

By Philip Timothy
For The Town Talk

LENA – Can innovative, cutting-edge water treatment technology help restore CLECO Lake to its past glory?

It just may if a three-month pilot program proves successful.

Working with Ecolotron, a water treatment company located in Dickinson, Texas, Cleco officials began the program on Sept. 9 using a process known as E-Floc, which hopefully will lead to the reduction of the turbidity (cloudiness) and improve the clarity of the water.

The high turbidity is due to charged clay particles which are too fine to fall out of suspension. The E-Floc process changes the charge of these clay particles which then allows them to settle to the bottom of the lake.

Placed on the warm side of the lake, two large machines draw in the cloudy water filled with the charged particles, treat them and then discharges the water back into the lake where the particles' charge has been changed. The treated particles sink to the bottom.

Since the mid-2000's turbidity has been an issue at CLECO Lake.

"Several factors have combined to cause this problem," said Jacob Hudson, the plant's Environmental Operations Specialist. "The lack of submerged vegetation and forestry practice (clear cutting) in a 34 square mile watershed that feeds the lake.

"Based upon extensive and favorable laboratory testing of the lake's water after it has been subjected to this technology, I believe it will succeed," Hudson continued. "While this is the largest application of this technology ever attempted, we are really pleased based on our testing and studies so far."

Still, the task is a daunting one as CLECO Lake, also known as Lake Rodemacher, is a significant body of water consisting of 3,070 surface acres. It is two miles wide and four miles long and contains more than 10 billion gallons of water.

"While it is not on the scale we are attempting here, the oil industry has been using this process to treat their waste water for some time," Hudson said. "We are hoping we will have the same results here. Just from what I've seen in the lab it is working."

Plant Manager Greg Coco said, "Cleco is pursuing this experimental project voluntarily. We want to be good stewards and we would especially like to see the lake return to its place as one of the top fisheries in the state. We believe this process, which is the most cost effective, can help to bring about that recovery."

District III Inland Fisheries Biologist Manager Ricky Moses said, "I have to compliment Cleco for their efforts. They are doing this strictly on a sport fishing stand point. The water they use to cool their plant is not affected by the turbidity.

"So, on their own, they have decided to use this cutting edge technology to help clean up the lake," Moses said. "I hope they succeed because it will bring CLECO Lake back but the department is also very interested in the results. Baton Rouge sees the possibilities of possibly using the application to help other lakes elsewhere around the state."

Completed in 1974, the lake is primarily used to provide cooling water for the power plant. However, Cleco decided to also open it up to public fishing and the LDWF has not only assisted with the management of the lake but has also invested a considerable amount of resources and funds to help improve the fishing.

"At one time, CLECO Lake was named as one of six quality lakes in the state," Moses said. To make the lake productive again for fishing means it must have submerged vegetation and that means clear water. "Long-term turbidity can be a real killer," Moses said. "When the sunlight is unable to penetrate the surface of the lake, it means there is little to no growth of aquatic vegetation. Without the vegetation,

the fry have no adequate cover or food. The fish population, itself, suffers and it begins to go into decline.

“In one of our most recent surveys, we found the fish were not looking very healthy,” Moses said. “And there was very little submerged aquatic vegetation. All those factors work against having a healthy, productive lake.”

In the late 90s, hydrilla appeared and started getting jammed in the power plant generators. By 1992, almost 50 percent of the lake was infested with hydrilla causing significant problems at the water intake structure.

Over the next three years (1993-1995), a total of 32,250 grass-eating carp were stocked into the lake and the lake kind of followed the same timeline as Caney Lake. With the grass, the bass fishing exploded on the lake.

When the carp were introduced, the grass went away and the fishing got tougher but not impossible. The problem became compounded when the land around the lake was clear cut which brought a fine clay from the watershed and into the lake.

“The particles had no vegetation in which to stick or cling to,” said Moses. “Because the water is constantly being circulated around the lake, the water is constantly stirred up, which creates a murky, cloudy effect.”

While Coco believes CLECO Lake could eventually heal itself, he realizes it would take much too long and the fishery would suffer even more. He hopes the process will help to speed along the lake and the fishery’s recovery.

“Eventually, Mother Nature will heal this lake,” he said. “With all the rain we’ve gotten this summer, we’ve noticed some difference. Still, if we can use this program to give Mother Nature a helping hand, I am all for it.”

And if this application is successful?

“We wouldn’t mind sharing it with others,” Coco said. “I am sure the Wildlife and Fisheries could find a use for it.”

For more information about the process or the company, go to www.ecolotron.com.