Overland Pond

Background, Long Term Issues & Trends

- Overland Pond receives high nutrient concentrations from its source water (South Platte River) which results in excessive algae growth, primarily in the form of <u>phytoplankton</u> (small floating algae).
- The high algae growth contributes to poor water quality and clarity and potentially physically stressful conditions for aquatic life (elevated pH).

Developing Issues

The pond was renovated in 2013 through a project coordinated by the Greenway Foundation. The renovation included sediment removal, re-grading of the pond bottom, and reconstruction of the pier, amphitheater, and boat access.



Location: 955 W Florida Ave Surface Area: 1.7 acres Max Depth: ~6 ft Primary Source Water: South Platte River Intended Lake Uses: Irrigation supply (indirectly), fishing, wildlife, aesthetics Current Regulatory Issues^{1/}: pH 1/ Conditions exceeding state water quality standards.

Updated March 2016; questions to: alan.polonsky@denvergov.org

Based on 2013 and 2014 monitoring results, the renovation may have initially contributed to improved water quality. However, depth measurements in 2014 suggest there was considerable in-fill of the newly created holes. The September 2013 flood events may have contributed to sediment deposition, which would account for that.

The outlet structure was replaced in November 2014 (*see photo*) with a flow through system which will assure consistent water movement through the pond (when its full). Improved conditions noted in 2015 (significantly lower phytoplankton activity, improved water clarity, lower pH and organic nitrogen levels—*see figure below*) may have been a result of increased water exchange.

The pump facility that diverts water from the South Platte River to Overland was to be replaced in 2015. This should not impact the source water quality.

Fish, Wildlife, & Habitat

Fish: Over the past few years, Overland has been stocked with a variety of fish including bluegill, bass, catfish, and trout (the latter to support youth fishing events). While Overland Pond can sustain a healthy warm water fish community, it is only marginally suitable for trout. The frequently elevated pH, warmer temperatures, and variable oxygen are often at levels that will physically stress trout.

Wildlife: Although the park is limited in size, when combined with the adjacent South Platte River corridor there is good habitat provision for wildlife and birds. Kingfishers, herons, and a variety of waterfowl are common visitors at the pond.

Habitat: Thanks to efforts by the Denver Department of Parks & Recreation, and the Greenway Foundation, Overland Pond and the park have developed into an ideal natural area with quality wildlife habitat. It also serves as an environmental class-room for a variety of ages, and provides good recreational opportunities (fishing, wildlife viewing). The recently installed fish structures and pier supports provide some habitat structure for aquatic life.

Recommendations

- Sustain healthy aquatic life structure by maintaining bank-full conditions.
- Enhance naturalized areas by connecting with AquaGolf and the South Platte River corridor.
- Continue stocking of predatory fish (bass) to enhance the <u>zoo-</u> <u>plankton</u> community which will feed on phytoplankton.
- Test non-chemical algae control alternatives such as ultrasonic waves and barley straw to control annual phytoplankton blooms and subsequently stabilize pH.



