a zebra/quagga mussel emergency response exercise in Oregon. Initial plans are to pick a site that will include the presence of ESA listed Salmonids in the location where a mock detection of mussels will have occurred. The goal will also be to bring together at the planning table the local stakeholder groups (Tribes, environmental advocates, SWCD's etc.) to help answer those anticipated tough questions on how to move forward with an adequate response in the future when Salmon are present in a detection area.
2. Increased training for law enforcement agencies with the addition of our new "pull the plug" law along with the increased emphasis (via our BOR grant funds) to have more patrol time spent enforcing the mandatory stopping aspect of our boat inspection stations.

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**Name:** "Quagga D" Davis

**Organization:** Quagga D LLC/PSMFC

**Title:** WIT Trainer

**Mailing address:** 2415 Pebble Springs Ct.

**City:** Henderson

**State:** NV

**Zip:** 89074

**Email address:** quaggadee@cox.net

**Phone:** 702-236-3814

**Fax:** n/a

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

1. WIT Trainings
2. Decon Think Tank Committee
3. SeaPlane Committee
4. Attended HACCP and Trainer Training

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

1. WIT II Trainings

November 19-20, 2019 – Lake Mead

January 14-15, 2020 – Lake Mead

February 11-12, 2020 – Lake Mead

March 10-11, 2020 – Lake Mead

2. WIT III Trainings  
January 28-30, 2020 - Lake Mead  
February 25-27, 2020 – CA (FULL)

3. Travel Trainings  
WIT – March 24-25 Texas  
WIT – April 21-22 California  
WIT – May 19-20 Nebraska

# Texas Update Report for the Western Regional Panel Meeting

Annual Meeting

October 9-11, 2019

Missoula, Montana

Name: Monica McGarrity

Organization: Texas Parks and Wildlife Department (TPWD)

Title: Senior Scientist for AIS Management

Mailing address: 4200 Smith School Rd.

City: Austin State: TX Zip: 78744

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Phone: 512-552-3465

Fax: 512-389-4405

## **TEXAS' TOP FIVE AIS ACTIVITIES/ACCOMPLISHMENTS/PRIORITIES FOR THE PAST YEAR:**

***Zebra mussel monitoring and prevention:*** Zebra mussel early detection, population monitoring, and prevention continue to be among TPWD's top priorities. A coalition of partner agencies monitors approximately 50 water bodies for zebra mussel (ZM) early detection or population monitoring. Texas' prevention efforts focus on a targeted "Protect the Lakes You Love" public awareness campaign that aims to reach boaters at highest risk for transporting aquatic invasive species (AIS). Messaging focuses on motivating them to clean, drain and dry (CDD) their boat, trailer and gear before traveling from lake to lake. In 2019, nearly \$420,00 was spent on paid media between Memorial Day and Labor Day when most boaters are on the water. The paid media included 58 billboards, pump topper advertising at 170 gas stations, gas station TV advertising at 90 stations, geo-targeted and contextually-targeted digital banner ads and pre-roll video ads, paid social media ads on Facebook and Instagram, and digital radio ads on Pandora. The campaign also employed tactics such as email blasts and renewal mailing inserts to reach registered boaters, boat ramp signage, print ads and editorials in relevant publications, outreach materials, and organic social media.

***Boater survey:*** One significant prevention accomplishment was development and implementation of a boater survey designed to assess knowledge of AIS, reported CDD behaviors, motivations for CDD efforts, and exposure/response to the TPWD AIS prevention campaign. The survey was emailed to 18,108 randomly selected registered boaters and had a final "served to completion" rate of 5.3% (i.e., 25% took the survey but only 5.3%--966--qualified to complete the survey in full by having used a motorized watercraft on at least one of 43 listed lakes with AIS and more than one water body in the past 18 months). Most boaters (86-87%; primarily day-use) reported always CDD and drying their boats for more than a week before visiting another lake to stop the spread of AIS and protect Texas waters. However, 62% of boaters using lakes with ZM reported not knowing or being unsure whether the lake had ZM and those who rarely to never CDD were less likely to know. More than half of surveyed boaters (57%) felt they had little or no personal control over the spread of AIS, with most of these individuals (91%) attributing this to lack of control over the actions of others. The survey instrument and a report of results prepared by the marketing firm is available upon request.

***Giant Salvinia Rapid Response and Biological Control:*** In addition to ongoing efforts to manage existing infestations of giant salvinia and other aquatic invasive plants, TPWD has focused on rapid response and eradication of newly detected giant salvinia introductions. In the past year, early detection and rapid response using measures such as installation of floating booms for containment and herbicide treatments resulted in successful eradication of giant salvinia from lakes Athens and Fork. Additionally, booms and herbicide treatments were used at three other lakes—Brandy Branch Reservoir, Timpson Reservoir, and Martin Creek Reservoir—and giant salvinia has not been detected in several months. Biological control of giant salvinia using weevils in tandem with floating boom deployment for containment and herbicide application continues to play a key role in TPWD's integrated pest management strategy. The weevils have been successful in numerous water bodies from the Carthage area (~60 miles SW of Shreveport) south along the Louisiana border to the coast. However, winter temperatures in the northernmost areas of this range and farther north, including highly infested Caddo Lake, are below the lower temperature tolerance of the weevils, resulting in limited success.

***Riparian Invasive Plant Management:*** Watershed-scale efforts to manage riparian invasive plants in Texas continue to focus on saltcedar and Arundo (*Arundo donax*; a.k.a. river cane, carrizo cane) in key Native Fish Conservation Areas. The Healthy Creeks Initiative—a TPWD-led partnership with river authorities, local governments, NGOs, and landowners—implemented treatment of Arundo on 170 properties across four watersheds in the Hill Country of Central Texas. In the Upper Brazos River watershed in the Rolling Plains and Cross Timbers and Prairies ecoregions of North-Central Texas, saltcedar management efforts continued to expand with an additional 3,350 acres treated across 40 new properties.

***AIS Research:*** Four AIS research projects were selected for funding by TPWD for fiscal years 2020-2021 through an open request for proposals. Research topics include population ecology, downstream dispersal, and impacts of ZM on native mussels in Texas; potential viability of ZM in Texas waters of varying calcium concentrations; potential for water stargrass and endangered Texas wild-rice to suppress hydrilla regrowth after removal; and pathways and effects of introductions of coastal cyprinodontids into inland Texas waters and potential spread.

#### **PRIORITIES FOR THE UPCOMING YEAR.**

Management of giant salvinia and other aquatic invasive plants remains top priority. Extensive management of giant salvinia using herbicides and biological control weevils will focus on Caddo Lake and Toledo Bend Reservoir. Investigations of herbicide efficacy will also continue as will investments in early detection and rapid response.

The outreach campaign will continue to focus on ZM and giant salvinia. Because the boater survey revealed much lower awareness and understanding of the severity of giant salvinia issues (i.e., as compared to ZM), increased focus on and investment in giant salvinia messaging is under consideration. Additional analysis of survey results is planned to aid in guiding campaign directions and messaging.

Riparian invasive plant management efforts will continue to primarily address saltcedar and Arundo and efforts will be expanded to include more TPWD River Access and Conservation Area, Landowner Incentive Program, and Texas Paddling Trail access locations.



## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      October 9-11, 2019                      Missoula, Montana

Please fill out this form to provide a **brief** written report that highlights your top five priority program activities or accomplishments since September of 2018. Please include any legislative updates or the link to your website where more information can be found. Reports will be distributed at the 2019 WPR Annual Meeting in Missoula, MT and added to the meeting minutes. **Please limit your entry to 2 pages total. Your report will not be edited. There will not be verbal reports at the 2019 meeting.** Non-Member participants are also welcome to submit an activity report.

Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Damian Walter**

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

1. Cost-Share Programs for Watercraft Inspection Stations and Monitoring
2. First Chemical Flowering Rush Treatment in McNary Reservoir and additional hand removal in John Day and additional surveys within USACE projects for Portland, Seattle, and Walla Walla Districts.
3. Establishing Cost-Share for Flowering Rush Control and Rapid Response actions (in development). Ran into policy and approval issues, this aspect is currently being addressed.
4. Harmful Algal Blooms (HABs) ERDC research on maintenance and control techniques. Numerous studies and efforts occurred this year at Lake Okeechobee.

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

1. Maintain Cost-Share Programs for Watercraft Inspection Stations and Monitoring 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.
4. Establishing Cost-Shares for Watercraft Inspection Stations, Monitoring, and Rapid Response in the other river basins as authorized in WRDA.
5. Continues HABs maintenance and control technique research contingent on appropriated funding.

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**Name:** Jacob Bradford

**Organization:** Bureau of Reclamation

**Title:** Natural Resource Specialist

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

1. Performed sampling for zebra/quagga mussel veligers at Reclamation reservoirs in Montana, South Dakota, North Dakota, Nebraska, and Kansas, as part of Reclamation's initiative for early-detection/monitoring.
2. Allocating funds for "Clean, Drain, Dry" program for Belle Fourche Reservoir of South Dakota.
3. Funded Montana Fish, Wildlife and Parks to purchase a decontamination wash unit and inspection station at Tiber Reservoir.
4. Funded three waterless cleaning/outreach kiosks for North Dakota Game and Fish Department.
5. Assisted Reclamation AIS coordinators in creating list of Reclamation owned waterbodies most susceptible to Zebra/Quagga mussel infestation.

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

- A)** Outfit Reclamation Area Offices with proper tools and gear necessary for them to be proactive and conduct their own zebra/quagga mussel veliger sampling.
- B)** Allocate funding for South Dakota Game, Fish, and Parks to set up one mobile decontamination wash station for Shadehill Reservoir.
- C)** Remove Canyon Ferry Lake of Montana from Suspected Waterbodies List for zebra/quagga mussel contamination.
- D)** Develop agreement with Colorado Parks & Wildlife to help fund temporary boat inspector labor on Reclamation bodies of water.
- E)** Funding for Wyoming Game & Fish Department to purchase two mobile decontamination wash stations for Reclamation projects.
- F)** Funding for Kansas Department of Wildlife, Parks, and Tourism to purchase three mobile decontamination wash stations for Reclamation projects.

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Jolene Trujillo**

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

Reclamation's primary focus for the past year has been the implementation of the Fiscal Year 2019 Mussels Spend Plan. In June 2017, the Department of Interior (Department) launched a government-wide initiative entitled Safeguarding the West from Invasive Species- Actions to Strengthen Federal, State, and Tribal Coordination to address Invasive Mussels (Initiative). The Initiative focuses on keeping invasive dreissenid mussels out of the Columbia River Basin and containment of invasive mussels in the lower Colorado River.

As part the Initiative, Reclamation provided approximately \$4 million dollars to support various mussel's management activities across the West. Activities that these funds supported are described below:

- The Washington Department of Fish & Wildlife Watercraft Inspection Stations.
- Montana Fish, Wildlife & Parks Watercraft Inspection Stations.
- The Colville Confederated Tribes Invasive Mussel Early Detection Project - The Colville Confederated Tribes' (CCT) will establish an Aquatic Invasive Species (AIS) program that would enable the CCT to fully participate in regional AIS issues.

- The Washington Department of Fish and Wildlife (WDFW) CD3 Pilot Deployment - WDFW will pilot the use of Clean-Drain-Dry-Dispose or “CD3” systems within the Columbia River basin area of Washington State.
- The Washington Department of Fish and Wildlife to conduct zebra and quagga mussel monitoring activities at high-risk water bodies throughout Washington State for all mussel life stages.
- Support for Oregon Department of Fish & Wildlife Education and Outreach.
- Portland State University, Center for Lakes and Reservoirs Quagga Monitoring – Portland State University staff will perform dreissenid mussel surveys at high-priority water bodies in the CRB.
- Providing increased Enforcement at AIS Inspection Stations through the Oregon State Marine Board.
- Continued quagga mussel inspections and containment efforts at the Lake Mead National Recreation Area through the National Parks Service
- Arizona Inspection and Decontamination Station Operation and Maintenance for mobile decontamination stations as well as additional stations
- California Watercraft Traffic Study at border crossing with Arizona and Nevada conducted by and for the California Department of Food and Agriculture at their border protection stations.
- Support for Colorado Parks and Wildlife (CPW) watercraft inspection and decontamination program and the watercraft inspection database
- South Dakota Game, Fish and Parks to purchase Trailered Mobile Decontamination Wash Stations and provide Watercraft inspector Training
- Fund the Town of Grand Lake to install one boat inspection and decontamination permanent structure.
- Fund the Larimer County Department of Natural Resources to install four boat inspection and decontamination permanent structures.
- Wyoming Game & Fish Department to purchase a trailered mobile decontamination wash station and sampling nets
- North Dakota Game and Fish Department to purchase three waterless cleaning/outreach kiosks.
- Support for Utah Department of Natural Resources to prevent movement of mussels out of Lake Powell
- The Lake Berryessa Zebra and Quagga Mussel Prevention Program
- Mobile Decontamination Stations for the State of California.
- Joint funding with Reclamation’s Science and Technology program to pursue the development of invasive mussel open water control methods including those from the winning project from Reclamation’s prize challenge.

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

- The implementation of Reclamation’s Fiscal Year 2020 Spend Plan to support various mussel’s management activities across the West
- Continued mussel monitoring
- Continued research on control technologies and early detection methodologies

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**Name: Anthony Prisciandaro**

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

1. Developing program document, study plans and monitoring protocols for all invasive species field activities
2. Monitored settling plates and water temperatures at 8 Reclamation reservoirs
3. Purchased mobile pressure washer mainly for Reclamation boats that could be deployed to an infested site if needed
4. Working with USGS to update zebra/quagga risk mapping for Colombia Basin
5. Presentations on probability of detection and "out of the box" risk factors for Colombia River Basin Team Webinar and Greater Yellowstone Coordinating Committee AIS Team meeting

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

1. With a full year of temperature data at multiple depths on 30 minute intervals, we will work to better identify the temporal range of adequate and optimal spawning temperatures.
2. Additional analysis of historic water quality data is being conducted to look at historic thermocline depths, max/min temperatures, anoxic zones for a more wholistic look at establishment risk.
3. Get all Boise based Reclamation boat users trained on the new pressure washer unit and develop protocols for mandatory vs voluntary boat washes depending on species and conditions at past and future destination of each boat. This will include many factors outside of zebra/quagga such as algae blooms and whirling disease.
4. As risk models for introduction and establishment improve, alternative methods may be needed to efficiently detect mussels at lower risk reservoirs with lower frequency monitoring. With the potentially short duration of veligers in the water column to be detected by traditional methods, alternative sampling methods that can detect over a longer time frame would be useful. Sediments have been shown to preserve eDNA and shells for longer periods than they are detectable in the water column. If Reclamation internal Science and Technology grant doesn't get funding, look for additional funding opportunities to investigate alternative sampling methods. These include determining feasibility of detecting failed veligers via sediment eDNA and microscopy of positive sediment eDNA samples.



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Annual Meeting

October 9-11, 2019

Missoula, Montana

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**Name:** Cynthia Tait

**Organization:** U.S. Forest Service

**Title:** Regional Aquatic Ecologist

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

## **REGION 1 (MT, n. ID, ND)**

- 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. The Trail allows the public to travel through Federal (17 miles through NF lands), State, County, and private lands. All public land boundaries and access/camping features are identified by river signage and kiosk maps. DPG is working with ND Game and Fish to install AIS educational signage at four launch sites. It is an excellent opportunity to engage the public and align BMPs across agencies for environmental stewardship. DPG distributes information on AIS at the river festival event at Fort Ransom State Park.
- Flathead NF (MT) partners with Missoula County to implement an AIS early detection and rapid response and prevention program. The agreement funds a roving AIS inspector who will visit busy boat ramps in the Flathead Basin and provide education and outreach at county fairs, fishing derbies, and other events throughout the upper Columbia Basin. The 2020 agreement will include applying eDNA methods for early detection at various vulnerable lakes.
- Lolo NF (MT) partners with MT Fish, Wildlife, and Parks to fund the Clearwater Junction inspection station. They also partner with Clearwater Resource Council out of Seeley Lake to conduct AIS education/outreach and veliger sampling throughout the chain of lakes.
- Region 1 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.
- Region 1 is coordinating with Recreation.gov to include AIS information in the "Need to Know" section of the reservation confirmation.

## **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 2019, 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

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

- 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, including Saguaro Lake which was recently invaded by quaggas.
- 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 and Coronado NFs participate in programs that search for non-native American bullfrogs and remove them if encountered, 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 addition, Tonto NF assisted AGFD to remove a non-native salamander (*Ensatina* sp.) from the headwaters of Tonto Creek.
- Several forests 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. In addition, USFS participated in piscicide treatments to remove non-native trout for Gila Trout restoration.

### **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 \$1.2 million across 10 years. In 2015 – 2018, state partners interdicted, inspected, and outreached to 230,000 watercraft; 3500 of these boats arrived from infested waters and required decontamination prior to launch; and 50 boats were infested with AIS. State partners also monitored 28 NFS waterbodies multiple times each season for invasive mussels & plants. Funding will continue in FY2020, providing \$134,000 to state partners. To date, there are no known occurrences of invasive mussels in any Regional USFS waterbody.

### **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 FY20, it is expected to be similar to FY19 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)**

- **Regional AIS Monitoring Strategy:** In 2019, the Regional Office Fisheries Program collaborated with PNW Research Station to complete the final of 3 years of testing the Regional AIS Monitoring Strategy. Monitoring will help us understand the degree of AIS invasion on NFS lands within Oregon and Washington and inform our early detection/rapid response program. The strategy includes using surveyors at fixed locations throughout the region. Areas not covered by surveyors will be sampled using multispecies eDNA. With sufficient support from our partners, the Region hopes to fully implement the monitoring strategy in 2020.
- **Suttle Lake Eurasian Watermilfoil Control:** The Regional Dive Team spent 4 days controlling an invasion of Eurasian watermilfoil in otherwise pristine Suttle Lake in the Cascade Mountains on Deschutes NF.

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

Please note that while FWS and other DOI Bureaus will be implementing boundary changes to reflect changes to DOI boundaries, the 2019 report is still organized by FWS legacy regions as it reflects work accomplished within 2019.

**Branch of Aquatic Invasive Species – Craig Martin (craig\_martin@fws.gov)**

**2019 State/Interstate Aquatic Nuisance Species (ANS) Management Plan Grant Program:**

- FAC received \$2 million for the FY19 State and Interstate ANS Management Plan Grant Program. The NOFO closed on March 27th.
- 43 of the 44 ANSTF-approved plans applied for funding this year. Connecticut did not apply this year due to some loss of invasive staff and changes in leadership.
- Final numbers were shared with the Regions on May 13th. So the 43 plans that applied for funding are approved to receive between \$42,000 and \$46,775 depending on what they asked for. Stage 2 of the grant program is currently ongoing in the Regions.

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

On May 8-9, 2019, the ANS Task Force held a public meeting in South Lake Tahoe, California.

- The meeting included presentations on topics of regional significance such as ANS management activities on Lake Tahoe, preventing the spread of Dreissenid mussels, transboundary management of European green crab, and information on ballast water and biofouling management programs.
- During the meeting, the ANS Task Force approved the revised Wisconsin Aquatic Invasive Species (AIS) Management Plan, the 2016-17 ANS Task Force Report to Congress, and the ANS Task Force Strategic Plan for 2020 – 2025.
- The recently adopted strategic plan contains a target set of priority goals, objectives, and associated strategies that are intended to be completed by the ANS Task Force in the next 5 years. The six strategic goals within the Plan focus on coordination, prevention, early detection / rapid response, control and restoration, reach, and outreach and education.
- Potential outputs for the new Strategic Plan were reviewed during the meeting, focusing on time needed for completion and potential contributors. New committees aligned with the Strategic Plan goals were formed and tasked with developing annual work plans.
- The next meeting of the ANS Task Force is scheduled for November 6-7, 2019 in Beltsville, Maryland.

### **Outreach Updates**

- Partners of the Stop Aquatic Hitchhikers (SAH) campaign have requested an expansion to the existing SAH website that will allow campaign materials to be shared and customized. The USFWS has secured a contract to build this feature on the current website. With assistance from the regional panels of the ANS Task Force, categories for the campaign materials have been identified and example materials are being compiled to be uploaded onto the portal. After this initial test, the portal will be made available to partners. SAH has also begun to incorporate vector-specific branding into campaign in order to target additional recreationalists such as sea plane operators, scuba divers, duck hunters, and non-motorized boat users. The USFWS along with the ANS Task Force is seeking to conduct an assessment to better understand how target audience receive and perceive SAH information and if the brand has influenced their willingness to change behaviors. This assessment supports action from the new ANS Task Force Strategic Plan as well as DOI's *Safeguarding the West from Invasive Species* initiative.
- The USFWS has teamed up with PIJAC to revitalize Habitattitude, a nationally branded social marketing campaign targeting aquarium owners and water gardeners to promote environmentally responsible behavior and prevent the establishment of invasive species. The relaunch of the campaign was announced on June 11, 2019 during the Reduce Risks from Invasive Species Coalition's (RRIS) agency fair on Capitol Hill in Washington, D.C.
- USFWS FAC is working with National Wildlife Refuge System (NWRS) to develop a Memorandum of Understanding (MOU) 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 and to 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. We anticipate completion of the MOU by the end of the fiscal year.

### **USFWS prevention website and availability of ERSSs:**

- Nearly 1,000 ERSSs are posted on the FAC prevention website. We anticipate having over 1,100 posted by the end of the fiscal year, including some updates to early ERSS to conform to the SOPs. BAIS and Regions 3 and 5 are revising the ERSS SOP for clarity and it will be posted once complete.
- The Standard Operating Procedures for the Freshwater Fish Injurious Species Risk Assessment Model (FISRAM) is completed and was posted in May. This is the third and last SOP for the risk assessments. FISRAM can be used to further narrow the risk of a species that has an uncertain Overall Risk Assessment Category in an ERSS. In June, BAIS published a paper on the model in the peer-reviewed journal Management of Biological Invasions.

#### **NEPA Categorical Exclusion for EDRR:**

- Since late 2017, BAIS has been working with DOI's Invasive Species Coordinator, subsequently with R4's AIS Coordinator, and more recently with DOI's Office of Environmental Policy and Compliance to coordinate an effort among the bureaus for one or more new categorical exclusions (CE) specifically on invasive species. The core team has reviewed the information received from 52 responses from seven bureaus from the data call in 2018 and has developed a draft CE. In April, the core team coordinated 9 other people from FWS (R1 and 4), NPS and BLM to categorize the documents into details that could provide substantiation for the proposed CE actions. The core team is now taking that information and starting to prepare substantiation for a CE focusing on rapid response, possibly including control measures. The proposed timeline, coordinated through Scott Cameron, has the final CE completed in September 2020.

#### **Injurious wildlife:**

- BAIS has been working with USGS on analyzing the effectiveness of injurious wildlife listing. The first species were listed as injurious in 1900, so the analysis is complex. The analysis is in a draft paper that will be submitted for peer-reviewed publication. Results show that, of the 306 species listed for invasiveness, only 18 were established at the time of listing. The other 288 were not established at the time of listing and remain not established, which is a 100% prevention rate. BAIS plans to present these results at the 2019 joint AFS-TWS conference.

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

- In FY19, through the State and **Interstate ANS Management Plan grant program** \$46,775.00 was provided to each state in the region (Hawaii, Idaho, Oregon and Washington). Funds support implementation of the state ANS management plans, including prevention activities.
- **Section 7 Consultation Manual** to facilitate consultation for actions related to rapid response for invasive mussel detections in the CRB. Federal and State agencies and Tribes have contributed to the Manual, including peer-review, with a final manual expected at the end of FY19.
- **ICS Framework:** The FY19 Appropriations bill included language directing Interior to work with USDA, USFS, and USACE, Western Governors' Association, and Western States to develop a joint Federal-State Incident Command System (ICS) to address invasive mussels in the West. Federal agencies (DOI, BOR, FWS, NPS, NISC-Secretariat, USFA, USFS, USACE) convened an interagency team coordinated by Hilary Smith (DOI) and have met monthly since March to provide a coordinated response to Congress in 2019. FWS participants included R6 and R1. The team continues to meet to develop ways to better coordinate rapid response activities among federal entities.
- **AIS Workshop for Columbia River Basin Tribes:** A 2-day workshop on aquatic invasive species was held for several tribes represented by the Columbia River Inter-Tribal Fish Commission (CRITFC)

(Yakima, Umatilla, Warm Springs, Nez Perce) in September 2019. This workshop was funded through the Bureau of Indian Affairs (BIA) in partnership with CRITFC and supported by U.S. Geological Survey, Washington State University and U.S. Fish and Wildlife Service. The two-day workshop included field-based sampling, laboratory analysis, as well as ongoing research, monitoring, and discussions about invasive concerns focused on the Columbia River Basin.

#### Region-wide Coordination

- **Pacific Region FWS** is coordinating internally across programs (FAC, ES, Refuges) to streamline regulatory processes and actions related to control of invasive species - specifically flowering rush and invasive zebra and quagga mussels.
- **The Western Washington Fish and Wildlife Conservation Office** worked with the Washington Invasive Species Council and provided invasive species coordination, technical support, and outreach to Federal, State, Tribal, and local governments in the Pacific Northwest. Major topics included Northern pike (*Esox lucius*), flowering rush (*Butomus umbellatus*), European Green Crab (*Carcinus maenas*) and preparation for an Early-Detection Rapid Response Exercise for invasive mussel response at Lake Roosevelt in FY2020. The WWFWCO provided prevention-focused invasive species information to partners and the public through special events.
- **The Oregon Fish and Wildlife Office** continued to serve on the Oregon Invasive Species Council and supporting the OISC strategic plan, including consultation, habitat restoration and both technical and financial support. Staff provided comments on the ESA Section 7 Consultation manual for invasive mussel response in the Columbia River Basin, and conducted outreach to the public about invasive species at venues including the Portland Museum of Science and Industry, and the Oregon Zoo. The Klamath Falls office (Region 8) is involved in brook trout control and eradication efforts in areas of important bull trout habitat.
- **The Idaho Fish and Wildlife Office** continued to serve on the Idaho Invasive Species Council. Staff also participated in an Early Detection Rapid Response table-top exercise at Brownlee Reservoir in southwest Idaho in May 2019. Pacific States Marine Fisheries Commission (PSMFC) facilitated the training as part of the Columbia River Basin Rapid Response plan for invasive mussels. Participants included Idaho Power, Idaho Department of Agriculture, FWS (ES and FAC), NMFS, Oregon State Marine Board, Oregon Dept. of Agriculture and PSMFC.
- **The Pacific Islands Fish and Wildlife Office (PIFWO)** implements activities to prevent, mitigate, control, and eradicate populations of aquatic non-native invasive species (AIS) in Hawaii and other Pacific Islands, including identifying and strengthening biosecurity actions. PIFWO actively engaged with the Hawaii Invasive Species Council and the Coordinating Group on Alien Pest Species, aiding in their strategic planning out to 2025. PIFWO continues participating in stakeholder meetings to support amending Hawaii Administrative Rules focused on addressing ballast water and biofouling on high biosecurity risk vessels. This year PIFWO also hosted two Hazard Analysis and Critical Control Point Planning workshops in Honolulu for both Service and partner agency personnel.

#### **Region 2 (AZ, NM, OK, TX) –Barak Shemai AIS Coordinator, [barak\\_shemai@fws.gov](mailto:barak_shemai@fws.gov)**

- Region 2 awarded seven QZAP grants totaling \$960,000, The awardees include the following:

- Pacific States Marine Fisheries Commission, \$77,499, Watercraft and Decontamination Training Program Utah Department of Natural Resources, \$225,338, for boat inspection and decontamination, and outreach in Utah with an emphasis on containment near Lake Powell.
- Nevada Department of Wildlife, \$222,633, for containment and decontamination at Lake Mead and outreach for Las Vegas Area Watercraft Dealers
- Lake Havasu Marine Association, \$10,000, for industry outreach on SLIDE Anchor.
- Arizona Game and Fish Department, \$200,000, for boat inspection and decontamination, and public outreach throughout the Lower Colorado River
- Invasive Species Action Network , \$103,400, Non-motorized boater outreach through industry partnerships, advertising, and agency coordination.
- University of Montana, Flathead Lake Biological Research Station, \$121,100, to quantify the lowest natural abundance of invasive mussel 5 observable using the DNA-Tracker to facilitate improvements in Early Detection.
- Awarded a sole-source grant in the amount of \$193,000 to Arizona Game and Fish Department for Watercraft Inspection and Decontamination at Lake Havasu and Pleasant within the state of Arizona.
- Hosted a HACCP and train-the-trainer course for state and federal partners in the western United States. Tuition and supplies were funded by USFWS.

**Region 3 (IA, IL, IN, MN, MO, OH, WI) - Amy McGovern, amy\_mcgovern@fws.gov**

- The Midwest and Northeast Regions worked with Headquarters to complete over 900 Ecological Risk Screening Summaries (ERSSs) to identify highest-risk aquatic species that are not yet present in the Great Lakes but have a history of invasiveness and a climate match to the region. Once available to decision makers, risk screening reports are essential to informing risk management and enhancing collaborative and voluntary partnerships with industry and states. Data from these assessments was used to inform the listing of 11 new species as Injurious under the Lacey Act in 2016. ERSSs are available online at [http://www.fws.gov/fisheries/ANS/species\\_erss\\_reports.html](http://www.fws.gov/fisheries/ANS/species_erss_reports.html).
- Region 3 administered approximately 50 open grants and awarded an additional 22 grants in FY18.

**Asian Carp**

- The draft 2017 Water Resources Reform and Development Act (**WRRDA**) Annual Report to Congress on Asian Carp in the Upper Mississippi River and Ohio River Basins is currently undergoing surname review. When approved, the report will be transmitted by the Director to Congressional committees and made available on [asiancarp.us](http://asiancarp.us).
  - The USFWS Midwest Region has formally requested input (annual accomplishment and expenditure data) from state and federal agency partners for development of the 2018 Report. Initial drafting of the document has begun.
- In Support of the implementation of the *Management and Control Plan for Bighead, Black, Grass, and Silver Carp (National Plan)*:



- The Midwest Region continues to lead a multi-agency Black Carp working group for the ACRCC, which prioritizes monitoring and surveillance of this species in its invaded range of the Mississippi River, focusing on young of year sampling and the state funded (Illinois) bounty program for adults. Development of a species specific bait is underway, as well as refinement of genetic surveillance tools (eDNA).
- Throughout the Mississippi River Basin, MICRA has facilitated the development of three frameworks for collaborative implementation of management and control actions in the Upper Mississippi, Ohio, and Missouri River basins. A fourth partnership is working to finalize a framework for the Lower Mississippi River Basin. Additionally, MICRA works with the Asian carp partnerships in the Upper Mississippi River and Ohio River basins to develop an annual Monitoring and Response Plan to collaboratively identify and implement highest priority projects with USFWS funding support authorized by Congress for these portions of the Mississippi River Basin.
- Substantial expansion of Asian carp control actions is planned for 2019 in the form of increased contract fishing efforts in both the Upper Mississippi River and Ohio River basins. USFWS is working across Regions and with partnerships in each basin to develop and coordinate an Asian carp stock assessment program (including SEACarP model) to evaluate deterrence, removal, and other management actions.

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

- Serve as American Co-Chair for the International Red River Board Aquatic Ecosystem Committee.
- Leads FWS HACCP Committee. Teaching 2019 HACCP courses in Alaska, Hawaii, California, Nevada, Atlanta and Nebraska. Working with National Conservation Training Center to update training materials and webpage. Training/coaching additional Regional Coordinators to serve as HACCP instructors.
- Participate in DOI Committees for Safeguarding the West Initiative and DOI funding.
- R6 dive team supports state partners in diving for invasive mussels. Dove at Tiber Reservoir, MT to search for mussels in 2019 and developing project to install mussel settlement samplers in Fort Peck Reservoir following spread of zebra mussels to other Missouri River reservoirs.
- Montana Fish & Wildlife Conservation Office assists Blackfoot Tribe with waterbody monitoring for quagga/zebra mussels.
- Worked with R6 Refuges Visitor Service Office and design firm to develop AIS outreach panel for region's refuges and hatcheries. Panel installed at ten National Fish Hatcheries throughout the region and nine National Wildlife Refuges in Kansas, Nebraska, North Dakota and South Dakota.
- Served as FWS WRP Voting Member and WRP ExCom Member thru mid-September 2019
- Represent FWS and provide funding support to the 100<sup>th</sup> 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
- Building Consensus in the West legal products – National Sea Grant Law Center
- Fish Hatchery Biosecurity Protocol Assessment – National Sea Grant Law Center
- Veliger Detection Laboratory – Montana Fish Wildlife and Parks
- 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

**Alaska Region - Aaron Martin, [aaron\\_e\\_martin@fws.gov](mailto:aaron_e_martin@fws.gov)**

- The Service collaborated with the Alaska Department of Fish and Game, the Department of Agriculture, and NOAA-Fisheries in leading the development of the first all-taxa invasive species strategic plan for Alaska. The estimated completion date for the strategic plan is April, 2020.
- The Service conducted the 3rd year of pilot work focused on watercraft inspections and decontamination at the Alcan Port of Entry in coordination with US Customs and Border Protection. Operations in 2019 were for 16 days and 142 watercraft were inspected. Over the three years of operation, ~38% of all watercraft entering Alaska were from states with Quagga and/or Zebra mussels and >70% of all watercraft had not been inspected on their way to Alaska. The partners intend to expand operations to the entire summer season in 2020.
- The Service is collaborating with the University of Alaska – Anchorage and others to initiate a multi-year effort to assess the movement of watercraft throughout the state's waterways. The information will help identify high risk areas and to prioritize early detection surveys.
- The Service partnered with multiple entities to conduct early detection surveys and invasive species management efforts throughout various regions of the state.
  - Early detection surveys identified one new water body infested with Elodea and one new water body infested with Northern Pike on the Kenai Peninsula Alaska.
  - A population of invasive Fathead Minnows was eradicated from the Kenai Peninsula.
- The Service is collaborating with the National Park Service, US Forest Service and the University of Alaska – Anchorage to develop a standardized survey protocol for Elodea.
- The Service is collaborating with the Department of Defense at Fort Wainwright to conduct field trials that will determine the detection probability of Elodea in newly infested waterbodies. The results of the project will help establish a standardized survey protocol.
- During the summer of 2019, the Service had two Directorate Resource Fellows working on invasive species outreach materials to support field staff and state/federal visitor center operations.
- One HACCP course was held with 15 people in attendance representing state, federal and tribal agencies and private citizens.
- The Service has been actively involved in implementing the Arctic Council's Arctic Invasive Alien Species Strategy and Action Plan and is the regional U.S. representative of the circumpolar implementation coordination group.

**Region 8 (CA, NV)– Louanne McMartin, louanne\_mcmartin@fws.gov**

- Two HACCP courses and a HACCP Train-the-Trainer course were hosted in California. HACCP courses held in Lodi and Sacramento will aid natural resource staff in ensuring their field activities don't expand invasive species populations. Several Regional AIS Coordinators and other partners are now trained to teach HACCP.
- Bluefin Killifish – In October of 2017 bluefin killifish (*Lucania goodie*) were discovered by the USFWS Lodi Fish & Wildlife Delta Juvenile Fish Monitoring crew in the Sacramento–San Joaquin River Delta. Since then, the species has been captured by both USFWS and State agencies indicating an established population. A coauthored paper is in draft form and expected to be published in 2020. 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)
- AISP Workshops for the public and partners: For the 12<sup>th</sup> year running, R8 AISP with its California State Partners from California State Parks Division of Boating & Waterways and California Coastal Commission along with the California State Department of Fish and Wildlife have provided hundreds of participants with three key take home elements: 1) An understanding of the impacts AIS have on the economy and environment 2) Learn to recognize AIS in their region and 3) How to take action and prevent spreading AIS by inspecting and cleaning equipment and watercraft.
- Nutria Modeling Project- Working with USFWS and California State partners for the following goals: (1) identify potential habitat for nutria in the Central Valley and (2) to forecast their future distributions. We focus our forecasts on areas of management concern in the Sacramento San-Joaquin Delta, especially areas that relate to habitat for endangered species and infrastructure for drinking water and flood protection.

## Member Update Reports for the Western Regional Panel Meeting

Annual Meeting

October 9-11, 2019

Missoula, Montana

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

1. *Columbia River Basin Dreissenid Mussel Monitoring Forum.* We facilitated two workshops of the Columbia Basin Dreissenid Mussel Monitoring Forum, one in Boise, ID and the other in Spokane, WA, that discussed goals and objectives of early detection monitoring and risk assessments for dreissenid mussels in the Columbia River Basin (CRB). Two associated webinars were held and addressed issues surrounding risk assessments for dreissenid mussels in the CRB, mapping of 2018 CRB early detection monitoring locations, and strategies for improving data flow before and after monitoring seasons.
2. *Collaborative project with the Columbia River Intertribal Fisheries Commission.* We collaborated with the Columbia River Intertribal Fisheries Commission and Washington State University to enhance tribal capacity for addressing aquatic invasive species issues in the CRB. As part of this effort we conducted sampling for the Asian clam in the Columbia River to better understand how these invasive clams flourish in this system. We also held a two-day workshop to present information about strategies for collecting and analyzing monitoring samples for aquatic invasive species
3. *USGS collaboration.* We held a workshop that brought together USGS scientists with data management, decision support tool, machine learning, and monitoring design expertise to formulate a strategy for developing risk assessment tools that could help managers allocate early detection monitoring effort to areas of high risk and socioeconomic value.
4. *USGS-USBR collaboration.* We worked with USBR to evaluate the efficacy of adding environmental (e)DNA surveillance to the U.S. Geological Survey (USGS) streamgauge network. USGS hydrologic technicians collected monthly eDNA water samples, May – September 2018, from streamgages downstream of USBR reservoirs in the Columbia River Basin thought to be vulnerable to dreissenid mussel establishment. We tested water samples for dreissenid mussel DNA and also for kokanee (*Oncorhynchus nerka*) and yellow perch (*Perca flavescens*) DNA; the two fishes were used to assess if streamgages are adequately located to provide early-detection eDNA surveillance of taxa known to be present in upstream reservoirs. No Columbia River Basin streamgauge samples met our criteria for being scored as positive for dreissenid DNA. We did detect kokanee and yellow perch DNA at all streamgages downstream of reservoirs where these species are known to

occur. Field collection, laboratory analyses, and personnel time required for collection of four eDNA samples at a streamgage site cost US\$500 -US\$600 (net). Given these results, incorporating eDNA biosurveillance into routine streamgage visits might decrease costs associated with an invasion since early detection maximizes the potential for eradication, containment, and mitigation.

5. *USGS eDNA collaboration.* We conducted a double-blind round-robin analysis of probe-based assays for DNA of dreissenid (*Dreissena* spp.) mussels. DNA extract from water samples spiked with known amounts of dreissenid DNA and from water samples collected from waters with and without dreissenids were analyzed by four USGS research labs. We used results to calculate detection repeatability within labs and assays, detection reproducibility among labs and assays, and estimated dreissenid DNA copy number precision and accuracy. Lab and assay repeatability and reproducibility of detection results were high, 91% and 92%, respectively. The estimated copy numbers were neither precise nor accurate for samples spiked with < 773 gene copies. These results suggest that eDNA surveillance of dreissenid mussels, using the protocols evaluated herein, can generate reliable detection data for decision-making. However, managers should be cautious about using the quantitative information often associated with eDNA detections, especially when DNA is at lower abundance.

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

*USGS-USBR risk assessment models.* We will work with USBR and other regional partners to : (1) develop criteria for assessing the relevance of water quality data for dreissenid mussel risk assessments across the CRB; (2) develop a ranking scheme for water quality metrics relevant to dreissenid mussel establishment in the CRB; (3) discuss the benefits and drawbacks of various strategies currently used to assign dreissenid mussel risk rankings based on water quality across the CRB; and (4) display the application of water quality relevance criteria and risk assessment rankings to water bodies in the Columbia River Basin in a georeferenced format.

*USGS-USBR eDNA field sampling evaluation.* Currently there is no standard for eDNA sample collection and analysis and there is more to learn about the best collection methods, especially because mussel samples are collected from waters across the West under variable conditions. We will collaborate to test a variety of eDNA field sample collection techniques in waters with lower density mussel populations, and in more controlled mesocosm studies. Results and protocols will be reported to all partners and regional (e.g., Western Regional Panel) and national (e.g., DOI Mussel Initiative) collaborative groups. These protocols will form the foundation for a Quality Assurance Project Plan (QAPP) specific to eDNA dreissenid mussel surveillance in the West.

USGS-100<sup>th</sup> Meridian Columbia Basin Team-University of Alberta. We will work with the Columbia Basin Dreissenid Mussel Monitoring Forum to develop a flexible regional model to facilitate optimal resource allocation of dreissenid mussel early detection monitoring that incorporates establishment, introduction risk, and monetary/non-monetary valuation of natural resources.

# Member Update Reports for the Western Regional Panel Meeting

Annual Meeting                      October 9-11, 2019                      Missoula, Montana

Please fill out this form to provide a **brief** written report that highlights your top five priority program activities or accomplishments since September of 2018. Please include any legislative updates or the link to your website where more information can be found. Reports will be distributed at the 2019 WPR Annual Meeting in Missoula, MT and added to the meeting minutes. **Please limit your entry to 2 pages total. Your report will not be edited. There will not be verbal reports at the 2019 meeting.** Non-Member participants are also welcome to submit an activity report.

Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name:** Allen Pleus

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**Fax:**

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

1. Zebra/Quagga mussels:
  - a. Secured and finalized a 25 year lease on the Spokane watercraft inspection station
  - b. Awarded USBR grant to keep Spokane check station open year-round
  - c. Anticipated 32,500 mandatory watercraft check station inspections by end of 2019 (30% increase over 2018).
  - d. Anticipated 5,620 Zebra/Quagga early detection samples (plankton, substrate, eDNA, and Ponar) by end of 2019 (22% increase over 2018)
  - e. Anticipated 1,900 water quality samples (temperature, pH, salinity, secchi, and calcium) by end of 2019 (48% increase over 2018)
  - f. Awarded USBR grant for a trained Dreissenid mussel detection canine "Puddles"
2. European Green Crab:
  - a. Salish Sea Transboundary Action Plan (SSTAP) finalized and signed by WDFW, the Canadian Department of Fisheries and Oceans, Puget Sound Partnership, and Washington Sea Grant
  - b. Continuing successful early detection and rapid response to new detections with wide range of partners/stakeholders

- c. Received critical state funding to continue WA Sea Grant's citizen science Crab Team early detection monitoring program
- 3. Vessel Incidental Discharge Act (VIDA):
  - a. Finalized with important state requirements and consultation directives.
  - b. Supported Western Governor's Association letter to EPA on meeting state consultation directives
- 4. Prevention:
  - a. Awarded USBR grant to purchase four CD3 units for empowering boaters to Clean-Drain-Dry-Dispose
  - b. Transitioned K-12 education system to stop using live crayfish in life sciences kits – in concurrence with Office of the Superintendent of Public Instruction, WDFW will not be issuing AIS Permits for possession of prohibited species for 2019-20 school year

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

- 1. Zebra/Quagga mussels:
  - a. Continuing to improve early detection monitoring program.
  - b. Continue to improve mandatory watercraft check station inspection program
  - c. Install a permanent containerized decontamination unit at Spokane station
  - d. Conducting an enhanced rapid response exercise including field operations (Oct. 2019).
  - e. Revising the state Dreissenid rapid response plan.
- 2. European green crab:
  - a. Implementing the SSTAP.
  - b. Expanding management to coastal regions.
  - c. Working with regional partners/stakeholders on comprehensive data sharing and research.
- 3. VIDA:
  - a. Implementing meaningful consultation process.
  - b. Providing recommendations for environmental standards to EPA.
  - c. Working with National Ballast Information Clearinghouse on data sharing.
- 4. Funding:
  - a. Developing comprehensive state funding package for 2021.
  - b. Advocating the implementation of VIDA's Coastal AIS Mitigation Grant Program.
  - c. Seeking grants as available.
- 5. Prevention:
  - a. Implementing USBR contract for empowering boaters to Clean-Drain-Dry-Dispose using CD3 systems.
- 6. Northern Pike:
  - a. Expand early detection monitoring using eDNA.
  - b. Provide support for rapid response and control management actions as needed.
- 7. Continuing to document AIS detections and submitting for inclusion in USGS NAS database.

## Member Update Reports for the Western Regional Panel Meeting

**Name:** Andrew Z Skibo, PhD

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

1. The Western Aquatic Plant Management Society (WAPMS) is the western chapter of the [Aquatic Plant Management Society](#) – an international organization. The geographic region of WAPMS includes the states of: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Oregon, Nevada, New Mexico, Montana, Utah, Washington, and Wyoming. WAPMS produces a bi-annual newsletter, holds an annual conference, and maintains a membership list. Members also receive *Aquatics Magazine*.
2. Joint Session WAPMS /APMS meeting. The WAPMS held the 2019 annual meeting in San Diego, CA with over 100 attendees. Presentations included current invasive species efforts in the California San Joaquin River Delta Complex and on Lake Tahoe; Hydrilla management in the Upper Midwest and Northeastern US; new species of concern emerging in the Southeastern US and Florida; and highlighted research efforts behind several new aquatic chemistries as well as updates on national policies relevant to conference attendees.
3. **Emerging and expanding plant problems.** WAPMS is active in sponsoring workshops and disseminating information about emerging issues in the West. Examples are: Flowering rush (*Butomus umbellatus*), South American spongeplant (*Limnobium laevigatum*), water primrose (*Ludwigia grandiflora* ssp. *hexapetala*), common reed (*Phragmites australis*), hydrilla (*Hydrilla verticillata*), hybrid milfoils (e.g., *Myriophyllum spicatum* x *M. sibiricum*), and yellow floating-heart (*Nymphoides peltata*).
4. WAPMS encourages all WRP members to participate in the society. WAPMS is active on social media – Like us on Facebook! For more information, visit our website at [www.wapms.org](http://www.wapms.org)



## Member Update Reports for the Western Regional Panel Meeting

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Please return your completed form to Dennis Zabaglo (dzabaglo@trpa.org) by COB **Friday, September 27, 2019.**

**Name: Beth Bear**

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**Fax:**

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

1. Outreach provided AIS information at local events, fairs, in schools and at the Wyoming Outdoor Expo. The boater appreciation raffle was again conducted to thank boaters for cooperation with watercraft inspections. As of mid-September, there were a total of 1,271 entries in the raffle survey; of those 736 unique individuals entered the raffle. The majority of boaters (97%) indicated they were very satisfied (85%) or satisfied (12%) with their overall inspection experience.
2. Watercraft check stations operated from April 13 through September 22 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 49,228 inspections have been conducted. Of these, 3,943 were high risk watercraft and 526 were decontaminated for water onboard or suspect AIS. Nineteen boats were intercepted with mussels attached; on all the mussels were dead and watercraft were thoroughly decontaminated and released.

3. Rapid response plans are being completed for 23 major waters throughout the state to identify key stakeholders, communications strategy, and response and containment options in the event that Dreissenid mussels are detected in a Wyoming water. Plans will be completed by July 2020 and will then go to the public for comment. As a result of these plans, several new changes to regulation will likely occur over the next few years 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 2019. 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 2019.
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.**

- **Development and completion of rapid response plans**
- **Revision of risk assessment with new refined water quality metrics collected in 2019.**
- **Revisions to training to incorporate more online and video components.**