



CENTRAL FLORIDA LAKES ASSESSMENT

PROJECT DESCRIPTION

AEI is supporting Drummond Carpenter (DC) with providing environmental services to Orange County Environmental Protection Division (OCEPD) to assess lead (Pb) environmental impacts at four lakes in Orange County, including Big Sand Lake, Lake Mary Jane, Lake Hart, and Lake Condel. The four lakes have been designated by the Florida Department of Environmental Protection (FDEP) as impaired for lead. Key components of the scope include identifying the extent of lead impacts in sediment and in the water column, evaluating potential sources of lead, performing trend analyses, evaluating lead mitigation options, and developing a regulatory strategy.

Prior to field work, AEI prepared Health and Safety Plans (HASPs) and assisted with development of the Sampling and Analysis Plans (SAPs). Field efforts to date have included collection of 245 water depth and muck thickness measurements, and collection of 594 sediment samples and 118 surface water samples. Water depth and muck thickness measurements are collected using a graduated pole that could be quickly connected in 10-feet sections. Sediment samples are collected using a macrocore sampler or Petite Ponar. Water samples are collected using a peristaltic pump. Photographic documentation of each sediment sample is collected. Samples are characterized by sediment type and sediment color using the Munsell color chart. AEI created geodatabases that contained the sample locations, sample characterization information, and the associated photographs of the samples.

OUTCOMES

AEI's field efforts have resulted in definition of the extent of lead impacts in sediment at all four lakes. AEI's analyses regarding water quality trends, sources, and regulatory options have informed the County's path forward. AEI's guidance to the County is assisting them with addressing lead impacts prior to development of a Total Maximum Daily Load (TMDL) for lead.

PROJECT DETAILS

PROJECT CLIENT:

Orange County Environmental Protection Division (OCEPD) via Drummond Carpenter, PLLC

PROJECT LOCATION:

Orange County, FL

SERVICE LINE AREAS:

-  Contamination Assessment
-  Engineering & Water Resources

EXPERTISE:

- Sediment and Surface Water Sampling
- Regulatory Strategy
- Statistical Analysis
- Geospatial Analysis
- Lake Management