

## Radio-telemetry Investigation of Common Carp in Clear Lake, Iowa

**Principal Investigator:** Clay L. Pierce  
**Student Investigator:** Christopher R. Penne (M.S.)  
**Duration:** June 2004 to August 2007  
**Funding Source(s):** Iowa Department of Natural Resources

### Goals and Objectives:

- The purpose of this study is to document seasonal locations, movements and tendency to aggregate of common carp in Clear Lake, Iowa. This information is necessary to evaluate potential future carp reduction strategies, such as targeted netting or poisoning.
  - Specific objectives include:
    - Capture, radio-tag and track sub-adult and adult carp over a period of two years.
    - Describe and quantify the seasonal locations, movements and tendency to aggregate of sub-adult and adult carp.
    - Interpret the results in light of the desire to reduce carp biomass through potential future reduction strategies, such as targeted netting or poisoning.
- 

### Introduction:

Reduction of carp in Clear Lake and other systems with declining water quality and high carp biomass is a key objective in improving their overall environmental health. Unfortunately, the track record of previous efforts to permanently reduce carp biomass is poor. A recent effort to reduce carp biomass in Ventura Marsh, connected to Clear Lake, illustrated the potential water quality benefits of reducing carp, but unfortunately also demonstrated how short-lived the benefits can be. Two lessons can be drawn from past carp reduction experiences: (1) efforts to reduce carp must be viewed as an on-going program rather than a one-time quick fix, and (2) detailed knowledge of the seasonal locations, movements and aggregation in the system of interest is required to accurately guide what will undoubtedly be an expensive, long-term investment in carp control activities. This proposal addresses the second point – obtaining the information necessary to efficiently guide limited resources for effective carp reduction..

### Progress:

Investegators began tracking in November 2004 and completed tracking in August 2006, totalling 20 months of year-round tracking and collecting over 2,100 study fish relocations. These data are being used to construct maps detailing the seasonal distribution, habitat preferences, and aggregation areas of common carp in Clear Lake.

### Future Plans:

We are currently analyzing data and plan to have a final report ready by May 2007. Results of this study will be interpreted in light of the desire to reduce carp biomass through targeted removal. Our results will guide future carp control activities by the DNR as part of a comprehensive water quality improvement plan.