

# LAKE GRACE

**Lake Grace water clarity 1998 through 2015 (in meters)**

**Size:**

1.3 acres

**Drainage Basin:**

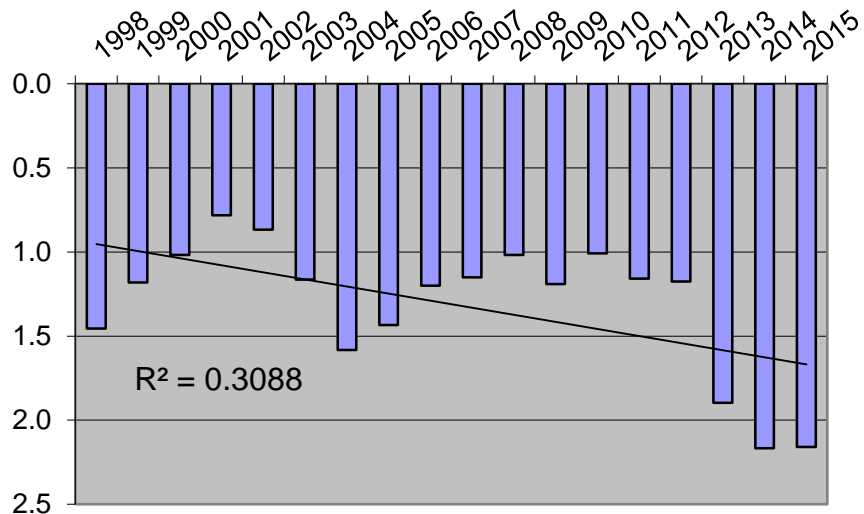
7 acres

**Average Depth:**

9 feet (approx.)

**OHW Elevation:**

101.6 feet NGVD



**General Information:** Like nearby Lake Forrest, Lake Grace appears to be a geologically older, sinkhole lake. The water level in the lake is dependent on groundwater levels, which are ultimately dependent on rainfall. Three stormwater outfalls convey runoff to Lake Forrest. There are no permanent surface inflows to the lake. Lake Grace is connected to Lake Forrest by a culvert, and high water levels are controlled by a drainage well on the eastern side of Lake Forrest that conveys water to the aquifer once the lake level exceeds the control elevation (101.6 feet above sea level).

**Water Quality:** Water quality in Lake Grace is heavily affected by stormwater runoff from within its own 7 acre drainage basin. Even though the basin seems small compared to some of the larger lakes, it is over five times the area of the lake. Trend analysis of monthly Secchi disk data from 1998 through 2015 indicates no statistical change in water clarity.

**Management Efforts:** The city maintains leaf traps on the two of the stormwater outfalls to help slow the amount of organic material entering the lake. Due to the size of the outfalls, and the steep slopes, the traps are only marginally effective, removing 20 to 70 percent of the leaf load (depending on the magnitude of the rain event). The third outfall receives treated runoff from a newer subdivision, and does not need a trap. The underground depth of the stormwater system in the Quail Hollow subdivision prevents the installation of cost effective stormwater treatment systems. The City has been experimenting with inlet baskets for leaf and debris removal, and may consider them for the Lake Grace basin if an efficient maintenance program can be developed for them.

Other management activities include the installation of an aeration system in 2000 to reduce infestations of floating plants, primarily the floating fern (*Salvinia rotundifolia*). Prior to the installation of the aeration system, it was common for 50 to 75 percent of the surface of Lake Grace to be covered with the small, floating plants. Controlling the plants required numerous herbicide treatments every year.