Association for the Preservation of Clear Lake

Lake Association News

A newsletter for the Association for the Preservation of Clear Lake

SPRING 2007

APCL MEMBERSHIP DRIVE IN FULL SWING

The APCL is mounting a first ever membership drive and we need your help. Please invite your neighbors, family, friends and co-workers to join us and become members. There is strength in numbers as we work to clean up the lake and continue our efforts to preserve its beauty. A new APCL website will be available soon at www.apcliowa.org.

Let's be the generation that leaves a legacy of a cleaner lake!!

Past APCL Projects:

Assisted in the creation of the Sanitary District, which initially completed sanitary sewer around the lake in the 1950's.

Assisted in securing lands to protect the watershed, including McIntosh Woods State Park, Ventura Marsh Wildlife Area, and McIntosh Wildlife Area.

Current APCL Projects:

Providing financial and administrative support for the lake dredging project.

Providing funding support for the CLEAR Project.

Future APCL Projects:

Continuing to educate the public about water quality.

Maintaining strong relationships with local, state and federal government agencies.

Protecting land within the watershed.

Carp Telemetry Project - What Did We Learn?

The results of a two year study by Iowa DNR and Iowa State researchers using radio telemetry to characterize the seasonal distribution and habitat use of common carp are in. The purpose of this research was to better understand the seasonal habitats of these destructive fish and to search for times and locations when they are most vulnerable to removal through netting. The field portion of the study began in October 2004 when researchers collected 30 adult and 30 subadult carp from Clear Lake and surgically implanted the fish with radio transmitters that would allow a tracking crew to pinpoint each fish's exact location. Subadult fish weighed less than a pound and were implanted with a transmitter about the size of a small watch battery. Adult fish ranged in weight from 3 - 26 pounds and were implanted with a transmitter about the size of AA battery.

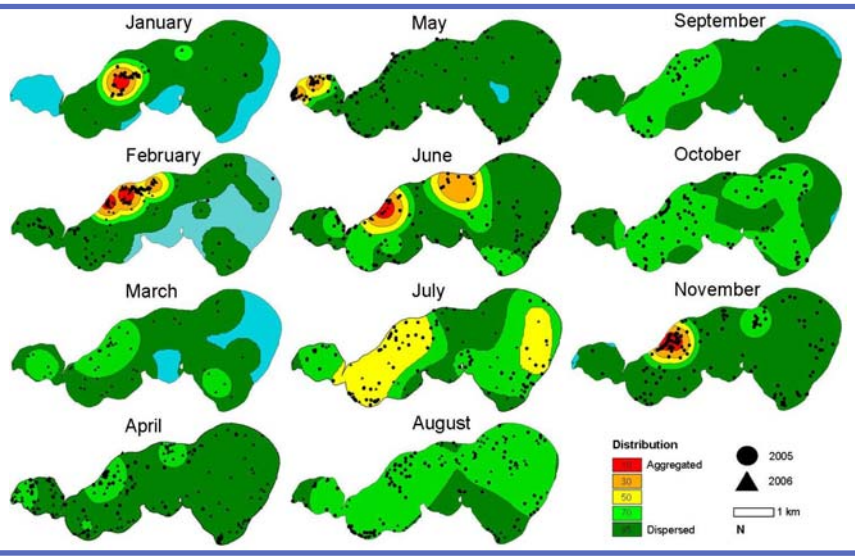
Researchers monitored carp movements year-round for two years. During the summer, tracking was done by boat and in winter, tracking was done over the ice using an all terrain vehicle or hovercraft. Over the two year tracking period, a total of 1,951 locations were collected from carp implanted with radio transmitters.

Subadult carp were found primarily in the western half of the lake and were particularly abundant in the Little Lake. Subadult carp were predominately located in water less than 5 ft. deep and demonstrated a strong attraction to the beds of cattails and rushes found in the lake's western half. It is thought subadult carp use these beds of vegetation as nursery areas where they can feed and grow until they reach a size where predation from other fish is no longer a threat.

During the summer, adult carp were found scattered around the lake in water that was generally less than 6 ft. deep. The fall distribution of adult carp was similar to that of summer until water temperatures fell below 40°F. As temperatures approached freezing, tagged fish migrated from all regions of the lake to concentrate with other carp in deeper waters near the western aerator, where they would spend the remainder of the winter. Adult carp scattered in early spring, but concentrated again in the shallow vegetated areas of the Little Lake during spring spawning in May and June. After spawning, many carp funneled out of the Little Lake to scatter in the main lake for the rest of the summer.

Though carp were found scattered throughout much of the year, the brief windows of time when carp concentrate during winter and spawning present great opportunities for removing large numbers of carp with the least amount of effort. Winter aggregations were estimated to include a larger percentage of carp population than in spring and might be best exploited in open water just before ice formation during late fall.

Adult Carp Monthly Distribution



Article and graphics provided by:
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ANNUAL PICNIC INFORMATION

NEW DNR DIRECTOR LEOPOLD TO SPEAK AT PICNIC

The APCL Annual Picnic will be held on August 17th at the Clear Lake State Park lodge. New IDNR Director Rich Leopold will be speaking at the event and sharing his vision for water quality improvements at Clear Lake and for the State of Iowa. Director Leopold has held a variety of biologist, naturalist, and administrative positions within the U.S. Forest Service, the National Park Service, and the Minnesota and Iowa Department of Natural Resources. From 1999-2002, Leopold served as the coordinator for IOWATER, Iowa's statewide volunteer water-quality monitoring program. Most recently he served as director of the Iowa Environmental Council.

Picture Source:

http://www.iowadnr.com/news/07jan/leopold.html

LAKE NEWS

How Do Wetlands Improve Water Quality?

The CLEAR Project and APCL have long been promoting wetland restoration as a way of improving water quality. Although most people accept the general fact that wetlands are "good for the environment," few realize what actually happens in a wetland to make that statement true. Warning - If you hated science class, then you may not want to read any further.

Field runoff that enters a wetland is often high in a soluble form of nitrogen called nitrates (NO3). Bacteria found in wetlands process the nitrates (NO3) into nitrogen gas (N2), which is released into the atmosphere. This process is known as denitrification and occurs in areas of the wetland where oxygen is not present, which is typically in or near the sediments. Denitrification can remove significant amounts of nitrogen from the wetland. ISU research has shown up to 90% of nitrates are removed in a properly functioning wetland.

The filtering of phosphorus is a little more difficult and less efficient task for wetlands. This is due to the fact that unlike nitrogen, the phosphorus cycle does not contain a gaseous stage, so the phosphorus never has a chance to actually leave the system. However, much of the phosphorus can become immobilized and essentially trapped in the wetland, keeping it from moving into our lakes and streams. This is performed primarily through a process known simply as plant uptake. Aquatic vegetation utilizes phosphorus in the water for growth, storing it in the plant material and holding it there. Another method of trapping phosphorus is the process known as adsorption. This occurs when positively charged phosphate ions (PO4) come in contact with the negatively charged soil particles in the marsh sediments and they become bonded together due to their opposite charges. This immobilizes the phosphorus in the sediment and keeps it out of the water column.

These same processes are also effective in removing harmful chemicals like pesticides from runoff. Additionally, wetlands slow down the flow of water and allow sediment to drop out.

Although wetlands typically perform the function of cleansing our waters quite well, they can also begin exporting large amounts of pollutants when their bottom sediments are disturbed and the contaminants they have collected are again mixed into the water column. It is this reason why keeping bottom dwelling fish like carp out of Ventura Marsh is so important.

The next time you look at a wetland, you now will hopefully have a little more appreciation for the complex ecosystem that it is and how it works to improve the water quality of lakes and rivers throughout the state.

Clear Lake Dredging Project Update:

An additional $2.5 million was allocated by the State legislature during the FY'07 session. A total of $6.5 million in State funds have now been allocated, leaving only $2.5 million needed to complete their funding commitment. It is anticipated those funds will be awarded in the 2008 session. This summer, construction of the containment site will take place and the IDNR hopes to also award the dredging contract.

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