

ADVANCING A REGIONAL DEFENSE AGAINST DREISSENIDS IN THE PACIFIC NORTHWEST



January 21, 2015



"Unity is strength . . . When there is teamwork and collaboration, wonderful things can be achieved."
– Mattie Stepanek

WEBINAR AGENDA

I. Regional defense definition

II. Presentations by AIS representatives

- Columbia River Basin 100th Meridian Initiative (Stephen Phillips, PSMFC)
- Aquatic Nuisance Species Task Force (Don McLean, US Fish and Wildlife Service)
- Western Regional Panel on Aquatic Nuisance Species (Elizabeth Brown, Colorado Parks and Wildlife)
- Building Consensus in the West (Leah Elwell, Western Regional Panel on Aquatic Nuisance Species)
- Pacific Ballast Work Group (Rian Hooff, Oregon Department of Environmental Quality)
- Pacific Northwest Economic Region (Mark Sytsma, Portland State University)
- Preventing an Invasion (Lisa DeBruyckere)
- Northwest Power and Conservation Council (Jim Ruff, NWPCC)
- Invasive Species Councils (Bill Tweit, Washington Department of Fish and Wildlife)

III. Questions of presenters



Northwest **Power** and
Conservation Council

ANS Task
Force

WEBINAR AGENDA (CONTINUED)

IV. Goals and elements of a regional framework

- Prevention
- Early Detection
- Control and Management
- Target Audiences
- What we're spending on prevention
- What an introduction to the PNW would cost
- Research
- The Model Law
- Vulnerability

V. PNWER's contribution moving forward

VI. Key next steps

WESTERN INVASIVE MUSSEL EFFORTS

Regional Defense

Using resources in a cost-effective, interjurisdictional, coordinated response to prevent mussels from entering uninfested areas and to contain AIS at their source



CRB

100TH MERIDIAN INITIATIVE



Birth: National Invasive Species Act 1996

“(2) make recommendations to the Task Force regarding an education, monitoring (including inspection), prevention, and control program to prevent the spread of the zebra mussel west of the 100th Meridian pursuant to section 1202(i) of this Act; “

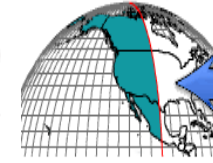
Goal: The 100th Meridian Initiative is a cooperative effort between local, state, provincial, regional and federal agencies to prevent the westward spread of zebra/quagga mussels and other aquatic nuisance species in North America

Broken up into Watershed “Teams”: Columbia River Basin and Missouri River Basin Teams are active

Website: <http://www.100thmeridian.org/> (D. Britton, USFWS)

CRB

100TH MERIDIAN INITIATIVE



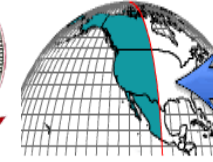
100th Meridian Initiative
Help us stop the spread of Aquatic Nuisance Species

Columbia River Basin Team (since 2004)

- I. Partnership of agencies, tribes, universities, and others
- II. Meets twice annually (next meeting May 2015 dates TBD)
- III. Initial focus was zebra mussels, but broader purpose is to prevent westward spread of all aquatic invaders (e.g. New Zealand mudsnails, flowering rush, northern pike, etc)

CRB

100TH MERIDIAN INITIATIVE



100th Meridian Initiative
Help us stop the spread of Aquatic Nuisance Species

II. Progress made:

- I. Serves as a coordination forum for Quagga/Zebra/AIS response
- II. Q/Z Rapid Response Planning
 - I. Columbia River Basin Interagency Invasive Species Response Plan: Zebra Mussels and Other Dreissenid Species (2008, updated 2011, 2013)
 - II. Six table top and two mini-exercises exercises held (2007-2014)
- III. Information Sharing (AIS News)
- IV. Q/Z Monitoring Website (since 2010) (w/USGS; Cook, WA, Gainesville, FL)

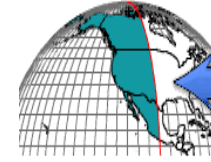
CRB 100TH MERIDIAN INITIATIVE



III. Locations of outcomes and deliverables

- CRB Team Meeting Minutes - http://www.100thmeridian.org/Columbia_RBT.asp
- AIS News - <http://www.westernais.org/>
- Q/Z Monitoring - <http://crbais.psmfc.org/monitoring/monitoring-for-aquatic-animals>
- Rapid Response Plan and Exercises – http://www.100thmeridian.org/Columbia_RBT.asp
for exercise documents and plan

CRB 100TH MERIDIAN INITIATIVE



IV. Gaps to address moving forward

- a. Geographic Scope – meeting locations have concentrated west side
...need to expand geographic scope to include the whole CRB
- b. Ensure that meeting topics aren't swallowed up by Q/Z

THE AQUATIC NUISANCE SPECIES TASK FORCE

The logo for the Aquatic Nuisance Species Task Force. It features the letters "ANS" in a large, red, serif font. A horizontal black line runs through the middle of the "ANS" text. To the right of the "ANS" text, the words "Task" and "Force" are stacked vertically in a blue, serif font. A horizontal black line runs through the middle of the "Task" and "Force" text, aligning with the line through the "ANS" text.

**ANS Task
Force**

HISTORY



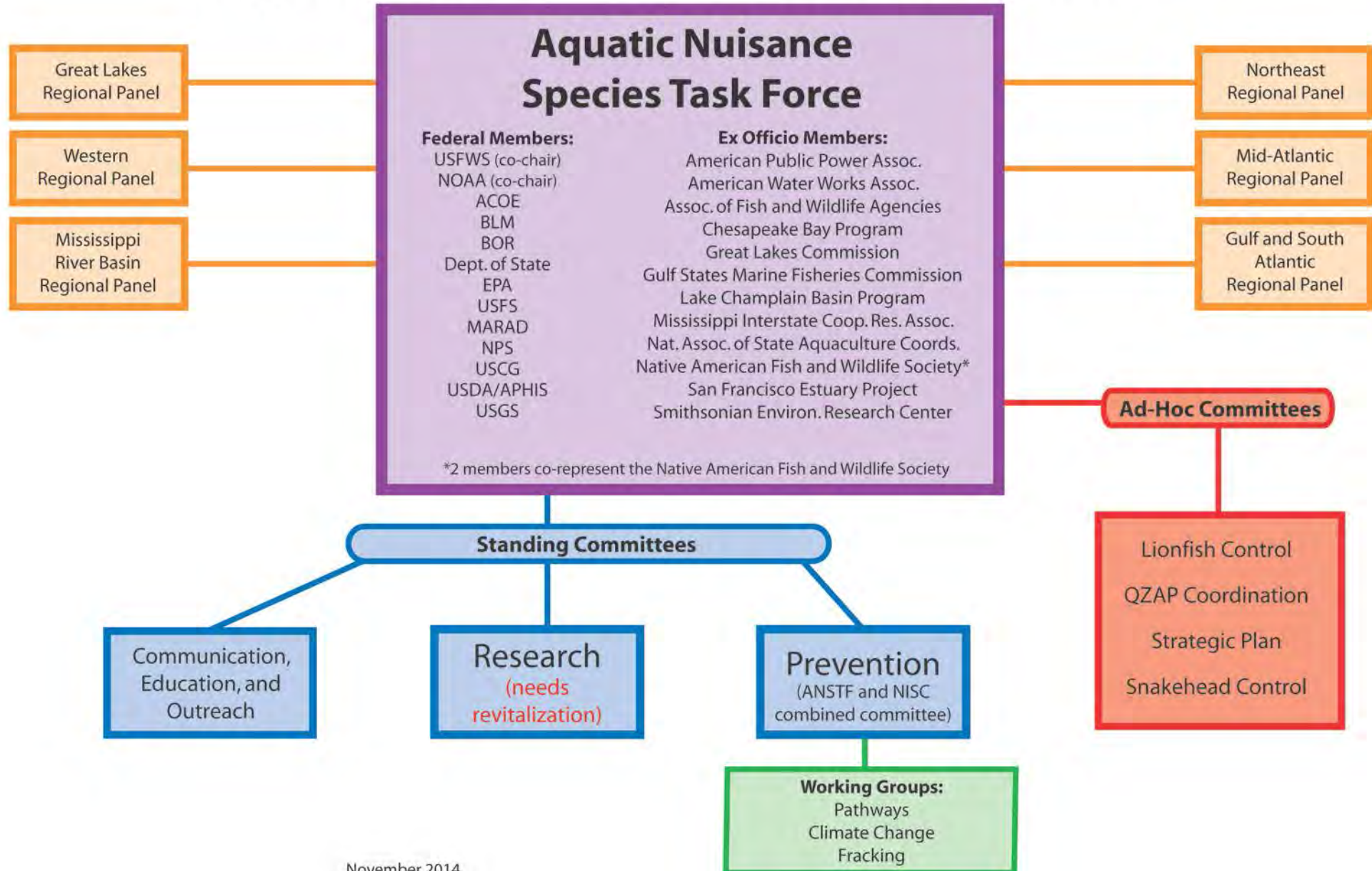
- **Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 and reauthorized as the National Invasive Species Act of 1996**
- Created the Interagency Aquatic Nuisance Species Task Force (ANSTF)
- Gave the U.S. Fish and Wildlife Service several critical, national leadership roles, including:
 - Co-chairing and administering the ANSTF;
 - Supporting ANSTF Regional Panels;
 - Providing grants to States for ANS Management Plans;
 - Implementing a National ANS Program.

ANSTF BACKGROUND

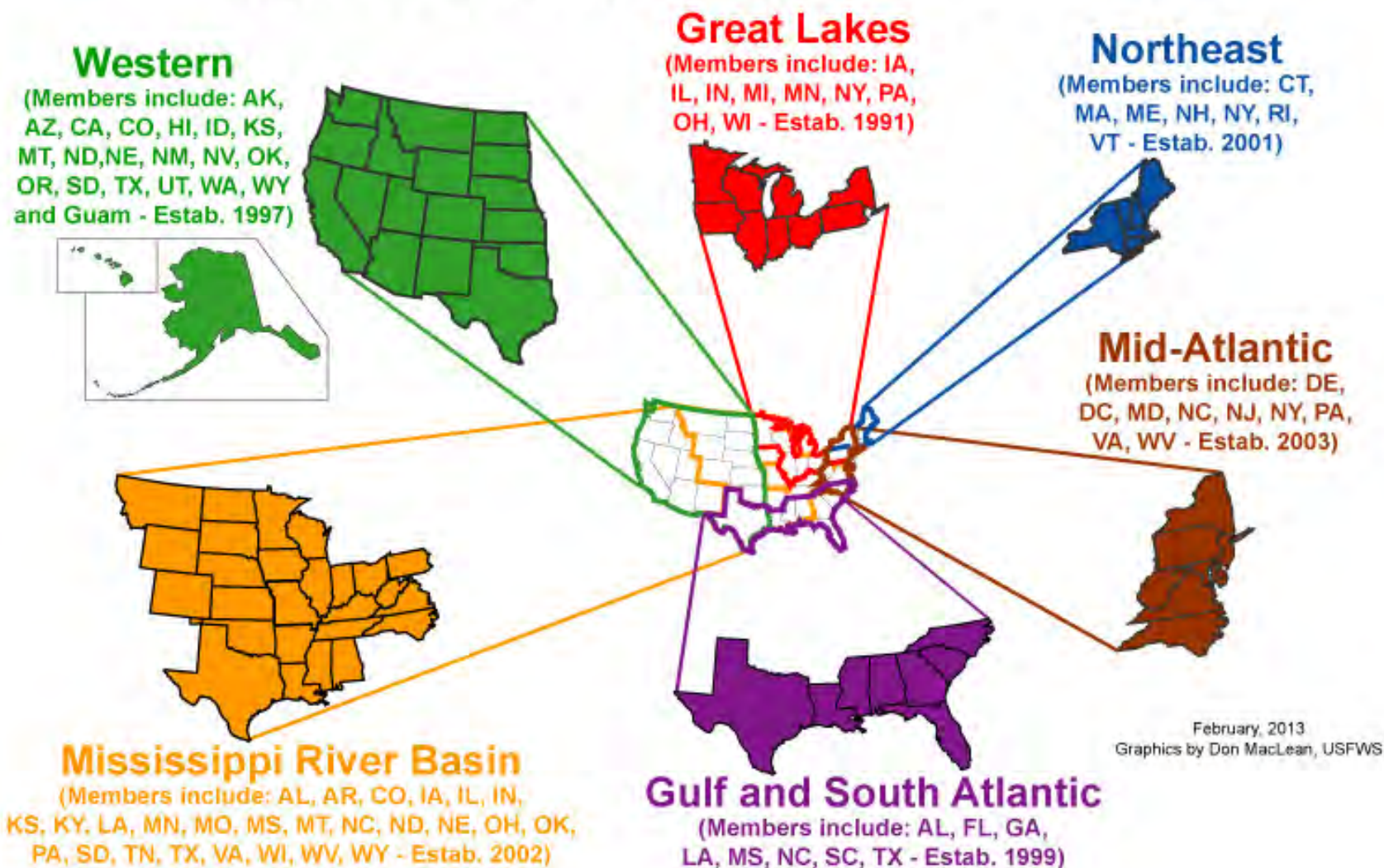


- ANS Task Force established in 1991
 - Only Federally mandated intergovernmental organization solely dedicated to preventing and controlling ANS.
 - Collaborates and coordinates aquatic invasive species activities across jurisdictional boundaries.
- 13 federal Members and 13 Ex-Officio Members
- 6 Regional panels
- 42 State/Interstate ANS Management Plans
- 2 Meetings a year

Aquatic Nuisance Species Task Force Structure

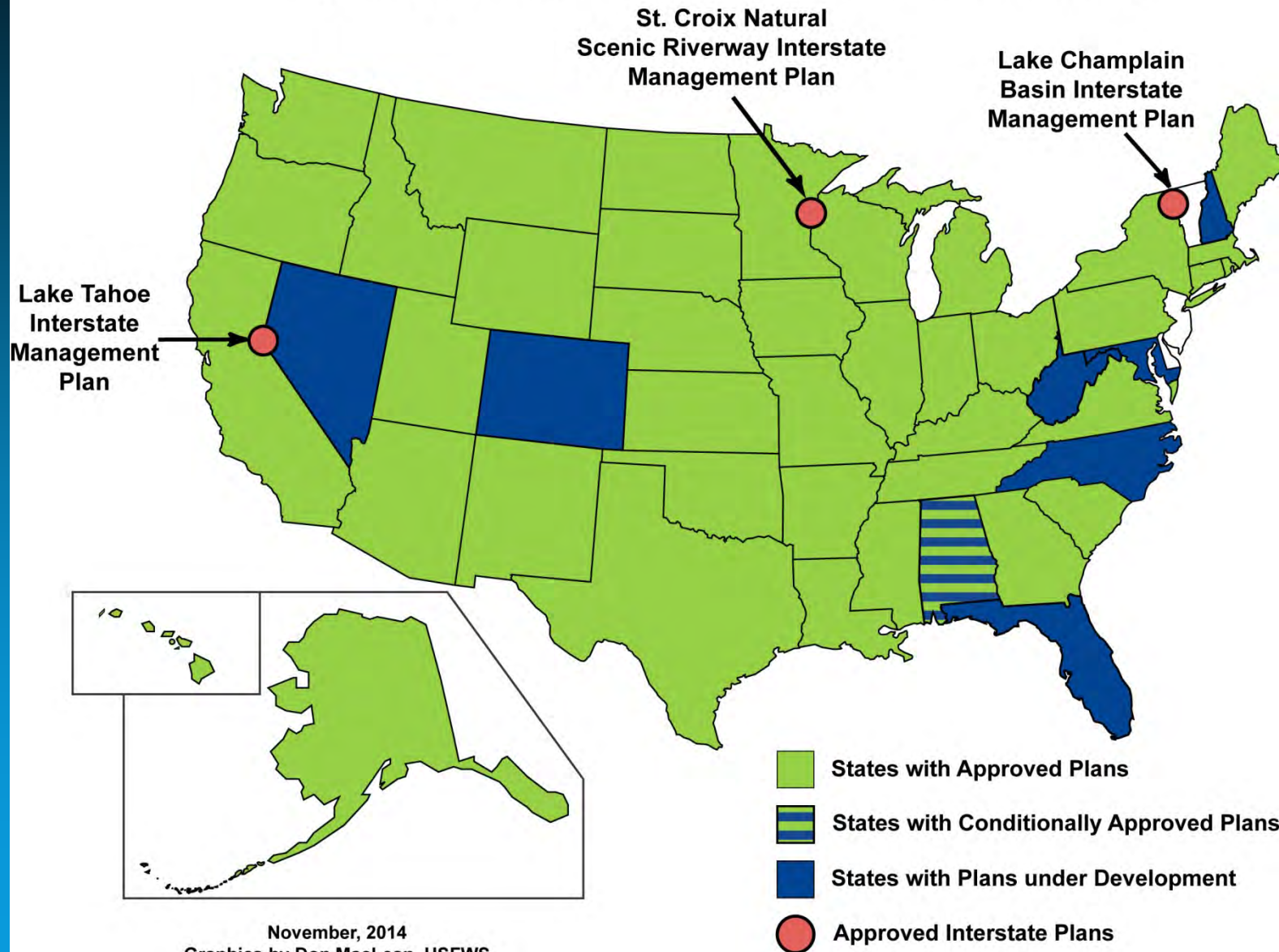


The Regional Panels of the Aquatic Nuisance Species Task Force



Status of State ANS Management Plans

(42 Approved Plans - 39 State, and 3 Interstate)



ANSTF ACTIVITIES



- Coordination
 - Through ANSTF meetings
- Funding of Regional Panels
- Funding of State/Interstate ANS Management Plans
- Development of Species Control Plans
- Development of Public Awareness Campaigns

PROGRESS MADE



- Implementation of 100th Meridian Initiative
- Many years of funding ANSTF Regional Panels
- Many years of funding State ANS Management Plans
 - Funding in early years often helped found State AIS programs
- Teaching of HACCP and Development of HACCP Plans
- Development of the Quagga-Zebra Mussel Action Plan for Western U.S. Waters
 - Funding of QZAP Projects
- Development of BMP's
 - Recreational, Water Garden, and Classroom Guidelines

LOCATIONS OF OUTCOMES AND DELIVERABLES



- ANSTF Web Page: <http://www.anstaskforce.gov/default.php>
- HACCP Web Page: <http://www.haccp-nrm.org/>
- Report to Congress (available soon)

GAPS TO ADDRESS MOVING FORWARD



- Lack of Resources
 - Greater Funding for State Plans
 - Greater Funding for Regional Panels
 - Greater Funding for Control (where other societal goals can be achieved)
- Reauthorization of NANPCA
 - National AIS Monitoring Program
 - Dedicated Rapid Response Fund
- More Authority for States to Prevent the Spread of Dreissenids
- Improved tools for early detection and for control
- Improvements to the Injurious Wildlife Listing Process so FWS can prevent more high risk species from being imported in the first place

WESTERN REGIONAL PANEL ON ANS



Colorado Parks and wildlife
invasive species coordinator

MISSION

- To protect western aquatic resources by preventing the introduction and spread of non-native invasive or nuisance species into western marine, estuarine, and freshwater systems through the coordinated management and research activities of state, tribal, federal, commercial, environmental, research entities, industries and other regional panels.

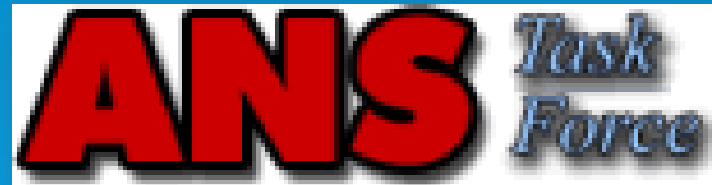


PURPOSE

- The Panel is a nongovernmental advisory body to the Aquatic Nuisance Species Task Force (ANSTF) and serves as a forum for coordinating activities on ANS management in the West.
 - Attendance at Spring and Fall meetings
 - Committee Participation
 - Snakehead – John Wullschleger
 - Lionfish – John Wullschleger
 - QZAP – Stephen Phillips
 - Education and Outreach (new) – Elizabeth Brown
 - SAH! Advisory Committee (new) – Joanne Grady
 - Response to Requests or Inquiries
 - Strategic Plan
 - Report to Congress
 - Send out requests to WRP members (e.g. climate change)

LEGAL BASIS

- The Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA) of 1990 created the Aquatic Nuisance Species Task Force.
- Section 1203 – *Regional Coordination* – the ANS Task Force was required to create two Regional Panels within 30 days
 - The Great Lakes Panel
 - The Western Regional Panel
- WRP was not formed until 1997 following passage of the National Invasive Species Act in 1996
 - An amendment to NANPCA.



MEMBERSHIP



- The scope of the Panel includes an extensive geographic range encompassing the nineteen states, and four provinces west of the 100th Meridian.
- WRP currently has 64 voting members with many other additional regional partners who participate in WRP activities. The membership is representative of inland and coastal interests with members from state agencies, federal agencies, Canadian agencies, tribal representatives, and members ranging from academia, industry, commissions, non-profit conservation organizations, recreational boating, and legal interests.

OUTSTANDING EXECUTIVE COMMITTEE

- Beth Bear, WY
- Earl Chilton, TX
- Joanne Grady, USFWS
- Bob McMahon, TX
- Tom McMahon, AZ
- Stephen Phillips, PSMFC
- John Wullschleger, NPS
- Dennis Zabaglo, Tahoe



Chair Elizabeth Brown and
Coordinator Leah Elwell

FANTASTIC COMMITTEES

- Annual Meeting – Dennis Zabaglo
 - September 2-4 at Lake Tahoe
- Building Consensus – Joanne Grady
 - Model Law & Regs – Stephanie Showalter Otts
 - WID Training – Elizabeth Brown
 - WID Data Sharing – Elizabeth Brown
 - Inreach – Beth Bear
 - Outreach - Tom McMahon
- Coastal – Sonia Gorgula
- Membership – Leah Elwell
- Recreational Ballast Tank – Stephen Phillips



COORDINATING THE COORDINATION

- Per Direction at 2013 Portland Meeting 😊
- Compiled a list of 42 entities working on AIS
- Drafted and approved a letter and sent it to 42 entities or associations
- Drafted a one pager for WRP members to hand out at events



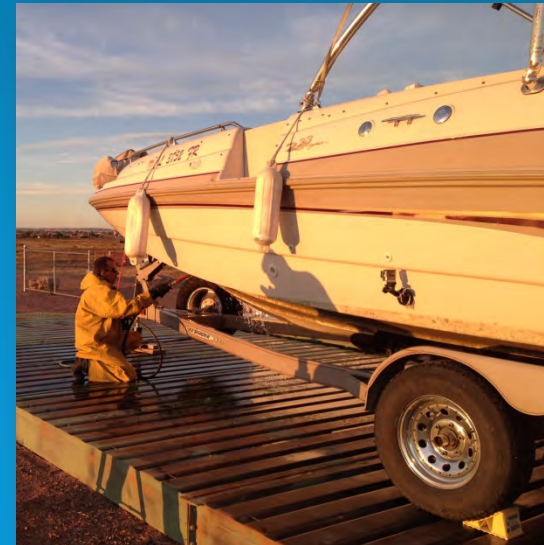
COORDINATING THE COORDINATION

- Focus time and energy on 5 main groups
 - Association of Fish and Wildlife Agencies
 - Western Association of Fish and Wildlife Agencies
 - Western Governors Association
 - Pacific Northwest Economic Region
 - Reducing the Risk of Invasive Species Coalition
- Working to set up meetings with other interested parties that responded to letter



2015 POLICY PRIORITIES

- Increased funding for state aquatic invasive species management plans
- Increased funding for implementation of the Quagga Zebra Action Plan
- Reauthorization of the National Invasive Species Act
- Adoption of the Model Law by States



ONGOING INLAND “WID” WORK

- Building Consensus in the West
- Model Law and Regulations
 - Gap Analysis
- Marine Industry Partnership for Development of ANS Technology
 - Ballast Filter
 - ABYC Workshop
- Watercraft Inspection and Decontamination Training Procedures Development
 - 100th Meridian and PSMFC
- Watercraft Inspection and Decontamination Mobile Data Application with Website
 - <https://ans.cpw.state.co.us>
- Education – Inreach and Outreach
- Sampling Lab Standards and QC
 - AFS Committee on Aquaculture, Sub-Committee on Fish Health



FOR MORE INFORMATION

- Western Regional Panel on ANS
 - <http://www.fws.gov/answest/>
- Building Consensus in the West
 - <http://seagrant.oregonstate.edu/invasive-species/invasive-mussels-west>
- Model Law & Gap Analysis
 - <http://nsglc.olemiss.edu/projects/model-legal-framework/index.html>
- The Magic Website (WID Training)
 - <http://www.westernais.org/>
- ANS Task Force
 - <http://www.anstaskforce.gov/default.php>

CONTACT INFORMATION

Elizabeth Brown, WRP Chair

Office: 303-291-7295

Elizabeth.Brown@state.co.us

Leah Elwell, WRP Coordinator

Office: 406-222-7270

Leah@stopans.org

Stephanie Showalter Otts, Director

National Sea Grant Law Center

Office: 662-915-7714

sshowalt@olemiss.edu

THANK YOU!

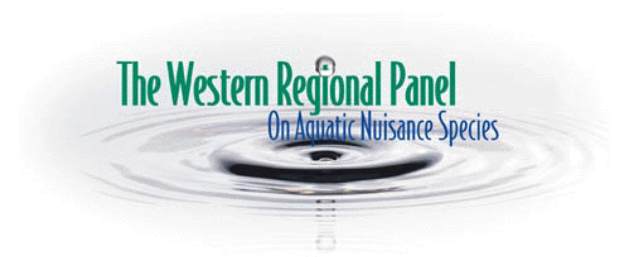
Elizabeth brown

Elizabeth.brown@state.co.us



BUILDING CONSENSUS IN THE WEST

WESTERN REGIONAL PANEL COMMITTEE

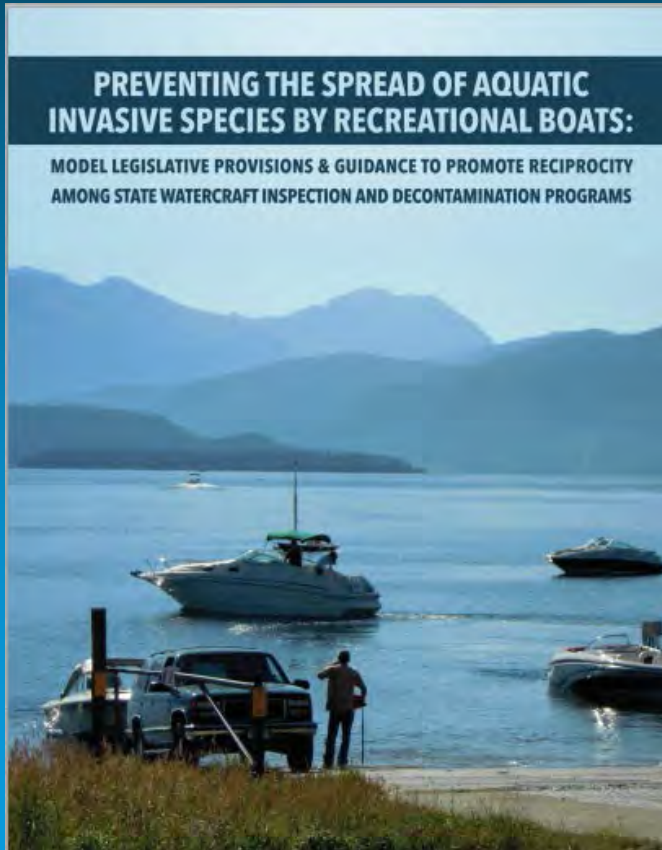
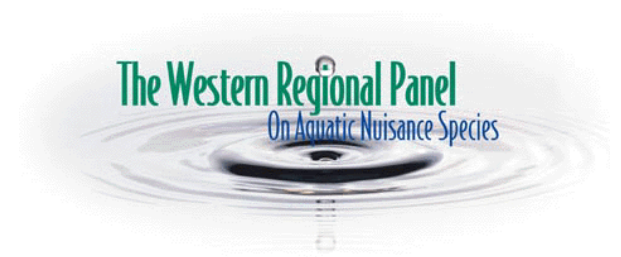


I. General Description

- Working Committee to Protect Uninfested Waters in the West
 - Covers the 19 state footprint of the Western Regional Panel and the 100th Meridian Initiative
 - Includes state, federal, legal, law enforcement and academic partners
- Funding
 - 100th Meridian Initiative – U.S. Fish & Wildlife Service
 - National Sea Grant Law Center
 - National Sea Grant Education Grant
 - In-kind Services of AIS coordinators, Law Enforcement Supervisors, and Assistant Attorney Generals throughout the 19 Western states

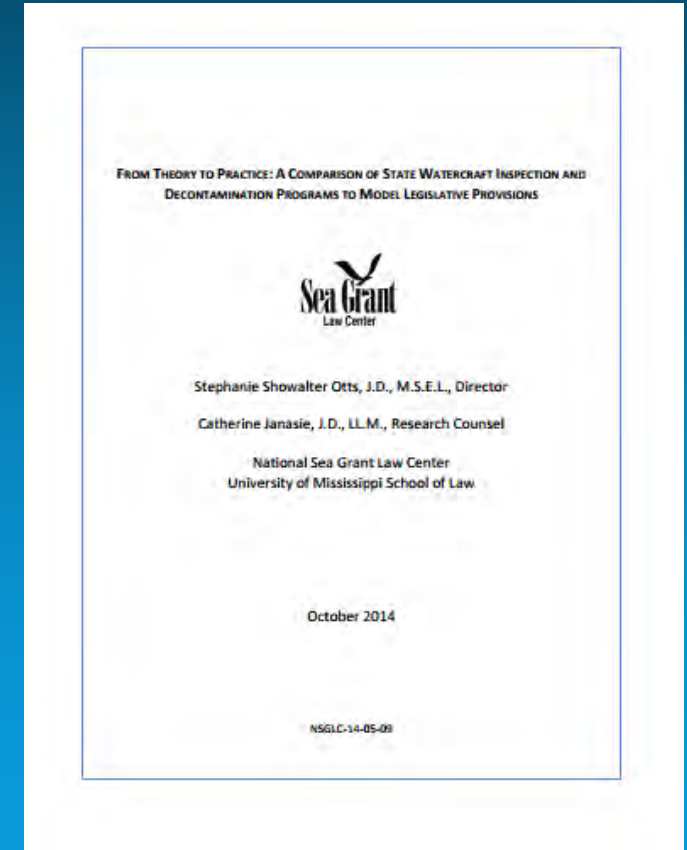
BUILDING CONSENSUS IN THE WEST

WESTERN REGIONAL PANEL COMMITTEE



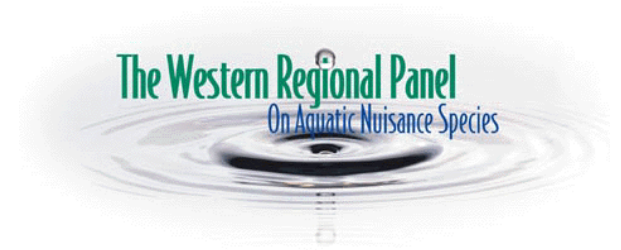
II. Progress made:

- An Action Plan to Implement Legal and Regulatory Efforts to Minimize Expansion of Invasive Mussels through Watercraft Movements in the Western United States
- Model Legislative Provisions for State Watercraft Inspection and Decontamination Programs
- Comparison of Existing State Laws to the Model Provisions
- Consensus by Western State AIS Coordinators on Waterbody Classification Standards, Watercraft Inspection & Decontamination Protocols & Training Materials, and Standard Definitions



BUILDING CONSENSUS IN THE WEST

WESTERN REGIONAL PANEL COMMITTEE



III. Locations of outcomes and deliverables:

<http://nsglc.olemiss.edu/projects/model-legal-framework/index.html>

A screenshot of the National Sea Grant Law Center website. The header is blue with the Sea Grant Law Center logo on the left, the text "The National Sea Grant Law Center" in the center, and the University of Mississippi logo on the right. Below the header is a navigation bar with links: Home, About, Our Work, Advisory, Publications, Projects, Legal Network, and a Search button. The main content area has a brown header with the word "Projects". Below this is a breadcrumb trail: Home > Projects > Building Consensus in the West: Developing a Model Legal Framework for Watercraft Inspection and Decontamination Programs. The main content area features a large image of a boat being decontaminated with a high-pressure hose. To the right of the image is a sidebar with the heading "Questions About Projects?" and contact information for the National Sea Grant Law Center.

Sea Grant Law Center **The National Sea Grant Law Center** **THE UNIVERSITY OF MISSISSIPPI**
Providing Legal Research, Education, and Outreach Since 2002
School of Law

Home About Our Work Advisory Publications Projects Legal Network Search

Projects

Home > Projects > Building Consensus in the West: Developing a Model Legal Framework for Watercraft Inspection and Decontamination Programs

Building Consensus in the West: Developing a Model Legal Framework for Watercraft Inspection and Decontamination Programs

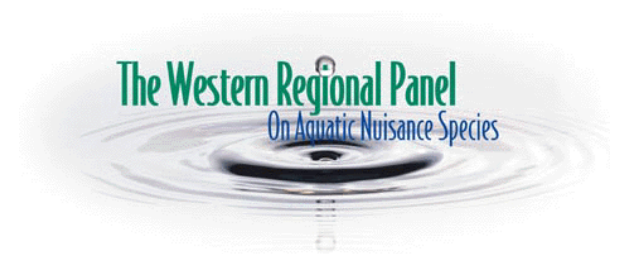
Questions About Projects?

Have questions or comments about projects at the National Sea Grant Law Center? Feel free to contact us!

Call, fax, or email:
662-915-7775
662-915-5267 (fax)
seagrant@olemiss.edu

BUILDING CONSENSUS IN THE WEST

WESTERN REGIONAL PANEL COMMITTEE



IV: Next Steps

Working with American recreational boat manufacturing design engineers on changing standards to decrease spread of invasive species by trailered boats.



Aquatic Invasive Species Summit

Design and Construction of Boats in Consideration of AIS



Date and Time

January 27 –28, 2015
8:00 am to 5:00 pm

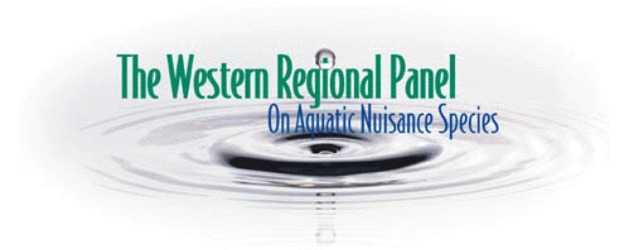
Location

South Point Hotel
9777 Las Vegas Blvd South
Las Vegas, NV 89183

[Click Here to Register](#) or
www.abycinc.org/aisummit

BUILDING CONSENSUS IN THE WEST

WESTERN REGIONAL PANEL COMMITTEE

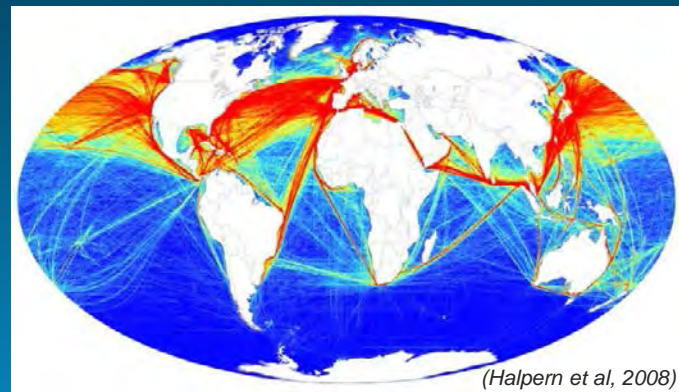


IV. Additional Steps moving forward

- a. Finalize standard protocols for waterbody sampling and frequency
- b. Complete Model Regulations to fall under the authority of the model legislative provisions
- c. Finalize Federal Land Management Agency Authorities analysis
- d. Standardize outreach messaging
- e. Development of Regional Reciprocity Compact for Watercraft Inspections & Decontaminations of Low Risk Boats
- f. Expand conversation to Eastern source states

PACIFIC BALLAST WORK GROUP (PBWG)

COORDINATION FOR AIS MANAGEMENT POLICY DEVELOPMENT AND RESEARCH ASSOCIATED WITH WEST COAST SHIPPING ACTIVITIES



- Ad-hoc group **formed in 1998**
- **Mission:** to foster coordination and formulate consensus solutions for safe, economical, and environmentally protective management strategies of common concern to regulators, managers, scientists and the **commercial shipping industry** on the West Coast.
- **Participating Entities:**
 - State Regulators (CSLC, ODEQ, WDFW, ADFG, HDNR)
 - Federal (USCG and EPA; Transport Canada)
 - Research Institutions (PSU, SERC, MLML, Cal Maritime)
 - Maritime Industry Representatives (PSMA, WSPA, others)



PACIFIC BALLAST WORK GROUP (PBWG)

COORDINATION FOR AIS MANAGEMENT POLICY DEVELOPMENT AND RESEARCH ASSOCIATED WITH WEST COAST SHIPPING ACTIVITIES



- Ballast Water Transfer
- Management Strategies
 - Mid-Ocean Ballast Water Exchange
 - Transoceanic Voyages
 - Coastwise Voyages
 - Vessel inspection, compliance verification, and enforcement efforts.
 - Pursuit of more robust prevention methods that are safe and practicable.



PACIFIC BALLAST WORK GROUP (PBWG)

COORDINATION FOR AIS MANAGEMENT POLICY DEVELOPMENT AND RESEARCH ASSOCIATED WITH WEST COAST SHIPPING ACTIVITIES



Group Activities:

- Annual Meetings
- Technical Workshops
- Emerging Issues

PACIFIC BALLAST WORK GROUP (PBWG)

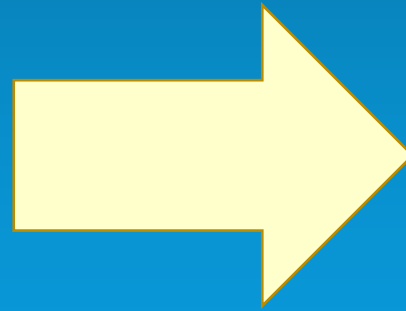
COORDINATION FOR AIS MANAGEMENT POLICY DEVELOPMENT AND
RESEARCH ASSOCIATED WITH WEST COAST SHIPPING ACTIVITIES



Gaps & Challenges

- Implementation of BWDS.

Oceanic Ballast Water Exchange (BWE)



Ballast Water Discharge Standards (BWDS)

via Shipboard Treatment



PACIFIC BALLAST WORK GROUP (PBWG)

COORDINATION FOR AIS MANAGEMENT POLICY DEVELOPMENT AND RESEARCH ASSOCIATED WITH WEST COAST SHIPPING ACTIVITIES



Gaps & Challenges

- Implementation of BWDS.
- Agreements between cooperating and overlapping jurisdictions.



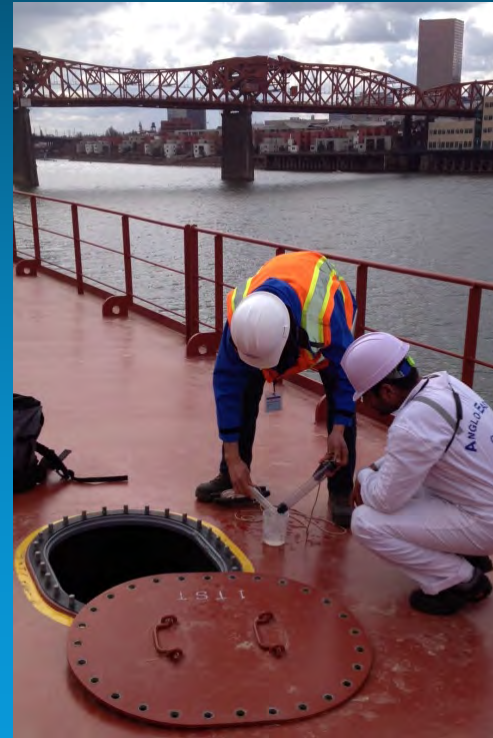
PACIFIC BALLAST WORK GROUP (PBWG)

COORDINATION FOR AIS MANAGEMENT POLICY DEVELOPMENT AND RESEARCH ASSOCIATED WITH WEST COAST SHIPPING ACTIVITIES



Gaps & Challenges

- Implementation of BWDS.
- Agreements between cooperating and overlapping jurisdictions.
- Biofouling Management.



PACIFIC BALLAST WORK GROUP (PBWG)

COORDINATION FOR AIS MANAGEMENT POLICY DEVELOPMENT AND RESEARCH ASSOCIATED WITH WEST COAST SHIPPING ACTIVITIES



<http://www.westernais.org>

Pacific Ballast Work Group

- Contacts
- Resources/Links
- Meeting materials
- News

Aquatic Invasive Species
Protecting the West from the Introduction and Spread of Aquatic Invasive Species

Home Coordination Education/Outreach News Pathways Rapid Response Regulations Training

Pacific Ballast Work Group (maritime) About
Building Consensus Contacts
100th Meridian Documents/Resources
ANSTF Links
Invasive Species Advisory Committee Meetings
Preventing an Invasion Ballast News
Western Regional Panel
Invasive Species Councils
PNWER Invasive Species Working Group

Pacific Ballast Water Group (PBWG)

[Contacts](#)
[Documents/Resources](#)
[Links](#)
[Meetings](#)
[Ballast News](#)

MISSION

The mission of the Pacific Ballast Water Group (PBWG) is to promote development and implementation of safe, economical, effective management of aquatic nuisance species associated with West Coast shipping.

OVERVIEW

The PBWG was formed in 1998 following a series of informal meetings of West Coast state/provincial and federal agency and shipping industry representatives from the US and Canada concerned about the introduction of aquatic nuisance species through ballast water discharge. The PBWG serves as a coordinating body to share information and formulate consensus solutions on ballast water management and research issues of common concern to regulators, managers, scientists and the shipping industry on the West Coast (Canada, California, Oregon, Washington and Alaska). Beginning in 2002, the Pacific States Marine Fisheries Commission (PSMFC) began to serve as the administrative entity and provide staff support to the PBWG. Randy Fisher, Executive Director of the PSMFC, currently serves as chair of the PBWG.

The PBWG has also been coordinating its activities with the West Coast Governors Alliance on Ocean Health (www.westcoastgoa.org). The agreement's Action Plan, completed in 2008, identified the need to prevent the future establishment of non-native species by reducing pathways of introduction, including release from ballast water. The Action Plan also identifies the PBWG as a forum for states to coordinate their ballast water policies.

MEETINGS

The PBWG meets annually. The PBWG also sponsors periodic technical workshops on issues of mutual concern to the region including, "Testing of Ballast Water Treatment Systems: General Guidelines and Step-wise Strategy Toward Shipboard Testing (2005)", and "Alternate Ballast Water Exchange Areas: Physical And Biological Oceanographic Considerations (2006)". Agendas, presentations and reports from past meetings can be found under the "Past Meetings" tab on this page. Future PBWG meetings and workshops are posted under the "Future Meeting" tab.

FURTHER INFORMATION

For further information contact the PBWG coordinator, Stephen Phillips, stephen_phillips@psmfc.org

BALLAST WATER BRINGS UNWANTED SPECIES

Discharging ships fill ballast tanks with millions of gallons of water for stability when their cargo holds are empty. The water may contain creatures that can be carried into the Great Lakes. Even empty ballast tanks hold residual water and mud that may contain tiny creatures.

PACIFIC NORTHWEST ECONOMIC REGION



IV. Pacific Northwest Economic Region

- a. Public/private non-profit created by statute in 1991 by the states of Alaska, Idaho, Oregon, Montana, Washington, and Canadian provinces and territories of British Columbia, Alberta, Saskatchewan, Northwest Territories, and the Yukon



PACIFIC NORTHWEST ECONOMIC REGION



IV. Pacific Northwest Economic Region

- b. Unique organization comprised of state, provincial, and territorial legislators with a remit to work across borders
 - Provides opportunity for one-on-one interaction on issues outside the formal legislative process



PACIFIC NORTHWEST ECONOMIC REGION



IV. Pacific Northwest Economic Region

c. Attracts high level participation



US and Canadian Ambassadors



BC Premier Clark



MT Gov. Bullock

PACIFIC NORTHWEST ECONOMIC REGION



IV. Pacific Northwest Economic Region

d. Capitol visits can advance regional efforts at the state and federal levels



Ottawa meeting with Prime Minister Harper



Olympia meeting with Governor Inslee

PREVENTING AN INVASION

BUILDING A REGIONAL DEFENSE AGAINST QUAGGA AND ZEBRA MUSSELS



I. Workshop May 15, 2013 – 90 individuals

- Canadian and PNW irrigation and water districts, water suppliers, legislators, state and federal agencies, tribal sovereign nations, nonprofit organizations, recreational boating interests, consortiums, and others
- Coordinate and implement the Northwest Defense Against Mussels (NDAM)
 - Regulatory, policy, outreach, funding, research, coordination



PREVENTING AN INVASION

BUILDING A REGIONAL DEFENSE AGAINST QUAGGA AND ZEBRA MUSSELS

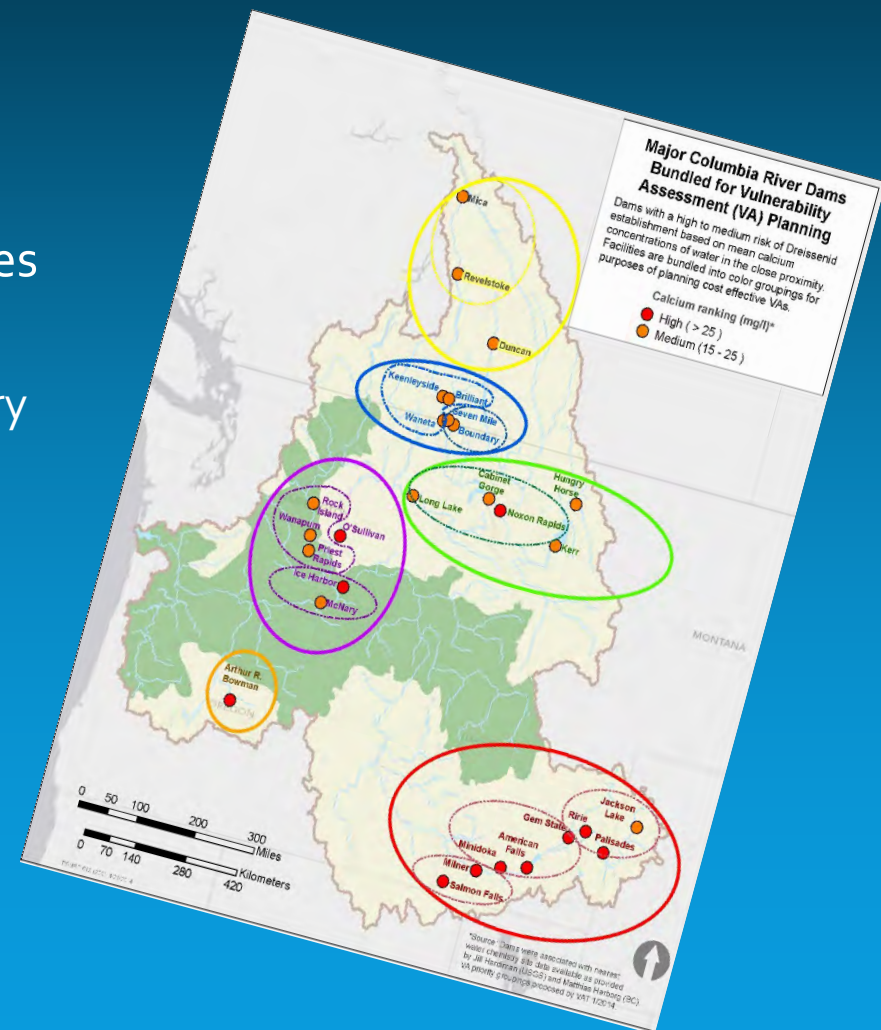
II. Progress made:

- Declaration of Cooperation – 23 signatories
- Action Plan
 - Conducted workshops to advance regulatory review for non-chemical/pesticide control
 - Updated CRB plan appendices (control/eradication methods)
 - Supported Rapid Response Plans
 - Oregon and Washington ✓
 - Rapid Response Working Group
 - Vulnerability Assessment Team

OREGON DREISSENID MUSSEL RAPID RESPONSE PLAN



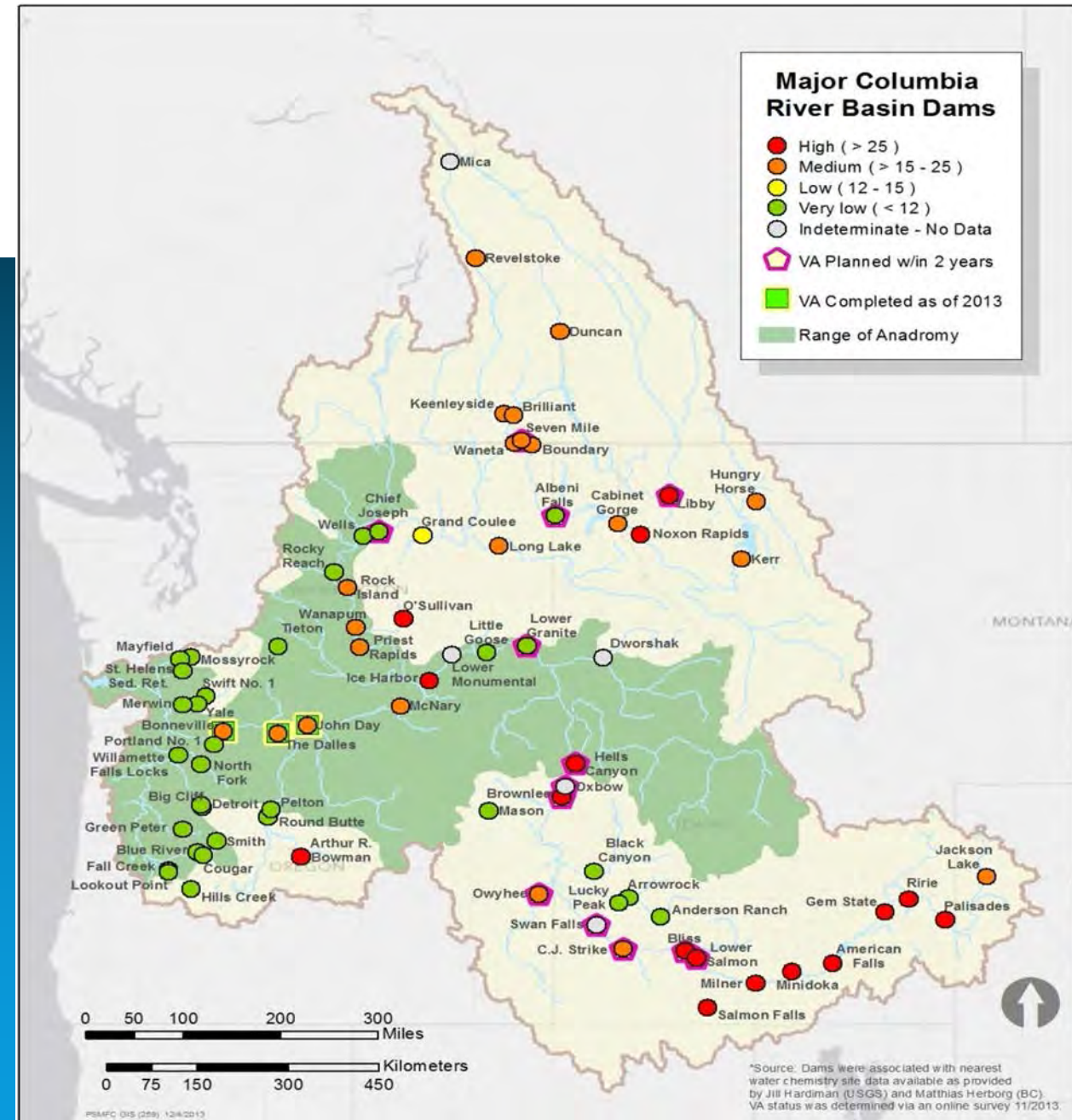
Portland State
UNIVERSITY



VULNERABILITY

Vulnerable systems and ecosystems

- Columbia River Basin
 - Water bodies with high calcium levels in the CRB
 - Hydropower facilities without vulnerability assessments
 - Water bodies with significant recreational boater traffic



PREVENTING AN INVASION

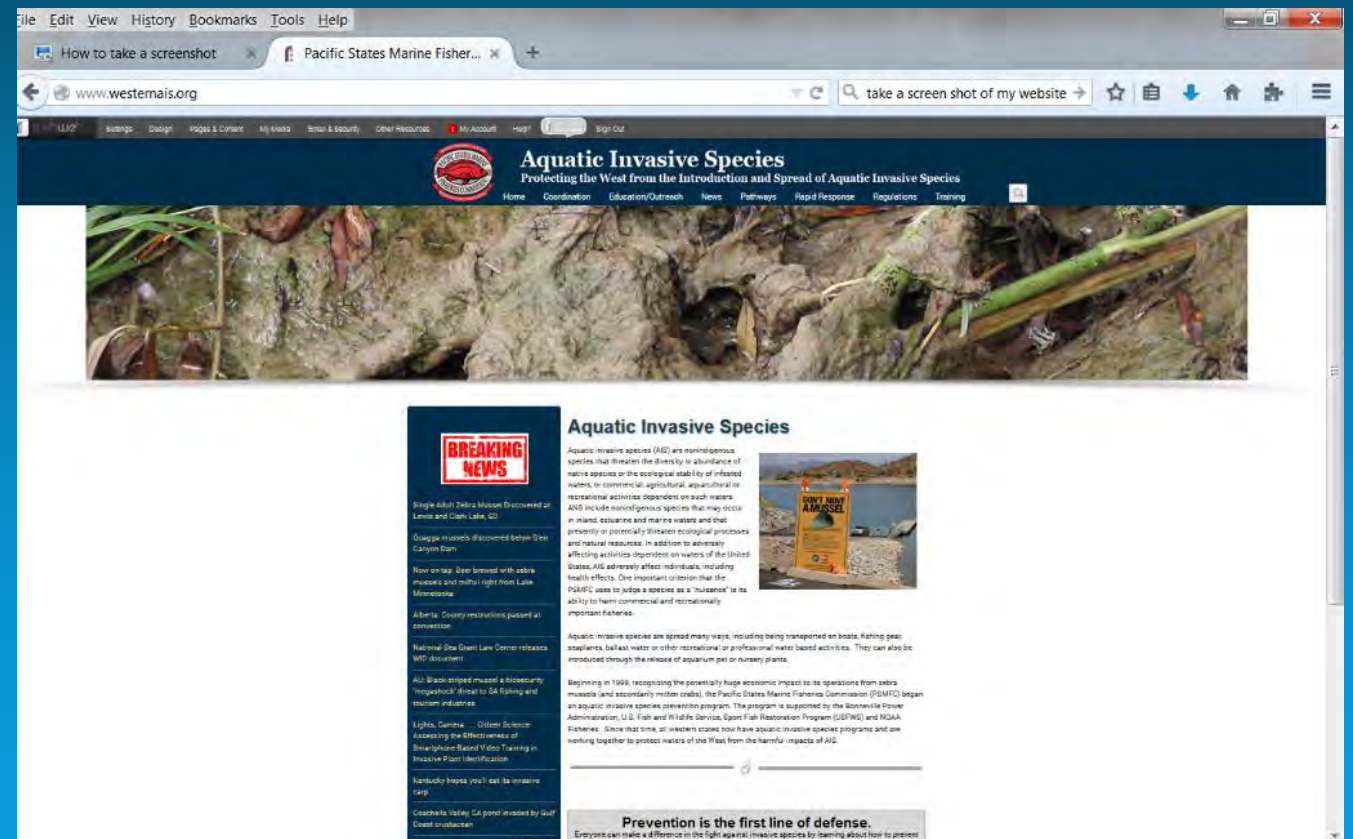
BUILDING A REGIONAL DEFENSE AGAINST QUAGGA AND ZEBRA MUSSELS

III. Locations of outcomes and deliverables

<http://www.westernais.org>

– one stop shopping

Preventing an Invasion



PREVENTING AN INVASION

BUILDING A REGIONAL DEFENSE AGAINST QUAGGA AND ZEBRA MUSSELS

IV. Gaps to address moving forward

- a. Complete rapid response plans for all provinces and states in the PNW.
- b. Update vulnerability assessment document on an ongoing basis, continually identifying opportunities to bundle assessments and address high risk facilities
- c. Add new signatories to the Declaration of Cooperation
- d. Ensure new and emerging control products are registered in each state and labeled for use in controlling dreissenids
- e. Address all other items in the NDAM action plan

NORTHWEST POWER AND CONSERVATION COUNCIL



Northwest **Power** and
Conservation Council

- What is the Northwest Power and Conservation Council?
- Northwest Power Act of 1980
- Interstate Compact among 4 NW states (ID, MT, OR, WA)
 - Eight members appointed by Governors of NW states
- Council to prepare a 20-year Power Plan
 - Demand forecast; low-cost resources; energy efficiency
 - Address hydropower impacts on fish and wildlife
 - Public involvement
 - Residential exchange
- BPA has a consistency requirement



S E V E N T H
**NORTHWEST
POWER PLAN**

NORTHWEST POWER AND CONSERVATION COUNCIL



Northwest **Power** and
Conservation Council

- Develop a Fish and Wildlife Program for Columbia River Basin
 - First Program developed in 1982; 18 more since
 - Protect, mitigate & enhance F&WL affected by hydropower
 - Initial focus on improving dam passage; today mostly habitat
- Prepare a Power Plan for Pacific Northwest
 - First Plan developed in 1983; working on Seventh Plan now
 - Assure an adequate, efficient, economical and reliable power supply
- Revise F&WL Program every five years, then the Plan
- Provide for public involvement
 - Inform and involve Northwest citizens

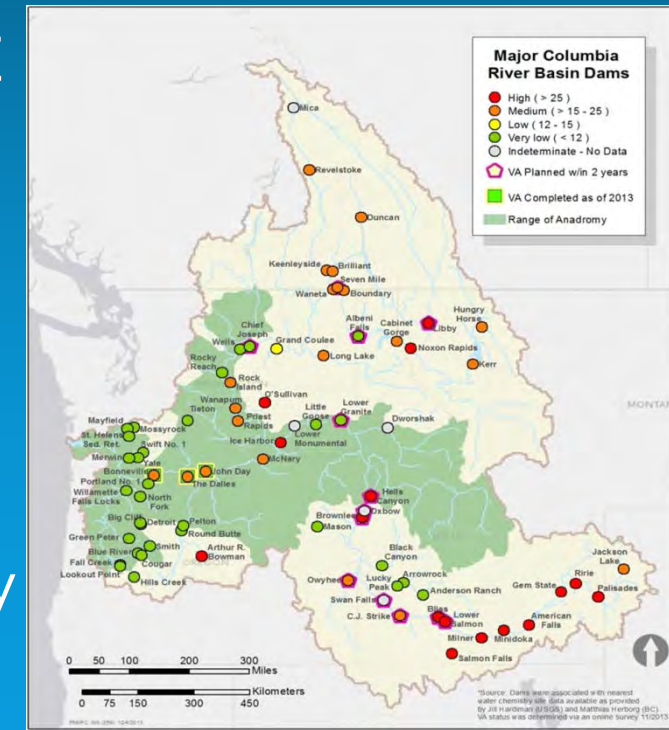


NORTHWEST POWER AND CONSERVATION COUNCIL



Northwest **Power** and
Conservation Council

- Council is a unique regional agency that provides:
- Regional decision-making process
 - Program directs >\$300 million of BPA ratepayer funds annually
 - Program also calls for projects by USACE, USBR & FERC
- Independent Scientific Review
 - Ensures F&WL projects are based on sound science
- Accountability
 - Council watches over public's investments
- Regional Power Planning
 - Provides analysis on energy demand, technologies, efficiency



NORTHWEST POWER AND CONSERVATION COUNCIL



Northwest **Power** and
Conservation Council

- Key elements of 2014 Fish and Wildlife Program
- Improve fish survival at dams (flow, spill, passage)
- Improve ecosystem function by:
 - Improving habitat for fish and wildlife
 - Protecting & restoring ecosystems and biological diversity
- Use hatcheries to rebuild runs and support harvest
 - Ensure abundant harvest while maintaining strong wild stocks
 - Encourage genetic management plans for hatcheries
 - Program guided by best available science
- Protected areas from future hydropower development

Columbia
River Basin
Fish and Wildlife
Program 2014



NORTHWEST POWER AND CONSERVATION COUNCIL



Northwest **Power** and
Conservation Council

- What's new in 2014 Fish and Wildlife Program?
- Reducing threats from **invasive species**, predators, toxic substances and climate change
- Protecting 'strongholds' – areas of good habitat and native fish residing within them
- Enhancing conservation of wild fish
- Investigate feasibility of reintroducing salmon & steelhead into blocked areas, notably above Chief Joseph and Grand Coulee dams
- Repairing aging infrastructure & equipment related to projects implementing the Program



NORTHWEST POWER AND CONSERVATION COUNCIL



Northwest **Power** and
Conservation Council

- What's in Program's strategy on non-native and invasive species?
- Preventing the establishment of AIS such as Q/Z mussels is a key measure in Program
- Council encourages federal & other regional agencies to prevent invasive species introductions by:
 - Monitoring & managing various introduction pathways into CRB
 - Developing strategies & public outreach tools to educate the public about prevention and management of invasive species
- Program calls on BPA and other federal agencies to assist NW states' efforts to prevent the establishment of Q/Z mussels



QUAGGA MUSSEL



NORTHWEST POWER AND CONSERVATION COUNCIL



Northwest **Power** and
Conservation Council

- For more information about the Council, see:
www.nwccouncil.org
- For more information about the F&WL Program, see:
www.nwccouncil.org/fw/program/2014-12/Program
- Questions?

Columbia
River Basin
Fish and Wildlife
Program 2014



REGIONAL COORDINATION ON INVASIVE SPECIES

Bill Tweit

Washington Invasive Species Council

Washington Department of Fish & Wildlife



COORDINATED OUTREACH CAMPAIGNS

Common messaging on signage and educational materials throughout the NW states



Wood boring beetles
and moths

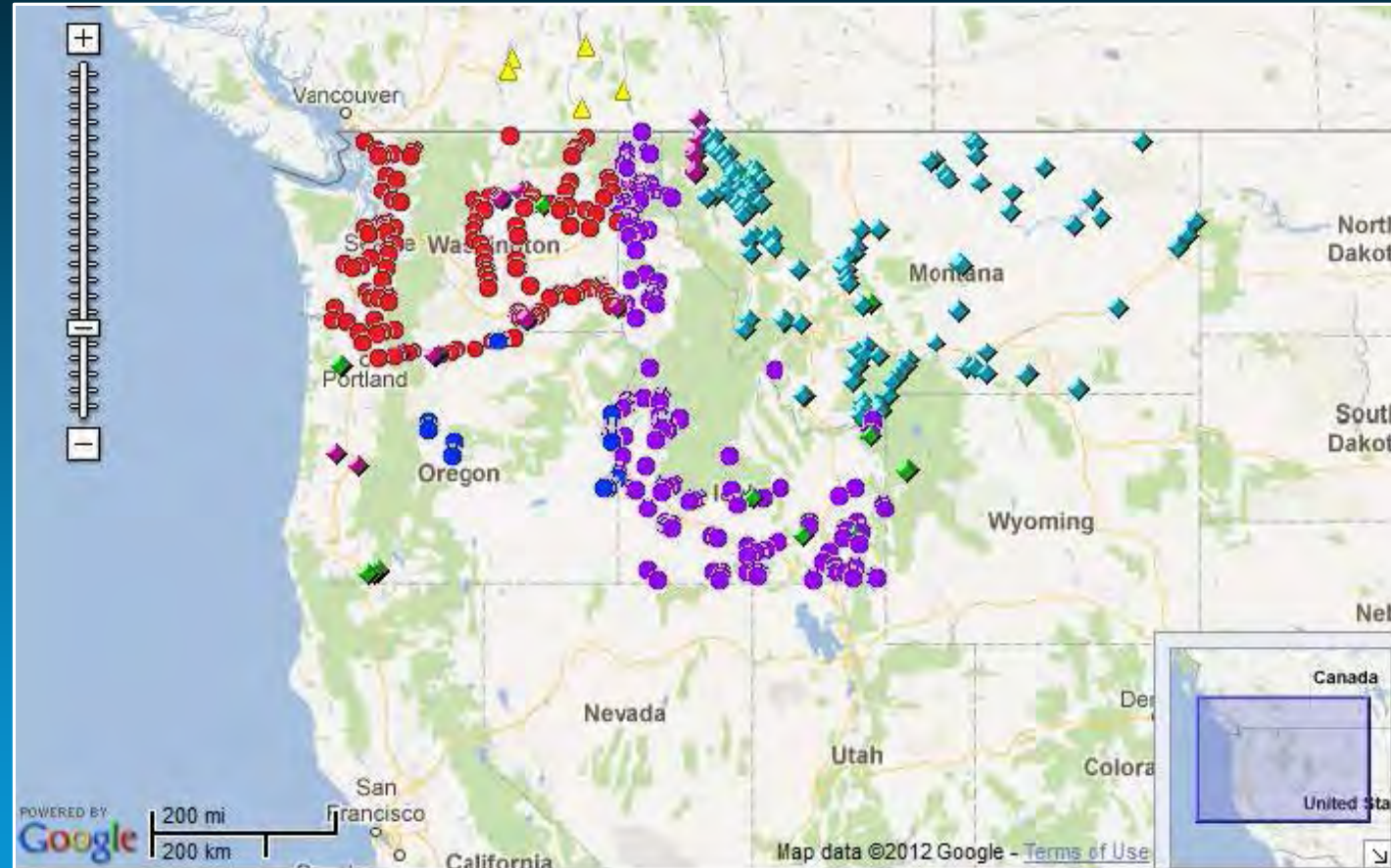


Feral swine

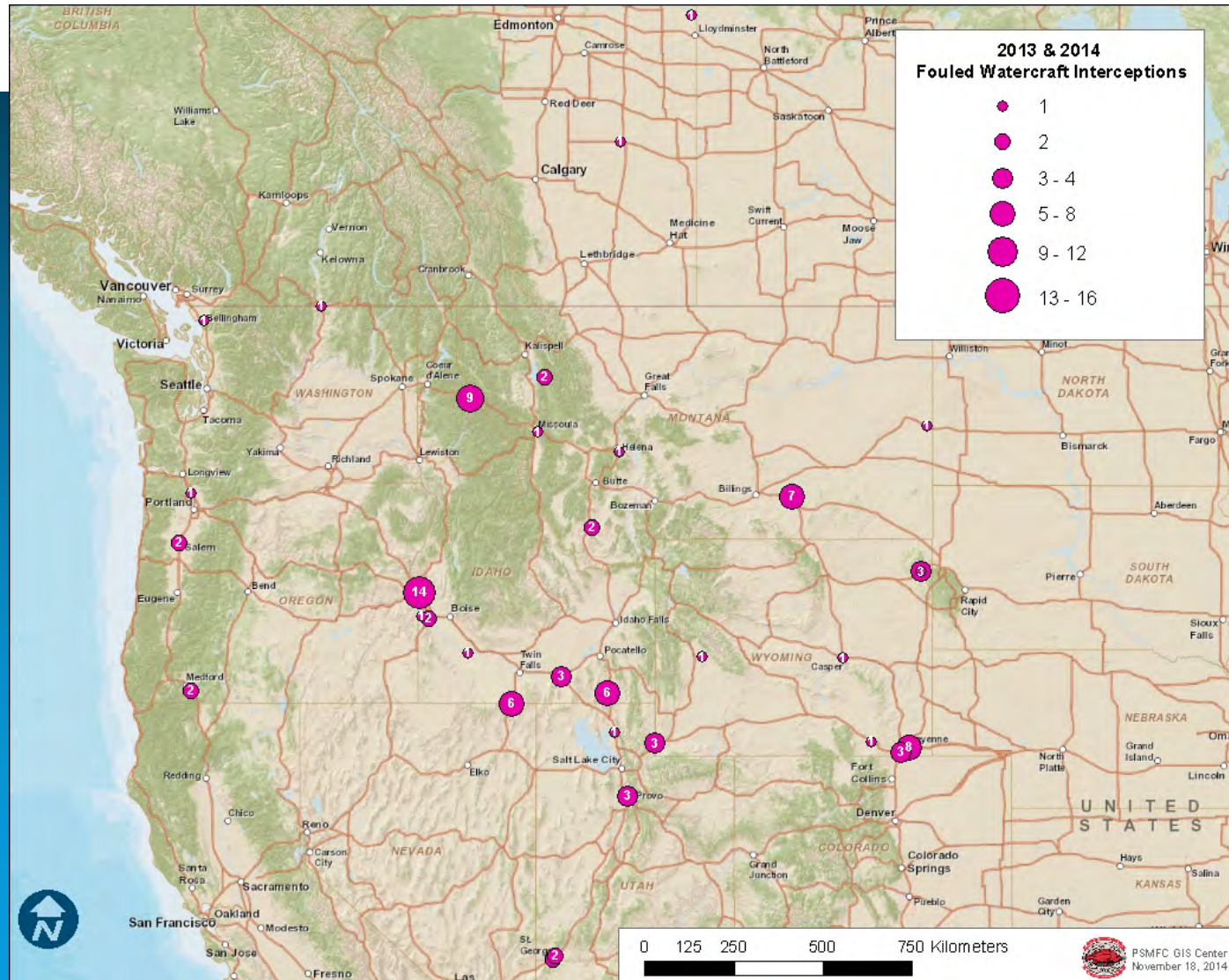


Aquatic invasive
species

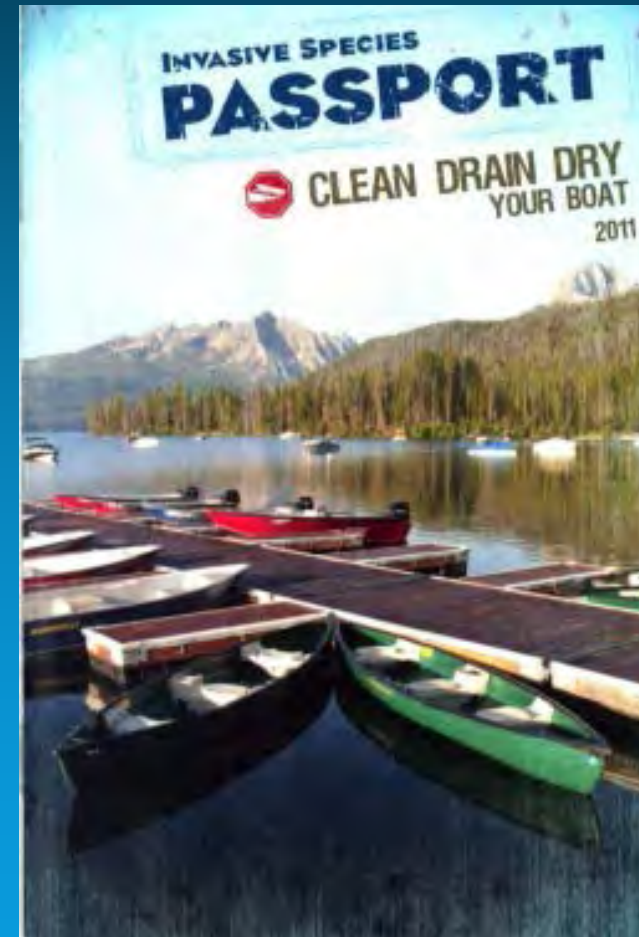
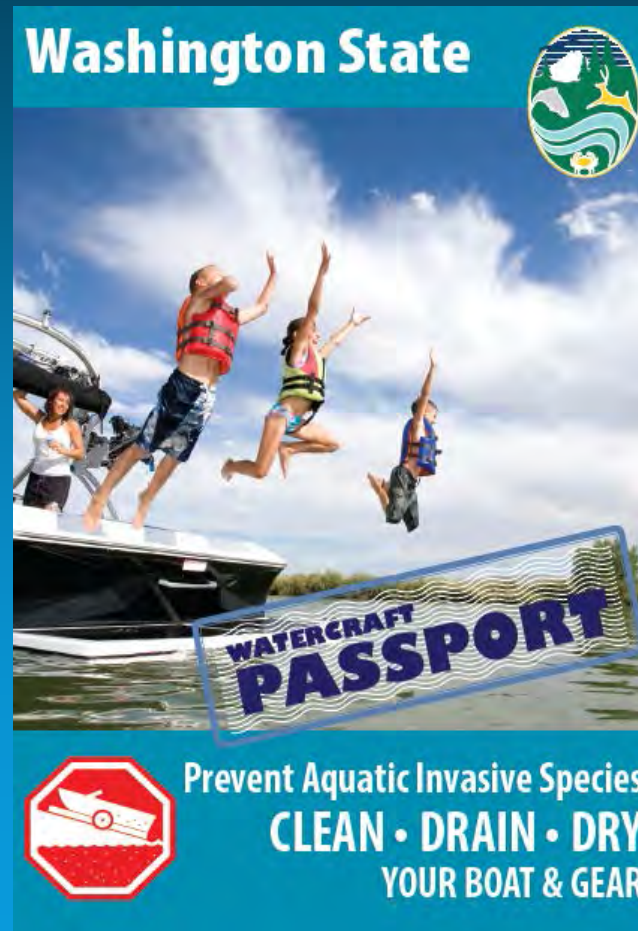
Coordinated Communication and Monitoring



COORDINATED WATERCRAFT INTERCEPTION EFFORTS



INVASIVE SPECIES PASSPORT



PROMOTING RESEARCH

Regional studies on invasive species:

- *Economic Impacts of Invasive Species in the Pacific Northwest Economic Region – PNWER*
- *Economic Risk Associated with the Potential Establishment of Zebra and Quagga Mussels in the Columbia River Basin – IEAB*
- *Quagga Mussel Survival and Growth in Columbia River Waters – BPA/PSU/NPCC*

COORDINATED STATE AND FEDERAL ADVOCACY

At the **STATE** level...

- Establishment of state invasive species council's (WISC, OISC, IISC, MISC)
- Support in requesting funding for state AIS programs
- Development of consistent decontamination protocols
- Development of dreissenid rapid response plans

At the **FEDERAL** level...

Support of regional campaigns to:

- List dreissenid mussels as injurious under the Lacey Act
- Increase decontamination efforts at infested water bodies (Lake Mead, Havasu, etc)
- Request funding from Water Resource Development Act
- Increase National Invasive Species Act funding

QUESTIONS FOR/DISCUSSION WITH PRESENTERS



POLL

PROGRESS TO DATE – TRACKING THE ACTIONS

- Regional accomplishments

- Preventing an Invasion Action Plan
- Building Consensus in the West Action Plan
- Rapid Response Working Group Actions
- Vulnerability Assessment Team Actions

Prevention
EDRR
Control and Management



- Regional Framework Addresses Gaps

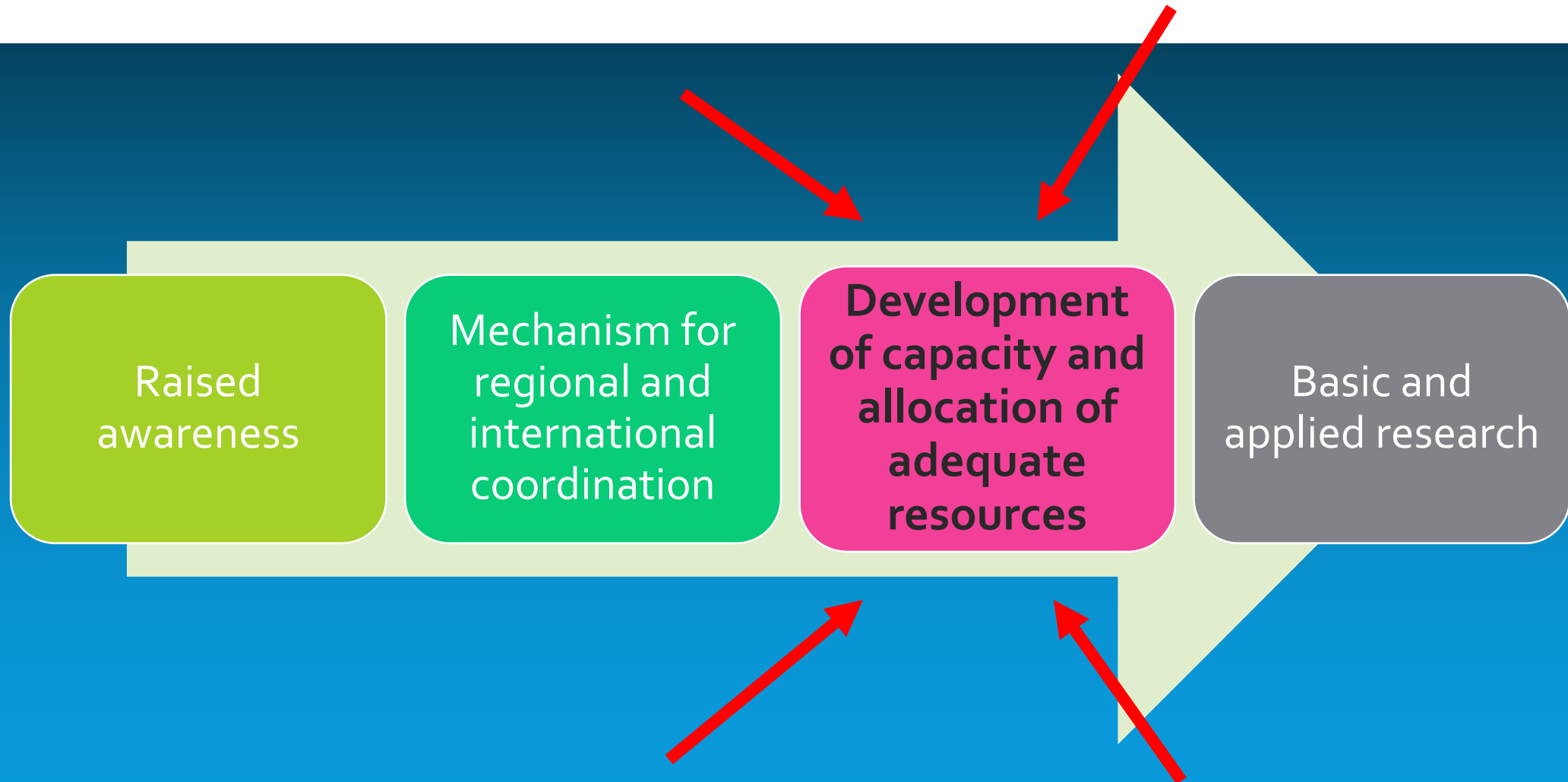


GOALS OF A REGIONAL FRAMEWORK

- Prevent the introduction of dreissenids (and other AIS) to the PNW
- Prevent the spread of dreissenids in North America
- Improve surveillance and monitoring of dreissenids
- Improve rapid response and management capabilities
- Create an aware, informed, and educated public
- Develop and enhance detection and response tools and technologies
- Improve communication and information about key vectors and pathways

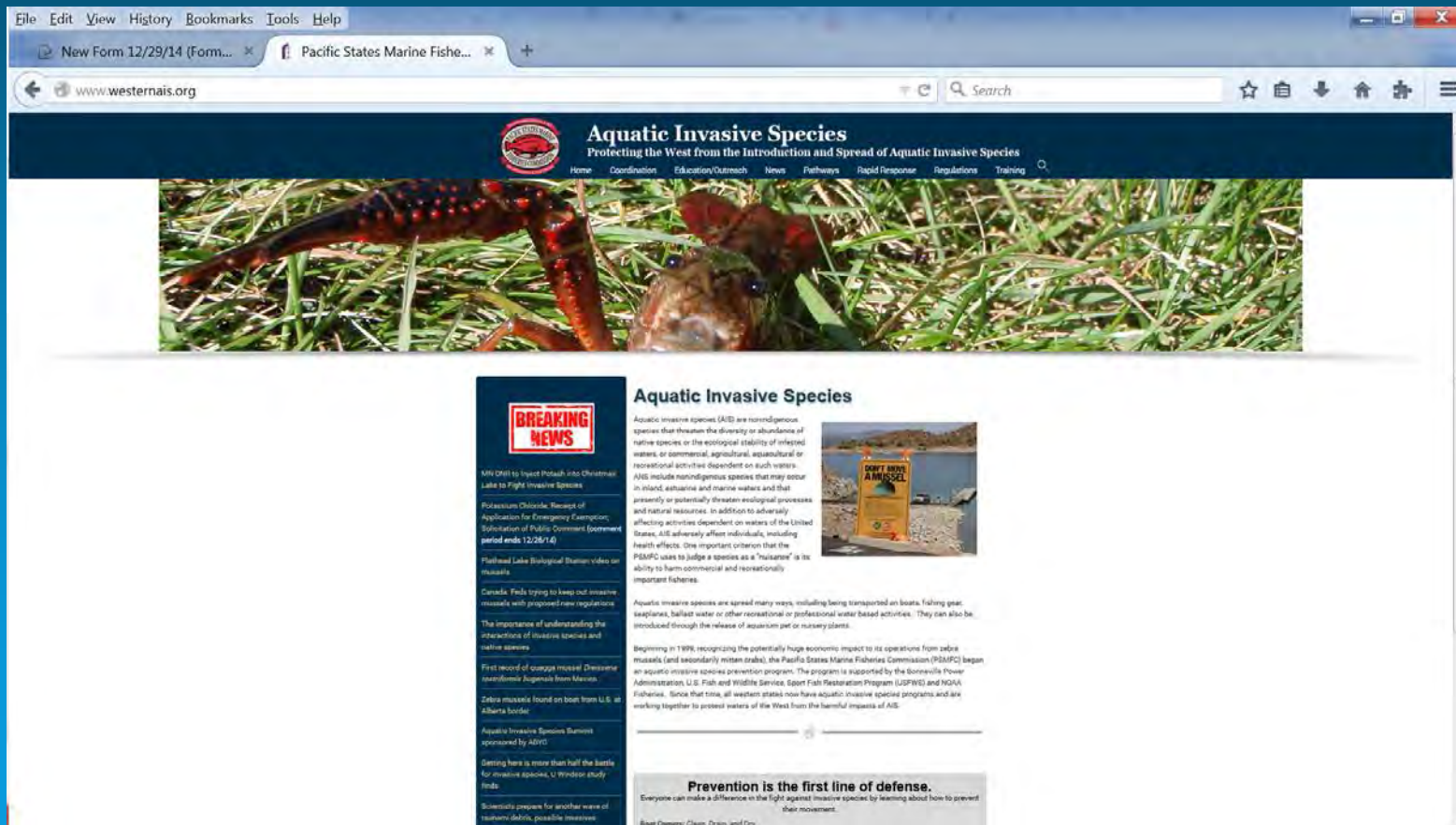


REGIONAL FRAMEWORK PREREQUISITES



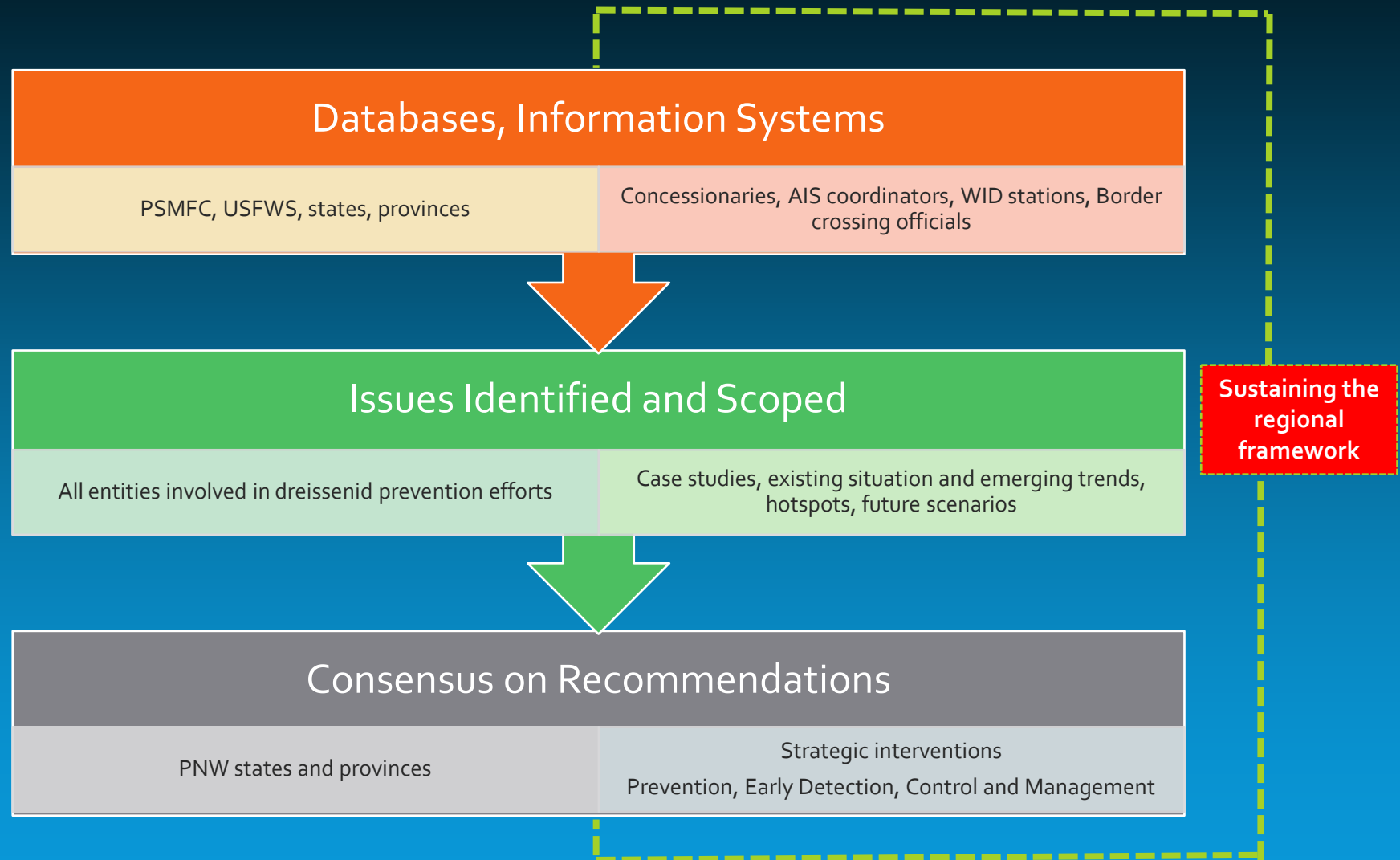
RAISED AWARENESS/MECHANISM FOR COORDINATION

Collaborative efforts – westernais.org



POLL

Pacific Northwest Regional Dreissenid Framework



Consensus on Recommendations



Requires resources and
capacity

PREVENTION

- Identify, forecast and prioritize threat
- Identify high-risk pathways for movement and introduction
- Identify vulnerable ecosystems
- Collaborative efforts
- **Implement actions** to prevent introduction and establishment

EARLY DETECTION

- Survey to detect new introductions and monitor priority species
- Evaluate the extent of infestations and their existing and potential impacts
- Report detection findings in standardized databases
- Develop tools and techniques to detect and monitor invasives

CONTROL AND MANAGEMENT

- Coordinate with partners
 - NOAA, USFWS
- Prioritize and implement treatments
- Implement rapid response for new infestations
- Monitor and report accomplishments in standardized databases
- Develop the tools, technologies, methods, and budgetary processes to prioritize, manage, and eradicate invasives

TARGET AUDIENCES

- Policy and decision makers
- Governor's offices/agencies/commissions (AIS oversight entities)
- AIS coordinators
- Federal natural resource managers
- Recreation and boating public
- Commercial vessel haulers
- Boat manufacturers
- General public



COSTS – ANNUALLY WID

\$10,433,178

- Idaho - \$1,250,000 (2015 – T. Woolf)
- Montana - \$640,000 (T. Boos – Montana)
- Oregon - \$542,340 (R. Boatner – ODFW)
- Washington - \$175,000 (A. Pleus – WDFW)
- California – Lake Tahoe - \$1.5 million (D. Zabaglo – TRPA)
- State of California - \$3,025,838 (D. Norton)
- Wyoming - \$800,000 (B. Bear – Wyoming GFD)
- Utah - \$1,350,000 (J. Nielson – Utah DWR)
- Nevada – \$600,000 (K. Vargas, NDOW)
- Alberta - \$530,000 (K. Wilson, Province of Alberta)
- British Columbia - \$20,000 (M. Herborg – British Columbia)



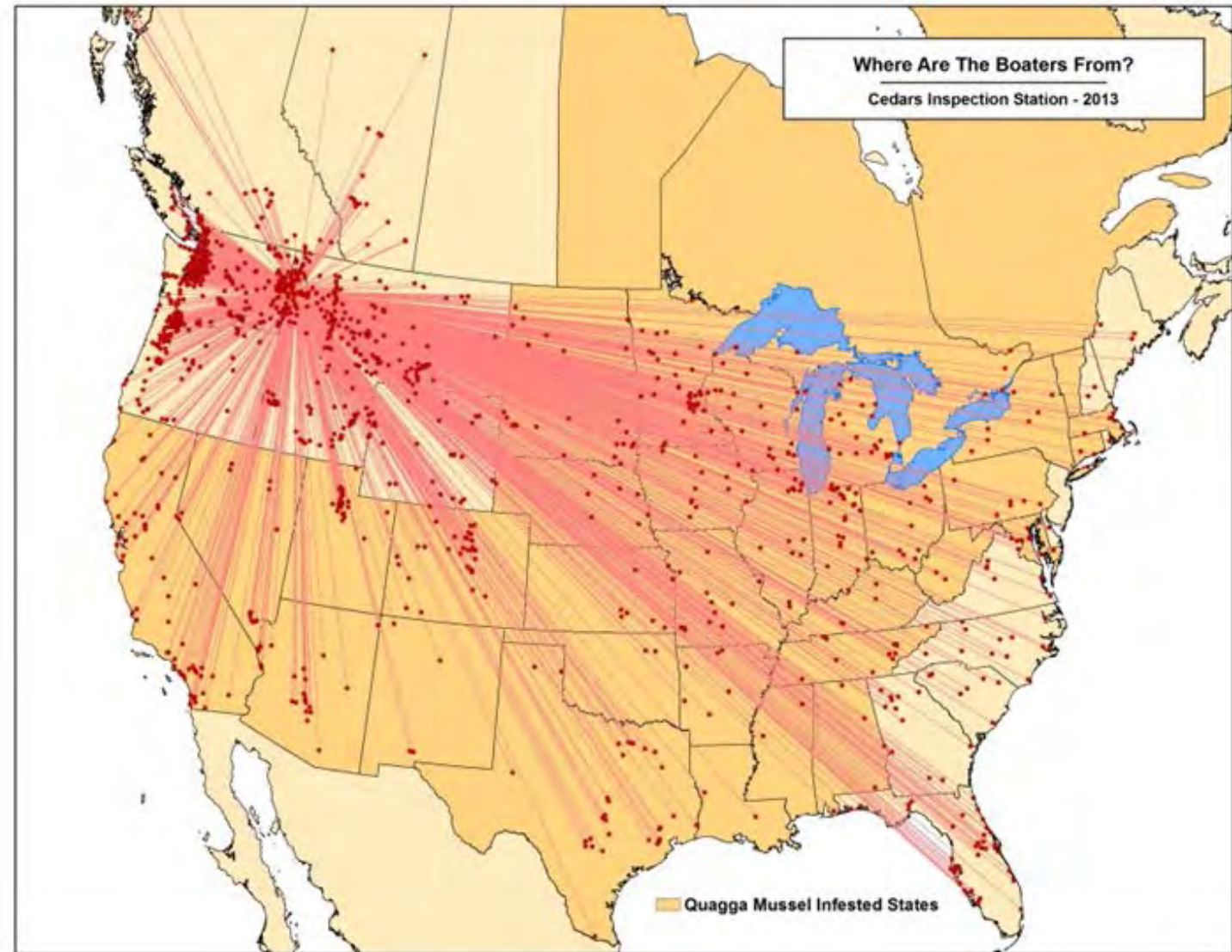
Wyoming watercraft inspection station.

POTENTIAL COSTS OF A DREISSENID INTRODUCTION	ALBERTA	BRITISH COLUMBIA	NORTHWEST TERRITORIES	SASKATCHEWAN	YUKON TERRITORIES
Power Generation	\$5,938,487	\$6,524,532			
Drinking Water Systems	\$20,839,921	\$9,251,608			
Boat Maintenance	\$390,060				
Recreational Fishing	\$21,830,892	\$12,385,962	\$193,713,742		
Water Management Structures	\$8,841,373				
Water Diversion Intakes	\$3,910,000				
Property Value	\$13,789,500	\$10,867			
Golf Courses					
TOTAL ANNUAL COST ESTIMATED	\$75,540,773	\$28,172,969	EST. \$30M	EST. \$30M	EST. \$30M
	ALASKA	IDAHO	OREGON	MONTANA	WASHINGTON
Hydropower		\$47,242,000		\$41,791,000	
Other Dams		\$148,700		\$328,700	
Drinking Water Intakes		\$4,287,000		\$4,287,000	
Boating Facilities		\$285,000	\$379,719,356		\$240,000
Fish Hatcheries and Aquaculture		\$1,136,800		\$146,500	
Boater Costs/Maintenance		\$23,850,000		\$13,250,000	
Fishing Use		\$17,507,500		\$20,157,166	
Golf Courses		\$17,100			
Irrigation					
TOTAL ANNUAL COST ESTIMATED	EST. \$5M	\$94,474,000	EST. \$100M	\$80,245,356	EST. \$100M

TOTAL ESTIMATED COST TO THE PNW = \$573,433,098 MILLION ANNUALLY

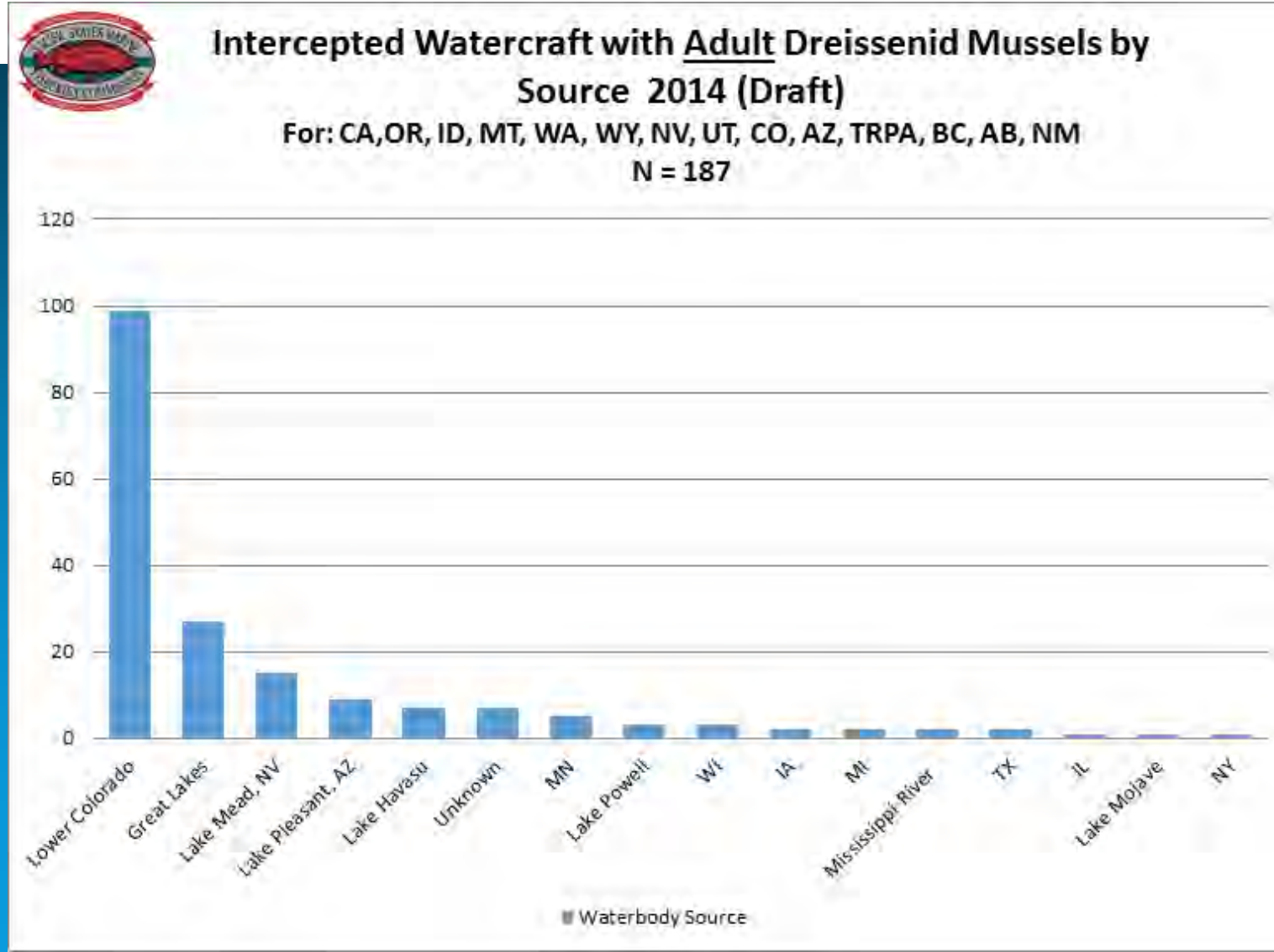
ISSUES IDENTIFIED AND SCOPED

- High-risk pathways of movement and introduction
 - Recreational boaters from infested waters
 - Commercial haulers hauling conveyances from infested waters



SOURCE OF INFESTED BOATS

The source of the majority of fouled watercraft in the Pacific Northwest is the Great Lakes and Lake Mead. **But the Lower Colorado region (Lake Powell to Mexican Border) is a leader in high-risk “fresh” boats, and likely a greater threat than the Great Lakes.**

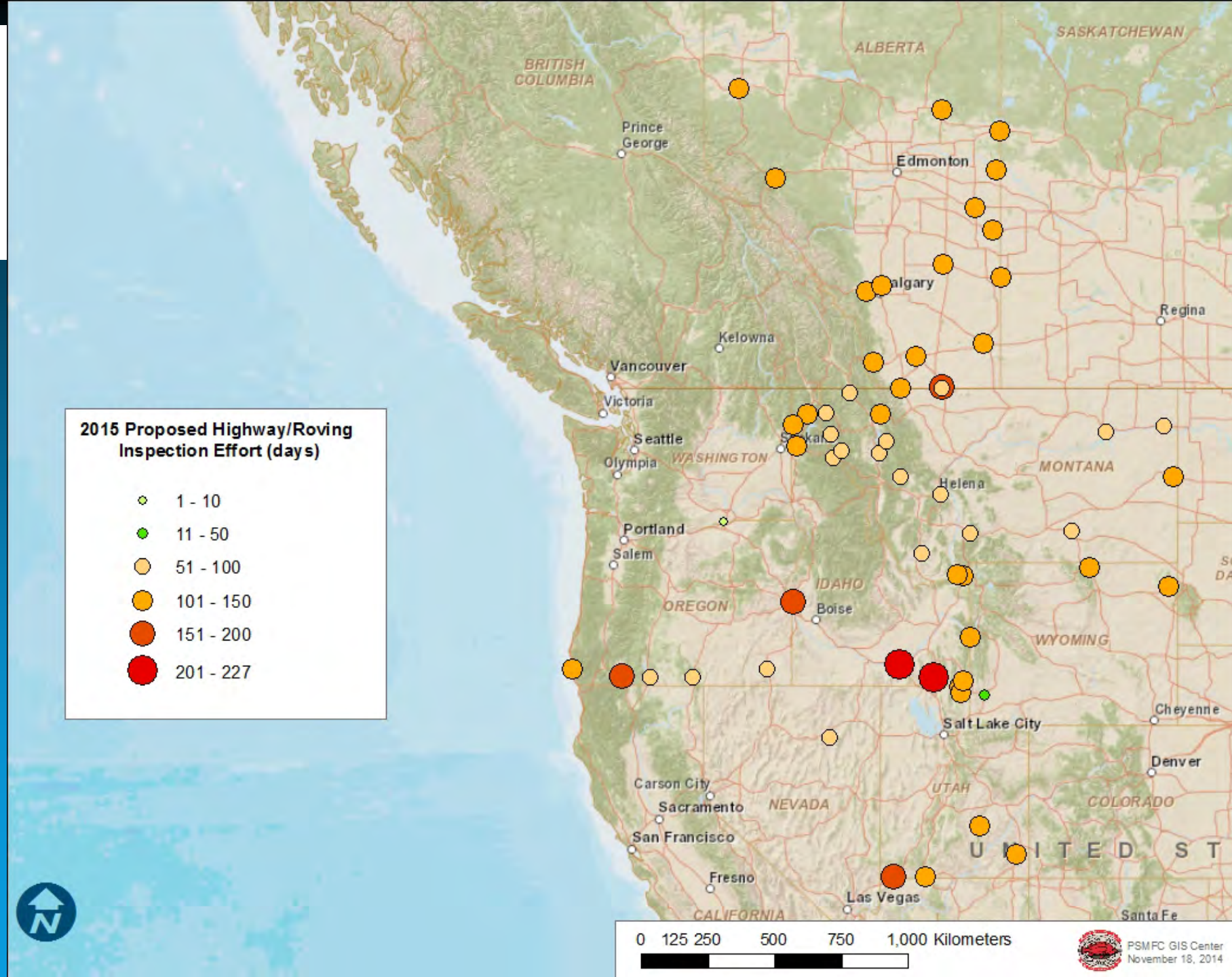


IDAHO: Of the 48 vessels from the Great Lakes and eastern waters, ~ 2-3 were out of the water for <30 days, compared to >40 that were "fresh" from Mead, Havasu, Pleasant and Powell (Source: TW/SC, ISDA)



2014 WATERCRAFT INSPECTION/INTERCEPTION PROGRAM DATA BY STATE				
STATE	# BOATS INSPECTED	CONTAMINATED DREISSENID BOATS INSPECTED	ORIGIN	DESTINATION
MONTANA	34,121	3	ON, OH, IN	WA, MT (2)
OREGON	11,490	11	WI (3), MN, NV, IL GREAT LAKES, OH, MI, LAKE POWELL, TX	WA (6), OR (3), COLUMBIA R., WILLAMETTE R.
WASHINGTON STATE WID LAKE WHATCOM	14,215 7,859	0 1	LAKE HAVASU, AZ	LAKE WHATCOM, WA
IDAHO	49,380	15	MN (2), OH (2), MI, IA, LAKE PLEASANT, LAKE POWELL (2), GREAL LAKES, NEVADA (5)	ID (5), WA (4), BC (2), AB (1), MT (3)
WYOMING	40,587	10	IL, IA (2), MN (2), GREAT LAKES, AZ (3), TX, WI	ID, WA (2), OR (2), CO, CA, WY (2), ND
UTAH	106,000	5	LAKE MEAD (5)	UT (5)
COLORADO	428,457	11	UNKNOWN (4), WI (2), LAKE MEAD, LAKE POWELL, LAKE PLEASANT (AZ), LAKE HAVASU (AZ)	
CALIFORNIA	110,053	112	LOWER COLORADO RIVER (MEAD, HAVASU) (99), GREAT LAKES (10), MI (2), TN (1)	CA (105), NV (2), OR (1), AZ (2), AK
LAKE TAHOE	8000	11	LAKE MICHIGAN, UNKNOWN (3), LAKE MEAD (3), LAKE HAVASU (2), MISSISSIPPI RIVER (1), LAKE MOHAVE	LAKE TAHOE
NEVADA Performed 246 decons at Lake Mead in 2014	1,331	0		
PROVINCE OF ALBERTA	3,747	3	ON, MI, AZ	AB (3), AK
PROVINCE OF BRITISH COLUMBIA	132	1	LAKE PLEASANT, AZ	UNKNOWN

2015 ROADSIDE/ ROVING INSPECTION STATIONS



RESEARCH PRIORITIES (2010 QZAP) (2015 GNLCC)

- Determine physiological tolerances to estimate potential range
- Develop a method to track dispersal via genetic fingerprints
- Develop alternative decontamination methods
- Develop biological control methods
- Develop eco-friendly chemical control methods



COMPARISON TO MODEL LAW



	IDAHO	OREGON	MONTANA	WASHINGTON	WYOMING
% of core authorities suggested in Model Law	70	75	55	75	90
LEGISLATIVE FINDINGS	√	×	√	√	×
DEFINITIONS	No definitions for decontamination or inspection	No explicit definition for inspection	No definitions for inspection, decontamination, and waters	Does not define inspection	√
POWERS AND DUTIES	√	√	√	√	√
PROHIBITIONS	√	√	No launching prohibitions	No prohibition on launching out-of-compliance conveyances	√
OWNER RESPONSIBILITIES	No general obligation to Clean, Drain, Dry	×	No cleaning and drying obligations	√	Does not impose Clean, Drain, Dry obligations
INSPECTION	√	√	No provisions to authorize law enforcement stops	No express authority for law enforcement stops	√
DECONTAMINATION	√	No express authority to impound conveyances or impose costs	No express authority to impound conveyances or impose costs	√	√
CERTIFICATION	Authorizes issuance of receipts/seals only for decontamination	√	×	No provisions for seals or reciprocity	√
PENALTIES	√	√	√	√	√

PNWER INVOLVEMENT IN 2015 LEGISLATION



- Visits to state capitols
 - Idaho – January 20
 - Washington – January 27-28
 - Montana – February 5
 - Oregon - TBD
- Increase awareness and understanding of AIS issues and importance
 - Introduce many of the entities working on this issue
 - Recommended priority set of actions to address
 - State-specific information on watercraft inspection
 - Case studies
 - Reiterate priority of actions



Regional Framework for Preventing an Introduction of Dreissenids to the Pacific Northwest



Regional Defense

Using resources in a cost-effective, interjurisdictional, coordinated response to prevent mussels from entering uninfested areas and to contain AIS at their source



Support appropriation of WRDA funds to Columbia River Basin dreissenid activities

Water Resources Development Act (signed June 2014)

■ Section 5007

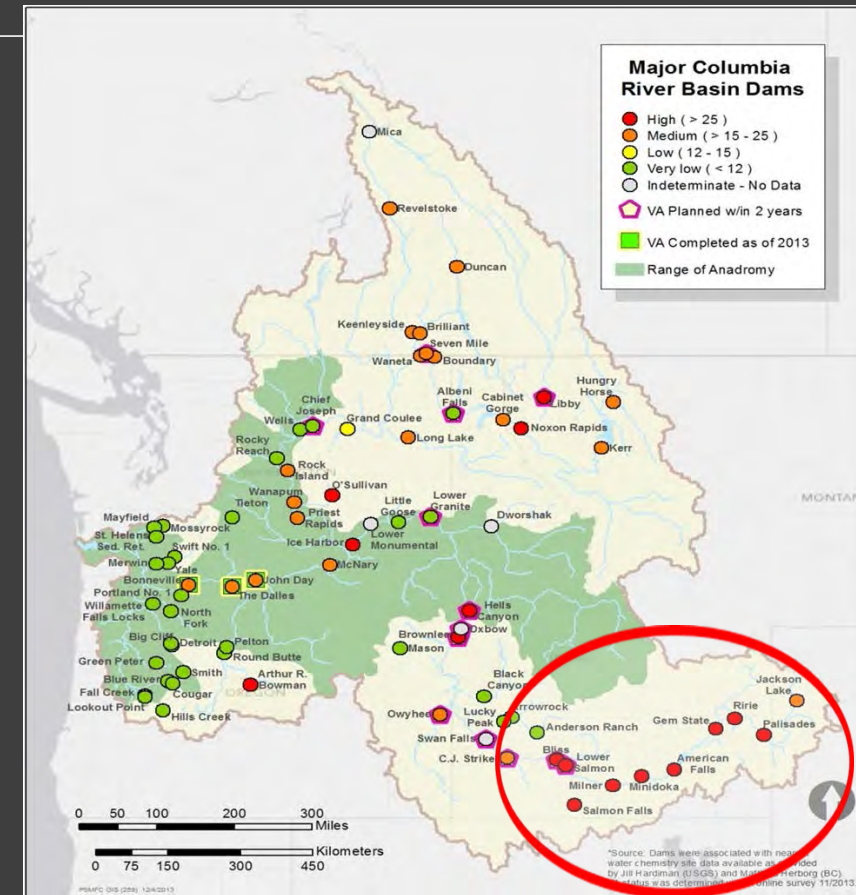
- Authorizes the Secretary (of the Army) to establish a program to prevent and manage aquatic invasive species in the Columbia River Basin in Idaho, Montana, Oregon, and Washington. Directs the Secretary to establish watercraft inspection stations in the Basin at locations having the highest likelihood of preventing the spread of such species into reservoirs operated and maintained by the Secretary.”
- Authorizes the Secretary to conduct monitoring and contingency planning that includes conducting risk assessment of each major public and private water resources facility in the Basin, establishing an AIS monitoring program in the Basin, establishing a Basin watershed-wide plan for expedited response to an AIS infestation, and monitoring water quality at facilities owned or managed by the Secretary in the Basin.

■ \$20 million authorized

ISSUE: The funding has not be appropriated to the Basin.

ACTION:

C. Appropriating these funds could provide capacity within the Columbia River Basin for Idaho to address an infestation of invasive mussels. Idaho Snake River facilities are in the highest risk category for an invasive mussel introduction. Support appropriation of \$20 million authorized for use in Columbia River Basin dreissenid efforts.



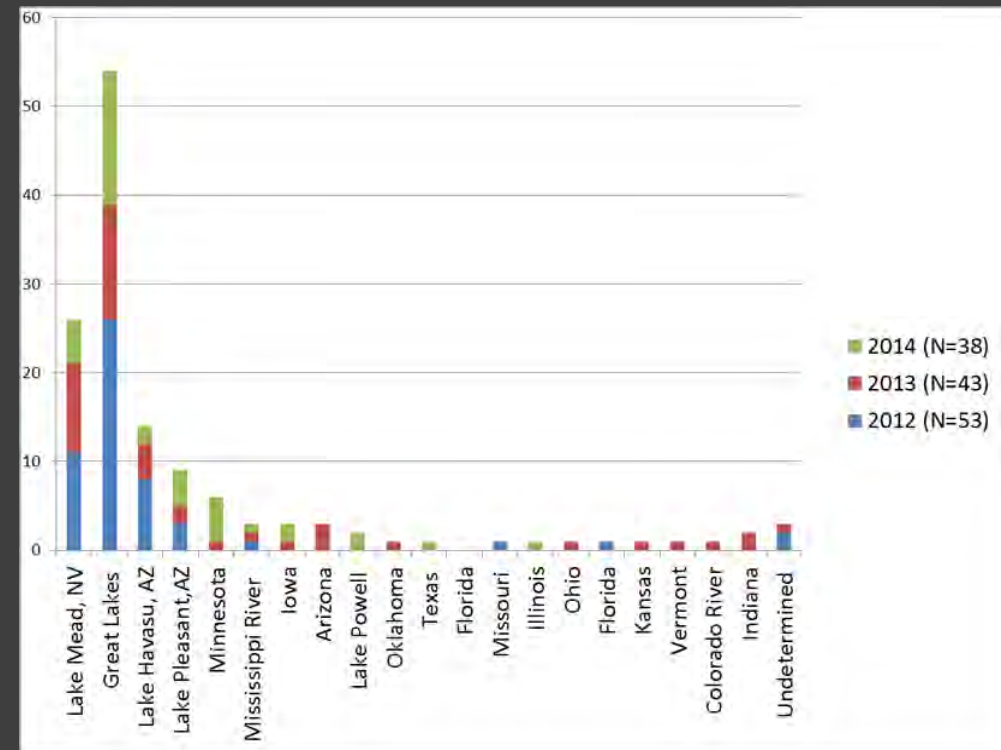
Support mandatory decontamination of fouled watercraft at federally managed waterbodies

Priority One is “Containment at the Source”

- Cost-effective

ISSUE: We need a federally binding decontamination policy for federal waters (excluding the Great Lakes, where source decontamination is unrealistic)

ACTION: Support efforts for the mandatory decontamination of any watercraft/conveyance leaving a federally managed water body.



Support reauthorization of the National Invasive Species Act

Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA) of 1990

- Identify and implement ways to prevent the unintentional introduction and spread of invasive species into waters of the U.S.
- Work toward minimizing economic and ecological impacts of established invasive species
- Establish a program to assist states in the management and removal of invasive species
- NANPCA was reauthorized and amended in 1996 and renamed the National Invasive Species Act (NISA)

ISSUE: Congressional appropriations have never met the amounts authorized in NISA (group of bipartisan legislators wrote the leaders of their respective Appropriations Committees in 2002); other aspects of the legislation need updating to address numerous invasive species issues that have emerged since 1996.

ACTION:

D. Support reauthorization of NISA to prevent the introduction and spread of invasive species and minimize the impacts of established invasive species.

Support adding quagga mussels as “Injurious species” under the Lacey Act

The Lacey Act

- Enacted in 1900
- Administered by the US Fish and Wildlife Service
- Prohibits the interstate transport of wildlife killed or taken in violation of state law
- Amended in 1981 and 2008 to extend protections to plants, increase penalties for violations
- Title 16 prohibits wildlife trafficking and the submission of false records
- Title 18 prohibits the importation and interstate transportation of listed injurious species
 - Zebra mussels are listed as injurious species, but quagga mussels are not

ISSUE: The Lacey Act needs to be reformed to include quagga mussels as injurious to make it illegal to transport across state lines quagga mussels

ACTION: Support reforming the Lacey Act to include quagga mussels as injurious

Communicate the economic and environmental effects of dreissenids

Idaho Invasive Species Act of 2008

- Provided policy direction, planning and authority to combat invasive species and prevent new introductions
- Idaho State Department of Agriculture establishes rules, creates the Idaho Invasive Species Fund (2010 sticker legislation provided the source of funding for this fund), and conducts watercraft inspections

Enacting this legislation was visionary – Idaho became a leader for other PNW states

ISSUE: Other states need to develop and fund Invasive Species Funds and elevate awareness and understanding of the economic and environmental effects of invasive species

ACTIONS:

A. Support/encourage other state legislators to develop similar legislation and funding mechanisms to advance individual state protections and create the capacity needed for states and regional entities to collaborate on regional defense and prevention.

B. Discuss the economic and environmental effects of invasive species on Idaho's agricultural, recreational and other industries with Congressional members.

2014 Idaho watercraft inspection/interception program data

Number of boats inspected: 49,380

Number of contaminated dreissenid boats inspected: 15

Origin of intercepted contaminated boats:

- Minnesota (2)
 - Ohio (2)
 - Michigan
 - Iowa
 - Lake Pleasant
 - Lake Powell (2)
 - Great Lakes
 - Nevada (5)
- Destination of intercepted contaminated boats: Idaho (5), Washington (4), British Columbia (2), Alberta (1), Montana (3)

Case Studies “Hello Boat”

INCIDENT DETAILS:

Species Found: Quagga Mussels
Alive/Dead: Alive
Date Inspected: May 19, 2009
Date Decon: May 21, 2009
Boat From: Lake Mead, NV
Destination: Spokane, WA
Found by: UT and WA

Citation: Gross misdemeanor

On May 15, 2009, an alert citizen driving home from work in Utah saw a boat with likely invasive quagga mussels attached heading north out of Salt Lake City and reported it to Utah authorities. A general alert was broadcast to Idaho, Montana, Washington and Oregon as the boat's final destination was unknown. Based on a blog alert on an Idaho website, the boat was spotted at a residence in Spokane, WA on May 19. WDFW Enforcement Officers were dispatched and the boat was seized for decontamination as it was heavily fouled with live quagga mussels. The owner was a dealer who had just repossessed the boat from its location in Lake Mead, NV. WDFW held a press conference on May 21 to highlight the regional cooperative effort to find this boat before it could launch. Idaho Rep. Anderson attended the action, which also coincided with the Idaho governor signing new AIS legislation targeting zebra and quagga mussels. The owner was cited for unlawful transportation of a prohibited invasive species.



Summary

- I. Support appropriation of WRDA funds to Columbia River Basin dreissenid activities.
- II. Support mandatory decontamination of fouled watercraft at federally managed waterbodies.
- III. Support reauthorization of the National Invasive Species Act.
- IV. Support adding quagga mussels as “Injurious species” under the Lacey Act.
- V. Communicate the economic and environmental effects of dreissenids.

PNWER'S CONTRIBUTION LEGISLATIVE – WGA RESOLUTION



- Western Governors Association Resolution
 - We call on federal agencies that manage water bodies with infestations of dreissenids to expedite mandatory decontamination of fouled watercraft to contain dreissenids at their source.
 - Request that Congress expedite appropriation of Water Resources Reform and Development Act funds to significantly enhance monitoring and prevention efforts and to implement the intent of the Act.
 - The Governors request that Congress fully fund and implement state and interstate aquatic nuisance species management plans to provide the capacity and resources to address aquatic invasive species threats.
 - The Governors request that Congress reauthorize the National Invasive Species Act (NISA) to prevent the introduction and spread of invasive species and minimize the impacts of established invasive species. Further, the Governors request that Congress support appropriations authorized in NISA.
 - The Governors call on the US Fish and Wildlife Service to list quagga mussels as “injurious” under the Lacey Act to make it illegal to transport quagga mussels across state lines.

PNWER'S CONTRIBUTION LEGISLATION – WGA RESOLUTION



▪ Process

- Work with each of the state AIS/Agency leads to draft a state-based resolution
 - Incorporate all components of WGA resolution
- PNWER conducts capitol visits, addressing dreissenid issues and providing legislators with recommendations on legislation to support (by mid- to late February)
 - Note: Legislation was drafted in consultation with PSMFC and others
- Once state support exists, PNWER approaches WGA to support resolution

State Approval and
Support



PNWER works with
WGA



Other entities – AFWA, WAFWA, etc.

PNWER'S CONTRIBUTION CROSS-BORDER COLLABORATION



- Collaborative Efforts
 - Cross-border information sharing (database)
 - REAL-TIME SHARED DATABASE: Details on boats
 - Outreach and education (distribute pamphlets) – *Clean, Drain, Dry*



POLL

THE PNW MOVING FORWARD

- Support key legislation and funding initiatives
- Install permanent decontamination stations at key locations along the perimeter
- Create a shared rapid response equipment pool (e.g., curtains, barriers) for the PNW
- Define the perimeter for the PNW and fund adequate prevention infrastructure on these borders
- Other thoughts, comments, and recommendations? CHAT!

DRAFT

STICKING POINTS MOVING FORWARD

- What can't we get done and why? What are the barriers?
 - CHAT!
 - Send us your comments!



THE PATH FORWARD



- January 21 webinar – 95 people registered
 - Develop a shared understanding
 - Share outcomes to date – identify key gaps moving forward
 - Identify any sticking points or barriers to prevention, early detection, and control and management recommendations for the region
- Provide PNWER leaders with the needed materials and information to conduct state capitol visits and garner political support for PNW efforts
 - Assist in ongoing efforts to address legislative issues and funding

STAY TUNED!