



IOWA DEPARTMENT OF NATURAL RESOURCES

Sport Fish Restoration Research Findings

Management of Sport Fisheries In Urban Lakes



Project Duration: 2006-2011

Locations: Banner Lakes, Blue Heron Lake, Copper Creek, DMACC Pond,
Easter Lake, Gray's Lake, Lake Manawa, and Lake Petocka

Study Number: 7030



Large Impoundments

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Management of Sport Fisheries In Urban Lakes

In Iowa, urban fisheries present a unique opportunity to anglers, park users and fisheries biologists alike. These waters and surrounding parks can attract large numbers of diverse users. Creating unique angling opportunities and a pleasant outdoor experience can attract new anglers and users to the area. However, urban fisheries present unique management challenges; areas of concern include water quality, fish flesh contamination, and maintenance of quality fishing despite very high fishing pressure. This study included a number of important mini-projects that helped the Iowa DNR better understand and manage urban fisheries.

Who Fishes Here?

Goal: To identify important user groups in 8 urban fisheries.

Lessons Learned

Easter Lake was dominated by shore anglers (52% of users) but a harvest rate near zero, showing a subpar fishery despite high interest. Users of urban lakes were very diverse in ethnic, gender, and age. Great potential is seen in youth, who represented 30% of the users surveyed.



Factors Affecting Water Quality

Goal: To measure water quality at Easter Lake and the impact of airport runoff on Yeader Creek.

Lessons Learned

Easter Lake is eutrophic, but still swimmable, although it is plagued by regular algal blooms that may affect that condition from year to year.

Yeader Creek was in poor to sub-optimal condition for fish and benthic macroinvertebrates, and was dominated by tolerant fish species indicative of poor water quality.

Safety of Fish Consumption

Goal: To determine the safety of eating Channel Catfish and Largemouth Bass harvested from urban lakes

Lessons Learned

Tested fish were overall very safe to eat, with chlordane and PCB levels barely reaching detection limits. Mercury was also very low for Channel Catfish across the board.

Only one advisory was recommended for North and South Banner lakes: Limit eating Largemouth Bass to one meal per week due to mercury levels.

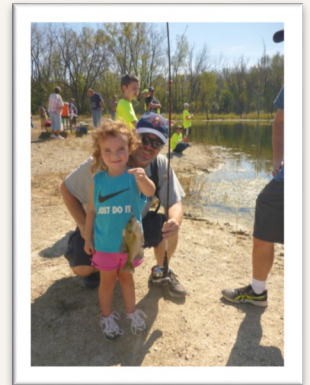
Effectiveness of Fish Stocking in Urban Fisheries

Goal: To determine the effectiveness and popularity of stocking Rainbow Trout, Hybrid Striped Bass, and Walleye in several urban lakes.

Lessons Learned

Stocking Rainbow Trout was very popular and brought new anglers into fishing, with 15% of anglers in the creel reporting they bought a license just to fish Banner Lake South.

Walleyes grew slightly above average, while Hybrid Striped Bass grew slightly below average. Modeling showed no need for length limit regulation for these species in Lake Manawa. Angler education is needed to help grow these fisheries' popularity so they can reach their potential.



Monitoring Channel Catfish Fisheries

Goal: To compare the effectiveness of creel surveys, tournament surveys, and tandem hoop netting to monitor the Channel Catfish population at Lake Manawa; and to evaluate Channel Catfish size structure at several lakes

Lessons Learned

Anglers tend to catch larger fish, underrepresenting smaller, younger fish. Netting provides a more accurate picture of the size structure of Channel Catfish. Channel Catfish at South Banner Lake were larger and in better condition than at Easter Lake, but slowed their growth at age 3. Black Bullhead did not do well in South Banner Lake, and stocking should be stopped.