

Restoration Strategies Science Plan Implementation

Long-Term Plan Quarterly
Communications Meeting

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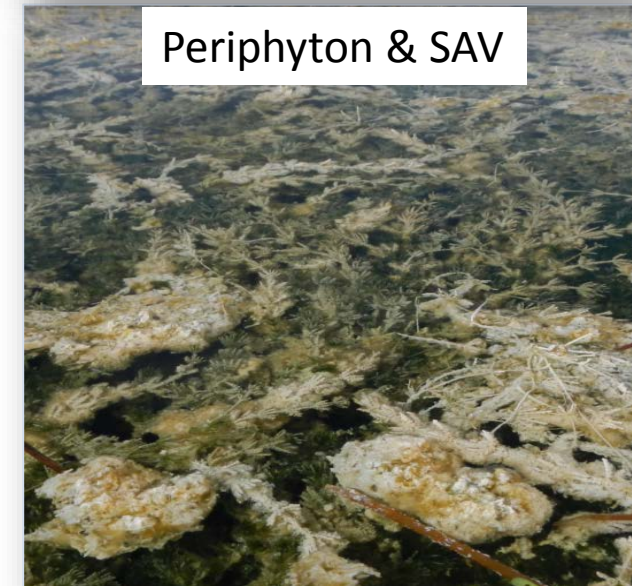
Soil Amendments/Management

- **Objective:**
 - Investigate if internal phosphorus loading can be reduced by application of soil amendments and/or soil management techniques
- **Status:**
 - Completed review of technologies
 - No plans to do further testing on chemical amendments
- **Next steps:**
 - Soil inversion evaluation in STA-1W Expansion (2019)



STA-3/4 Periphyton-based STA: Performance, Design & Operational Factors

- **Objective:**
 - Determine factors that contribute to PSTA Cell's superior treatment performance
- **Status:**
 - Interim reports completed
 - Ongoing data analysis and additional testing
- **Next Steps:**
 - Complete testing and data analysis
 - Topographic survey and estimated depth to bedrock in selected STA cells
 - Feasibility study



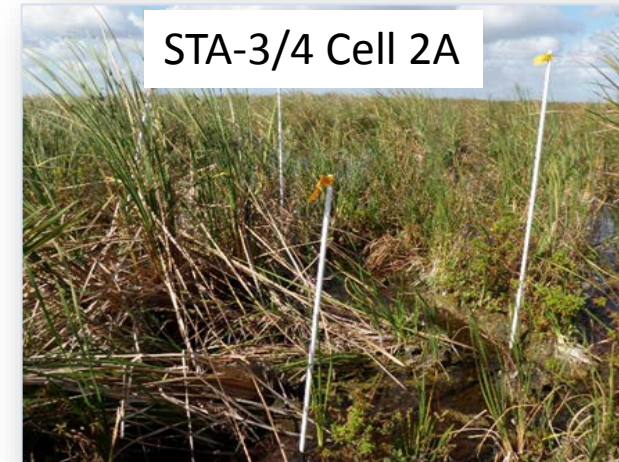
Influence of Canal Conveyance Features on STA & FEB Inflow & Outflow TP Concentrations

- **Objective:**
 - Determine if P concentrations change when conveyed through STA inflow & outflow canals
- **Status:**
 - Completed Phase I desktop study of STA-1W, STA-2, and STA-3/4 Inflow Canals, and STA-2 Discharge Canal
 - Completed STA-2 Inflow Canal Phase II field study
- **Next Steps:**
 - No further Canal Study tasks recommended at this time



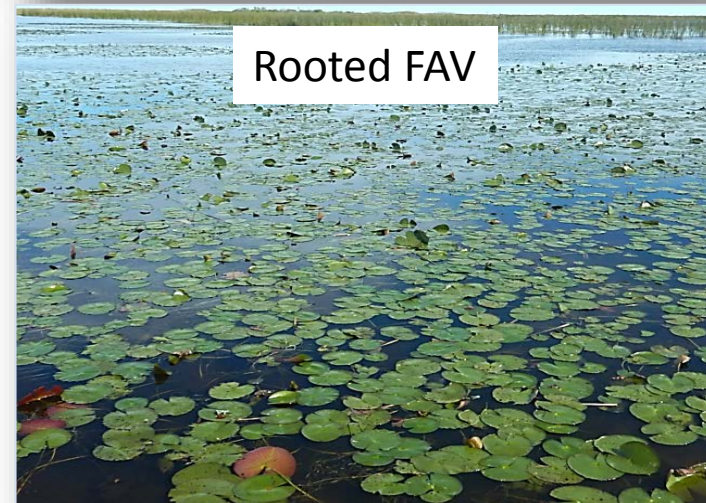
Impacts of Deep Water Inundation Pulses on Cattail Sustainability

- **Objective:**
 - Determine inundation depth & duration threshold to sustain cattail in the STAs
- **Status:**
 - Completed STA-1W Cell 1A in-situ study
 - Continuing STA-3/4 Cell 2A in-situ study
 - Test cell preparations are ongoing; test cell study will start late 2017 or early 2018
- **Next Steps:**
 - Continue cattail surveys in STA-3/4 Cell 2A
 - Grow-in of cattail in test cells, then impose inundation treatments



Use of Alternative Vegetation to Achieve Lower Outflow Total P Concentrations

- **Objective:**
 - Determine if rooted floating aquatic vegetation (FAV) can further reduce TP concentrations in water column
- **Status:**
 - Initial sampling was completed
 - Study is continuing in 2017
- **Next steps:**
 - By July 2017, evaluate available data and determine if further investigation is warranted
 - Phase II (more in-depth investigation) to determine factors and mechanisms relevant to rooted FAV performance



Evaluate Phosphorus Sources, Forms, Flux, & Transformation Processes in the STAs

Objective: Characterize P sources, speciation, cycling, & transport in STAs, and understand mechanisms and factors influencing P reduction in low P environment

Task	Status
Data mining	Completed
Surface water quality & Flux Measurements	Ongoing
Soil characterization	Baseline completed; additional analyses ongoing
Vegetation assessment	Baseline completed; continuing
Fauna surveys	Ongoing
Particle dynamics	Ongoing
Microbial activity assays	Ongoing
Data synthesis & integration	Planning phase



Status of Other Studies

Study	Status
Development of Operational Guidance for FEB/STA Regional Operational Plans	Field experiments completed; operational tools developed; final report by April 2017
Evaluation of Sampling Methods for Total Phosphorus	Study completed; final report pending; follow-up study planned for 2018
STA Water and Phosphorus Budget Improvements	Flow data improvements continuing; water and phosphorus budget updates underway for selected treatment cells

Additional Information

- Planning underway for new studies for 2018-2022 implementation
- Science Plan information:
 - www.sfwmd.gov/restorationstrategies/
- Annual SFER (Chapter 5C):
<https://www.sfwmd.gov/science-data/sfer>
- Greater Everglades Ecosystems Restoration (GEER) Special Sessions on STAs & Studies – 4/18/17

Questions?

