

ADVANCING A REGIONAL DEFENSE AGAINST DREISSENIDS AND AIS IN THE PACIFIC NORTHWEST

May 7, 2015

Lisa A. DeBruyckere, PSMFC and PNWER

Mark Sytsma, Portland State University

Glenn Dolphin, Oregon State Marine Board

Rick Boatner, Oregon Department of Fish and Wildlife



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

– Mattie Stepanek

AGENDA



- **A regional framework for dreissenids in the Pacific Northwest**
 - Lisa DeBruyckere, Pacific Northwest Economic Region and Pacific States Marine Fisheries Commission
- **State Aquatic Nuisance Species Plan**
 - Mark Sytsma, Center for Lakes and Reservoirs, Portland State University
- **Oregon's Aquatic Invasive Species Prevention Program – Laws, Permits, and Partnerships**
 - Glenn Dolphin, Oregon State Marine Board
- **Oregon's Aquatic Invasive Species Prevention Program – Boat inspection stations**
 - Rick Boatner, Oregon Department of Fish and Wildlife
- **Questions and Discussion**



QUAGGA AND ZEBRA MUSSEL BIOLOGY

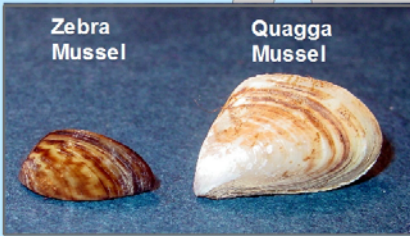


- Small, freshwater, bivalve mollusks
- Two species of dreissenids in North America – Zebra and Quagga Mussels
- Introduced to U.S. from Eurasia via ballast water in cargo ships to Great Lake
- Only freshwater clams that attach to hard surfaces via hair-like threads
- 700,000 individuals per square meter
- Spread by free floating larvae and people (attached to boats)
- Biofoulers – block pipes in water systems and impact aquatic ecosystems
- Projected cost to the PNW - \$0.5 billion annually





Zebra and Quagga Mussel Sightings Distribution *Dreissena polymorpha* and *D. rostriformis bugensis*



- Zebra mussel occurrences
- Quagga mussel occurrences
- Both species occurrences
- Zebra/Quagga mussels eradicated
- Zebra/Quagga mussels failed

Map produced by the U.S. Geological Survey, Nonindigenous Aquatic Species Database, March 12, 2015.

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



THE TEAM

100th Meridian Initiative: Prevent the westward spread of zebra/quagga mussels and other ANS

ANS Task Force: Implements 100th Meridian Initiative, produced QZ Action Plan

Western Regional Panel on ANS: Prevents the introduction and spread of ANS into western waters through coordinated management and research activities

Building Consensus Committee:

- Model Legislative Provisions for State Watercraft Inspection and Decontamination
 - Comparison of Existing State Laws to the Model Provisions
- Consensus on Waterbody Classification Standards, Watercraft Inspection & Decontamination Protocols & Training Materials, and Standard Definitions
- Working with recreational boat manufacturing design engineers

Pacific Ballast Work Group: Foster coordination and formulate consensus for management strategies

THE TEAM



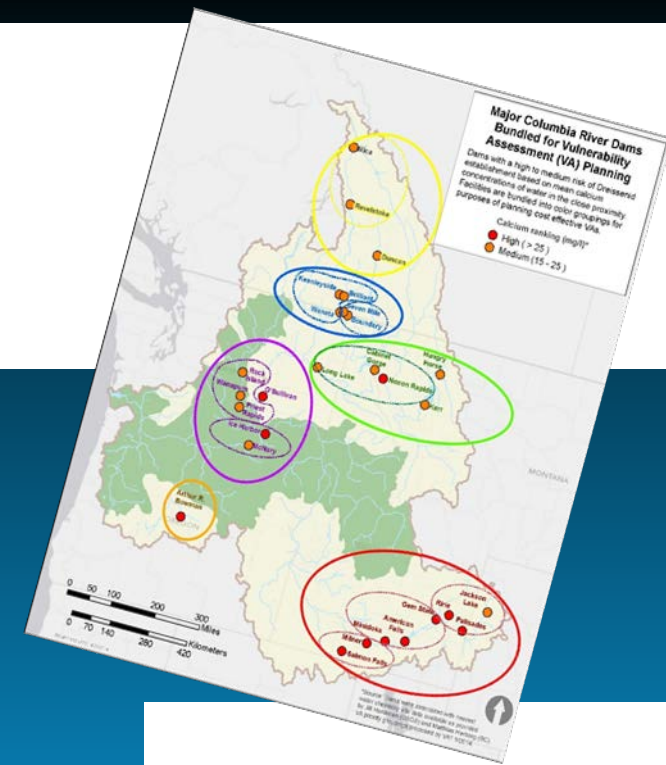
Pacific Northwest Economic Region: Drafted WGA resolution on funding WRRDA and implementing containment at the source; State capital visits

- Oregon Governor
- Sen. Arnie Roblan , Sen. Doug Whitsett, Sen. Rod Monroe
- Rep. Deborah Boone, Rep. Bill Kennemer, Rep. Kevin Cameron (Alt), Rep. Brad Witt (Alt)

Preventing an Invasion (2013): OR and WA rapid response plans, declaration of cooperation; workshops to prepare; informal consultation w/NOAA and USFWS, vulnerability assessments

Northwest Power and Conservation Council: 2014 Fish and Wildlife Program emphasizes reducing invasive species threats

State Invasive Species Councils: Coordinated regional campaigns



OREGON DREISSENID MUSSEL RAPID RESPONSE PLAN



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

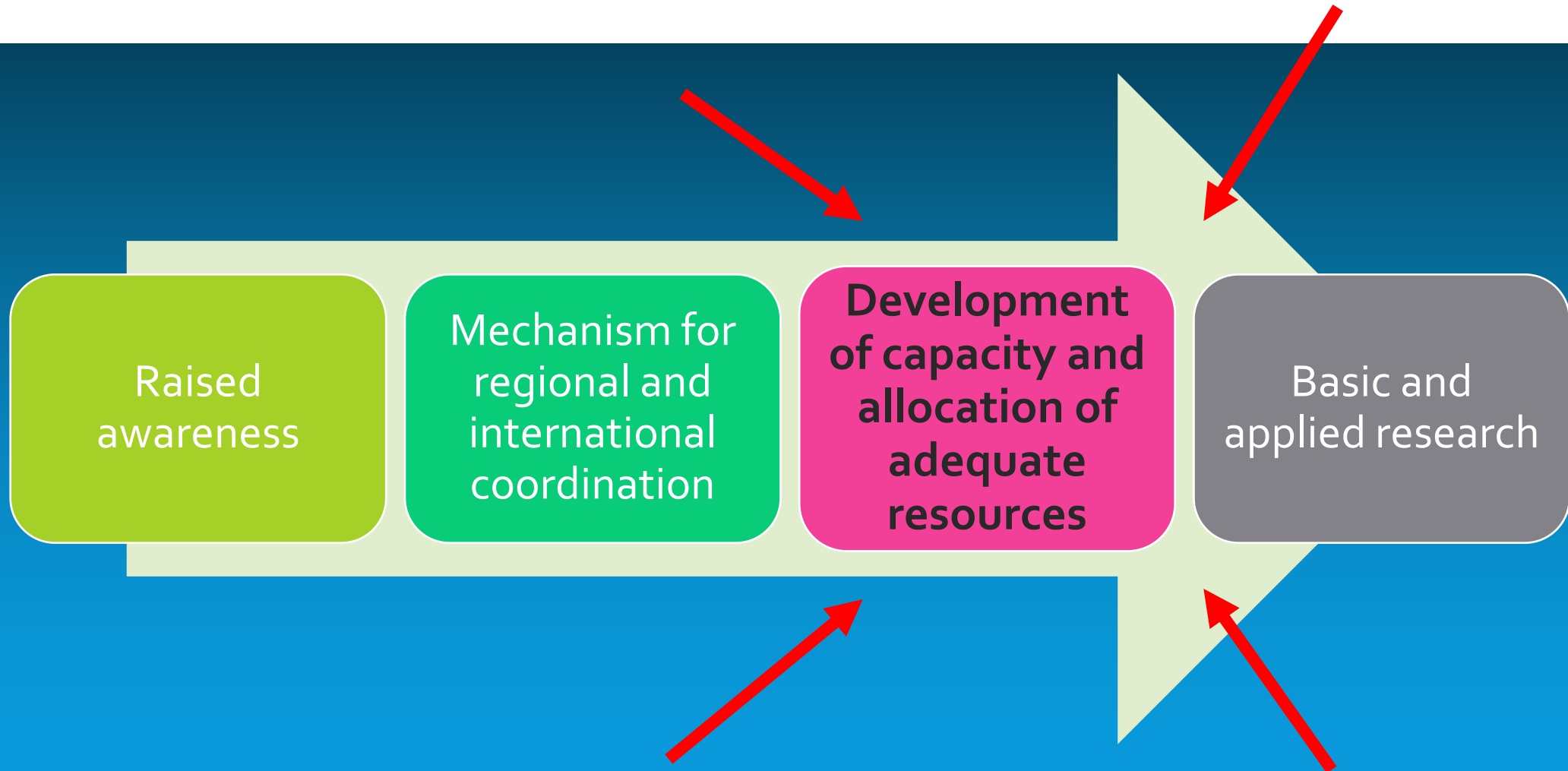


GOALS OF A REGIONAL FRAMEWORK

- 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



PREVENTION COSTS – ANNUALLY

\$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)



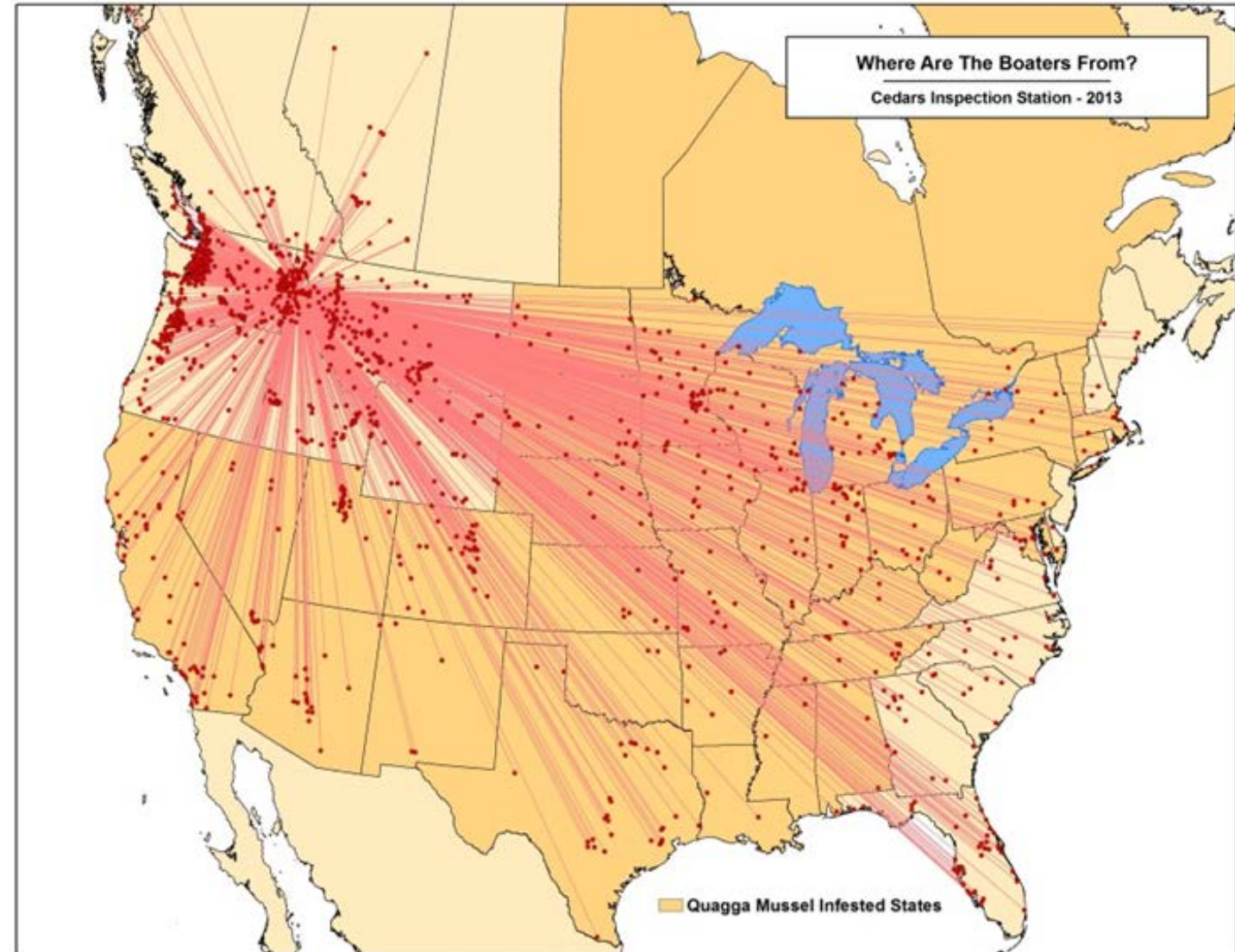
Wyoming watercraft inspection station.

POTENTIAL COSTS OF A DREISSENIID 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



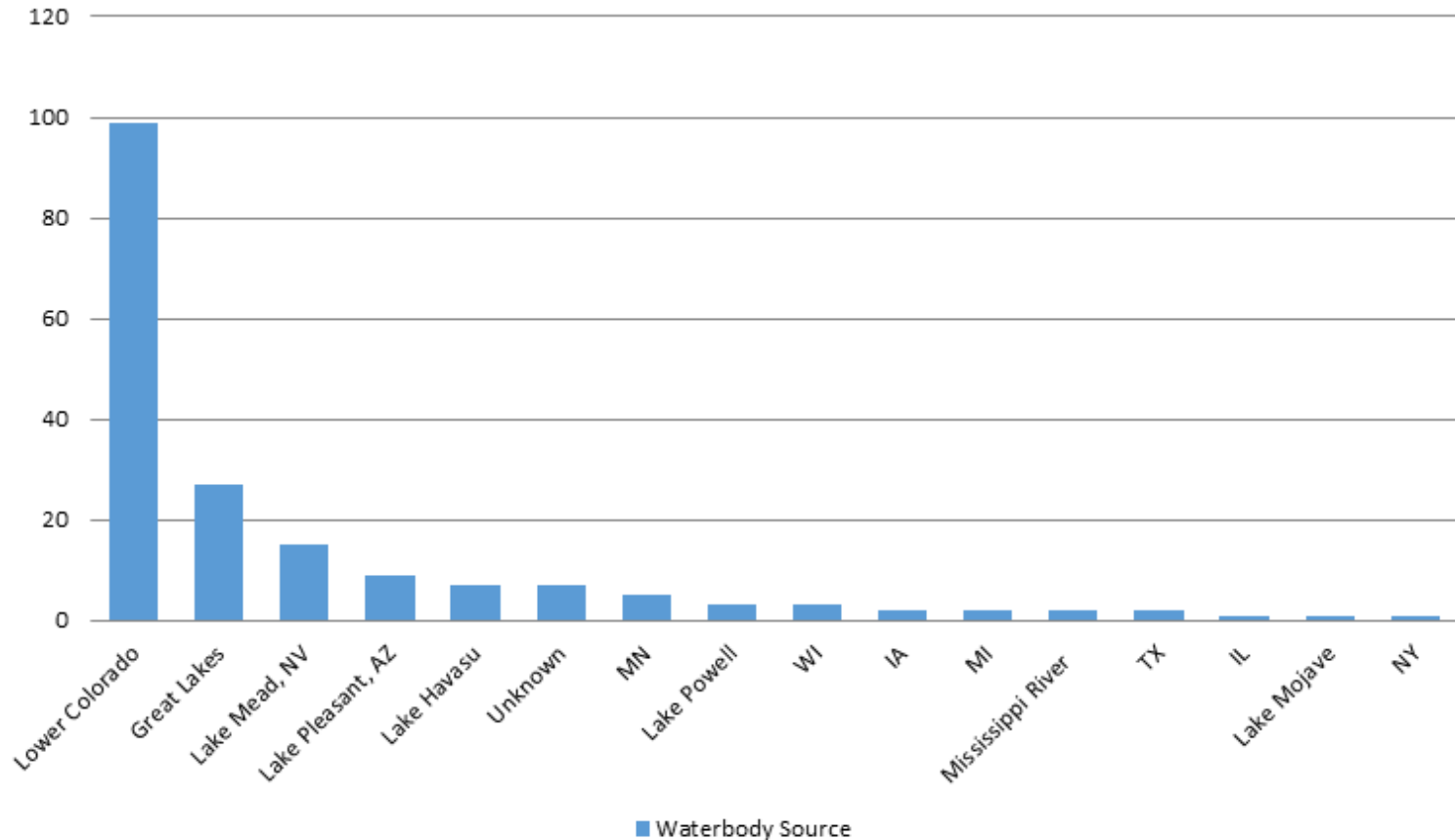
SOURCE OF INFESTED BOATS

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.**



Intercepted Watercraft with Adult Dreissenid Mussels by Source 2014 (Draft)

For: CA,OR, ID, MT, WA, WY, NV, UT, CO, AZ, TRPA, BC, AB, NM
N = 187



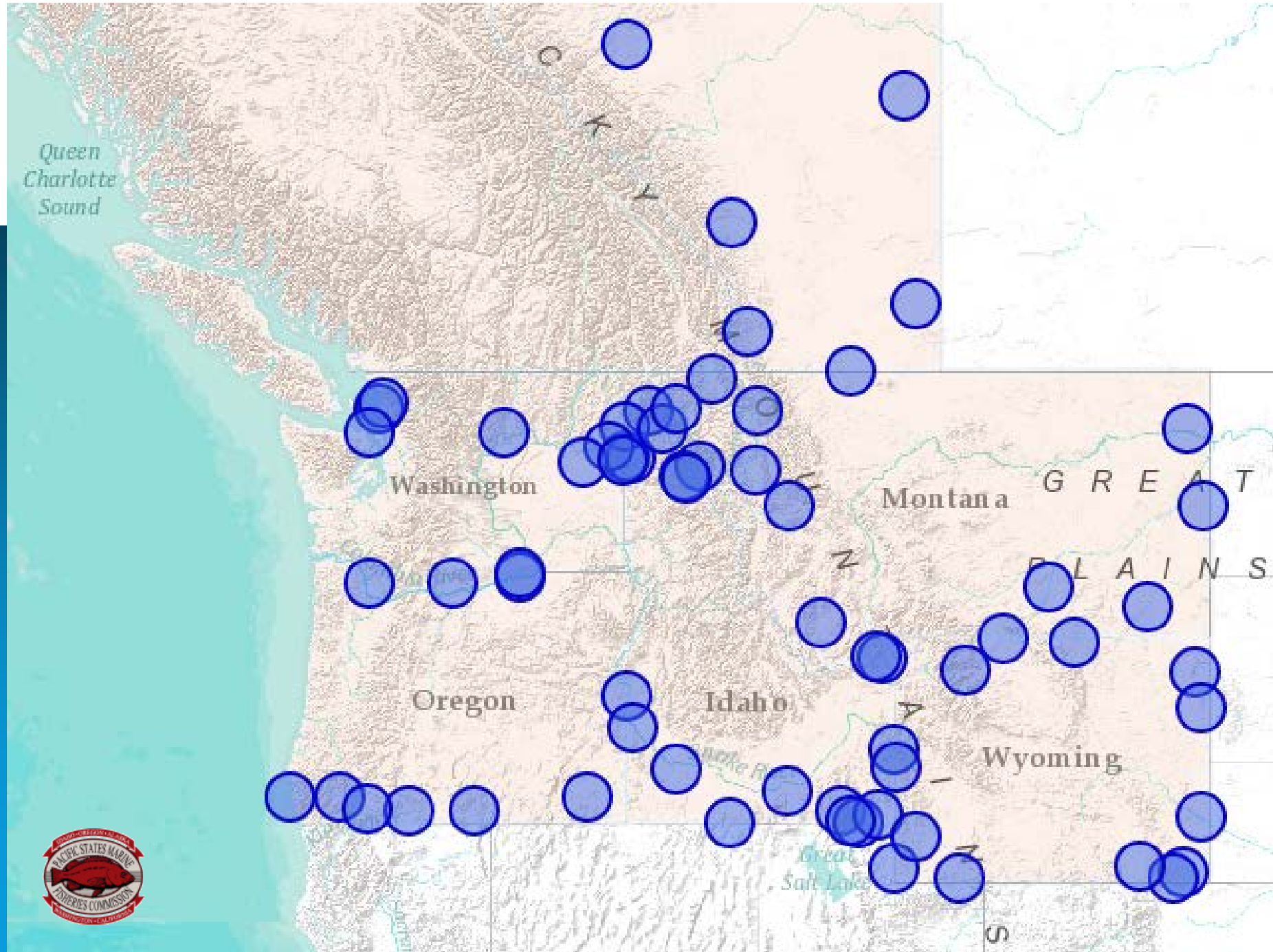
IDAHO: Of the 48 vessels from the Great Lakes and eastern waters, ~ 2-3 were out of the water for <30 days, compared to >40 that were "fresh" from Mead, Havasu, Pleasant and Powell (Source: TW/SC, ISDA)



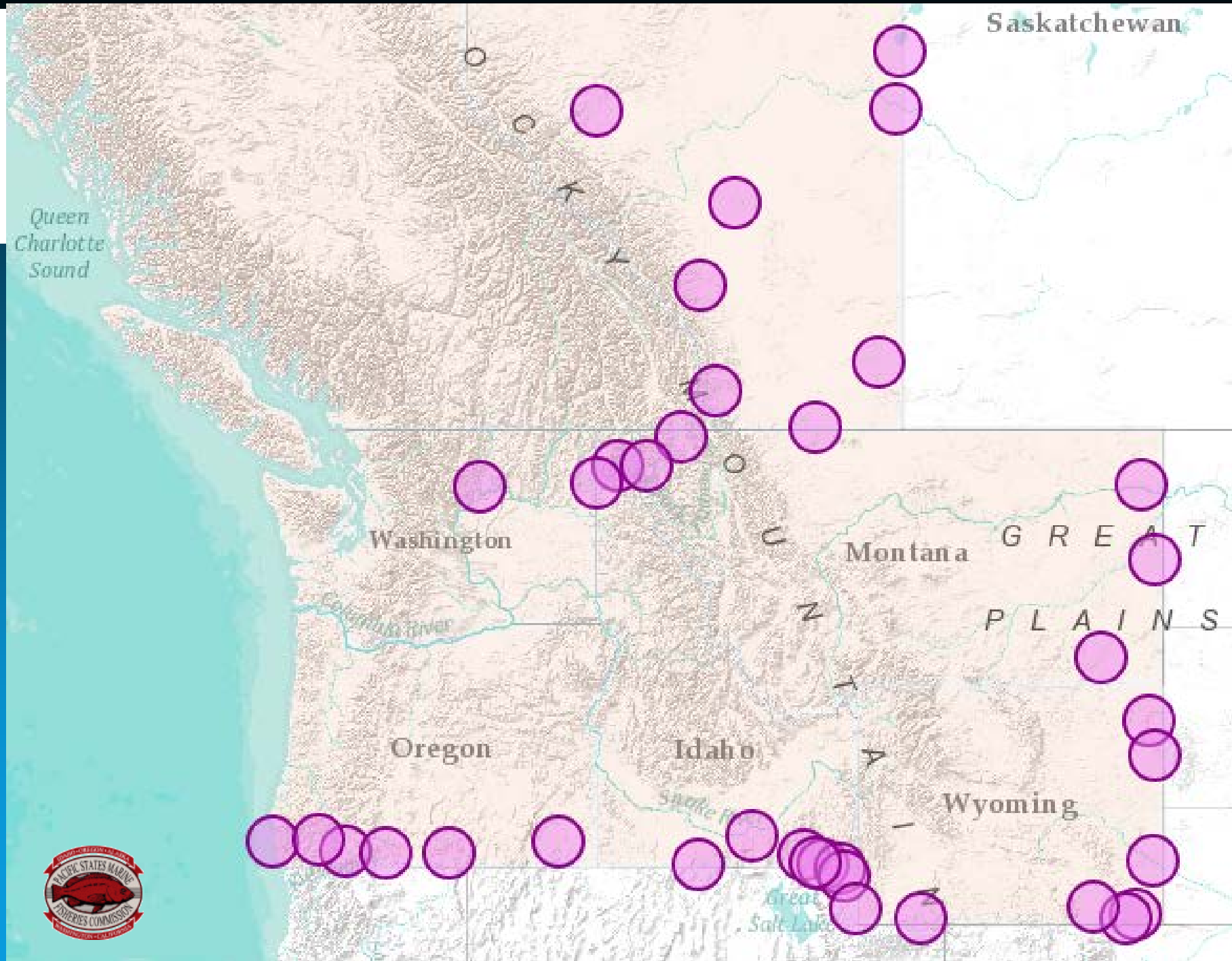
2014 WATERCRAFT INSPECTION/INTERCEPTION PROGRAM DATA BY STATE

STATE	# BOATS INSPECTED	CONTAMINATED DREISSENIID 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, TX	WA (6), OR (3), COLUMBIA R., WILLAMETTE R.
WASHINGTON	14,215	0		
STATE WID	7,859	1	LAKE HAVASU, AZ	LAKE WHATCOM, WA
LAKE WHATCOM				
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	8,000	11	LAKE MICHIGAN, UNKNOWN (3), LAKE MEAD (3), LAKE HAVASU (2), MISSISSIPPI RIVER (1), LAKE MOHAVE	LAKE TAHOE
NEVADA - 246 decons-Lake Mead	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

WID STATIONS ACTIVE OR PROPOSED FOR 2015



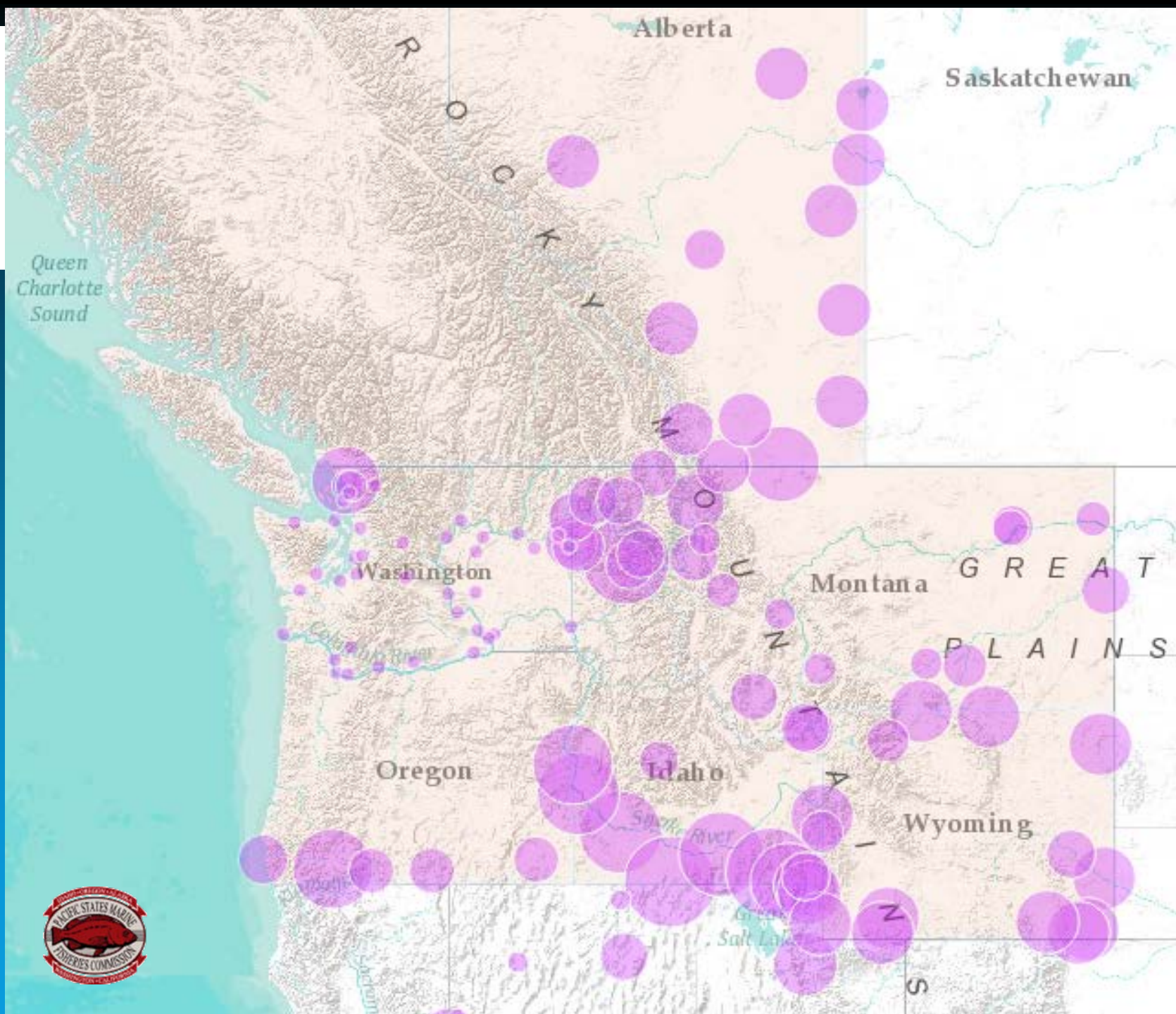
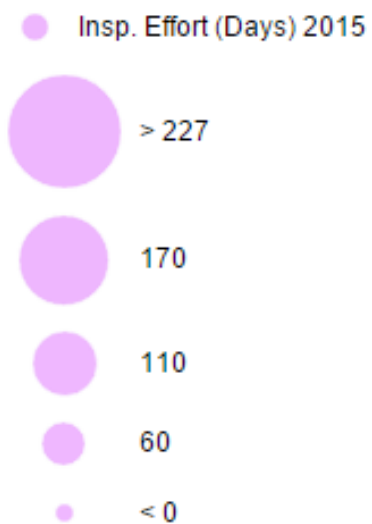
PNW
PERIMETER
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FOR 2015



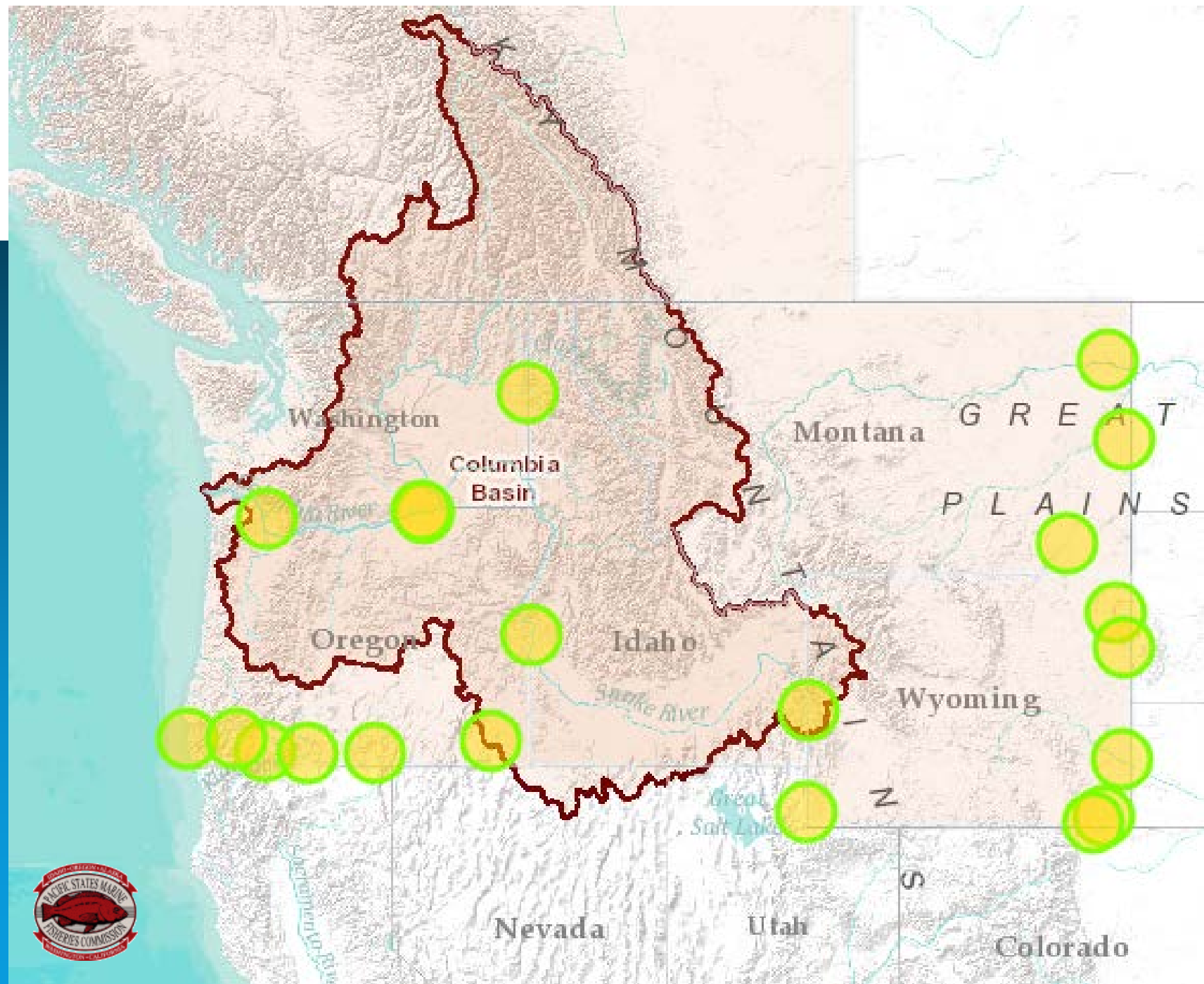
PNW ACTIVE WID STATIONS

2015 BY INSPECTION EFFORT

2015 Currently Planned Inspection Effort
(days of operation)



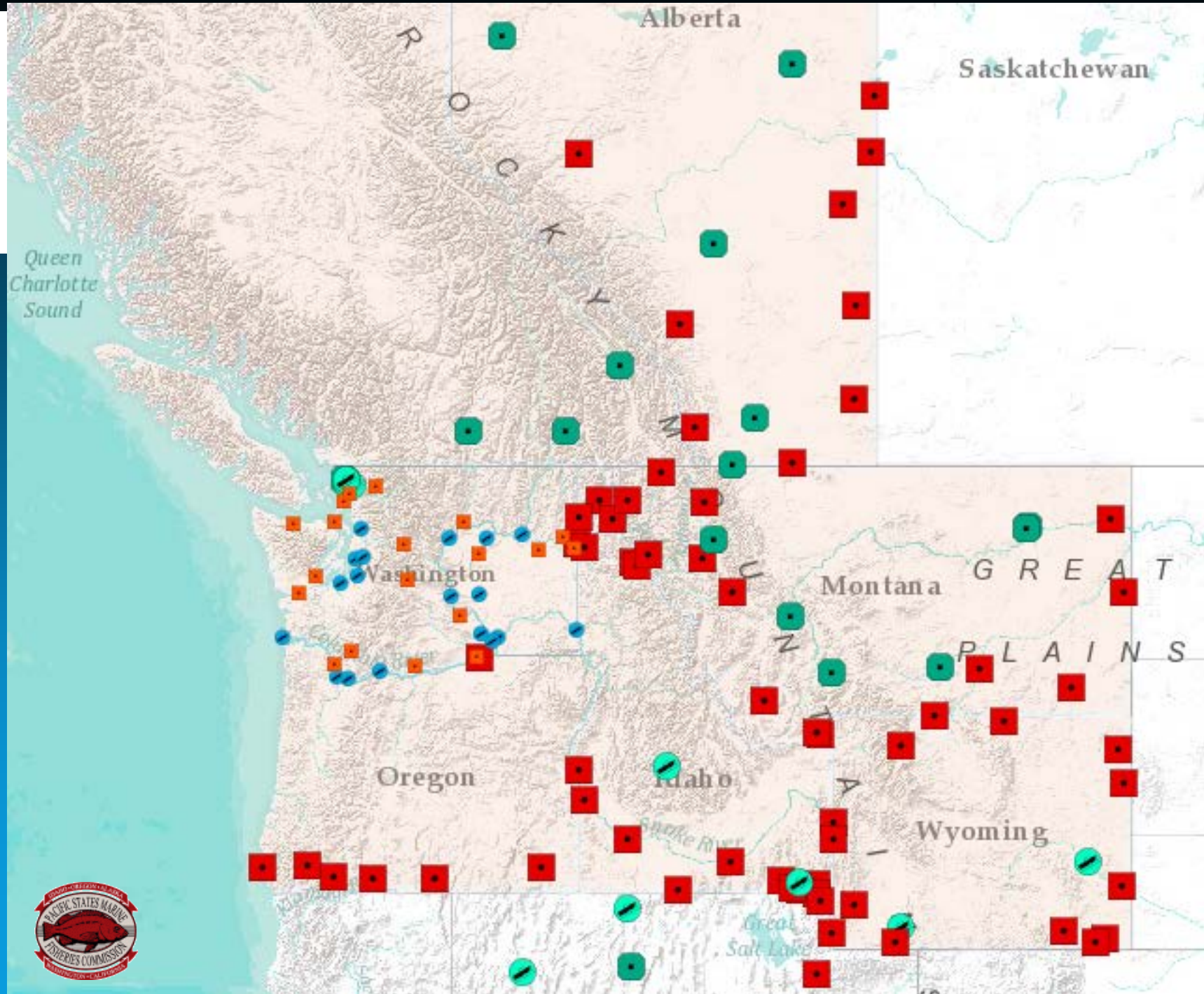
WID STATIONS
TO PRIORITIZE
FOR
ADDITIONAL
HOURS IF
FUNDS
BECOME
AVAILABLE



CURRENTLY ACTIVE OR PROPOSED WID STATIONS FOR 2015 BY TYPE

2015 Proposed and Current Watercraft Inspection Stations (by type)

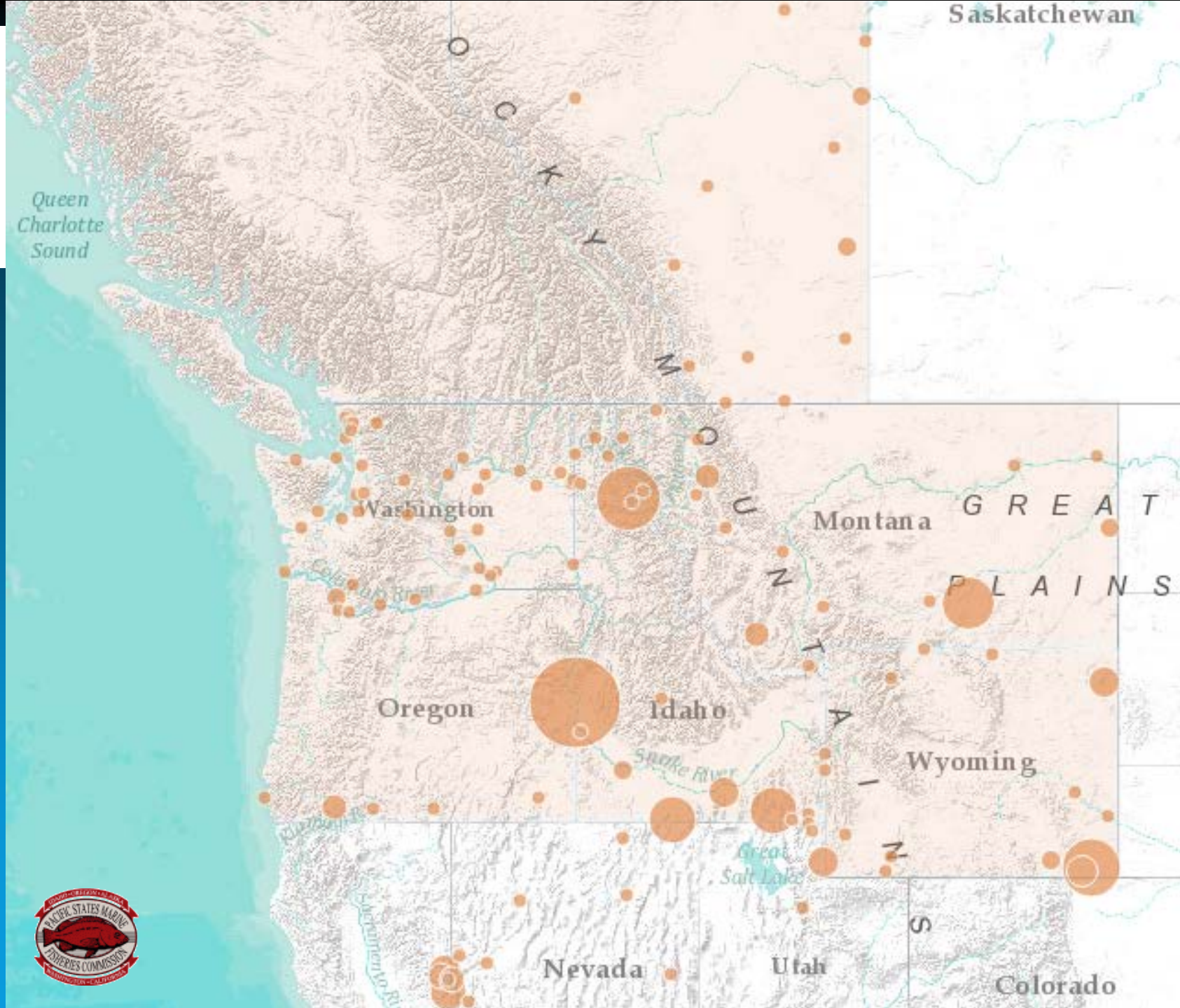
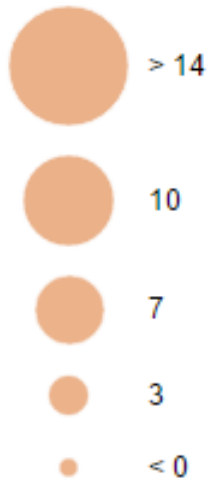
-  Roving
-  Highway Inspection Station
-  Rampside Inspection Station
-  Source
-  Temporary Rampside
-  Temporary Roadside



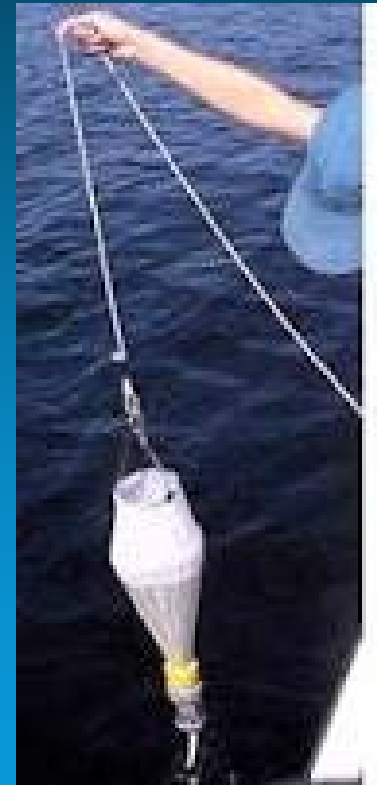
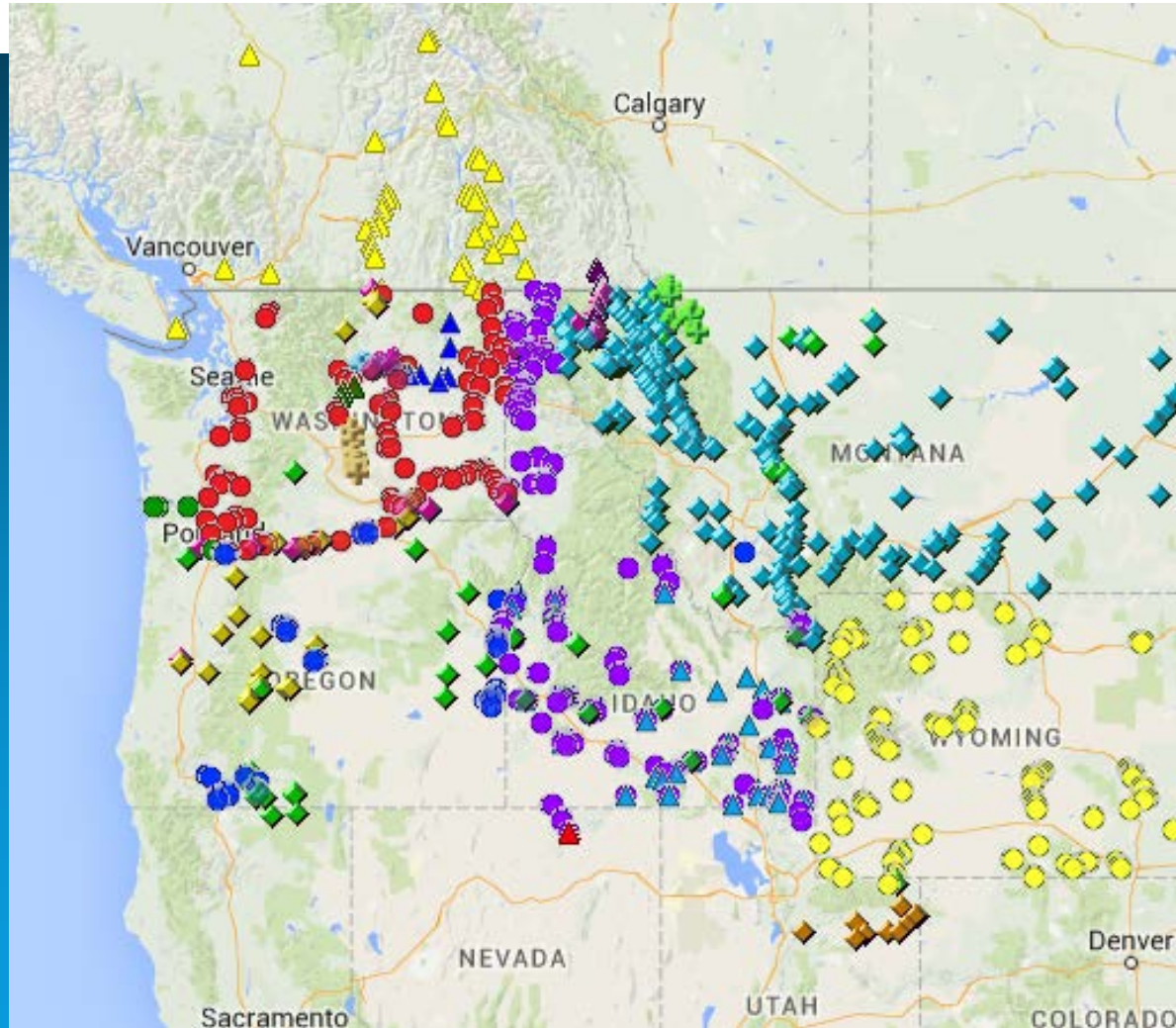
PNW ACTIVE WID STATIONS 2015 BY INSPECTION EFFORT

Fouled Boat Interceptions (2013 & 2014 Combined)

● Interceptions (2013 + 2014)



2014 MONITORING SITES



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	√	√	√	√	√

RECOMMENDED 2015 PRIORITIES

- I. Support appropriation of WRRDA 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



*Pacific NorthWest
Economic Region*

- 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.

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
- Identify the highest research priorities for dreissenid prevention efforts
- Define the perimeter for the PNW and, through WRRDA and state funds, support adequate prevention infrastructure on these borders

OREGON AQUATIC INVASIVE SPECIES MANAGEMENT PLAN

Mark Sytsma

Center for Lakes and Reservoirs

Portland State University

OREGON AIS PLAN

- Created at request of Gov Kitzhaber's Natural Resource Cabinet
 - Approved 2001
 - Funding from USFWS – currently ~\$20k/year
- Elements
 - Coordination
 - Prevention
 - Early detection
 - Control
 - Outreach and Education
 - Research

Oregon Aquatic Nuisance Species Management Plan



Eurasian watermilfoil



Zebra mussel



Mitten crab

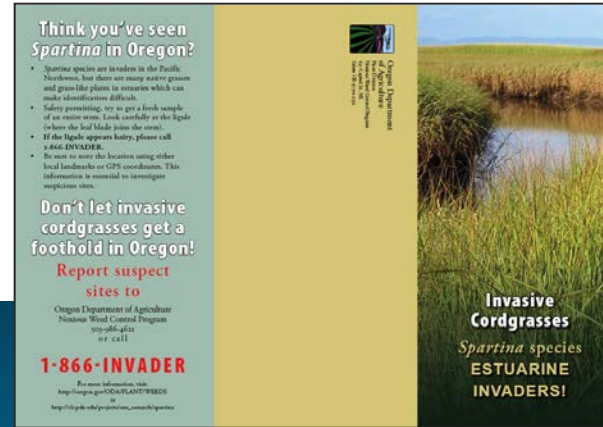


Hydrilla

OR AIS PLAN

• Past Activities

- Outreach and education
 - Oregon Lake Watch Volunteer Monitoring Program
 - Signage, brochures, etc.
- Ballast Water Program Support and Development (DEQ)
- Zebra and Quagga Mussel EDRR (ODFW & OSMB)
 - Dreissenid Veliger Identification Laboratory
- Feral Swine Action Plan (ODFW)
- Aquatic Weeds (ODA)
- Regional coordination
 - Columbia River Basin Team
 - PNWER Inv. Species Working Group
 - Western Regional Panel
 - Pacific Ballast Water Group



Feral Swine Action Plan for Oregon



Portland State
UNIVERSITY
Center for Lakes and Reservoirs
Environmental Science & Resources

OREGON DREISSENID MUSSEL
RAPID RESPONSE PLAN



Portland State
UNIVERSITY
OREGON
DREISSENID
MUSSEL
RAPID
RESPONSE
PLAN
OREGON
BAY
MARINE
BIOL.

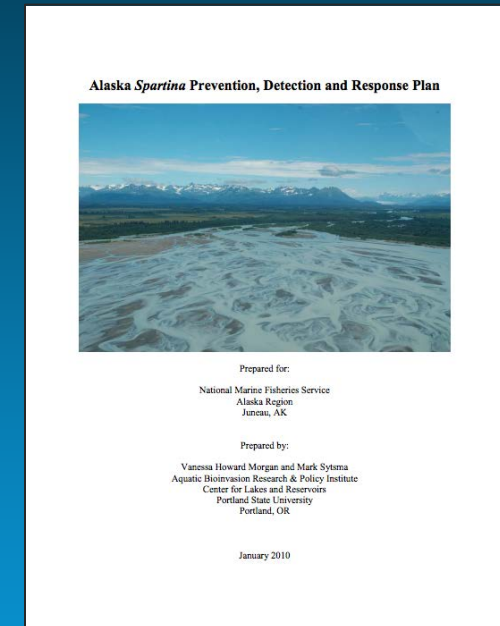
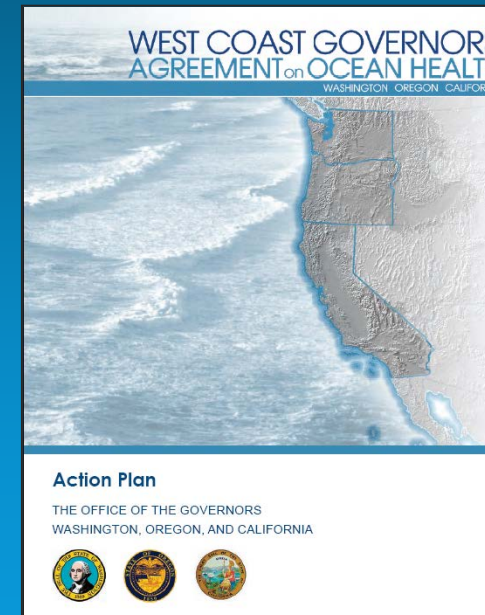
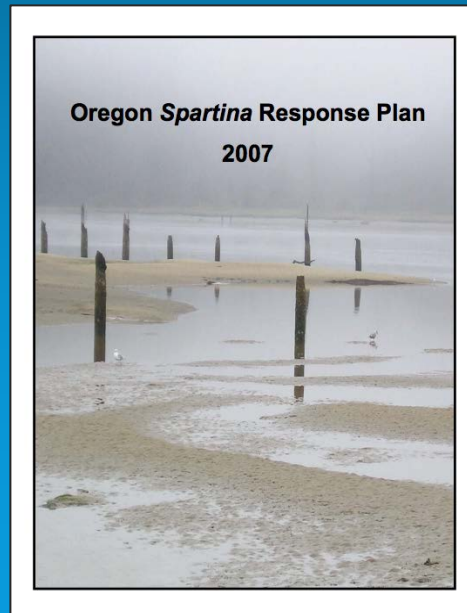
OR AIS PLAN

- Current activities
 - Support of OISC
 - External review of Council operations
 - Interim coordinator support
 - Invasive tunicate response
 - Japanese tsunami marine debris



OR AIS PLAN

- Current activities
 - Aquatic Weeds
 - Early Detection Rapid Response
 - Spartina Management Plan



OR AIS PLAN

- Current activities
 - Aquatic Weeds
 - Early Detection Rapid Response
 - Spartina Management Plan
 - Potential \$40M economic impact in Oregon*

Coos Bay



Columbia Estuary



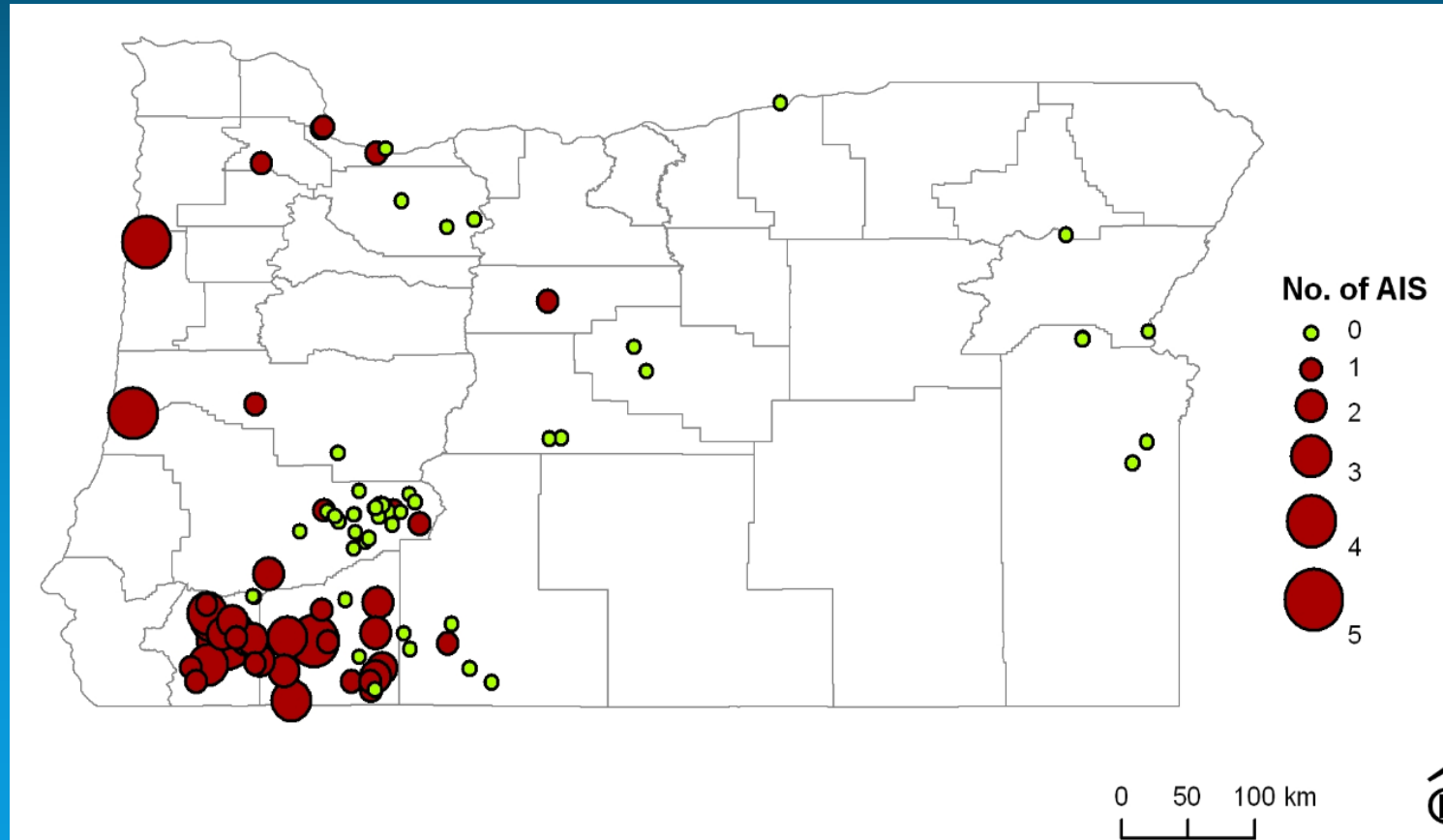
Siuslaw Estuary



* The Research Group, LLC. 2014. *Economic Impact From Selected Noxious Weeds in Oregon.*

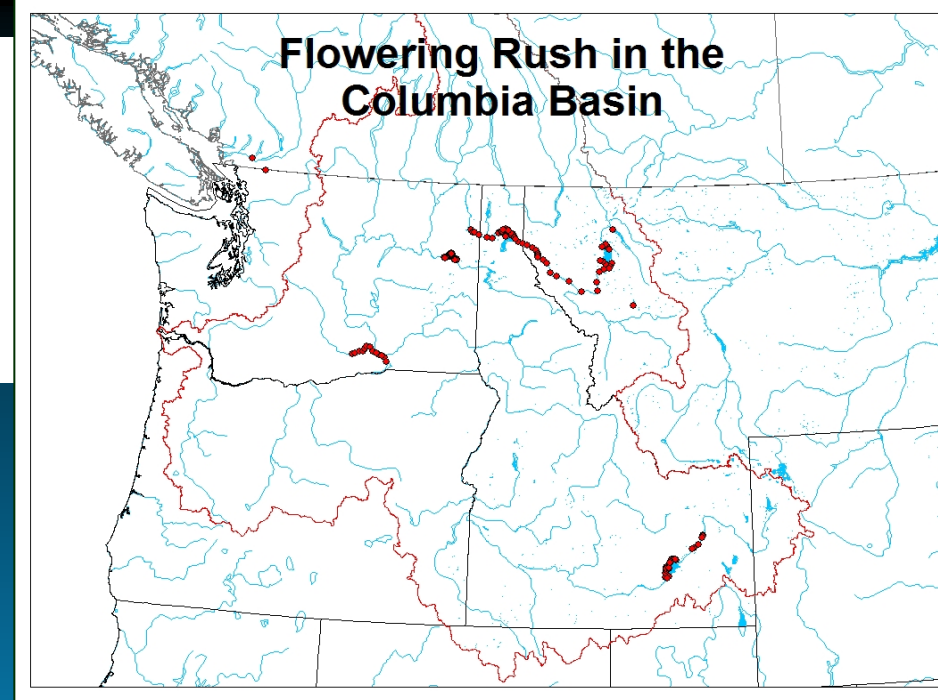
OR AIS PLAN

- Current activities
 - Aquatic Weeds
 - Early Detection Rapid Response
 - Freshwater weed surveys



OR AIS PLAN

- Aquatic Weeds
 - Early Detection Rapid Response
 - Freshwater weed surveys
 - Flowering rush detection in Columbia River near Umatilla
 - PSU/ODA/WSDA coordinated bi-state response



OR AIS PLAN

- Aquatic Weeds
 - Early Detection Rapid Response
 - Freshwater weed surveys
 - Water primrose threatens water quality, and fish habitat (salmonids and Oregon chub)

Western **A**quatic **I**nvasives **N**etwork



OR AIS PLAN

- Future focus on:
 - Early detection surveys for all AIS
 - Management planning for all AIS
 - Technical assistance
 - Research on AIS biology, ecology, and management options
 - Aquatic weed program development



Variable leaf milfoil in Siltcoos Lake

AQUATIC INVASIVE SPECIES PREVENTION PROGRAM



Glenn Dolphin

AIS Program Coordinator

Marine Board Regulations

- **AIS Permit Program – 2009 + 2011 Legislative session**
 - ORS 830.565 – 830.585 + OAR 250-010-0650
 - Citation fine lowered in 2011 (from \$260) to \$30 – non-motorized
\$50 – motorized
- **“Clean Launch Law” - 2009 Legislative session**
 - ORS 830.560 – Class B violation = \$287
- **Illegal to transport AIS - 2009 Legislative session**
 - ORS 830.999 – Civil penalty not-to-exceed \$6,250
- **AIS boat inspections - 2009 + 2011 Legislative session**
 - ORS 830.589 + OAR 250-010-0660
 - In 2011, law changed to a mandatory stopping requirement
 - Failure to stop at open check station -Class D Violation = \$110

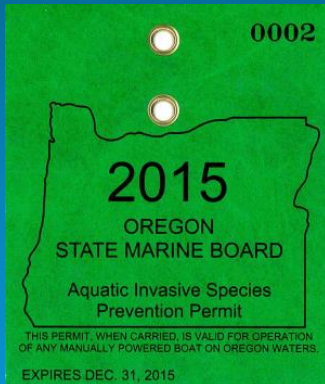
AIS BOAT PERMIT CATEGORIES



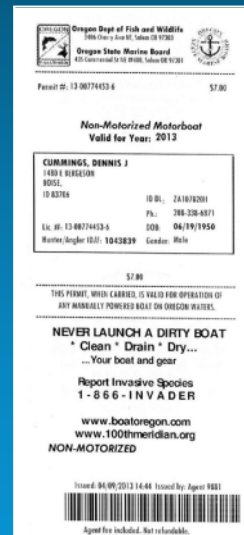
Oregon Motorboat
\$5/2yr registration

Non-Motorized Boats

OSMB Tyvek tag
\$5/yr. or \$10/2yr.



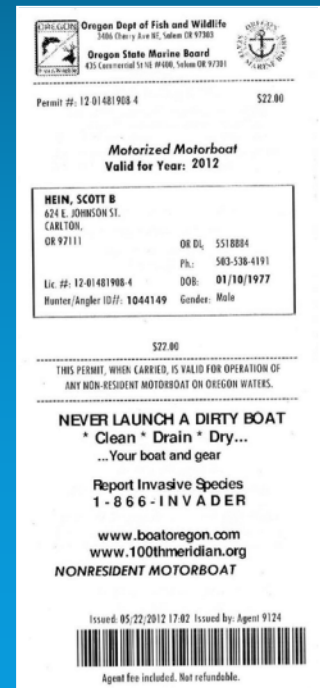
ODFW Paper - \$7/yr.
Includes a \$2 agent fee



Non-Resident Motorboat

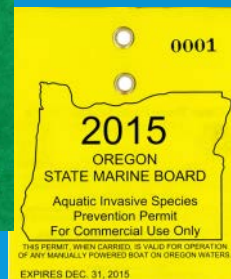
OSMB Paper
laminated card
\$20/yr.

ODFW Paper - \$22/yr.
Includes a \$2 agent fee



Outfitter/Guide or Livery

Discounted rates:
6-10 boats = \$30
11-20 boats = \$55
21 or more = \$100



AIS PERMIT REVENUE

AIS Prevention Fund

Administered and managed by the OSMB and is established in the State Treasury, separate and distinct from the General Fund. Only to be used for the AIS Program for prevention and management.

2014 Fiscal Year

<u>Permit Categories</u>	<u># of permits</u>
➤ OR Motorized	= 69,334
➤ Non-motorized public (1yr + 2yr)	= 39,227
➤ Non-motorized business	
▪ Guides + Liveries	= 2,300
➤ Out-of-state motorized	= <u>4,731</u>
Total Permits Sold	= 115,552

Total Fiscal Year Revenue

2011 = \$840,545

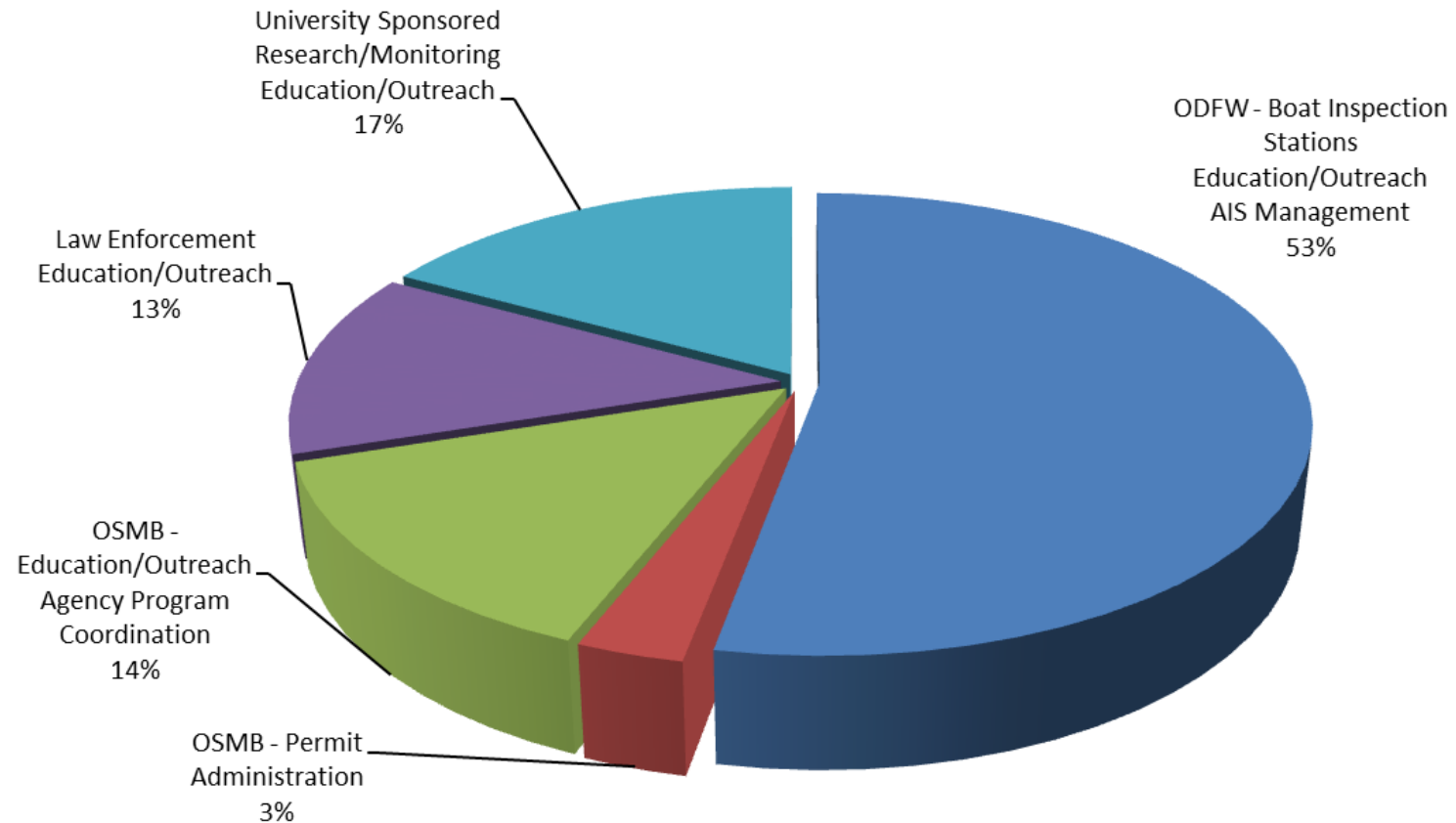
2012 = \$732,094

2013 = \$724,175

2014 = \$670,235

DISTRIBUTION OF FUNDS

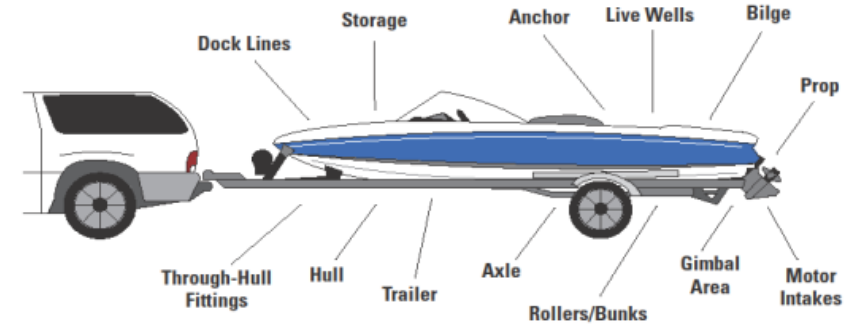
Aquatic Invasive Species Prevention Program Expenditures FY 2014



CLEAN...DRAIN...DRY

➤ **CLEAN** all aquatic plants, animals and mud from your boat, motor or trailer and discard in the trash. Rinse, scrub or pressure wash, as appropriate, away from storm drains, ditches or waterways. Lawns, gravel pads, or self-serve car washes are best.

Before launching and before leaving...
Inspect everything!



CLEAN...DRAIN...DRY

- **DRAIN** livewell, bilge and internal compartments.
- **DRY** your boat between uses if possible. Leave compartments open and sponge out standing water. Find a place that will allow the anchor line to dry.



PROGRAM OUTREACH SIGNS



Highway Sign (20)
10' x 5'

Boat ramp sign
3' x 2'

Boat ramp sign
11" x 17"



To report invasive species call:
1-866-INVADER (468-2337)
Or report online at:
www.oregoninvasiveshotline.org



PRINTED MATERIALS

STATE FUNDED

Attention Paddlers



**Clean Boats
Protect Clean
Waterways.**

**AQUATIC INVASIVE SPECIES
PREVENTION PERMIT**

Beginning January 1, 2010, operators of canoes, kayaks, drift boats and other manually powered boats 10 feet or longer must carry an Aquatic Invasive Species (AIS) prevention permit when paddling.

**The cost is \$7 per year (\$5 permit plus \$2 agent fee)
*including out-of-state visitors.**

One permit per boat when boat is in use. Permit is transferrable to other watercraft.



Watermilfoil



New Zealand Mud Snail



Quagga Mussel

CLEAN all aquatic plants, animals and mud from your watercraft, oars and other gear.

DRAIN by inverting or tilting the craft, opening compartments and removing seats if necessary. Rinse or flush under flooring, at inflation chamber joints or other areas that can trap mud and debris.

DRY the boat as much as possible. Mud tracked into a boat can carry New Zealand mud snails and other organisms, too.

Clean, Drain, Dry.

For more information visit www.boatoregon.com/ANS.shtml




**Protect Oregon's
Waterways Against
AQUATIC INVASIVE
SPECIES**




www.boatoregon.com

**Thank you for stopping at
Oregon's Aquatic Invasive
Species Boat Inspection Station**



The Oregon Department of Fish and Wildlife and Oregon Marine Board are conducting boat inspections throughout the state in an effort to stop the spread of invasive species—quagga and zebra freshwater mussels; water-borne diseases and viruses; New Zealand mudsnails; and aquatic plants such as Eurasian watermilfoil.

Inspections will take about ten minutes if boats are free of invasive species. If a boat is found to be contaminated with quagga or zebra mussels, it will be held and decontaminated on site.

By stopping for boat inspections, a boater is not subject to penalties or fines associated with transporting Aquatic Invasive Species (AIS).

How you can help

Always: Clean, Drain and Dry

- After boating, clean your boat and gear thoroughly
- Inspect boats, trailers and motors for the presence of AIS prior to and after use in any water body
- Remove any vegetation and leave at the site of origin or discard in the trash
- Drain and flush your bilge, live well, bait buckets and any other standing water
- Clean and scrub hulls, motors, anchors and trailers— then hose equipment with hot and/or high pressure water
- Allow boats to dry before being used again
- Remove all drain plugs

**With your help, we can keep
Oregon's waters clean and open
for recreation.**

This program is funded by the sale of Aquatic Invasive Species Prevention Permits. The law requires operators of all motor boats and non-motorized boats that are 10 feet in length or longer to have a Permit.

Registered Motor Boats— resident and non-resident:

- Residents: Oregon registered motor boats do not have to buy a Permit. They pay an AIS \$5 fee along with their boat registration; a current registration decal is proof the fee has been paid.
- Non-residents: Out-of-state residents who trailer a boat into the state and launch in Oregon's waters are required to purchase an annual non-resident Permit for \$20.

Non-motorized boaters— resident and non-resident:




- Each manually powered boat (drift boat, canoe, kayak, raft, etc.) 10 feet or longer must have a Permit on board. Permits cost \$5 per year.
- Permits are transferable to use on other non-motorized boats: The name on the Permit does not have to match the person using it.
- Children 13 years of age and younger are not required to have a Permit.

Washington and Idaho boaters

- Washington and Idaho boaters **DO NEED** a Permit when boating in Oregon's state waters including lakes, reservoirs, the ocean and rivers.
- **No Permit** needed when Washington boaters are boating on the Columbia River and when Idaho boaters are boating on the Snake River and in possession of an Idaho AIS sticker.

Invasive species are identified in the Oregon Conservation Strategy as one of the biggest threats to the state's fish and wildlife and their habitats. Keep Oregon's waters and habitats healthy—stop the spread of aquatic invaders.



Oregon Department of Fish and Wildlife
503-947-6000
www.dfw.state.or.us

Oregon Marine Board
503-378-8587
www.boatoregon.com



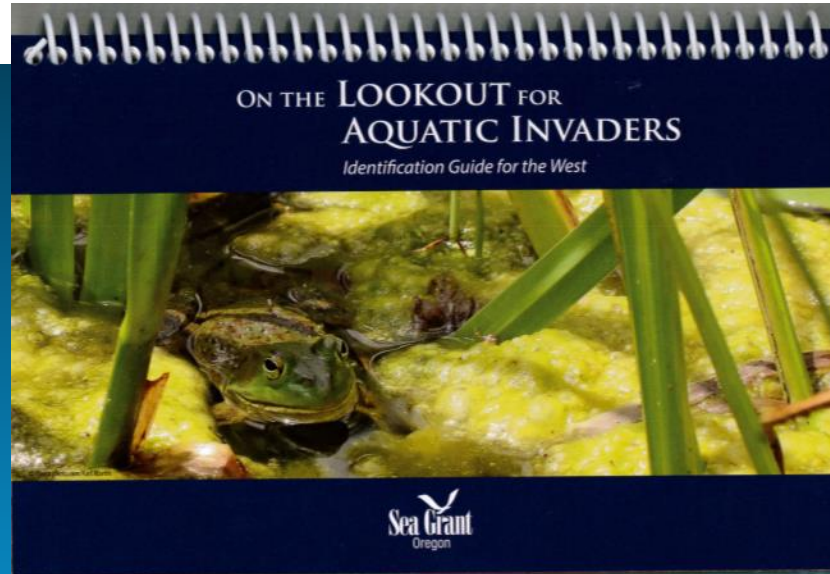

OSMB rack card and brochure

ODFW rack card – inspection station

Printed Materials

State Funded

OSU Sea Grant – flip book guide



Oregon's Aquatic Invasive Species Prevention Program

2014
Program Report



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Glenn Dolphin – Oregon State Marine Board
Rick Boatner – Oregon Department of Fish & Wildlife



January 2015



Clean Boats Protect Clean Waters
• Clean • Drain • Dry

Thank You
For helping to fund Oregon's
Aquatic Invasive Species Prevention Program.
Permit revenues are dedicated to the protection of Oregon's lakes
and rivers from invasive aquatic pests. To learn more about this
program, visit: www.boatoregon.com

Before Launching - Inspect your boat and related equipment for
mud, plants or other aquatic species. Dispose of all materials in the
garbage.

After Boating - Away from waterways, **CLEAN** your boat and
equipment of any vegetation or aquatic species. Dispose of in
garbage. Rinse and **DRAIN** your watercraft completely. Let gear
DRY before next use.

Report Invasive Species
1-866-INVADER or www.oregoninvasiveshotline.org

Tyvek tag
backside
of permit

STOP THE SPREAD!

Aquatic weeds like Eurasian watermilfoil and South American waterweed (see reverse) can clog lakes, reservoirs, and rivers. These and other aquatic weeds can easily hitchhike to new waterways on boats, trailers, motors, paddles, etc. Thick growths of aquatic weeds can:

- ruin boat engines and jam steering equipment.
- damage sport fish populations.
- reduce recreational access for boaters, fishermen, and swimmers.
- degrade wildlife habitat for fish and waterfowl.
- contribute to fish kills.
- impair drinking water quality (foul odors, colors, and tastes).

KEEP WATCH ON THE WATER AND REPORT SUSPICIOUS PLANTS

Have you noticed an unusual new plant growing in your favorite lake, stream or river? If so, be sure to note where it is and what the plant looks like. If possible, take a few pictures.

Think you've spotted a high priority aquatic weed like hydrilla or yellow floating bear?

Call 1-866-INVADER to report it.

Did you know that in Oregon it's illegal to launch a boat with aquatic plants or animals on the hull, motor, or trailer? That includes all parts of aquatic plants: stem fragments, leaves, flowers, and seeds.

Be sure to **CLEAN, DRAIN, AND DRY** your boat and all equipment before leaving a water body.

More information on aquatic weeds

NEVER LAUNCH A DIRTY BOAT

Program Annual Report

ODA – Aquatic weed card

OTHER FUNDED PROJECTS

- Monitoring for New Zealand Mud Snails at Boat Ramps
- Analysis of Coastal Marine Invasions in Oregon
- Containment Strategies for Eurasian Watermilfoil Infested Central Oregon Lakes
- Oregon Lake Watch Program
- Zebra and Quagga Mussel Monitoring in High Risk Oregon Waters
- Tenmile Lake Boat Wash Effectiveness Monitoring
- Atlas of Oregon Lakes AIS Interface

Tenmile Lake
Boat Wash Station (2013)



AQUATIC INVASIVE SPECIES PREVENTION PROGRAM

SUMMARY PRESENTED TO THE AGRICULTURE AND NATURAL RESOURCES COMMITTEE



AQUATIC INVASIVE SPECIES PREVENTION PROGRAM

- To protect Oregon's water bodies against the introduction and spread of aquatic invasive species. Key element of the Oregon Conservation Strategy
- Educate everyone about aquatic invasive species.

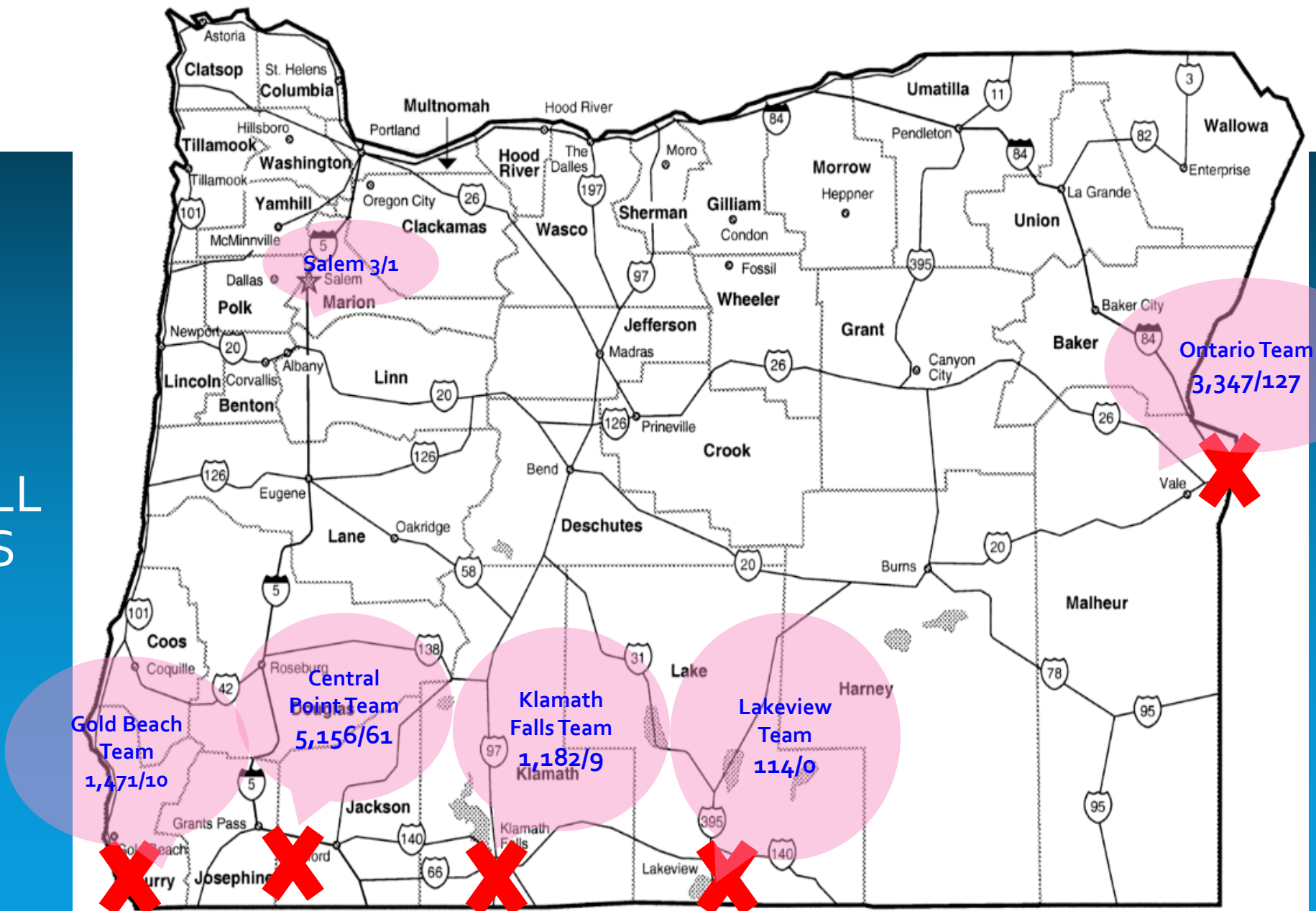


TYPES OF BOAT CONTAMINATION

- Attached zebra or quagga mussels
- New Zealand Mud snails
- Live bait
- Aquatic weeds
 - Eurasian Watermilfoil and Hydrilla
- Standing water in boat



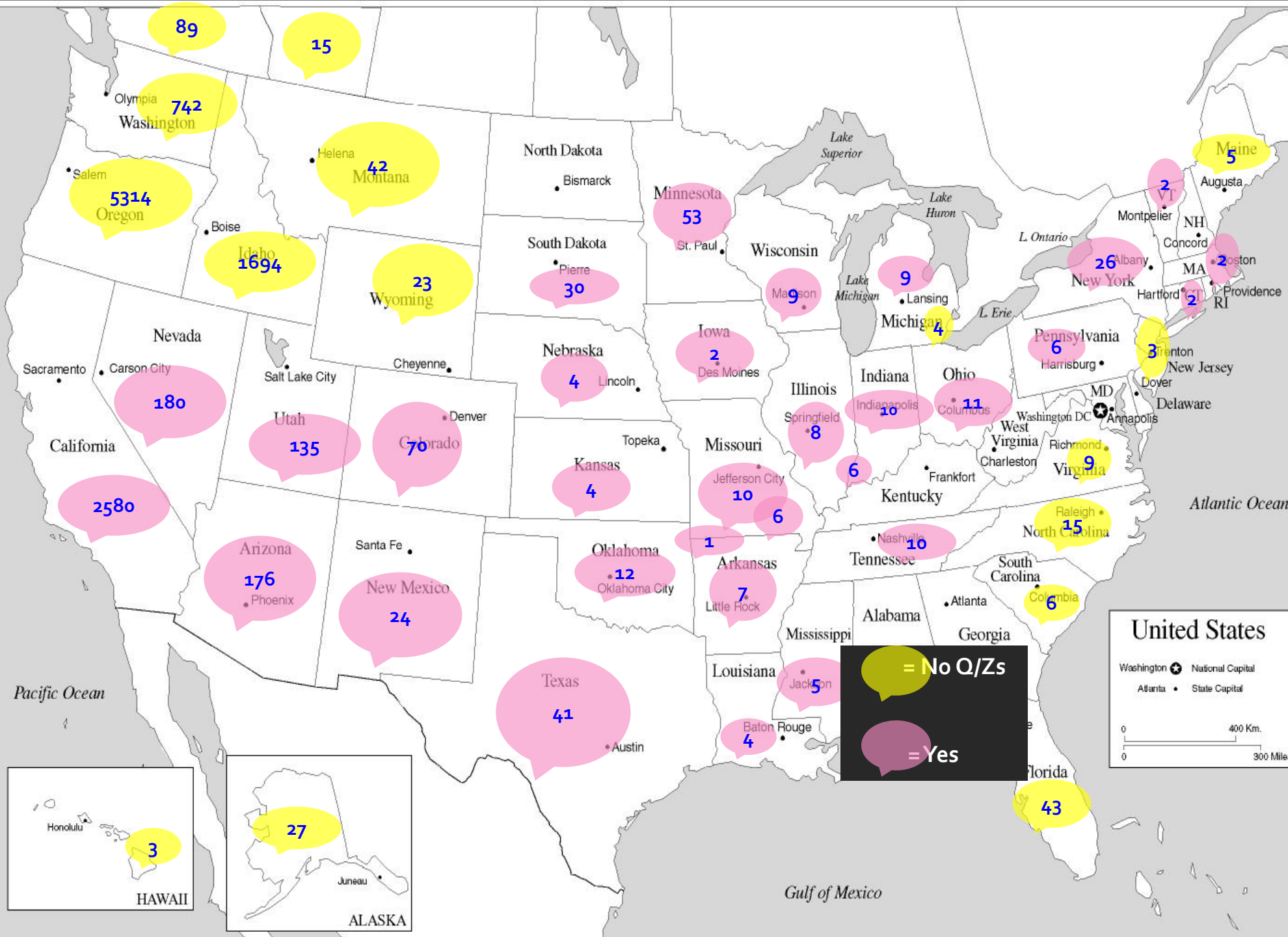
2014 SUMMARY OF WATERCRAFT INSPECTIONS AND ALL DECONTAMINATIONS



2014 INSPECTION STATION HOURS

HWY	Location	Start Date	Hours	Close Date	Staff #
101	Brooking	May 5	Wed-Mon 10:00-6:00	October 30	2
I-5	Ashland	February 3	Sun – Sat 7:00-8:00	October 30	4
97	Midland	May 9	Wed-Mon 10:00-6:00	September 23	2
395	Lakeview	May 9	Wed-Mon 10:00-6:00	September 23	1
I-84	Ontario	April 9	Sun – Sat 7:00-8:00	October 24	3

Summary of watercraft inspected by State



INSPECTION STATIONS



QUAGGAS AND ZEBRAS

- 8 – Great Lakes
- 5 - Lake Powell
- 2 – Lake Mead
- 1 – Colorado River
- 1 – Texas
- 2 – Atlantic Ocean
- 1-Flathead

Moist (humid) Dry

Clean Overall app

Obvi

RESULTS: {Check applicable box

Drive / Prop shaft Q/ZMs:

Stator tube/Transducer Q/ZMs:

Q/ZMs:

Q/ZMs:

High hull fittings Q/ZMs:

Cells Q/ZMs:

Drain locker Q/ZMs:

Q/ZMs:

DISCONTINUATION NECESSARY?

Please contact ODFW 503-947-

Plan: *Commercial*



2015 DECONTAMINATION



ROAD SIGNS



TENTATIVE 2015 INSPECTION STATION HOURS

HWY	Location	Start Date	Hours	Close Date	Staff #
101	Brooking	May 11	Wed-Mon 10:00-6:00	October 29	2
I-5	Ashland	March 2	Sun – Sat 7:00-8:00	October 29	4
97	Midland	May 15	Wed-Mon 10:00-6:00	September 18	2
395	Lakeview	May 9	Wed-Mon 10:00-6:00	September 18	1
I-84	Ontario	March 8	Sun – Sat 7:00-8:00	October 29	3
95	Basque	June 4	Vary	September 18	1

QUESTIONS?

