

Quagga and Zebra Mussel Management in the West

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Panel on ANS



Western Regional Panel on ANS

- Established by NISA (1996) to coordinate ANS activities in the western USA
- Advisory body to ANS Task Force (ANSTF)
- 19 Western States, 4 Canadian Provinces, Federal Agencies, NGOs, and Private Industry
- Preventing the spread of zebra and quagga mussels is a top priority for all members



Quagga Zebra Action Plan for Western Waters (QZAP)

- Requested of WRP in October 2008
- Submitted to ANSTF in October 2009 and approved in February 2010
- QZAP Goals:
 - **summarize** current ZQM prevention strategies in the West
 - **identify and prioritize** the specific actions that are needed to comprehensively prevent the further spread of invasive mussels, respond to new infestations, and manage existing infestations
- Status Report Published by WRP in May 2019

QZAP 2010 Highest Priority Goals



- Increase capacity to address invasive mussels
- Implement **mandatory** watercraft inspection and decontamination at infested waters
- Develop and adopt **standard watercraft and equipment inspection and decontamination protocols** in western states

QZAP Objectives

- A. Increase capacity – funding and coordination (2)
- B. Prevention [and containment] (9)
- C. Early detection monitoring (4)
- D. Rapid response (5)
- E. Management of existing populations (6)
- F. Education and outreach (6)
- G. Research (5)

37 action
items



WISCE – Western Invasive Species Coordinating Effort (States)

- All western states have an ANS Program
- Most have a WID program
- Coordinate QZAP Implementation
- Improve State-Federal Cooperation



WRP's Building Consensus in the West

- BC is setting the path to consistent, effective, and efficient implementation of QZAP
- Final Report Published by WRP in May 2019.



Legal Framework

FROM THEORY TO PRACTICE: A COMPARISON OF STATE WATERCRAFT INSPECTION AND DECONTAMINATION PROGRAMS TO THE MODEL LEGAL FRAMEWORK

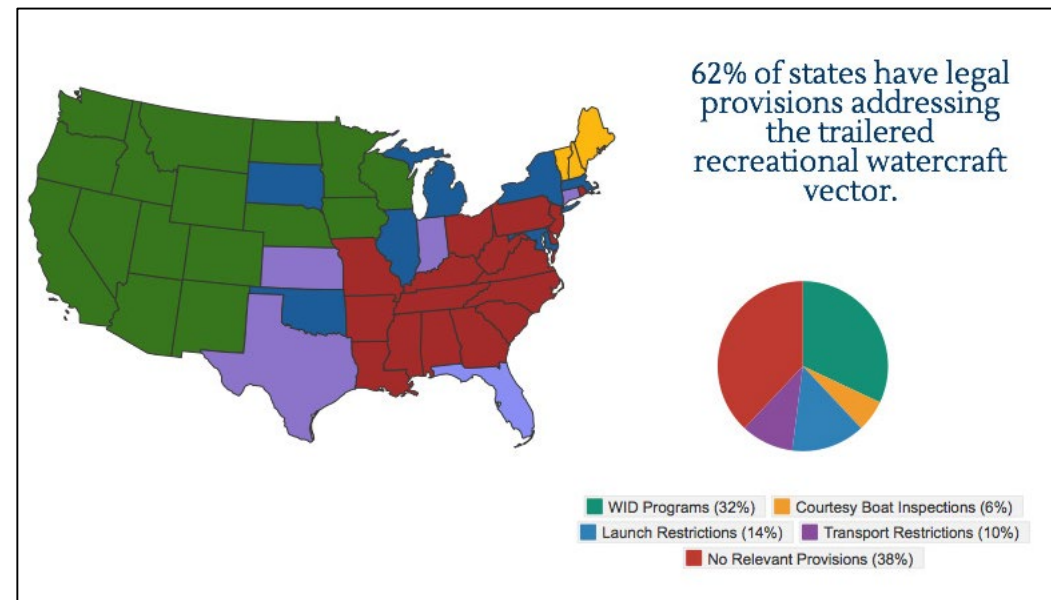
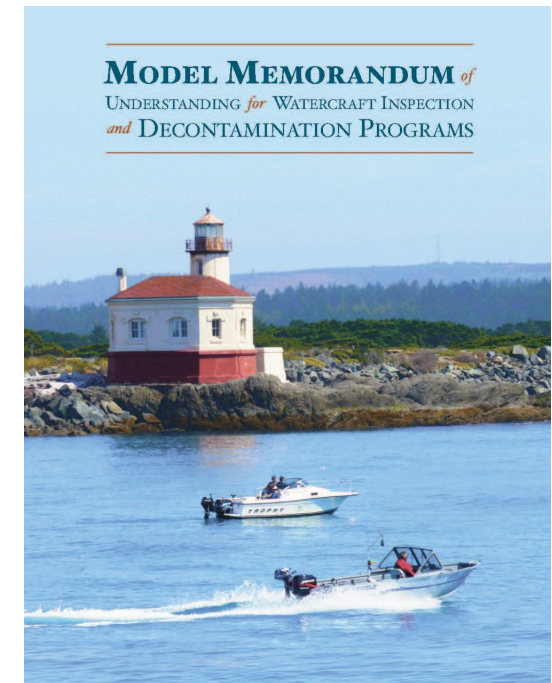
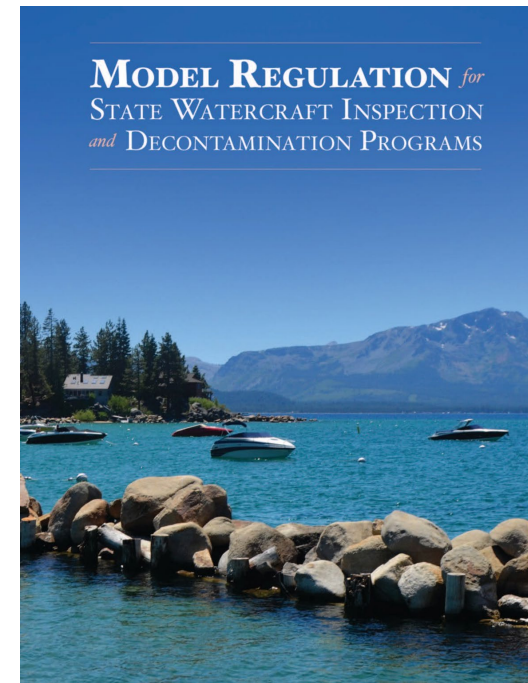
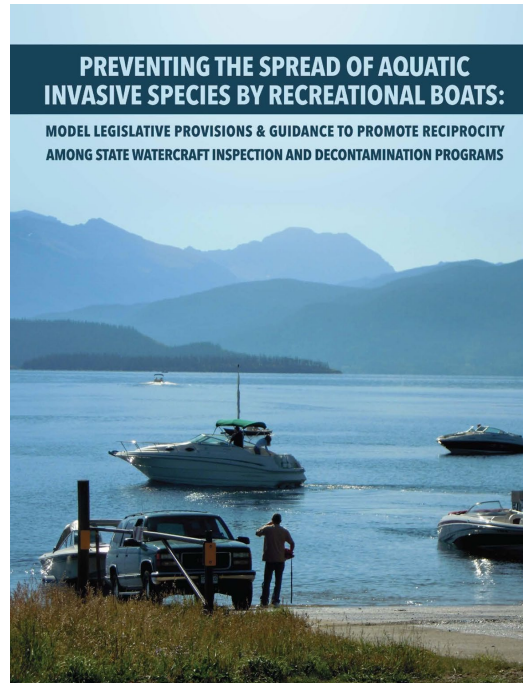


Stephanie Showalter Otts, J.D., M.S.E.L.

National Sea Grant Law Center
University of Mississippi School of Law

April 2017
Revised and Updated December 2018

NSGLC-17-05-02, Revision 3



Federal Policy Options

Addressing the Movement of Aquatic Invasive Species Onto and Off of Federal Lands and Waters

Committee on the Movement of Aquatic Invasive Species
both onto and off of Federal Lands and Waters
8/28/2015 FINAL

The United States faces significant economic and environmental threats from invasive species. The prevention, management, and control of invasive species is a cross-cutting issue involving multiple federal agencies and requires a coordinated multi-agency response with tribal, state, and local jurisdictions. This paper provides guidance and policy options to increase coordination among the federal government and state and local partners to strengthen national efforts to prevent and contain the spread of aquatic invasive species (AIS). This paper summarizes a review completed by federal agencies of their current authorities and potential opportunities to prevent and control AIS on federal lands and waters. The paper focuses on AIS but more general authorities may pertain to terrestrial species as well. This summary and the underlying review may serve as an informational guide to identify existing laws, regulations, and policies that can be utilized by agencies or bureaus to address the movement of invasive species both onto and off of federally managed lands and waters; it does not represent a complete or definitive list of all federal legal authorities on invasive species nor is it intended to interpret or amend any federal legal authorities. Additional steps for consideration by participating federal agencies as well as partners within the Aquatic Nuisance Species Task Force and the National Invasive Species Council are identified at the end of this paper.



Operational Standards

Acknowledgments

Building Consensus in the West is a collaborative effort that would not have been possible without contributions from the following organizations.



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Quagga and Zebra Mussel Action Plan for Western US Waters

Status Update – April 2019



Zebra mussels (*Dreissena polymorpha*)



Quagga mussels (*Dreissena rostriformis bugensis*)

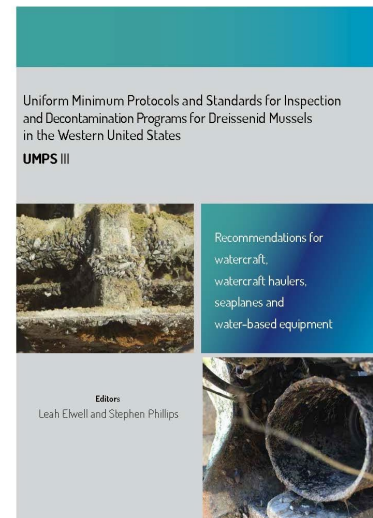
Western Regional Panel On Aquatic Nuisance Species

Building Consensus in the West Workgroup

Final Summary Report 2011-2018



Draft: April 9, 2019 (v9)



WESTERN REGIONAL PANEL On Aquatic Nuisance Species

Dreissenid Mussels Sampling and Monitoring Protocol



Zebra mussels (*Dreissena polymorpha*)



Quagga mussels (*Dreissena bugensis*)



FINAL
October 2, 2018

Student Training Curriculum for Watercraft Inspectors and Decontaminators to Prevent and Contain the Spread of Aquatic Invasive Species in the U.S.A.



Version 2 – Updated February 1, 2016



Trainer's Manual for AIS Watercraft Inspection and Decontamination Certification Courses



Version 2 - February 1, 2016



A REVIEW OF CHEMICAL USE ASSOCIATED WITH WATERCRAFT DECONTAMINATION TO ADDRESS AQUATIC INVASIVE SPECIES

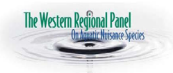
A special supplement to the Uniform Minimum Protocols and Standards (UMPS) for Inspection and Decontamination Programs for Dreissenid Mussels in the Western United States report



Leah C. Elwell and Stephen Phillips, editors

WESTERN REGIONAL PANEL On Aquatic Nuisance Species

Laboratory Standards for *Dreissena Veliger* Analysis

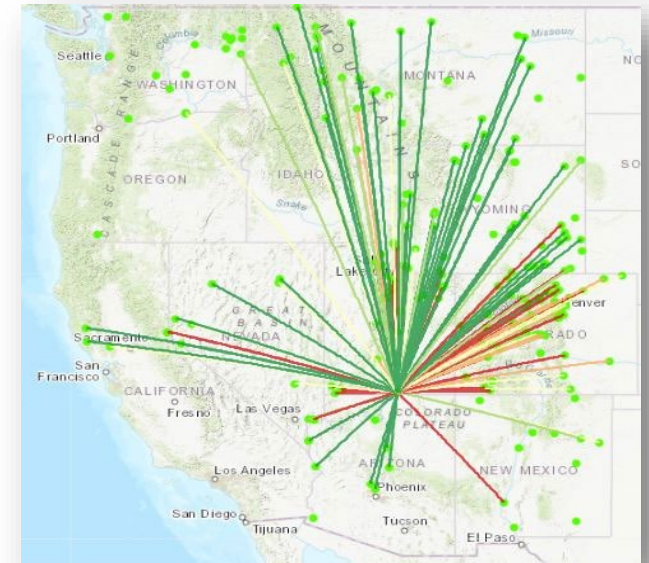
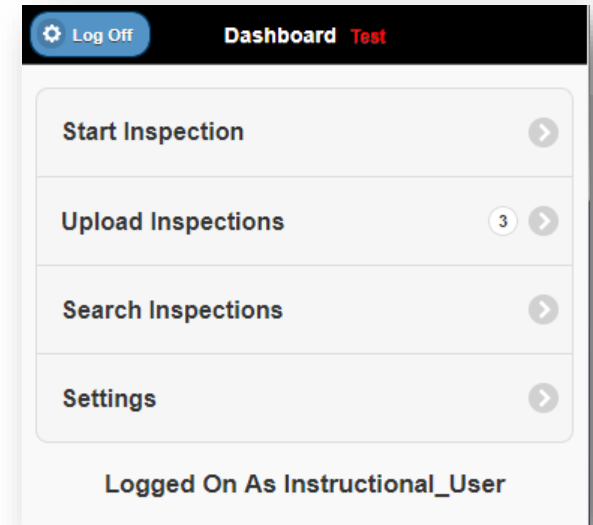


Prepared by
AIS Laboratory Standards Subcommittee

FINAL
October 2, 2018

Western Regional WID Data Sharing System

- Mobile Application for Data Collection
 - Inspection Procedure Driven
- Verify a boat's use history to accurately assess risk
- Send/Receive mussel boat notifications from infested waters
- Reporting and Data Analysis



Successes



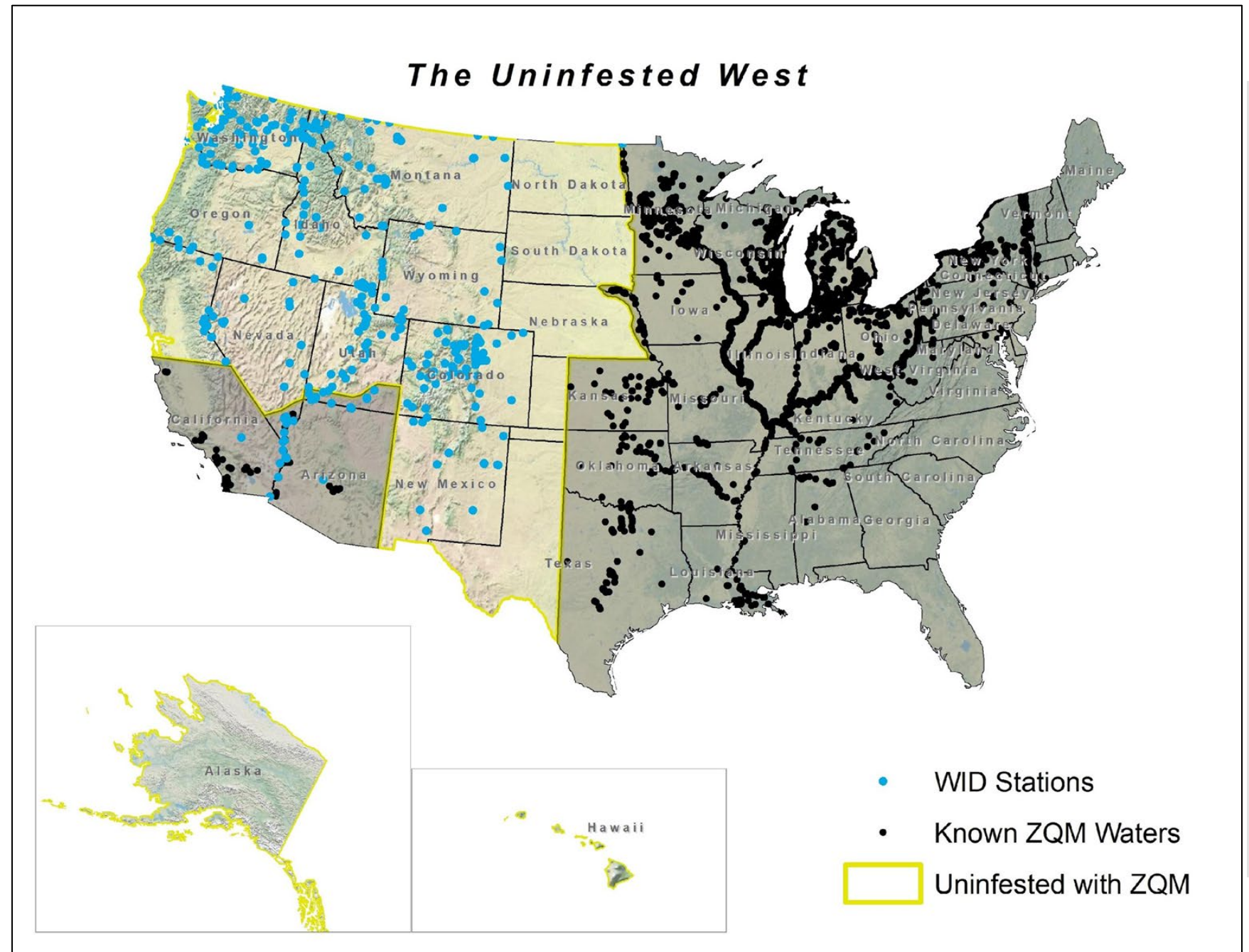
- WID Prevention Works!
 - MUCH of the Western USA is still MUSSEL FREE!
- Improved coordination – Western Regional Panel
- Improved Communication – Regional WID Data Sharing System
- WRP Building Consensus products
 - Science- based standards and protocols
 - Model legal framework
- DOI Safeguarding the West Initiative (2017)
- ABYC Technical Information Report (2018)
- WGA Biosecurity and Invasive Species Initiative (2019)
- Lake Mead and Lake Powell Containment Programs (ongoing)

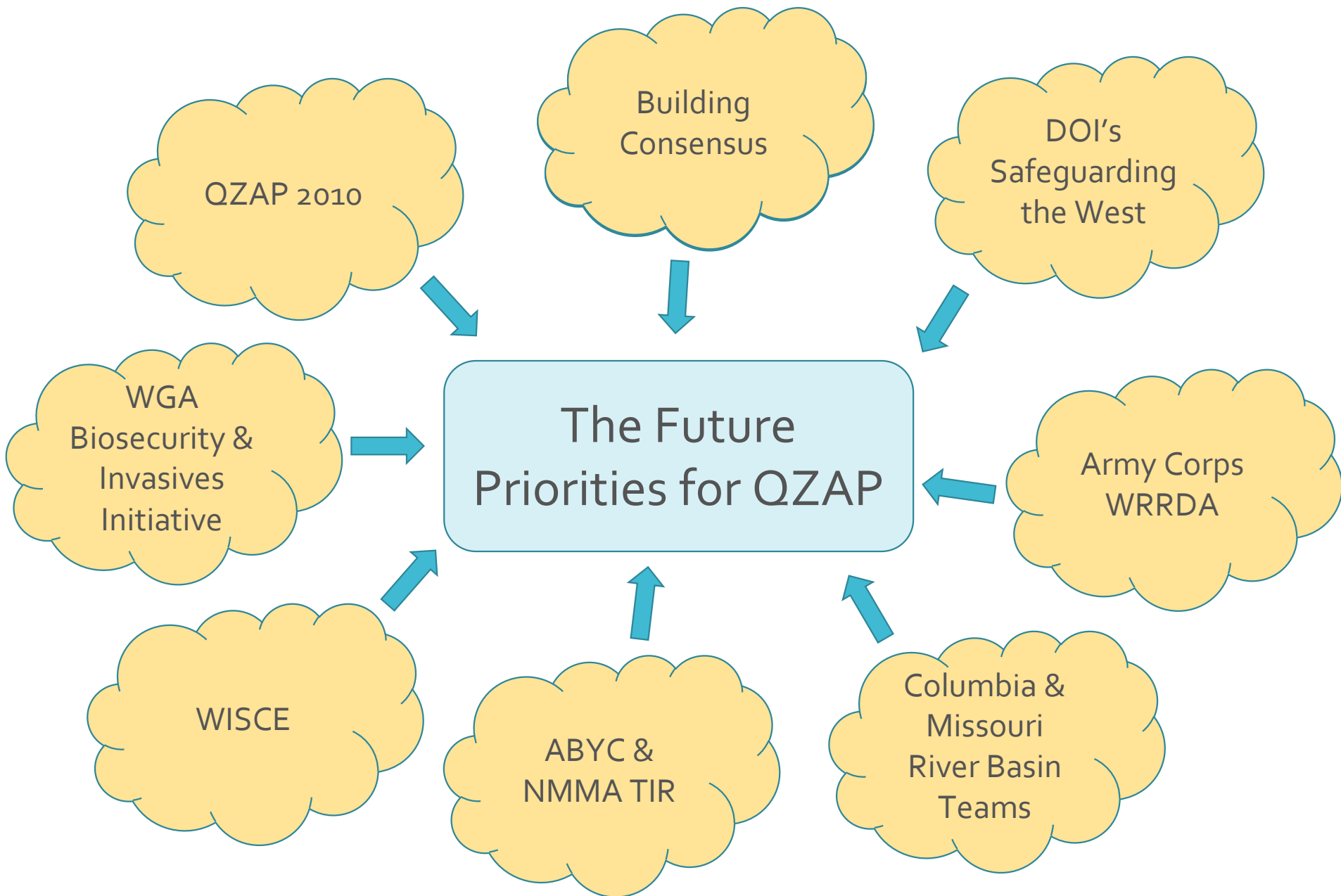
Challenges

- Need for increased capacity for state programs – funding and staff
- Lack of consistent and adequate dollars for ongoing annual field operations (WID)
- Lack of infrastructure for WIDS
- Mussels behaving differently in Powell and Lower CO River
- Still lacking authority in some state and federal agencies
- Increased infestations in places that don't have prevention
- West-wide evaluations not completed
- Other ANS coming!



Protecting the Uninfested West





Issues to Wrestle With Next

- The appropriate role of eDNA in early detection
- Mechanisms for funding WID (boater fees, stamps, etc.)
- The role of private industry in performing WID
- Exploring alternate ways of decontamination
- Evaluation of tracking systems for watercraft movement

Questions?



TEAMWORK!
WORKING TOGETHER GETS THE GOODS!