

Partnerships Results in a “Clear Lake”

Rich Walters Sr. remembers a time when he could stand on his dock, throw a stone, and watch it sink four or five feet to the bottom of the lake. Rich and his son would canoe to the west end of the lake where abundant vegetation provided superb cover and forage for waterfowl. Largemouth bass, bluegill and yellow perch populations flourished and fishermen from near and far were attracted to Clear Lake (Brown County).

In the summer of 1999, historic high waters threatened the Clear Lake Club cabins on the east side of the lake. With a small amount of dirtwork, Clear Lake was connected to the Calamus River in hopes that the lake elevation would drop.

Ironically, the summer of 2000 was below normal precipitation and the lake fell far below the point of running out. Unfortunately, the ubiquitous carp did not miss the opportunity to find Clear Lake and quickly colonized the water body. Carp are well known as a thriving reproducer, highly tolerant of almost any condition and one of the most damaging aquatic invasive species to Sandhills lakes and wetlands. Common carp were brought into the United States during the mid - 1800's after immigrants could scarcely believe that there were no carp in this country. In Europe and Asia, carp were selectively bred and cultivated as a food source.

After carp were introduced they quickly reproduced and rapidly infiltrated watersheds across the nation. Carp are bottom feeders, they “root” along the floor of a body of water, uprooting vegetation. This activity causes the muddiness of the water, which in turn reduces the ability of plants to receive sunlight, and aquatic plants soon disappear.

For instance, the water clarity (secchi depth) reading of clear lake prior to the invasion of carp was 8 feet compared to less than 12 inches in 2012. Ultimately, the health of a lake or wetland becomes diminished to the extent that game fish cannot survive and waterfowl look for other places to frequent. Carp infested lakes can be recognized by their lack of vegetation throughout the lake, absence of waterfowl or shorebirds, and a general “dull” or “chocolate milk” look.

A unique partnership came about in 2010 when Andrew Glidden (NGPC fisheries biologist) recognized an opportunity to re-claim Clear Lake. A partnership consisting of the NGPC, New Clear Lake Club, U.S. Fish and Wildlife Service (FWS), North Central R, C&D, and the Sandhills Task Force (STF) formed over a period of months. An agreement between the partners included the manpower and funding necessary to treat 1000 acre feet of water.

At the time, Clear Lake was completely full due to consistent rains throughout the entire summer. As wet conditions persisted into 2011, it appeared that the lake would remain too high for the project to take place. Even as drought conditions persisted in 2012, it was uncertain if the lake would drop to the predetermined level.

The next challenge arose as it became apparent that there was a very limited supply of rotenone available in the U.S. Rotenone is a naturally occurring substance derived from the roots of tropical plants in the bean and pea family that are found primarily in Malaysia, South America, and East Africa. In fact, rotenone has been used for centuries by indigenous people to catch fish for eating purposes. Rotenone is commonly used in this country as a “fish toxicant,” to remove undesirable fish species such as carp from a lake, stream, or an entire watershed.

Finally, in late November, the order of rotenone arrived and weather conditions remained dry. On December 4, NGPC fisheries employees, New Clear Lake Club members, boats, equipment, and 900 gallons of rotenone arrived at Clear Lake. Applying rotenone consists of pumping a mixture of lake water and chemical evenly into the water column, followed by mixing the solution with the prop-wash of an outboard motor. Everybody was eager to see what game

fish had been able to co-exist in the lake with the carp. Within hours, it became evident that relatively few game fish had been able to withstand the degraded environment. By late afternoon, the shoreline of the lake was littered with mid-sized carp that had succumbed to the effects of rotenone.

It is expected that in a short amount of time the water quality will return to pre-carp conditions. Previous renovations revealed that Sandhills lakes go from “turbid water state” to a “clear water state” in a short amount of time. The success of this considerable effort is dependent on the actions of many people.

The most common way carp invade a lake or wetland is by overland flooding, which occurs frequently on Sandhills wet- meadows. Fortunately, Clear Lake is not physically connected to any other water bodies, which eliminates the concern of natural migration. A very preventable way to keep carp from entering a waterbody is to avoid the use of live minnows for bait. These regulations are already in place and will continue to be enforced by NGPC. Also, the deliberate movement of fish from one water body to another is against the law and often results in carp infestations.

Ultimately, an increase in community awareness regarding the impacts of carp on the Sandhills ecosystem will play an important role. The FWS, STF, and NGPC along with a host of other conservation groups are interested in expanding the endeavor to remove carp from targeted Sandhills watersheds. An integrated approach including, carp exclusion devices, netting, trapping, and rotenone will play an important role. The vision is “clear,” carp-free watersheds, and clean water for game fish, wildlife, and generations of people.

Article written by Kyle Graham (USFWS Wildlife Biologist) Contact at kyle_graham@fws.gov



