

WATER QUALITY EVALUATION OF PIKE'S POND WITH MANAGEMENT PLANNING AND POND IMPROVEMENT OPTIONS

Contact: **Pike's Pond Association**
 2715 Lake Chevy Chase Drive
 Kalamazoo, MI 49008

Project Costs: **\$8,000**

Project Completion: **2002**

The Pike's Pond Association (PPA) authorized KIESER & ASSOCIATES (K&A) to initiate a study of Pike's Pond. The pond has a surface area of 2.25 acres based on the current investigation. Of this surface area, nearly 50% is covered by emergent aquatic plants. Another two acres of wooded wetlands form the perimeter of the pond to its western and southern edges. Lands draining to the pond area comprised of primarily residential development with some commercial areas noted to the south. Pike's Pond receives urban storm water runoff from three separate City of Kalamazoo storm sewer outfalls. An evaluation was undertaken by K&A to assess current water quality conditions within Pike's Pond and to determine impacts to the pond from the contributing drainage areas. In addition, the PPA was interested in controlling in-pond nuisance weed growth, improving wildlife habitat and pond aesthetics.

The study consisted of the following components:

- Lake Association members questionnaire
- Pond drainage area determination
- Runoff volume modeling
- Bathymetric mapping of pond bottom
- Aquatic vegetation survey in pond
- Spring in-pond sampling
- Spring stormwater and in-pond sampling
- Sediment sampling in pond
- Pollutant load modeling
- Management plan recommendations as they relate to water quality and vegetation control
- Cost estimates for recommended best management practices (BMPs)

Upon evaluation, Pike's Pond was found to be hypereutrophic with only one vegetative species present, the yellow pond lily. Heavy pollutant loads were found to come from city storm sewers and high levels of nutrients and sediment were evident from monitoring and limited modeling. The PPA expressed a desire for increased visible water surface and this was taken into account in the suggestion of a variety of management options presented to the association. K&A recommended the following management prioritization:

1. Aquatic vegetation control to immediately improve pond aesthetics
2. Riparian area management improvement beginning with native species plantings in low/no traffic and eroding areas
3. Immediately initiate discussions for storm water controls between riparians and the City of Kalamazoo followed by pre-engineering and costing, identification of funding sources, final engineering and implementation
4. Develop and implement wildlife improvement strategies following other improvements.