

B O N N E V I L L E
P O W E R A D M I N I S T R A T I O N

Aquatic Nuisance Species Program Activities



Jim Clune, Bonneville Power Administration
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PSMFC-BPA ZEBRA/QUAGGA Prevention Program Components

BPA has supported ANS prevention efforts for the past 10 years, primarily through the Pacific States Marine Fisheries Commission ANS prevention program. With a focus on quagga and zebra mussels, program elements include:

- **Coordination and Planning:** Support and participation in the Columbia River Basin Quagga/Zebra Rapid Response Plan, 100th Meridian Initiative, and Quagga/Zebra Action Plan
- **Monitoring:** Portland State University veliger microscopy and substrate monitoring programs
- **Educational Outreach:** Targeting recreational anglers, boaters, haulers marinas, state and county law enforcement, hydro operators
- **Research:** Technology Innovation Grants Program



Coordination and Planning

- **Columbia River Basin Interagency Rapid Response Plan, Zebra/Quagga Mussels:**
 - Developed by PSMFC and USFWS, the purpose of the Plan is to coordinate a rapid, effective, and efficient interagency response in order to delineate, contain, and when feasible, eradicate zebra, quagga, and other dreissenid mussel populations if they are introduced in CRB waters. Rapid Response Exercises, with partial support from BPA, were held in 2007, 2008 and 2009 to test the Plan.

- **100th Meridian Initiative:**
 - BPA is an active member and provides support along with the USFWS for the Initiative's Columbia River Basin Team, comprised of federal, provincial state, tribal and local government entities. The Columbia River Basin Team helps coordinate ANS (mostly mussel) prevention in the region.

- **Uniform Watercraft Decontamination Protocols:**
 - In 2009, the PSMFC, with support from BPA, completed the document Recommended Uniform Minimum Protocols (UMPs) and Standards for Watercraft Interception Programs for Dreissenid Mussels in the Western United States. This document, adopted by the Western Regional Panel on Aquatic Nuisance Species, serves as a regionally accepted manual for watercraft decontamination.





Monitoring

- Portland State University Monitoring Programs:
 - Effective response to a quagga mussel invasion will require a robust monitoring program to detect an infestation rapidly. BPA has supported the veliger microscopy and substrate monitoring program at Portland State University (PSU) since 2002.
 - In 2010, BPA is supporting partnering between Portland State University and the US Army Corps of Engineers to significantly increase monitoring efforts at Corps projects in the Columbia River Basin.



Educational Outreach

- BPA (and USFWS) is supporting PSMFC in a broad array of projects targeting recreational boaters, including:
 - Watercraft Inspection Training (WIT): Over the past 5 years this project has delivered over 40 training courses delivered in eleven western states to over 2000 individuals representing over eighty state, federal, local, private, and tribal agencies, organizations and businesses so that they can successfully intercept, inspect, identify, contain and decontaminate trailered watercraft suspected of carrying zebra mussels.
 - Don't Move a Mussel" Video: Over 4000 copies of this video have been distributed to date. The video includes a watercraft inspection and decontamination training section.
 - Booths at sport shows/boat shows in OR,WA,ID, MT, and CA.
 - Marina and commercial boat hauler outreach and education.
 - Publications (e.g. "Zap the Zebra"), radio PSA's, signage.
 - Presentations to hydro/fish/boating groups throughout the region including Public Power Council, Public Generating Pool, Joint Operating Committee, Pacific Fisheries Legislative Task Force, Pacific Fishery Management Council, and Western States Boating Administrators Association.



Research

- Antifouling Coatings: Investigation of the Feasibility of Mitigating Dreissenid Mussel Fouling in Raw Water Systems:
 - This recently completed PSU study provides a review of the factors that influence coating efficacy, evaluates coatings currently on the market, and recommends actions needed to identify coatings that could be applied to hydropower facilities in the CRB as part of an integrated mitigation strategy.

- Prioritizing Zebra and Quagga Mussel Monitoring in Columbia River Basin:
 - The soon to be released report will generate the information needed to improve and expand our ability to identify water bodies likely to support dreissenid mussels and our ability to target monitoring efforts in the future for early detection.

- Quagga Mussel Survival and Growth:
 - This PSU study is attempting to grow Quagga mussels in Columbia River water and see how well they will survive. The information obtained in this study will help in the prediction of quagga growth rates and could help in the planning for schedule and cost associated with maintenance of hydropower facilities in the Columbia Basin.

