



# Timpanogos Special Service District

PLEASANT GROVE ★ AMERICAN FORK ★ LEHI ★ ALPINE ★ HIGHLAND

CEDAR HILLS ★ EAGLE MOUNTAIN ★ SARATOGA SPRINGS ★ SUN CREST

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Job Site Address: Timpanogos Wastewater Treatment Plant — 6400 North 5050 West, Utah County, Utah

August 31, 2016

James Harris  
Utah Division of Water Quality  
P.O. Box 144870  
Salt Lake City, Utah 84114-4870

Mr. Harris,

Thank you for the opportunity to comment on the 2016 Integrated Report. Timpanogos Special Service District would like to offer the following comment relative to Utah Lake listings.

### **Cyanobacteria Counts as a Means of Listing:**

We note that the Division of Water Quality (DWQ) has used cyanobacteria cell counts as a parameter to list Utah Lake. We believe this is inappropriate for three reasons. First, we believe that the use of the screening cell count of 100,000 cells of cyanobacteria creates a de facto water quality standard. On EPA's website it states "Section 303(d) of the CWA, requires states to identify waters within their state where current pollution control technologies alone cannot meet the water quality standards set for that waterbody"

(<https://www.epa.gov/tmdl/impaired-waters-and-tmdls-statute-and-regulations>). While the cell count method was identified in the Integrated Report as an assessment method, we believe that before it can be used for listing it must first go through rule making and appropriate public comment periods before it can be used as a standard. Secondly, we believe that the use of cell counts alone as a listing method ignores the concern for toxins since it does not include a toxin level associated with the cell count. The 1999 WHO guidance quoted in the 2016 Integrated Report states, "Public health concern regarding cyanobacteria centers on the ability of many species and strains of these organisms to produce cyanotoxins" (WHO Section 1.3). If toxins are the primary area of concern when evaluating cyanobacteria, then toxins should be the primary measurement for impairment. As demonstrated in the 2016 cyanobacteria bloom on Utah Lake (<http://deq.utah.gov/Pollutants/H/harmfulalgalblooms/bloom-2016/utah-lake-jordan-river/index.htm>) the toxin levels in the whole water samples did not exceed the WHO screening level of 20 ug/L. Only surface scum samples exceeded the screening value. We maintain that listing of Utah Lake should be based on whole water toxin concentrations exceeding 20 ug/L. Third, if samples for listing include surface scum areas, we believe that only the areas where surface scum accumulates should be listed.

In addition to the reasons stated above we also question the statement on Pg. 21 of the Integrated Report – Chapter 5 where it states that, "Although cyanobacteria are naturally present

in many temperate waters, including Utah Lake, the concentrations of cyanobacteria in large blooms in Utah Lake appear to have increased.” We are aware from antidotal statements and our own personal knowledge that significant blooms have occurred in the past similar to the 2014 or 2016 blooms. If evidence exists that demonstrates that blooms are increasing in severity, we would like to see it. At the August 24, 2016 Water Quality Board Meeting, a DWQ staff member presented a summary, to date, of the July, 2016 algal bloom occurring in Utah Lake, stating that it was the largest bloom so far. An aerial slide of the bloom was shown to the board. Later, during the same meeting, a second DWQ staff member giving a slide presentation, showed an aerial slide of the September 2006 algal bloom on Utah Lake which was obviously much larger. To us, this demonstrates the lack of knowledge for listing the entire lake as impaired at this time. Since phosphorous levels in POTW discharges has gone down in the past several years from Timpanogos and Orem, it does not seem logical that phosphorus alone is driving increasing blooms as the IR infers.

**Listing of Utah Lake for Phosphorus:**

Although a phosphorus TMDL for Utah Lake is in progress, we continue to maintain that the use of phosphorus only as listing criteria is inappropriate. In R317-2 phosphorus is listed as an indicator. If DWQ wishes to use it as criteria, then it should be approved through the rule making process as an indicator. We recognize that DWQ has recently recognized this and is now proceeding to look for scientific justification for an in-lake phosphorus standard. After reviewing Section 5 of the Integrated Report, the selective use of sampling appears to be a significant basis for the impairment declaration for Utah Lake. There are several issues that the Utah Lake sample collection sites raise. Specifically, Chapter 2: 2016 303(D) Assessment Methods do not address how sampling should be conducted and where samples are obtained. Sampling on any water body where cyanobacteria occurs can be biased based on where the sample is obtained.

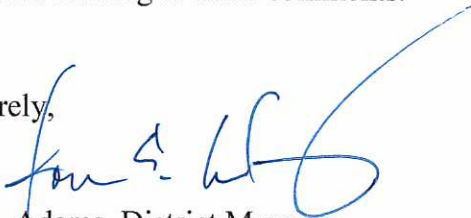
**Adaptive Management:**

The District (TSSD) supports the use of adaptive management as a means for managing water quality in Utah Lake. The District believes any changes relative to Utah Lake be done on a quantifiable basis to protect beneficial uses and not subject the discharges to the lake with undue expense. DWQ supports the adaptive management approach as stated on their website explaining the Division’s goal to protect Utah’s waters for their beneficial uses.

In closing, TSSD funds and supports research on Utah Lake to gain knowledge of this particular ecosystem and the development of specific standards for the lake. Answers should help determine if cyanobacteria needs to be, or can be controlled. The District believes an adaptive step of 1 mg/L phosphorus for an effluent limit is sufficient to protect Utah Lake and avoid any degradation for years to come.

Thanks again for the opportunity to comment. Please contact me if you have any questions relating to these comments.

Sincerely,



Jon E. Adams, District Manager  
Timpanogos Special Service District