# COLUMBIA RIVER BASIN 100TH MERIDIAN TEAM MEETING

June 6-7, 2018
Portland, Oregon

## ATTENDEES:

Eric Anderson (Washington Department of Fish and Wildlife), Leslie Bach (Northwest Power and Conservation Council), Jennifer Bayer (US Geological Survey), Martina Beck (BC Ministry of Environment & Climate), Rick Boatner (Oregon Department of Fish and Wildlife), Steve Bollens (Washington State University), Justin Bush (Washington Recreation and Conservation Office), Samuel Chan (Oregon State University - Sea Grant), Marcie Clement (Chelan Public Utility District), Tim Counihan (US Geological Survey), Rhonda Dasher (Confederated Tribes of the Colville Reservation), Lisa DeBruyckere (Creative Resource Strategies), Shawn Devlin (Flathead Lake Bio Station - University of Montana), Glenn Dolphin (Oregon State Marine Board), Leah Elwell (Invasive Species Action Network), Samuel Fischer (University of Alberta), Joanne Grady (US Fish and Wildlife Service), Keith Hatch (US Bureau of Indian Affairs), Gina Hoff (US Bureau of Reclamation), Rian Hooff (Oregon Department of Environmental Quality), Bryan Horsburgh (US Bureau of Reclamation), Rayola Jacobsen (RJ Consulting, LLC), Kimberly Johnson (Bonneville Power Administration), Lloyd Knight (Idaho State Department of Agriculture), Meghan Lyons (National Park Service), Madelyn Martinez (US Army Corps of Engineers), Rich Miller (Portland State University), Blaine Parker (Columbia River Inter-Tribal Fish Commission), Stephen Phillips (Pacific States Marine Fisheries Commission), Allen Pleus (Washington Department of Fish and Wildlife), Christine Pratt (Seattle City Light), Anthony Prisciandaro (US Bureau of Reclamation), Martyne Reesman (Oregon Department of Fish and Wildlife), Johnna Roy (US Fish and Wildlife Service), Ed Rudberg (CD3), Cindy Sawchuk (Alberta Environment and Parks), Stacy Schmidt (Montana Fish, Wildlife & Parks), Barak Shemai (US Fish and Wildlife Service), Hilary Smith (Department of the Interior), Michael Stephenson (Idaho Power Company), Angela Strecker (Portland State University), Mark Sytsma (Portland State University), Damian Walter (US Army Corps of Engineers), Teagan Ward (City of Bellingham), Stephen Waste (US Geological Survey), Bill Whitacre (Western Governors' Association), Leonard Willett (RNT Consulting), Kate Wilson (Montana Dept of Natural Resources & Conservation), John Wullschleger (US National Park Service), Cody Youngbull (Flathead Lake Bio Station - University of Montana), and Nic Zurfluh (Idaho State Department of Agriculture).

## QUAGGA/ZEBRA MUSSEL ISSUES

### 2018 WATERCRAFT INSPECTION UPDATE

Montana Fish, Wildlife & Parks (*S. Schmidt*)

- Updated map of check stations: http://cleandraindry.mt.gov/Watercraft-Inspections
- Conducted more than 8,000 inspections; intercepted 6 mussel-fouled boat
- A total of 15-20 trainings were conducted statewide
- Partner operations include tribes and conservation districts as well as BOR and MDT
- Using regional data app
- New high-risk form is a compilation of several other forms
- Now locking all mussel-fouled boats

- Low-risk receipts/passports to expedite low-risk boats
- High turnover in area supervisors
- Hiring is difficult – but now nearly fully staffed
- New Flathead Basin Rules – if launching outside basin, watercraft must be inspected prior to re-launch within basin
- Midwest campaign is launching soon – campaign targeting AZ and NV boaters is completed – social media campaign contracted by a public relations company

Oregon Department of Fish and Wildlife (*R. Boatner*)

- 2017 inspection, 21,000 boat inspections, intercepted 16 boats with QZ and 283 boats with other AIS. WRDA funding expanded program to include 2 other stations – Umatilla and Burns.
- 2018 inspections – Lakeview station does not exist (lack of employees) – a total of 8,000 boats have been inspected – 6 interceptions to date. Using construction trailers in most locations now to replace tents.
- 2 check stations were open year-round (Ontario and Ashland) – inspected 1,916 boats, intercepted 4 QZ boats – from Great Lakes – commercial haulers.
- Challenges for winter operations – heated trailer for decontamination unit.

Idaho State Department of Agriculture (*N. Zurfluh*)

- Budget prior to FY18 - $1.4 million program; 2018 legislature funding similar to 2017 - $3.1 in GF, $1 million (WRDA), $1.4 million base spending authority, $171,000 (presentation).
- 2018 – 10th year of inspection program – 20 inspection stations (19 cooperator stations) – 3 roving crews – New inspection stations – expanded night operations (18 hour: 6am-midnight at Malad, Cedars, and Jackpot) – 24-hour station at Cotterell. Law enforcement support by local county and Idaho State Police.
- Currently, 20 check stations are operational, as are 3 roving crews. Conducted 16,494 inspections, with 26 fouled watercraft. They have conducted 846 hot washes. They have found 59 boats with weeds.
- 2018 site improvements include new site preparation, expanded footprint, permanent signage, work shade/shelter, electrical power utilities, solar panel, electronic message board, cell service booster, propane heater fuel, wash unit ramp.
- ITD border signage project to reflect new signs in Idaho.

Washington Department of Fish and Wildlife (*E. Anderson*)

- 2017
  - 216 station days, 9,054 inspections and 686 stops. Washington is moving toward an AIS inspection division within the program.
  - Spokane and Tri-cities are the locations of the new permanent stations.
  - Signed an MOU with the National Park Service at Lake Roosevelt – conveyed authorities to NPS inside the park
- 2018
  - $450,000, which allowed for expansion of check stations
  - Chief Bear pledged additional funds ($150,000 to maximize WRDA)
  - WGA contacted WDFW re: the MOU with national parks
  - 2nd MOU signed with Clark County sheriff's department – they have a marine division

- BOR grant application submitted for a mussel dog
- Working with WA State Parks on WDFW Safe Boating Form – could be the new state form for all boating safety by 2019 – AIS will be added to the form
- New AIS prevention permits are for sale online – Point of Sales as well
- 2018 check stations – Spokane and Plymouth; goal is to increase 100% check station days (432 plus days) – additional roving stations will occur in June, July and August; significant increases in staff – 2 detections to date; Diamond Lake HOA will have voluntary inspections – 58 completed to date. WSP POE – have conducted six inspections.
- There is now a permanent inspection/decontamination on the Idaho/Washington border.

British Columbia (*M. Beck*)

- Transition of program operations to Conservation Officer Service.
- 2 dedicated Sargeants for the program.
- New watercraft inspection signs to increase visibility, awareness and improve compliance.
- 2018 season will have 12 inspection stations, 64 auxiliary conservation officers, 1 station at 24 hours/day, 5 dawn to dusk, 6-10 hours/day; inspection season is April to end of September and October.
- Have inspected 4,000 boats, 200 high-risk boats; 45 decontaminations performed; 9 mussel fouled boats to date (compared to six last year at this time).
- Challenges in 2017
  - health and safety problems at some inspection stations
  - compliance - 2017 compliance is relatively high for most stations
  - water testing of new boats
- Expansion of the canine unit to 2 dogs (Kilo and Major)

Alberta (*C. Sawchuk*)

- 2018 inspections – focused inspections on eastern border with Saskatchewan (18 of 19 mussel-fouled boats came from eastern Canada). This year, 3 of 4 fouled boats came from eastern Canada.
- 3rd full season of canine deployment – expanded to include shoreline searches.
  - New in 2018: new signage and specified penalties – failure to stop is $270; if bilge is blocked, it costs about $130;

CD3 Waterless Cleaning Stations (*E. Rudberg, CEO*)

- Mille Lacs lake – walleye fishery crashed due to spiny water flea and zebra mussels – cost a rural county $31 million annually.
- 3-legged stool:
  - Public – science, outreach and education, participation
  - Private – vision, execution, stakeholder input
  - Non-profit – bridge builder, outreach and education, advocate
- Barriers associated with pressure washers, staffed inspection and resources
- Station remote portal:
  - Walks people through online tutorial
  - Has remote access that notifies when it's 70% full of debris

- Conducted a pilot
- 2018 and beyond
    - User surveys and interviews
    - 3rd party efficacy research
    - Custom programs
    - Commercialization
    - Off-grid

Regional Northern Pike Update (*J. Bush*)

We're at a critical time in the Columbia River Basin where northern pike will likely soon be affecting anadromous fish. Northern pike threaten habitat, harvest, hatchery, and hydropower. July 25 summit on invasive species in Spokane, Washington. Agenda will include Safeguarding the West, a panel on QZ mussels, sudden oak death, and northern pike. There was a March 21 Salmon Recovery Funding Board briefing on March 21 – focused on the northern pike population above Grand Coulee Dam. There is a Salmon Recovery Funding Board and Oregon Watershed Enhancement Board joint meeting June 25-26, 2018 to share monitoring needs and address predation. There is a Mid and Upper Columbia River Interagency Regional Pike Forum July 18-19, 2018 in Spokane, WA to convene leads for pike suppression activities. The primary needs include leadership and coordination at the regional, state, and local levels; suppression funding at all scales; rapid response planning; prevention; data and information sharing; and outreach and education.

## INVASIVE MUSSEL INITIATIVE UPDATE

Department of Interior (*H. Smith*)

**Safeguarding the West from Invasive Species**—Hilary Intergovernmental panels that focused on key issues to address quagga and zebra mussels to build on existing work that has been in progress as well as identify areas for improvement. In June of 2017, a document with 40 action items was produced. Lake Mead and Lake Havasu convenings have occurred to highlight containment issues. A progress report was produced in February 2018 that describes the status of action item implementation. National Park Service authorities document was produced. There is a focus on containment.

**Bureau of Reclamation** (*B. Horsburgh*)

Safeguarding the West has accelerated BOR's engagement in QZ mussel activities. There is a leadership and engagement coordination commitment in the Safeguarding the West relative to convening entities in the Pacific Northwest, however, it was realized this effort has been underway for quite some time, so the commitment has been revised to "Use the Columbia River Basin Federal Caucus to develop federal unity for addressing quagga issues in the Pacific Northwest." The federal caucus is 10 federal agencies working on endangered salmon and steelhead in the Columbia River Basin.

Update on FY2018 activities:

- Additional $1.24 million allocated to the BOR PN Region in FY2018.

- Funding was incrementally released during the continuing resolution.
- Spend plan submitted to BOR Policy office for approval:
    - Safeguarding the West commitments
    - State submissions through Western Governors Association
    - Bureau of Reclamation Commissioner's priorities

Facility Vulnerability Assessments

- Service agreement with BOR Technical Services Center
- 10 high-risk facilities across the region
- Facility visits from May-September 2018 – final reports expected in early 2019.

Assistance to the CSKT on watercraft inspection stations.

Assistance to Montana (Upper Columbia Conservation Commission) re: education and outreach, monitoring, response planning, and moored vessel pilot.

Assistance to Washington – Fund a detailed Rapid Response exercise on Lake Roosevelt in 2019 (5-day enhanced exercise); WDFW support for EDRR monitoring equipment and a mussel detection canine and handler training out of Spokane.

Assistance to the National Park Service for microscopy on veliger tows and analysis conducted at BOR Water lab.

**National Park Service** (*J. Wullschleger*)

Western Regional Panel's database for regional boats RFP is about to be released.

NPS held an AIS workshop in Denver in June 2018 – attendance from 11 western parks. They are working on a strategic plan for all of the parks. In 2018, the NPS is adding $1 million to the existing $2 million expended at 8 parks for QZ prevention and containment. $650,000 is going to Glen Canyon (Lake Powell) and Lake Mead – housing at Glen Canyon for state personnel and shelters; Lake Mead will pay for shade shelters, decontamination equipment, and staff. The remainder is being expended at other prevention parks.

**Western Governors Association** (*B. Whitacre*)

The WGA is working with Congress to give the NPS authorities for watercraft inspection and decontamination. Four workshops and webinars will be held across the West in 2018 and 2019 to develop recommendations and policies (in report published in June 2019) related to invasive species and invasive mussels and AIS management. There is potential in the spring of 2019 to host a Western Regional Leadership Forum on invasive mussels to convene federal and state agency leadership in late winter and late spring of 2019, assess the workshop that has been completed to date, and assess how policies are being implemented and where gaps exist, and determine how gaps in policies can be addressed. They are currently scoping the project to determine agenda, participants, and desired outcomes.

## OTHER PRESENTATIONS

**USACE WRDA** (*D. Walters*)

- $4.172 million on a 50:50 cost share for watercraft inspection stations
- Monitoring 2018 cost share - $691,000 on a 50:50; mix of 2016, 2017, and 2018 appropriate funds
- Remaining funds from 2018 is roughly $4.8 million
- Rapid response cost-share – working through ESA and NEPA – schedule completion December 31, 2018
- NEPA on schedule (85%); but can't be finalized until ESA consultation is complete.
- ESA BA for Rapid Response processed through USACE on Friday June 1 and in the mail to the agencies—BA, weblink on maps and projected schedule to PSMFC

**Endangered Species Act Compliance for Dreissenid Mussel Response** (*L. DeBruyckere*)

A manual is being produced that delineates a suite of most-likely rapid response eradication actions for a potential introduction of dreissenids in Columbia River Basin states, and to assess the potential for those actions to affect Endangered Species Act-listed species and critical habitats. Information in this manual is intended to facilitate future conference actions associated with an introduction of dreissenids in the basin. Drafts of the manual, which is in development, are posted weekly online here: https://www.westernais.org/esa-manual. It was stressed that the manual is a work in progress, with numerous sections being worked on simultaneously. Comments and information to add to the manual are welcome.

**Vulnerability Assessments** (*L. DeBruyckere*)

Significant progress has been made conducting vulnerability assessments within the Columbia River Basin since the Vulnerability Assessment Team was formed years ago after the Vancouver, WA convening by Portland State University, Pacific States Marine Fisheries Commission, and US Geological Survey. The latest version of the map of vulnerability assessments completed, and in progress, can be found here: https://docs.wixstatic.com/ugd/0e48c2_3c71ab71afcf4881a08c07cd16d22e64.pdf

**Lake Roosevelt National Recreation Area AIS Activities** (*M. Lyons*)

Lake Roosevelt

Lake Roosevelt NRA – 130-mile long reservoir created in 1941

Managed by NPS, BOR, BIA, STI, CCT, and WDFW

22 NPS-owned boat launches, tribal boat launches

New MOU with WDFW to enforce state AIS laws

Program components include AIS signs at all launches, stencils at most launches, education and outreach materials, informational displays at boat shows/fairs, and a site-specific brochure.

Prevention of new introductions are focused on boat inspections, inventory and monitoring, and EDRR.

Watercraft inspections and monitoring occurs

- 2017 inspections were voluntary.
- 2018 inspections can be mandatory with new MOU with WDFW
- Rotating inspection stations on weekends at ramps
- Staff (1 permanent, 2 seasonal interns)
- 2016 – 99 boats inspected
- 2017 – 280 boats inspected

Monitoring includes monthly veliger tows, artificial substrates and visual shore surveys. There were 9 sites in 2017 (no detections), and 19 sites are planned for 2018. Monitoring is a collaborative effort with WDFW and STI.

Lake Roosevelt has developed a boater self-certification program.

Northern pike have an established breeding population in the upper portion of the reservoir. A bounty program was initiated in the spring of 2017 and continues this year. There is ongoing removal efforts for adults and juveniles.

Glacier National Park

The park is part of the Crown of the Continent, and includes three major watersheds – Columbia, Missouri, and Saskatchewan River to Hudson Bay. A two-tiered emergency response plan includes:

Tier 1: A new infestation or substantial change in the distribution of invasive mussels in an adjacent state triggers GLAC Leadership Team to convene to determine the immediacy of the threat to park waters, review existing prevention procedures for adequacy, and determine appropriate management responses.

Tier 2: A detection of invasive mussels in a waterway within the State of Montana triggers an immediate closure of surface water access points within Glacier National Park (boat launch areas) until such time that it can be determined that the park can adequately ensure that invasive mussels will not be introduced into park waters.

The current status is that all motorized and non-motorized boats must be inspected prior to use on park waters, motorized/trailered watercraft are permitted on Lake McDonald with a 30-day "self-quarantine" (boat sealed to trailer for 30 days), concession boat tours and motorized boat rentals are available, non-motorized boats can be used with a NPS AIS inspection, and the park is participating on the Upper Columbia Conservation Commission planning team.

Monitoring includes veliger sampling (late summer annually since 2011), eDNA sampling (late Spring annually starting in 2017), and all tests have been negative to date. Potential future plans include employing the Colorado tracking database, participate in the Montana boater AIS passport program, and develop boater inspection MOUs with state, local, and tribal entities.

Grand Teton National Park

The park has two lakes legal for motorized watercraft – Jackson and Jenny lakes. Non-motorized watercraft are permitted on 10 other lakes and the Snake River; there has been increased visitation in six of the last seven years – more than three million recreational visits each year from 2015-2017.

Park inspectors are trained by Wyoming Game and Fish Department, using their laws, regulations and protocols, however park staff are not recognized as peace officers, therefore, enforcing laws is problematic.

In 2017, two inspection stations were open 116 days during the primary boating season (May 22-September 10, September 16-17, and September 23-24). Stations located in Moose and Moran operated between 7:30am-4:30pm. The park requires boat permits (10,593 permits in 2017 – 85% non-motorized, 15% motorized).

In 2017, 20,562 watercraft passed through two stations – 3,625 commercial float trips and 16,857 private parties, guides, or rentals. High risk inspections were conducted on 492 boats, resulting in 36 decontaminations. An average of 177 boats used the park each day, a 13% daily increase since 2016.

Monitoring is conducted by Wyoming Game and Fish Department, and includes veliger tows on Jackson, Jenny, and Sting Lakes as well as inspections of marina infrastructure for adult mussels. The Bureau of Reclamation conducts veliger tows on Jackson Lake; their dive program is transitioning to settling plates in 2018.

Kelly Warm Spring GRTE has been an aquarium dumping ground for decades, resulting in A-typical pathogens and five species of non-native fish. A rotenone treatment is planned for 2018 – there is currently no strategy to remove bullfrogs and red-rimmed melania (snail).

Yellowstone National Park

The park is comprised of 2.22 million acres and has six entrances. It is located at the headwaters of the Columbia and Missouri River Basins. Two lakes are open to motorized watercraft – 3 boat ramps. Most lakes and ponds are open to non-motorized watercraft. All but one river is closed to boating per CRF (except the Lewis River Channel to Shoshone Lake). Eight ANS exist in the park, including New Zealand mudsnails, red-rimmed melania, whirling disease, and 5 non-native fish: three of the ANS (lake trout, mudsnails, and whirling disease) have significant detrimental effects.

Boat inspections started in 2011. In 2012, 17% of boats were inspected, and AIS stickers were initiated. In 2013, a policy was implemented to require mandatory AIS inspections, and included attaching AIS exit seals for returning boats. In 2014, dedicated certified boat inspectors were hired. In 2016, six seasonal certified boat inspectors were hired to conduct inspections seven days a week. In 2018, a felt-soled boot ban is in effect. Yellowstone conducts its own boat inspections. A boat arrived in Yellowstone that was sealed, with the receipt noting it had been inspected twice, no mussels were noted, and no decontamination had been conducted. All watercraft and angler float tubes must be inspected at the time of purchasing a boat permit or re-entering Yellowstone waters (AIS stickers expire after 7 days).

In 2017, 3,576 boat permits were issues and 4,359 inspections were conducted, which means that 99.3% of the permitted boats were inspected (compared to 76% in 2013). Of the 650 motorized watercraft inspected the past three years, 83 were determined to be high risk, 26 underwent full decontaminations, and 136 were cleaned.

Half of the boats enter through the South Entrance, and the shoulder season use is growing.

Monitoring includes veliger tows. Future monitoring will include settling plates and visual surveys at Yellowstone and Lewis lakes as well as participation in the Montana AIS passport program.

**Using Watercraft Inspection Data to Improve Aquatic Invasive Species Management** (*S. Fischer*)

Inhibiting dreissenid mussel invasions requires effective boat inspections and early detection. These, in turn, require a solid understanding of boater behavior as well as an assessment of propagule pressure and probability of mussel establishment. Sam presented an approach to estimate propagule pressure, predict boater behavior, and optimize inspection station operation.

The approach included four steps:

1. Estimate the distribution of boater traffic over time. Use likelihood-based approach rather than histograms to prevent biases.
2. Model boaters' route choices. Assume boaters travel on locally optimal paths and prefer shorter routes.
3. Fit a gravity model to estimate for each donor and recipient the number of travelling boaters. Assume the number of travelling boaters is randomly distributed with mean dependent on lake attractiveness, population of the donor jurisdiction, and the distance between donor and recipient.
4. Optimize inspection station operation. Use linear programming to optimize inspection station placement and operating hours. Approach requires a route choice model for boaters.

The results of the approach applied to BC included

- The daily boater traffic distribution. Traffic peak was at 2PM.
- A map of the most important high-risk boater jurisdictions for BC. The number of travelling boaters decayed heavily with increasing distance. Boaters avoided crossing national borders.
- A map of the lakes receiving the most high-risk boaters per day. The lakes receiving most high-risk boaters were the large lakes in southern/south-eastern BC.
- A map of boater traffic along roads. The highways crossing the eastern border of BC were most frequented by high-risk boaters. The strongest boater flow was estimated on highway 1 via Golden.

**Recent advances in extraction-free rapid detection of invasive mussel eDNA with continuous flow digital droplet quantitative PCR in the field**

(*S. Devlin, C. Youngbull, Flathead Lake Biological Station*)

Water samples can measure the species associated with that water sample. Challenges and limitations include nucleic acid degradation, extraction efficiency variability, and random spike events.

DNA tracker as an inspection tool – will examine bilge water, rinse of boat, swipe of boat and other extraction techniques to assess the presence of DNA. The concern is that the eDNA process be integrated with watercraft inspection and not interrupt flow. Timeframe relative to sampling, results, and communication are important as well as public perception.

Utility of using eDNA:

- Decontamination Assurance
- Monitor a water body for the presence of eDNA quickly and inexpensively to identify portions of the water body with high incidence of eDNA

There are emerging uses of eDNA technology – could include online notifications and alarms in irrigation systems and at hydropower facilities.

**Federal funding for quagga/zebra mussel prevention in the western United States** (*Barak Shemai, USFWS*)

USFWS review process has evolved – it's more refined and objective that includes other AIS partners in the selection process.

Federal funding for QZAP is congressionally directed. About $940,000 in awards annually.

For FY2018, four key areas – 14 proposals received.

Western QZAP allocations for FY2017:

- Utah Division of Wildlife Resources - $200,000
- Colorado Parks and Wildlife - $153,970.
- Nevada Dept. of Wildlife - $260,260 (Lake Mead)
- University of Montana, Flathead Lake Biological Research Station - $127,770
- Pacific States Marine Fisheries Commission (WIT Training) - $120,000
- Lake Havasu Marine Association (boater outreach) - $67,000

(*Joanne Grady, USFWS*)

Region 6 and Region 1 was historically called the 100th Meridian Initiative – opportunity closes June 25, 2018 – emphasis on preventing spread of invasives in western U.S. $100,000 available. Cost-share is required. Greater Yellowstone and Columbia River Basin are priorities. Previously funded grant projects include PSMFC (CRB Team meetings, westernais.org, rapid response exercises), NSGLC (Building Consensus model law, model regulations and MOU), and ISAN (Don't Let it Loose). Applications go to Joanne_Grady@fws.gov.

(*Johnna Roy, USFWS*)

State grants - ANS grant process - $48,000/state. Proposals from OR, WA, ID, and HI. Phase II paperwork should be submitted by June 15.

Develop a program working with the Columbia River Basin tribes – seed funding from headquarters – thinking of hosting a workshop, followed by the development of an interstate tribal plan.

**Upper Columbia Conservation Commission (UC$^3$)** (*K. Wilson*)

The $UC^3$ is dedicated to AIS west of the divide. FWP leads the AIS program and operations. DNRC manages the Montana Invasive Species Council, $UC^3$, and AIS grant program, and facilitates interagency coordination.

The purpose and duties of the $UC^3$ are to monitor condition of aquatic resources; coordinate development of an annual monitoring plan; encourage close cooperation between federal, state, regional, tribal and local water resource managers; encourage international coordination between Montana and British Columbia; develop and implement an education and outreach strategy, encourage economic development by reducing and controlling invasive species; producing an annual report; and making recommendations to reduce threats of AIS.

Highlights

- Workshop on watercraft inspections and monitoring to share information and enhance cooperation among partners in the basin – December 11-12.
- Quarterly meetings and subcommittees.
- Flathead Basin Rule – Mandatory Inspection – boat must be inspected before launch.
- Received BOR funding for outreach and education, monitoring network expansion, and marina pilot project.
- Containment recommendations: close access points at Tiber that cannot be staffed; no "local boaters" that reside west of the divide.
- Tiber status (current) – compromise - Tiber Update – all stations are open, 3 are staffed, two are not – if you pass an exam online, you can access the water body using the code to a locked gate
- Next meeting is June 13 – the group will address a state funding mechanism (sticker, gas tax, angler pass, hydro, etc.)
- CRB Rapid Response Exercise – Flathead Lake – shared management among state and tribes, two counties, two managers – September 2018 – lessons learned from 2016, scenario development, incident command, treatment option.
- Prioritizing 4 of higher risk water bodies so they understand access points, staging areas, etc.
    - Modeled after a spill response
- Fire - Northern Rockies Coordination Group Mandatory Protocols – science-based BMPs
- Aviation BMPs
- Other vectors –
    - 310/Joint application for water-based equipment for in-water work.
    - Seaplanes – WRP Committee – regional approach
- Thinking about the culture of the organization relative to BMPs; *Clean, Drain, Dry*
- Montana is conducting an economic analysis to assess mussel impacts to statewide resources, is implementing a Missouri River Pilot Project to enhance coordination with local partners via a Central and Eastern Montana Mussel Response Team and the Fort Peck Invasive Mussel Tabletop Exercise August 18, is participating November 14 in the Western Governors Association Initiative, and is hosting a law-review focused summit November 15-16 with the Montana Invasive Species Council.

Invasive Species Action Network Updates (*L. Elwell*)

- WRP Annual meeting this fall in Tacoma, WA October 24–26, 2018. The meeting will be hosted by WDFW.

- DMM III Decontamination Video: *Don't Move a Mussel* video. The previous version was completed in 2011. It will focus on decontamination techniques that will be posted on www.westernais.org as well as serve as a resource for decontaminators. The videos will be completed later this summer.
- UMPS Chemical Paper is completed and posted on www.westernais.org, a supplement to UMPS.