lets keep Clear Lake clear

Association News

A newsletter for the Association for the Preservation of Clear Lake

Winter, 2005

Storm Water Site Evaluations

The City of Clear Lake, Cerro Gordo County, and the Iowa Department of Natural Resources have combined efforts to perform evaluations on six sites where storm water improvements need to be made. The sites will be evaluated by Bonestroo, Rosene, Anderlik & Associates to determine which best management practices (BMPs) will be most effective in reducing contaminants in the storm water runoff. After the evaluations are finished, design specifications will be completed and then the BMPs will be installed.

The six sites under considerations are located at: Clear Lake State Park, Bayside Ave, Black Locust in Ventura Heights, DNR Fish and Wildlife Office, All Vets, and Ventura Grade. The site evaluations are scheduled to be completed by June.

Water Quality Monitoring Results for 2004

Thanks to a grant from the EPA, 2004 marked the first year of intensive water quality monitoring at Clear Lake since the ISU study in 1998-2000. The continued monitoring of Clear Lake is important so it can determined if lake restoration efforts are heading in the right direction.

The 2004 data left researchers with guarded optimism that lake water quality has improved over the past few years. The data clearly shows a decline in contaminants most detrimental to Clear Lake, phosphorus and total suspended solids. However, the reason for the decline is less certain. Environmental conditions such as amount and timing of rainfall, zooplankton population, and rough fish population can all have major impacts on water quality.

Although the amount of restoration activities currently implemented in the watershed is likely not enough to dramatically improve lake water quality, it is certainly playing a part. These restoration activities include: wetland restorations, nutrient and pesticide management programs, shoreline stabilizations, and storm water filtration systems. Grass roots efforts such as using no phosphorus fertilizers, cleaning up pet waste, and proper disposal of yard waste also plays a key role in improving our lake.

Even more encouraging than seeing lake water quality improving is that the water quality of the tributaries feeding Clear Lake also showed lower levels of contaminants than what was seen during the ISU study. Reducing contaminants in the waters entering Clear Lake is the only way of ensuring long-term lake water quality improvements. *The box below explains the data in more detail.

Total Phosphorus:
A steady decline in Total P levels is seen since 1998. A slight increase the past two years has been seen, possibly due to large amounts of spring rain.

Total Suspended Solids:
TSS levels are often tied closely to phosphorus levels as phosphorus is often bound to soil particles. The fact that Total P data closely resembles TSS data over the past several years reinforces that idea.

Secchi Disk Depth:
Secchi disk depth (water clarity) was highest in 2003. This is likely due to the high zooplankton populations that year which fed on the algae. This greatly reduced algae populations and therefore increased water clarity

Chlorophyll *a*:
Chlorophyll a is a measure of phytoplankton (algae) in the water. These levels have varied much over the past several years. The low levels in 2003 can be attributed to the high zooplankton populations feeding on the algae.

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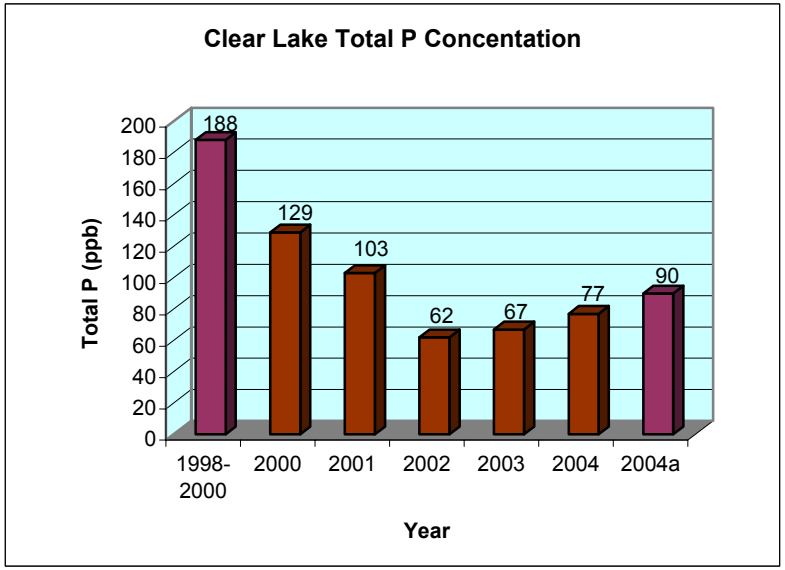
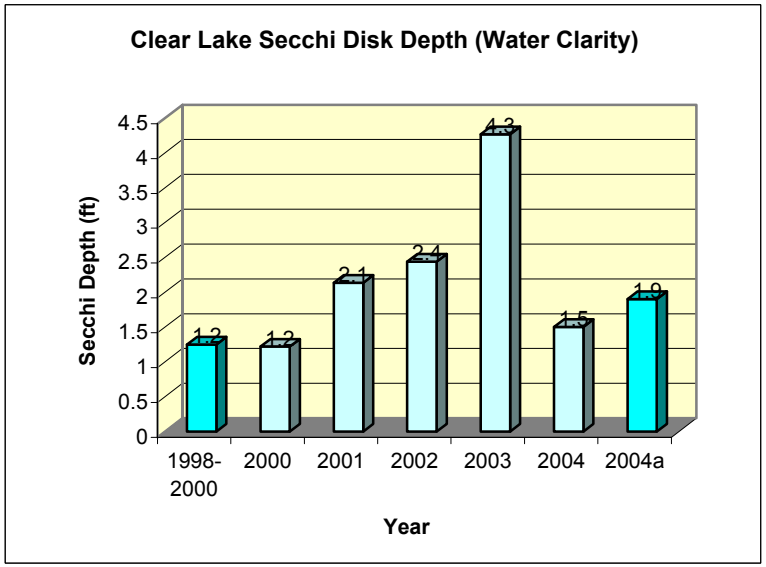
Clear Lake Water Quality Data 1998-2004

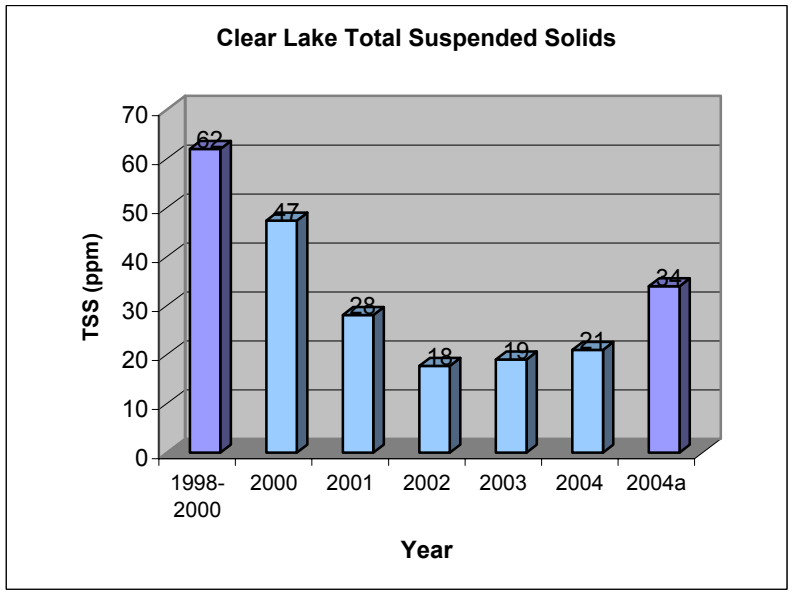
Sources: 1998-2000 Data - Clear Lake Diagnostic and Feasibility Study (ISU/IDNR) - samples collected twice per month
2000-2004 Data - Iowa Lakes Survey (ISU/IDNR) - three samples collected each year
2004a Data - CLEAR Project monitoring - samples collected twice per month



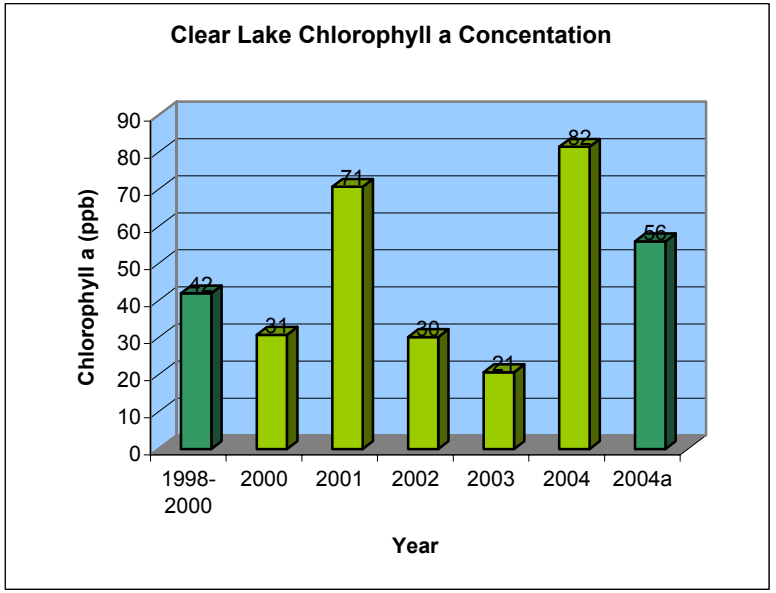
Total P is the amount of phosphorus in the water. Phosphorus is the limiting nutrient for algal growth in fresh water systems.



Secchi disk depth is a means of measuring water clarity.



TSS is an indicator of the amount of sediment particles in water.



Chlorophyll a is an indicator for the amount of algae in the water.

Lake Dredging Projects Jeopardized by Lack of State Funding

Investigations by Iowa State University have shown that two natural lakes in north central Iowa, Clear Lake and Crystal Lake, are badly in need of dredging. However, the future of those projects is in doubt due to a lack of State funds being appropriated for lake dredging. The Lake Restoration Fund, also known as the Lake Dredging Fund, has been funded at only $1 million in both 2004 and 2005. The recently released Governor's budget again proposes a stagnant $1 million in the fund for 2006.

The Crystal Lake project is dependent on State funding for dredging activities to be completed. An estimated project cost to deepen Crystal Lake from 8 feet to 13 feet is about $3 million. Although this project is now first in line on the DNR's priority list for dredging, there are simply not enough funds to proceed with it.

For the Clear Lake project, the DNR is considering a partnership with the Corps of Engineers to help offset some of the restoration costs. In this scenario, dredging would likely begin in 2009 and the Corps would pay for 65% of restoration costs while the State would be responsible for 35%. However, preliminary dredging cost estimates from the Corps of Engineers are so much higher than typical State-funded dredging projects that it may be less expensive for the State to perform the dredging on their own. In either scenario, it could cost the State up to $8 million to perform the dredging work recommended by Iowa State University.

Clearly, the two projects in our area would take many years to complete at the current funding level. And make no mistake, there are many other lakes in the State in need of dredging and many other communities trying to secure dredging funds from the State. For example, the community of Storm Lake is in the midst of a multi-year dredging project that will likely require State funding for the next 10 years.

The Governor and many State legislators mention improving water quality as a priority item along with education and health care reform. However, the funding lake restoration has received greatly pales in comparison to other funds designed to improve the economy and quality of life for Iowan's. For example, in 2006 the Iowa Values Fund is proposed to be funded at $74.5 million compared to the only $1 million for the "valued" Lake Restoration Fund. The Governor has expressed an ambitious goal of removing all waters in the State from the impaired waters list by 2010. The 2004 impaired waters list contains 211 water bodies, up from 205 in 2002. His commitment is expressed by the proposal to spend $50 million over the next 5 years in water quality improvements as part of the $800 million economic development plan. So why is only $1 million proposed for the Lake Restoration Fund? The recent House version of the economic development plan is even worse for water quality as it does not include any appropriation for water clean-up.

Iowa State University is currently involved in an Iowa Lakes Valuation Project which is being headed by renowned limnologist Dr. John Downing. The investigation is showing clear evidence that Iowa lakes are the most valuable "land" the State has to offer. Lake restoration projects, such as Lake Ahquabi in Warren County, have shown that the monies expended on lake restoration can be recouped in as little as 3 years due to increased number of visitors to the area where water quality was improved. The value of Clear Lake to the local economy is estimated at anywhere between $40 and $60 million dollars annually. If the water quality of Clear Lake declines, the revenue generated from the lake will certainly decline as well.

If north central Iowans truly feel that the restoration of Clear Lake, Crystal Lake, and other lakes in our State is a priority to them, their voices need to be heard by our Governor and State legislators. The time is right to express your opinion during this crucial period when the 2006 budget is being determined. Demand that the politicians appropriate adequate funds for lake restoration.

North Central Iowa Legislators:

Senator Thurman Gaskill - (515) 281-3371
Senator Amanda Ragan - (515) 281-3371
Representative Linda Upmeyer - (515) 281-3221
Representative Bill Schickel - (515) 281-3221
Representative Henry Rayhons - (515) 281-3221
Email Address Format: firstname.lastname@legis.state.ia.us

LAKE RESTORATION ACTIVITIES OF NOTE:

50 Acres Enrolled in CRP/FWP:
Fifty acres of land located in the Clear Lake watershed in Hancock County has recently been enrolled into the Conservation Reserve Program. The agricultural land will be restored to wetlands in low lying areas and prairie vegetation in upland areas. At least 100 more acres in the watershed are expected to be enrolled in the program this summer.

Rain Garden Planned for Clear Lake:
The CLEAR Project is working with the NRCS to design a porous pavement and rain garden structure at a public approach in the Clear Lake watershed. The project has grant funding totaling $40,000 to install rain gardens in the watershed. A rain garden utilizes native vegetation with deep root systems to filter runoff as it infiltrates through the garden.

Shoreline Stabilization Nears Completion at Redeemer Lutheran Church:
The shoreline stabilization project is nearly complete at Redeemer Lutheran Church. Over 400 feet of shoreline will be lined with native fieldstone riprap to provide protection from shoreline erosion. The shoreline has seen heavy erosion at times over the past several years. Funds from the Hanson Foundation are being utilized to complete this project.

Storm Water Filtration System Installation at City Beach Delayed until spring:
The two storm water filtration systems at City Beach planned for last fall will now be installed this spring. The city did not receive an acceptable bid for the project in the fall. The project will be re-bid this spring and construction will begin shortly thereafter. Site evaluations are underway at 6 more locations in the watershed (see box on front page).