



**TSSD**  
Clean Water

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Utah Lake Water Quality Study Steering Committee 5/30/19



# TSSD Year Average

Year	t-Phos (as P) (mg/L)	TIN (as N) (mg/L)
2013	2.7	9.1
2014	2.1	8.2
2015	1.1	9.4
2016*	1.9	10.3
2017	1.1	7.0
2018	1.4	8.5
2019	0.7	7.3

- Start Composite Samples

# Variance - Tier 1

- December 31, 2021
- t-Phosphorus < 2.6 mg/L as P
- Capital Improvement Projects (\$13,460,000)

# Variance - Tier 1

- Phosphorus Optimization Training & Study
- Blower Replacement
  - BNR Zone/Redox Control/Reliability Improvements
- Biosolids Disposal

# Variance - Tier 2

- December 31, 2023
- t-Phosphorus < 1.5 mg/L as P

# Variance - Tier 2

- Bioreactor Improvements
- Clarifier Improvements
- Digester Side Stream Treatment



# Objective





# Objective



# TSSD Dechlorination Ponds







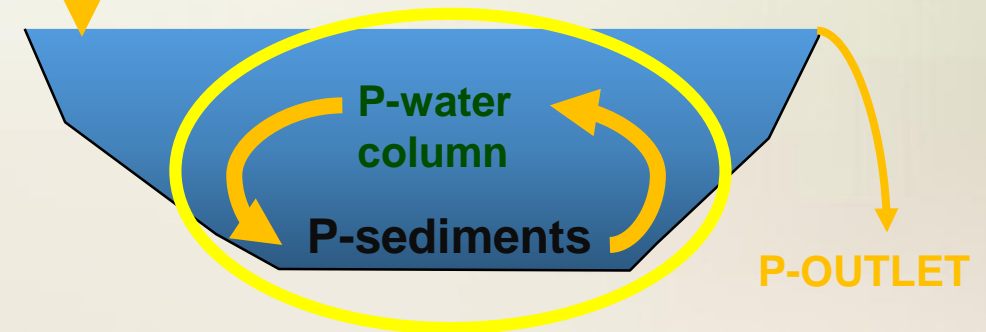
# TSSD Studies



• **Carp exclosure**



**P-watershed**



Nutrient Denial via geochemical augmentation