

Truckee Regional Aquatic Invasive Species Prevention Program 2013 Report



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INTRODUCTION

Prevention and control of aquatic invasive species (AIS) continues to be one of the most challenging issues facing resource managers in the western United States. While state and federal officials have implemented control measures and programs on a broad scale, protecting specific water bodies from AIS has primarily been left to local governments and resource managers. While quagga mussels, and the closely related zebra mussel, have been in the Great Lakes since the late 1980’s their relatively recent introduction and spread in western states has elevated the importance of aquatic invasive species in general and motivated many resource managers to evaluate the risks associated with other invasive species. The potential spread of invasive species such as Asian clam, Eurasian watermilfoil, New Zealand mudsnail, Hydrilla, and other mobilizing invasive species present their own resource and management concerns that are best addressed on a watershed scale. This is particularly true for AIS given their ability to travel through open water systems within a watershed.

Since 2010, the Tahoe Resource Conservation District (Tahoe RCD) has coordinated with local partners in the Middle Truckee River Watershed (outlet of Lake Tahoe to the California state line) to implement the Truckee Regional Aquatic Invasive Species Prevention Program (TRAISPP). Since the program began, it has benefited from the broad support of resource managers, county representatives, utility managers and boaters, and from funding provided by the Truckee River Fund and US Bureau of Reclamation.

Table 1. Program Waterbodies	
Donner Lake	Stampede Reservoir
Independence Lake	Boca Reservoir
Webber Lake	Prosser Reservoir
Martis Creek Lake	Lake of the Woods

In 2011, federal, state and local agencies and stakeholders completed a risk analysis for the program area, which showed moderate to high risk of introduction, establishment and transport of AIS. As a result, project partners began working toward the creation of mandatory inspection programs within each of the jurisdictions in the program area – Placer County, Nevada County, Sierra County and the Town of Truckee.

Coordination efforts have resulted in a formal Memorandum of Understanding and letters of support, as well as funding and in-kind contributions from partner agencies. The geographical scope of coordination extends through the entire Truckee River watershed, from Lake Tahoe to Pyramid Lake. The degree of coordination and cooperation among partner agencies underscores the importance and need for regional management efforts.

FINAL REPORT

For a fourth year, the Tahoe RCD coordinated the Truckee Regional Aquatic Invasive Species Prevention Program. Funding support for the program included grants from the Truckee River Fund and US Bureau of Reclamation as well as in-kind support from the Tahoe Regional Planning Agency and US Forest Service. The principle objectives for 2013 were to better understand invasive species issues in the region, provide outreach and education on invasive species, organize regional resource managers, evaluate usage patterns, and evaluate the feasibility of watercraft inspections and decontaminations. Project Goals and their associated accomplishments are summarized in this section. Greater detail is provided in sections that follow.

Project Goals

- 1) *Work with local jurisdictions (Town of Truckee and Nevada, Sierra and Placer Counties) to implement mandatory aquatic invasive species prevention programs and facilitate regional coordination.*

Accomplishments: The Tahoe RCD supported local jurisdictions by compiling an AIS Vulnerability Assessment, creating implementation frameworks for mandatory watercraft inspection programs, coordinating public support for mandatory AIS prevention, and implementing a voluntary inspection program. Greater detail on each of these accomplishments is provided below.

- In response to jurisdictional requests, Tahoe RCD and Truckee River Watershed Council (TRWC) staff collaborated on compilation of an AIS Vulnerability Assessment for Truckee regional waters. The Assessment documents findings of the facilitated stakeholder AIS risk assessment process completed in 2011. It also includes updated information on nearby AIS infestations as well as newly completed studies that serve to provide additional context and information related to AIS risk in the region. The AIS Vulnerability Assessment is included as Attachment A.
- Town of Truckee: Working closely with staff from the Truckee River Watershed Council and Town of Truckee staff, the Tahoe RCD assisted in the passage of a revised AIS ordinance. The Tahoe RCD provided content for ordinance revisions and coordinated a demonstration of public support for the mandatory program through letters and Town Council testimony. Town of Truckee Ordinance 2014-01 was adopted in January, 2014 (Attachment B). A compilation of letters in support of the ordinance and the Town's implementation of a mandatory program are included as Attachment C.
- Sierra and Nevada Counties: The Tahoe RCD developed a Watercraft Self-Inspection Framework for Sierra and Nevada Counties. These frameworks provide scalable implementation options tailored to each county's resources and logistics. Attachment D includes frameworks for Sierra and Nevada Counties.
- Since the jurisdictions continued working on implementation plans for mandatory programs during the 2013 boating season, the Tahoe RCD implemented a voluntary inspection program for a fourth year. Staff provided free voluntary inspections and public education at public boat ramps at Boca Reservoir, Donner Lake, Prosser Reservoir and Stampede Reservoir during peak hours of the 2013 boating season. See Section G for more detail on the voluntary program in 2013.

2) *Develop and implement administrative structure for a Truckee regional mandatory AIS prevention program.*

Accomplishments: The Tahoe RCD worked with jurisdictions to develop funding mechanisms to sustain their watercraft inspection programs. Mechanisms include inspection fees, grant funding and utilization of in-kind services. The Town of Truckee adopted Resolution 2014-07 (Attachment E) establishing watercraft inspection fees, and Sierra County secured funding for AIS prevention through USDA Forest Service Title II payments. Nevada County has demonstrated interest in partnering with the US Forest Service to use existing field staff to support watercraft inspections.

With funding support from the Truckee River Fund and the US Bureau of Reclamation, the Tahoe RCD will work with jurisdictions to continue to development of funding systems to support AIS prevention into the future.

3) *Solidify multi-party collaboration and management of the Truckee Regional Aquatic Invasive Species Prevention Program (TRAISPP)*

Accomplishments: Partner collaboration was strengthened in the following ways.

- In 2013, the Truckee Donner Recreation and Park District (TDRPD) provided voluntary inspections at Donner Lake. In early 2014, the TDRPD board voted in favor of operating the mandatory watercraft inspection program as requested by the Town of Truckee.
- In October, 2013 the Tahoe RCD and Truckee River Watershed Council (TRWC) convened jurisdictional partners to explore their visions for the future of AIS prevention in the region. Representatives from the Town of Truckee, Sierra County and Nevada County renewed their commitment to maintaining AIS ordinances and working with the Tahoe RCD and TRWC to develop prevention programs for waters under their purview. The group agreed to meet on an annual basis to facilitate coordination and regional consistency.
- In January 2014, partners wrote letters and/or provided public comment to the Truckee Town Council in support of fee-based mandatory inspections at Donner Lake. Supporters included representatives from California Department of Parks, California State Lands Commission, Nevada Department of Wildlife, University of Nevada Reno, Truckee Meadows Water Authority, Trout Unlimited, Mountain Area Preservation Foundation, Donner Lake Property Owners Association, Desert Research Institute, Tahoe RCD, TRWC and several local citizens. As noted above, a compilation of support letters is included in Attachment B

4) *Cultivate public/private partnerships for inspection and/or decontamination of high risk watercraft*

Accomplishments: In 2013 free decontaminations were provided to Truckee boaters at the Lake Tahoe Watercraft Inspection Program (WIP) inspection sites through coordination with the Tahoe Regional Planning Agency.

In support of mandatory inspection programs in the Truckee region, decontaminations will be available for a fee at the Lake Tahoe WIP inspection stations in 2014. The Tahoe RCD will continue to work with

jurisdictions and public and private partners to identify a suitable operator and funding for a decontamination station within the Truckee region.

5) Improve comprehensive AIS education and outreach plan in the Truckee River watershed region

Accomplishments: In 2013, public education and outreach was improved in the Truckee region by creating a professionally-designed rack card for the program (See Attachment F). TRAISPP staff disseminated this rack card along with other AIS materials through more than 8,000 boater interactions at public boat ramps and through TruckeeBoatInspections.com, the AIS hotline, radio-broadcast public service announcements and printed materials.

The Tahoe RCD worked with each jurisdiction to develop signage and outreach materials to inform the public of their mandatory programs. Additionally, the Self-Inspection Frameworks developed for Sierra and Nevada Counties include recommendations for development and implementation of education and outreach efforts that are consistent with regional efforts

6) Conduct early detection monitoring to gather baseline data in the lower Truckee River watershed

Accomplishments: Early detection monitoring was performed by scientists from University of Nevada Reno (UNR), California Department of Fish and Wildlife and US Bureau of Reclamation. UNR scientists compiled the results of the monitoring efforts. Their report (Attachment G) indicates no new infestations of AIS in project waters. Additional detail is provided below in the “Early Detection Monitoring” section.

Program Development

In 2013, the Tahoe RCD maintained public presence of the Truckee Regional Aquatic Invasive Species Program (TRAISPP) through operation of a voluntary inspection program while also working with jurisdictions toward implementation of mandatory programs. Certified watercraft inspectors provided more than 4,000 free voluntary inspections, and educated boaters about the threat of AIS and how they can prevent the spread. The voluntary inspection program provided public education and protection of biodiversity in the Truckee River Watershed.

Through collaboration with University of Nevada Reno, US Bureau of Reclamation and California Department of Fish and Wildlife, program water bodies were monitored for water quality and AIS. The AIS early detection monitoring that was performed revealed no new infestations, indicating that program waters remain free from Dreissenid mussels.

In response to some questions regarding the survivability of Dreissenid mussels in Donner Lake, the Town of Truckee postponed implementation of their mandatory program in 2013. In a demonstration of regional consistency, Sierra and Nevada Counties also postponed mandatory programs. The Tahoe RCD worked to ensure jurisdictional commitment to AIS prevention by summarizing AIS risk data and creating implementation frameworks to guide development of mandatory programs. Representatives

from Sierra County, Nevada County and the Town of Truckee confirmed their commitment to maintaining their AIS ordinances in late 2013. The Tahoe RCD’s primary goal for 2014 will be to support the implementation of mandatory programs. Concurrently, the Tahoe RCD will facilitate coordination among regional partners to examine opportunities for consolidation of implementation efforts and/or reciprocity between neighboring programs.

Watercraft Inspections

Tahoe RCD inspectors provided free voluntary inspections at Boca, Prosser and Stampede Reservoirs from May – September, 2013. Truckee Donner Recreation and Park District staff provided voluntary inspections at the public launch on Donner Lake during the same period.

Table 2. Total Boat Inspections	
Water Body	Inspections
Stampede Reservoir	1,585
Boca Reservoir	1,172
Prosser Reservoir	94
Donner Lake	1,312
TOTAL	4,163



Boaters who passed inspection were also asked to sign the “Pledge for Healthy Truckee Waters,” which states that the boater understands the threat of AIS, the typical means of transport (motorized watercraft and trailers), and the laws prohibiting transport of AIS. More than 4,000 boaters pledged to Clean, Drain and Dry their boat prior to each launch in a new waterway, to pull drain plugs prior to arrival at the boat ramp, to not launch in known infested waters and to participate cooperatively with TRAISPP staff in the

future. After signing the pledge, boaters were issued a sticker which streamlined access on their subsequent visits to TRAISPP ramps. By giving the inspector the ability to empower the boater with knowledge of how to prevent the spread of AIS, the interaction between the inspectors, boaters and anglers was far more productive.

At the four primary boat ramps in the region, which include Donner Lake, Stampede, Prosser and Boca Reservoirs, inspectors interacted 8,390 times with boaters while conducting inspections, surveys and boater education. See Table 3 for details. Staff observations indicated that the majority of boaters with whom they interacted were aware of AIS

Table 3. Total Boater Interactions	
Water Body	Interactions
Stampede Reservoir	2,773
Boca Reservoir	2,508
Prosser Reservoir	289
Donner Lake	2,820
TOTAL	8,390

prevention measures and have been practicing the standard Clean, Drain and Dry protocols. Boater response and community support show that boater education programs are very successful in the Truckee region. Consequently, the presence of watercraft inspectors at launch sites provided an excellent opportunity to interact with the various user groups present at each of the waterbodies. In addition to performing inspections, boaters were asked questions related to launching to better understand boater use patterns at each of the water bodies.

Early Detection Monitoring

Early detection monitoring is an important part of AIS management because it provides the quick response necessary to prevent further spread and impact by catching the establishment of AIS early. Early detection monitoring was performed by scientists from University of Nevada Reno (UNR), California Department of Fish and Wildlife and US Bureau of Reclamation. UNR scientists compiled the results of the monitoring efforts. Their report (Attachment G) indicates no new infestations of AIS in project waters and states, “The use of



Donner Lake: Diver in Asian Clam bed

voluntary boat inspections and public outreach by the TRCD has likely been pivotal in preventing any new invasions in these lakes, and both are highly recommended to continue.”

The objective of this project is to identify water bodies within the Truckee River region that have already-established invasive invertebrate and plant communities, and to identify and document recent invasions. Data collected in this fourth year of the project built upon data collected in 2010, 2011 and 2012. Specifically, the goals were to:

1. Use the method developed by Rammer and Chandra (2010) to continue shoreline surveys for invasive invertebrates (Dreissenid mussels, New Zealand mudsnail, Asian clam and crayfish) and invasive plant (Hydrilla, Curly-leaf pondweed and Eurasian watermilfoil) species.
2. Sample lakes (using zooplankton net hauls) for the DNA of Dreissenid mussel veligers to document invasions.
3. Quantify the concentration of calcium in the epilimnetic waters of each lake.

Boater Surveys

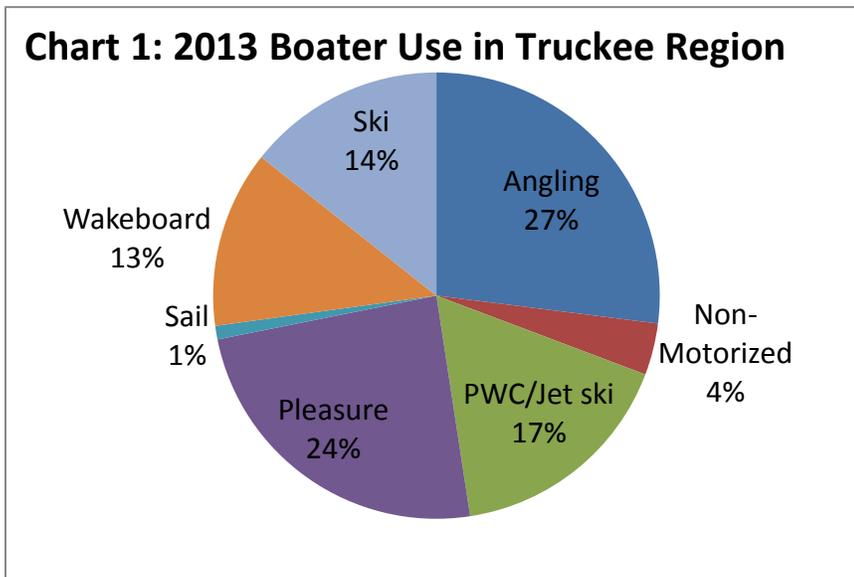
The presence of watercraft inspectors at launch sites provided an excellent opportunity to interact with the user groups of each of the water bodies. In addition to performing inspections, boaters were surveyed to better understand the usage patterns at each of the water bodies. The summary of results characterizes a general representation of boater information in the four water bodies where inspections/interactions occurred during 2013.

Watercraft inspections were performed during peak days and times; therefore, not all boaters or activities can be accounted for in the results presented. However, after careful consideration of the data analysis, the results do seem reasonable. Tables 2 and 3 above provide the number of inspections/interactions at each of the 4 water bodies. Table 4 shows where boats that launched in the Truckee region are registered. Chart 1 provides a breakdown of regional use by boater type.

Table 4. Boater Registration	
California	2,061
Colorado	4
Florida	1
Idaho	3
Nevada	1,665
Oregon	7
Texas	2
Utah	5
Unknown	415
TOTAL	4,163

Together, the information in these tables helps to assess risk of AIS introduction in the Truckee region and to develop prevention strategies tailored to the specific type of boater using regional waters. Each boating type has a different pattern of use and vector types for transmission of AIS to other waters.

Additionally, different user groups obtain information from different sources. A wake boarder seeks out different supplies and information than an angler does. This information helps to guide education and outreach strategies. It is also important, when planning for Education & Outreach, to consider the routes boaters take to access the region and to better target the specific shopping and informational outlets accessed by the different user groups for effective dissemination of materials.



PROJECT GOALS – 2014

The Tahoe RCD will support the launch of mandatory watercraft inspection programs by offering technical support, program operation services and providing public education on AIS. The Tahoe RCD will continue to convene jurisdictional partners to facilitate coordination among programs, foster creation of a regional program and encourage establishment of sustainable funding for program operation into the future.

ACKNOWLEDGMENTS

The ongoing success of this program is the result of the continued support and contributions from the agencies, jurisdictions, stakeholders and community members of the Middle Truckee River Watershed region. In 2013, the Truckee River Watershed Council contributed significantly to program development by working with Tahoe RCD to assemble the TRAISPP Vulnerability Assessment. The Tahoe RCD extends its sincere appreciation to all of the individuals and agencies that provided resources, suggestions, comments and encouragement to the program. In particular, the Tahoe RCD thanks the Truckee River Fund and US Bureau of Reclamation for funding this program and the boating community for their patience, understanding, and input. Finally, Sierra County, Nevada County and Town of Truckee deserve special acknowledgement for their tremendous leadership and commitment to protecting the health of regional aquatic ecosystems.