

Reply To
Attn Of: ECO-083

Informational Memo

Subject: Regional Invasive Species Update #5: January-April, 2004

From: Joan Cabreza
Regional Invasive Species Coordinator

To: R10 ECO Management Team

ecc: Internal EPA mail group, & interested outside parties

This is the fifth quarterly update to the EPA Ecosystem Management Team on some of the more important regional activity in the EPA Region 10 Invasive Species (IS) Program. My apologies if it seems a bit “EPA -centric” to the large number of “outside” recipients now asking to receive this summary; I’m trying to include other national regional and state activities also. I’ll be happy to include updates or activities from any reader who wants to submit them. Credit for any errors is entirely mine.

EPA REGIONAL OFFICE ACTIVITY: Building Inter-Agency Bridges

Governor's Summit on Invasive Species: I attended the one-day Governor's Summit on Invasive Species in Boise, February 17. Hosted by Idaho Governor Kempthorne, the Summit followed the release of Idaho's *Assessment of Invasive Species Management in Idaho*. The purpose was to build the foundation for Idaho's Invasive Species Action Plan, expected to be completed by the end of 2004. Approximately 180 natural resource managers, experts, and other parties attended. The Governor, the Chair of the ID Invasive Species Council, State Representative Bolz, and several Department Directors provided remarks, followed by breakout sessions to identify issues and action items related to forest and urban pests, agricultural pests, aquatic and riparian environment, and terrestrial weeds. EPA commented on the aquatics.

Columbia Basin ANS Workgroup/100th Meridian Meeting*: I attended the second meeting of this new group in Portland, April 7. The primary purpose was to plan/report on progress of steps being taken to reduce the risks of zebra mussels and other species introductions into the Columbia River Basin, particularly addressing the high out-of-state boater use expected during the upcoming Lewis and Clark Bicentennial. EPA was asked to join this group in September. Projects include: a WDFW boat inspection video for state patrol inspectors; a boat ramp and marina inventory to identify locations for informational sign placement; 400,000 brochures are

being printed, and traveler information systems (moving signs) being purchased for DOTs; a zebra mussel monitoring program, and development of an emergency response plan. (**A US-Canada task force chaired by Steve Phillips of the PSMFC, and formed to stop the Westward spread of zebra mussels and other aquatic invasive species at the 100th Meridian line.*)

Invasion Pathways Pilot Project. I have been working with ORD Cincinnati lab and Regions 5 and 9 to develop a tool to determine historical invasion pathways using genetic analysis of ballast water. This tool will also provide a quick and efficient ballast water enforcement tool, which is currently greatly needed. Region 10 will submit a RARE proposal in June to build on Region 5 and 9 work previously funded under the ORD regional initiative program.

WA State ANS* Committee and Rapid Response Plan Involvement. I attended several monthly meetings of the ANS Executive Committee. Main agenda items were to prepare for the semi-annual meeting of the full statewide committee April 8, and to discuss the focus and first draft of the state's Rapid Response Plan. I provided an update on Henry Lee's estuarine database, and submitted a number of comments on the response plan. Hopefully a good draft will be available this summer. Committee member reports indicate so much is happening on so many fronts it is difficult to summarize here; ask me to forward a copy of the last meeting minutes, which contain report-outs from many groups, if interested. (**Aquatic Nuisance Species Committee, chaired by Scott Smith, WDFW*)

The Western Regional Panel* and Meeting with USDOJ. I plan a trip to Anchorage in September to attend the WRP annual meeting. Agenda items include national and state updates, project and member report-outs, updates on various invasions (Atlantic salmon, spartina, pike, zebra mussels, mud snails, etc) and related activity. While in Anchorage I will also spend a day meeting with the Dept. of the Interior; I have agreed to assist them in planning sessions on invasive species for the February AK Forum on the Environment. (** 56-member international group coordinated by USFWS; includes Mexico, Canada, 17 western states and some feds. I represent EPA on this panel*)

National Estuary Program (NEP) Invasive Species Monitoring: At Teresa Kubo's invitation, I met with the Nation Estuary program (NEP) directors for mutual sharing of info on invasives and the aquatic invasives monitoring plan development in Puget Sound, Tillamook and Lower Columbia. Last year the EPA gave a \$40k grant to a partnership of the three Region 10 NEPs (Puget Sound, Tillamook Bay and Lower Columbia River), to design an ANS monitoring system. San Francisco Estuary Institute is drafting an Exotic Species Detection Program for each estuary that will include identification of target environments and taxa for sampling; sampling methods; systems to provide taxonomic info and support; methods for managing data; and cost estimates. (*See Teresa Kubo for more info: 503/326-2859*)

R10, IvyOUT and Earth Day Activity: The IvyOUT project, initiated in 2000 by the WA Native Plant Society and Earthcorps, focuses on removing ivy from Seattle and King County parks. Although EPA has not been a past participant, literally dozens of other federal, state and local agencies and private groups have been involved; over 8500 volunteers participated in projects last year. I attended the annual (?) IvyOUT meeting on March 31, and agreed to generate some EPA support by bringing Pieter Bohlen from the Cascade Land Conservancy to speak on ivy in urban parks at our Earth Day celebration, and collecting EPA volunteers for two ivy removal projects.

EPA REGIONAL OFFICE ACTIVITY: Outreach/Education

PNW Invasive Species Book. A number of people are collaborating to produce a very needed publication! A book “*100 (of the worst) invasive species of the Pacific Northwest*” to be published by the U of Washington, and co-edited by Sarah Reichard and Amy Van Buren, will contain species descriptions and range, impacts, control and management methods, life history, and history of invasiveness. It should be useful to biologists and non-biologists alike. I will be contributing the sections on carp (lumped group including *Cyprinus carpio carpio*, *Ctenopharyngodon idellus*, and *Aristichthys nobilis*.) and tamarisk (*Tamarix ramossisma*).

Water Quality Publication. One NISWG conference action item is the development of a peer-reviewed paper suitable for publication, describing impacts of invasive species on water quality. I have agreed to take the lead on organizing it, but ORD, HQ and other regions will also hopefully be contributing sections and/or providing review.

New Washington Wetland Mitigation Guidance: Ecology, the Corps and EPA have just completed a major revision of our 1994 and 1997 interagency wetland mitigation guidance. This year, for the first time, we added sections and an appendix on invasive species. In the last decade, invasives have been recognized as a major cause of wetland mitigation failure.

Watertalk Article. I prepared an article for the April EPA Watertalk publication (“*Invading Species Harming our Ecosystems*”), describing ways in which aquatic invasives affect our waters.

Earth Day Projects: About 60 people have signed up so far for Earth Day invasive species projects, including ivy removal (May 27 and 28), Spartina flagging in the Stillaquamish Estuary (May 6), and knotweed data collection on the Skagit River (July & August). (*Still room if you want to sign up; see me!*)

Bellevue Natural Resources Week: Krista Rave and I will be providing two days of invasive species education at the nature fair in Bellevue May 18 & 21. This is sponsored by the Bellevue schools and focused primarily on fifth and sixth graders. We hope to raise awareness of the invasive species and their impacts.

Presentations. Invasive species awareness is exploding, and a wide variety of groups have requested diverse presentations:

- Total presentations for March-Dec 2003: 15

- Completed this quarter (Jan-April 2004): 5

02/04/03	National IS Workshop (Regional Perspective on IS) - Research Tri Park, NC
02/05/03	National IS Workshop (Water Quality Impacts of IS) - Research Tri Park, NC
03/27/04	King Co Small Farm Expo (Invasives and small landowners) - Enumclaw, WA
04/08/04	WA State ANS Committee (database update) - Olympia, WA
04/13/04	ECL Office (IS “101” and compliance plan development) - Seattle WA

- Future Presentations Requested

05/08/04 United Methodist group (Natives, Invasives, and wildlife) - Redmond, WA
05/18 -21/04 Bellevue Natural Res Week (Invasive species workshops) - Bellevue WA
05/26/04 Native Plant Appreciation Week (Invasive plants & gardening)- UW, Seattle, WA
07/19/04 International Conf: Soc. of Wetland Scientists (National IS update) - Seattle WA
08/23/04 International Conf: Soc. for Ecol restoration (IS "101" and update) - Victoria BC
10/02/04 Bellevue Demo Garden (Invasive plants & gardening) - Bellevue WA
11/08/04 PNW Society for Ecol Restoration (Invasive species in the PNW) - Everett WA
02/07?/05 AK Forum on the Environment (National/regional update) - Anchorage, AK

EPA INTERNAL PROGRAM DEVELOPMENT

NISWG*: Second National Invasive Species Workshop: ORD, R5 and R10 co-sponsored a national EPA IS workshop at Research Triangle Park, February 4-6. Goals included information sharing, identification of issues, action items and research needs, and better definition of EPA's 'niche'. Gary Voerman and I both attended, and I gave two presentations, "A Regional Perspective on Needs and Priorities" representing all of the regional offices, which was designed to inform HQ of regional needs, and a second on "Impacts of Invasive Species on Water Quality", designed to spark discussion of items needed for inclusion in OWOW's new Invasive Species Strategy. About 50-60 people from regions and HQ attended. The workshop also incorporated presentations of the eight cutting-edge invasive species STAR research projects funded by ORD in 2001. Henry Lee has prepared a summary of the 91 potential action items resulting from the conference, and NISWG is preparing a document summarizing the workshop. (* *National Invasive Species Workgroup- an internal EPA multi-program workgroup*)

ORD Presentations: Henry Lee (Newport OR lab) gave an invasive species presentation to the Executive Team and then he and co-presenter Deborah Reusser (USGS) provided a brown bag presentation for interested staff on "Vulnerability of Pacific Coast Estuaries to Invasive Species and Nutrient Loading". This new estuarine classification project focuses on submerged aquatic vegetation and estuarine vulnerability to nutrient loading/sources, and nutrient input modeling suggests the ocean, rather than freshwater, is the major source of nutrients for a large proportion of west coast estuaries. This is the opposite of the "East Coast paradigm", raising some interesting questions about nutrient TMDLs. They also provided an overview of invasive species impacts and the Pacific Coastal Estuarine Information System database.

Region 10 EO Compliance Plan. Work continues on development of the Regional Compliance Plan. This quarter I worked with Superfund groups to build their portions of the plan. The next groups targeted are office of Water and Office of Environmental Assessment. It is expected that HQ will soon ask for evidence of what Region 10 is doing to comply with the National IS Management Plan and Executive Order 13112, and this will help us get ahead of the curve, as well as providing a model for other regions.

NEPA Invasives Scoping Letter. A number of invasive plant management EISs are in the scoping stage right now, including the Deschutes-Ochoco NF, Gifford Pinchot, Mt. Hood, and Columbia River Gorge, and a project in the Payette NF. Our national NEPA guidance seems in a permanent stall, so I pulled together a generic scoping letter for NEPA to use as early input on these projects. It has also been sent to R3, 8 and 9 for any feedback/additions.

Invasive Species Database: Henry Lee's newly developing invasive species Pacific Coast Estuarine database (PCEIS), originally a small WRP grant, received an additional \$250k in USGS funding for geographic modeling to tie into this database. Originally for invasive species, the database now contains data on life history and distributional information for ~2600 species, both native and invasive, in over 500 west coast sub-estuaries. The Beta version should be available for testing in December. (*Call Henry for more info at 541/867-5001*)

UW Invasive Species Class: Sarah Reichard graciously allowed me to audit her first quarter UW invasive plants class. The class met twice weekly January-March, and provided good historical references and background information.

Regional IS Web Page: Charles Bert is constructing a regional IS web page. We hope to provide an EPA perspective and links to other key IS sites, rather than reinvent the wheel. It should be up and running in June, if I can break out some time to work on it.

GIS Data Layer Development. Bill Bogue and Burney Hill are interested in building some invasive species GIS data layers. I have received a number of internal suggestions from the "expanded team" (now numbering about 120 people) on what information would be most useful, but still need to find time to check with other agencies to determine what data they may already have available, before we begin building layers.

NATIONAL & INTERNATIONAL ACTIVITY

IMO* Ballast Water Conference: On February 13, 2004, the International Maritime Organization (IMO) adopted an International Convention for the Control and Management of Ships' Ballast Water and Sediment. Among the issues resolved at the conference were whether member nations could impose more stringent standards, the schedule for the treaty to become effective, the ratification formula and a biological standard to determine compliance. On March 1, 2004, the USCG, NOAA and EPA briefed Senate staff on the provisions of the Convention. (*For additional information, email agarofal@imo.org or visit <http://www.imo.org/home.asp>*)

Aquaculture Rule: Approximately 200 comments were received on the proposed rule. The internal workgroup review is almost completed and the final rule package will hopefully be forwarded to OMB in April. (*For more info, call Lisa McGuire 206/553-0226*).

TMDL Lawsuit: "The Ocean Conservancy vs EPA" was filed in California district court on April 5. It charges EPA's list of TMDL waters was "arbitrary and capricious" because it did not include waters whose quality is impaired by invasive species, and that invasive species are biological pollutants and must be addressed under the Clean Water Act. Environmentalists are asking the court to mandate that EPA revise California's 2002 impaired waters list to include those waters failing to meet water quality standards because of invasive species, and to require that EPA or California develop TMDLs addressing the waters by a date certain. (*Note: Our TMDL database currently lists nearly 800 waters as being impaired by exotic weeds, and that is from only a couple of states...if all states were to include invasives, the list would doubtless number in the thousands.*)

IUCN Call to Action: The Union of Concerned Scientists, with the National Environmental Coalition on Invasive Species (NECIS), has announced the release of the Call To Action on Invasive Species. It was signed by nearly 800 U.S.-based experts on invasive species representing every U.S. state, the District of Columbia, and Puerto Rico, and by 120 citizen's groups. Their Call to Action challenged the President and U.S. Congress to strengthen outmoded laws and to take a more comprehensive approach to resource protection.

IUCN Conference: The State Department has requested that the EPA's Office of international Activities help the Union of Concerned Scientists (IUCN) put on a June conference on invasive species, with a specific reference to trade pathways. EPA/OIA is a member of IUCN, and IUCN has done quite a bit of work on invasives in the Caribbean and Central America. Both State and EPA are working to integrate discussions of invasives into the environmental reviews of trade agreements, and State is taking it one step further, trying to establish invasives as an area of cooperation as part of the work plan for the environmental cooperation agreement that is being negotiated for the Central America FTA.

ORD STAR Grants. Recipients of eight STAR grants presented their findings at the national IS workshop in February. These grants focused on invasive species, and were issued under the ORD FY 2000 Request For Applications (RFA) for Exploratory Research. Comments from the workshop will be factored into the next RFA. ORD expects to issue another RFA with an aquatic invasive species focus in October, 2004, with possible ballpark funding of \$2 million.

The 5th Annual National Invasive Weed Awareness Week (NIWAW-5), was held in Washington, DC, February 21 – 27, 2004. The purpose was to help raise awareness of invasive weeds and to foster coordination. Over 100 people from across the country heard from a number of administrators at both the Department of Agriculture and the Department of the Interior. Participants also held meetings with National Invasive Species Council staff and other agencies, including EPA. *(For additional details click on "NIWAW V" at www.nawma.org).*

Letter to Western Governors (WGA) re Zebra Mussels: The Western Regional Panel (WRP) sent a letter to the WGA to notify them of the new zebra mussel population found in El Dorado Reservoir in Kansas, and the threat of the possible westward expansion. We are asking the WGA to support States taking actions to prevent new infestations, and requesting that the WGA work with the WRP to provide the states with knowledge and resources to stop the zebra mussel spread. A WRP Request for Proposals (RFP) to develop a Rapid Response Plan for Zebra Mussels invading the Western US is coming soon. A draft Policy resolution relating to spread of invasive species via water craft will also be introduced at the WGA meeting in June.

The National Aquatic Invasive Species Act (NAISA), its companion act the Aquatic Invasive Species Research Act, and HB 266/S536, a bill that would codify the National Invasive Species Council, all appear to be stalled, as Congress seems focused on Iraq.

Tamarisk Control. Bills that would establish pilot projects and funnel more federal dollars into salt cedar control are making headway in Congress, and the president's budget request includes a \$1 million increase in tamarisk control funding. In February, the House passed a bill that would allocate \$24 million to assess the extent of tamarisk infestation and set up three demonstration sites in the West. Senate bill, S. 1516, that would provide \$20 million for the study and control of tamarisk awaits a floor vote. According to David Brunner of the National Fish and Wildlife

Foundation The tab for controlling tamarisk is estimated at about \$2,500 to \$5,000 per acre; \$4-\$8 billion will be needed to fully address the problem,

OTHER PACIFIC NORTHWEST ACTIVITY

Zebra Mussels Continue Westward: Zebra mussel veligers have now been confirmed in the Missouri River in the river reaches below Ft. Randall Dam and Gavin's Point Dam along the South Dakota / Nebraska border. There is now a proposal to conduct more quantitative sampling this summer. Not good news for the 100th Meridian group.

Pacific Ballast Water Group: This group of US and Canadian agencies and industry was initially formed to discuss issues of mutual concern. It has been inactive for some time, but there are efforts to re-start it. A meeting will be held in Portland on June 29. (*EPA is a member*)

HACCP for Hatcheries. USFWS is beginning to develop Hazard Analysis and Critical Control point (HACCP) plans for all their hatcheries. Because intensive fish production provides an ideal environment for spread of fish pathogens, parasites and other pests, conducting hazard analysis and identifying potential vectors and management practices is an important step in protecting fish stocks. (*Contact Kevin Aitkin, 360/753-9508 for more info*)

WA- Seattle Ivy Initiative. On Saturday, April 17, 2004, hundreds of volunteers, led by Earth Share of Washington member group Earthcorps, pitched in to restore local parks including Magnuson, Seward, and Cheasty Greenspace.

WA- Invasive Fish on the Tulalip Reservation. While doing wetland monitoring, the Tulalip tribal biologist discovered an exotic species tentatively identified as an Oriental weatherfish (*Misgurnus anguillicaudatus*), a species that has already established itself in Lake Washington and several other locations in Region 10. An omnivore, it also tolerates a wide range of water temperatures and conditions, and has a high reproductive rate. Steps are being taken to verify the species to insure this is not a new weatherfish species. It also points out the importance of being able to recognize something new when you see it! (*Mike Sevigny, Tulalip Tribe*)

WA- Seattle Habitat & Invasives Mapping: In 2000, the Seattle Urban Nature Project initially surveyed and mapped 31 habitat types in 7,943 acres of Seattle public land, and compiled species lists for each habitat. One visual communication tool called the "Invasive Species Summary" map, depicts the combined effects of 11 species. They also have data on the location and percent cover estimates for 27 species, 20 of which are listed as noxious by King County and the State. The database allows customized analyses for specific areas. (An interesting finding: 94% of all habitat polygons, contained English ivy, and the most invaded habitat was deciduous forest.)

They also have a number of project proposals, subject to support from potential project partners. These include utilizing the data to identify priority areas for restoration; implementing a monitoring program on public lands to detect changes in invasive species cover; documenting effects of invasive species on urban biodiversity; and examining the spatial pattern of collective restoration efforts in Seattle in order assess gaps and opportunities to connect associated initiatives. (*Contact Matthew Ramsey at 206/522-0334 for more info*)

WA- The Mercer Island Ivy Tax Initiative did not pass for a variety of reasons, but organizers feel it received good press coverage, which greatly increased awareness of the issue. An estimated 232 AC on Mercer Island are covered with ivy, with an estimated removal cost of >\$51 million. But the good news is that Ivy is now listed on the State Noxious Weed List as a Class C Weed, so counties can now regulate or insure its control, and the Council has asked for additional information to make a proposal for removal in next fall's budget cycle.

WA- Environmental Soundness Workgroup Established. Washington has established an Environmental Soundness workgroup, chaired by Gerry Joyce, of Audubon Society. The first meeting was January 8, and focused on toxicity of ballast water biocides, looking at how products will be used, etc. *EPA has been asked to join this group, although I have not yet been able to attend, and am hoping to involve the Regional Toxicologist.*

WA- Rapid response plan: WDFW has contracted for development of a state rapid response plan to allow us to more effectively deal with new invasions. Hopefully a good draft will be available for comment this summer. *EPA needs to decide whether we want to have a role in rapid response teams that may be formed under this plan.*

WA- PSMFC projects: The Pacific State Marine Fisheries Commission currently has about \$35 in contracts related to a variety of invasive species topics including Atlantic salmon monitoring, substrate monitoring, a regional ballast water database, Columbia River ANS study, Spartina, zebra mussel outreach, mitten crab range modeling and an amazing number of other studies. *(Contact Steve Phillips for more info: 503/650-5400)*

WA- Home Depot has updated their "Annual and Perennial Guide", a free store handout. They have removed English Ivy and Purple Loosestrife, so that they do not promote use of these plants. This is apparently due to the efforts of Larry Howard, a volunteer at CUH. Who says one person cannot make a difference?! (from Sarah Reichard).

OR- Protocol Development. The Ports of Astoria and Portland, assisted by PSU, SERC and CRANSI*, are developing protocols to verify mid-ocean ballast water exchange on a chemical basis. (* *Columbia River ANS Initiative*)

OR- Weedmapper and State Weed Database. Oregon Department of Agriculture has an online weed mapping program (**WeedMapper**) located at www.weedmapper.org. It will take several years to develop the full database, but Weedmapper is already functioning and will accept data. Users can query the data base and produce maps that depict state and county distributions of weeds. Actual locations (UTM coordinates) of weed populations can be determined and maps printed or pasted into other documents. The database currently is restricted to weed species on ODA's weed lists but can be expanded to accommodate other species not on the lists. Weed inventory data can be combined with 160+ possible other data layers to do weed risk assessments. These other data layers include data on climate, soils, topography and other factors influencing weed distribution. OSU is currently developing a simple GPS/PDA system capable of collecting large data sets for inclusion into WeedMapper. *(Sorry-have lost my source info on this item)*

OR- Oregon Invasive Species Council initiatives. There are presently two ongoing initiatives. One is the development of a management plan for feral swine in Oregon. There is only a small population and they want to eradicate them before they create the kind of damage that is

happening in California. The second is development of an education/outreach strategy. They are currently developing an RFP to assist in developing a strategy to raise invasive species awareness in Oregon, and hope to have the RFP out in a couple months. The next Council meeting will be held June 23 in Salem. *(For more info, contact Mark Sytsma at 503-725-3833)*

AK - Invasive Species Booklet: The Union of Concerned Scientists (UCS) has produced three new state-specific booklets focused on invasive species for Texas, West Virginia, and "**Invasive Species: Alaska.**" These 16-page booklets contain state-specific information on numbers of non-native and invasive species, the most significant pathways of introduction; economic impacts and the most severely affected sectors; environmental damage and what's at stake (landscapes, habitats, species); examples of the most harmful organisms ("The Worst of the Worst"); and the public and private organizations that deal with the problem, with suggestions for strengthening their work. *(Download these reports at: http://www.ucsusa.org/global_environment/invasive_species/page.cfm?pageID=1113)*

ID- Weed Conference: The Idaho Weed Conference was held in Nampa, ID on February 4 – 5, 2004. Presentations involved invasive species including the Ecology of Weed Invasions, Early Detection of Leafy Spurge and Other Weeds Using NASA Program Techniques, etc.

AK- The AK Forum on the Environment to be held February 7-11, 2005, will include one day of sessions on invasive species in Alaska. Of particular interest are marine organisms, fresh-water fishes, rats, and noxious weeds. I have agreed to assist USDOJ in planning the invasive species portion of this effort.

WA- Atlantic salmon survey: The survey being done by WDFW has assessed more than 40 rivers and streams. Approximately 1000 juvenile salmon were found near the Scatter Creek hatchery and 3 near the Cinnabar Creek hatchery. Scatter Creek was fined by Ecology (as a source of biological pollutants). Winter spawning surveys found no returning adults. The survey will continue through January 2005 if funding lasts. *(from Pam Meacham, WDFW)*