

Board of County Commissioners

**Request for Conservation
Area Impact Permit**

CAI-19-05-022

**Applicant: Phosphorus Free Water
Solutions, LLC.**

July 2, 2019



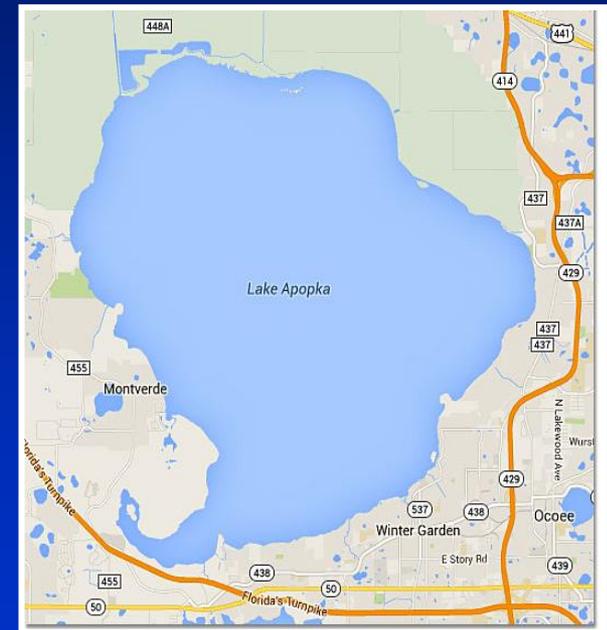
Background

- Lake Apopka is impaired for Total Phosphorous
- Lake Apopka North Shore (LANS) is owned by the St. Johns River Water Management District (SJRWMD)
- Lake bottom is sovereignty submerged lands owned by the Trustees of the Internal Improvement Trust Fund of the State of Florida
- SJRWMD awarded a contract to Phosphorous Free Water Solutions, LLC to implement phosphorous removal project



Lake Apopka Innovative Total Phosphorus Removal Project

- **Unconsolidated flocculent (UCF) sediment**
 - Source is primarily organic matter produced from dead algae
 - Contains high nutrient levels
 - Easily resuspended in the water column by wind action
 - Blocks light penetration
 - Prevents growth of submerged aquatic vegetation, which is vital to restoring the lake
- **Proprietary process demonstrated on pilot scale in 2017**



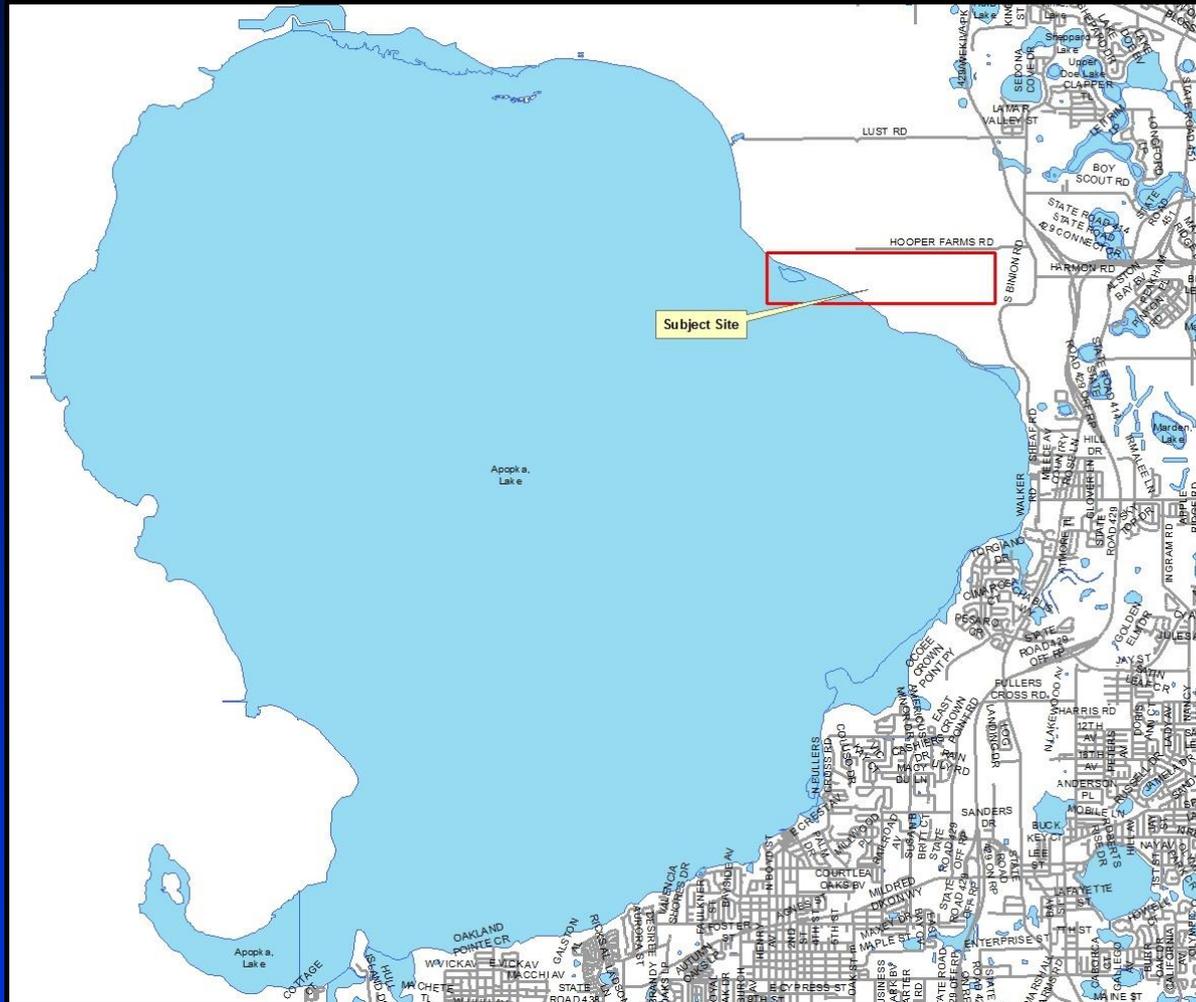


Project Purpose

- **The Lake Apopka Innovative Total Phosphorus Removal Project, as designed, has the capability at full operational rates to:**
 - Remove 16,000 to 48,000 pounds (estimated) per year of total phosphorus originating from all sources.
 - Process approximately 3.3 billion gallons of water annually at the facility.
 - Bind and cover residual pesticide contaminants in soil on a five-acre portion of the property with treated slurry.



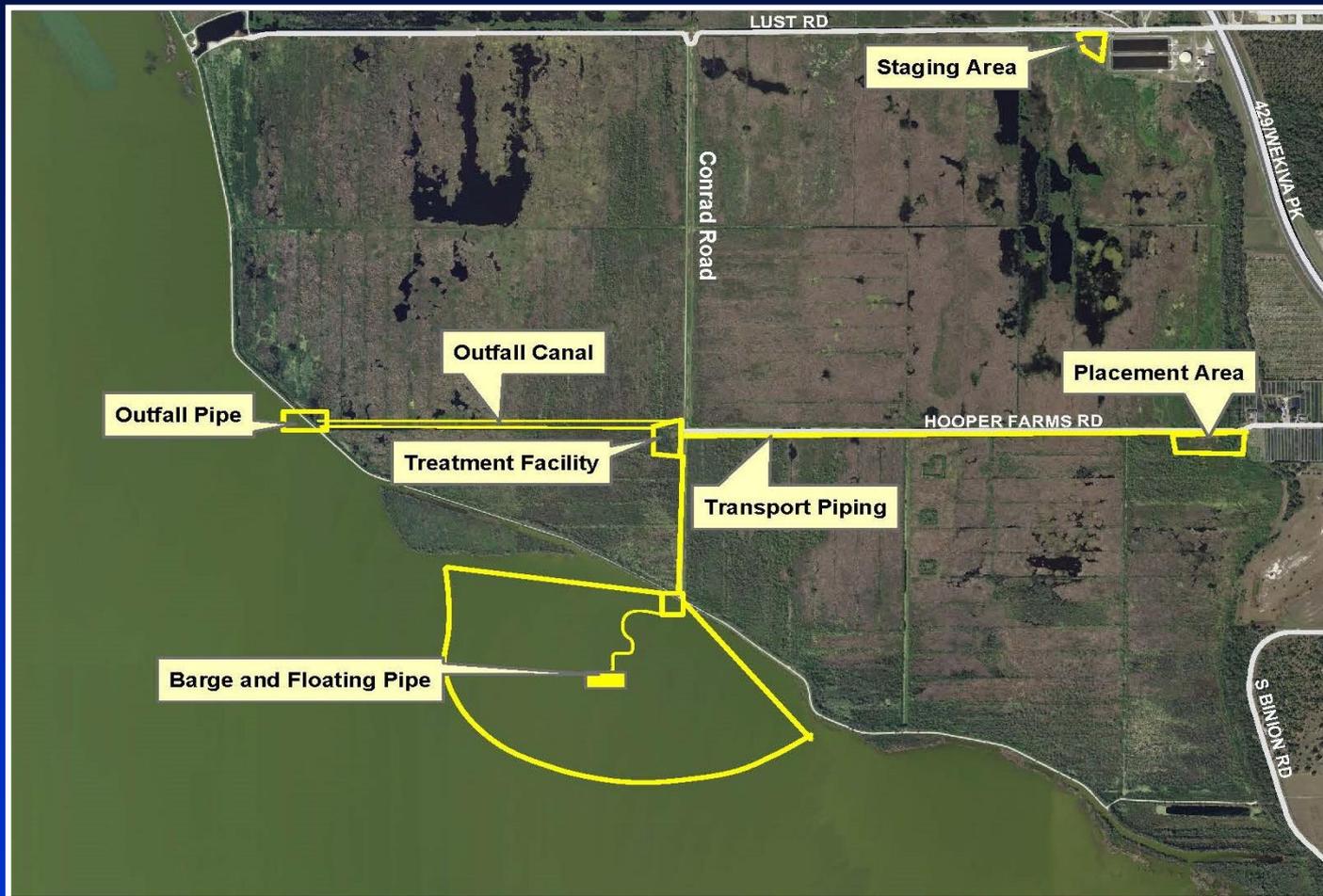
Location Map



Lake Apopka North Shore Restoration Area



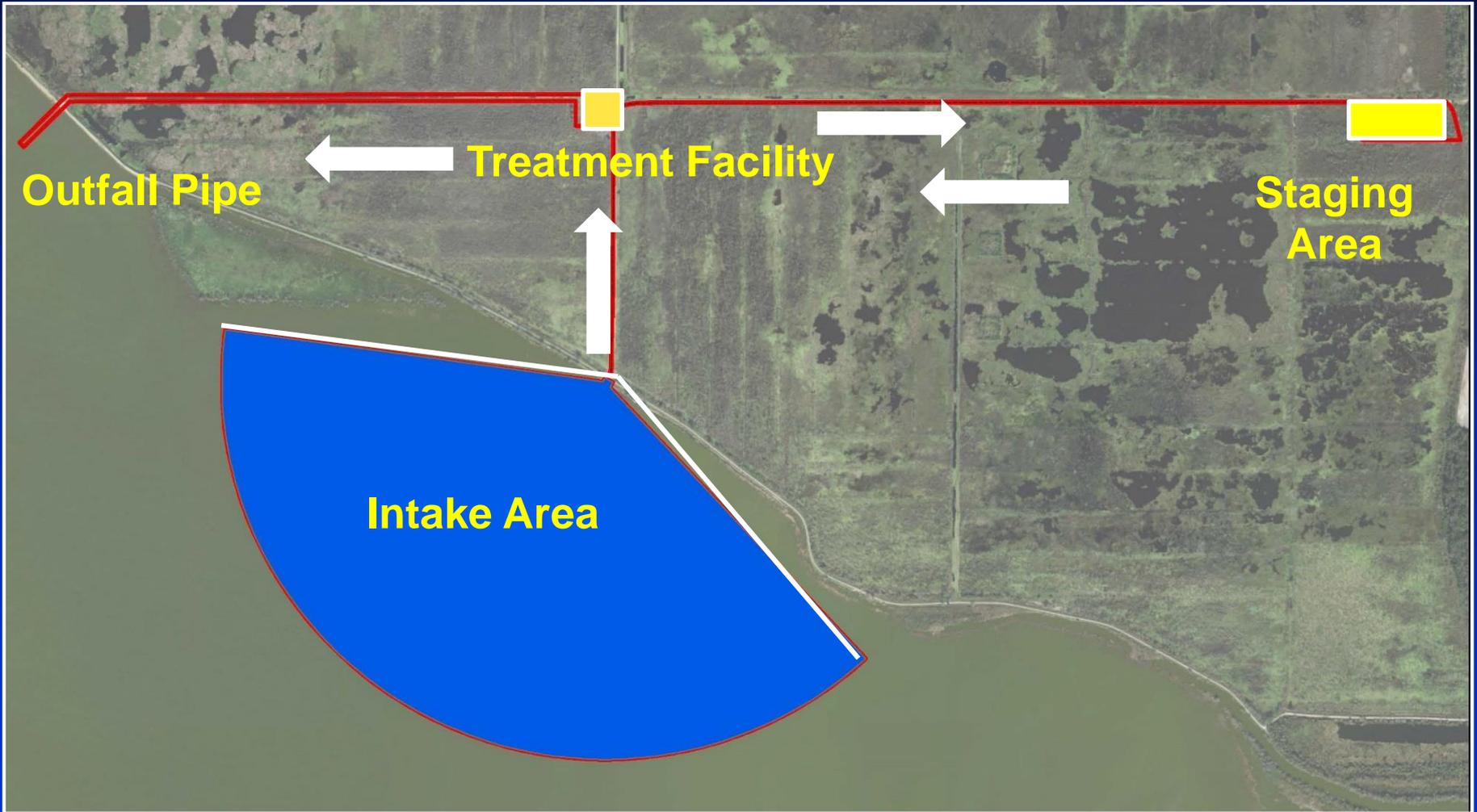
Location Map



Lake Apopka North Shore Restoration Area

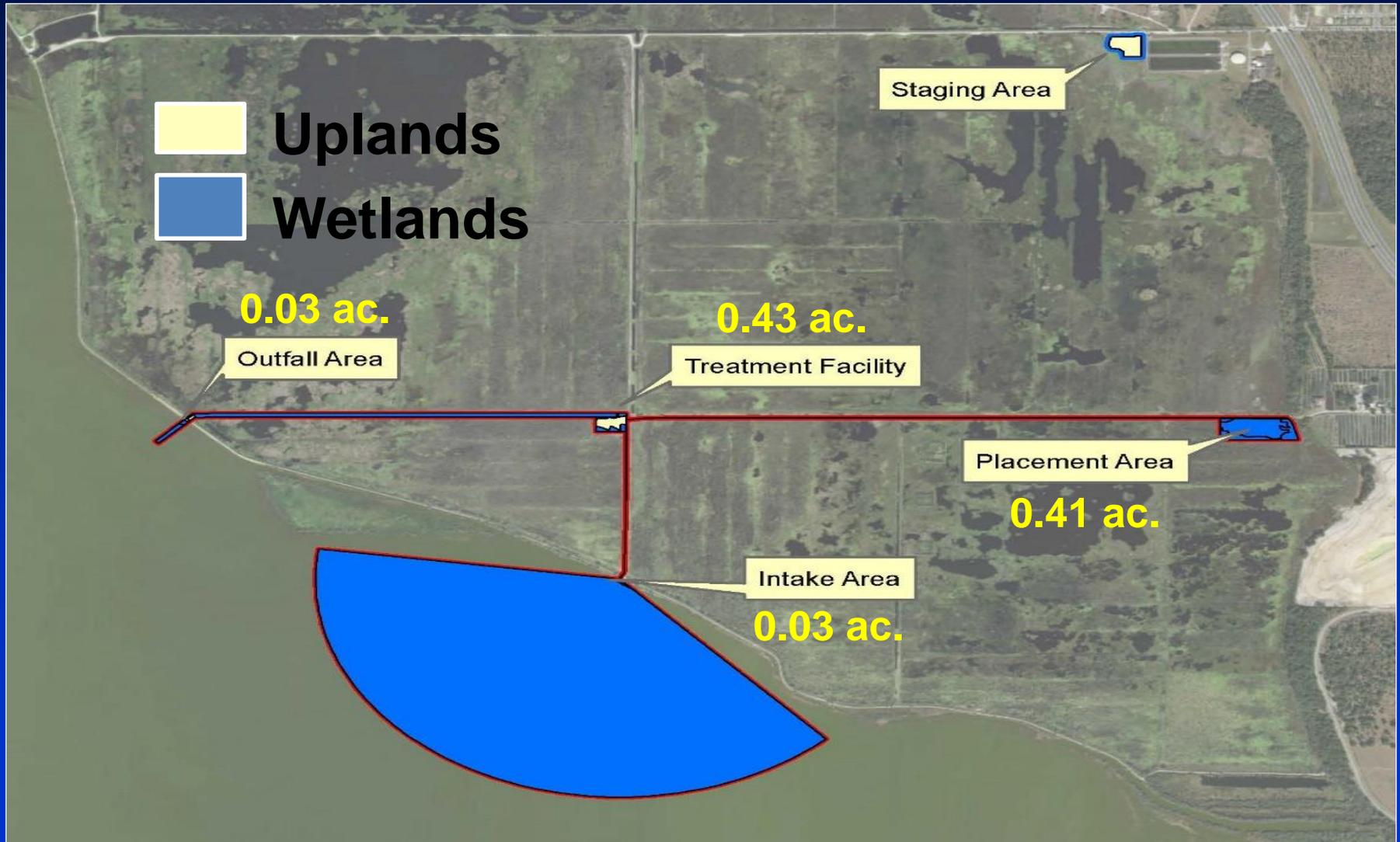


Location Map – Process





Wetland and Surface Water Impacts





Existing Conditions

Intake Area





Existing Conditions

Treatment Facility





Review Criteria

- **Sec. 15-362(5) – Where wetlands serve a significant and productive environmental function . . . any alteration or development affecting such lands should be so designed and regulated so as to minimize or eliminate any impact upon the beneficial environmental productivity of such lands, consistent with the development rights of property owners.**
- **Sec. 15-396(3)(a) – The removal, alteration or encroachment within a Class I conservation area shall only be allowed in cases where no other feasible or practical alternatives exist that will permit a reasonable use of the land or where there is an overriding public benefit.**



Considerations

- **This project will supplement SJRWMD's restoration timeline by removing phosphorus and remediating a portion of the site with historic pesticide contaminants**
- **PFWS is obligated to restore all work areas to the existing condition, so all wetland impacts have been considered temporary in nature**
- **EPD staff has evaluated the permit application pursuant to Orange County Code, Chapter 15, Article X**
- **The applicant has demonstrated that the proposed temporary Class I impacts allow for a reasonable use of the property and that there are no feasible or practical alternatives to minimize or avoid the proposed impacts and that the project has an overriding public benefit**



Action Requested

- **Approval of Conservation Area Impact Permit (CAI-19-05-022) for Phosphorus Free Water Solutions, LLC, subject to the conditions listed in the staff report. District 2**