ASIAN CLAM CONTROL PROJECT
TAKING PLACE AT EMERALD BAY

October 4, 2012

Lake Tahoe, CA – A team of partners from the Lake Tahoe Aquatic Invasive Species Program is scheduled to begin implementation of the largest Asian clam control project in the history of Lake Tahoe on October 15, with plans to treat an area of up to 5 acres at the mouth of Emerald Bay.

The goal of the Emerald Bay Asian clam control project is to treat a relatively small, isolated population of Asian clams before they spread to an unmanageable level. Currently, the clams live on a shallow, gravel sill approximately 15 feet below the surface that partially separates Emerald Bay from Lake Tahoe. Treatment will be accomplished by covering the infested lake bottom with thin rubber barriers, augmented with organic material, that reduce the available oxygen and smother the clams.

The Asian clam infestation at Emerald Bay is in the early stages of invasion and currently small enough to manage through an effective prevention and control program. Scientists have found that without treatment, the population can grow rapidly and become extremely difficult and expensive to control.

“Invasive species are a real threat to Lake Tahoe and its nearshore environment. That is why, since 2009, the Lahontan Water Board has provided $789,000 in funding, and issued several permits, towards controlling Asian clams in Lake Tahoe,” said Patty Kouyoumdjian, Executive Officer of the Water Board. “Because Emerald Bay is Tahoe’s most iconic location, we are supporting this effort, which addresses the Asian clam infestation in Emerald Bay and will provide information for fighting invasive species going forward,” she said.

Controlling the Asian clam population in Lake Tahoe is critical as the clams have a variety of negative impacts. The clams could increase the potential for other species such as quagga mussels to establish in Lake Tahoe by increasing localized calcium concentrations. They also promote the growth of algae by releasing highly concentrated nutrients. Increases in algae impact the scenic beauty of the shoreline by changing the water color, reducing water quality, and washing rotting materials onto the beaches. Perhaps most significant, Asian clams compete with native animals for habitat and food, which causes a disruption
in the food web. By treating the Emerald Bay infestation in the early stage, these impacts can be minimized or avoided. The treatment will also help prevent the spread of these invasive clams to other areas of Lake Tahoe.

Recent scientific research has shown that the use of bottom barriers is effective at controlling Asian clam infestations in Lake Tahoe. In 2010, the barriers were first tested on a large scale (two half acre plots) in the southeast portion of the lake. Individual bottom barriers measure 10 feet by 100 feet and are hand placed by divers over known populations of Asian clams on the bottom of the lake. Steel rebar on top of the barriers keep them in place and deny the covered clam population access to oxygen. By adding thin, woven sheets of biodegradable organic material (e.g., aspen fiber) under the rubber mats, the loss of oxygen can be accelerated, improving the effectiveness of the treatment method. Organic material that does not decompose during the project will be removed with the bottom barriers.

"We are excited about the progress the Asian clam control projects have made over the last couple of years," said Jim Brockett, AIS Control Program Coordinator with the Tahoe Resource Conservation District. “The diverse partnerships and collaboration lends itself to the commitment and success of this effort."

The Asian clam control project is scheduled to begin on October 15 (weather permitting) and deployment of the bottom barriers will take from four to six weeks to complete. The barriers will be left in place for approximately one year in order to achieve clam mortality. Crews will return for three weeks in September-October of 2013 (after Labor Day) to remove the barriers. Work will primarily occur in early mornings to minimize interference with recreational boating; however, boaters entering Emerald Bay may be asked by on-site coordinators to delay their entrance into the bay for a short while to ensure diver safety. Work will only occur during the week, with no work occurring on the weekends or holidays, and has been scheduled not to interfere with the summer boating season. Boaters planning to visit Emerald Bay during these periods are asked to take extra precautions to avoid disrupting the control project or endangering the divers.

“This project exemplifies the partnership-building role we play as the Tahoe Regional Planning Agency -- working together with the funding agencies, California Department of Parks and Recreation and all organizations,” said Patrick Stone, Senior Wildlife and Fisheries Biologist and project lead for the Tahoe Regional Planning Agency. “We are asking the boating community for their patience and support as we work together to protect our natural and cultural resources, and maintain opportunities for high-quality recreation.”

The Lahontan Regional Water Quality Control Board, U.S. Fish and Wildlife Service, California Department of Parks and Recreation, and the Tahoe Regional Planning Agency are leading the charge to control Asian clams in Emerald Bay. The U.S. Forest Service, Pacific Southwest Research Station is funding continued research on the invasive clam infestation to monitor the effectiveness of this control effort. The team of partners working on this project also includes staff from the Tahoe Resource Conservation District, California State Lands Commission, Nevada Division of State Lands, and researchers from the University of California Davis Tahoe Environmental Research Center and the University of Nevada Reno.

The Lake Tahoe Aquatic Invasive Species Program consists of 40 public and private partner organizations including federal, state and local jurisdictions, research partners, public utility districts, and private marinas. This Program provides leadership, direction and resources to fulfill its mission of prevention, detection and control of aquatic invasive species in the Lake Tahoe Basin. For additional information, contact Kristi Boosman of TRPA at (775) 589-5230 or kboosman@trpa.org.
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