

Management information

Cyprinus carpio

Physical:

Mechanical methods include barriers, commercial fishing, water level manipulation, and traps. Barriers are the most commonly used mechanical method because of their one-time expense and potential effectiveness over several years, whereas most other mechanical methods are considered labour intensive with limited effectiveness from 1 to 5 years (Wydoski and Wiley 1999 in Baldry, no date). When carp are absent from a wetland or lake, barriers such as metal grates can be placed over culverts and streams to prevent future entry of adult carp. Another method is harvesting, which is achieved through seining or trapping (Baldry, no date).

Experiments were carried out by Parkos and Wahl (2000), using plastic mesh substrate covers, which reduced the loss of submerged vegetation and associated macro-invertebrates, but did not however, diminish the effects of carp on turbidity and phosphorus. "The most ecologically sound method to reduce common carp populations in North America is to improve water clarity. Sight-feeding game fish such as *Esox lucius* (northern pike) or *Stizostedion vitreum* (walleye) can more easily capture carp minnows in clear water" (Baldry, No date).

Chemical:

"Chemical methods are preferred because of ease of application, short time period required to achieve results, and lower cost when compared to other controls. The majority of projects focus on complete removal as partial treatment has varying success. One of the most frequently used methods for controlling common carp is Rotenone, a natural chemical extracted from stems and roots of several tropical plants and is non-selective when applied at dose rates necessary to eliminate carp" (Fajt and Grizzle 1993 in Baldry, no date).

Biological:

Biological methods consist of using predatory fish, pathogens and biomanipulation. With biomanipulation, various chemical and mechanical methods are used to adjust the interrelationships among plants, animals, and their environment to achieve a balanced food-web structure. In general, the ratio of piscivorous to planktivorous fish species is the key to stabilizing an aquatic system.