



Lake Association News

A newsletter for the Association for the Preservation of Clear Lake

WINTER 2009 - 2010

NEW FISHING JETTY PROVIDES MANY BENEFITS

A new fishing jetty was recently constructed a few hundred feet north of the existing jetty on the west end of Clear Lake. The jetty will provide increased fishing opportunities in an area that is already a favorite spot of many locals. However, the jetty was designed for more than just recreational benefits as it will also aid in capturing and removing carp from Clear Lake. When the pumping station as part of the Ventura Marsh restoration efforts is installed, the new primary outlet for the marsh will be located between the two jetties. In early spring, flowing water acts as a magnet to carp and they will congregate in the area between the jetties. This will allow commercial fishermen to place a net between the two jetties, trapping the fish. The commercial fishermen can then seine the area between the jetties and remove the carp. Annual removal of the carp will help keep their population in check and reduce the negative impact they have on water quality.



Source: CL Mirror Reporter

New fishing jetty constructed in the fall of 2009.

2009 Survey Shows Clear Lake Fish Diversity Increase

Each year since 1972, IDNR Fisheries staff at Clear Lake has conducted a survey of the "young of the year" fish in the lake. The long-term data collection allows researchers to see trends in the spawning success of various fish species in Clear Lake. In general, degraded water quality conditions support fewer fish species, while good water quality leads to a more diverse fish community. Poor water clarity and lack of aquatic vegetation often leads to a water body dominated by less desirable fish like common carp and black bullhead. Some sport fish, such as walleye, are able to tolerate more turbid environments, but have limited natural reproduction and rely on annual stockings, according to Scott Grummer, Fisheries Biologist with the IDNR.

As water quality improves, more macrophytes (aquatic vegetation) become established, providing essential habitat for a number of fish species. Macrophytes not only provide cover

for young fish, but are an important food source, as a number of aquatic insects consumed by fingerlings are found in macrophyte beds. According to Grummer, higher densities and more diversity in young fish populations should result in higher survival rates of predator fish such as walleye and muskellunge.

As the lake restoration efforts take hold, it is anticipated that water clarity will continue to improve and will also lead to an increase in aquatic vegetation. The expected impact on the fish community of Clear Lake is an increase in the density of species like bluegill, yellow perch, and largemouth bass that need good water clarity and aquatic vegetation to thrive.

Although it is only one year's worth of data, the 2009 sampling shows this shift in the fish population may be starting to take place. The number of young bluegills collected was the highest since 1975. Likewise, yellow perch numbers were the

highest since 1995. It was also encouraging to see that black bullheads and common carp, fish that do well in poor water quality, had only one young of the year collected, combined. Based on a population estimate completed this fall, adult common carp numbers remain at a relatively low level compared to what they were previously. The current carp population estimate is around 80-90 lbs/acre, down from over 300 lbs/acre about five years ago.

If the recent young of the year fish survey is any indication of what is to come, Clear Lake anglers can expect to have a few more species to target in the not so distant future.



Young of the year Yellow Bass collected during Clear Lake survey.

Ventura Marsh Project Moving Forward



The long awaited Ventura Marsh Aquatic Ecosystem Restoration Project is getting closer to becoming a reality. The principal goal of the project is to restore Ventura Marsh by achieving water level control of the marsh. Periodic draw downs of the marsh will allow for better control of carp populations, allowing aquatic vegetation to take hold. The current lack of aquatic vegetation diversity and coverage in the marsh greatly reduces its function.

Restoration of the marsh is also essential in the Clear Lake improvement process, as the marsh contributes up to 40% of the annual sediment loading the lake receives.

The specific goals of the project include: demolishing the existing stoplog structure and grate; constructing a new controlled spillway; constructing a marsh pump station and outlet to Clear Lake on the northeastern shore of the marsh; dredging a water flow channel from the deepest section of the marsh to the pump station; dredging the forebay immediately adjacent to the pump station; constructing two grade control structures; excavating one sediment detention basin; constructing approximately 10,000 lineal feet of vegetation cutting in the upper marsh; and installing rough fish control features at the pump station and the new controlled spillway.

The U.S. Army Corps of Engineers is the primary project sponsor and the Iowa DNR is the local cost-share sponsor. The DNR will be responsible for 35 percent of the project costs, which is estimated to be about \$600,000. The project is anticipated to be bid by this spring, with construction beginning by the fall of 2010. A strong local push continues to be exerted on the Corps of Engineers to complete the project as currently scheduled in 2010.

2009 Water Monitoring Data Shows Continued Improvement

MORE STORM WATER PROJECTS COMPLETED

The process of retrofitting storm water outlets in the Clear Lake watershed to reduce pollutant loading to the lake is nearing completion. In 2000, a study identified storm water outlets that carried the most contaminants to Clear Lake. A total of 30 outlet sites were designated as high priority for improvement. The first two storm water “filter boxes” were installed in 2001. Over the last 9 years, more than 30 more improvements have been made. The most recent include three more grit collection chambers installed this fall. These systems remove about 80% of the sediment and 60% of the phosphorus from the storm water. The final four priority site improvements will be made next spring, bringing the total to 37 sites completed. Over \$2 million was invested by state and local partners.



Grit collection chamber being installed at Clear Lake.

LAKE NEWS

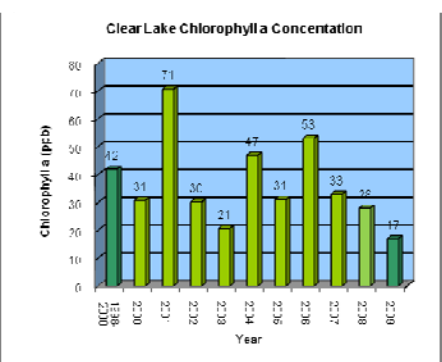
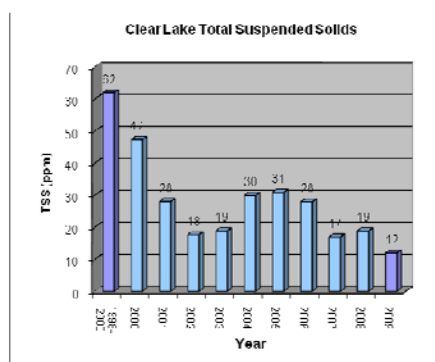
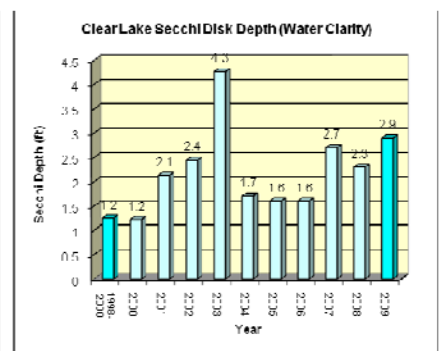
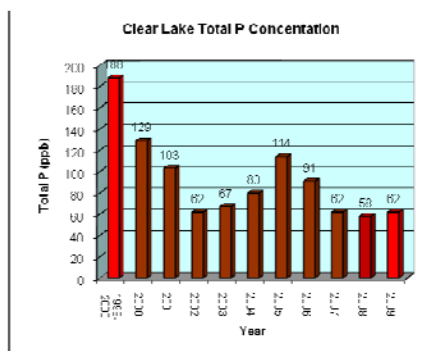
The CLEAR Project and the Iowa DNR have been monitoring Clear Lake’s water quality annually since 1998. In 2009, samples were again collected from three sites on Clear Lake and one site on Ventura Marsh twice each month from April to October. Data from each of the three lake monitoring sites are combined and averaged to show trends in overall water quality. The lake monitoring data continued to show low levels of total phosphorus, the nutrient most responsible for algal production. The levels have now stayed at about 60 ppb for the past three years. At this level, algae production will still take place, but large nuisance blooms will be less frequent. Total suspended solids, which measures the amount of sediment in the water, averaged 12 ppm in 2009. This was the lowest level recorded over the past 10 years. Chlorophyll a, which measures the amount of algae in the water, also had the lowest recorded level over the past 10 years at 17 ppb. All three of these water quality

parameters that measure impairments are about 1/3 of what they were when intensive monitoring began in 1998.

As the levels of contaminants declined, it was not surprising to see the levels of water clarity, measured using a Secchi Disk, increase to 2.9 feet in 2009. It is hoped that the lake will maintain water clarity levels in the 3-4 foot range when all restoration activities have achieved their expected results.

Of special interest going for-

ward will be the monitoring results from the west end of Clear Lake now that dredging is completed. Historically, this “Little Lake” sample site has shown the poorest water quality of the three sample locations on Clear Lake. However, in 2009, the “Little Lake” samples showed to have as good or better water quality than the other two sample sites on several of the monitoring dates. As the results of the dredging project take hold, that trend is expected to continue.



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