

**Western Regional Panel
Annual Meeting**

**Sheraton Hotel
Anchorage, Alaska**

September 8-9, 2004

Wednesday, September 8, 2004

Welcome, Vision, Introductions

Susan Ellis welcomed everyone to the meeting. Marilyn Leland of host Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) introduced John Devens, Executive Director. Devens welcomed the WRP to Anchorage and spoke of PWSRCAC's efforts watching for invasive species in Alaska waters and specifically those brought to Prince William Sound and the Gulf of Alaska through tanker ballast water. Alaska State Senator Fred Dyson also gave welcoming remarks, as did Laverne Smith, Assistant Regional Director for Fisheries for Region 7 of the U.S. Fish and Wildlife Service.

Alaska Perspectives – Welcome and Importance of Natural Resources to Indigenous Peoples

Ole Lake spoke of the personal importance of natural resources from the Native perspective. He urged a kindness and compassion towards all things, plant, fish and mammal. He spoke of the importance of not disturbing the ecological balance by taking judiciously from the natural resources and only what is needed. He said it was important to be observant of changes in the environment because all environments are connected and changes affect future generations.

Plenary Session

ANS in Alaska –

(Denny Lassuy, U.S. Fish and Wildlife Service, and Bob Piorkowski, of the Alaska Department of Fish and Game (ADFG))

Lassuy observed that the huge size of Alaska presents huge challenges. Aquatic invasive threats to Alaska include: mitten crab, green crab (not yet in Alaska waters) but of concern because they are particularly vulnerable in the short transit time of ballast water; Eurasian watermilfoil, New Zealand mud snails (not in Alaska yet) but of concern; Northern Pike – native North of Alaska Range, not native in southern waters; Atlantic salmon.

[See slides]

Green crab: Some sampling has been done in Southeast Alaska.

Northern Pike: Very efficient predators – (agenda item later)

Eurasian watermilfoil (plant) – present in Lake Hood, Anchorage – a float plane port with traffic that goes all over the world -- non-native species could be brought in through this mechanism.

Atlantic Salmon: Alaska revolves around salmon and anything that is a potential threat to its native wild salmon is of concern. Some escapes have occurred from fish farms in Washington and British Columbia. A risk assessment study is underway to study the potential for invasion of Atlantic salmon from escaped stocks.

New Zealand mudsnails: Not yet seen in Alaska.

Crayfish showed up in 2004 in the Kenai River system. Alaska Dept. of Fish and Game found the individual who put the crayfish into the system. The department responded to the threat immediately. It is not yet known if this threat of invasion is over.

Terrestrial weeds: Orange hawkweed has begun to take over in the Kodiak National Wildlife Refuge. Lassuy said he worked with the refuge for the eradication of this weed.

Rats: Norway Rat – most were introduced via ship wrecks and have invaded parts of Alaska in the Aleutian Chain. Rats have killed many more Alaska seabirds than the entire Exxon Valdez Oil Spill. They eat eggs, chicks and adult birds. They are starting to do eradication on some of the islands infested.

Bob Piorkowski gave a recent history and future plans at ADF&G invasive species program along with future planned actions. In addition, he described a successful eradication of an invasive species, yellow perch, in the Kenai area of Alaska.

The State of Alaska has been a member of the Western Regional Panel since 1998 though involvement has been limited due to lack of funds. An ANS Management Plan was developed and approved in 2002 with a program coordinator hired June 2003. Federal funding for initial program implementation has been secured. In addition to an intended strong education focus for the program, there will be regional coordination with local, state, and federal agencies. The Alaska Aquatic Nuisance Species Management Plan is the first step in an integrated NIS program in the state.

Immediate plans include: hiring an assistant coordinator with both program planning and a ballast water focus in Fall 2004, activating an ADF&G interdivisional team, and working toward developing a statewide ANS council.

[See slides]

Alaska Yellow Perch invasion – a success story. Yellow perch are not indigenous in Alaska though they can thrive and reproduce under the State's climatic conditions. A successful invasion by yellow perch is feared as it could do great harm to existing social and economic institutions which depend on healthy salmonid populations. Yellow perch would feed heavily on soft bodied salmon and have high reproduction rates. In April 2000, ADF&G received a report of yellow perch in a Kenai-area lake from a retired conservation officer. ADF&G decided to eradicate that invasion. Rotenone was determined to be the method of choice but it required a lengthy approval process through several state agencies and the Board of Fisheries along with training for ADF&G personnel in its application. Rotenone is a restricted pesticide in Alaska so those who apply it need training and certification. After jumping through all the hoops, ADF&G successfully applied Rotenone to the infected lake in September 2000. No yellow perch have been reported since the eradication efforts. While the process of getting permission to apply the piscicide was lengthy and included advertising the plans, there was criticism from legislators that the public wasn't sufficiently involved in the process as there is fear among the public regarding Rotenone. Because future applications of Rotenone for another problematic invasive species (northern pike) in parts of Alaska may be called for, ADF&G is in the process of developing an invasive pike management plan that lays out both the public and government protocol that must be followed before a future eradication action is allowed.

WRP Project Updates

Cross Boundary *Spartina* Control and Eradication – (Kevin Anderson, Puget Sound Water Quality Action Team)

[See slides]

This project involved eradication and control of *Spartina angelica* in Boundary Bay on the US-BC, Canada border. This species invades rapidly, disrupts salt water ecosystems and critical habitat. The *Spartina* infestation in BC can reinvade Puget Sound. By controlling in BC, they have successfully managed an invasion in Skagit County, Washington.

Spartina angelica is found in the mudflats and in a vegetative marshland environment.

The effort included a lot of outreach, recruitment of volunteers, and GIS mapping of the infested area. Methods of eradication were hand pulling and mechanical control of clones and seedlings. The removed plant and roots were put in black plastic bags and then incinerated.

The \$2,500 WRP money leveraged the interagency cooperation and equipment, got \$23,000 in new BC funds and \$12,000-14,000 in matching funds.

Results: established a protocol for eradication and control.

Next steps: continue monitoring, re-treat as necessary and evaluate alternative treatments.

Estuarine Database -

(Joan Cabreza, EPA, presented on behalf of Henry Lee)

Cabreza explained the species database that has expanded to 460 invasive species in Washington, Oregon and California. The work continues to expand. The database now lists all the estuaries where a species is located – and is available in an Excel file. Some things are still missing, including Q&A from grey papers.

[See slides]

An alpha version of the database was demonstrated and is available for testing by those interested. Henry Lee is interested in comments from WRP participants of what they would like to see that is not included in the database. A beta version is expected by December 2004. They will be looking for people to do beta testing in early 2005.

Educational Material Catalog on Searchable Database -

(Robyn Draheim, Portland State University)

Draheim presented a searchable database to coordinate outreach and published materials. It presently has 120 records and is searchable. The next step will be online publication of the database which will allow instantaneous review of the catalogued material and will allow expansion of the catalogued material. The database will be maintained in MS Access. New features will be added to the database as it is published on line, allowing for easy expansion, images available for many materials, URLs linked for easy download when available, and online submission of new materials availability. Users who want to submit new materials will be required to register with the site and there will be a review and approval procedure for the submission. The online version will be available for testing by the end of September 2004. Volunteers to do beta testing were encouraged.

Joint Western Governors' Association Project-

(Scott Smith, Washington Dept. of Fish & Wildlife)

Progress is being made working with states to implement programs to address invasive species using the WRP "Recommendations of State Actions." The WRP

sent a letter to the Western Governors' Association to ask for assistance in presenting an ANS resolution at their summer meeting. A resolution was passed (copy in meeting packet). One aspect of the resolution was that "the Western Governors Association shall convene an Aquatic Invasive Species Working Group to develop, fund, and implement a comprehensive program to prevent the spread of aquatic invasive species in the water resources of western states."

The Western Association of Fish & Wildlife Agencies also passed a resolution encouraging its member states to adopt the recommendations of the Western Regional Panel (copy in meeting packet). The result is to bring all the western governors and the fish and wildlife agencies together

A grant is being sought to implement the charges in the resolutions.

Member Reports

(Facilitated by Bob Piorkowski)

Susan Ellis thanked outgoing Chairman Scott Smith and Vice Chair Jim Athearn. Both received engraved Leatherman tools.

Tina Proctor announced the following changes in WRP representatives:

New members: Linda Drees – National Park Service

Robert Leavitt, new alternate representative for California

Robin Knox, new representative for Colorado, replacing Gary Ziba.

Eileen Ryce, new representative for Montana.

Pat Lim has moved onto another job.

Kathy Hamel, new representative for the Western Aquatic Plant Management Society

Karen McDowell – co-chair of the work plan committee – San Francisco Estuary Project.

(Written member reports were submitted before the meeting. The reports are available as an appendix to the Minutes as a separate document.)

Paul Heimowitz for FWS, LCDR Keith Ward for USCG, Joan Cabreza for EPA, Bob Piorkowski for Alaska, Al Van Vooren in place of Fred Partridge for Idaho, Jeff Shearer for South Dakota, Dr. Earl Chilton for Texas, Susan Ellis for California, Eileen Ryce for Montana, Karen McDowell for the San Francisco Estuary Project, Kevin Anderson for the Puget Sound/Georgia Basin International Task Force, each presented brief highlights of their written reports.

Non Member Reports/Public Comment

Doug Jensen, University of Minnesota Sea Grant gave a report on activities in Minnesota. The *Aquatic Invasive Species: Hazard Analysis and Critical Control Point Program* curriculum originally developed by the Great Lakes Sea Grant

Network to eliminate the risk for spread of aquatic invasive species (AIS) by aquaculture, wild baitfish harvest, and fish hatcheries has been adapted for fisheries management, researcher, and conservation officer activities. A new curriculum booklet is about to go to press – stay tuned. Based on surveys, over 95% of Minnesota boaters and anglers are taking actions at water accesses to prevent the spread of AIS. Zebra mussels remain only in two inland lake locations, one in a tributary that flows into the Mississippi River. Spread of Eurasian watermilfoil continues to be slow. These outcomes strongly suggest that public education continues to prevent the spread of AIS. Salt cedar was found in an abandoned mine pit and has since been eradicated by DNR. A pond on the University of Minnesota Duluth campus where koi, goldfish and other AIS were found was drained. Residual standing water was treated with rotenone and the AIS were eradicated.

Challenges of Managing Ballast Water In Alaska

(Tom Colby of Alaska Tanker Company, and Catherine Huot, U.S. Coast Guard)

Alaska Tanker Company has a fleet of eight ships currently in the TransAlaska Pipeline Service (TAPS) trade, of which one is out of service and three have double bottoms. The double-bottom tankers will be out of TAPS service in approximately six months because of Oil Pollution Act of 1990 (OPA 90) retirement dates. There are five tankers in Alaska Tanker Company's fleet with "J" ballast tanks.

Colby explained recent testing of ozone treatments on ballast water and the challenges with different classes of vessels and different designs of dealing with ballast water exchange. In the new vessels, it is intended that all of the functions can be done from the wheelhouse during the ballast water exchange.

Alaska Tanker Company is presently testing ozone treatment to clean water and kill organisms in ballast water. Ozone has never been used on board ships in the treatment of ballast water. The testing is presently being conducted on the TT/V *Tonsina*, a 125,000 dwt tanker. The challenge is to pipe ozone into diffusers all the way through the "J" tanks and ensure that it kills all the organisms. Testing is ongoing, both chemical and microbiological.

The focus of the next stage is engineering and the need to reduce installation costs once the effectiveness of the ozone treatment is proven. The focus will also be on obtaining U.S. government grants for additional funding. Congress awarded Nutech O₃ a grant. Full-scale testing will be performed during the first and second quarters of 2005 aboard the T/V *Prince William Sound*. Final published results are scheduled for the third quarter of 2005.

Catherine Huot, USCG-Valdez, stated that USCG wants to see that the risks are defined (by the stakeholders) and USCG will define the performance standards to mitigate that risk. USCG wants to see industry be innovative to meet the risks.

LCDR Ward added that a draft EIS is being developed. On treatment technologies, the USCG is presently asking for public comment on what effective treatment technology is and how effectiveness should be measured. USCG is also looking at what are acceptable standards for zooplankton.

New Zealand Mud Snails

Billie Kerans of Montana State University made a presentation on current research on New Zealand mudsnails

[See slides]

The New Zealand mudsnail is a very small snail (5-7 mm). It can disperse long distances and can survive outside of water for some lengths of time (up to 20 days in damp media). How it travels is not known, but it could have been transported in ballasts. It is a freshwater snail but can live in brackish water as well. Humans and animals can also transport it on fur, clothing, equipment or boats. It can float on vegetation and downstream dispersal is a problem. It invaded Europe in the 19th century and spread all over Europe. It was first found in North America in the Snake River in mid-1980s. The biggest infestation is in the Greater Yellowstone Park area.

Most invasive populations are primarily female and clonal. They brood internally and are fully functional at birth, so it naturalizes very easily.

It is tolerant of abiotic conditions. Population densities in some areas are greater than 200,000 per square meter on cobble in Greater Yellowstone. They can dominate macroinvertebrate assemblages.

New Zealand mudsnails eat the algae on the rocks that are the food sources of other benthic macroinvertebrates. Populations may reduce food resources at the bottom of the food web and may compete with other macroinvertebrates. They compete with other grazers in small-scale experiments. However, the evidence of effects is not strong from the field. The New Zealand mudsnail has a hard shell and may not be good resource for fish. It is not eaten by fish, and there is not statistical significance in the fish growth rates in areas where there are New Zealand mud snails.

Conclusions: They continue to spread rapidly and will probably be found in many aquatic habitats. There is evidence from small scale experiments that it will have a negative affect on other macroinvertebrates. Evidence from larger-scale surveys shows little effect on macroinvertebrates, but some reduction of periphyton. Evidence appears to indicate that fish do not eat New Zealand mud snails. Future focus will be on how to control the spread and protect sensitive areas, clearly define habitats at risk, determine the effects to native biota, and the mechanisms of control.

WRP Recommendations to States – Update

(Tina Proctor, Panel Coordinator)

Tina Proctor updated the Panel on the WRP recommendations to States. She noted that there is some overlap in the areas of the ANS management plan regions. There are presently five states with approved ANS management plans.

1. Appoint a State ANS or Invasive Special Coordination:
Alaska, Oregon, Washington, California, Montana and Kansas have full time coordinators
2. Establish state ANS or Invasive Species Committees:
Washington, Oregon, Utah, Idaho, Montana have established state ANS or ISC.
3. Create a State ANS Management Plan:
5 states have ANS Plans: Washington, Oregon, Montana, Alaska, Hawaii
5 have draft plans: Arizona, California, Idaho, Kansas, North Dakota
4. Appoint a Representative to the WRP
Idaho, Nebraska and Hawaii do not yet have an official designated representative to the WRP.
8 states have representatives but funding is inadequate.
5. Provide a Long-Term Stable Source of State Funding
Montana is funding to match the ANS funding monies, but stable funding is a problem for nearly all the states.
Only 5 states have partial funding.
6. Implement Programs to Prevent the Spread of Invasive Species from Boating.
Proctor suggested the need to include Canadian provinces on the maps.
Full participation along the 100th meridian.
7. Create a State early detection and rapid response, etc.
Only 4 states have plans for specific species, but are not fully funded.
All others do not.
All states that are developing an ANS plan will have to have a rapid response plan as part of the ANS plan.
8. State authority to designate water that contains invasive species.***
6 states have authority are designating waters as “infested” or as “water quality limited”: Washington, Oregon, California, Nevada and Montana.

9. Implement a Non-native species classification program
5 states have screening and classification system with multiple categories:
Washington, Oregon, Nebraska, Montana, Hawaii
It was noted that Alaska has a screening and classification system, i.e., in that all importation has to be by permit.

Reports from the Other Regional Panels

(Tom Mosher reported on the Mississippi River Basin Panel.)

[See slides]

The MRBP has met twice in 2004 and is in its infancy. Membership is 46 plus alternates, 21 interested parties, Total of 71 in coordination directory. Have same interests generally as those in the WRP.

Asian carp (silver and bighead carp) are the top basin-wide ANS problems, followed by the zebra mussel. Other priority species of the sub-basins are: round goby, Eurasian watermilfoil, hydrilla, white perch, NZMS, and others.

Mosher said there is a need to develop a database of experts and research
There will be a risk assessment workshop at the next MRBP meeting.

They would like to recommend to the ANS task force that the ANS Task Force place a high priority and strong focus on prevention – especially on introductions into the country, as well as interstate, inter-basin, and intra-basin spread of ANS. The MRBP would like to see a strong screening process of all imports. States are limited in their responses to international and interstate commerce, as well as funding projects outside their borders, so federal leadership and funding is needed in several areas.

The MRBP recommendations to the ANS Task Force include:
that the Task Force and regional panels should continue to seek coordination across panels, such as joint panel meetings of adjacent states; national prohibitions (with listed exceptions) on transport of aquatic plants; establishment of a national contingency fund for rapid response, so that not all the burden falls on a state that may have been brought about by the cross-border infestation from another state or an individual.

San Francisco Bay Delta Invasive Species Database

(Ted Grosholz, University of California Davis)

Ted Grosholz demonstrated a new Access database specific to the San Francisco Bay Delta region. It was extracted from the SERC database and made specific to their region. It will be available for beta testing soon.

He said he would not want to see ten or so different databases, but would hope that this database, as with others, become part of a national database that is accessible and have the same information.

September 9, 2004

WRP Business Meeting – Al Van Vooren, Vice Chair

Al Van Vooren called the meeting to order at 8:10 a.m. He thanked PWSRCAC for hosting the meeting and Marilyn Leland and Adelheid Herrmann for the previous evening's social event at the Alaska Heritage Center. He thanked all who put the agenda together, and Tina Proctor, Coordinator.

Van Vooren announced that there were 25 voting members at meeting.

Motion and second to approve the Minutes of September 9-11, 2003. The motion passed.

Van Vooren reported that the Executive Committee met during the year and minutes were on the website. Also the email for WRP panel members is wrp@water.ca.gov

2004 Budget Report

A 2004 budget report was distributed. There was a \$50,000 appropriation from USFWS to WRP. The funds are being managed by the Pacific States Marine Fisheries Commission to allow carryover of funds from year to year. Total projects approved \$40,000. Not all funds were spent, but money will carryover. There was \$10,000 carryover from 2003. \$11,000 went to travel of members to attend meetings. \$2,500 for 2004 annual meeting costs. \$6,500 remaining to be used for pamphlet "Threats to the West" brochure.

Discussion of membership issues/requirements

Tina Proctor led a discussion of membership issues and went over the membership requirements. She reported that there was presently 56 voting member positions, of which 49 were presently filled. Idaho, Nebraska, HI, Guam, the Mexican Federal position, the Bureau of Reclamation, and the at-large inland position were all open at the present time.

The voting positions for tribal regions and other interests are four-year terms.

At the fourth year WRP meeting, the Panel shall reappoint or select a new representative. FY2005 will be the fourth-year Panel meeting, so decisions will have to be made at that point. The Executive Committee will also be elected in 2005. There are eight members on the Executive Committee, and they are all elected at one time. Members can serve for more than one term. She asked present members to start thinking about whether they want to serve for an additional term.

The Chair and Vice Chair are elected every calendar year. For 2004, Sue Ellis was Chair and Al Van Vooren was Vice Chair. They may be re-elected for a subsequent term. Elections are to be held in January of each year.

Blaine Parker asked how the Guide to Procedures may be amended if new members were to be included. He was particularly concerned that only four members of tribes are represented, whereas in the western region area there are potentially hundreds of tribes who control large areas of land that are and could be at risk for non-indigenous species invasions. It was suggested that he and Adeleheid Hermann work together to flesh out the issue during the next year.

Old Business

Selection of Work Plan Committee work – (This was a separate agenda item to follow business meeting.)

New Business

No new business.

Mark Systma moved to adjourn. Joan Cabreza seconded, and the motion carried.

[This concluded the business meeting.]

Work Plan Committee Presentation –

(Facilitated by Karen McDowell and Tom Grosholz)

Karen McDowell explained that \$30,000 in funding was available at the start for 2004. The PSMFC administration takes 15%, leaving \$25,500 approx. to fund small projects. Committee agreed with PSMFC to limit the number of projects to three. The committee was now working on formalizing the process.

The committee was limiting the funding to between one and three projects of \$5,000 minimum and \$25,500 maximum. McDowell listed the WRP Priorities. Favorable qualities of the proposals considered were availability of matching funds, seed money and low overhead. Proposals were open to application from non-members with member support.

The task before the WRP was to select the projects to go forward from the nine submitted. Each proposer was given three minutes to make his/her proposal, followed by short discussion period. Each proposal was documented and summarized in a handout. (*See handout for details.*)

The Panel discussed the benefits of each project to the WRP. Conflicts of interest of WRP members voting for proposals in which they had an interest were also discussed. It was agreed that with such a small group and a modest

amount of money involved, any conflict of interest was insignificant. However, it was also agreed that the work plan committee come up with more recommendations for resolving conflict of interest issues for the future.

It was agreed that the voting procedure would consist of each member having three votes, regardless of whether they had a proposal on the table.

An open discussion followed on the proposals:

Summary of voting on project proposals

| | For | Cost of proposal |
|------------------------------------|------------|-------------------------|
| WA/BC Rapid Assessment | 17 | \$ 5,000 |
| Mexico hull fouling | 9 | |
| Non-native brook trout | 0 | |
| ANS early detection/watersheds | 16 | \$10,000 |
| Zebra mussel in the El Dorado | 5 | |
| Zebra mussel in Missouri River | 2 | |
| NZMS biota factors | 8 | |
| WGA video | 6 | |
| Plant Research priorities workshop | 14 | \$ 5,750 |
| | Total: | \$20,750 |

Since the work plan committee limited the selection (at the request of Pacific Marine Fisheries Commission) to no more than three projects, it was agreed (22 in favor) that the remaining funds (\$4,250) be divided between the three projects. The Executive Committee will distribute as needed the remaining funds, taking into consideration whether the winning proposals receive the matching grants anticipated in their respective proposals. Note: Since the meeting, the Executive Committee has decided to give the remaining funds to the number 4 project, Mexico hull fouling.

100th Meridian Initiative Project Updates

Zebra Mussels in the Missouri River

(Jeff Shearer, South Dakota Department of Fish, Game and Parks)

Jeff Shearer gave an overview of the zebra mussels in the Missouri River and what states are doing to date about the invasion.

[See slides]

There was a rapid expansion of zebra mussel populations from 1988 to the mid-1990s in the Great Lakes area. In 1999 one shall was found near Sioux City, Iowa. SDGFG contracted with Larry Hesse to look for zebra mussels in the

Missouri River. No adult ZM were found. Veligers were found below Ft. Randall and Gavin's Point Dams.

SDFGP approached hatcheries and reviewed their protocols to make sure that no veligers are transported between lake and river waters. Fisheries sampling gear protocols were modified to prevent the spread of zebra mussel veligers. The department focused on outreach and education efforts on zebra mussels throughout. The department is continuing to monitor and sample through Larry Hesse and the department's own efforts. Very remote areas of South Dakota make intensive sampling difficult.

An action plan will be established for the Missouri National Recreational Reach which is based on the St. Croix National Scenic Riverway Plan. A zebra mussel awareness day was instituted at Lewis & Clark State Park, which offered free boat/trailer power washes and public awareness was raised through media announcements and "Zap the Zebra" brochure.

Zebra Mussels in Kansas

(Tom Mosher, Kansas Wildlife and Parks)

[See slides]

Zebra mussels were first found in the El Dorado, Kansas, in August 2003 in colonies of approximately 55 per sq. meter and most less than 10 mm. Veligers were found through the lake and in the spillway of the El Dorado in September. Mussels were found in 17 ft of water in October. They were found throughout the lake in September 2003.

A stakeholders meeting was held in October 2003 to line out what could be done in the reservoir and come up with a unified message for the public from that point on. A lake draw-down was proposed to kill zebra mussel along the shoreline. Only 3.5 feet was done in mid-December because public sentiment would not allow further depth. The objective was to kill the zebra mussels by drying and freezing along the shorelines and to determine the extent of the population. A public meeting was held on November 18, 2003, but it was not well attended by the public. A Zebra Mussel Response Team meeting was held the following day, attended by various agencies and stakeholders and they discussed surveys needed to be done, rapid response, etc. (See slides)

The draw-down was completed by December 23, 2003. They found populations higher than forecast, a lot more extensive, and slightly larger in size. Indications are that some of the mussels were as old as three years and as big as 25 mm.

2004 activities included: Post signs on the reservoir and, beginning in April, began zooplankton tows to get some idea of the amount and densities. Samples were taken from three veliger sites in the spring. Other signs have been added

to the initial ones and given to all mariners and marine park operators. Leaflets are placed on windshields of vehicles in parking areas. The Kansas Department of Health is doing the monitoring at the sites.

Results in 2004: Veliger samples at El Dorado were higher than in September 2003. No veligers were found in late April but were present by late May. Densities peaked in mid-June and declined thereafter through November; December samples were negative. Zebra mussels were found on native species of mussel, and all along the shoreline, and in the previous year's draw-down area. Because water from the reservoir is released frequently by the Corps of Engineers, veligers have been found in the Walnut River below the reservoir, and veligers were discovered in Kaw Reservoir, OK during the summer.

Assessing the Potential Ecological and Economic Impacts Of Zebra Mussels to Western River Systems

(Jon Brossenbroek, Univ. of Notre Dame)

Jon Brossenbroek presented his assessment model of zebra mussels in the Colorado and Columbia River reservoirs.

[See slides]

There is a known threat in the Colorado and Columbia River watersheds and the potential economic and environmental impacts are large. Zebra mussels were discovered in May on trailered boats at the Washington-Idaho border and in Lake Mead. The model looked at the prediction of the potential dispersal of zebra mussels based on the current distribution of zebra mussels in the US and 11 geologic and environmental variables. It looked at boater movement as a dispersal mechanism and tried to quantify it.

Conclusion to date: Zebra mussels are not marching across the landscape but their range is still expanding. Initial expansion was due to shipping traffic. Recent spread is the result of recreational boater movements. The probabilities of spread by recreational boating in the areas studied were predicted to be low but not zero.

Brossenbroek is now looking at what thresholds need to be crossed to trigger control and prevention efforts. That information should be available within a year. The project has one more year to go before completion.

NAISA Status/Implementation

(Allegra Cangelosi, Northeast-Midwest Institute)

[See slides]

The most recent authorization of federal statute concerning aquatic invasive species (NISA 1996) expired in 2002. Comprehensive reauthorization legislation was introduced in 2003/04 (NAISA) and various congressional committees are holding hearings. Most recently the Senate Commerce Committee held hearings on SB 2490 would reauthorize the ballast water component only.

The IMO agreement has a staged implementation of a standard for ballast water according to the date by which a vessel entered service and by the ballast weight of the vessel.

Conclusions: At this late point in the congressional session and an election year, legislation will require bi-cameral and bi-partisan agreement to happen. A research bill and an IMO-like ballast bill are the most possible legislations, but not certain. Next year may make for better quality debate as IMO provisions are vetted.

Organizational Updates

ANS Task Force –

(Everett Wilson, Acting Secretary, ANS Task Force)

Sharon Gross has left the USFWS and joined the U.S. Geological Survey and Kari Duncan has been hired to replace her.

Wilson reviewed the changes being made as a result of May 2004 ANS Task Force Meeting in Missouri and the timelines for various submittals

[See slides]

Invasive Species Advisory Committee –

(Diane Cooper, Taylor Shellfish Farms)

Cooper reviewed the NISC's interagency performance budget, key documents on the website, and upcoming activities of the ISAC activities.

[See slides]

Canada: National Strategy to Deal with the Threat of Invasive Species

(Gary Caine, British Columbia Ministry of Agriculture, Food and Fisheries)

Caine made a presentation on the present efforts of the Canadian government to deal with aquatic invasive species in British Columbia and the history of Canada's attempts to deal with NIS issues in the past.

[See slides]

Exotic Freshwater Fishes of Mexico –

(Dr. Salvador Contreras-Balderas)

Dr. Contreras- Balderas reported that interest in ANS in the introductions of exotic species is just beginning in Mexico. He has been commissioned to do a book on the freshwater fishes of Mexico by the National Commission on Biodiversity in Mexico. He said there is a marked increase in exotics populations that arrived via various vectors. Several species have been introduced to the La Amistad Reservoir by both Mexico and USA. Neither Mexico nor the USA has consulted with the other side on the problem.

[See slides]

Worst case#1: *Hemichromis guttatus* – has invaded Rio Mezquires and eats stromatolites and some small fish, competing with the endemic chichlid (*herichthys minckleyi*).

Worst case #2: *Loricariids* group: have been released accidentally in Rio Balsas, Brio Grijalva-Usumacinta. Over 70% of Tilapia fish catch lost, 3,000 fishermen and 43,000 local inhabitants impacted, economic loss = \$12 million/year.

Special cases of NIS are that of fishes of lowlands, brackish or marine waters becoming established in upstream areas. These species compete, displace, or harm the local native species.

There is no regulation or enforcement of the intentional or unintentional introduction of non-native species from aquaculture operations in Mexico. Some introductions are from the public's release of aquarium fish into local streams.

Northern Pike Impacts on Native Fish –

(Dave Rutz, Alaska Dept. Fish & Game)

[See slides]

Northern Pike was first introduced in Alaska's northern river drainages in the 1950s to an area roughly the size of Indiana. The problem is the Susitna

drainage morphology. All five species of Pacific salmon reside in the river drainage and their paths will cross with Northern Pike. Many streams and lakes that probably had healthy populations of rainbow trout and salmon are now exclusively Northern Pike. Some public love them and some hate them, and some feel ADF&G should manage Northern Pike as a sport fish. After a flood, they spilled over into all the northern streams of Cook Inlet. Presently there is no bag or possession limit for Northern Pike. ADF&G is presently studying and evaluating the impact of Northern Pike on salmon populations. It does provide an enormous growth as a sport fishery, but a problem in how to manage this invasive species. The study's goal is to provide managers the necessary tools to deal with Northern Pike. Radio telemetry is being used to track the species.

Study findings suggest Northern Pike is selective and will take salmon over sticklebacks and others species as food source of choice.

Habitattitude -

(Doug Jensen, Minnesota Sea Grant)

Jensen gave an overview of "*Habitattitude*TM", a new national public education campaign created by the Pet Industry Joint Advisory Council (PIJAC), U.S. Fish and Wildlife Service (FWS) and NOAA's Grant Lakes Sea Grant Network aimed at preventing the release of fish and aquatic plants by aquarists and water gardeners into the environment. The campaign is scheduled to debut at the SuperZoo Trade Show in Las Vegas on September 23, 2004.

There is an increasing frequency of aquatic plants and fish and other animals associated with the pet industry being found in the environment. Most hobbyists are unaware of the impacts a release can cause. *Habitattitude*TM is a proactive, nationally branded campaign targeting aquarists and water gardeners and providing a solution to meet the challenge that focuses on public awareness, engaging people and promoting unifying environmental messages with corresponding beneficial actions. All segments of the industry are part of the solution. The program gives alternatives to release, and may be modified as the campaign rolls out. Jensen welcomed suggestions from the WRP on the project. To date, PIJAC and its members have contributed \$1.1 million to the project. USFWS has contributed 100,000, and Sea Grant has contributed \$300,000.

Over the coming year the program will be visiting trade shows and retail stores and distributing materials through distribution networks. Interested regional panels, federal, state, and tribal agencies, academic institutions, businesses, and hobby clubs and societies can join the campaign. By joining, partners can help to promote unifying prevention messages aimed at protecting and conserving our water resources. He invited the WRP to be the first regional panel to become a member of *Habitattitude*TM.

Motion by Anita Schall that the WRP endorse and support the *Habitattitude*TM program. Seconded by Karen McDowell. There was no discussion. The motion passed unanimously.

Latent Invasiveness-

(John Chapman, Oregon State University)

[See slides]

Invasion rates of ANS are increasing and impacts are increasing and states do not have enough resources.

Chapman gave an example of the periwinkle snail (*Littorina littorea*) that showed up in Pictou, Nova Scotia in 1840. In 160 years, the population migrated down the East Coast to New Jersey before it was studied. Fifteen fossil shells that were pre-Columbus were found in Nova Scotia. Two shells were from the only Viking campsite in North America and it is thought the Vikings brought the snails with them. Solid ballast was introduced in 1840. It is thought the snails probably moved down the coast with the shipping trade through the ballast mechanism. *Littorina littorea* is the oldest introduced invasive species in North America.

Every introduced species are vectors, are significant, and every population has the potential to explode long after introduction. In the case of the periwinkle it took 800 years. The impact of introduced species is often underestimated.

Public Comment

Bob Piorkowski commented on fin-fish farming. Alaska has taken a stand against fin-fish farming. He applauded British Columbia for its efforts to prevent escapes from their farms, but a fish farm will be very close to Alaska soon and is of concern. ADF&G is looking at how to protect Alaska's wild stocks.

Everett Wilson addressed the issue of sport fishing tournaments and zebra mussels. He reminded people that the Lacey Act (federal) can be enforced against boats coming from outside a state (with regard to controlling zebra mussels invasions), even if a state does not have its own regulations.

Dave Rutz clarified any misconception from his earlier comments about Alaska salmon populations with the reassurance that 90% of salmon stocks in Alaska's Susitna drainages are in clear tributaries, and most of the salmon populations in the Susitna drainage system are at all-time highs.

Next Steps for WRP/Location of Next Meeting

Next meeting -- Wichita, Kansas

It was suggested that the Mississippi River Panel attend and have a joint meeting with the WRP and to include a field trip to the zebra mussels in the El Dorado reservoir.

Adjournment

The meeting was adjourned at approximately 4:30 p.m.

Friday, September 10, 2004

Dave Rutz, ADFG led participants on a field trip by airplane to see the impacts of Northern Pike.