



United States  
Department of  
Agriculture

Forest  
Service

Lake Tahoe Basin  
Management Unit

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Dear Special Use Permit Holders:

The Chief of the USDA Forest Service has identified invasive species as one of the four critical threats to our Nation's ecosystems. Invasive species are plants, animals, fish, and insects from other parts of the country or world that have reached nuisance levels of abundance wherever they have been introduced (note: some invasive species are originally from adjacent states). These foreign species frequently have no natural predators in America and, therefore, multiply easily and quickly. As they do, they destroy habitat and consume the resources our native species rely upon. Invasive species may out-compete native plants and animals posing threats not only to the environment, but to the economy, recreation, and human health. The goal of the USDA Forest Service invasive species program is to "*reduce, minimize, or eliminate the potential for introduction, establishment, spread, and impact of invasive species across all landscapes, waterscapes, and ownerships.*"

As a business that uses rivers and lakes on the National Forest of California, you are someone who especially cares about and depends on the outstanding qualities of these waters. We need your help to protect rivers, lakes, and water bodies across California from invasive aquatic animals and plants that have the potential to significantly degrade water quality, displace native species, and upset the natural food web. The presence of aquatic invasive species may even result in the closure of a water body and corresponding recreation area(s), which happened in 2008 at San Justo Reservoir and Recreation Area in San Benito County due to zebra mussel infestation. Moreover, once a water body is infested, management costs can be extremely high. Zebra mussel control and eradication *alone* costs up to \$1 billion annually in the United States.

How each of these species moved to our waters is unknown, but anglers, boaters, aquatic resource specialists, and other water enthusiasts are believed to play a significant role. All those who come in contact with water need to help prevent the spread of aquatic invasive species by cleaning or thoroughly drying their water-contact equipment and boats after leaving a body of water and before entering another. Enclosed is a general description of cleaning and prevention techniques that we recommend you follow. At this time, the Forest Service does not endorse any particular method; however, we do encourage you to share this information with your staff and customers.

Non-native and invasive aquatic plants and animals such as zebra and quagga mussels, New Zealand mudsnails, Asian clams, Eurasian water milfoil, and purple loosestrife, among others,



| Species and Location   | What's the Problem?   | Photo   |
|--|---|---|
| <p><b>New Zealand Mudsnails</b><br/>(NZMS)<br/>(<i>Potamopyrgus antipodarum</i>)<br/>See Enclosure 1 (maps) for species locations</p>                                      | <p>NZMS colonies disrupt the base of the food chain by consuming algae and competing with native bottom-dwelling invertebrates. A population decline of macroinvertebrates (aquatic insects) can follow the introduction of NZMS, which reduces fish forage. With a decrease in food availability, fish populations can decline as well.</p>  |    |
| <p><b>Didymo (common name is "Rock Snot")</b><br/>(<i>Didymosphenia geminata</i>)<br/><br/>See Enclosure 1 (maps) for species locations</p>                                | <p>Didymo can smother streambeds and adversely affect freshwater fish, plant and invertebrate species by depriving them of habitat, and also impact recreational opportunities. It is a diatom or single celled algae that can grow over rock surfaces in a dense, thick, and shaggy mat.</p>   |    |
| <p><b>Asian Clam</b><br/><i>Corbicula fluminea</i><br/>See Enclosure 1 (maps) for species locations</p>  | <p>Asian clam is a prolific and highly competitive species that is capable of rapid growth and spread. Asian clams can displace native species, reduce biodiversity, and alter food chains. Furthermore, Asian clams have biofouling potential for manmade structures and may clog water intake pipes, affecting power, water, and other industries.</p>                            |   |
| <p><b>Quagga &amp; Zebra Mussels</b><br/><i>Dreissena rostriformis bugensis</i><br/>&amp; <i>Dreissena polymorpha</i><br/>See Enclosure 1 (maps) for species locations</p> | <p>These organisms clog water intake structures (e.g., pipes and screens), which greatly increases maintenance costs for water treatment and power plants. Recreational activities on lakes and rivers are adversely affected as mussels accumulate on all submerged, hard surfaces including docks, buoys, boat hulls, and anchors. Beaches can become heavily encrusted, too.</p> |  |

Preventing the introduction of invasive species is more efficient and cost-effective than trying to eradicate them once they are established. We are asking you and your staff to ensure your water equipment, including, but not limited to, boats, jet skis, kayaks, rafts, wetsuits, ropes, anchors,