

Legislative Presentation 200212

Introduction: I am the District Manager for Timpanogos Special Service District providing wastewater service for the 10 cities in northern Utah county. Thank you for the opportunity to present today.

The question is can there anything that can be done for Utah Lake?

TSSD wants to complete an in-situ (in place) test on Utah Lake to study the effects of geochemical augmentation (adding chemicals to bind nutrients and minimize algae growth) with and without the presence of carp and/or improving water quality such as from wastewater treatment facilities. TSSD has budgeted \$100,000 to start the project in 2020. We have purchased six limno corrals (fish enclosures) and plan to conduct a three year experiment.

TSSD hired Jacobs, a national engineering firm, in 2019 to address the question of whether anything can be done for Utah Lake. The first slide explains the scientific foundation of this question. Water bodies have a life cycle. They typically start off as a clear waterbody with phosphorus less than 25 µg/L. As the environment changes, life grows and total phosphorus may increase up to 100 µg/L but the water may remain clear because of the stable state maintaining ecologic diversity. As the ecology changes, typically dying off of native species and plant life due to environmental or human causes, and the chemistry stays the same you get a green pea soup looking waterbody.

The waterbody may continue to receive phosphorus leading to concentrations greater than 100 µg/L. The shifts happen over the course of years and involve multiple factors. To move between each stable-state takes effort.

A large scale experiment was done on Lake Wingra in Wisconsin. They too have problems with their lake. It's green and has carp. They put an enclosure in that keeps the carp out and vegetation grew back. You can see the water cleared up when the carp were excluded.

A similar experiment was performed by Utah State University on Utah Lake sponsored by Central Utah Water Conservancy District. They studied the types of vegetation carp like/don't like. BYU is currently studying the interaction of lake sediment.

The ULWQS is studying where the lake has been, where it is now and what it can be. TSSD want to take the final step and see if it is attainable. We are working with the ULWQS Science