

## CARP MANAGEMENT

A frequent problem that plagues many of the ponds in northeastern Illinois is the presence of common carp (*Cyprinus carpio*). Carp lay between 100,000 – 500,000 eggs, grow rapidly, tolerate water with extremely low oxygen levels and high temperatures. Adults normally range in size from 1-10 lbs., with some as large as 60 lbs. Average carp lifespan is 7-10 years, but they may live up to 15 years. Carp have acute senses of smell, taste and hearing that allow them to function in low light conditions that are intolerable to sight-feeding fish such as sunfish, bass and perch. As carp feed they root around in the pond sediment. This causes resuspension of sediment and nutrients and disrupts aquatic plants. Additionally, spawning, which occurs near shore in shallow water, occurs from late April until June also contributes to turbidity problems. The overall appearance of the pond suffers from an increase in unsightly algal blooms, having a detrimental effect on property values. There are techniques to remove carp from ponds. However, rarely does any method completely eradicate carp from a pond.

**Rotenone** - The only reliable piscicide (fish poison) on the market at this time, but it kills all fish that it comes into contact with, carp as well as desirable fish. Rotenone is biodegradable, does not bioaccumulate, has low mammalian and avian toxicity. Other aquatic organisms, such as mollusks, frogs, insects and zooplankton can be negatively impacted. Restocking of desirable fish species may occur about 30-50 days after treatment. The fishery can be restocked and quality sport fishing normally returns within 2-3 years. Some fish can escape removal, as well as carp eggs being 50 times more resistant than adult fish, and rotenone retreatment needs to occur about every 10 years. There is also a **Rotenone laced baiting** system that can selectively remove carp. However, several factors still need to be worked out in order for it to be a viable alternative to the whole pond treatment. To use rotenone in a body of water over 6 acres a *Permit to Remove Undesirable Fish* must be obtained from the Illinois Department of Natural Resources (IDNR), Natural Heritage Division, Endangered and Threatened Species Program.

**Electro-Fishing** - An electro-shocking unit takes power from a generator and transfers it to the water through an electrical probe. The electrical current running through the water causes the muscles of the fish to contract, stunning the fish for a short time. While stunned the undesirable fish can be removed from the water. The carp are less susceptible to this method and it is not cost effective, except in smaller shallow ponds.

**Carp Tournament** - A carp tournament could be a fun way of challenging resident anglers and removing the carp from the pond.

If these methods are used, the pond may be immediately stocked with more desirable fish species such as large mouth bass or northern pike. Rotenone application, electroshocking and fishing are only effective on adult populations of carp. Whatever the method of carp eradication the stocking of larger predators into the pond to feed on the young carp as they hatch could be helpful. These methods could be quite useful in small ponds that do not have inlets from other waterbodies that may contain carp. To ensure the best results with any carp removal methods precautions can be taken to assure a higher longevity. These precautions include banning live bait fishing (minnows bought from bait stores can contain carp) and continually removing adult carp from the pond.

By removing carp, aquatic plants will be allowed to grow and help further stabilize the sediment. Fewer nutrients will be resuspended, greatly reducing the likelihood of nuisance algae blooms and associated dissolved oxygen problems. Additionally, reestablishment of aquatic plants has other positive effects on pond health and water quality, increases in fish habitat and is a food source for wildlife such as waterfowl.