Urban Fisheries Project

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Collaborators: Iowa Department of Natural Resources
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Goals and Objectives:

An Urban Fisheries Project was created in 2012 as a collaborative effort between Iowa State University Cooperative Fish and Wildlife Unit and the Iowa Department of Natural Resources. Study and development of fishing resources in central Iowa's urban communities were the main goals of this two-year project.

Progress:

To accomplish those goals, potential sites were identified and their functionality as an urban fishery was evaluated. A methodology for site selection was developed; hereafter referred to as a site selection matrix. This matrix was used to efficiently incorporate many sampling metrics used in fisheries management into a scoring rubric to rank and prioritize sites. This allowed for quick evaluation of a large number of sites to help determine those best focused on for future improvements. The matrix attempts to capture variation in the key fisheries statistics of water quality, vegetation, lake physical features, and fish assemblage to determine which have the most impact on a site's viability as an urban fishing resource. While angling resource requirements vary among different user groups, the goal of using the matrix is to identify sites with greatest overall potential as a sustainable fishery for the widest range of users. Using historical data from the 2009-2012 stage of the Urban Fisheries Project, baseline matrix scores were created for priority, secondary, and eliminated sites. Through principle component analysis, the impactful factors in appropriate site selection were discovered and each category in the site selection matrix was weighted accordingly. With that guideline in place, new locations sampled in 2012-2014 were assigned matrix scores and ranked on the scale built, in part, by historical data. Each site was then ranked and delineated into priority groups: primary, secondary, and eliminated.

Conclusions and Recommendations:

These guidelines, rankings, and priority groups are useful for fisheries managers who have a large number of sites to work with at any one time. Choosing sites that rank highly within the context of the matrix for fisheries and amenities improvements allows managers to maximize the potential return on investment for available funding and efforts. For this project, preliminary management recommendations were provided for five "priority" sites including Georgetown and Sawgrass ponds, Ankeny; Marina Cove Pond, Polk City; City Pond, West Des Moines; and Prairie Heritage Pond, Altoona. While the matrix is structured to efficiently capture metrics used in fisheries management, parameters not well captured by a simple statistic (i.e., social and community concerns) must also be considered. A willing or motivated community initiative and partnership can potentially result in projects being more viable than indicated by status assigned using the matrix. Acknowledging the potential social complexity is important; however, the matrix is still helpful in determining a starting point when looking for a potential urban fishery. The five selected sites ranked well using the matrix, but final selection was adjusted slightly to account for the more intangible nature of the community-driven initiatives or jurisdiction at the final sites.