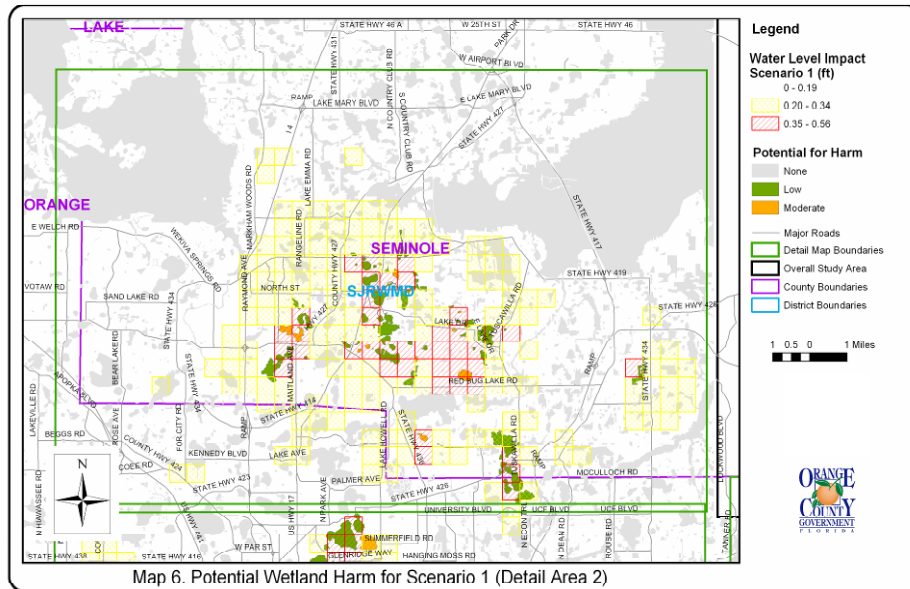


Integrated Water Resources: Wetland Impact Assessment



Client/Owner: Orange County

Project Location: Orange County, Florida

GPI, as a sub-consultant to PB Americas, Inc., assisted Orange County Utilities with an ecological impact assessment to estimate the potential effects of a proposed increase in groundwater withdrawals. The wetland impact assessment study was intended to address a Request for Additional Information (RAI) from the St. Johns River Water Management District (SJRWMD). A lake and wetland assessment for all water bodies located within the surficial aquifer predicted net water level impact areas of 0.2 ft or greater was completed, allowing the determination of any potential economic or environmental harm due to the proposed consumptive use. Much of this study was performed in the GIS environment, including defining the study area and assessing net water level impacts using land use land cover data, soils, and predicted drawdown output from a groundwater model. Spatial and tabular data were processed in a database environment, where all necessary computations to assign probability of ecological change were performed. Literature values for allowable changes in hydrology were used in conjunction with expert opinion from field assessments to assign potential for harm to each wetland and lake feature. A report and monitoring plan were prepared based on results of the analyses of the 173 assessed wetlands/lakes of interest.