

Utah Lake Water Quality Study



UTAH DEPARTMENT *of*
ENVIRONMENTAL QUALITY

**WATER
QUALITY**

Steering Committee Meeting #7

May 30, 2019

Scott Daly

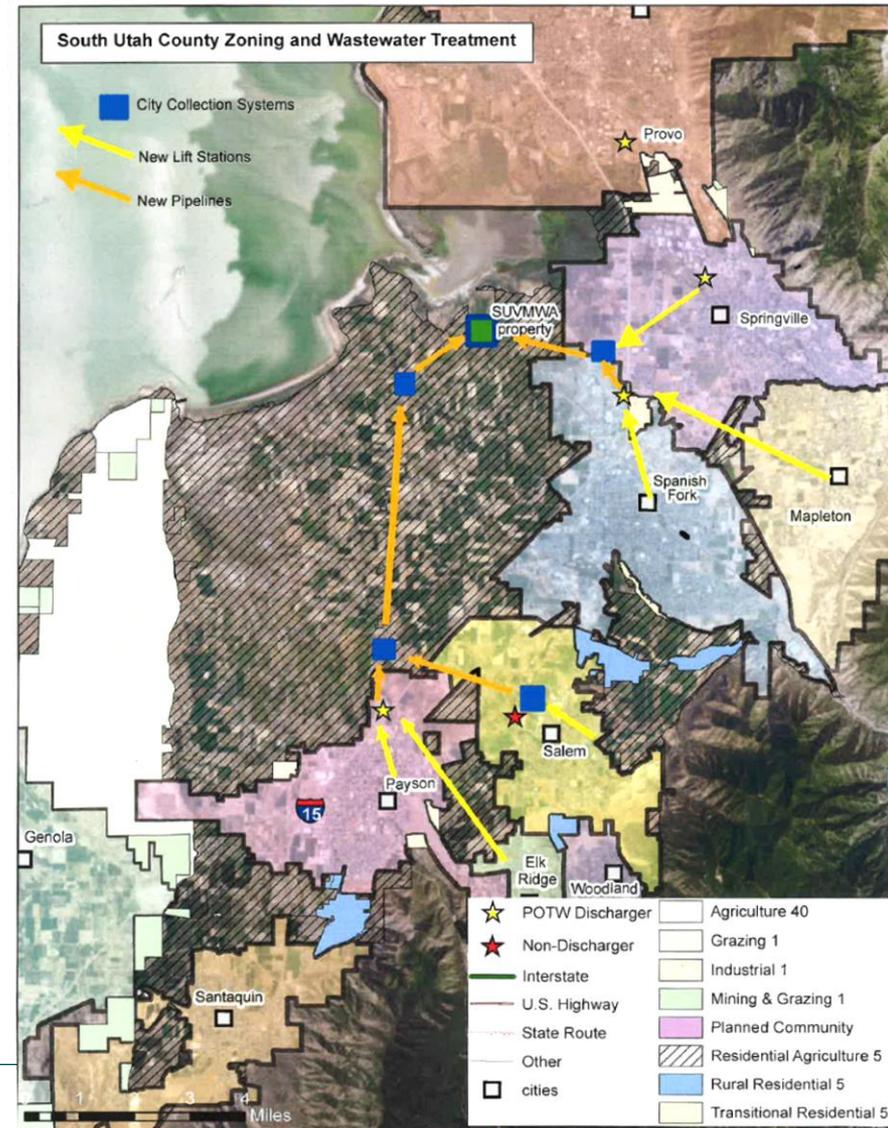
Brief Update on DWQ Analysis of Discharge Location Alternatives



Discharge Location Analysis

Questions

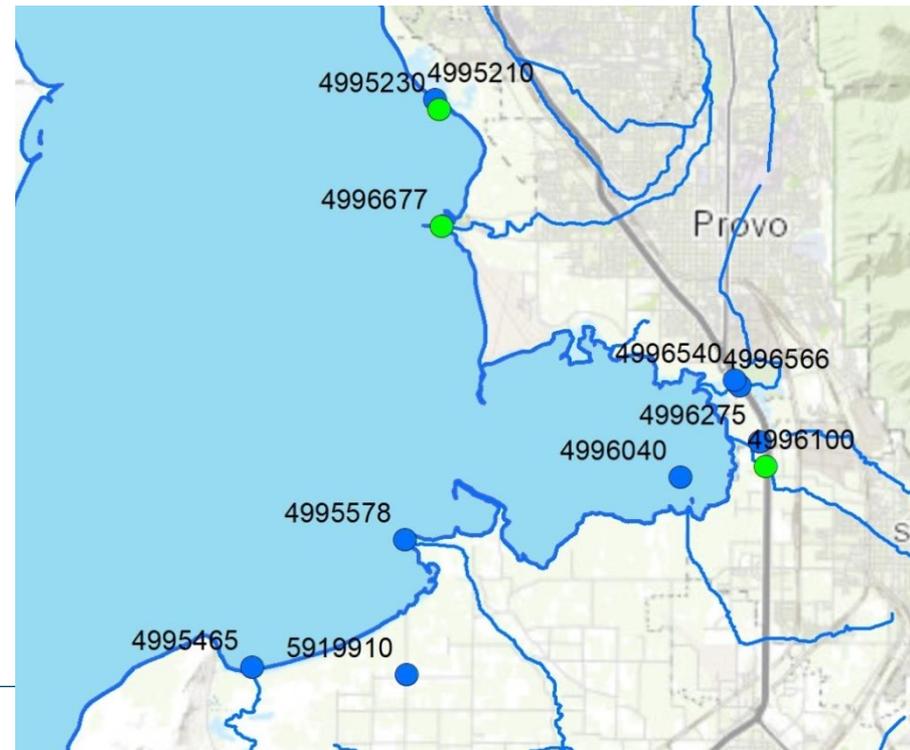
- What is the hydrologic communication between Provo Bay and Utah Lake open water?
- What is the potential impact moving the POTW discharge locations on the Provo Bay water budget?
- What is the potential impact of moving POTW discharge locations on effluent limits?



Discharge Location Analysis

Tasks

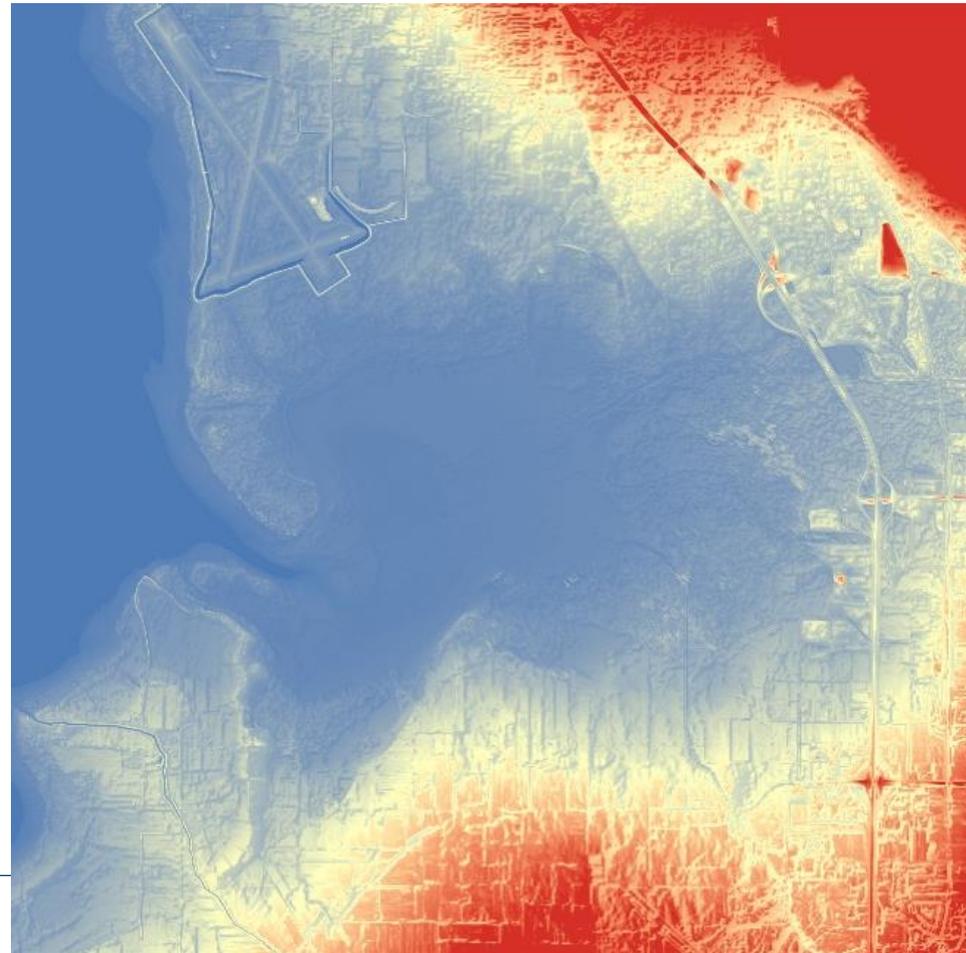
- Provo Bay Water Budget Analysis
 - Determine minimum flow requirements in Hobble Creek
 - Assess existing water budgets (LKSIM)
 - Incorporate pressure transducer data
 - Assess DMR data
 - Monitor discharge at mouth of Provo Bay
- Future POTW Discharge Analysis
 - Evaluate changes in discharge in response to growth
 - Evaluate effects of planned alternatives on discharge



Discharge Location Analysis

Tasks

- Provo Bay Water Elevation Analysis
 - Mosaic lake bathymetry with 2013 and 2016 LIDAR
 - Visually demonstrate wetted area of Provo Bay at various lake elevations
 - Investigate existing lake data for relationships between open water and Provo Bay elevations
- Hydrodynamic Modeling
 - Simulate flow exchange between Provo Bay and main lake
 - Run scenarios with selected POTW discharge alternatives
 - Conservative tracer analysis



Discussion

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