Invasive Species Conference Proceedings

PNWER Annual Summit - Anchorage Alaska

July 17th, 2013

**Co-Chair**Rep. Eric Anderson, *Idaho*

**Co-Chair** Dr. Mark Sytsma*, Associate Vice President for Research, Portland State University*

**Speakers:**

Kristine Dunker*, Alaska Department of Fish and Game, Sport Fish Division*

Brianne Blackburn,*Alaska Department of Natural Resources*

Matt Carlson*, Assistant Professor & Program Botanist, University of Alaska Anchorage*

Tammy Davis*, Invasive Species Program Lead, Alaska Department of Fish and Game*

**Introductions**

Update from PNWER jurisdictions:

Alaska – Collaboration has improved; as increase awareness, receive more reports of invasive though it is hard to follow up on due to geographic challenges; elodea (AK’s first fresh water submerged invasive plant) is a priority for ADFG, ADNR, ADEC - MOU adopted

Idaho –priority is quagga/zebra mussels (watercraft inspections) - also inspect for aquatic plants

Oregon – 2001 created OR Invasive Species Council; 2009 created a fee for quagga mussels – 51 decontaminations; weed funding included in state budget; an emergency response fund is something unique to Oregon; swine eradication; Declaration of Cooperation recently signed with regards to quagga mussels; trying for a full eradication of tuna kit on OR coast; “Eradication by Mastication” – summit

Montana – Bill recently passed leg that funds aquatic invasive program to set up check stations around the border; Eurasian watermilfoil also a concern

Washington – check stations for the quagga mussels are a focus – working with transportation for commercially hauled boats; working with local governments; bill in legislature recently passed to pursue “Regional Passport”; WDFG is asking for more funding in the WA legislature next session

Alberta – Huge step forward with transition of focus to vectors and pathways of spread; aquatic invasive have also seen a huge step forward – training to recognize species, working on legislation for funding, collaboration with non profits and other government agencies, pilot inspection program began this year, 7 boats have been identified and decontaminated; awareness amongst key decision makers for funding is a major concern

British Columbia – aquatic invasive program has taken off; early detection rapid response plan for all species, previously it was just plants; certification program for horticultures industry; local government tool kit for bylaw adaptation; lack federal regulation to prohibit bringing contaminated boats into Canada; free range border throughout Canada is a challenge

The Northwest territories – no one present

Saskatchewan – Forest insects is where the majority of invasive focus is

Yukon – no one present

Alaska and Northern Pike Eradication: A success story

Kristine Dunker talkedabout removing Northern Pike from South central Alaska. In the Late 1950s pike were illegally introduced and are now in over 120 water systems in south central Alaska. This is problematic because the pike is a top predator that uses sit and wait ambush technique and is an opportunistic feeder. The habitat of the pike also overlaps with that of rearing salmonids causing fishing decline. Outreach is important to help mitigate the issue, it is important to increase sport fishing harvest, public awareness, and preventing future intros. Scoring matrix can be used to identify priority projects. Alexander Creak was a productive salmon fishery prior to 2000 but pike discovered the lower river in the late 1990s and salmon numbers crashed. The fisheries are now closed. To remove the pike large scale annual gill net programs have begun to remove as many pike as possible. This method has been affective. Eastern Washington’s Box Canyon also aims to reduce pike through angler harvests, pike derbies, and targeted gill nets. This effort is aimed at preventing the spread of pike down the Columbia River. Rotenone is a chemical used to eradicate fish by blocking the biochemical process for fish to utilize rapid oxygen absorption. Rotenone is a commonly used tool that has an extensive permitting application in Alaska in addition to federal process. The project preparation includes water quality monitoring, bio inventory, fish removal. Rotenone was first used in 2008 and treated Arc Lake on the Kenai and Cheney Lake in Anchorage. Both lakes were successful and are now restocked with trout. There are also future projects at Soldotna Creek and Otter Lake.

* Native to much of Pacific Northwest region, including most of Alaska
	+ Distribution can be explained by historic glacial spatterns
	+ Environmental DNA
		- Water samples can be used to detect aquatic species in low abundance
		- Pursuing this project for better pike detection

There are further steps that can be taken such as updating the management plan, continue prioritization, education, outreach, eradication efforts, control efforts, protect fisheries, and prevent spread. Outreach to the public is a constant challenge, but it is extremely important. Pike have a minimal salinity tolerance, but it is not believed that this is the reason why they are moving.

Invasive Weeds

Brianne Blackburn talked about how Alaska is developing to be less isolated with evolving pathways, transportation corridors, and increased visitors. Onechallenge facing Alaska is size. There are many diverse ecosystems and policy implementations that are statewide may not cover all of them. Logistics is another issue with 586,400 square miles of land and over 30,000 miles of shoreline. With increases in technology we may be better able to combat these challenges.

A rural/urban interface is also important with vector management and an emphasis on education. Alaska is currently in a “lag phase” of introduction and detection and there is a lot of room left for prevention efforts to be put in place. Alaska’s first invasive aquatic plant was elodea which had no records of being in the state prior to 1982. Elodea has brought many user groups and stakeholders to the table. It exists in lakes utilized by sea planes which can easily spread it to anywhere in Alaska. Currently the state is in the process of gathering more data. Messaging is challenging because elodea is native to many other places in the Pacific Northwest. There needs to be a management plan and policy put in place to prevent the spread of this invasive species.

Challenges and Successes in Information Sharing

Matt Carlson from the University of Alaska Anchorage alsodiscussed the transportation of species. Species are being moved around the planet at a rate much greater than what we have ever seen. Flora and fauna have entered an age of globalization just like economic globalization. But invasive species are costly to deal with and cause economic problems in certain cases. Currently there are patterns emerging in Alaska and the Yukon. While in the past most lands were not impacted by non-native species, this is changing. Between 1968 and 200 approximately three nonnative plant species were gained per year. Between 2000 and 2013 that number rose to five nonnative plant species a year. Intact biological resources are incredibly important in this region and management of invasive species needs to take top priority. Again Alaska is in a “lag phase” and information sharing is crucial because it allows new invaders to be identified before the population erupts and control becomes more of a challenge.

Early detection and rapid response are extremely important. There are new resources emerging like the publically available geospatial database (<http://aknhp.uaa.alaska.edu/maps/akepic>). Each point on the website represents the discovery of an invasive plant species in the Alaska and Yukon Territory. It also includes information on individual species and identification of potential new invaders and corridors. There are now many data sharing partnerships such as the connection between the Alaska Natural Heritage Program, Yukon Invasive Species Council, US Forest Service, and many others. There are also challenges with funding, logistical constraints, communication, and the ability to set effective control measures in place/management plans and priorities. The Salmon Lake Campground is the only Bureau of Land Management campground in the US without nonnative plants.

Expert Panel on Invasive Species and the Border

Kara Cornum works at U.S. Customs and Border Patrol which has an agricultural academy for their agricultural specialists and the CBP also has a career track for agricultural inspectors. CBP officers assist the agricultural specialist who does the detailed inspections. Smaller ports may refer products to a specialist 24/7. Also vessel crews are given posters to help with the identification of species that should not enter the country. Alaskan ports have found samples of AGM egg masses during routine inspections and ordered those ships out of port. Also ice covered ships have to be cleaned by the crews before they are allowed off of the ship. There was also an Alaska Firewood Survey conducted that looked at firewood that was coming into the state. Multiple agencies participated in this effort but nothing of importance was found. Pest Risk committees

* + DBP and APHIS host port and regional pest risk committees that include state and federal partner agencies.

Equipment that is covered in soil is not allowed in country. Here in Alaska the equipment is sent to Seattle to be cleaned before being allowed in. Since 9/11 there has been an increase of pests/insects entering the USA because of more emphasis on terrorism. The creation of DHS meant that CBP was given agriculture as part of the organization. USDA and CBP can do inspections. But the two are not totally coordinated. CBP has increased the number of inspections and interceptions. Though no data from the USDA inspections is available to the CBP. Nome is the furthest North coastal inspection that Alaska has. Also, if ships don’t come up from foreign ports there is not the same authority. If the vessel comes up from a USA port it does not have the same level of inspection as ships coming from foreign ports. Along with this, recreational boats are not inspected by CBP for agricultural issues if coming from the USA. While people reentering the USA are always allowed in, but there is a chance that their boat can be denied upon entrance. While invasive species are not the primary function of CBP it has become one of their duties. Their primary purpose is still keeping out terrorists. Invasive species have been deemed more of a state issue. CBP trains its officers and works with the states as best they can. But if a port does not have an agricultural specialist it will not have the same level of enforcement.

Lloyd Knight is an administrator at the Idaho Department of Agriculture and h is used to dealing with many different agencies in the USA. He talks about how the US is a t a crossroads with so many people traveling through the states. The highest risk traffic is not necessarily coming out of Canada. Idaho does 40-50 thousand watercraft inspections every year. Half the vessels that come through their stations are not destined for Idaho. Creating relationships between states to control the spread of invasive species takes a lot of work and time. Idaho learned the hard way that sometimes the best thing to do is to take care of what you can based on resources and statutes. Unfortunately the cleaning stations can only be run for so many hours in so many locations.

Quagga and Zebra Mussels: an update on regional efforts

Mark Systma, spoke about the invasion of Quagga and zebra mussels coming primarily from lakes Mead and Colorado. NDAM has to focus on area priorities when addressing concerns with these invasive species and regulatory and policy actions must be taken. There is a need to look at the current documents and regulations that are intended to control invasive species. Right now only zebra mussels are listed as a truly invasive species and getting others added takes five years. A bill has been introduced with both Republican and Democratic sponsors. It was introduced in the House Judiciary Committee where may not be the correct place for it. But the good news is the issue has been elevated and it is moving along. There is also, an emergency listing capable with the “slaughter bill.” This bill has a slim chance that it will pass but the end goal is to have listing of the mussel be accomplished quickly.

Another federal issue is the reauthorization of the invasive species act. No action has been taken as of yet, though an invasive species caucus has been started in the House. This just started. Brian Baird reintroduced HR 2732 to Stop Westward Aquatic Threats Act. There needs to be an effort placed to develop consistent messaging for targeted stakeholders and others that would be affected by the introduction and establishment of invasive mussels to raise awareness about the importance. Enhancement and improvement of timely communications about movements and inspections of high-risk watercraft in the West via the creation and the use of a database will help to establish a more productive system. This system would also captures information about water conveyances moored in infested waters. Unfortunately tracking watercraft can have privacy issues. There is, currently, no electronic database. But opportunities need to identify to generate funding for regional AIS preventions efforts. These could included things like developing a list of organizations at risk by subgroup and develop a shared vision and messaging. Hosting legislative hearings in states could also help to address the problem. Focused attention, efforts and strategic investments on water conveyance inspection stations on the southern and eastern borders of the Pacific Northwest is another way to help alleviate the problem. States could also conduct research to determine the number of trailered watercraft traveling on roadways/launch sites and determine the percentage being intercepted.

**The future of Federal Activities Panel Discussion: Legislative challenges in Invasive Species Control**

* Mike Cuffe, Montana—Perimeter protection passed by Montana. Idaho will pick up some of the checks they can’t do. HWY 93 has a boat check station. One of the better stations because of being co-located with CBP. Trying to develop a good working relationship across the Northern Border. Flathead Lake people wanted their own station and they came up with their own station/funding. New Zealand mud snail is starting to pop up in the state. From a general novice knowledge. We need a regional approach to be effective. We need a good regional response team that can help. It is like a wildfire and those start small. We need to catch it early and eradicate it before it can be established. Better education is needed. We need better marketing; “Inspect, clean, drive” doesn’t work. We need to get the word out at every opportunity. We need a good documentary done that talks to this issue.
* Bruce Chandler, Washington—Yakima area. Senate bill 5702 passed and signed by the Governor. There is now a special account for invasive species. Need to protect the funding. Once we start something we need to keep it going. “It is a siege and not just a single assault.” The trailer needs to be included too in inspections. A clearance from another states needs to be respected. We can get bogged down in the administrative process and we need to make sure the real world part is on track. Washington has dodged a lot of bullets, the “donut hole” in the Pacific NW. We need to protect the Columbia River basin. Coordination with Federal agencies is critical.
* Peggy Wilson, Alaska— Spoke on DVEX? Grows on rocks and sea beds and other manmade structures like nets, etc. It is expanding off the coast of New England. No way to eradicate it. Follow aquatic farm gear. It is sexual and asexual in nature. It has been found in Washington and B.C. Found in Sitka Alaska. If you are not prepared—this is what can happen. Some people call it marine vomit. By August of 2010 they had it identified. Alaska Fish and Game responded. The people of Sitka were very concerned. No funding was available. It was contained in an oyster farm. The US Fish and Wildlife Service contributed $85K to “investigate” the issue. Tides go in and out twice a day. In the Fall and Winter of 2010 there were educational sessions for a wide variety of agencies and organizations. January 2011 did a dive survey and hired someone to do a treatment plan. There needs to be aquatic removal of the species. By the next year, 2012 the aquatic farm was decommissioned. An RFP was put out with no responses. The RFP will need to go out again since the State’s contracting regulations first require RFPs to go out to Alaskan companies only. Lessons learned:
	+ Have a plan in place
	+ People are fearful of these types of events
	+ Get the word out
	+ Need a way to release funds for quick action
	+ Need a written plan and have it define who is doing what and who is responsible
	+ Look at your procurement laws so they don’t hinder action
* Bill K., Oregon—There have been some bills passed in OR. 2001 the OR Invasive Species Council was funded. A $5 fee was adopted for Zebra mussels. Adopted legislation keeping foreign wood out. Quick response before the Tsunami debris arrived. Prevented the taking of commercial hay to the wildland areas.
* Cal Dallas, Alberta—They are in the early stages of mitigation. Education and inspection and monitoring. There is collaboration happening between ministries and jurisdictions. Irrigation districts need to be involved. They are doing examination of boats. There is decontamination that is authorized. It is complimentary of actions being taken between Idaho and Montana. Seven boats have been intercepted, including a large boat. The boat was destined for the Yukon, but was de-conned. New regulations are expected in the coming year. They established a hotline and a slogan, “Clean, drain and dry.” Lots of good attention being shown on the topic by PNWER and good information being shared.
* Eric Anderson, Idaho—You can’t wait for the Feds or other states to do things. You have to yield authorship to those who know more. The use a lot of volunteers. Boy Scouts have used this as part of their program. Monitoring and quick action is needed. It is the Ag Department of Idaho that administers the program where in other states it is wildlife. The Federal government needs to be a better partner. They do not do things quickly. He has been a thorn in the flesh of federal agencies. He handed out a “passport” which would be a good way to brand the movement of watercraft.

Tsunami Debris

Peter Murphy presented on existing efforts to identify marine life that has survived the transit across the ocean from Japan on debris generated by the Tohoku earthquake of March 2011. However, not all life on debris is an invasive species. Ocean currents carry curtain kinds of debris across the Pacific which may also carry invasive species. Winter storm patterns generally drive debris in the northern Pacific Current towards the north and west, generally leading to more deposition in the winter in the Northwest, including Oregon, Washington, British Columbia and Alaska.. Federal, State and local agencies are working together to share information on debris-carried invasive species monitoring. Academic groups have also been important in the process. Experts from both Oregon State University and Williams College have coordinated identification, assessment and monitoring efforts. AIS Preparedness & Response Workshop held in 2012 also worked to address this problem. Moving forward, further development and information sharing in sightings data and reporting protocols will be beneficial.. Methods for record keeping are also important such as taking clear photos, recording lat-long, and good description of the object that are potentially affected. Small vessels and woody debris have also been reported. So far the large docks found in OR and WA carried the most species. Ongoing actions to identify and contain invasive species include sightings coordination, protocol updates, and information sharing.

Jesse Schultztalked about the Aquatic Invasive Species Unit whose mission is managing aquatic invasive species. Due to the Japan quake on March 11, 2011 an estimated 25 million tons of debris made its way across the pacific. Washington State quickly developed a Marine Debris Response Program plan to address marine debris coming from Japan. Japan gave the USA $5 million and $45 thousand was then given to Washington Department of Fish and Wildlife for response equipment. One of the most significant findings from the marine debris was five living Barred Knifiejaws (Oplegnathus fasciatus), a species of fish native to Japan, Korea, and China, were found in the open well of a 20 foot long boat when it washed ashore upright with an “aquarium” of water inside, which is rare.Another significant finding was a 185 ton concrete dock washing up in a very remote area along Washington’s coast line. The dock was decontaminated on site and then removed for an approximate cost of $500 thousand.

Action Items

1. Develop a white sheet on Marine Invasive Species Regional Response Plan and explore possible PNWER involvement in plan implementation/oversight
2. Investigate a PNWER Regional Compact for Invasive Species Prevention
3. Develop a PNWER Regional Noxious Weed List the identifies the Level of Invasiveness for each species
4. Implement a PNWERAquatic Invasive Species Regional Passport
5. Develop a Feral Pigs Regional Management Program
6. Develop a Long-Term PNWER Roadmap that identifies key regional pathways for invasive species introductions during the next 3-5 years
7. Encourage PNWER to sign on to the NDAM plan
8. Encourage Implementation of an Electronic Database that tracks movement of high-risk boats from waterbodies infested with quagga/zebra mussels
9. Assist PNWER in reaching out to Secretary Jewell, provide background on previous invasive species activities, and concerns for the region
10. Encourage the inclusion of a representative from each of the state and provincial l invasive species councils on a newly developed PNWER regional invasive species council
11. Develop a white paper on the importance of Monitoring of Local Waterways for Invasive Species
12. Encourage Rapid Response Planning in state and provinces through outreach letters and a brochure that describes best management practices
13. Seek funding for #1 - 12