



Lake Association News

A newsletter for the Association for the Preservation of Clear Lake

FALL 2006

FEATURE PROJECTS

STORM WATER IMPROVEMENT - BLACK LOCUST

Cerro Gordo County recently completed a storm water and shoreline improvement project in Ventura Heights at Black Locust Ave. A Vortechs system was installed to capture runoff from the 3 acre drainage area. The badly eroding bank was stabilized and then sod was installed. The improvement will keep over 2 tons of sediment out of Clear Lake annually.



THANKS FOR PROPERLY DISPOSING OF LEAVES!

The City's Yard Waste Collection Facility received a large amount of leaves this fall. The facility takes the leaves and recycles them into beneficial mulch. If leaves are allowed to be washed into the lake, they contribute to the problem of excessive nutrients in the water. Burning the leaves can create noxious gases. So, a big thanks to those who chose the healthiest way for the lake and for us to dispose of the leaves; the collection facility!

Water Monitoring Results 2006

Thanks to a partnership between the U.S. EPA, IDNR, and CLEAR Project, water monitoring has been conducted on Clear Lake since 1998. The eight years of monitoring has provided a good supply of data that can provide us with information on how the water quality of the lake is changing in the short term. Although eight years is a significant amount of time in our lives, in the life of a lake it is a very short time period. While it is interesting to compare the changes in water quality over these last eight years, it is especially beneficial to have this information for comparisons that will be made 5, 10, 20 and even 50 years from now.

The main water quality impairments that are tested for are Total Phosphorus (responsible for algae growth), Total Suspended Solids (amount of sediment in water), and Secchi Disk Depth (water clarity). We can learn a great deal about the health of the lake by looking at these parameters.

The results of the lake monitoring in 2006 shows that total phosphorus and total suspended

solids levels have been reduced by 52% and 55% respectively since 1998. This significant reduction in contaminants, however, has not led to a significant increase in water clarity as evidenced by Secchi Disk depths only increasing by 25% during that time. The reason for the limited increase in clarity is due to the fact that even though phosphorus levels have decreased, the remaining levels are still high enough to promote algae production. High clarity in 2003 was an anomaly due to high zooplankton levels.

The Ventura Marsh monitoring results have shown a strong correlation to carp populations. A natural winter fish kill occurred in the winter of 2003/2004 which nearly eliminated carp in the marsh. The 2004 data shows a dramatic decrease in contaminants over 2003 when carp populations were high. Carp populations began to rebound in 2005 and became quite high again in 2006. The water monitoring data shows the increase in carp led to a marked decrease in water quality.

The Clear Lake and Ventura Marsh monitoring help justify the restoration work being proposed for both water bodies. The Clear Lake data indicates that watershed improvements alone will not be enough to generate the water clarity levels we are striving for. The dredging of the west end of the lake will be necessary to further reduce phosphorus and suspended solids levels to achieve significant water clarity improvements.

Likewise, the Ventura Marsh data shows that it is necessary to be able to induce winter fish kills in the marsh as needed rather than relying on infrequent environmental conditions that allow them to occur naturally. More information on this project is explained in the article below.

Monitoring Graphs on Page 2



Dry Fall Could Lead to Carp Kill in Marsh

Due to some mild winters and above normal water levels the past couple years, the carp population has been able to thrive in Ventura Marsh. This year, however, environmental conditions should be very conducive to reducing carp populations in the marsh. The low rainfall amounts received this year has left the marsh about 15" below its normal water levels. An additional 9" in water level reduction will be achieved after the marsh is drained into the lake when the duck hunting season is over.

This will leave very shallow water conditions in the marsh. Low water levels coupled with a high population of carp needing oxygen should be enough to create a winter fish kill when the



marsh freezes over and the carp use up the small oxygen supply. Winter fish kills occur due to ice cover prohibiting the water to air contact that is needed to add

oxygen to the water column. The very visible impact the carp have had on water quality in the marsh over the past couple years is a good reminder of the need to implement water level control measures so we don't have to rely on an infrequent drought cycle to reduce carp populations. The Army Corps of Engineers and IDNR plans to install a permanent pump house, new outlet structure, and fish barrier beginning in the fall of 2007. These activities will allow for better control of carp populations.

Water Monitoring Graphs

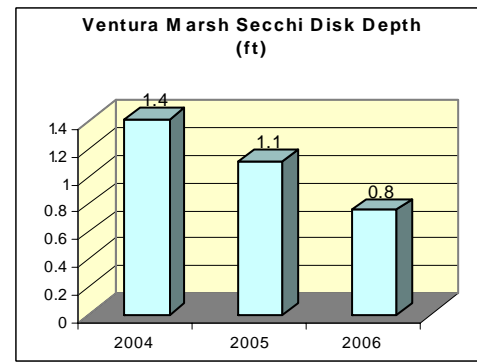
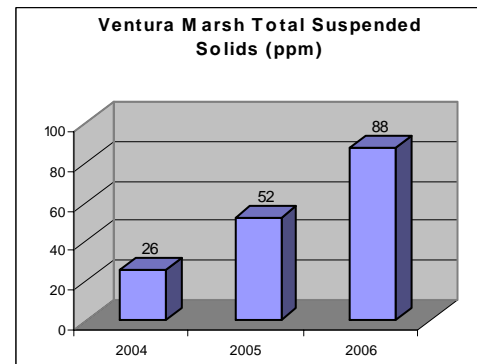
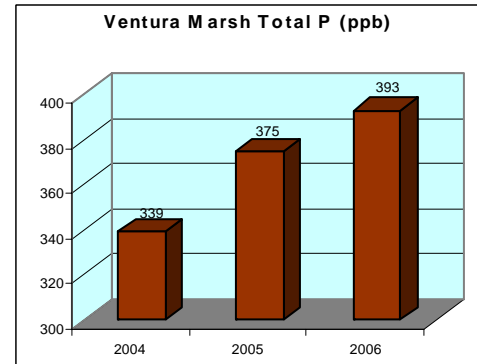
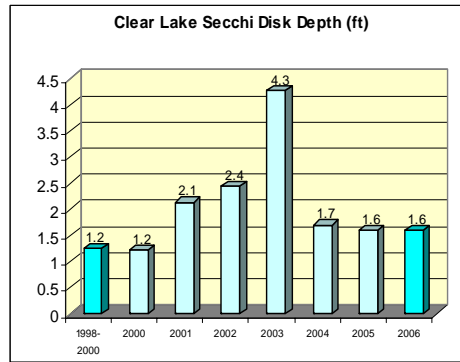
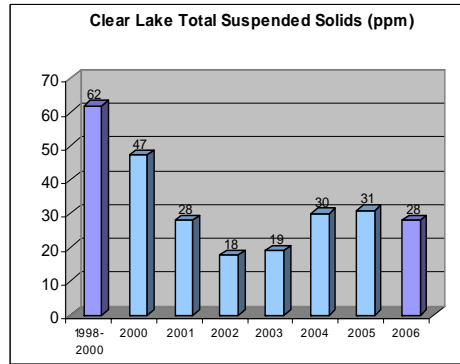
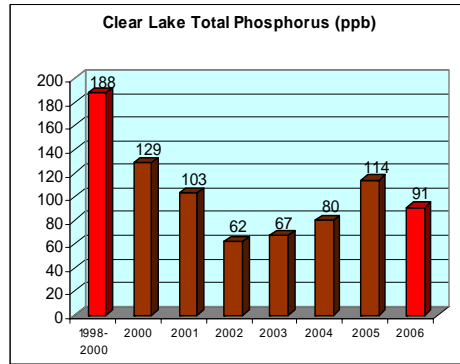
FEATURE PROJECTS

CARP COMMERCIAL FISHING CONDUCTED ON CLEAR LAKE

This fall a private commercial fishing company fished for common carp at Clear Lake. A single seine haul (a seine is a large net used to capture fish) resulted in nearly 60,000 lbs of carp collected. About 2/3 of the carp caught were large adults greater than 8 lbs. in size. The carp will be sold to fish markets primarily in Chicago and on the East Coast. After Ventura Marsh restoration activities take place to reduce carp recruitment from the marsh, efforts will be made in Clear Lake to target and remove larger quantities of carp to reduce population levels in the lake.



LAKE



More water quality information available at : www.clearproject.net

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