Aquatic Invasive Species Prevention Efforts in the Lake Tahoe Basin

CA

Nov 2009

Lake Tahoe Region AIS Management Plan

 Provides localized coordination and guidance for preventing and managing AIS in the Lake Tahoe Region

Goals

Prevent new introductions of AIS to the Lake Tahoe Region

- Limit the spread of existing AIS populations in the Lake Tahoe Region, by employing strategies that minimize threats to native species, and extirpate existing AIS populations when possible
- Abate harmful ecological, economic, social and public health impacts resulting from AIS

 Endorsed by CA and NV considered for approval by ANSTF in Nov

AIS in the Lake Tahoe Region

Aquatic Plants

Eurasian watermilfoil (*Myriophyllum spicatum*) Curlyleaf pondweed (*Potamogeton crispus*) Rock snot (*Didymosphenia geminate*)

Fishes

Largemouth bass (*Micropterus salmoides*) Brown bullhead catfish (*Ameiurus nebulosus*) Black crappie (*Pomoxis nigromaculatus*) Bluegill (*Lepomis macrochirus*) Common carp (*Cyprinus carpio*) Golden shiner (*Notemigonus crysoleucus*) Goldfish (*Carassius auratus*)

<u>Other Species</u> Asian clam (*Corbicula fluminea*) Bullfrog (*Rana catesbeiana*)











oto: USFS-LTBML





Approximately the size of a nickel

Asian clam distribution, Lake Tahoe

Asian clams can be found from the shoreline to depths of up to 70 meters in Lake Tahoe (Slide Courtesy of Dr. Marion Wittmann UC Davis)

Marla Bay, July 2008

(Slide Courtesy of Dr.Marion Wittmann UC Davis)

Aquatic Invasive Threats to Tahoe Basin

Quagga/ Zebra Mussels
Impact

Source water
infrastructure

Fishery

Recreation
Economic







Lake Tahoe Boat Traffic

Dreissenid Mussels in the U.S.



Quagga mussel exhibit an 86% survival over 51 days with positive growth



(Slide Courtesy of Dr. Sudeep Chandra UNR)

AIS of Concern for Introduction

Aquatic Plants

Brazilian egeria (*Egeria densa*) Hydrilla (*Hydrilla verticillata*) Oxygen weed (*Lagarosiphon major*) Parrot feather (*Myriophyllum aquaticum*) South American spongeplant (*Limnobium laevigatum*) Water chestnut (*Trapa natans*)

<u>Fishes</u> Northern Pike (*Esox lucius*) Smallmouth bass (*Micropterus dolomieui*)

Invertebrates

New Zealand mudsnails (*Potamopyrgus antipodarum*) Spiny waterflea (*Bythotrephes longimanus*) Quagga and zebra mussel (*Dreissena bugensis and D. polymorpha*)



Tahoe AIS Prevention Efforts

2008

Outreach and interagency/private coordination begins

- Voluntary inspections commence at 10 public boat ramps
- New TRPA Code

2009

 Mandatory inspections at all Launch Facilities on Lake Tahoe, Fallen Leaf and Echo.

2009 Inspection/ Decontamination

- Funding
 - Grant funding/Inspection fees for 15 FTE inspectors 2009
 - Additional funding for infrastructure
- Inspections at Public and Private facilities
- 10 boats held by CDFG and NDOW for quagga/zebra mussels

Next Steps for Prevention

- Continue to set up off ramp inspection stations
- Continue to evaluate changes in risk
 - Proximity of infected lakes
 - Other lake's inspection program success
 - Environmental conditions
 - Species specific information
 - Number of vessels detected with AIS with consistent inspection effort
- Implement Rapid Response Plan

Assistance from Local Jurisdictions

Questions?

TEL