NapaSan

OPERATIONS

PROCESS OPTIMIZATION

Dan Fritz – Operations Supervisor

Reduced Use of Polymers- Coagulants and Flocculants

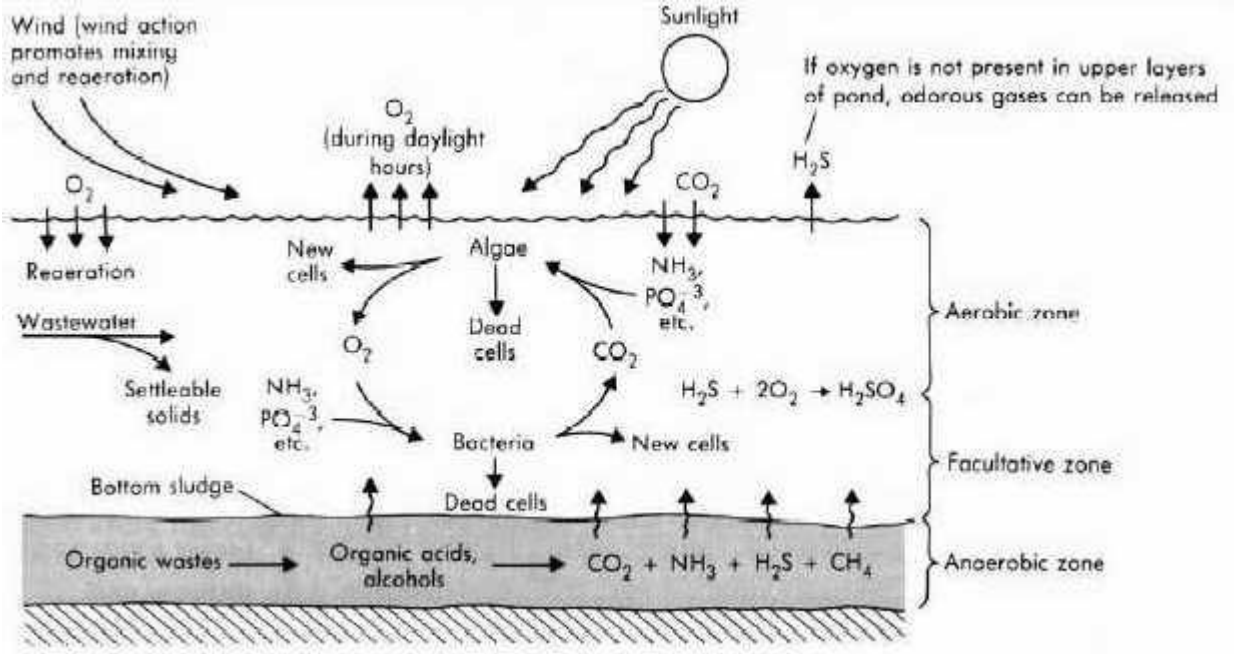
Optimization of Plant Operations

Process Optimization – Ammonium Control

Budget Impact

Pond Operation

- Maximum water column = optimal treatment.
- Facultative Pond
- Dissolved Oxygen
- Reduced BOD and TSS
- Recirculation

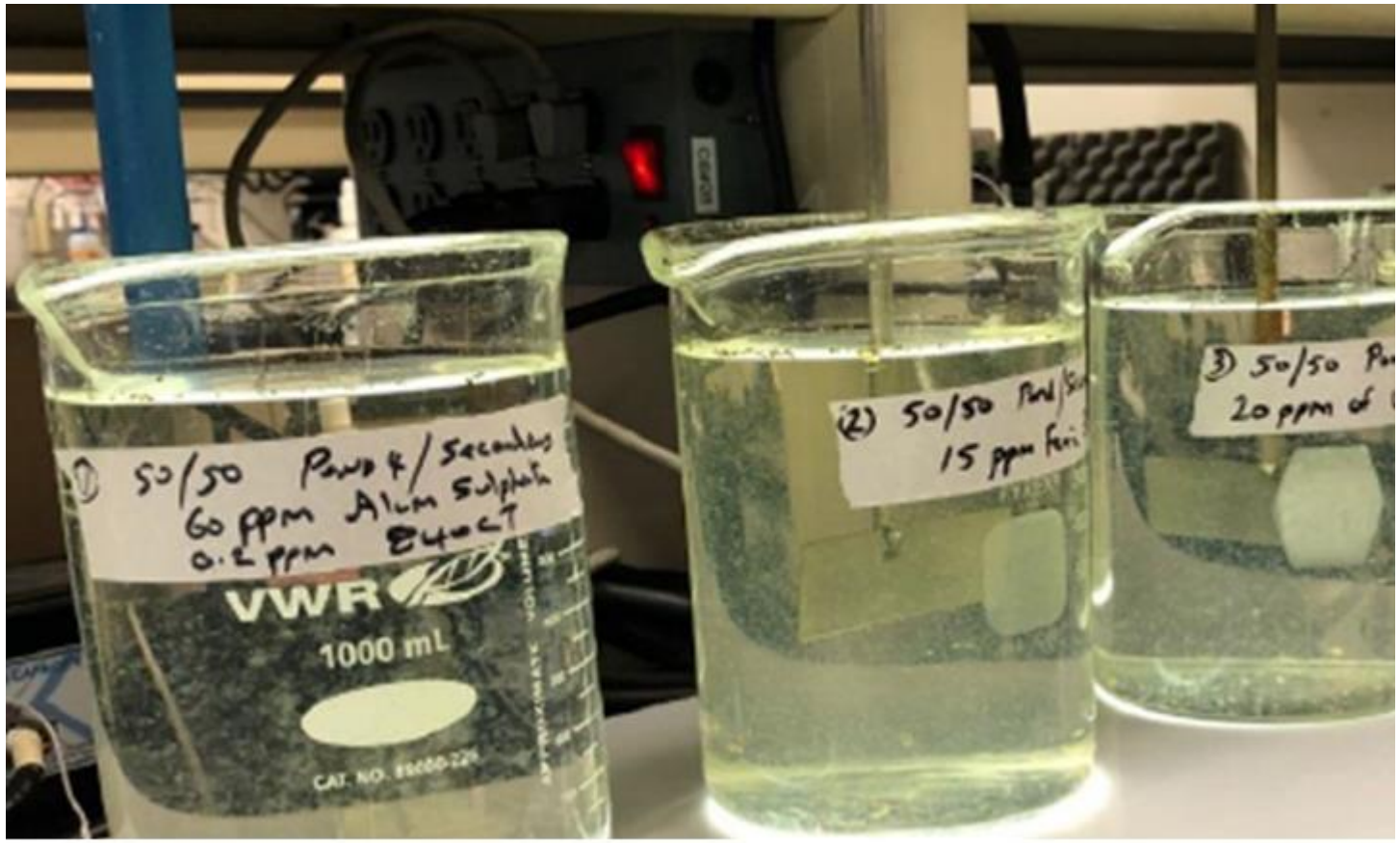


Pond Recirculation

Optimization of Plant Operations

Jar Testing

- Lab test to determine optimal dose
- Test run by Operations and by chemical venders



Optimization of Plant Operations

Operational Changes – Treat all dry weather influent in the ABs.

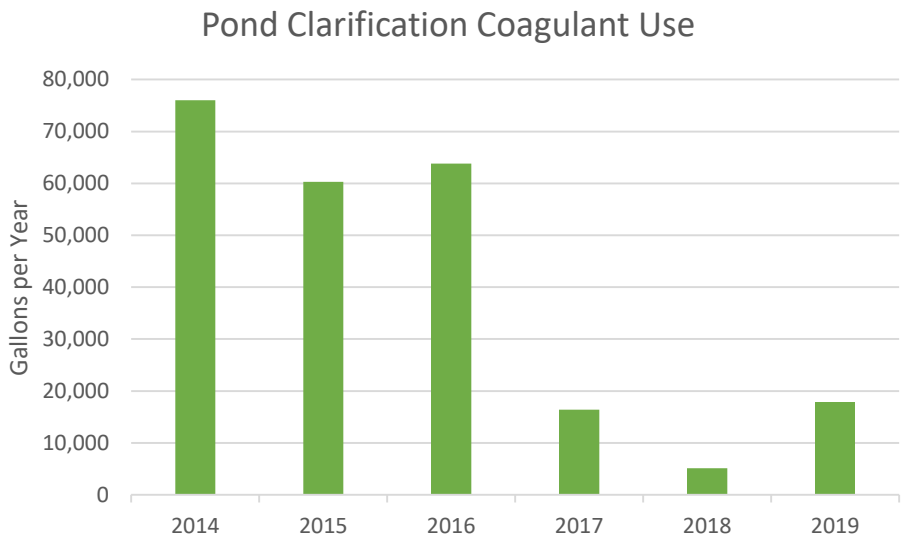
Benefits:

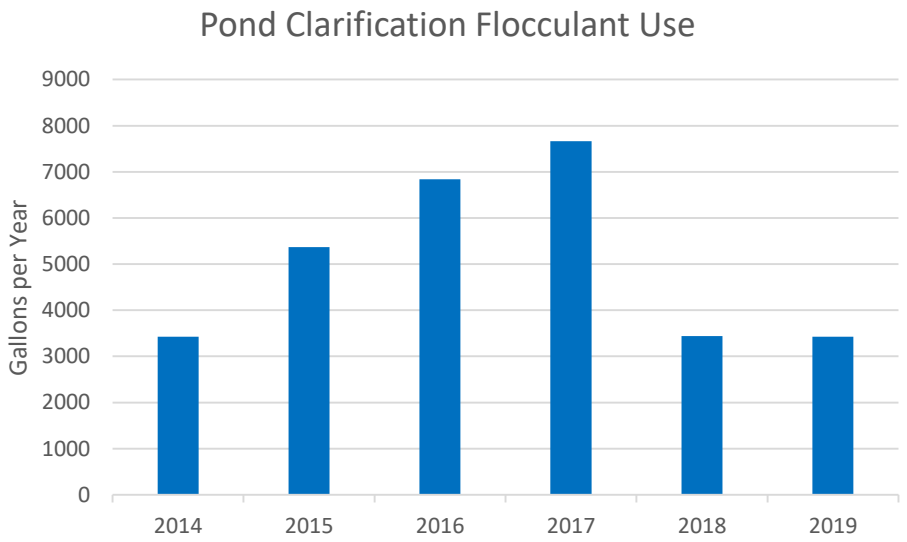
- Avoid high cost of pond water clarification
- Reduced chemical cost in the filter
- Reduced chloride concentration in RW
- Reduced loading on the pond system
- Reduced proliferation of blue-green algae

Process Optimization – Ammonium Control

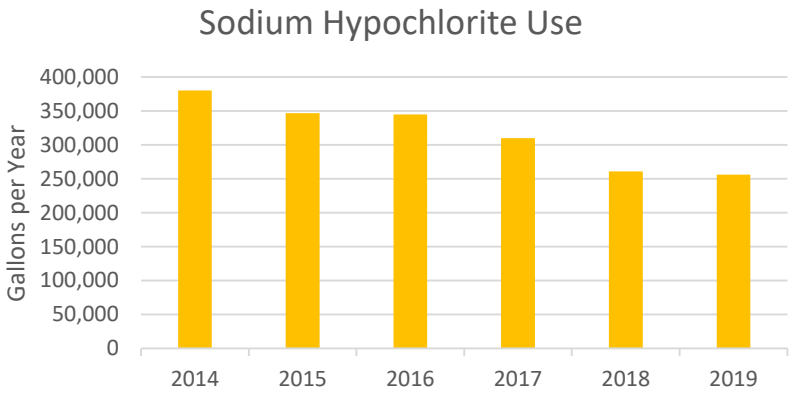
- Nitrification of Ammonia
- Maintain proper air in system for optimal treatment
- Helps prevent Breakpoint chlorination
- Reduced chemical use

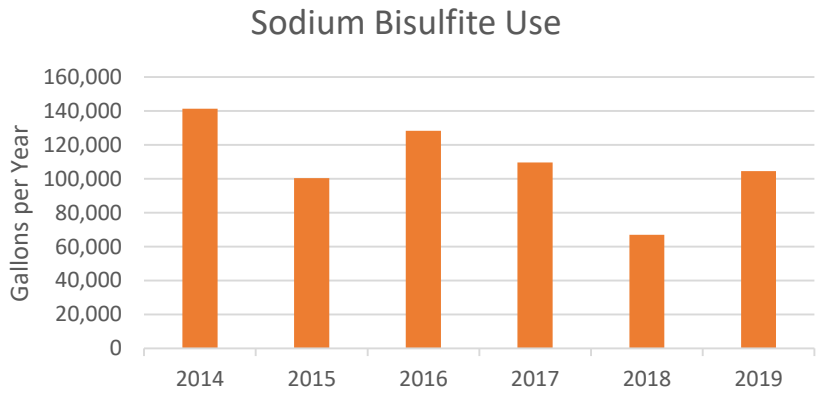
Pond Operation

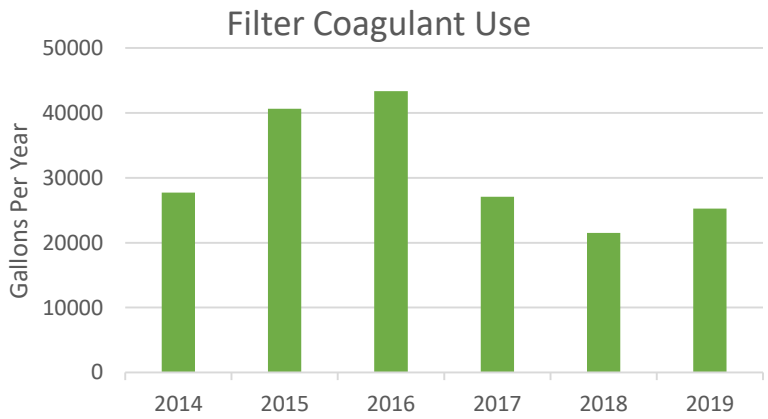




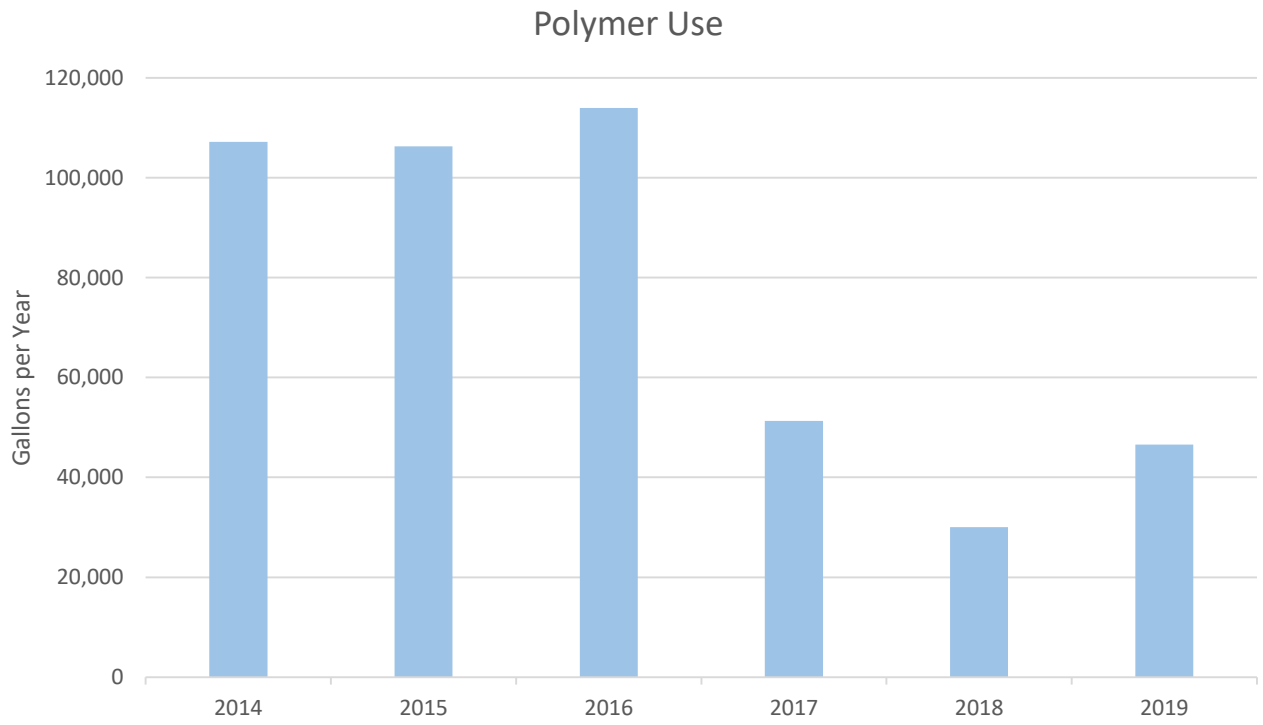
Disinfection & Filters



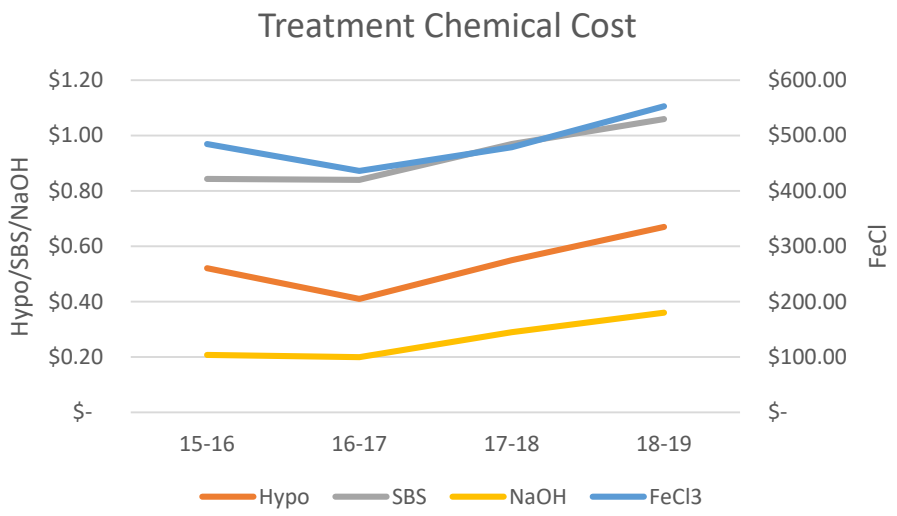


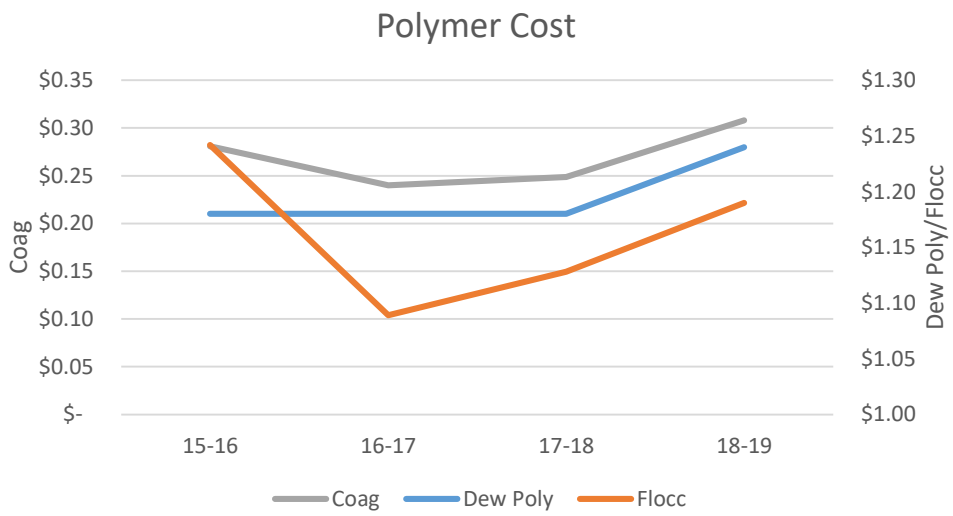


Overall Polymer Use

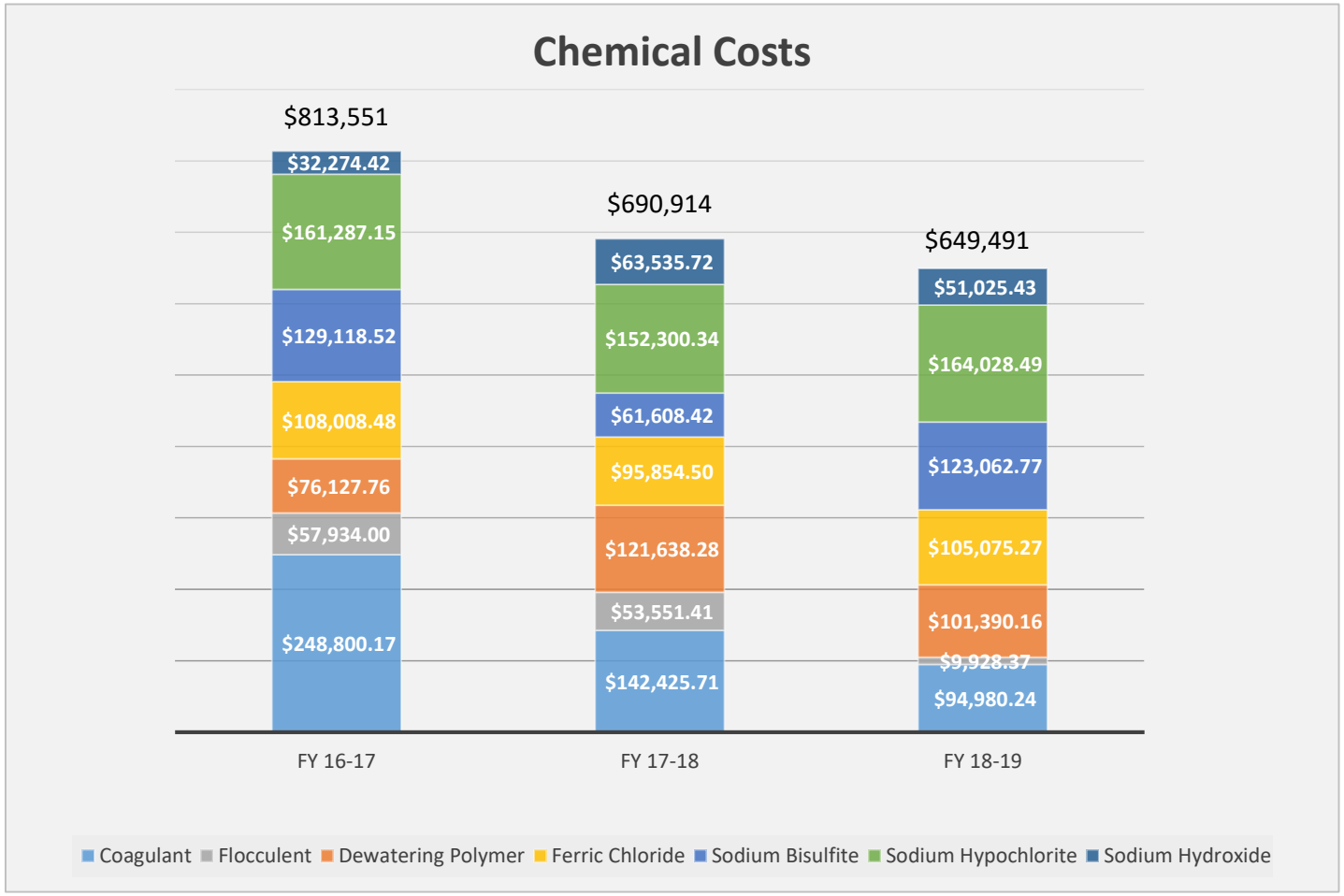


Increasing Chemical Cost





Budget Impacts



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Questions