

# 1<sup>st</sup> Year Monitoring Report for Jordan Marsh Water Quality Treatment Park



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Resources Department



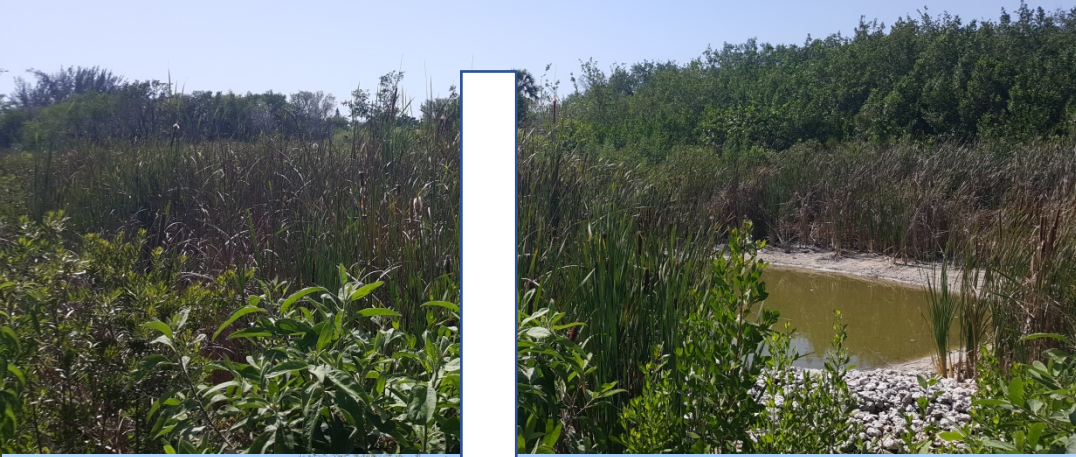




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1st Stage



3rd Stage



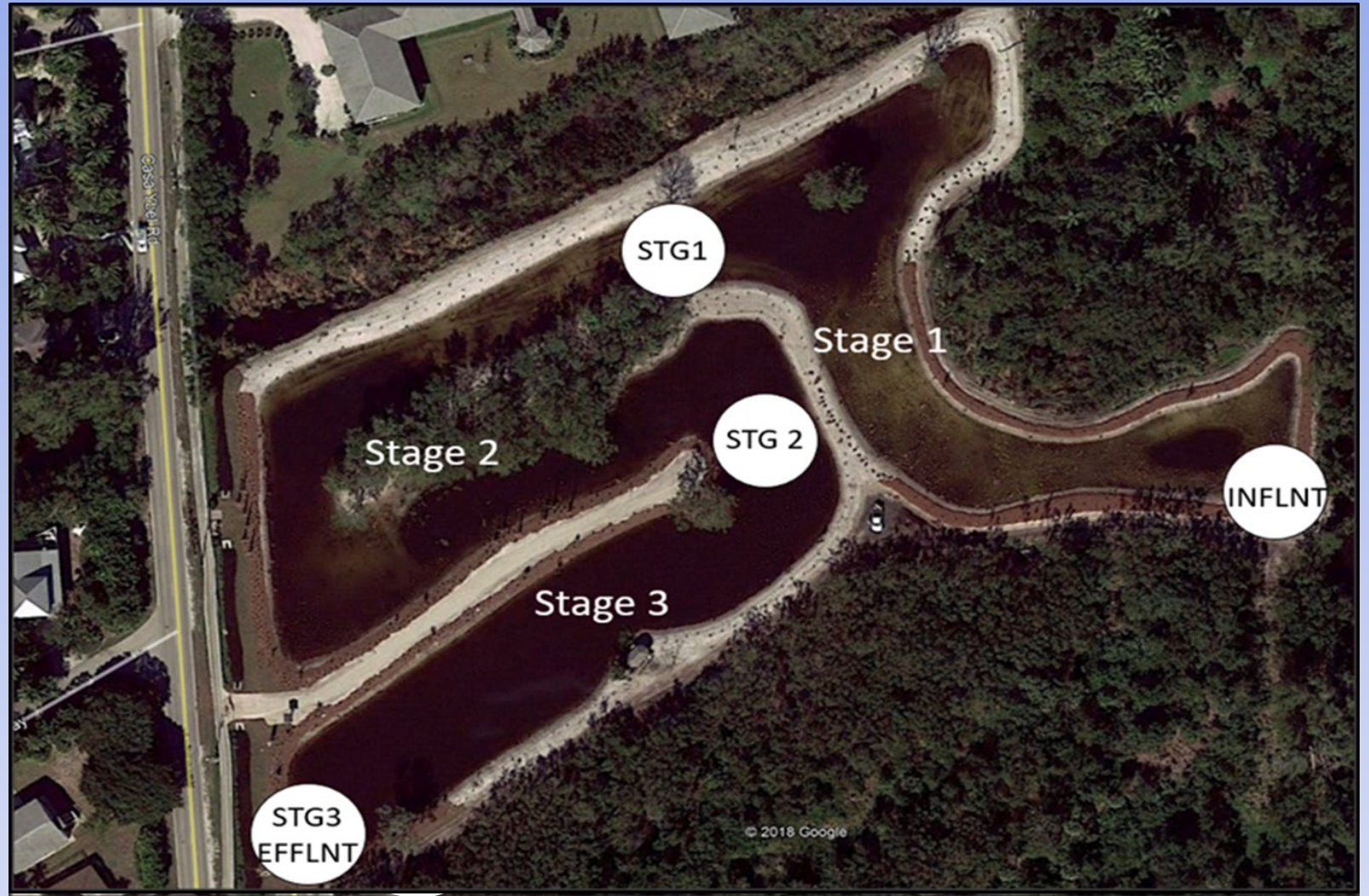
Treatment  
Train

2nd Stage





- Influent/Effluent Sampled 11 times over 1.5 years
- 3 Internal grab sampling events for nutrient removal efficiency by stage







To get nutrient concentration data

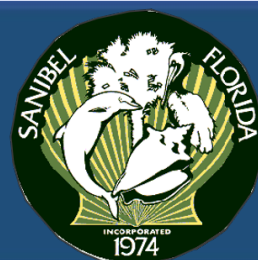
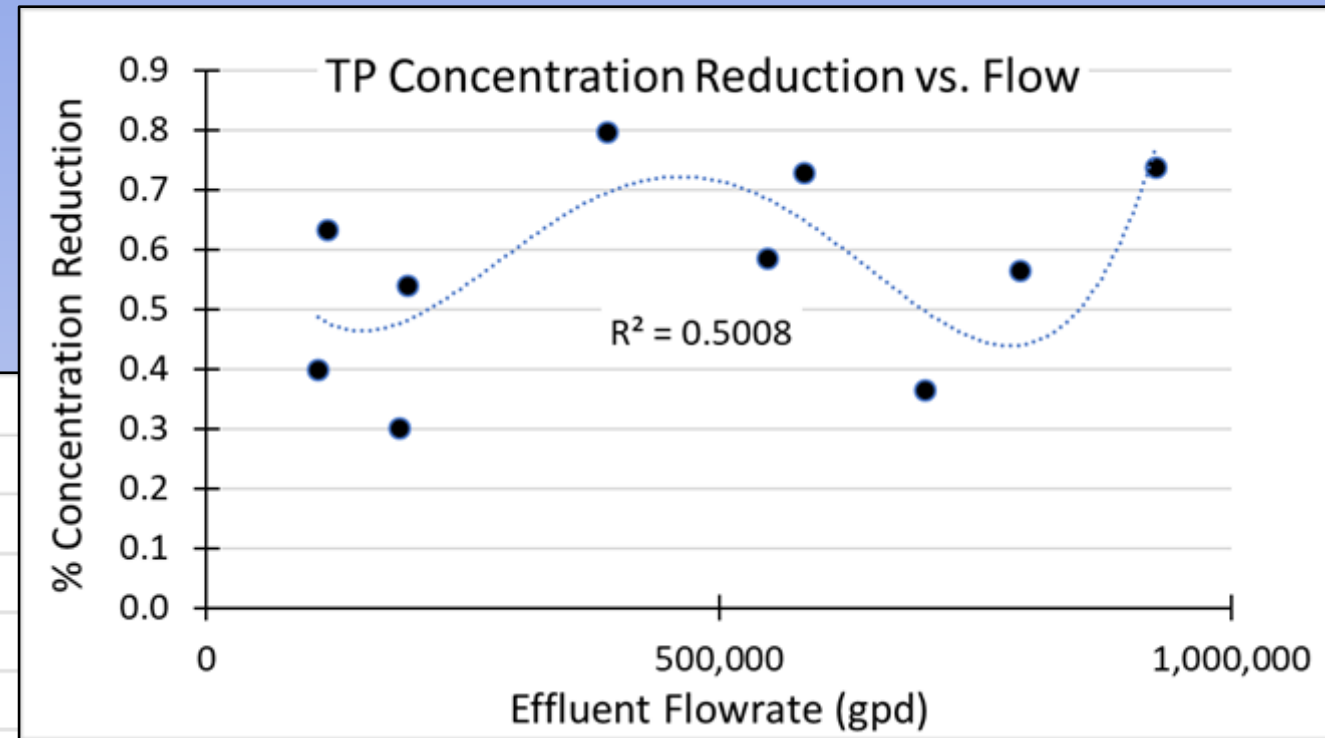
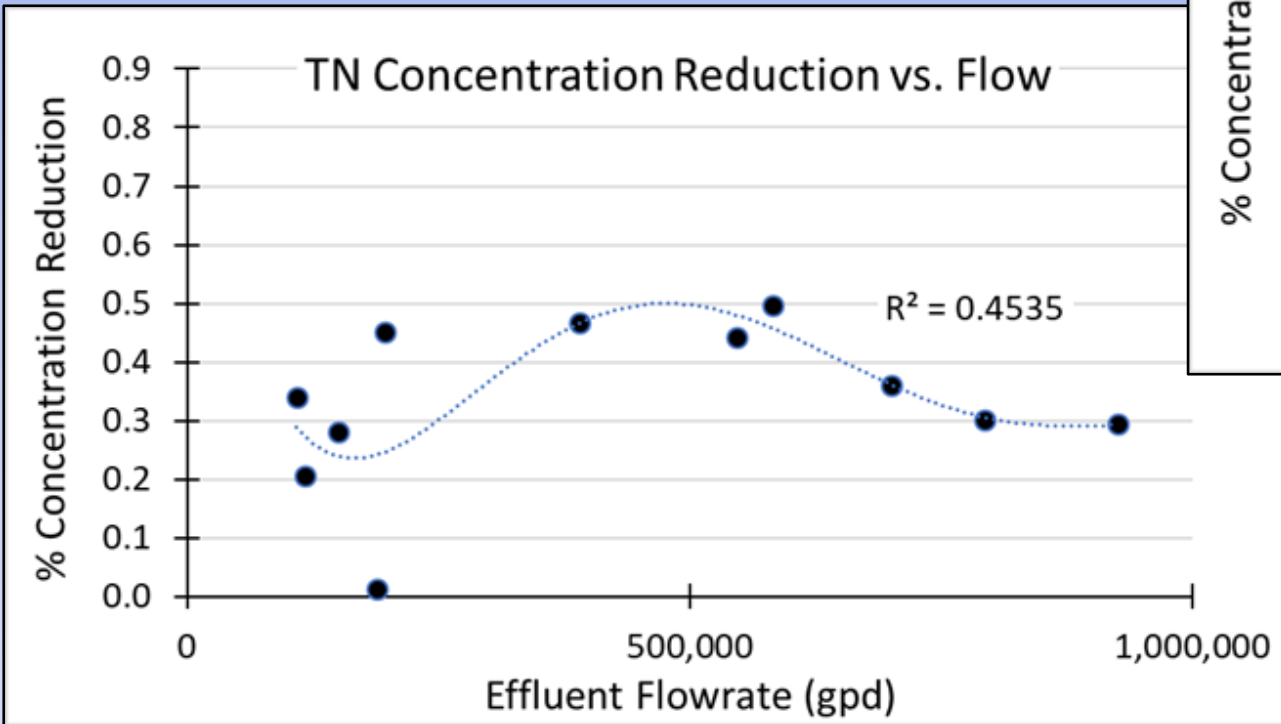




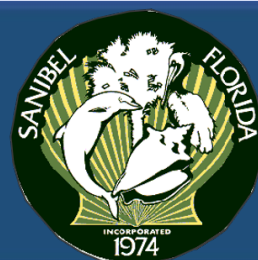
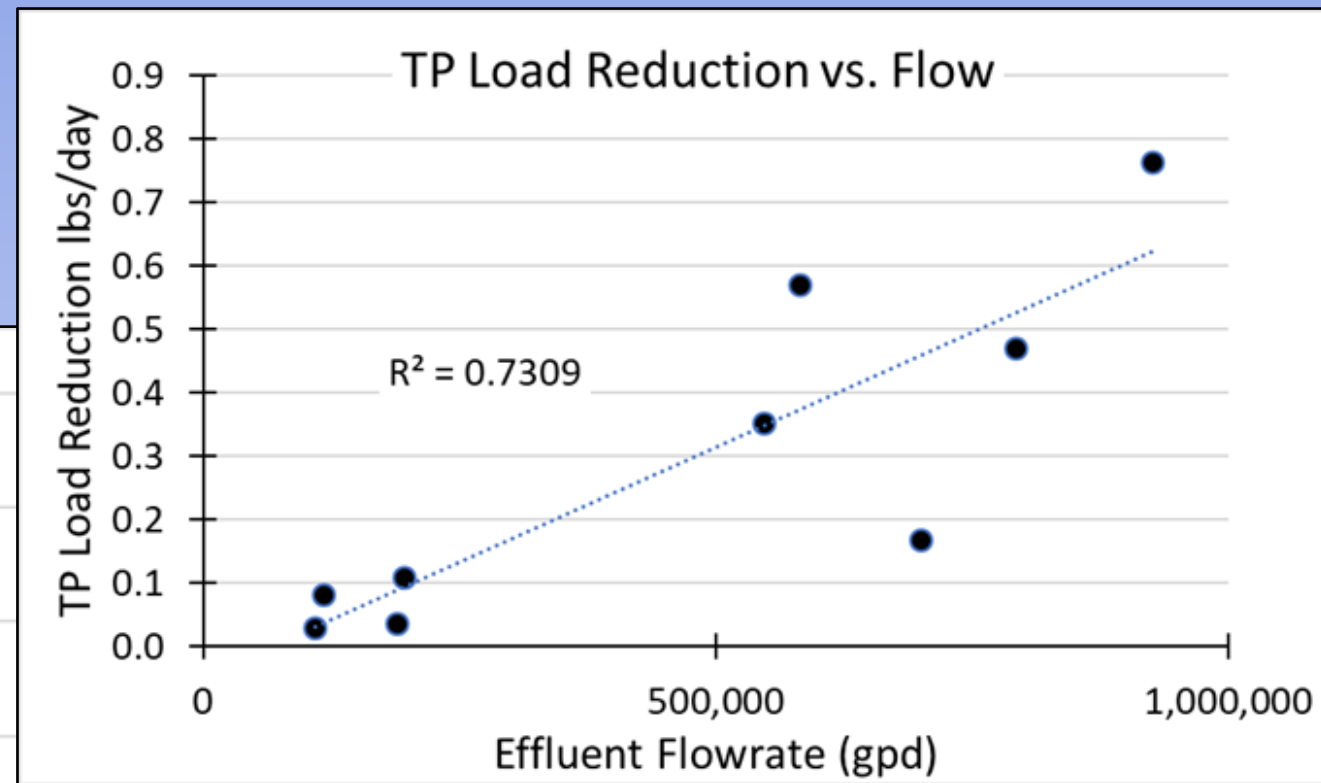
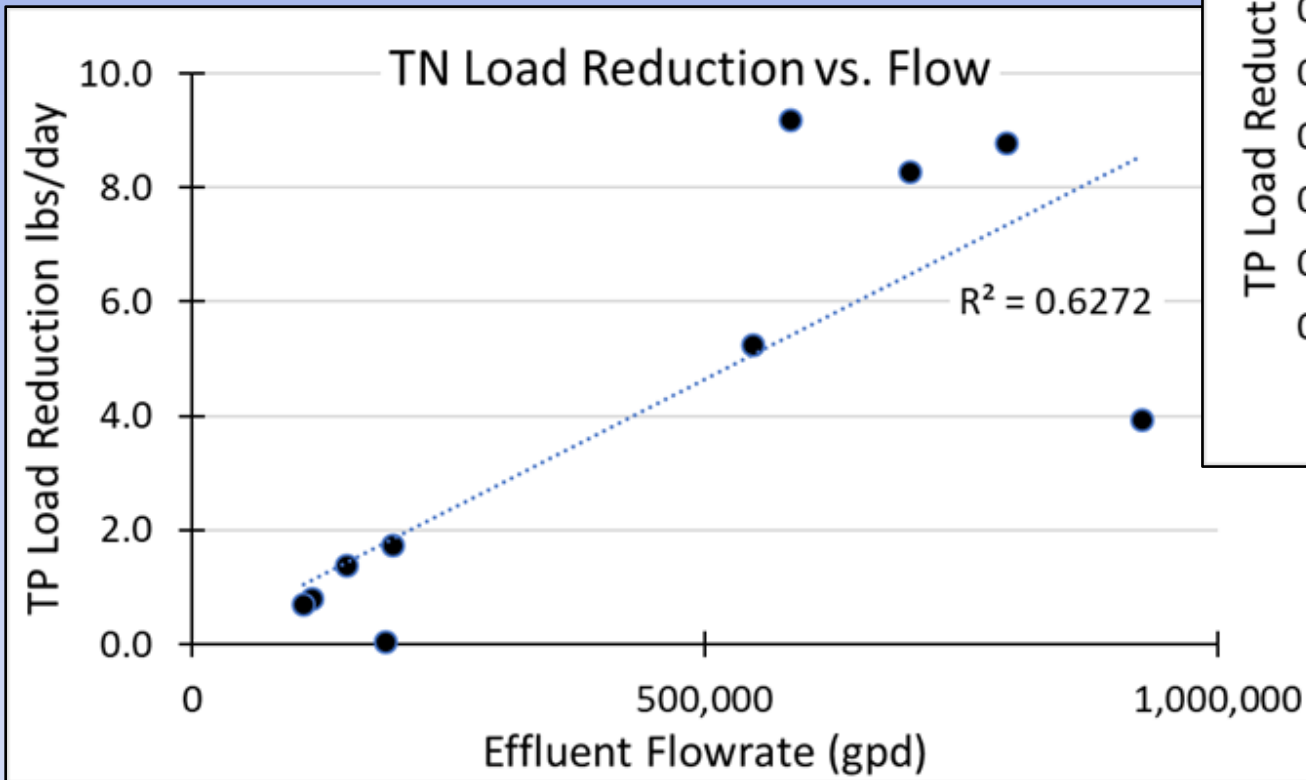


- Level sensor and data logger at weir
- Ultrasonic flow sensor on influent pipe
- Flow recorded hourly
- $\text{FLOW DATA} \times \text{CONCENTRATION DATA} = \text{MASS (lbs.)}$





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1st Stage

30% N  
Removal

3rd Stage

Treatment  
Train  
TN  
Removal

2nd Stage

4% N  
Removal

0% N  
Removal

34% P  
Removed





1st Stage

43% P  
Removed

3rd Stage

Treatment  
Train  
TP  
Removal

2nd Stage

12% P  
Removed

0.1% P  
Removed

55% P  
Removed





1st Stage

3rd Stage

73.4° F

2nd Stage

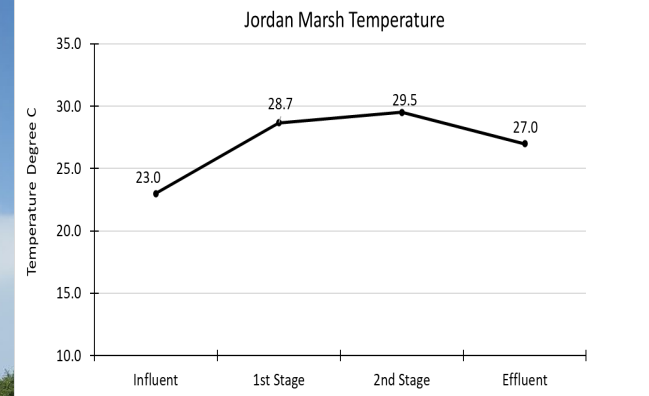
83.7° F

85.1° F

80.6° F

+7.2° F

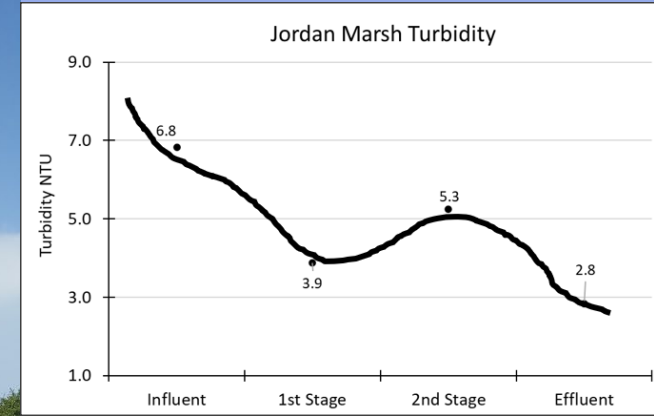
Sanibel Slough





1st Stage

3rd Stage



6.8 NTU

3.9 NTU

2nd Stage

5.3 NTU

2.8 NTU

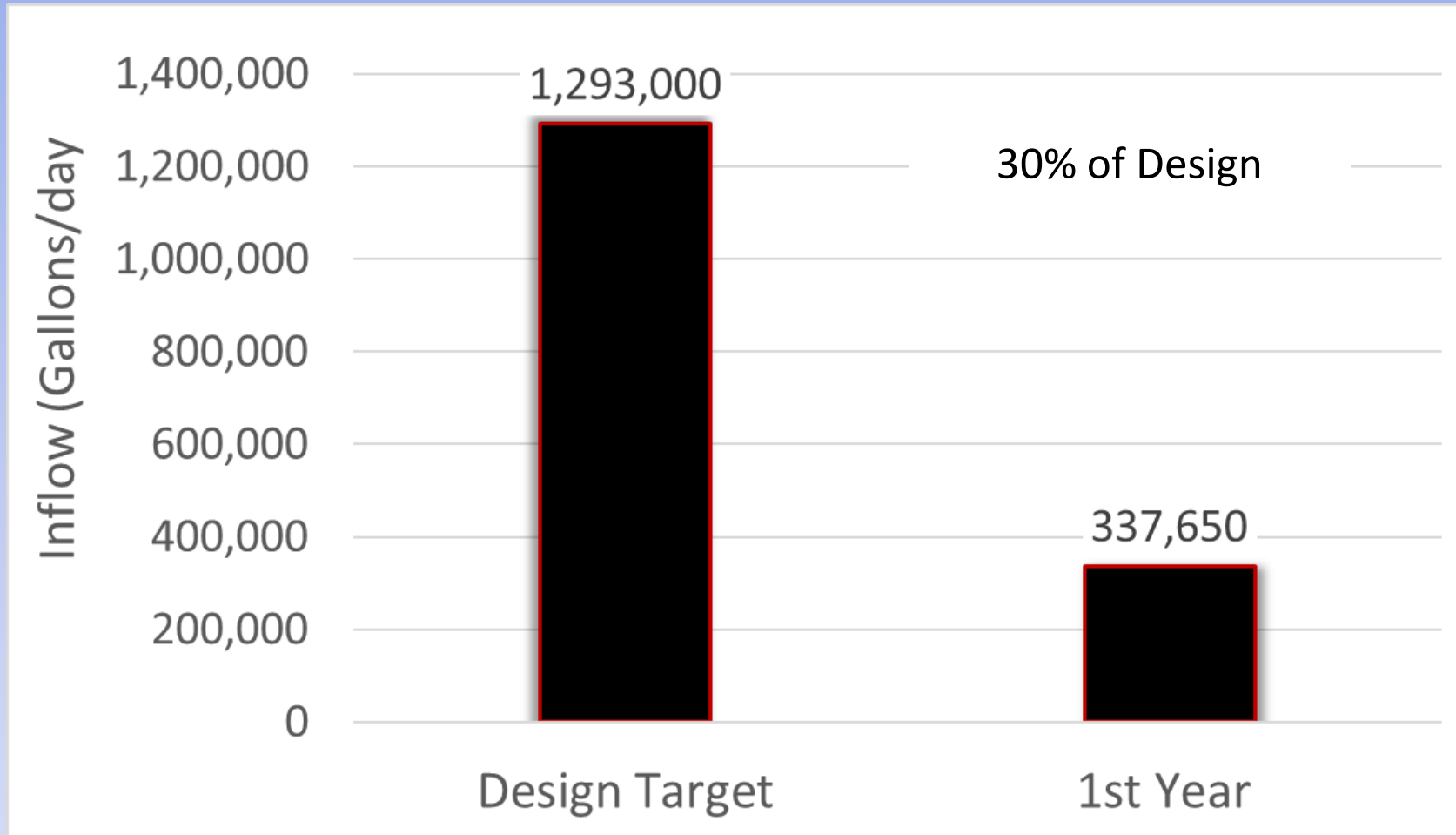
-4.0 NTU

Sanibel Slough





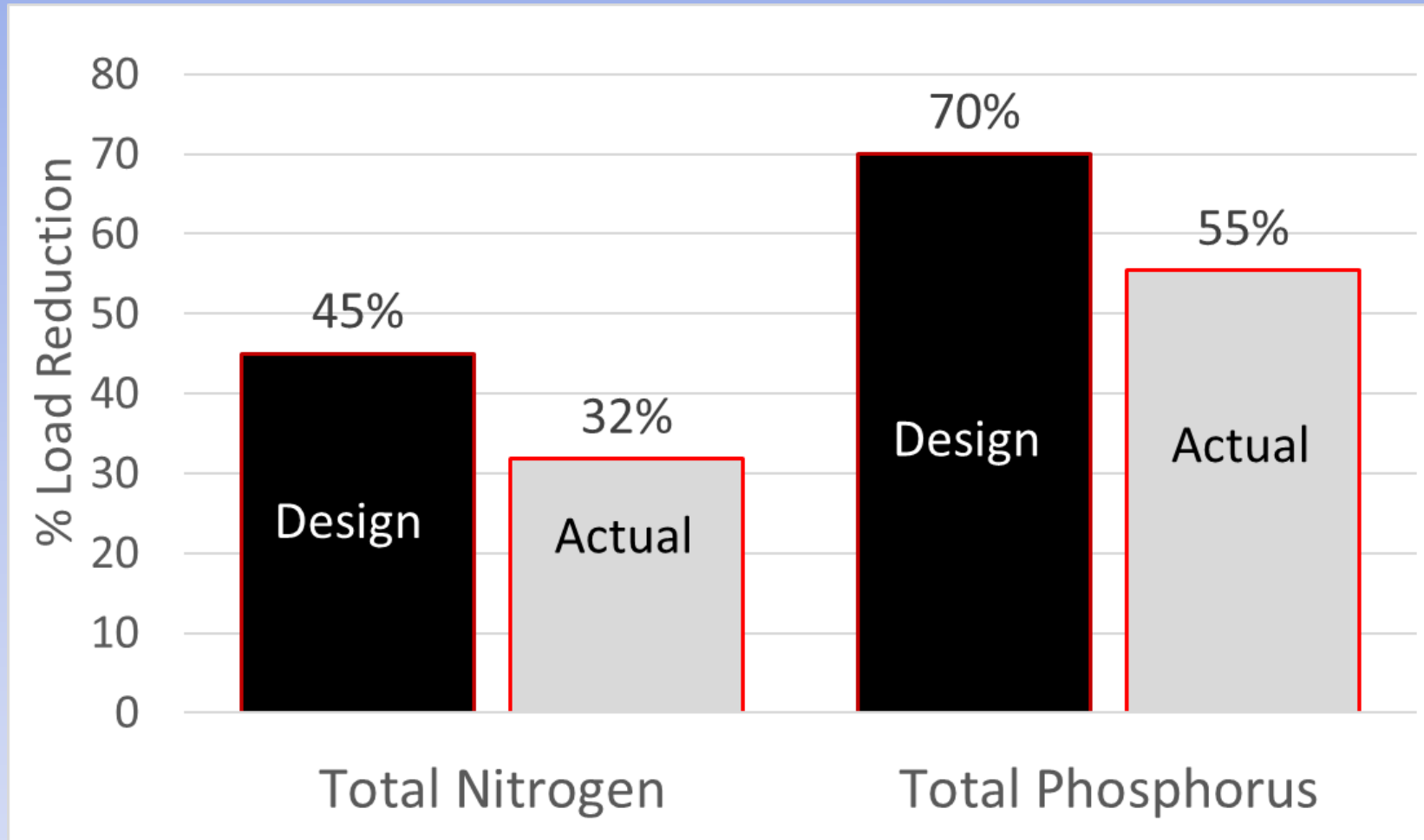
# Hydraulic Loading: Comparison to Design



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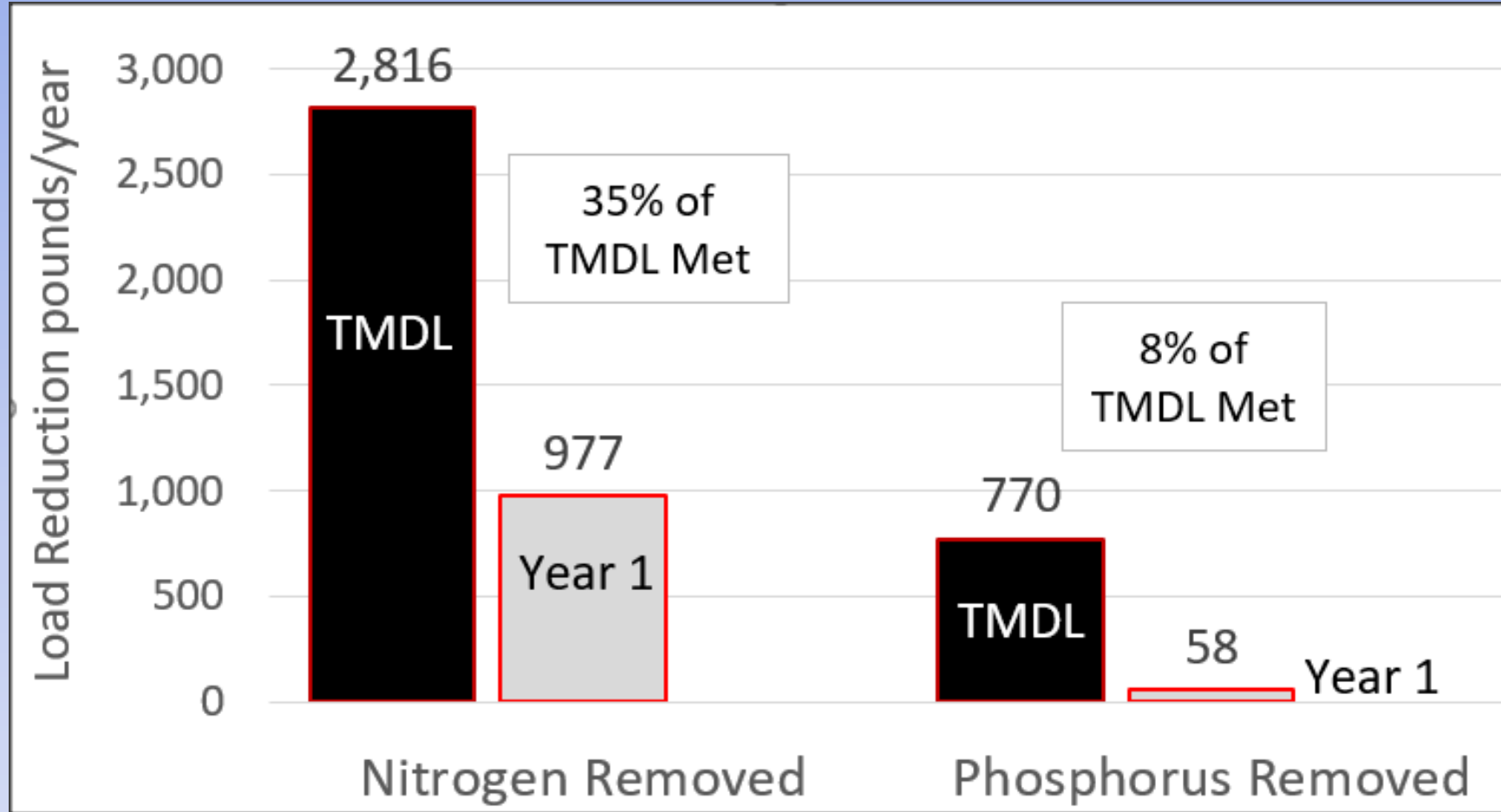
# Load Reduction: Comparison to Design



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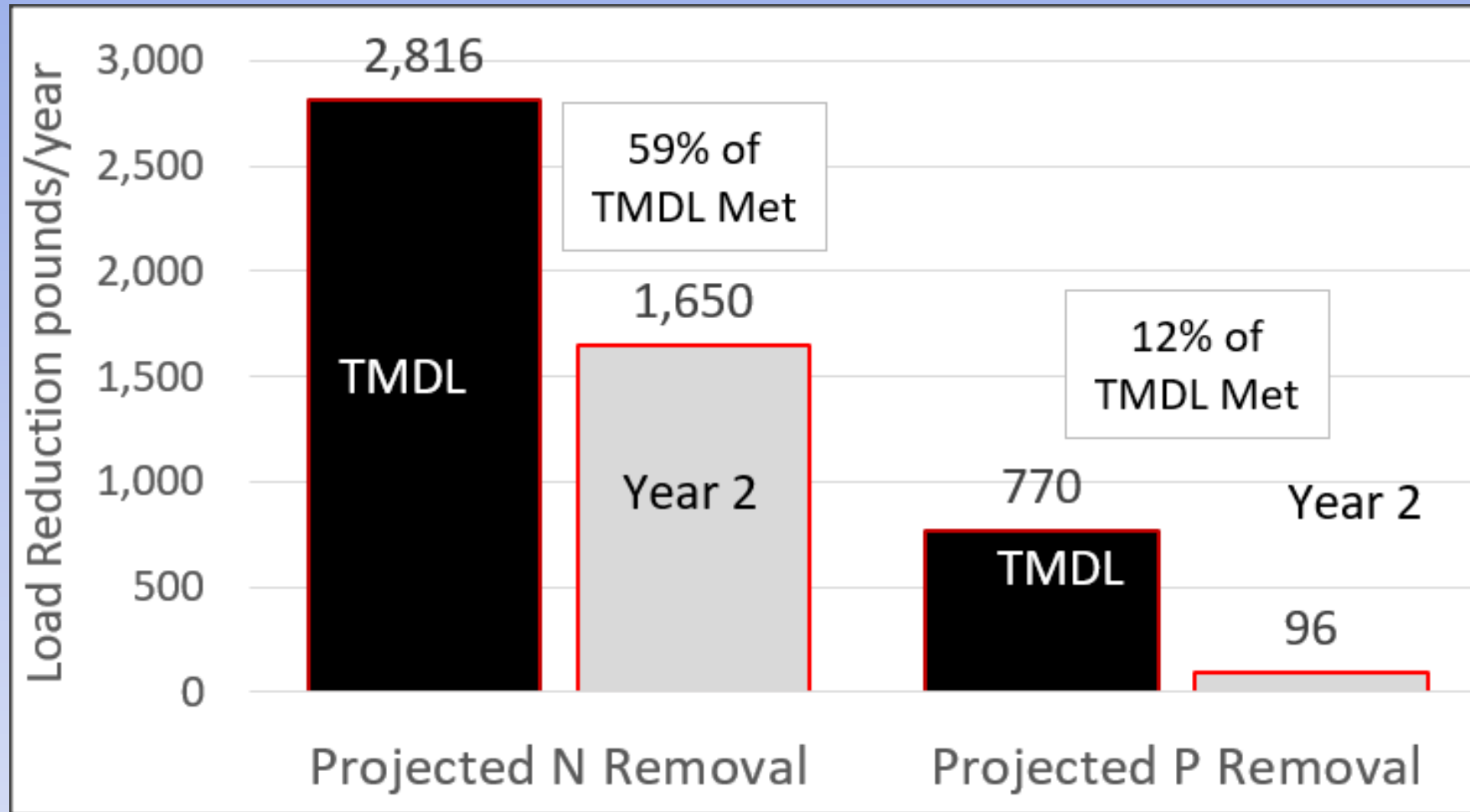


# Load Reduction: Comparison to TMDL Requirement





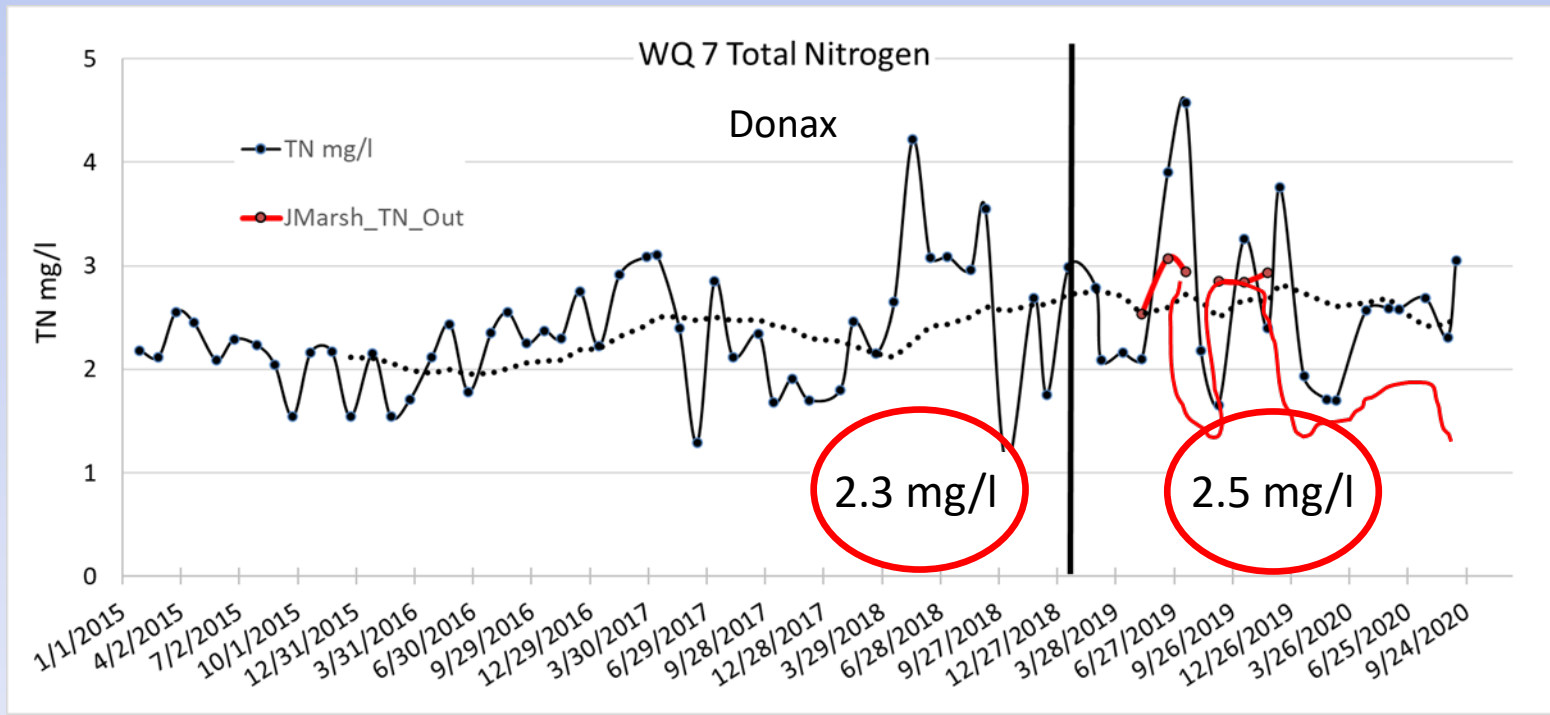
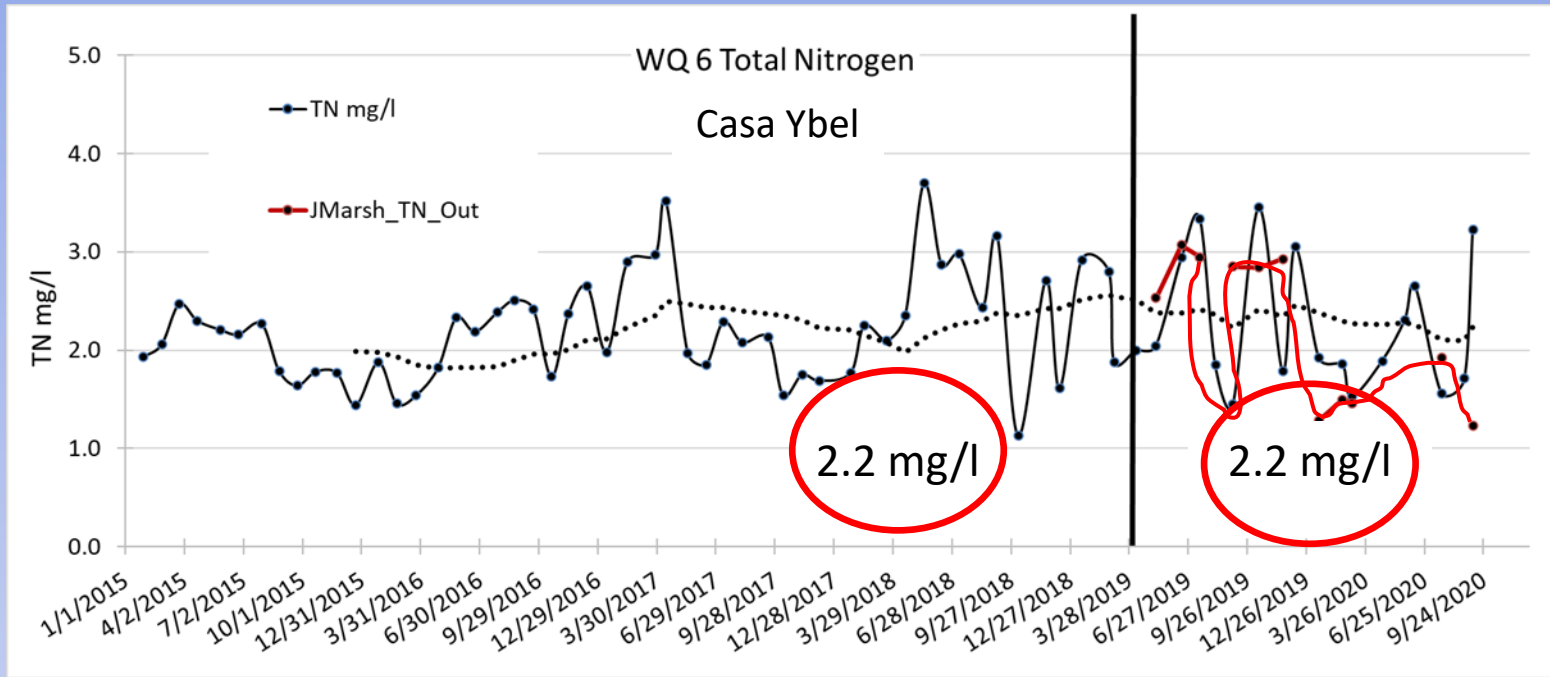
# Projected Load Reduction



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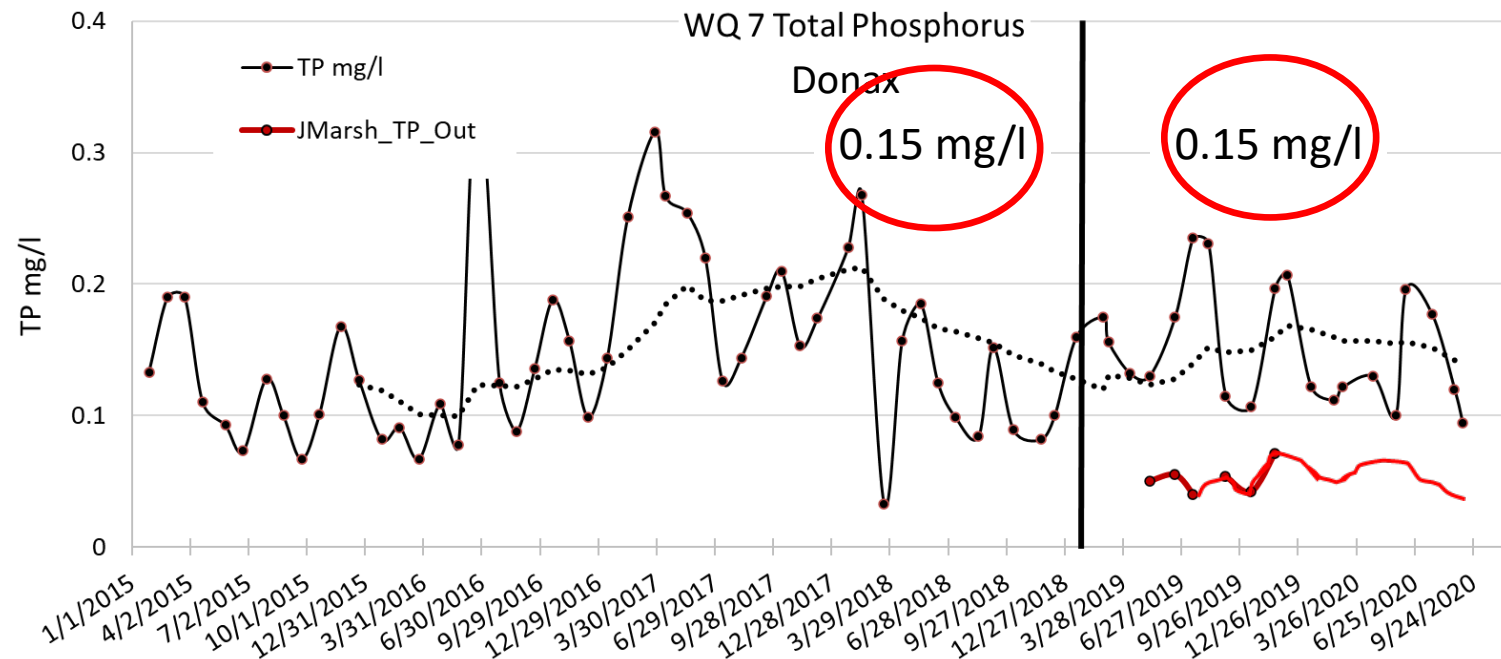
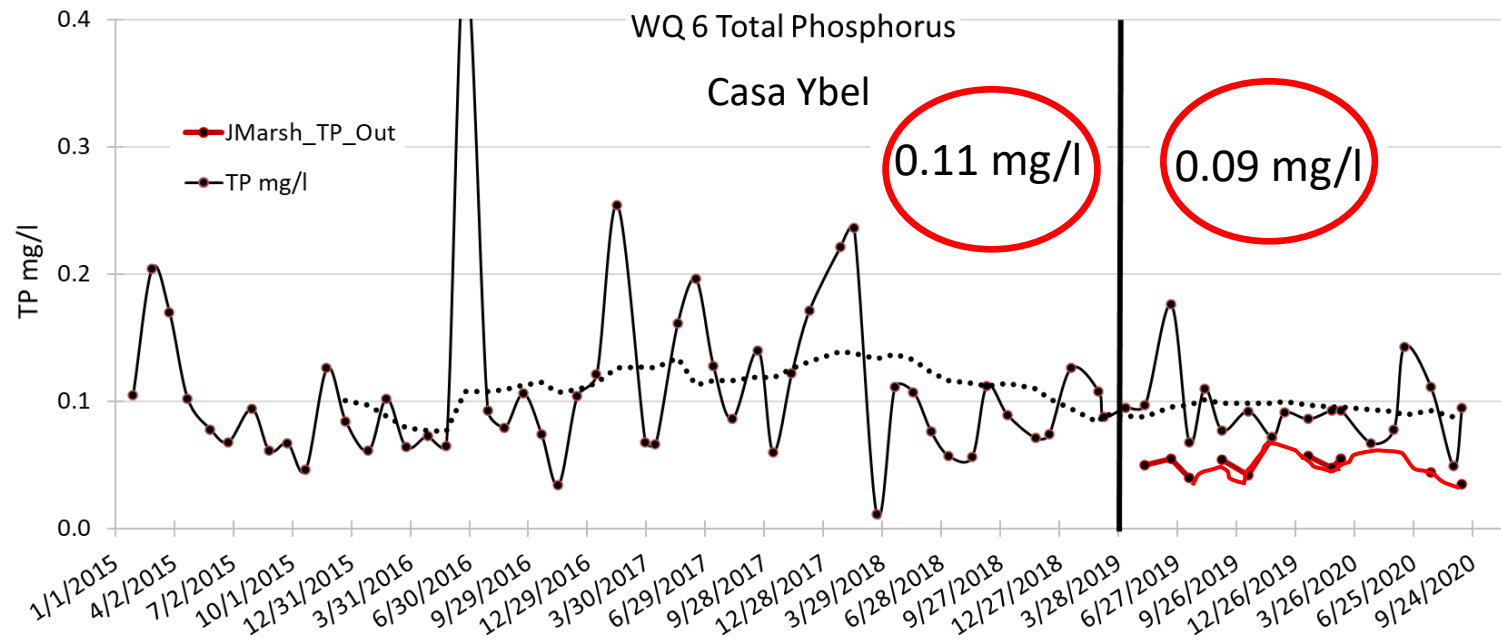


Has there been an impact on water quality within the East Basin yet?



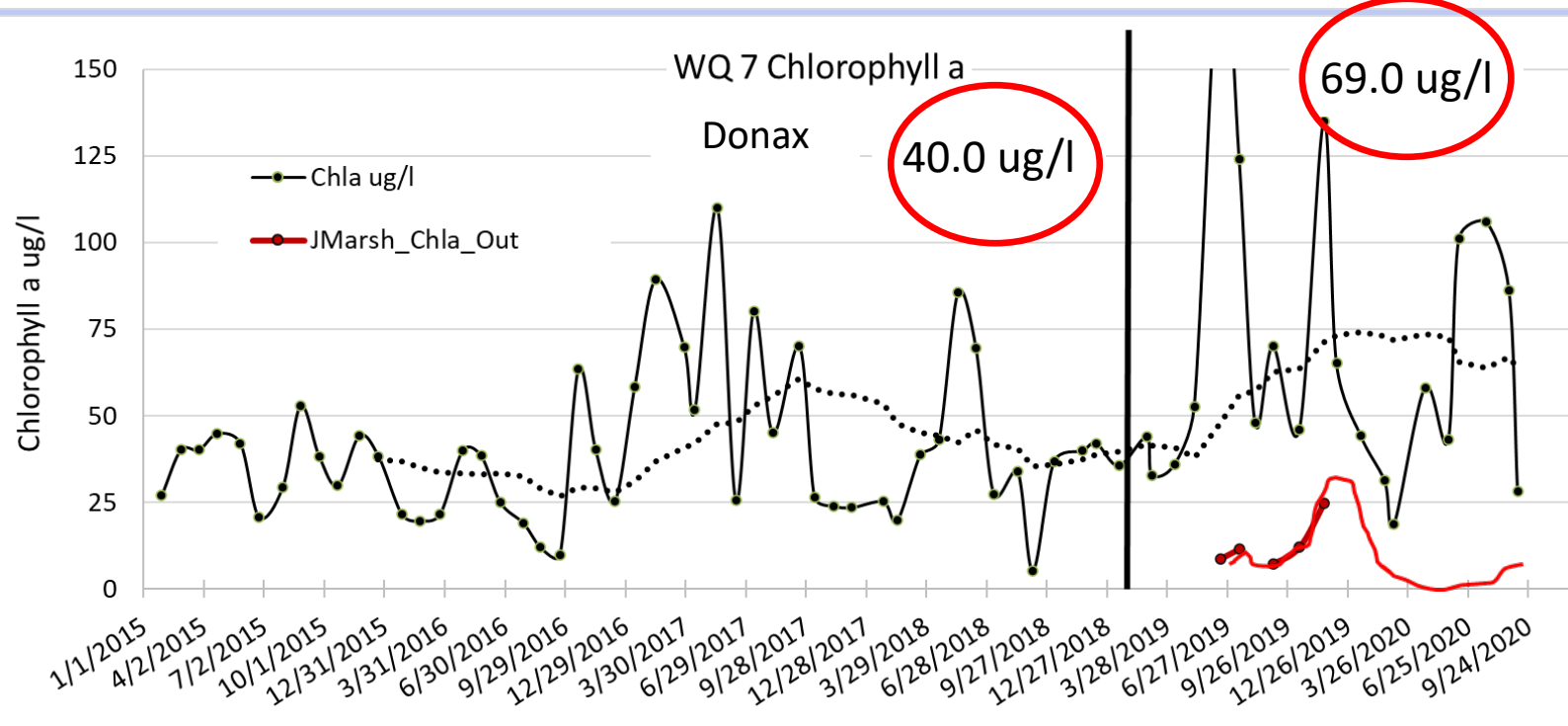
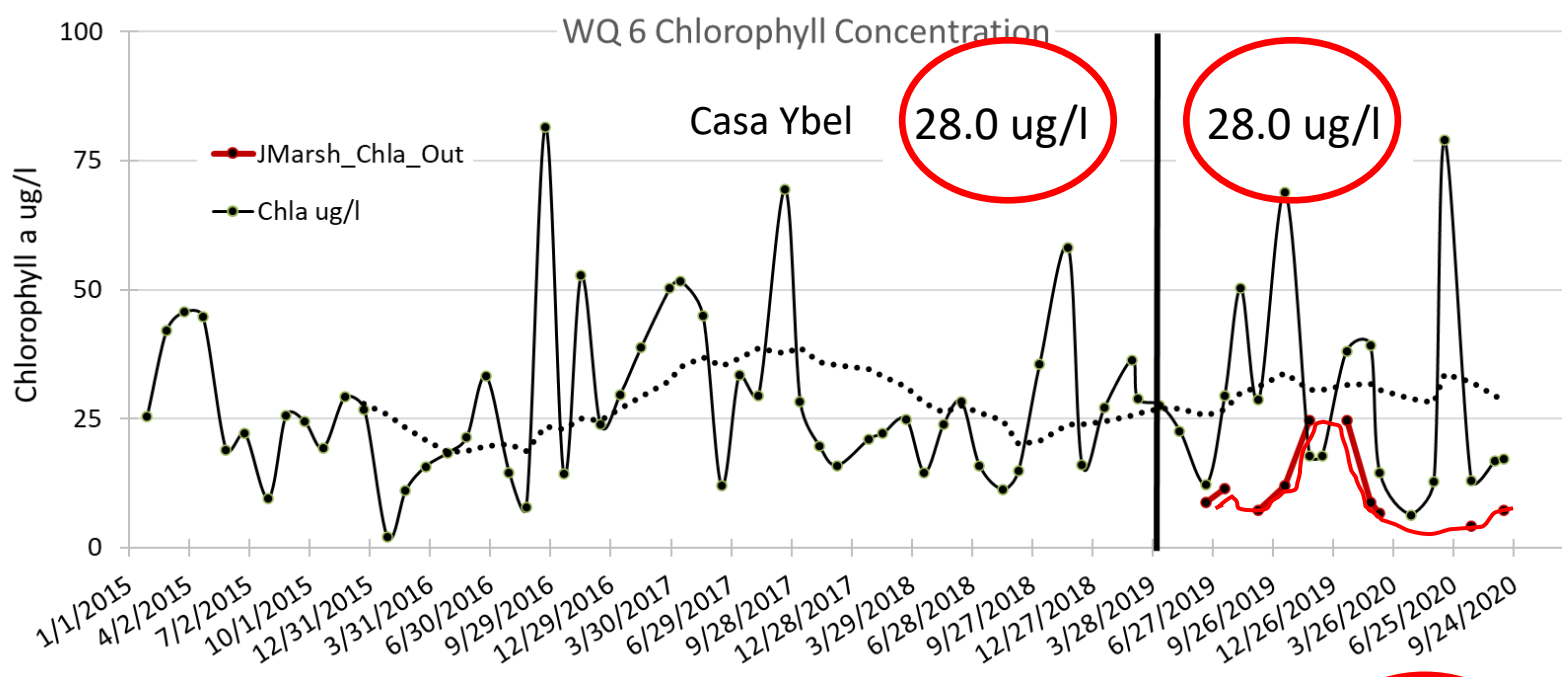


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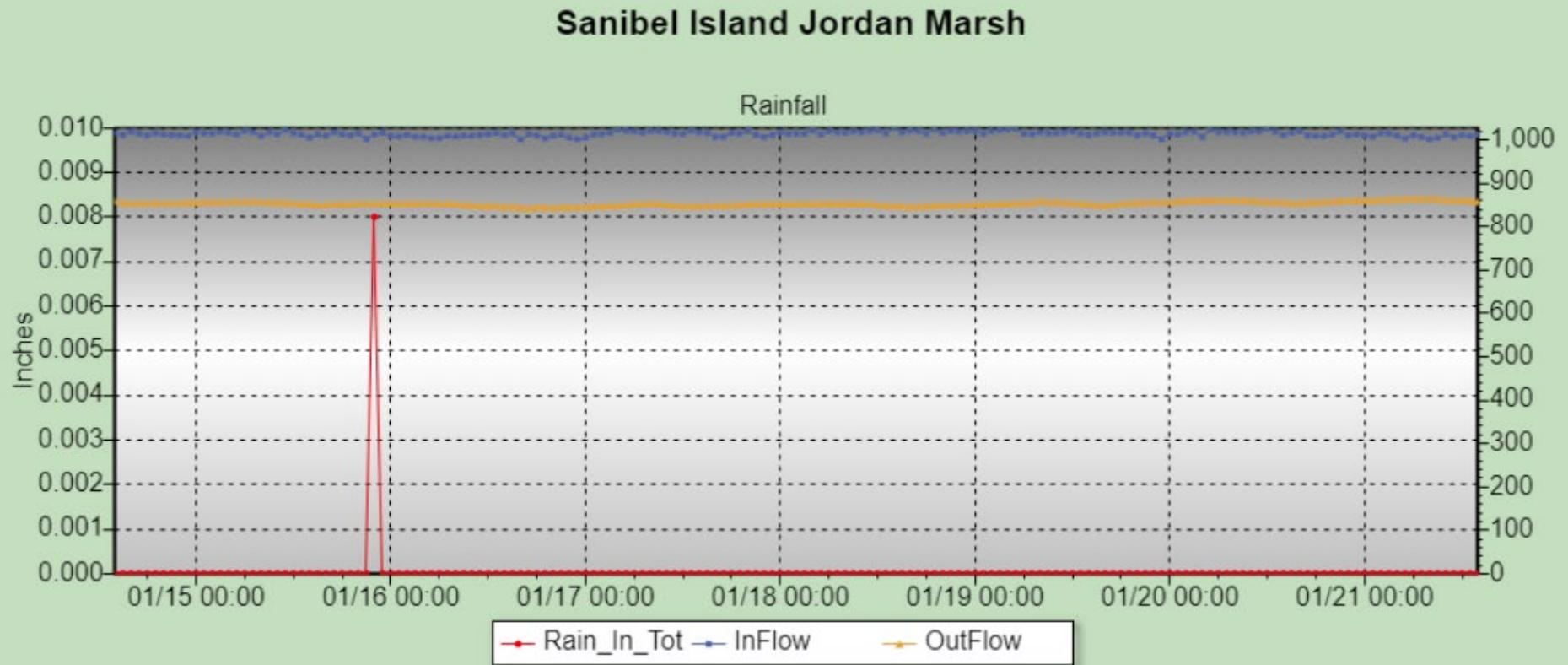


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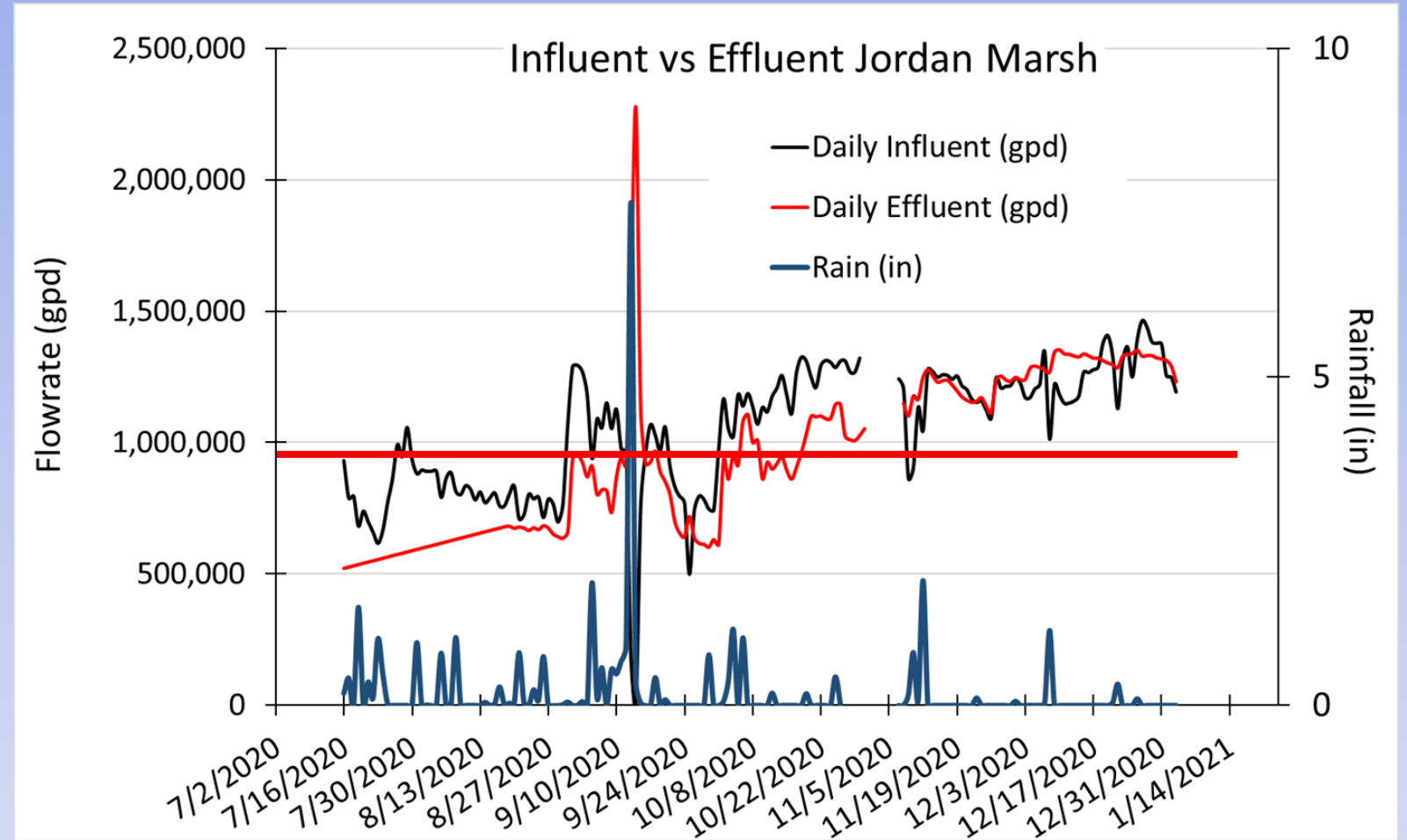
# Website for Real Time Flow Data





# Recommendations

- Improve mass removal by increasing input rate.
- 1<sup>st</sup> year was only 1/3 of suggested flow



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# Recommendations

- Stage 3 – deeper, fewer plants, no removal occurring.
- Add plants!
- Improvement of mass removal by addition of (floating) plants.





Thank  
You



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