

Smith Lake



Background, Long Term Issues & Trends

- The Washington Park Lakes are sustained with [re-use water](#). This conserves limited water resources, and allows Denver to maintain our lakes sustainably. The cost of using re-use water is that it comes with high [nutrient](#) loads which contribute to productive algae and vegetative growth.
- Since switching to re-use water in 2004, the lake has had elevated pH (see figure below). This is driven primarily by [phytoplankton](#) (small floating algae) growth which has been enhanced with the nutrient rich re-use water.

Developing Issues

Shoreline Renovations - The 2011 Washington Park master plan includes plans for shoreline improvements around Smith Lake. The plan includes a mix of three approaches: (1) a naturalized slope edge; (2) a promenade with a wall separating a shoreline trail from the water's edge; and (3) a cement step down shoreline allowing for easy lake access.

Avian Botulism - The number of waterfowl impacted by [avian botulism](#) in Washington Park Lakes has been increasing over the past few years. However, there were few suspected cases of waterfowl deaths attributable to it in 2014.

Fish, Wildlife, & Habitat

Fish: The fish community was enhanced with summer (2014) stockings of trout. Water quality is marginally adequate for trout but the lake sustains them and provides good fishing opportunities for the public.

Wildlife: The exposed and high recreational use of the lake perimeter limits opportunities for wildlife other than waterfowl. Wildlife use of the lake and its surroundings is limited primarily to aquatic species and waterfowl.

Habitat: The in-lake and perimeter habitat is limited. A set of 4 floating islands was installed in 2005, which did attract use by turtles and nesting waterfowl. The islands unfortunately required more maintenance than resources allowed for. They were removed from the lake by 2012. Implementation of the 2011 master plan will hopefully improve existing Smith Lake habitat conditions.

Recommendations

- Implement portions of the master plan that improve water quality and habitat, such as naturalized perimeter and the promenade, which are opportunities to incorporate wetlands. Minimize the hardscape-steps which would attract Canada geese and their waste.
- Continue with goose hazing efforts (i.e., DPR's remote control "[goosinator](#) ") to decrease impacts of their waste.
- Incorporate pre-treatment of City Ditch nutrients and parking lot storm runoff with wetlands or other options as opportunities arise.
- Smith Lake is a good candidate to test the ultra-sonic approach for algae control, which could help decrease pH.
- Maintain a balanced fish community to help with biological control of phytoplankton levels through control of [zooplankton](#) feeding fish (i.e., bluegill) via predation by [piscivorous](#) (fish-eating) fish (i.e., bass).
- Future monitoring should include zooplankton assessment to provide a better understanding of the aquatic community.

Location: 701 S Franklin St

Surface Area: 18 acres

Max Depth: ~ 10 ft

Primary Source Water:

Re-use water via City Ditch

Intended Lake Uses:

Irrigation, fishing, wildlife habitat, aesthetics, concession boating

Current Regulatory Issues^{1/}:

pH, ammonia

1/ Conditions exceeding state water quality standards.

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