



NicNevol

Engineering Services



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Northeast Environmental C&D Facility

Location: 209 Environmental Blvd., Palatka, Putnam County, FL

Owner: Nova HydroGeologic, LLC

Markets: Industrial, Solid Waste, Geotechnical Engineering

Services: Geotechnical Exploration, Subsurface Investigation, Laboratory Testing, Settlement & Slope Stability Analysis

Project Description

NicNevol Engineering Services completed a geotechnical exploration and evaluation for the proposed expansion of the Northeast Environmental C&D disposal facility in Palatka, FL.

The purpose of the study was to evaluate subsurface soil and groundwater conditions, settlement potential, and slope stability to support the design and construction of new disposal cells. Field activities included nine (9) Standard Penetration Test (SPT) borings advanced to depths of 30–60 ft, along with soil sampling and groundwater monitoring.

Laboratory testing was performed to classify soils, determine moisture content, Atterberg limits, organic content, and fines content. Results identified fine sands, silty sands, and clayey sands to depths of ~40 ft, underlain by sandy clays and denser soils. Groundwater was measured at shallow depths of 2–6.5 ft across the site.

Engineering analyses included settlement predictions using the Westergaard method and slope stability modeling with Ensoft STABLPRO software. The analyses confirmed acceptable long-term performance, with calculated settlement of 2–5 in. and slope stability factors of safety above 1.5, meeting Florida DEP requirements.

NicNevol Responsibilities

- Performing SPT borings and subsurface logging.
- Conducting laboratory testing (classification, Atterberg, organics, moisture).
- Evaluating bearing capacity, settlement, and slope stability.
- Providing foundation and embankment design parameters.
- Preparing recommendations for earthwork, fill placement, and compaction.
- Delivering geotechnical report with DEP-compliant design parameters.



Project Highlights

- Client: Nova HydroGeologic, LLC.
- Proposed C&D disposal facility expansion (~multi-cell).
- Field program: 9 SPT borings (30–60 ft).
- Soils: sands (SP/SM), silty sands, sandy clays; organics in some layers.
- Groundwater: 2–6.5 ft depth.
- Settlement: 2–5 in. predicted under design loading.
- Slope stability: $FS \geq 2.0$ (acceptable per DEP criteria).
- Recommendations: excavation, structural fill placement (SP soils), compaction to 95% Modified Proctor, groundwater and surface water control.



Delivering engineering expertise that supports safer, stronger infrastructure.

