

Aqua Golf Lake

Background, Long Term Issues & Trends

- The shallow depth and poor water exchange throughout the pond create ideal conditions for prolific algae growth (see figure below; chlorophyll-a is an indicator of phytoplankton growth; secchi depth is a measure of water clarity).
- Groundwater flows emanating from the historic Shattuck Superfund site (up-gradient, southeast) historically flowed under the AquaGolf vicinity towards the South Platte River. Groundwater monitoring by the Colorado Department of Public Health and Environment, and surface monitoring by the Denver Department of Environmental Health have found that the Shattuck Superfund site does not pose health risks towards visitors and employees at AquaGolf.



Developing Issues

2006 Renovation - Included a modification of the outlet structure that discharges to the South Platte River (from the lake); re-routed storm runoff from the watershed southeast of the pond (Florida Lateral); enlargement of the inlet structure discharging from the Florida Lateral System.

Modified System - (1) increased the amount of storm runoff entering the pond; and (2) included construction of a forebay to settle suspended solids and associated contaminants prior to entering the pond. To improve trash control, a rack was added to the forebay in 2013.

Aeration System - Installed in 2010. This included eight distribution points throughout the lake.

Fish, Wildlife, & Habitat

Fish: Primary use of the pond as a driving range is not conducive to management of any type of recreational fishery.

Wildlife: Based on regular presence of pelicans and cormorants, there is likely a good aquatic prey base for them (minnows, carp, frogs, etc). Because the property is fenced, there is less human-based disturbance along all but the east shoreline which creates good opportunities for terrestrial and riparian based species. This, coupled with its proximity to the South Platte River corridor makes it an ideal refuge for reptiles, amphibians, and likely a mix of small mammals and birds. This in turn attracts a mix of other wildlife such as foxes, coyotes, and raptors.

Habitat: The combination of several in-lake golf structures, aeration system, and healthy riparian zone can support a diverse wetland-type aquatic community. The aquatic plant and algae community is typically dominated by phytoplankton. As mentioned above, the fenced property provides a nice refuge for terrestrial/riparian-based wildlife.

Recommendations

- Include annual monitoring of water prior to discharge to the forebay for constituents indicative of Shattuck groundwater (i.e., elevated nitrates and copper).
- Look for opportunities to further enhance naturalized areas by connecting with Overland Park and the South Platte River corridor to the extent possible.
- Consider and test non-chemical algae control alternatives such as ultrasonic waves.

Location: 501 W Florida Ave
Surface Area: 11 acres
Max Depth: ~ 5 ft
Primary Source Water:
South Platte River via Overland Pond; urban runoff
Intended Lake Uses:
Golf driving range; irrigation; wildlife habitat
Current Regulatory Issues^{1/}:
Iron, pH

1/ Conditions exceeding state water quality standards.

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