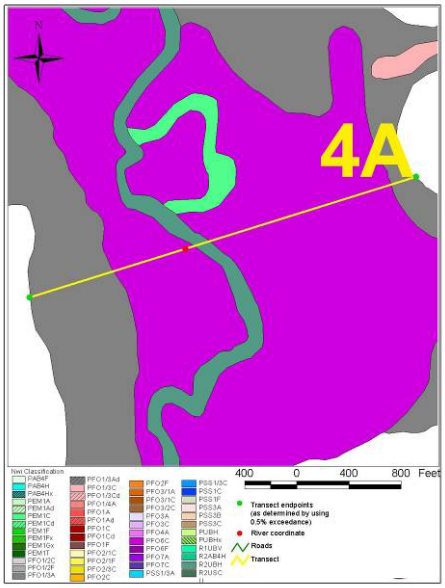
GPI

Characterization of Wetland Vegetation Communities and Hydric Soils in Four River Systems: Middle Peace, Upper Hillsborough, Weeki Wachee, and the North and South Prongs of the Alafia

Habitat Mapping



Client/Owner: Southwest Florida Water Management District
Project Location: Polk, Hardee, Desoto, Hillsborough, and Hernando Counties, Florida

GPI has been contracted by the Southwest Florida Water Management District to characterize vegetation, hydrology, and soil characteristics along transects at the Middle Peace River, Upper Hillsborough River, Weeki Wachee River, and the North and South Prongs of the Alafia River. Data obtained through this habitat mapping process are needed for the scientifically sound establishment of Minimum Flows and Levels for the rivers. Specific tasks include: determination of appropriate transect locations; GIS mapping; field assessments of elevation, vegetation, and soils; database development and management; statistical analyses; and detailed reporting services. The work effort involves extensive and detailed data gathering, field ecological and biological assessments, GIS mapping, and statistical analyses for 45 transects. The methodology requires the use of quadrats to identify groundcover vegetation at random locations between survey station markers. The occurrence of shrubs and trees are characterized using the Point Centered Quarter method. Key physical indicators of historic inundation are identified, including: cypress buttress inflection elevations, adventitious roots, lenticels, etc. Soils are manually inspected to an adequate depth to appropriately classify the soils. Univariate statistical analyses are performed to verify field-collected data; additional multivariate data analyses (e.g., classification tree analyses) are performed to complement the univariate analyses. Data collected in support of the assessments includes: 1999/2000 Digital Ortho Quarter Quads, National Wetlands Inventory Wetlands; 2001 Florida Land Use Cover and Forms Classification System, Florida Game and Fresh Water Fish Commission GAP Land Cover Classification System, Natural Resources Conservation Service soils, Federal Emergency Management maps, United States Geological Survey topography, water level gage locations, and modeled percent exceedances.