Association for the Preservation of Clear Lake

Lake Association News

A newsletter for the Association for the Preservation of Clear Lake

SUMMER/FALL 2009

CLEAR LAKE DREDGING COMPLETED

After several years of studying, planning, designing, and implementing, the dredging project at Clear Lake is now officially complete. The dredging crew finished deepening the area by the McIntosh boat ramp and touching up other areas the week of August 24th. A total of 2.4 million cubic yards of material was removed from the lake. This amount was 100,000 cubic yards more than had been originally contracted for. The demobilization of the dredging equipment will likely last into late fall. The next steps will be to continue pumping water from the containment site to de-water it. Over the next few years, the site will be seeded down to prairie and the height of the berm walls will be decreased. Water quality data from this summer is already showing an increase in clarity of 7" from last summer. A new lake depth map is available at: www.iowadnr.gov/fish/fishing/lakes/cle17.html. Thanks to all those who helped with this project!

Water returning to Ventura Marsh from dredging containment site

Conservation Easements - Another Tool to Protect Clear Lake

Conservation easements are one of the most powerful, effective tools available for the permanent conservation of private lands in the United States. The use of conservation easements has successfully protected millions of acres of wildlife habitat and open space, keeping land in private hands and generating significant public benefits.

A conservation easement is a voluntary, legally binding agreement that limits certain types of uses or prevents development from taking place on a piece of property now and in the future, but allows landowners to maintain ownership of the property.

Conservation easements have played an important role in protecting ecological and open space values in the Clear Lake watershed. The first conservation easement in the watershed was the "Lone Tree Point" area enrolled by the Connell family in 1992. The family utilized the Iowa Natural Heritage Foundation (INHF) to protect 101 acres of woodland, including 4,300 feet of undeveloped Clear Lake shoreline. Since that time, the INHF has been involved in other watershed projects such as preserving the "Ventura Cove" woodland area adjacent to Ventura Heights.

A national organization that has established an easement in the watershed is the Nature Conservancy. In 2008, the late Max Clausen enrolled 240 acres of undeveloped land, including 2,700 feet of shoreline known as the "Clausen's Cove" area. At the time of donating the easement, Clausen stated, "I wanted to preserve what I had. Anyone would have sold by now. I saw what they did to the rest of the lake and wanted this property to stay in its natural state."

In a conservation easement, a landowner voluntarily agrees to sell or donate certain rights associated with his or her property – often the right to subdivide or develop – and a private organization or public agency agrees to hold the right to enforce the landowner's promise not to exercise those rights.

An easement selectively targets only those rights necessary to protect specific conservation values, such as water quality or migration routes, and is individually tailored to meet a landowner's needs.

A conservation easement is legally binding, whether the property is sold or passed on to heirs. Because use is permanently restricted, land subject to a conservation easement may be worth less on the open market than comparable unrestricted and developable parcels. Sometimes conservation easements will enable the landowner to qualify for tax benefits in compliance with Internal Revenue Service rules.

The Iowa Natural Heritage Foundation has several resources available on their web site (www.inhf.org) to help landowners determine if a conservation easement is right for them.

- Portions of this article taken from www.nature.org.

Lone Tree Point and Clausen's Cove areas

Natural Resources Sustainable Funding

Source: Iowa Environmental Council

Iowa voters will have a historic opportunity in November 2010 to vote on a constitutional amendment establishing a trust fund to preserve Iowa's natural resources and outdoor recreational opportunities. Trust fund revenue will aid in conservation of agricultural soils and improve water quality and natural areas in Iowa, including parks, trails, and fish and wildlife habitat.

In 2008 and 2009, more than 90 percent of Iowa's state legislators overwhelmingly approved legislation that would establish the constitutionally protected Natural Resources and Outdoor Recreation Trust Fund. Polls conducted in 2006 and 2008 continue to affirm that Iowans value natural areas and the features that are unique to this state. If approved by Iowa voters, the Trust Fund would allocate 3/8ths of one cent from sales tax revenue the next time the Iowa legislature raises the state sales tax, providing the Trust Fund an estimate of $150 million per year. This funding recommendation was based on over two years of research and study conducted by a legislative advisory committee. The advisory committee concluded that those funds, strategically used at state and local levels, would meet current needs. The impact on the average taxpayer in Iowa would be about 8¢ a day, with nearly half of the revenue coming from business and travelers. A broad range of programs would be enhanced by the Trust Fund, including watershed protection and lakes restoration.

COST SHARE AVAILABLE FOR RAIN GARDENS

The CLEAR Project has funding available to cost share up to 75% of rain gardens installed at private residences in the Clear Lake watershed. Funding will be awarded on a first-come, first served basis. A rain garden is a flower garden that captures rain from roofs, driveways or yards. A depression is made in the landscape that temporarily stores runoff after rain events to allow rainfall to infiltrate on-site rather than flow through a storm drain to the lake. Rain gardens are also an attractive addition to the landscaping features of a home. If you are interested in installing a rain garden, please contact the CLEAR Project at 641-923-2837 Ext.3.

LAKE NEWS

ISU Works to Determine Impacts of Zebra Mussels and Carp

Zebra mussels were found on a rock in Clear Lake in August, 2005. Over the last several years, numbers of zebra mussels have been increasing in abundance and have been found on the majority of nearshore substrate including rocks, docks, and boat lifts.

Zebra mussels exhibit a complex life cycle that aids the rapid colonization of suitable lake habitats. Adult zebra mussels attach to hard objects such as rocks in order to reproduce and feed on planktonic algae. The life cycle begins when female zebra mussels release eggs into the water column, which are then fertilized, resulting in a veliger. Veligers are the juvenile stage of zebra mussels and are generally found floating in the water column, where they feed on algae and grow. Once a veliger reaches a size where it is too large to float, it undergoes metamorphosis and attempts to locate a suitable location in the lake for attachment and feeding.

Zebra mussels feed by filtering algae out of the water, and it is estimated that a single feeding zebra mussel filters approximately 1 liter of water over a 24 hour period. Since zebra mussels can rapidly filter water and achieve high numbers on suitable habitats (1,000-10,000s per square foot), there is potential for a significant effect on water quality.

Although their filter-feeding removes algae from the water column, the overall effect zebra mussels will have on Clear Lake is uncertain. Results from studies of similar aquatic systems suggest that the net effect of zebra mussel on water quality in Clear Lake could be neutral, positive, or even negative. In some studies zebra mussel filter-feeding on algae was selective, resulting in the reduction of high quality algae, leaving lower quality blue-green algae that are commonly associated with nuisance algal blooms. Zebra mussels also excrete nutrients directly into the water column.

Although water quality in Clear Lake may improve as the zebra mussel population increases and more suspended algae and sediment is removed from the water column by these animals, we still lack critical information needed to make an accurate prediction of how water quality will respond. Another unanswered question is how zebra mussels and common carp will interact and affect water quality in Clear Lake. Will zebra mussel activities (e.g., removal of particulate matter by filter feeding) compensate for or negate adverse carp effects (e.g., sediment resuspension) or will zebra mussels cause even greater water quality problems (e.g., through phosphorus excretion and promoting blue-green algae blooms by selective feeding of green algae)?

Monitoring the invasion of zebra mussels for use in a model of the Clear Lake ecosystem began in 2007. The model will be used to evaluate the potential effects of zebra mussels and management on the future water quality and fishery. Data are also being collected on the carp population, benthic invertebrates, benthic algae, fish community, and juvenile zebra mussels, and this study will continue through 2010. Surveys of benthic substrates throughout the lake show a 7-8 fold increase in zebra mussel densities from 2007 to 2008 on rocky areas. Zebra mussel veligers have not been detected in Ventura Marsh.

The interaction of invasive zebra mussels and carp and their effects on the biological community and water quality in Clear Lake is uncertain. The effects of management strategies to maximize water quality and biological productivity in Clear Lake may take many years to be realized. Our model of the Clear Lake ecosystem will provide a useful tool for the evaluation of management strategies to achieve water quality and fishery objectives in light of the recent invasion of zebra mussels and continued carp removal.

- Michael E. Colvin, E. Katzenmeyer, C. Pierce, and T. Stewart

This research project is being undertaken by the Iowa Cooperative Fish and Wildlife Research Unit and ISU and was funded by Iowa DNR.

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