

Minutes

100th Meridian Initiative - Columbia River Basin Team Meeting
October 15, 2013
Hilton Hotel
Vancouver, WA

[See end of document, Attachment 1, for attendee list]

Federal Activity

Status of FY13 \$1M federal funding at Lake Mead (see **Attachment 2** - USFWS Funding for Quagga/Zebra Mussel projects in the Western United States FY 2013). The check-in/check-out data base system at Lake Mead NRA is based on a smart phone app, but USFWS still needs to wrap in marina operators. Also, Karen Vargas reported that cell phone coverage is spotty at Lake Mead marinas.

Legislative Activity: PLAQ Act [HR 1823](#), which would legislatively list quagga mussels, is stuck and not had a hearing. Bill has 21 co-sponsors, but any action this year is unlikely this year. Got pushback from SoCal water providers (MWD) due to interstate water transport concerns. Passage on the Slaughter bill (Lacey Act legislation, HR 996/S 1153) is doubtful because of in part pet industry opposition. [HR 996](#) includes a Sec. 6 emergency temp designation for non-native taxa that if passed would be helpful for a quick administrative listing of quagga mussels. The Department of the Interior's proposal to use a Categorical Exclusion under the National Environmental Policy Act (NEPA) for adding species to the Lacey Act's list of injurious wildlife had a hearing in the House. There was pushback on this administrative proposal from House republicans. [S. 601](#) (WRDA) has funding for the Columbia River Basin for monitoring and contingency planning. Once the House is done with its WRDA bill ([HR 3080](#)) the two bills will go to Conference committee in late October [note: this won't occur until later 2013 or 2014]. Sen. Schumer proposed an EDRR grant program to combat AIS in May 2013, but legislation hasn't been introduced.

DOI Invasive Species Strategy status: Part of this process includes Federal staff (NISC/USFWS) collecting AIS rules and regulations for federal lands (and waterbodies), with the ultimate goal of improving management to reduce the movement of invasive species on/off federal lands. The information collection stage is ongoing and expected to be completed soon. We have been advocating for this process to be expedited because of concerns, for example, of watercraft still leaving Lake Mead NRA fouled with mussel. The hope is that it will bolster [EO 13112](#).

Asst. AG/AIS (Denver) Workshop Update:

Lisa DeBruyckere went over August 13-15, 2013 Denver Workshop. The goal of this workshop was to a) develop some standard definitions to prevent spread of Q/Z mussels, b) develop standard criteria for monitoring and evaluation and listing protocols, and c) develop model statutory/regulatory language for AIS prevention. Results from the workshop included developing consensus on what constitutes early detection and water body definitions based on

detections, Triggers to implement management actions. The group started to develop Delisting timelines for suspect, positive, infested waterbodies. Topics that need further work include watercraft inspection and decontamination training and field procedures, quality control standards, record keeping and reporting, data sharing, communication and notification and sampling standards. A follow-up meeting in 2014 will focus on these unfinished regional topics. [Note: Denver (and Phoenix) workshop products can be found @ <http://seagrant.oregonstate.edu/invasive-species/2012-boat-mussels-law-workshop>]

Infested Waterbody Definition – Update of CRB RR Plan

Stephen said that the Denver workshop developed a set of regionally accepted definitions for waterbodies and detection verification as follows:

Minimum to verify detection: 2 independent results from the same sample, using scientifically accepted techniques [with at least one result being a visual technique (microscopy)] [Note: The Denver group left it up to the states to decide on the lab techniques used for the samples. Therefore we can keep our original language in the plan on either finding an adult, or a water sample analyzed by visual and genetic techniques.]

Waterbody definitions:

- **Status Unknown** – Waters that have not been monitored.
- **Undetected/Negative** – sampling/testing is ongoing and nothing has been detected, or nothing has been detected within the time frames for de-listing.
- **Inconclusive (temporary status)** – Water body has not met the minimum criteria for detection.
- **Suspect** – Water body that has met the minimum criteria for detection.
- **Positive** – Multiple (2 or more) subsequent sampling events that meet the minimum criteria for detection.
- **Infested** – A water body that has an established (recruiting or reproducing) population of AIS.

Stephen said that if you have a detection “incident” in your waters, the CRB Dreissenid Rapid Response Plan is not a binding document—you are the decision-making authority. But as discussed, because you are a plan signatory, it is assumed you will communicate with other RR Plan agencies. A conference call would then take place, and the decision would be made re: activation of the RR Plan. Also, under these definitions, you could get a PCR hit and see a veliger—for the near term, it would be called “suspect” until an additional sampling event takes place. If another PCR hit and veliger are found, it could be upgraded to “positive,” however, as we have witnessed, not all samples and lab results are created equal, therefore, we need to remain flexible in our decision making based on the evidence.

If we concur with these definitions, we should consider changing language in the plan; where it says “positive,” it should be changed to “suspect/positive.”

Stephen recommended that we take the following actions:

ACTION: We amend the CRB RR Plan with the agreed to Denver waterbody definitions.

ACTION: We amend the language in the CRB RR Plan -- where it says “positive” should be changed to “suspect/positive” as follows (from page 15):

There was discussion on adding background information for additional species to the RR Plan (Conrad’s false mussel and the golden mussel).

There was agreement of those attending that the plan modifications as proposed were acceptable. Stephen will check with those not in attendance on language changes before finalizing.

PDAM Update

Lisa updated the group on progress made from the May 15 Preventing an Invasion (NDAM) workshop outcomes: Parties signed a Declaration of Cooperation (DOC, developed a set of action items and outreach actions. Identified a Vulnerability Assessment Team for NW; a total of 49 VAs out of 75 have provided info and will identify levels of vulnerability. Also have a RR working group to work thru the control options and permitting processes. Note that neither Idaho nor MT have signed onto the DOC yet. A progress report was sent out to the meeting attendees in early October and that can be found @ <http://preventinganinvasion.psmfc.org/wp-content/uploads/2013/05/declarationofcooperationupdates-October-2013-III.pdf>

Regional Passport System

Allen Pleus WA said that had received \$10K in funding to develop a passport system within WA. Passport would give an inspector an indication of a “lower risk” boater, but not everyone agrees with that. Major benefit is for public education/outreach with helpful contact info. Hope is that ID will recognize WA passport, and vice versa. WA is open to developing a regional passport system for reciprocity within CRB (including BC), Allen discussed the concept of setting up a regional single boater fee to purchase a passport good in all 4 states (that would allow boaters not having to buy a non-resident boat sticker fee for multiple states). Stephen will put together regional 4-state call to discuss it further.

Viability (Test Strip) Research

Robyn Draheim said that Dan Malloy has been contracted with to test it under field conditions. Work was scheduled to begin in November.

OR Dreissenid Rapid Response Plan Update

Robyn gave an overview on the recently completed Oregon Dreissenid Mussel Rapid Response Plan (see <http://preventinganinvasion.psmfc.org/wp-content/uploads/2013/08/OregonZMRRPlan10092013.pdf>) Robyn Acknowledged the important role of the OR Office of Emergency Management, which is based on a bottom up (county) level

response. Robyn said that even though this plan applies to all Dreissenid mussels, many of the strategies listed herein can be applied to rapid response efforts for other AIS.

State Updates

Nevada: Karen reported that NDOW received a grant to provide boater outreach and inspect and perform AIS removal (decontamination) on moored boats (priority #1 boats) leaving Lake Mead (see above), but they are still waiting for a signed agreement with NPS. They will also perform voluntary inspections and AIS removal for watercraft entering Lake Mead as the lake currently does not have many AIS species present. Expect the agreement to be in place in December 2013. NDOW will give boaters a carbon copy of any AIS removal process performed; needs to work with check-in/check-out database once it's up a running. At Wildhorse Reservoir, we held a meeting recently with all parties to determine how to increase boater compliance with inspections. NV is working with Shoshone-Paiute Tribe on inspections at the reservoir, but the tribe needs a funding mechanism for their portion of the lake. Lack of law enforcement there is an issue due to the remoteness of the reservoir. NV has voluntary boat inspection stations along roadways, with mandatory inspections at boat ramps prior to launch providing all access points are covered. Knowingly transporting/introducing AIS in the state has penalties from a misdemeanor offense to felony charges. ~\$125 fine if caught without a Nevada AIS annual decal. All NDOW veliger testing around state has been negative to date.

Wyoming : Beth Bear anticipated that there would be no new AIS legislation in Wyoming for 2014. Several species were added to the prohibited list of AIS which now includes: zebra and quagga mussels, New Zealand mudsnail, Asian clam, rusty crayfish, brook stickleback, Asian carp (bighead, silver, black), snakeheads, hydrilla, Eurasian watermilfoil, and curly pondweed. Had 15 border inspection stations near port of entry points. WY inspected 38K boats, and requires "high risk" boats to be inspected. Performed 543 decontaminations; found 14 fouled boats in 2013 (all dead), most mussels were dead. Monitored 65 water bodies in 2013 and still awaiting results from BOR; all MT monitoring and evaluation results have been negative. Law enforcement of boat stickers is a problem, and boaters stopping at inspection stations.

Montana: Allison Begley reported they had 20 boat inspection stations open from mid-May through Labor Day (some run into mid-Sept). Inspected about 30K boats this year, and found 11 fouled boats with dead mussels and aquatic plants. No positive results from mussel monitoring. AIS law enforcement funding began on July 1; multiple citations issued. Statewide management area designated. Now working on a re-write of ANS management plan. Interest in MT for a passport system and reciprocity, but probably need an outside source of funding for it. MT will sign regional DOC.

Washington: Allen Pleus reported that DOE is still developing new, proposed AIS legislation for 2014 with a \$3.8M funding package based largely on boat excise tax. Would use ~\$1M annually for local AIS management activities for inspection/prevention efforts. Have both ballast water exchange and biofouling studies coming due. Jesse reported that mussel monitoring (microscopy & substrates) were all negative in 2013 to date. Carl reported that WA

has found 9 fouled mussel boats. WA trained US Border inspectors on AIS. Finding lots of non-native crayfish and bull frogs in commercial establishments and pet stores.

Oregon: Rick Boatner reported that 5 different check station locations were open in 2013; inspected 7500 boats with 18 decontaminations performed, and 260 boats deconned for Eurasian milfoil. Averaging ~68% inspection compliance rate with boaters. OR is considering new legislation to get quarantine authority. Glen Dolphin reported that 1700 enforcement actions for having no boat stickers on boats in water. Completed a boat wash station on south coast (Tenmile Lake)

CRITFC: Blaine Parker surveyed for invasive crayfish (and didn't find any) in lower John Day River.

Alberta: Ron McMullin (Alberta Irrigation Projects Association) reported that Alberta has high risk water bodies for invasive mussels. They have two boat inspection stations and found two fouled boats in 2013. Monitored 60 water bodies and all were negative. Alberta needs to develop a RR Plan.

Lake Whatcom and Lake Samish Inspections

Tegan Ward reported that mandatory boat inspection on Lake Whatcom (and Lake Samish) began April 27 from 5 am to 9 pm, 7 days per week with 8 inspectors. Inspected about 3080 total boat inspections. Have a wire seal program; sold 200 permits (\$20 for a 3-day pass). Performed 4 decontaminations and ~3% of boats had standing water. Whatcom County wants to include all lakes in county by 2015.

NWPCC F&W Program Amendment Process

Jim Ruff reported that they had received 480 recommendations for the F&W program amendment process. Go to <http://www.nwcouncil.org/fw/program/2013amend/> for further information and to see recommendations and comments.

IEAB Updated Dreissenid Mussel Economic Report

Roger Mann reported that there was not any new economic information since the [2010 study](#). One of the key findings of the 2013 study (that can be found [here](#)) was that the region needs to keep key boat inspection stations open for a longer period of time, over 24 hrs per day, 7 days a week during the key boating season. Night transport of watercraft, when inspection stations are closed, is a problem. Roger mentioned that prevention was still underfunded but the watercraft inspections stations around the region, which has intercepted hundreds of boats since 2010, is working and saved the region millions of dollars. The region needs to concentrate prevention efforts at the waterbodies where mussels can become established is wise.

Province of British Columbia - ZQM Economic Impact Assessment, Spartina Herbicide Treatments, Northern Pike Programme

Matthias Herborg said he had worked on an angler reward program for N. pike removal in 2013. BC worked with the Kalispel Tribe Fish Biologists to identify suitable NP habitat in BC's section of the Columbia and they are building capacity and expertise for a removal pilot in spring 2014. In 2013, DFO did a Biological Risk Assessment for Q/Z mussels based on Calcium and temperature data. All parts of CRB drainage in BC are classified as "high risk." Did a preliminary economic risk assessment of Q/Z mussels for BC that includes power generation, water supplies, recreation, fishing was \$21.7M annually (Study can be found [here](#)). Implementing BC's new Alien Species law in 2013. Ran pilot watercraft inspection stations and inspector training. In 2014, BC will expand program to include both non-native mussels and fish and quarantine protocols. They are looking into where to focus their inspection efforts and investigating regulatory options for quarantining fouled boats (BC receives 5-10 Q/Z contaminated boats a year).

Spartina Eradication and Control

Mark Sytsma said that are 4 *Spartina* spp. non-native, invasive species, there is one native *Spartina* species in CA, and hybrids. Ecological impacts include:

- Conversion of open mud-flats to monotypic meadows of *Spartina*
- Displaces native plants in high marsh
- Increased sediment accumulation
- Reduction of available wildlife habitat
- Shift from algal-based food-web to detrital
- Altered hydrology - increased channel velocity
- Increased risk of flooding upstream

Oregon has been fortunate to have had only three small infestations and have had regular funding focused on the development and implementation of a Response Plan specifically focused on *Spartina*. Mark said that *Spartina* control activities have improved over the past 10 years and that management/prevention efforts are being better coordinated between states/Feds. All known population of *Spartina* on the west coast is currently being targeted for control.

Cost-Efficient Management of Aquatic Invasive Species: The Case of New Zealand Mudsnailes in the Pacific Northwest

Youngah Lim said that the modeling objective is to minimize total cost, including both expected damages and management costs. The model used survey data on invasive species management cost from OR, ID, and WA over the period 2009 – 2011.

Washington Aquatic Weed Update

Nathan Lubliner (and Jennifer Parsons by phone) talked about conducting herbicide trials at Silver Lake for flowering rush; also tested flowering rush control (hand pulling or digging) in rivers such as Pend Oreille and Spokane rivers. Pursuing research using biocontrol (insects) for flowering rush by CABI in Switzerland. A Flowering Rush Symposium will be held the afternoon of February 13, 2014 at the Northern Quest Resort in Spokane on 10-14 February 2014 as part of the Northern Rockies Invasive Plant Council meeting. Hybrid of Eurasian and northern milfoil becoming prevalent in CRB. Doing a small-scale pilot biocontrol (weevil) project for E. milfoil at Lake Osoyoos. Five lakes in WA been infested with variable leaf milfoil. Weed Council is considering additions to the Noxious Weed list in WA with other species on November 5th (Narrow-leaf cattail species and hybrids Russian olive, Japanese eelgrass may return to 2012 language). Also, an Aquatic Weed Management Fund Grant Program is funded from boat trailer tab fees; grants currently open [note: closed November 13, 2013] .

Idaho Aquatic AIS Inspection and Weed Reports

Tom Woolf reported that they had sampled 525 plankton tows from 68 waterbodies. No positive samples found, but did find *Corbicula* in Redfish Lake (probably dirty nets) and other new detects of AIS. Bryozoans found in Hayden Lake and Payette Basin this summer. Performed 43, 778 watercraft inspections this year at 14 stations; found 12 fouled boats, and did 500 hot washes. 96 boats had vegetation on them. Most of fouled boats in ID are arriving from SW (Lakes Havasu, Mead and Pleasant); 70% of fouled boats are likely viable from Southwestern waters, whereas only 10% of boats from Great Lakes appear to be viable. Most of fouled vessels are found in late spring and early summer.

- Is there a better way to deal with commercially-hauled boats?
- Coordinate timing of inspections in 2014 among NW states?
- Improve information sharing on high risk and/or fouled boats.
- Need more EDRR treatment tools.
- Continue regional coordination and collaboration to improve prevention efficiency.

Tom reported that they had treated 125 acres at Hayden Lake with herbicide for Eurasian milfoil has identified issue with hybrid milfoil. Started a biodegradable benthic barrier (jute) evaluation project in Lake Pend Oreille. Diver removal project in low density areas. In 2012, annual funding was allocated to ISDA for aquatic weed control. Flowering rush is rapidly expanding in Pend Oreille system. Exploring alternative treatment methods. Hydrilla eradication program is continuing in upper Snake (Bruneau River) using hand removal. Water hyacinth appears to be gone now in Snake River near Hagerman (used hand removal). Increasing involvement from county noxious weed control staff on aquatic weeds. No problems to date with NPDES permitting process.

Update and next steps for USGS/WSU dreissenid mussel early detection monitoring/analyses efforts

USGS/WSU reported that they have prepared a GIS mapping tool of 2012 mussel monitoring sites. Also developed a risk assessment ranking tool using risk of establishment (based on

available WQ data) and risk of introduction (but much less data on recreational use or fishing tournaments) information. USGS/WSU to incorporate 2013 monitoring data next (data call for CRB monitoring agencies will be sent out shortly) . But we really need better and more recreational use metric to improve the risk of introduction. This is an iterative project to refine and improve the analyses. USGS/WSU reported that they continue to evaluate the FlowCam for potential use as a monitoring tool in the Columbia River Basin.

Other Reports

Tim Dykstra reported the Corps has nearly completed a Vulnerability Assessment at Lower Granite Dam. Seattle District is also planning VA's for their facilities in the near future (including Chief Joseph and Albern Falls)

Steve Wells reported on the foul release/anti-fouling paint panel research being conducted in the Columbia River and San Justo reservoir, CA. He said that he has worked on cost figures for applying foul release paint on the diffuser gratings and bars at the Dalles Dam project as follows: It is estimated to cost \$1,111,855 to apply the Sher-Release/ Duplex foul-release coating system, manufactured by FUJI FILM Smart Surfaces LLC, to the 1,300 diffuser gratings and the 156 flat steel bars that are part of the auxiliary water system (AWS) in the adult fish passage facilities located at The Dalles Dam Project. [Note: Full report can be found [here](#).]

Next meeting will be in May 13-14, 2014 in Spokane, WA.

Attachment 1: Attendance List

100th Meridian - CRB Meeting - Vancouver, WA - October 15, 2013			
Last Name	First Name	Email Address	Company
Boatner	Rick	rick.j.boatner@state.or.us	Oregon Dept of Fish & Wildlife
Bollens	Stephen	sbollens@vancouver.wsu.edu	Washington State University
Chan	Sam	samuel.Chan@oregonstate.edu	OSU Sea Grant
Crosier	Raquel	rcrosier@nwcouncil.org	NW Power & Conservation Council
DeBruyckere	Lisa	lisad@createstrat.com	Creative Resource Strategies, LLC
Dolphin	Glenn	glenn.dolphin@state.or.us	Oregon State Marine Board
Dondy-Kaplan	Hannah	hadondy_kaplan@bpa.gov	Bonneville Power Administration
Draheim	Robyn	draheim@pdx.edu	Portland State University
Dykstra	Tim	Timothy.A.Dykstra@usace.army.mil	US Army Corps of Engineers
Gross	Jackson	jpgross@smith-root.com	Smith-Root Inc
Herborg	Matthias	matthias.herborg@gov.bc.ca	BC Ministry of Environment
Hooff	Rian	hooff.rian@deq.state.or.us	OR Dept of Environmental Quality
Klein	Carl	Carl.Klein@dfw.wa.gov	Washington Dept of Fish and Wildlife
Knudson	Tamara	tamarak@spokanetribe.com	Spokane Tribal Fisheries
Lim	Youngah	limy@onid.orst.edu	Oregon State University
Lubliner	Nathan	nlub461@ecy.wa.gov	Washington State Dept of Ecology
Malone	Alecia	amalone@smith-root.com	Smith-Root Inc
McMullin	Ron	ron.mcmullin@aipa.org	Alberta Irrigation Projects Association
Parker	Blaine	parb@critfc.org	Columbia River Inter-Tribal Fish Commission
Parsons	Jenifer	jenp461@ecy.wa.gov	Dept of Ecology, State of Washington
Phillips	Stephen	sphillips@psmfc.org	Pacific States Marine Fisheries Commission

Pleus	Allen	Allen.Pleus@dfw.wa.gov	Washington Dept of Fish and Wildlife
Pratt	Christine	christine.pratt@seattle.gov	Seattle City Light
Ruff	Jim	JRuff@NWCouncil.org	Northwest Power & Conservation Council
Schlenker	Murray	Murray.Schlenker@dfw.wa.gov	Washington Dept of Fish and Wildlife
Schultz	Jesse	jesse.schultz@dfw.wa.gov	Washington Dept of Fish and Wildlife
Sytsma	Mark	sytsmam@pdx.edu	Portland State University
Ward	Teagan	teward@cob.org	City of Bellingham
Wells	Steve	sww@pdx.edu	Portland State University
Woolf	Tom	thomas.woolf@agri.idaho.gov	Idaho State Dept of Agriculture

Attachment 2: USFWS Funding for Quagga/Zebra Mussel projects in the Western United States FY 2013

Summary of Proposals Submitted to the U.S. Fish & Wildlife Service for Funding Quagga/Zebra Mussel Projects in the Western United States in Fiscal Year 2013

Agency	Proposed Action	Requested	Approved
Arizona Game & Fish	Decontamination Station at Lake Havasu	\$330,00	\$260,000
Arizona Game & Fish	Law Enforcement Training	\$40,000	\$0
Colorado Parks & Wildlife	Staff Training in Watercraft Inspection and Decontamination	\$12,770	\$0
Glen Canyon NRA	Containment Program at GLCA	\$228,000	\$100,000
Lake Havasu Marine Association	Comprehensive Outreach Program at Lake Havasu	\$37,500	\$25,500
Lake Mead NRA	Decontamination Support at LAKE	\$29,500	\$29,500
Nevada Department of Wildlife	Decontamination Program at LAKE (NV side)	\$391,071	\$391,071
Pacific States Marine Fisheries Commission	Watercraft Inspection Training Program	\$67,969	\$67,969
State University of New York	Test Strip Protocol for Identifying Live Dreissenid Mussels	\$58,025	\$28,000
Utah Division of Wildlife	Implementation of the Utah AIS Management Plan	\$83,465	\$0
Total		\$948,300	\$902,040