



ORANGE COUNTY STATE OF THE WETLANDS ASSESSMENT

PROJECT DESCRIPTION

Applied Ecology, Inc. (AEI) supported the Orange County Environmental Protection Division (OCEPD) with a county-wide State of the Wetlands (SOTW) study to evaluate the effectiveness of the County's wetland ordinance initially adopted in 1987. Under the prime Contractor (Drummond Carpenter [DC]), AEI was tasked with quantifying the state of the wetlands and adjacent upland ecological communities within the County to help assess the effectiveness of the existing wetland ordinance at preventing loss of wetlands and wetland degradation. To accomplish this task, AEI performed a wetland inventory and functionality assessment utilizing remote sensing, field validation, and geospatial analysis techniques. The study found that despite the exiting ordinance, there had been a net loss of wetlands throughout the county from 1990 to 2022. In addition to loss in wetland area, the study found that wetland fragmentation had increased, resulting in increased edge effects, exposure to exotic species and potential hydrological changes that influence wetland function. These results revealed several environmentally sensitive areas throughout the county that had experienced wetland loss and were at risk of continued loss of wetland area and functionality without additional protection. A final SOTW report was prepared for Orange County that quantified these changes, identifies hotspots of change over time and space, evaluates the health of wetland mitigation sites and provides recommended policy considerations. AEI provided further support by assisting with developing the revised wetland ordinance language and developing training materials for County staff to facilitate a seamless transition upon ordinance adoption.

OUTCOMES

The SOTW study provided the scientific data to justify and guide the County's efforts in refining its wetland ordinance. The updated wetland ordinance was adopted by Orange County in 2023 and received a Diamond Award from the East Central Florida Regional Planning Council for its demonstration of excellence in conservation and countryside.

PROJECT DETAILS




PROJECT CLIENT:

Orange County via Drummond Carpenter, PLLC

PROJECT LOCATION:

Orange County, FL

SERVICE LINE AREAS:

-  Engineering & Water Resources
-  Ecological Services
-  Geospatial Services

EXPERTISE:

- Data gathering
- Literature and Regulatory review
- Land Use and Wetland Mapping
- Site Reconnaissance
- Remote Sensing
- Wetland Field Assessment