

Missouri River Basin 100th Meridian Team Meeting Minutes
Holiday Inn Express
Nashville, Tennessee
April 19, 2010

Introductions:

Many thanks to The Pacific States Marine Fisheries Commission and U.S. Fish and Wildlife Service for hosting this year's meeting which was held the day preceding and in conjunction with the Aquatic Nuisance Species Task Force's Mississippi Basin Panel meeting.

Attending:

Steve Schainost - Nebraska Game and Parks Commission
Eileen Ryce – Montana Department of Fish, Wildlife & Parks
Kim Bogenschutz – Iowa Department of Natural Resources
Jason Goeckler – Kansas Department of Wildlife and Parks
Tim Banek – Missouri Department of Conservation
David Britton – U.S. Fish and Wildlife Service
Bill Zook – Pacific States Marine Fisheries Commission
Andy Burgess – South Dakota Department of Game, Fish and Parks
Michael Watkins – U.S. Army Corp of Engineers, Kansas City

Please see the meeting agenda attached at the end of these minutes

Reconciliation of 2009 Action Items:

Action Items:

- 1. Tim Will provide a template to team members for billboards being used in Missouri - **Completed***
- 2. Eileen will send Montana boater survey data to Dave for inclusion in the 100th Meridian database - **Completed***
- 3. Eileen will resend protocols for preparing and shipping plankton (veliger) samples to those states using the Montana Lab - **Completed***

4. *Lynn will send copies of new billboard and signs being used in North Dakota - **Completed***
5. *Dave will provide the group with copies of the mussel monitoring report, the result of the Denver workshop when completed – **Completed***
6. *Dave will finish updating boater survey data by the end of July – **On-going***
7. *Team members will provide Dave with any new photos or other outreach information so it can be used to expand the “outreach resources” information provided at the 100th Meridian website – **None received***
8. *Dave will check on the availability of additional or redistributed PDA’s for boater surveys – **None available***
9. *Group will provide Dave with suggestions for 100th Meridian website enhancements – **Completed***

Montana Veliger Lab Update/Information: Eileen Ryce

All samples were processed in a timely fashion for presence/absence and were negative except for Lake of the Ozarks and one positive sample from Kansas. The lab prioritizes out of state samples and those near infested areas.

The number of samples processed in 2009 was as follows:

KS – 156; MO – 34; SD – 70; ND – 82; NE – 18; MT -300.

The Lab is well funded for 2010 and will receive approximately \$30,000 to \$40,000 from the USFWS. North Dakota will be providing \$2,000 and South Dakota will provide \$4,000 for lab supplies. Eileen will hire a full-time lab person and some seasonal lab technicians which will increase this year’s processing capacity to 2,000 samples (up from 670 in 2009). Montana will collect approximately 600 samples this year leaving a balance

of nearly 1,400 to be spread between other Missouri Basin states. The group identified the following estimates for veliger samples to be collected in 2010:

KS – 300; MO – 100; SD – 200; ND - ??; NE – 200; WY - ??

Eileen requested those sending samples to spread out the delivery and not stockpile so that they all don't come all at once. She also reminded the group to follow the protocols for collecting and preserving the samples and to make sure that samples are clean and that formalin is not used. She also recommended that a sheet of paper listing each sample be provided with each shipment as back-up insurance if individual sample labels are un-useable.

The lab has three scopes now. All suspect findings are confirmed by the Montana ANS Coordinator and Lab Manager then photographs are sent to two independent labs for confirmation, one in Kansas and the other in Oklahoma. The lab has been tested by external labs and has been shown to be effective in detection (no false positives). The Missouri River Basin Team is very confident in the Montana lab's ability to detect veligers.

OZAP Update: Eileen Ryce

The Quagga-Zebra Mussel Action Plan (Q-ZAP) was conditionally approved by the ANSTF in the fall of 2009 and received formal approval by the Task Force at its January 2010 meeting and is now in the process of being implemented. The WRP took the lead in writing the plan. Congress authorized two million dollars for FY-11 to begin implementation. Of that, \$800K will be allocated to Lake Tahoe for watercraft inspection stations. The remaining \$1.2M was divided into two chunks of \$600K each. The first \$600K will be divided equally among states with approved plans requesting funds (nationwide and not specific to the western US). The second \$600K will be divided somewhat equally (200K, 200K, 200K) among projects targeting the top three priorities identified by the plan; Early detection, decontamination of watercraft, and decontamination of equipment. A request for proposals has been issued and anyone can submit a proposal that addresses one of these priorities. The funds addressed in the RFP are expected to be targeted on the western US.

That process is underway and many western state agencies as well as private companies and educational institutions are submitting proposals that

will be reviewed and selected by an ANSTF committee. Funding is expected by early summer.

Individual Agency Updates:

Montana: Eileen Ryce

During the 2009 session the State Legislature passed the Montana Invasive species act (July 2009) that shares responsibility and funding between Fish, Game and Parks and the Department of Agriculture. The act authorized a one-time allocation of \$650,000 (fiscal note) to be administered by the Department of Agriculture. Of this total, Fish, Wildlife and Parks will get about \$150,000 for 2010/11 biennium.

The Montana Department of Agriculture will hire a full-time Invasive Species Coordinator (all species) and use the bulk of their funding to set-up voluntary border inspection stations, for invasive species management areas, border signs at points of entry and for monitoring/awareness to the pet and nursery trade. Fish, Wildlife and Parks will use its portion of the funding to increase watercraft inspections and early detection monitoring efforts statewide (\$55,000) and to implement a new public education and outreach plan (\$78,000). The two state agencies are still clarifying their respective roles under the new legislation. Efforts to establish a state invasive species council have not been successful to date.

A new public outreach and education campaign has been initiated with a budget of about \$120K. The money will be used to buy advertisement (TV, radio, newspapers) and have one standard, simple message advising boaters and waders to “Inspect/Clean/Dry.” Media packets will be developed and distributed to all news agencies. The campaign includes a built-in evaluation program composed of pre-program and a post-program public surveys.

Fish Wildlife and Parks completed five “spring training” programs for agency personnel, marina operators and guides and the public on watercraft inspection, decontamination, legislation and other ANS related issues and has one additional training planned for this summer.

The monitoring program has been expanded in the state with 255 sites currently being monitored and a goal to increase that to 300 in 2010.

Several local groups, including very active groups in Yellowstone and Missoula counties are leading the charge. Fish, Wildlife and Parks will put together kits for the volunteers to help with early detection and monitoring.

Fish, Wildlife and Parks is evaluating the need for new rule-making that would give the state more authority to:

- 1. Prohibit/regulate certain types of water transport around the state unless otherwise authorized by the Department*
- 2. Authority to stop watercraft not related to fishing, hunting or other activity regulated by the agency for inspection and decontamination(jet skies, water ski and other types of recreational and commercial watercraft)*
- 3. Prohibit the transport of certain aquatic plants (any aquatic macrophytes, not just aquatic weeds).*

Fish, Wildlife and Parks completed over 1,000 watercraft inspections in 2009 and plans to increase the number this year. They will hire eight seasonal inspectors in 2010, some assigned to a region and two roving to high use events. Three seasonal technicians will be assigned to the Flathead Lake area.

USFWS Update: David Britton

Erin William was unable to attend this year's meeting because she is completing a two-month Advanced Leadership assignment detail in Alaska. Dave filled-in for Erin to update the group on recent developments in USFWS. Dave advised the group that Erin's supervisor, Assistant Regional Director for Region 6, Mike Stemple, will retire at the end of this month. Dave advised the group that Bob Pitman retired as ANS Coordinator for Region 2 at the end of February and that he (Dave) is serving as interim coordinator until a permanent selection is made. Dave expects that the vacant position will be advertised by July and filled permanently soon afterwards. Dave also advised the group that Jeff Herod has replaced Jay Troxel as ANS Coordinator for Region 4.

The group expressed concern for the potential loss of the key coordination role that Dave has played in his position as Assistant ANS Coordinator in Region 2 and the impact that could have on 100th Meridian Basin teams in the west, the 100th Meridian website and management of the west's boater

survey database. The group was extremely hopeful and supportive of Dave's opportunity for advancement, but concerned about a potential blow to the system if he is selected to the Coordinator position and his assistant position is not filled. Dave indicated that he believed that since Region 2 receives money specifically to support western 100th Meridian Initiative work, that role would continue at some level, regardless any personnel or position changes.

Kansas Update: Jason Goeckler

Zebra mussel populations have progressively spread throughout the eastern portion of Kansas in recent years, with each waterbody being independently infested up to now (independent drainages). But, several additional waterways are now expected to become positive due to downstream drift from infested reservoirs. The Neosho River drainage (downstream of Marion Reservoir, which was detected positive in 2008) and John Redmond and Wolf Creek will probably be the next infested reservoirs in the state.

The zebra mussel population in El Dorado (2003) is rebounding slowly, but nothing near the peak levels of veligers found in 2006. Winfield City Lake (2006) has attained densities near 100 per liter (vs. a peak of 300 per liter at El Dorado) and has not yet experienced a crash like that seen in El Dorado. In 2009 Cheney Reservoir (2007) had veliger densities of 200 per liter; Perry Reservoir (2007) just above 50 per liter; Marion Reservoir (2008) below 1 per liter; Wilson and Milford Reservoirs (2009) remain below 1 per liter as well. The Kansas Department of Wildlife and Parks is also keeping a close eye on a number of other state waterways that were indicated to be at high risk for infestation based on 100th Meridian Initiative boater survey data.

Milford Hatchery, one of the State's largest and home of the state's hybrid striped bass and pallid sturgeon programs is located in very close proximity to Milford Reservoir (zebra mussel positive 2009). The hatchery stocks fish in over 350,000 surface acres of Kansas Reservoirs. The hatchery is going through a \$300,000+ renovation to the water supply system and implemented other steps to avoid contamination.

Several community based watercraft interception programs have been implemented on private lakes in Kansas; Kahola, Eskridge, and Marion County lakes now require inspections. The City of Council Grove now

requires an education course and certificate for entry (\$250 fine without certificate). Wildlife and Parks has developed an online training course at their website that is used by these and other communities and individuals.

Treatments of Eurasian watermilfoil using SONAR (\$25,000 city funds) on the City of Yates Center and for Hydrilla at Olathe-Black Bob Park (Multiyear project) were initiated in 2009.

Jason is working on an ANS decontamination policy for all KDWP watercraft and equipment to ensure that the Department is not moving invaders among waters within the state. His eventual goal is to work with the Governor's office to make the policy apply to all state agencies in Kansas.

The baitfish issue remains a problem. Jason has formed a committee to address the issue in an attempt to facilitate an emphasis on the issue. Aquaculture is regulated by the Department of Agriculture, which has not yet developed a state aquaculture plan to address disease and invasive species.

Jason has continued to expand outreach and education efforts statewide. Outreach efforts included development and deployment of more signage, revamping and production of more brochures, expansion of the tailgate decals program and the inclusion of an ANS brochure with 650,000 power bills, and watercraft inspections prior to launching are a few examples.

Research: Risk Assessment, Cyanobacteria production in ZM lakes (looks like ZMs are correlated with increased cyanobacteria), Human Dimensions (baitfish as a vector, knowledge and action to prevent spread), and zebra mussel impact on sportfish populations.

Kansas now has 8 zebra-mussel lakes (expecting to be 10 soon because of downstream flow). Contaminated boats are still moving mussels to new lakes.

Nebraska Update: Steve Schainost

A new Invasive Species Coordinator (all species) has been established at the University of Nebraska. The position has been filled by Karie Decker who works at the University in close coordination with the Nebraska Game and

Parks Commission and the Nebraska Invasive Species Council. The position is funded by the NGPC. A bill was submitted to the legislature to have the Council officially recognized, but has not yet passed and will be reintroduced next year. The council includes state agencies and NGOs. The new coordinator has completed a draft ANS management plan, which has been submitted to the ANS Task Force. The Council will hold public meetings on the plan this summer and hopes to have final adoption and Governor sign-off by September 2010.

100th Meridian Initiative money will be used this summer to hire one seasonal employee for three months to conduct boater surveys on four waters in western Nebraska near the Colorado border. A statewide level-one WIT training was hosted by NGPC at Lake Ogallala in March and delivered by Bill Zook from the PSMFC. Nebraska plans to expand veliger sampling this year. Last year, sampling was done in southwest NE reservoirs. The US Bureau of Reclamation is also doing veliger sampling on their reservoirs in Nebraska and processing their own samples.

Iowa Update: Kim Bogenschutz

In 2009 the Iowa Department of Natural Resources hired 18 seasonal employees; 13 watercraft inspectors and 5 enforcement personnel, and completed over 7,000 inspections and boater surveys. Of the total, about 100 watercraft were “dirty” and required some form of cleaning or decontamination. Four watercraft had zebra mussels, while another ten had invasive plants. All of the zebra mussels were on boats coming out of the Mississippi River. Approximately 81% of boaters surveyed knew about zebra mussels and 56% knew about the law prohibiting the transport of ANS.

Kim reported that zebra mussel densities in Clear Lake in north/central Iowa (infested with zebra mussels since 2005) are increasing and expanding in to marginal habitats. At Lake Delhi, mussel distribution continues to increase and mussels are now being found in the upper reaches of the impoundment. In 2007, a boat transported from the Mississippi River was discovered to have zebra mussels after it had been launched into Lake Rathbun (A Corps of Engineers Reservoir). That finding initiated sampling and monitoring efforts including dive surveys, deployment of settlement samplers and veliger surveys. In a June 2009 sample from Lake Rathbun nine veligers were collected at one site. All previous and subsequent efforts

did not find either adult mussels or veligers and, as of now, IDNR does not consider Lake Rathbun to be positive for mussels, but will expand monitoring there. Iowa does not consider a single detection of veligers as an infestation.

The same transport company also moved a contaminated boat to Washington recently and is now facing charges of Lacey Act Violations in both Iowa and Washington.

There was one new Asian carp infestation reported in 2009 in the Little Sioux River. A new record bighead carp (approximately 79 pounds) was caught by a bow fisherman in a borrow pit adjacent to the Cedar River.

Community TV produced a new AIS video for the Department targeting zebra mussels and Eurasian water milfoil (cost \$500). IDNR also produced a radio ad that was played throughout the Des Moines Area. Kim is also working with a documentary producer and shooting some 6-8 min TV spots this spring/summer to be broadcast on public TV (cost \$23,000). Smaller 2 min versions will also be available. The documentary will be made available to all public television stations in the US.

The Okoboji Protective Association has installed a TIS near East Lake Okoboji which is located at the state fish hatchery there for security reasons. Right now Kim has no control over the content. The signal reaches all of the nearby lakes. The DOT made and installed signs along state and county highways.

There were no new regulations adopted in 2009, but a new fisheries policy was established that Iowa DNR would no longer stock grass carp in public waters. The Enforcement Division has also recommended new rule making that would prohibit the transport of water and make the boat operator responsible for inspecting their watercraft.

South Dakota Update: Andy Burgess

South Dakota completed their state ANS Plan in 2008 which created an ANS over-site committee to coordinate implementation of the plan. In 2009, the South Dakota Department of Game, Fish and Parks hired three interns and completed plant surveys and veliger sampling on the east shore of the Missouri River and tributaries. West bank mainstem and tributaries were

surveyed in 2008. Interns also did some watercraft inspections after receiving watercraft inspection, species identification and veliger monitoring training last spring.

Sampling continued at about the same level throughout the state in 2009. Tribes were encouraged to examine any waters that were stocked from the Gavin's Point National Fish hatchers after Asian clams were discovered there in 2009. Veliger sampling continued in all of the Missouri River Reservoirs (all negative), and all of the BOR reservoirs in the west river were sampled (negative). Settlement monitors were deployed as well. No zebra or quagga mussels have been reported anywhere in the state since 2003 when a small number of veligers were found in samples taken below Gavin's point.

In 2010 the program in South Dakota will increase watercraft inspections and mussel monitoring. A recent tri-state (Minnesota and North Dakota) enforcement meeting targeting aquatic invasive species stimulated much more interest in the law enforcement division for taking action on invasive species.

A total of six community sponsored billboards are now in place on South Dakota highways, including the latest on I-90 and near Yankton and one that will be installed near Mitchell (Walleyes Unlimited) this summer.

Andy advised the group that he is leaving his position to get married and move to Iowa. The group was very disappointed to see him leave but thankful for his efforts to advance ANS prevention efforts in South Dakota. There is no information yet regarding backfilling Andy's position once he leaves.

The South Dakota Invasive Species Management Association (SDISMA) had a three day meeting in April where aquatic issues were discussed and it was followed by a Level One Watercraft Inspection Training completed by Bill Zook.

USACE Update: Mike Watkins

The Kansas City District, Corps of Engineers does not have a full time ANS coordinator, but, because zebra mussels have been discovered in Perry Lake and three other reservoirs within the District, Mike (District Wildlife

Biologist) has been taking the lead for the Corps within the District. Since the states (Kansas and Missouri) have authority over fish and wildlife for Corps projects, it has been somewhat challenging to get USACE staff motivated to take action, but Mike has succeeded by providing training opportunities, meeting with project offices, administration and division personnel and by developing a very aggressive outreach and education program both within the District and for project visitors.

A new zebra mussel section has been added to the district website. A “help stop zebra mussels” message has been added to their listing on the Corp’s national reservation website and printed on their day use permits envelopes. Stop Aquatic Hitchhikers signs have been posted at all boat ramps within the District (however surveys indicated that most people did not see them). The District has developed a new full-color sign, which includes the SAH message but also provides pictures and great new boat cleaning diagram. These new signs have been produced in various sizes including large fiberglass signs posted at kiosks located on several project lakes. Mike has also developed a new “rack card” which are provided to marinas and mailed to people renting slips at all project marinas, with similar artwork. Rangers and environmental school groups also distribute them by placing them on windshields at project boater access sites on holiday weekends. Billboards have also been added at various locations within the Kansa City District.

Mike has developed a number of other unique education and outreach tools for the District, several of which may be picked-up by other Corps districts, including the development of educational notebooks along with jars of preserved mussels (75 provided by Jason Goeckler) for all public points on contact within the District. He has also developed a new cartoon character called “Zippy” and developed refrigerator magnets, coloring book and comic book page for the national water safety comic series, based on this character. The 3’ x 3’ “Zippy” refrigerator magnets, adhesive (non-shrink) fish measuring rulers and other outreach materials are made available at visitors centers and handed out at boat shows.

A new sign was developed for infested lakes. It says “This Lake is infested with zebra mussels” and provides a checklist of steps that should be taken to clean watercraft leaving the lake. The District has also purchased five hot water power washers and will be ordering more in 2010.

The District has arranged with PSMFC (Bill Zook) and Kansas (Jason Goeckler) and Missouri (Tim Banek) to conduct two Level 1 WIT trainings in the District in May of this year.

The Kansas City District has developed new internal agency policies for equipment decontamination and for the role of the ANS Coordinator and adopted a policy to work closely with the states within the District to prevent the spread of zebra mussels to other public waters. The district has also developed a set of ANS contract specifications which require contractors to decontaminate all equipment before arriving on site. In addition, all equipment must be decontaminated after the work is completed.

The Kansas City District will expand its veliger sampling program in 2010 and consider utilizing the Montana lab to process samples and is committed to coordinating sampling with the states and national monitoring database.

Missouri: Tim Banek

The Missouri State ANS management plan was approved through the Governor's office and the ANSTF and MDC received their first ANS Task Grant in 2009.

Zebra mussels are now found throughout the Missouri River downstream from Kansas City. They are also firmly entrenched in large numbers throughout Lake of the Ozarks where they were first discovered in June 2006. Prior to 2006, the only populations of zebra mussels in the state of Missouri were found in the Mississippi River and tributaries. Truman Lake (hydraulically connected to Pomme de Terre Reservoir) is tentatively being treated as infested although no mussels or veligers have been found yet. Zebra mussels are now in Bull Shoals, Pomme de Terre and Taneycomo reservoirs, Lake of the Ozarks, and as of January 2010, in Lake Latawana.

2009/2010 has seen some significant budget cuts within the Department of Conservation. The MDC budget had a nearly seven million dollar deficit which resulted in the elimination of 133 positions. A new internal agency Zebra Mussel Prevention Policy was adopted in 2008 that requires that all MDC equipment must be decontaminated before being used in a different water. MDC also issued a directive to all field staff to discontinue the use of felt waders and hip boots. Tim developed new "contract specification" language for construction/maintenance contracts in the state that require

equipment decontamination. The new specifications will be used by State DOT and other state and federal agencies for projects within Missouri and has been made available as a template to other states and federal agencies.

Substrate monitors were deployed in several lakes and veliger monitoring was conducted statewide at selected waters in 2008 and 2009. All samples were negative except for Lake of the Ozarks and Pomme de Terre.

HACCP training was provided by USFWS and HACCP plans were developed for hatcheries and equipment handling. (HACCP training will be available at the National Conservation Training Center in Shepherdstown, WV June 2-3, 2010. <http://training.fws.gov>)

Missouri received \$18,000 to do boater surveys in the state in 2009, but the results were not presented at the MRB meeting since Tim will present them to the Mississippi River Basin Panel meeting on the day following this meeting. Refer to the minutes of that panel meeting for details.

A host of new public outreach material was developed and distributed in 2009 by the MDC, including table-top displays, brochures (rock snot) and signs. The Department will run radio ads on 61 stations in Missouri for the eight days leading up to the Memorial Day weekend. Cost \$4,000.

Tim attempted to get Fisheries Division staff to adopt a “triploid only” policy for grass carp in Missouri in 2009, but didn’t gain the necessary support. Only seven states still allow diploid grass carp, Missouri is one.

The MDC has applied for Q-Zap funding to do more boater surveys throughout the state in 2010. They have been working with U.S. Coast Guard Auxiliary Flotillas to conduct the surveys and boat inspections by agreement.

Missouri is looking into using VirKon (marketed as Quat and Spar-Quat) as a decontamination chemical to kill zebra mussel veligers. The USGS lab has been contracted to do the evaluation.

MDC also added some crayfish (Procambarius) to the prohibited species list and liberalized catch limits and regulations on the taking of Asian carp.

North Dakota: Lynn Schlueter (Report sent after the meeting, Lynn unable to attend)

North Dakota Game and Fish Department efforts in the Missouri River Basin include monitoring and educational efforts. Monitoring included sampling Lake Sakakawea and the Missouri River below Garrison Dam to Lake Oahe. Curly-leaf pondweed is well established in these two areas. Zebra mussel monitoring included – zooplankton tows and inspecting boat docks or other hard surfaces removed in the fall. Artificial substrate samplers, zebra mussel traps, were placed in areas of highest likelihood for initial infestation in early summer and retrieved in the fall. Zooplankton samples were processed by Montana Game, Fish, and Parks. No zebra mussels were detected.

Several smaller lakes or reservoirs in the basin were monitored for ANS infestations. Sampling included collection of rooted vegetation, hard substrates, and a sweep net. No new ANS infestations were found.

Sampling was a combined effort of NDGF, COE, BOR, FWS, and interested entities and/or parties. A cooperative effort for good resource management is being used. Added this year to this group is Basin Electric and Minkota Power which will be including ANS prevention messages in their publications.

Educational efforts included mass media (television, newspapers, radio, and regional periodicals), contact with fishing clubs, focused discussion with individuals, and similar outreach avenues. Primary message was that prevention is key, it takes only a few minutes to conduct, and is effective. Without prevention, the resources that we want will be compromised with no practical solution for recovery.

The Department has provided a grant to Lake Sakakawea Chamber of Commerce to prepare and provide other educational efforts. This group has developed an ANS field guide/booklet, radio spots and newspaper and magazine articles, articles in regional periodicals, and other materials. This group's ANS message is similar to the Department's, but is from a non-governmental view and uses local anglers as spokespersons.

Future monitoring and educational efforts will be similar to that which has been conducted. The Department is able to utilize some federal educational monies to augment Division budget.

Offutt Base Lake Eradication Project: Steve Schainost

Steve presented a complete and detailed summary of the Offutt Base Lake zebra mussel eradication project completed in 2009. The final report for this project is provided in the attached Summary Report (see attachment section)

WIT Update: Bill Zook

Bill summarized and updated the Team on a number of projects he is working on that have regional significance. A research project is underway at the University of Nevada Las Vegas to test the efficacy of the current watercraft/equipment decontamination protocols and standards (UMPS). The project is funded by USFWS and managed by PSMFC. Results are expected to be available by this fall.

PDMFC has submitted a proposal for the Q-ZAP RFP for a project that would update the UMPS; incorporating the results of the UNLV research, new information and alternative strategies. The proposal will also include the development of a pilot project to coordinate certification watercraft programs between Columbia River Basin states and thereby increase efficiency, reduce costs, improve protection and increase boater compliance.

Bill is working with commercial watercraft/equipment haulers to increase ANS awareness and standardize rules for decontamination of watercraft and equipment transported by this industry. A list of more than 500 active commercial haulers has been compiled from a variety of recent and reliable sources. An on-line survey has been developed that will provide information about issue awareness, current practices and industry attitudes. Letters will be sent in May to all haulers on the list with a link to the survey. Results of the survey will be used to develop new industry guidelines or rules that apply across jurisdictional boundaries.

He is also working with the Western Seaplane Pilots Association and state and federal coordinators to develop best management practices for decontamination of seaplane. Plans also include the production of a short

7-10 video on inspection and cleaning of seaplanes and development of an on-line training course for seaplane operators.

The following summary of the highly successful Watercraft Interception Training (WIT) program was also provided:

- 59 L1 trainings, 3,000 people, 17 states, 120+ agencies/organizations*
- 12 L2 trainings, 145 Grads*
- At least 200 L1 trainings presented by L2 grads, 2,000 people*
- 4,500 copies of training DVD distributed*

100th Meridian Database/Website Update: Dave Britton

Dave reported that Sarah Clemons at the University of California Davis has been contracted to do an analysis of the boater survey database. There have also been some format changes to the survey intake form to help standardize data and Dave is working with the Geographic Name Information System to consolidate information from waters that have been entered under name variations for the same waterbody. The changes will be complete later this spring and everyone will be advised. Large blocks of recent boater survey data from Montana and Washington are now being entered in the database.

Monitoring Update: Dave Britton

Dave advised the group that a “round robin” study is currently underway in the western US comparing the results of both light microscopy and PCR at various labs.

The results of last year’s monitoring workshop in Denver including microscopy and PCR protocols for veliger sampling and lab procedures can be found at www.musselmonitoring.com.

Colorado, Idaho, Glen Canyon National Park (Lake Powell) and Utah are all evaluating the potential use of the FlowCam to process veliger samples.

Portland State University and USGS are in the process of developing a nationwide database for monitoring sites similar to the USGS database of dreissenid mussel locations. Progress has been slow.

Dave reported that Sarah Clemons at the University of California Davis has been contracted to do an analysis of the boater survey database. There have also been some format changes to the survey intake form to help standardize data and Dave is working with the Geographic Name Information System to consolidate information from waters that have been entered under name variations for the same waterbody. The changes will be complete later this spring and everyone will be advised. Large blocks of recent boater survey data from Montana and Washington are now being entered in the database.

Action Items:

- 1. Mike will provide more information on some of the new outreach materials and his new boat diagrams to other Corps districts so they can consider some of the methods that he used to get attention in the Kansas City District group. He will share with the rest of us via email.*
- 2. Eileen will provide Montana boater surveys (1000+) to Dave for addition to the database.*
- 3. Dave will check into seeing if the PDA's can be updated to the new survey format so that those currently using PDA's can continue to use them for surveys.*
- 4. Eileen will provide the group with copies of Montana's new public outreach plan.*

Next Meeting:

The next meeting of the Missouri Basin Team will be in the Springfield Missouri July 19 and 20, 2011. It will be a two-day meeting hosted by Tim Banek and the Missouri Department of Conservation and include a field trip and bowling tournament.

After Hours Update:

For the first time in the history of the 6th annual World ANS Open Bowling Championship, the team from the NORTH composed of Eileen Ryce, Dave Britton, Andy Burgess and Bill Zook won the team championship in a hard fought battle that ended with a flat-footed tie after 8 games bowled and was finally settled by a one frame bowl-off.

For the sixth straight year a member of the NORTH team took the individual honors with Dr David Britton edging perennial champ Bill Zook by a mere 6 pins despite Bill's badly damaged, surgically repaired ankle.

Unfortunately, the very best ANS bowlers Missouri, Kansas, Nebraska, South Dakota, Montana and Iowa, once again could not contend. Wait until next year!!

Minutes Prepared By: Bill Zook and Dave Britton

Attachments

Agenda

**Missouri River Basin ANS (100th Meridian) Work Group Meeting
Holiday Inn Express, Nashville, Tennessee
April 19, 2010**

8:00 – 8:30	Introductions/Business	Group
8:30 – 8:40	MRB Veliger Lab Update/Information	Eileen
8:40 – 9:15	Q-ZAP Update.....	Eileen
9:15 – 10:15	Agency Updates	Group
10:15 – 10:30	Break	
10:30 – Noon	Agency Updates, Cont'd	Group
Noon – 1:00	Lunch Break (lunch provided)	
1:00 – 1:30	Offutt Base Lake Eradication Update	Steve
1:30 – 2:00	Funding Priorities and Forecast	Group
2:00 – 2:30	100th Meridian Database/Website Update	Dave
2:30 – 3:00	Watercraft Interception Program Update.....	Bill
3:00 – 3:15	Break	
3:15 – 4:00	Monitoring Programs/Protocols	Dave
4:00 – 4:30	Measuring the Effectiveness of Outreach	Jason
4:30 – 5:00	Review “To Do List”, Set Next Meeting	

Unfinished Business, Etc..... Group

5:00 – 7:00

Dinner Break

7:00 – 9:00

2009 national ANS Open Bowling Championship

Contact Steve Schainost at the Nebraska Game and parks Commission for a complete copy of this final report (308) 763-2940 steve_schainost@nebraska.gov

FINAL

S U M M A R Y R E P O R T

ZEBRA MUSSEL ERADICATION PROJECT

**LAKE OFFUTT
OFFUTT AIR FORCE BASE, NEBRASKA**

NOVEMBER 2009



Prepared for
55 CES/CEV
Offutt Air Force Base, Nebraska



EXECUTIVE SUMMARY

Zebra mussels are an invasive species from Eurasia that were introduced in Lake St. Clair, in the Great Lakes region in 1988. The ability of zebra mussels to attach to hard surfaces, their ability to live for extended periods out of water, and the small size of their larvae (veligers) allow them to be transported unknowingly on recreational boats, trailers, and bait buckets, and has contributed to their rapid range expansion. Within four years after being introduced in Lake St. Clair, zebra mussels had become established in all of the Great Lakes as well as the Arkansas, Cumberland, Hudson, Illinois, Mississippi, Ohio, and Tennessee River systems.

It is believed that zebra mussels gained access to Lake Offutt when a boat or boat trailer that had been used on a water body infested with zebra mussels was transported and unloaded into Lake Offutt. The Nebraska Game and Parks Commission (NGPC) confirmed the presence of zebra mussels in Lake Offutt in April 2006. This was the first confirmed reproducing population of zebra mussels in the state of Nebraska. The Zebra Mussel Working Group was formed to discuss treatment options and preventative measures and included representatives from government agencies and private stakeholders.

*Offutt Air Force Base (AFB), in cooperation with the Zebra Mussel Working Group, determined that treating the lake with copper sulfate would be the most feasible treatment method with the greatest potential for successful eradication. Offutt AFB contracted URS Group, Inc. (URS) to treat Lake Offutt in an attempt to eradicate zebra mussels (*Dreissena polymorpha*). An United States Environmental Protection Agency (USEPA) Special Local Need Label was acquired in order to treat the lake with a sufficient concentration of copper sulfate to eradicate zebra mussels (1 part per million [ppm] lake-wide copper concentration). Copper Sulfate was applied in two treatments to Lake Offutt over 30- hour periods on 17 and 18 September 2008 and again on 7 and 8 April 2009. Post application monitoring was performed in four categories: 1) water quality, 2) adult zebra mussels sampling, 3) larval zebra mussels sampling, and 4) fish mortality. Thus far no zebra mussels have been detected in Lake Offutt since the first treatment was applied.*