

Purpose

The purpose of this report is to document the suitability of the site as a source of fill, to establish the hydrogeological setting of the site, and to evaluate potential onsite and offsite impacts on the underlying aquifer resulting from mining operations on the site.

Prospecting Summary

Creative Environmental Solutions contracted Southern Drilling Solutions (SDS) to perform the drilling services for this project. On September 3rd and 4th, 2024 CES supervised fourteen (14) Direct Push Technology (DPT) borings. The borings were logged by a geologist. The borings ranged in depth from ten (10) to forty (40) feet below land surface (ft-bls). The drillhole locations are illustrated on the attached map. The boring logs are attached to this report as well. Four (4) of the borings were converted to piezometers for water level monitoring purposes.

The borings all encountered sand at land surface that persisted to depths ranging from 7 to more 35 feet below land surface (ft-bls). The sands were underlain by clayey sediments and in some cases dolomitic limestone (with no intervening clay).

Representative samples of the sand recovered from the borings were analyzed as necessary for minus (-) 200 content and Atterberg limits (clayey soils). The data indicated the soil is well suited as a source of structural fill for FDOP projects.

Use of soil from this site should be guided by FDOT Index 120-001. Both A-3 and A-2-4 are considered select soils by FDOT. The A-3 soils encountered on this site appear to be suitable for use on FDOT projects, including embankments, when used in accordance with Index 120-001. The A-2-4 soils appear to be suitable for use on FDOT projects, including embankments, when used in accordance with Index 120-001; however, these soils may hold moisture and may be difficult to compact, so it may be best if they are used above the water table.

Topography

According to the USGS Crystal River, FL quadrangle map of 1954, the elevation varies from less than 10 ft (NGVD 1929) in the southwest part of the site to just over 30 ft- in the northeast part. Less than ½ mile