

Putting the
Clear
Back in Clear Lake

by Konni Cawiezell, Assistant Director of Governmental Affairs

“The last five years have truly been ‘watershed’ years. The lake is our lifeblood and I am proud of the willingness of our city council and residents to take a leadership role in protecting and preserving our lake — not only for ourselves, but for future generations of Iowans.”

- Mayor Kirk Kraft, Clear Lake

Since the first sail was hoisted in the 1850s, Clear Lake

has been a popular destination for Iowans. Today, the cities of Clear Lake and Ventura expect over one million residents and tourists to visit the lake. Spend a sunny afternoon at one of the many beaches on Iowa's third largest natural lake and you can see the vital role it plays in the quality of life of northern Iowa. Studies estimate Clear Lake brings \$60 million in tourism dollars to the region.

While area residents and visitors enjoy boating, fishing and swimming on the lake, visitors also flock to events at the nationally known Surf Ballroom and other land-based attractions. Unfortunately, Clear Lake is endangered. Over the past 30 years, the water quality of the lake has plummeted as phosphorus levels have soared. The communities surrounding the lake now face the task of saving one of their most important natural resources.

Historically, the Clear Lake community has been very conscious of the lake's vulnerabilities. In the 1930s, citizens formed the Association for the Preservation of Clear Lake to promote the well-being of the natural resource. One of their first challenges was providing a public sewer system for the area. Recent efforts have

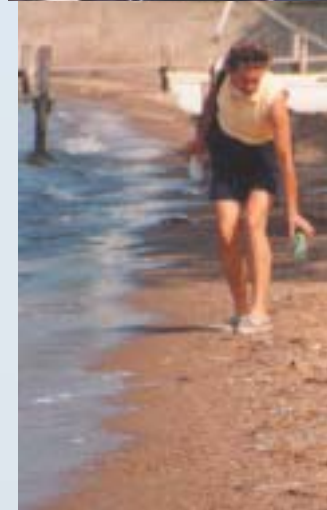


resulted in the Clear Lake Sanitary District and the \$22 million state-of-the-art facility which keeps area sewage water out of the lake.

Today, the Association is 200 members strong and continues to be a dedicated advocate for Clear Lake. The citizen group focuses on building partnerships to enhance lake restoration efforts. "We all have a stake in this - The Iowa Department of Natural Resources (IDNR) owns the lake, but we live here," Tom Ebeling, the Association president, said. Seeing a need for numbers to help their case, the Association was instrumental in initiating an Iowa State University study on the condition of Clear Lake. That study, partially funded by the city of Clear Lake, put the cost of restoring Clear Lake between \$15 and \$20 million. With a price tag that high, it became clear there was no quick fix for Clear Lake's water quality problems.

Undaunted, the community kept moving toward the goal. In 1995, restoration efforts began when the Soil and Water Conserva-

Pictures, clockwise from top: 1) Clear Lake marked the storm drains to increase citizen awareness. 2) "Filter boxes" are hidden below common manhole covers. 3) More pet sanitation stations await, pending the success of two donated to the city. 4) An Association member walks the shore of City Beach removing litter. 5) Boaters have easy access to downtown Clear Lake and City Park's renovated band shell from public docks along Lakeshore Drive. Photos by Heather Roberts



tion Districts (SWCD) in Hancock and Cerro Gordo counties established the Clear Lake Enhancement and Restoration (CLEAR) Project. The CLEAR Project now spearheads efforts to save Clear Lake and receives the majority of its funding from the Environmental Protection Agency (EPA) and IDNR.

The EPA and IDNR play a huge role in rescuing Clear Lake. It is a job,

waiting for the IDNR and the U.S. Army Corps of Engineers to save their lake. The local governments in the area have already kicked off programs designed to reduce the water contaminants that cause phosphorus levels to skyrocket.

Phosphorus is a nutrient that exists naturally in water bodies, but it increases substantially when additional nutrient loads are deposited into the lake. These additional nutrients are considered to be from two types of sources. The first, point sources, include the city of Clear Lake's storm water drains, which were constructed to empty directly into the lake. The second type is a non-point source — primarily agricultural land runoff —

which is extremely difficult to measure and control. Regardless of the source, additional nutrient concentrations lead to loss of water clarity due to an abundance of algae blooms. Not only does this make beach water less appealing to swimmers; it is also harmful to the fish, wildlife and humans living within the ecosystem.

One aspect of the CLEAR Project focuses on actual users of the lake to improve water quality. Boaters must abide by a speed limit in shallow areas

near the shoreline to avoid “stirring up” sediment containing phosphorus, which feeds the algae. They must also be careful fuel is not released into the water.

To address the tough non-point sources, the CLEAR Project has programs focused on farms that may be miles away from the lake, but can be major contributors to runoff containing phosphorus. The CLEAR Project offers farmers financial incentives, including crop consultations to minimize fertilizer use while maximizing crop yield. There are additional incentives for farmers to use conservation tillage methods that result in less soil erosion into the lake. The Clear Project also works with the Natural Resource Conservation Service (NRCS) to provide financial incentives for wetland restoration.

Extensive efforts are taken to encourage lake users to reduce litter; keep trash out of the water and add to the beautification of the lake community. The Association helped Clear Lake Parks and Recreation solve a somewhat smaller contamination issue. The city department installed two pet



quite literally; large enough for the Army. IDNR recently entered into an agreement with the U.S. Army Corps of Engineers to begin the process of restoring Ventura Marsh on the west end of Clear Lake. Although currently in the design phase, restoration of the marsh will result in dramatic improvements in the water quality of Clear Lake.

While the residents are eager to see the designs for the Ventura Marsh become reality, they aren't simply

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sanitation stations donated by the Association. The stations, located in City Park and along the seawall near the popular Lady of the Lake paddleboat, offer free pet waste disposal bags.

The idea is to give pet owners an easy way to dispose of pet waste properly. As the CLEAR Project's coordinator, David Knoll, stated in the Clear Lake city newsletter, "Dog waste not only contributes to phosphorus levels in Clear Lake, but also poses a health risk...the bacteria and other pathogens found in the waste can be easily washed into the lake when it rains. There is also a health risk for anyone who comes in contact with the waste on dry ground as well." If they are deemed successful, the Association plans to invest in additional stations around the lake.

Another effort focuses on contaminants entering from storm drains, a point source for phosphorus. Residential lawn care practices can make a substantial impact. When it rains, any non-absorbed phosphorus remaining in the grass from lawn fertilizer runs off into the streets and, eventually, into the lake. Residents have made conscious

decisions to decrease the amount of fertilizer used on lawns or to use a zero-phosphorus fertilizer.

Residents are asked to dispose of leaves and grass clippings through the available yard waste collection. This keeps leaves and grass clippings from entering storm drains. Citizens now volunteer to "Adopt-a-Storm Drain" where they routinely remove debris from street gutters and drain inlets. Storm drains in Clear Lake have even been labeled with a message of "Caution Drains to Lake" to remind citizens to keep litter and other contaminants out of streets and sidewalks.

Recently, the City of Clear Lake and Cerro Gordo County installed storm water infiltration trenches, also known as "filter boxes." A total of seven filter boxes were installed on a trial basis to improve the quality of urban storm water runoff by removing harmful contaminants. A study last summer showed the systems removed 97 percent of bacteria and 50 to 70 percent of sediments and phosphorus from the urban storm water runoff.

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Federal level participation:
 U.S. EPA - Contributes roughly \$5 million annually to control non-point source water quality problems in Iowa
 NRCS - Provides technical assistance for landowners interested in restoring wetlands and other conservation practices

Farm Service Agency (FSA) - Offers conservation programs like the Conservation Reserve Program (CRP)
 US Army Corps of Engineers - Recently entered into an agreement to assist Iowa DNR with restoring Ventura Marsh. The Corps anticipates paying 65 percent of the marsh project.

State:
 IDNR - Distributed \$350,000 in water quality improvement funds to the CLEAR Project for 2004. Heavily involved in all aspects of the project.
 Iowa Dept. of Agriculture & Land Stewardship (IDALS) - Funds the CLEAR Project personnel expenses and other project activities.

Local:
 Cerro Gordo County - Installed five storm water infiltration trenches and advises the CLEAR Project.
 Hancock County - Supervisors advise the CLEAR Project.
 Hancock SWCD - Five elected officials make decisions on soil and water conservation in the county. Sponsors the CLEAR Project.
 Cerro Gordo SWCD - Five elected officials make decisions on soil and water conservation in the county. Co-sponsors the CLEAR Project.
 City of Clear Lake - Plans as many as 20 filter boxes on the shoreline within city limits.
 City of Ventura - Mayor is active in preservation activities.
 Clear Lake Sanitary District - Provides sanitation system to region, focused on keeping waste from lake water.
 Clear Lake Independent Telephone Company - Provides free office space for the CLEAR Project
 Association For the Preservation of Clear Lake - Local citizens group coordinates citizen volunteer efforts.

though the efforts to improve Clear Lake are working. The beaches on Clear Lake have remained open and officials posted only one advisory for a single Clear Lake beach in the summer of 2003.

Due to the success of these systems, the city of Clear Lake established a storm water utility fee to fund more of the filter boxes. This \$1.50 per month charge on single family residences and \$3 dollar fee on other properties will result in approximately \$72,000 per year. The city plans to purchase 15 to 20 storm infiltration boxes to remove sediment, nutrients and bacteria from storm drain lines that empty directly into the lake. Each box costs \$50,000, a worthy investment in a community that receives millions of dollars from tourism.

Putting the clear back in Clear Lake won't be easy. It is a tremendous project that requires cooperation from all levels of government as well as individuals using the lake. Clear Lake's water quality will improve. The community won't have it any other way. Actual ownership aside, it is their lake. ▲

Water quality issues felt across Iowa

Clear Lake's water quality problems are not unique. Other waterbodies throughout Iowa are included in the impaired waters list compiled by the Iowa Department of Natural Resources. In 2002, the department's impaired waters list contained 188 waterbodies throughout the state that did not meet state water quality standards.

Iowa's water quality standards are based on the use of the water. Waters considered as General Use are protected for livestock and wildlife watering, aquatic life, recreation without surface water contact, crop irrigation, and industrial, domestic, agricultural, and other incidental water uses. Waters classified as Designated Use are afforded higher standards and additional protection. Designated Use waters fall into several classes, as follows:

- Classes A1, A2, and A3 include surface waters where body contact for recreation, such as swimming, boating, fishing, wading, and water skiing, occurs.
- Class B identifies waters that are provided special protection for expected growth and reproduction of aquatic life.
- Class C identifies waters that will serve as the raw source for public drinking water supplies.
- Classes HQ and HQR include waters deserving special protection due to exceptional, unique, or unusual water quality characteristics.

To address impaired waters, Governor Vilsack recently announced a Water Summit to be held November 24 and 25. The summit will bring together diverse groups to develop solutions to eliminate impaired waters throughout Iowa.

