



Lake Association News

A newsletter for the Association for the Preservation of Clear Lake

SPRING 2010

VENTURA MARSH CONSTRUCTION TO BEGIN

Anderson Excavating Co. from Omaha, NE was awarded the Ventura Marsh construction project. The company will begin work on the marsh this spring. One of the first activities to be completed will be installing a new outlet pipe for the future pump station. The outlet pipe needs to be placed under S. Main St. in Ventura. The City of Ventura will be replacing that road this fall, so it is important to get the outlet pipe installed before the roadwork takes place. Other activities to be completed this year will be the removal of the existing outlet structure and fish trap area. It will be replaced with a new controlled spillway with rough fish control features. The controlled spillway will serve as the emergency overflow once the pump station is operational. The pump station will not be installed until next spring as the soil where it will be constructed needs to settle for several months prior to construction. Other future project features include dredging a flow channel from the pump station to the deepest part of the marsh, constructing a sediment control basin, and performing about 10,000 lineal feet of vegetation cutting in the upper portion of the marsh. The completion date for the project, is November 8th, 2011.



Ventura Marsh

Clear Lake Restoration Accomplishments Review

Several major lake restoration practices have now been, or will soon be completed at Clear Lake. The CLEAR Project is in the process of comparing the original restoration goals that ISU recommended in 2001 to what has now been accomplished almost ten years later. This information will help determine what future activities may be needed for continued water quality improvement. An initial review of this comparison is described below.

In agricultural areas, one of the main recommendations was to convert 10% of the highest phosphorus exporting agricultural land to prairie and wetland. This equated to about 600 acres of land. Today, over 750 acres of land has been restored to prairie and wetland in the watershed. An additional 250 acres is scheduled for future conversion to prairie. Although not all of the restoration has taken place in the highest priority areas, it still has provided a significant reduction in phosphorus export to Clear Lake. Over half of the acres restored have been enrolled in a permanent conservation easement, ensuring

they will provide long term water quality benefits.

In developed areas, the installation of storm drain "filters" was one of the major recommendations. After the final four installations are completed this spring,, a total of 37 out of 68 storm water outlets will have been treated. These improvements were targeted for outlets that drain 5 acres or more, which provide the most contaminants to Clear Lake. Most of the treatments have consisted of installing grit collection chambers, which significantly reduce sediment and phosphorus loading. Numerous sanitary system upgrades have also taken place as more than half of the sewer lines in the watershed have been inspected and repaired.

As has been well chronicled, the main in-lake restoration activity was dredging the west end of Clear Lake to its original depths. ISU calculated this would require removing 2.3 million cubic yards of silt. After the dredging project was completed in 2009, a total of 2.4 million cubic yards of material was removed and maximum depth of the "little lake" was increased

from 6 feet to 30 feet. ISU estimated that dredging the lake would result in the immobilization of 60% of all phosphorus from water entering the dredged area of the lake.

The main recommendation ISU had for the restoration of Ventura Marsh was to install a pumping station to control water levels in the marsh for carp management and vegetation re-growth. The US Army Corps of Engineers has now awarded a contract for construction of the pump station and other marsh improvements to begin in 2010 (see article on left).

The above highlighted activities are expected to have a significant impact on water quality. The review being completed will help determine if other activities can provide further benefits.



Rain garden installed at 8th Ave S.

Male Osprey Returns to Clear Lake

Portions of this article provided by Lowell Washburn



Source: Lowell Washburn

An encouraging sign that the Clear Lake osprey reintroduction project is beginning to pay off took place this spring when a male osprey was seen constructing a nest about a mile south of Ventura. An effort to reintroduce osprey to the Clear Lake area began in 2004. Over the next 5 years, a total of 25 young birds were brought to Clear Lake where they were cared for by DNR staff and local volunteers until they could learn to fly and catch fish on their own. It is common for an osprey to choose a nesting site near where they fledged from when they reach sexual maturity. However, a successful reintroduction takes much patience and a little bit of luck as the mortality rate among young birds is high. "Ospreys are an amazing bird," notes DNR osprey restoration coordinator, Pat Schlarbaum. "As young release birds, they must learn to fly, then they must learn to fish, and within just weeks after that, they must embark on a grueling 2,000-mile-long migration that will take them to South America where they remain until returning north as two-year-olds. "It's an extremely dangerous flight and its amazing they make it at all. The fact that one of those birds has survived round trip migrations and has staked a claim at Clear Lake is really a cause for celebration." According to Clear Lake Mayor and osprey volunteer Nelson Crabb, "To see a surviving bird come back as a potentially nesting adult is an incredible thrill. It's really is a dream come true, not just for those of us who were privileged to work with the young (release) birds, but for everyone in the north central Iowa area. This really dovetails with the all the water quality work that is occurring at the lake, and to think the osprey appeared on Earth Week makes the occasion even more momentous." About a month has now gone by since the osprey began building the nest and it appears the male did not find a mate this year. However, DNR wildlife biologist Ron Andrews reiterated that "Having the male return was still a very good sign and gives a lot of hope for next year and into the future."

2010 BEACH MONITORING

Three swimming beaches at Clear Lake will again be monitored in 2010. Weekly samples will be collected by the Iowa DNR and analyzed at the University Hygienic Laboratory in Iowa City. Clear Lake State Park Beach has been reclassified as a *transitional* beach this year due to improvements seen in bacteria levels over the previous two years. If bacteria levels are able to remain low at the beach this year, it will be reclassified as a *non-vulnerable* beach for 2011. McIntosh Woods State Park beach is already classified as a non-vulnerable beach. As in years past, beaches classified as vulnerable or transitional will post swimming advisory signs when their most recent sample exceeds 235 *E. coli* per 100 ml one-time standard. Non-vulnerable beaches will only post swimming advisories when the geometric mean of 5 samples in a 30 day period exceeds 126 *E. coli* per 100 ml water. Clear Lake City Beach will also continue to be monitored.



LAKE NEWS

Clear Lake Ice Cover Historical Data

On April 1st, 2010, Clear Lake was officially determined to be ice free. The annual declaration of the lake being ice free is a welcomed occurrence for most north Iowans. The Clear Lake Water Treatment Plant has been keeping record of ice-in and ice-out dates since the 1930's. Looking back over the past 75 years of data, some interesting trends and variations in the data can be noted.

For example, the average number of days the lake is iced over each year is 126. In 2010, the lake was iced over for 113 days, about two weeks less than average. There has been a large disparity in the number of days the lake is iced over when comparing the shortest to the longest period. The shortest amount of time the lake has been iced over was 80 days, which took place in the winter of 1999/2000. The longest iced over period was 150 days, which took place in the winter of 1940/1941, and was nearly twice as long as the shortest period. The earliest date the lake has iced over was on Nov. 4th, 1991 while the latest date was Dec.

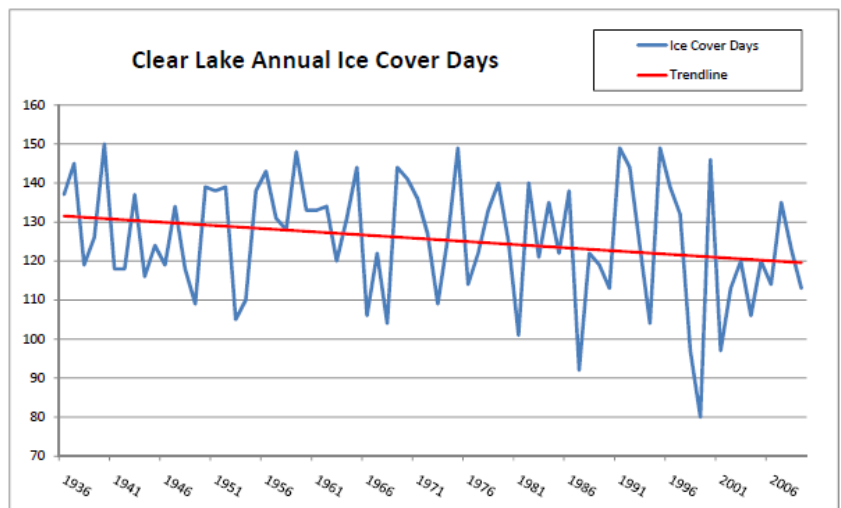
24th, 2001, nearly a two month difference. The earliest and latest dates the lake has been declared ice free are Mar. 5th, 1932 and Apr. 28th, 1952, respectively.

When the annual number of iced over days are graphed (see below), it is obvious that there is a lot of variation in the length of ice cover from year to year. When a trend line is added to the data, it is also evident that despite the variation, there is a slight downward trend in the length of ice cover over the past 75 years. The trend indicates an average of about 10 less days of annual ice cover today than there were 75 years ago.

The Clear Lake ice cover

trend is similar to that being seen in lakes in other northern states as well. Lake Mendota near Madison, WI, has data recorded since the 1850's and has shown a decline in ice cover from about 4 months to 3 months of ice cover over that time period.

The length of ice cover is dependent not only on temperature but also on snowfall amounts. Larger amounts of snowfall lead to less ice formation due to the insulation of the snow. Therefore, ice cover data can not be directly correlated with changes in temperature, but does provide a good measuring stick for trends in the length and severity of our northern winters.



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