

Final Draft Minutes

100th Meridian Initiative - Columbia River Basin Team Meeting

June 6, 2012

Holiday Inn, Portland Airport

Portland, OR

1. **Introductions and Announcements:** [See end of document for attendance list]
2. **Comments and Approval of March Minutes:** The final minutes from the March meeting can be found at http://www.100thmeridian.org/Columbia_RBT.asp

Quagga/Zebra Mussel Issues

Fouled tracking watercraft/alert management

There was a discussion of how agencies are tracking and being alerted when a fouled watercraft is in transit. Though the West911 alert system is sometimes used, Allen Pleus brought up that agencies are not sure when the system is supposed to be activated. Stephen said he would send out an updated terms of use of the West911 system for feedback to affected agencies.

Amy Ferriter brought up the need to have an accurate watercraft interceptions database for the 4 states and wanted to know where we were on putting together the interceptions database.

Stephen said he had started with the database and all state AIS coordinators have been sent the template. To date, only Idaho has responded. Stephen will follow up with coordinators to complete this task.

Status of FY 2012 \$1 million, Lake Mead – D. Britton (USFWS, call-in)

David went over the current spending plan for the appropriation (See **Attachment 1**). The changes to the spending plan include:

- Removal of proposed Rapid Response Database
- Changing the number of Lake Mead NMRA Quagga Mussel coordinators from two to one; -- [subsequently changed back to two]
- Removal of two proposed USFWS Special Agents to monitor activities at LMNRA and other waters on the lower Colorado River.
- Addition of watercraft inspection training classes for LMNRA concessionaires and staff (WIT II)

David discussed the proposed check in/check out database for Lake Mead where all boats moored at the marinas would be recorded and flagged as “red flag” or “green flag”. Boats that enter and moor will remain on the list as red flagged, if they leave and are professionally decontaminated by appropriately trained staff they will get a green flag. David said green flagged boats are not guaranteed to be mussel free.

David said that Park Service is hindered by legal issue of not being able to “bust” contaminated boats. According to DOI solicitors, the Federal government has no legal authority to stop boats contaminated with quagga mussels. Our Fourth Amendment protects us from unreasonable search and seizure and there is no Federal law against the possession or transport of quagga mussels. Federal authorities cannot stop boaters from leaving Lake Mead or any other water in the U.S. for suspicion of carrying quagga mussels. The only possible federal authority available is through the Lacey Act, which requires a state to act first, through prosecution of an existing state law, and then ask the Federal government for assistance. To date, no Western state has fulfilled these requirements. In contrast, many Western states have repeatedly declined to prosecute numerous violations of their own state laws prohibiting possession and/or transport of quagga mussels. This is why the USFWS has decided to provide additional funding to Western state law enforcement agencies. With additional funding it is hoped that individual states will be able to use the existing state authorities that are necessary before the Federal government can act.

Jim Ruff asked whether 1) western law enforcement and/or AIS coordinators would be able to access the database? and 2) has LMNRA considered using a cleaning deposit for boats mooring at lake mead?

David said that he believes that AIS coordinators should be able to access the database (he thinks we have gotten past Privacy Act issues) and 2) the deposit idea is being discussed (but will not be part of the current work plan for FY 2012 funds), the idea of paying for a decontamination in advance was nixed as the costs would be unknown (issues include variability between boats and you can't charge for a service not rendered - as some boats moor's and don't leave)

David discussed importance of Interdiction Rangers in Glen Canyon NRA – they could help assess and monitor effectiveness of decontamination at Lake Mead (boaters often visit both recreational areas); and Inspection/Decontamination at Navajo Reservoir. Navajo is upstream Lake Powell, if allowed to become infested with quagga or zebra mussels, would jeopardize down-river reservoirs.

David said that funding for increase federal law enforcement at LM was not feasible at this time; because quagga mussels are not listed as injurious wildlife under the Lacey Act, he stated that there is no federal law violation for possession or transport; only if state laws are broken can federal authorities be called in, and only after State authorities have acted first. Therefore the current plan is give this funding (\$250K) to states law enforcement (NV, AZ, ID, OR, WA, CA) [Now \$180K after Idaho declined funding and UT was added].

Concerns were raised as to why no funds were being spent on staff to conduct watercraft decontaminations

Amy asked how many decontaminations has Lake Mead done in the past and noted this is important benchmark information.

David has asked NPS this same question but they didn't know the answer. David said that the proposed Check-in/out database will provide this information, once in place.

Jim Ruff raised concerns about the funding for Lake Navajo and Powell (as it falls outside of the Congressional language for how the money should be spent)

David responded that this is a misconception. The Congressional appropriations committee specifically asked for the USFWS to target federally managed waters on the Colorado River. Lake Powell, on the Colorado River, is the only federally managed water body on the Colorado that mandates inspection and decontamination. Lake Navajo is upstream and connected to Lake Powell. Congressional language specifically points to QZAP action B.1, which highlights the importance of a multipronged approach, and also estimates that successful implementation would require \$19-25 million to be effective. QZAP asserts that continued annually funding of this magnitude would be necessary. Because one-time funding of only \$1 million was diverted from existing USFWS projects (not new money), difficult decisions had to be made to determine the best use of this limited funding. The current strategy was discussed with the Congressional appropriations committee and they gave their concurrence for this plan.

Jim Ruff said he had spoken with Mike Oetker of USFWS Region II about spending plan concerns. NW/PCC discussed the need for a meeting with NW/SW AIS stakeholders to come up with an integrated plan for quagga response activities in the NW and SW.

Stephen thanked David for calling-in, and said that there was still disagreement by the CRB Team agencies on the FY 2012 proposed spending plan.

Update on Dreissena Early Detection/Monitoring Methods and Quality Assurance Workshops - M. Frischer (Skidaway Institute of Oceanography)

One of the highest Quagga Zebra Action Plan (QZAP) priorities was the expansion of early-detection monitoring programs in the Western region. Expansion of early detection programs depends on early-detection methodologies and the availability of reliable analytical laboratories to complete timely analysis of plankton samples. With support from the U.S. Fish and Wildlife Service via competitive QZAP funding, two workshops that addressed both of these interdependent requirements were conducted. The workshops took place on the campus of Texas Christian University in Fort Worth Texas 7-10 February 2012. Summaries of the workshop can be found at <http://musselmonitoring.com/2012Workshop/ExecSummary.pdf>

The project components are as follows:

- **Sample Preservation Study:** What is the best way to store plankton tow samples for eventual examination for Dreissena spp. larvae using microscopic and PCR-based approaches? Some initial results are as follows:
 - No fixation results in significant sample decay (not surprising)
 - All the concentrations of EtOH used seem to be effective (a bit surprising)
 - pH adjustment doesn't necessarily hurt but makes sample examination difficult and in these samples at least appears to be unnecessary
 - Freezing at either -20 or -60/-80 results in sample decay (surprising)

- Optimal sampling strategies? To detect rare veligers is it better to collect multiple samples at a single high risk location or to randomly sample over a larger geographic area?

Preliminary conclusions: At least in a fast flowing river environment there does not seem to be a difference in the detection of rare veligers whether samples are collected from a single location (in this case a transect across the river at a single location) versus collecting the same number of samples along a river section (in this case a 10 km river segment)

- Develop a pilot scale laboratory testing program that would allow laboratories to obtain blind samples that could be used for internal quality control, assay development and competence training. Progress as follows:
 - Collection of materials to be used for preparation of Reference materials
 - Quagga Veligers (February 2011)
 - Zebra Veligers from Lake Champlain, Glen Lake (August 2011)
 - Plankton material (with no zebra or quagga veligers) (November 2011)
 - All materials are archived at Darrin Fresh Water Institute
 - Materials are stored at 4°C
 - Draft of “request of materials” web form. Final version June 15, 2012
 - Request of materials on-line June 30, 2012
 - Begin sample distribution upon request July ,2012

One recommendation from the workshop was to develop a taxonomy certification program to help identify personnel that are qualified to identify *Dreissena* spp. larvae in plankton tow samples microscopically This task is ongoing in partnership with the Society of Freshwater Science.

The final project report is due by September 30.

Live vs. Dead Dreissenid Mussels - R. Draheim (USFWS)

Robyn gave a presentation on the issue of viability of dreissenid mussels. Whether a mussel is dead or alive is important for a number of reasons. Determining viability can be difficult, especially when small mussels are involved. Rules and regulations across the West vary with respect to prohibiting transport of on live versus dead mussels as follows:

OR: live
 WA: either
 ID: live
 NV: live
 AZ: either

Robyn reviewed varying ways to determine viability (with the following caveat: “As the following are methods that have not undergone rigorous field testing and evaluation they should not be considered “criteria” for determining viability but can be used as guidance for parties interested in developing their own protocols for determining viability.”):

- For Adults: Manual Extraction, Tactile Response, Rehydration
- Juvenile mussels: Rehydration -> translocation
- Veligers: No field options currently available, Research into veliger viability assays ongoing

Robyn emphasized the need for documentation on the specimens including: field notes: photography/videography. Replication is very important. Collect/preserve samples for off-site confirmation. Confirmation possible through “RNAlater” (used/developed by Utah DNR/Pisces Molecular), Non-toxic aqueous preservative, RNA comparison with live mussels, other options: Vital Stains, Off-site rehydration, observation.

Next steps: Robyn will include accepting comments on draft Viability FAQ document, completing a longer paper on viability, discussion at WRP AG Conference, and exploring development of novel field tests and further off-site confirmation techniques

Allen mentioned that determination of a truly dead organism is a tough issue and we are dealing with the same issue in ballast water, Question: how many replicates are needed to determine viability for mussels?

Robyn said the number of replicates needs to be determined in cooperation with your law enforcement agency

Amy said that small mussels are an issue as they are very difficult to determine live/dead, so a bucket test wouldn't work.

Robyn said she is not a law enforcement specialist and hopefully through USFWS LE folks like Bryan Landry we can get clarification on these matters.

Paul Heimowitz said that there are two aspects of viability criteria – what is the biological basis, and what is needed to prevail in a law enforcement case. In both cases, there are lots of unknowns. The USFWS Pacific Regional AIS program is going to focus on helping clarify the biological basis and promoting development of new field tests, but will defer to state and federal law enforcement staff to determine the legal criteria. David mentioned a possible enforcement action in the lower Colorado....

Vicki Finn: Does not think that the focus should be on LE actions at this time as it is too complex. Energies need to be targeted at decontaminating boats. There are too many difficulties in getting to a prosecutable law enforcement case. Stopping the boats from getting here should be the focus.

State/BC/ Tribal Reports

Matthias Herborg (Province of British Columbia): A snakehead was found in a Vancouver area pond. Snakehead are not illegal in BC, they are hoping to change that through provincial legislation; he will follow up with the CRB team on recommendations for a BC banned species list. The Federal Fisheries Act is going through a reauthorization and there is AIS language in there and a process for control and eradication (but nothing on listing dreissenids as illegal). Their dreissenid lab tech has left and a replacement is in the works. Matthias was hoping on a dreissenid rapid response exercise in BC, but it was removed from the budget. They are working with Kalispel Tribe on the pike issue. They are also working with the Province's Invasive Species Councils on AIS outreach.

Eileen Ryce (MTFWP) : Allison Bagley is the new recently hired AIS coordinator for the state and she will start in July. Jason Duckworth has also been hired as a .5 fte located in the NW (CRB) region.

Watercraft inspection stations opened in mid-May, 50 inspectors will be hired. There are 8 inspection stations near borders and 5 roving crews (that will concentrate on fishing tournaments and specific waterbodies). Two mussel infested boats have been found intercepted to date. While the program is going smooth so far, there is a problem with boaters not stopping at inspection stations. They are using enforcement when possible and caught a few of these drive by's. Excuses for not stopping have included "I didn't see the sign"

MT has also started receiving commercial boat hauler notices and reporting these to other states (similar to what ID does). MT will be testing their stations inspection effectiveness through a "secret shopper" program, where an "undercover" boater evaluates how the inspectors perform their duties. Eileen said that new live bait rules are currently under rule-making. A large portion of the state still uses live bait, so it is a concern as an AIS vector. For further information go to http://fwp.mt.gov/news/newsReleases/fishing/nr_0680.html

Monitoring: Warmer water temperatures (and lower flows) this year will allow veliger monitoring for dreissenids to begin in the next few weeks. This was an off year for the MT legislature, they should start seeing legislative ideas for the 2013 in the next few months..

Karen Vargas (NDOW): NDOW received a grant funding from USFWS for Rye Patch, Wildhorse and Lahontan Reservoirs inspection stations. They are currently working on the state process for setting up these stations and are hoping to get the stations operational by mid-July. This will be done in cooperation of Nevada State Parks Department. The state sticker fee will begin 1/1/13. Fees -- resident:\$5 for non-motorized, \$10 for motorized; nonresident (\$10 and \$20). Fee proposal needs to be approved by NV Wildlife Commission. Note: The Wildlife Commission on 6/25 approved the AIS sticker fee for any watercraft that can hold water: that includes canoes & kayaks: Float tubes and paddleboards were exempted. They are also adding organisms to their AIS state regulation list including various species of fish, several species of crayfish, New Zealand mud snail and quagga/zebra and golden mussels. Quagga/zebra are currently prohibited but by adding to AIS List will increase fines (up to \$250,000 for a second offense).

Steve Wells asked about veliger monitoring at Wild Horse reservoir. Karen said as far as she knew, monthly monitoring would start in May/June (still no reports of a positive)

Amy Ferriter (ISDA): 7900 watercraft inspections to date, intercepted 42 fouled boats to date; 14 of these intercepted at Port of Entries, new veterinarian on team to help with outreach to pet industry/trade. They are planning on 600 samples for veliger monitoring this year, working with Cabela's on "Don't Let It Loose" campaign. A 12 foot python was reported in CJ Strike reservoir by a fisherman in the past week, a search for creature turned up empty. Python's are not on the Idaho AIS prohibited list. This summer ISDA is starting a new volunteer "mussel patrol", volunteers will be able to participate in substrate sampling (see **attachment 2**).

Allen Pleus (WDFW): Sgt. Carl Klein is working with Lake Whatcom on their proposed watercraft inspection program. Seven quagga fouled boats have been decontaminated so far this year. WDFW has given a grant to University of Washington ballast water research (will look at exchange effectiveness and high risk vessels). The state is working on the EPA Vessel General Permit application.

WDFW recently put out an RFP "Assessment of Biofouling Threats to Puget Sound" which will close on June 22. Relatedly, a cruise ship is seeking permission to do hull cleaning in Puget Sound, this is being looked into. WDFW is working on AIS decontamination protocols for agency field equipment (waders, boats, trucks trucks). Staffing – lost one ballast water tech, in process of hiring replacement for this position Allen reported a positive Didymo detection in the state. Department of Ecology has lead on this.

There was discussion as to whether Didymo is native and whether low phosphorous makes it bloom.

Paul asked Allen about the New Zealand mudsnail infestation at Capitol Lake (Olympia) and whether there was any enhanced monitoring taking place/planned to look for NZMS in other Washington waters.

Allen said not at this time.

Blaine Parker (Columbia River Inter-Tribal Fish Commission)

CRITFC received one year of dedicated AIS funding. Funds will be used for tribal education and outreach (fishermen, youth salmon camps). Working with tribal boat shop staff on decontamination training.

Rick Boatner (Oregon Department of Fish and Wildlife)

- Inspection stations are/will be operated in 2012 at La Grande, Central Point, Klamath Falls and Hines
- Still looking for additional staff to man these locations

- 500 boats have been inspected to date, 3 quagga/zebra infested boats, 12 boats had plant fragments,
- Have conducted several agency AIS training sessions, including one with US Forest Service
- Drive by's (failure to stop) at inspection stations continues to be a problem – 30 -50 % compliance. The first law enforcement blitz will take place Friday June 8 @ Ashland. Note: last year 27 drive by's were pursued, 25 were caught.

Glenn Dolphin (Oregon Marine Board)

- 20 highway signs will be going up with message on Oregon's watercraft sticker requirement
- Funding for the watercraft inspection program is on par with last year
- OMB funding PSU to undertake monitoring, setting up a volunteer monitoring program, coastal dive survey, milfoil and NZMZ surveys. OMB funding other AIS projects with USGS

Image Catalogue, Don't Move a Mussel (B. Zook, PSMFC)

- The image catalogue can be found at http://100thmeridian.org/video/DMAM2011/DMAM2011_Videos/Home.html
- It includes 11 hours of edited footage from the making of DMM 2011
- Catalog describes title, subject and length of each clip
- Clips arranged by basin and by either interview or "B" roll footage
- Includes a link to each clip following description
- Can be used as video clips or still images for education and/or outreach
- Editing software may be needed to edit clips or produce stills

Bill announced that he really is retiring at the end of the summer

Stephen thanked Bill for all of his service including developing the watercraft inspection program, marina outreach program in the Missouri and Columbia River Basins, the UMPS documents and of course the Don't Move a Mussel video's.

Invasive Northern Pike in the Pend Oreille River, Washington - D. Osterman (Kalispel Tribe)

- Northern pike established prior to 2004
- Began monitoring the population in 2005
- Increased exponentially from ~ 400 in 2006 to > 5,500 in 2010

- Range expanded throughout reservoir as well as downstream; Boundary Reservoir and Upper Columbia River
- All other species except smallmouth bass and tench have declined significantly

Pike threaten native species conservation and recovery in lower Pend Oreille and are a source for further illegal introductions into neighboring waters. Further spread will also threaten to Columbia River and ESA recovery, Tribal, recreational, commercial salmon and steelhead fisheries and Lake Roosevelt resident fish mitigation and substitution.

Management plans are to reduce the population include gillnetting and increased sport harvest. An 87 percent reduction in Box Canyon reservoir is sought by 2014.

Next steps will be

- Undertake Spring Pike Index Netting SPIN (Annually) and expand to Boundary reservoir (2013)
- Reservoir-wide warmwater survey (2014)
- Mechanical suppression (gill netting) at current level through 2014
- Explore other control measures ??
- Report to NWPC's ISRP (2014)
- PikePalooza ??

Deane mentioned that the pike are riddled with toxins (e.g. PCB's and Mercury) and gill netted fish go to a rendering plant? Bucket biology a problem. We need to work as a region to stop the spread of pike. Coordination and dialogue with the Montana will be important (note: currently pike are a listed as a game fish in Montana and Idaho) and he wants to work with the CRB Team as well and welcome inputs from team members.

Deane was asked is you catch a pike in Washington you must kill it? Yes, they must be killed and can't be transported. Northern pike are no longer a game fish in WA as well.

Stephen asked if Montana needed to change their game fish rule?

Deane: yes changes are needed, though it is understandable this will not be an easy task.

Jim Ruff: Mentioned that on August 9 NWPC will host "Predation in the Columbia River Basin: What are the Management Alternatives?" For further information go to <http://www.nwcouncil.org/fw/program/2012spe/>

A question was asked on how much outreach was the tribe doing with sport fishing groups.

Deane said that yes there were reaching out, there are some in the sport community that are pike advocates, so there is still work to do with them, but some progress has been made. Deane also said they are also looking at the lessons learned for the Lake Trout removal project working @ Yellowstone National Park and with the State of Alaska as they are dealing with pike in the

Alexander drainage (see

<http://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr01042011>)

Marty Hafke (E. Kootenai Invasive Plant Council). BC doesn't have regulations to pull fouled dreissenid watercraft over, all voluntary now. They received \$4 million last year for council activities as part of the "Take Action" program. They are currently collecting public perception AIS baseline data as part of a social science experiment and community-based social marketing program (need to change behavior). They have 13 crews working on this project. Hoping that they will receive additional funds in the coming year to implement what they find during their surveys. They are hoping to receive a decontamination station this summer and have received watercraft decontamination training from Thom Woolf (IDA) .

David Armes (Avista): David gave a presentation on Avista's aquatic weed management efforts. Avista operates under two Federal Energy Regulatory Commission (FERC) Licenses: Spokane River License and Clark Fork License. Lake Spokane. Invasive weeds they are managing include: Eurasian watermilfoil, Curly-Leaf Pondweed, Fragrant Waterlily, Flowering Rush and Yellow Floating Heart. Goals for the Lake Spokane Aquatic Weed Management Program Include:

- Reduce cover of invasive aquatic weeds at public and community boat access points;
- Maintain a moderate level of ongoing control of aquatic weeds in areas of 10-14 feet using winter reservoir drawdowns; and
- Support weed control and facilitate coordination among the entities involved in aquatic weed control.

2012 Aquatic Weed Management Tasks for Lake Spokane:

- A weed control reservoir drawdown of 13-14 feet during January and February.
- Finalizing and distributing the Lake Spokane and Nine Mile Reservoir aquatic weed brochure.
- Herbicide treatment of up to 15 acres focused on public and community boat launches.
- Continued flowering rush control.
- Aerial surveys/mapping of Lake Spokane and Nine Mile Reservoir for invasive aquatic weeds.

Other ongoing work includes implementation of the Coeur d'Alene Lake Aquatic Weed Management Plan for Non-tribal Waters (Milfoil distribution in Coeur d'Alene Lake is estimated between 1000-2000 acres). Management actions for 2012 include:

- Herbicide treatment (Navigate) of up to 538 acres of milfoil in CdA Lake. Barriers will be utilized in order to maximize the effectiveness of the treatments.
- Diver suction removal of milfoil in the St. Joe and St. Maries Rivers.
- Placement of up to one-half acre of bottom barriers.
- Aerial surveys and mapping of milfoil in CdA Lake; diver surveys (IDEQ) in six bays.
- Educational opportunities include participating in the North Idaho Fair, distributing milfoil brochures and coordinating with landowners.

Activities under the Noxon Rapids and Cabinet Gorge, Clark Fork License include:

- Avista partners with the Eurasian Watermilfoil Task Force, which consists of over ten public and private entities.
- In 2009 Avista installed 40,000 square feet of bottom barriers.
- In 2009 (40 acres) and 2010 (80 acres) Avista completed dye/herbicide trials.
- In 2010 Avista funded educational opportunities and boat check stations.
- In 2012 Avista will continue to work with the Eurasian Watermilfoil Task Force on milfoil management.

Inventory and Monitoring Coordination; data sharing -- J. Capurso, (USFS)

Jim led the discussion on AIS data sharing/databases. It's been 8 months since the USFWS AIS strategy was released and Jim was curious as to what AIS data repositories agencies are using ...are you using the USGA-NAS database? The Oregon I-Map database was shown (go to <http://www.imapinvasives.org/orimi/map/>). Oregon I-Map shares data with the USGS database. As a group we need to encourage species to be entered into the database in a timely manner.

Scott Smith said that a USGS staffer (Nancy Elder) enters WA AIS data into the USGS NAS database and if you have data she can enter it.

Steve Waste mentioned PNAMP (Pacific Northwest Aquatic Monitoring Partnership <http://www.pnamp.org/>) and the services it provides. Steve said that a PNAMP presentation at the next meeting would be a good idea (Jen Bayer, contact)

Jim will continue to track this issue for the CRB Team.

PSU Quagga Research – Paint, Growth, Lab Protocols (S. Wells, PSU)

1. The antifouling paint (foul release) study (funded by BPA) is underway – location – Port of Camas. The objective is to test antifouling foul release effective service life under Columbia River field conditions. In August experimental panels will be moved to Lake Mead so they can be infested with mussels. After they are in the water for a specified amount of time (0, 3, 9, 15, 21, 27, 33, 39+ months) they will be tested for resistance to mussel attachment. Paints to be tested include Sher Release, Intersleek 900, and Hempasil X3, Corps V766E, and CrystalSeal,

2. PSU quagga growth vs. calcium and temperature study (Lake Mead). This BPA funded study is in its final year (lead researcher Brian Adair) . Results (Willamette and Columbia River water):

- Willamette River water -- there is a positive relationship between [Ca²⁺] and growth, but no relationship b/w temp and growth
- Columbia- no relationship -- Mussels seemed to grow better (all treats >20 mg/L, t-test p<0.01)
- Average mussel growth: 2.9% Columbia and 0.1% Willamette

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Conclusions -- 20 mg/ L may be threshold for quagga thriving; small percentage grew at 6 mg Ca²⁺/ L; Growth rate in lab lower than Lake Mead

3. Microscopy training manual -- The manual will be an aid for those conducting veliger identification using light microscopy. This will be released soon for review. An online training tool is available at <http://mussels.research.pdx.edu/musselid/>

Next Rapid Response Exercise

The group discussed when and where to hold the rapid response exercise of the CRB Plan. Wild Horse reservoir was discussed as a possible location. The Shoshone-Paiute Tribe (Duck Valley Indian Reservation) will be contacted to see if they have interest (as well as NDOW). Dates for next exercise -- late spring 2013.

Member Updates

Jim C. --Discussed new memo from the Forest Service Intermountain Region entitled "Issuance of Forest Aquatic Invasive Species Orders for Law Enforcement". Would a similar issuance be something that the states of Oregon and Washington would be interested in? Oregon -- Yes; Washington -- Allen said he would get back to Jim

Jim C. also discussed raising the AIS issue with USFS Leadership Team. The USFS Leadership Team provides national leadership, direction, and counsel on implementing the authorities and promoting the principles of Service First, legislation that provides tools for an interagency approach to resource management, customer service, and operational efficiency, and a clear path for resolving issues.

Jim C. discussed movement of water for fire-fighting purposes (potential AIS vector) and training of staff on AIS movement. Jim also discussed training of USFS inventory crews on AIS monitoring and providing that data to the USFS NAS database. Cleaning of sampling gear was also discussed (use of Sparquat versus other chemicals discussed)

Britta Orwick discussed a recent PSU pet store owner survey in Portland metro area. Results show 90 percent of customers have not seen outreach materials. "Don't Let it Loose" more recognizable than "Habitatude." They are developing a catalogue for alternatives to release of pets. They are also developing a pet owner survey. This will be a continued focus for Briita and USFWS into the next year.

Scott Smith discussed the USGS project studying emergency ballast water treatments, it will include toxicity of ballast water discharge (will include baseline data for pretreatment) . Scott also said that Noah Adams would be doing another AIS dive survey training class this summer.

Jennifer Lam discussed Oregon boater survey. 82 % felt a combination of voluntary compliance and regulations were preferred. The "Don't Let it Loose" poster is being finalized. Jennifer also mentioned the AG Workshop which will take place in Phoenix, Arizona, August 21-23.

Paul Heimowitz discussed USFWS funding in the President's budget; for FY 2013 Asian carp is a priority and new quagga funding is reduced. Paul also discussed the eDNA coordination network and the ongoing interest to hold a workshop in the future. USFWS is also still collaborating with U of Idaho researchers on NZMS eDNA detection and their research is showing promise.

Allen P. discussed consideration for holding a WIT II type training in Washington, using marine fouling organisms instead of quagga mussels? There was agreement this could be an option.

Joan Cabreza announced her retirement from editor of Nutshell newsletter and thanked the Team for their help and friendship through the years.

The next meeting will be a two day meeting **October 3-4 in Spokane**. We will add more aquatic plant topics. It will be important to find agenda topics that overlap between plants and animals (vectors, etc).

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Attachment 1 : List of priority actions proposed for 2012 QZAP funding targeting containment of quagga mussels in the Lower Colorado River with an emphasis on Lake Mead National Recreation Area

Thursday, May 10, 2012 Version

LMNRA Improvements

\$397,800 to the National Park Service for Lake Mead National Recreation Area (LMNRA) to support the following projects

1. Finalize a new wash station near Lake Mead Marina and Las Vegas Boat Harbor Marina (Cost is approximately \$117,000)
2. Repair and maintain existing (three permanent and two mobile) wash stations at LMNRA (Cost is approximately \$58,500)
3. Two quagga mussel coordinators at LMNRA for one year. One would focus on education and outreach and work directly with the concessionaires. The other would focus on monitoring and research. (Cost is approximately \$175,500)
4. Outreach/Education Materials at Lake Mead National Recreation Area, promoting the National Stop Aquatic Hitchhikers! Campaign. (Cost is approximately \$46,800)

Rapid Response Database

\$29,250 for finalizing the Rapid Response Database as called for in QZAP.

- This system would promote rapid communication among jurisdictions and could serve as a central repository for documents related to boat interdictions and could assist coordination among law enforcement entities.
- Portland State University and the University of Texas at Arlington have already made progress toward developing a western-wide database.
- Funding would likely go to PSU

State Education/Outreach Campaigns

\$58,500 to Nevada Department of Wildlife and Arizona Game and Fish Department for outreach materials.

- We could expand the scope of existing cooperative agreements between the USFWS and these agencies.
- Outreach materials in Arizona would expand their existing campaign.
- Outreach materials in Nevada would help develop a campaign consistent with AZ and the federal Stop Aquatic Hitchhikers! Campaign.
- Emphasis should be on state laws and what is expected of boaters.
- This could include billboards and signs.

Check-in/Check-out Database

\$11,700 to the University of Texas at Arlington to develop a Check-in/Checkout database

- We could expand the scope of an existing cooperative agreement
- This system would record all boats moored in LMNRA.
- It would also record all decontaminations.
- An online system would allow law enforcement to query the database by boat number to see if and when the boat was in Lake Mead or Mohave, and to see if and when it was decontaminated.
- This information could be used by interdiction personnel to help decide how to process a boat entering their jurisdiction.
- This system could be expanded to all infested waters with marinas.

Interdiction Rangers

\$117,000 to the National Park Service for interdiction rangers at Glen Canyon National Recreation Area (Lake Powell)

- Lake Powell is one of the top destinations for boats leaving Lake Mead.
- Federal interdiction staff could help assess and monitor the effectiveness of decontamination at LMNRA while simultaneously protecting the second-most popular water body in the western United States.
- If Lake Powell is not protected from invasion, it could serve as another stepping stone for further invasions into the West.
- Glen Canyon's Aquatic Invasive Species Program is exemplary and, as such, should be encouraged as a model for other NPS parks and recreational areas.

Inspection/Decontamination at Navajo Reservoir

\$100,000 to New Mexico Game and Fish or the U.S. Fish & Wildlife Service to inspect and decontaminate boats at Navajo Reservoir on the Colorado/New Mexico border.

- This reservoir is upstream of Lake Powell, and, if allowed to become infested with quagga or zebra mussels, would jeopardize down-river reservoirs, including Lake Powell.
- Protecting this reservoir also protects Lake Powell, and subsequently prevents the second-most popular water body in the western United States from becoming a source for invasive mussels to spread further into the West.

Increased Law Enforcement at LMNRA

\$250,00 for law enforcement activities at Lake Mead National Recreation Area

- Proposed are two USFWS Special Agents to monitor activities at LMNRA and other waters on the lower Colorado River.
- State law enforcement officers, as an alternative, have been proposed, but there is a concern that such officers would not be able to focus their duties on AIS.

This list comprises approximately **\$964,250**. The amounts for each category may have to be adjusted, depending on actual costs and whether or not specific actions are funded or not. In case of a conflict, containment at LMNRA will take priority over prevention at other locations.

Additional actions considered are

1.	Havasu	Adding a wash station at Lake	\$292,500
2.	Pleasant	Adding a wash station at Lake	\$292,500
3.	Basin	100th Meridian Team, CO River	\$35,100
4.	LMNRA	State LE Spot Checks at	\$93,600
5.	Powell	Upgrade wash stations at Lake	\$310,050
6.	Powell	Night closure gates at Lake	\$321,750
7.	Powell	Adding outreach staff at Lake	\$245,700
8.	Rangers	Add Additional Interdiction	\$58,500
			\$1,649,700

Future funding, if available, could be used to include these additional actions to address specific priorities listed in QZAP.

Attachment 2: Idaho Mussel Patrol Program (Draft)

HOW TO MONITOR FOR ZEBRA AND QUAGGA MUSSELS

- Select a sampling location that is safe to access.
- Attach the substrate to a secure structure in a location that won't interfere with boater or swimmer activities.
- Deploy the substrate so that the weight is resting on the lake bottom or the substrate is as deep as possible. Ideal locations are shaded areas with some water movement.
- When checking the substrate, remove it slowly from the water.
- If possible, place substrate in a bucket for inspection in order to capture any mussels that may fall off. Closely inspect all surfaces paying special attention to corners and holes as well as ropes and weights. Juvenile mussels (veligers) are small so inspect carefully. Feel along surfaces for a rough sandpaper-like feel of very small mussels. Please note that there are no native clam-like species in Idaho that attach to things.
- Next, inspect the contents in the bucket for any mussels or other Aquatic Nuisance Species (New Zealand mudsnails, Eurasian milfoil, etc.) that may have fallen off during inspection.
- Redeploy substrate.
- Check substrate monthly if possible. **DO NOT** clean substrates before redeploying.
- Inspect existing docks, pilings, and along shoreline for mussels and other invasive aquatic species. If possible, wade upstream and downstream of the sampling location. Pick up and inspect the tops and underside of rocks in the area for invasive snails and mussels.
- Be sure you and your equipment are clean before moving to another sampling site.
- Report to ISDA every time the substrate is inspected and provide any unknown aquatic specimens for identification.

YOU CAN HELP!

Your help is needed! Volunteers can adopt a substrate sampler to place off their personal dock throughout the summer months and monitor for zebra and quagga mussels and other aquatic invasive organisms. Make sure that you **CLEAN, DRAIN, AND DRY** your personal watercraft and gear when you travel from one waterbody to another. With your help, we can keep Idaho Idaho.

CONTACT INFORMATION

For more information, please contact Amy Ferriter, Idaho Invasive Species Coordinator, at the Idaho State Department of Agriculture, 208.332.8686 or amy.ferriter@agri.idaho.gov.

Learn more by visiting: www.invasivespecies.idaho.gov

STOP AQUATIC HITCHHIKERS!

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MUSSEL PATROL PROGRAM
IDAHO STATE DEPARTMENT OF AGRICULTURE