



**Grasmere Lake:** Primary issues of concern for Grasmere Lake water quality over the past several years have been associated with impacts of explosive algae growth and also factors driven by source water quality (primarily recycled water).

Algae growth in Grasmere, as with most of our urban lakes, can be excessive as a result of a healthy dose of nutrients in the source water, shallow and subsequently warm conditions, and limited water exchange. Algae control efforts often succeed in removing much of the growth which sometimes result in low oxygen (2011 and 2012). Excessive algae growth can also result in elevated pH levels, decreasing water clarity, and most notably, general unsightly conditions.

Another issue of concern has been the elevated salts in the source water (recycled water). This has been primarily a concern for impacts to irrigated park land (from Smith). Salt levels have been increasing steadily, but still are at levels that do not have a significant impact on aquatic life.

To try and address algae control and oxygen issues, Park management added an aeration / mixing unit (a GridBee) to the north side of the lake, and moved one of the two existing solar mixing units (SolarBee) to Smith Lake. The rationale was that the GridBee would still provide mixing in the water column, but also add oxygen which at times can be limited.

While conditions were generally acceptable in Grasmere Lake this summer, there was a significant bluegreen algae bloom from mid to late summer. This bloom was likely enhanced by a lack of inflow which was rectified in August.