

MITIGATION AND REMEDIATION OF HARMFUL ALGAL BLOOMS THROUGH NUTRIENT REMOVAL AS INTACT CELLULAR ALGAE BIOMASS

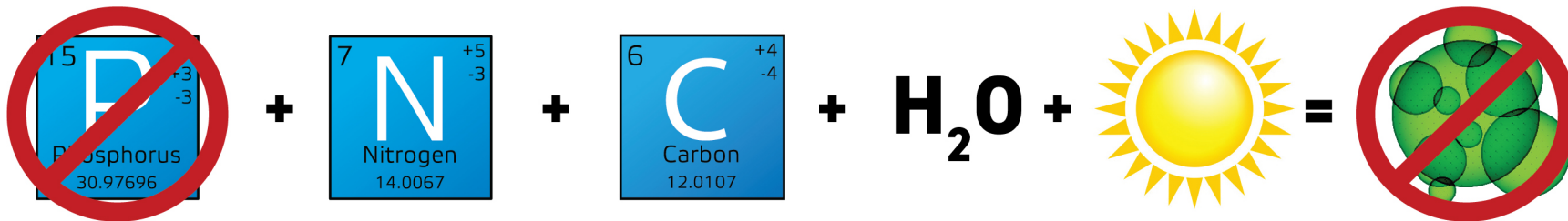
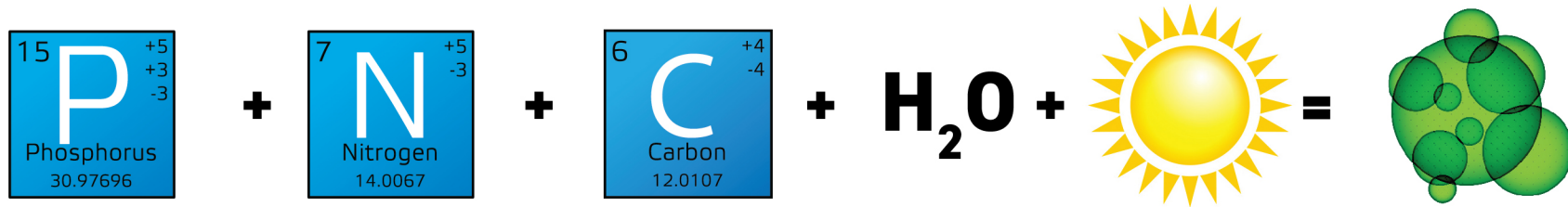
AECOM Imagine it.
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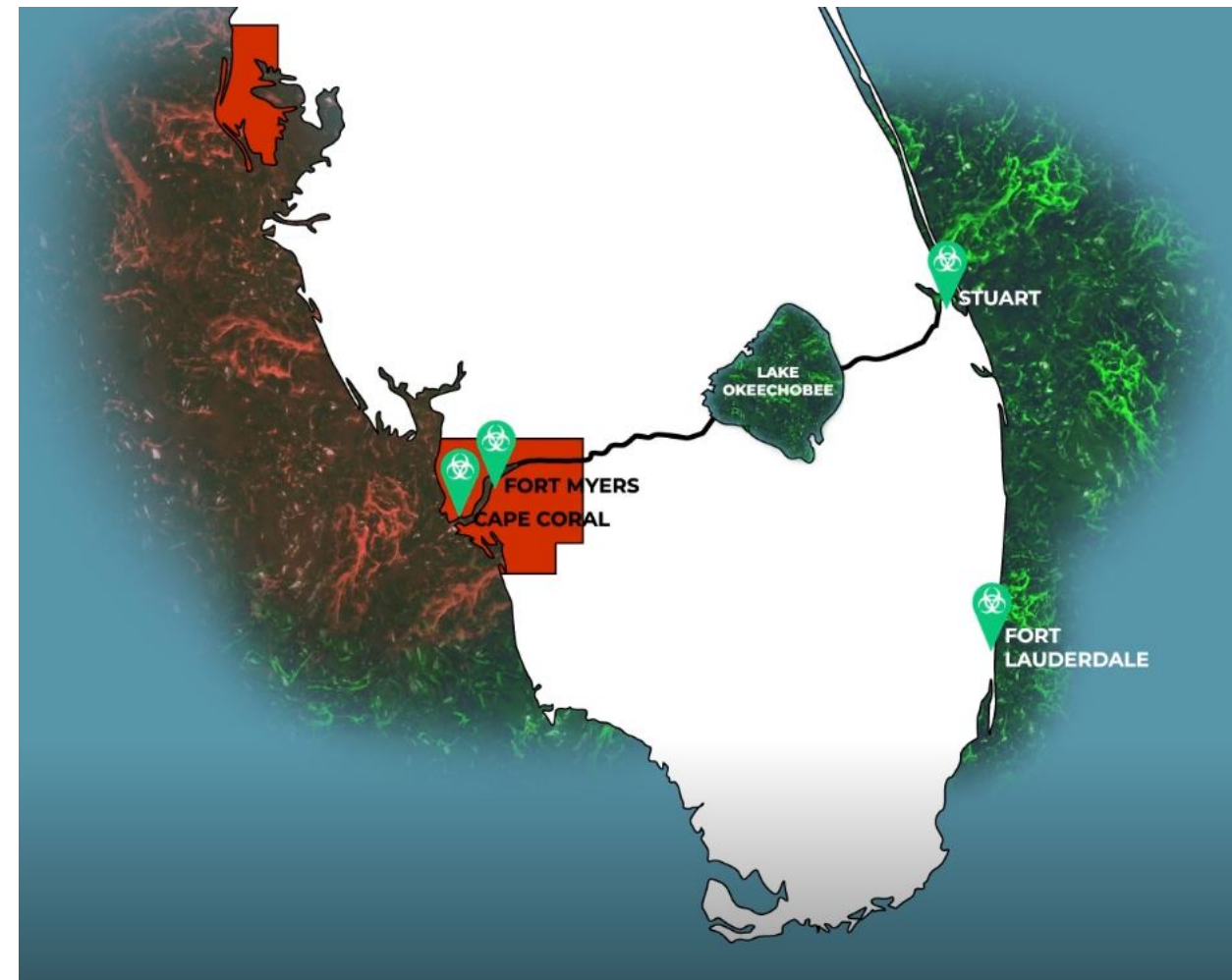
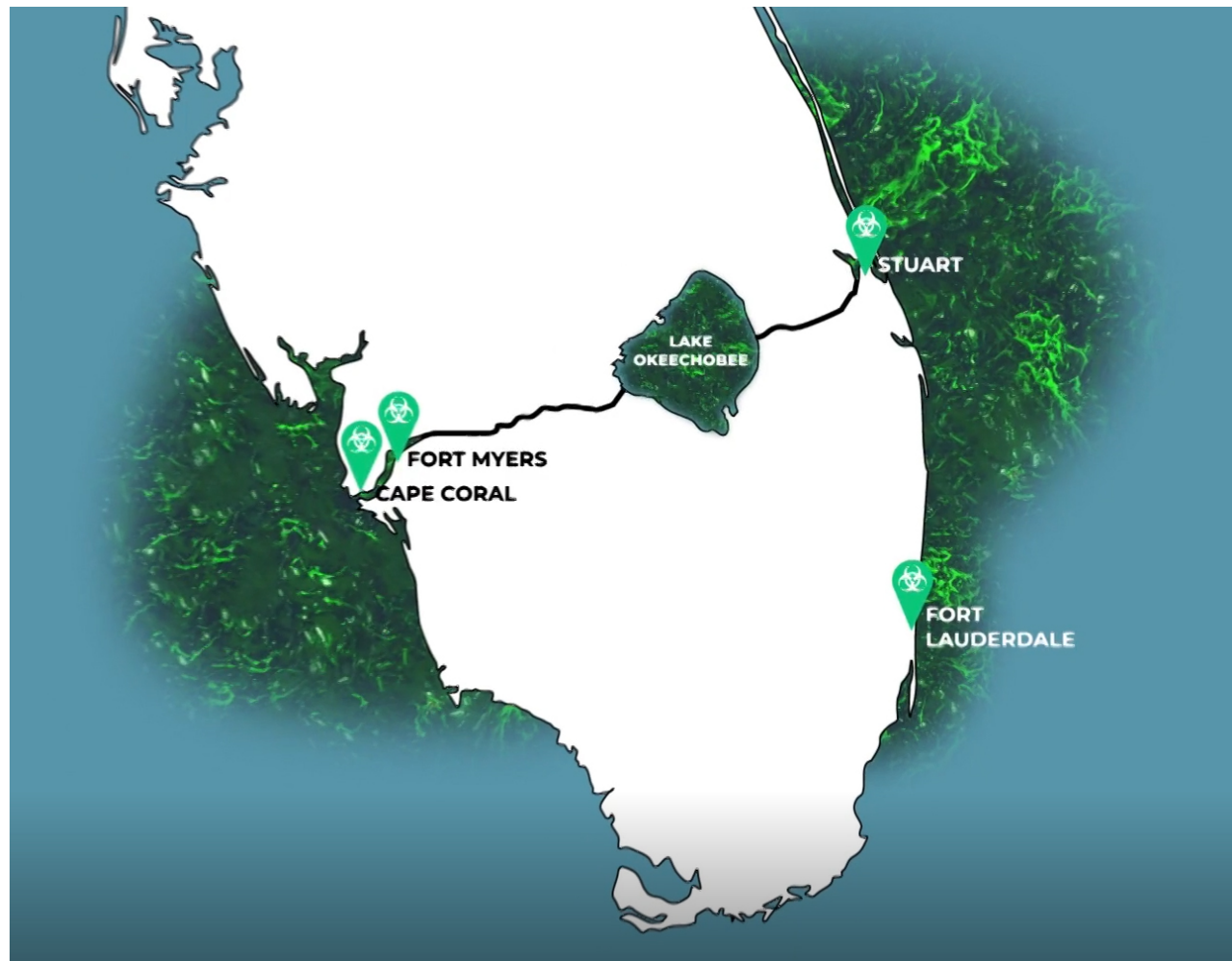


Mitigation of Algal Blooms Through Nutrient Export



Remove phosphorus from the equation, prevent algae formation.

2018 Florida HABs



Local HABs



Clipper Bay Condominium – Cape Coral, FL



August 9, 2018



August 10, 2018

Temporary Recovered Algae Treatment System

North Lee County RO WTP



Best (Appropriate) Technology - BAT

Dissolved Air Flotation (DAF)

Liquid/solid separation process in which microscopic air bubbles are attached to solids particles suspended in water, imparting buoyancy and causing the solids to float to the water's surface where they can be removed.



Photo Credit – Gainesville Sun

Why DAF?

- Proven “Shovel Ready” Technology
- High Hydraulic Loading - Highest Throughput in Smallest Space
- Algae Naturally Floats when Agglomerated
- Scale-able to Meet Flow Requirements
- Very Efficient Liquid/Solid Separation
- Recovered Algae Compacted into a Heavy Slurry
- Recovered Biomass Beneficial Use Potential

High Quality Effluent



Flotation Tank with Float Blanket



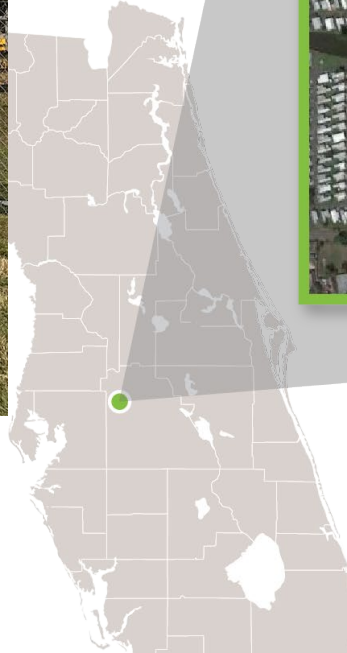
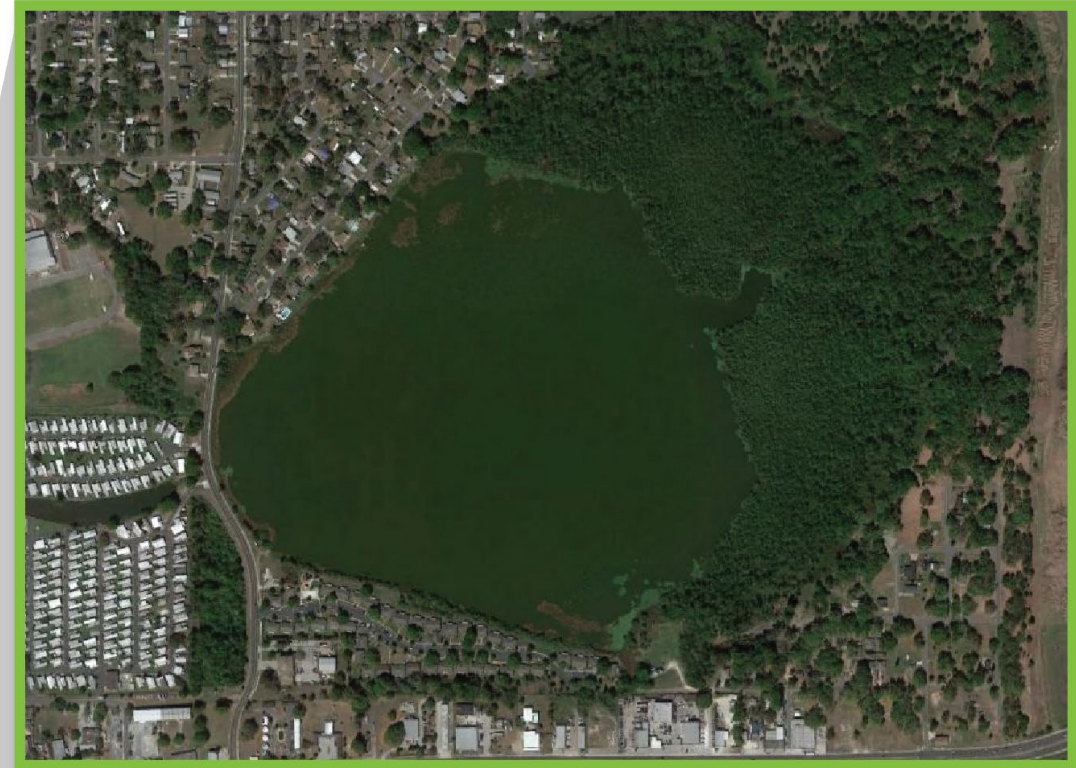
Belt Filter Press Slurry Dewatering



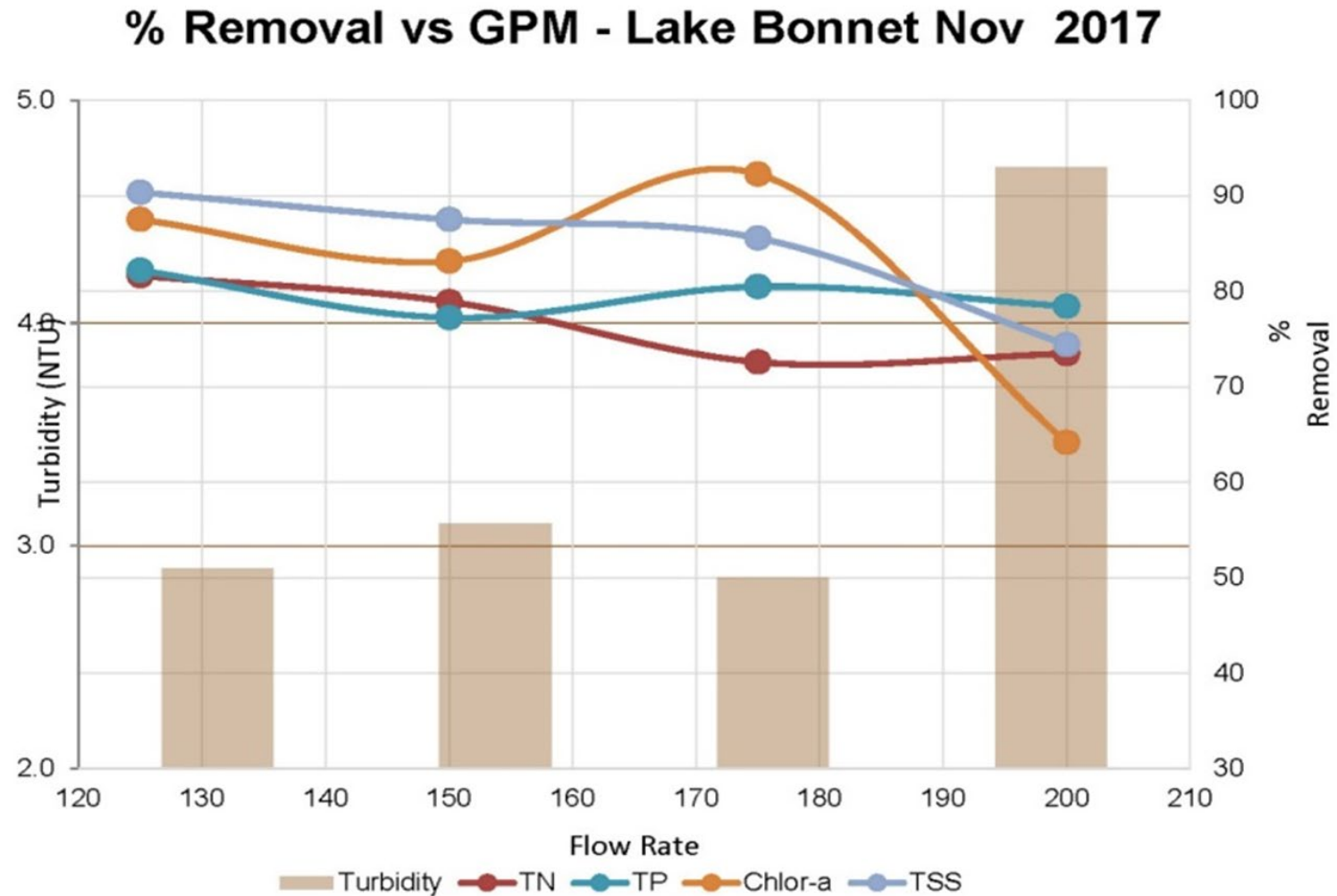
Belt Filter Press - Filter Cake



2017 Lake Bonnet Pilot Test - Lakeland, Florida



2017 Lake Bonnet Pilot Test - Lakeland, Florida

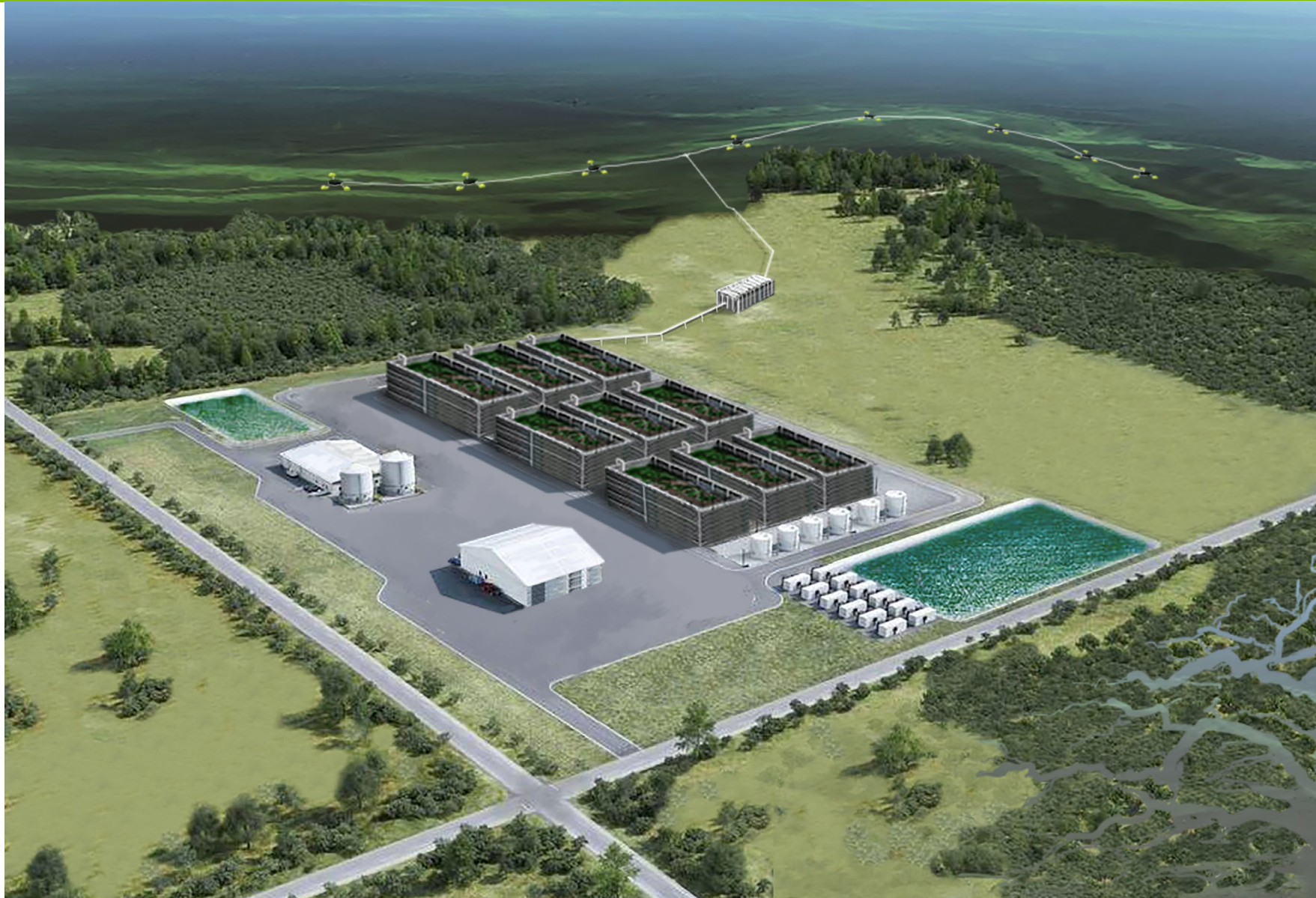


Performance Objective: Green Water In – Sparkling Water Out



Total N & P Removal Efficiency: 75% to 95%
Chlorophyll-a Removal Efficiency: 85% to 95%

Conceptual Rendering



Conceptual Rendering





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