Andrew K. Wantland

Hydrologist

Progressive Water Resources

Areas of Expertise

Hydrology • Water Use Permitting • Groundwater Flow Modeling • Well Construction-related Oversight • Aquifer and Well Testing • Geophysical Borehole Logging Well Testing • Wetland Delineation

Education

B.S., Geologist, University of South Florida, 2016

Project Experience

OVERVIEW – Mr. Wantland holds a Bachelor of Science in Geology from the University of South Florida. He has had a chance to work with several engineering firms and has gained extensive practical experience in geotechnical engineering, hydrogeology, and hydrology. Andrew has extensive experience with ArcGIS, utilizing the software to assist with projects for private developers, agricultural and commercial clients for Water Use and Environmental Resource Permitting. Mr. Wantland uses ArcGIS on a daily basis to create, translate, and integrate GIS data layers and digitize new data for technical assistance with project demands, analyze LiDAR imagery with respect to aerial photography to identify topographic features, and create ArcGIS map packages to support technical reports.

Mr. Wantland also provides geological services and field coordination on large- and small-scope projects. He has provided construction quality control services pertaining to the installation of deep observation wells and large-capacity water supply wells and provides oversight and quality control for installation of shallow, intermediate and deep monitor wells and piezometers within the Floridan Aquifer System. Mr. Wantland is experienced in aquifer performance testing, groundwater quality sampling, geophysical borehole logging and the interpretation of results. He routinely directs drill crews and field personnel for various soil sampling projects. He has provided geologic descriptions of Standard Penetration Tests (SPTs) and rock core sampling, and performed surface geophysical methods such as electrical resistivity and electromagnetic surveys for environmental and hydrogeological studies. Mr. Wantland has extensive experience in geotechnical drilling methods including SPTs and core sampling. He has also provided oversight of activities related to remediation of geologic hazards including site characterization and grouting.

Water Use Permitting - Mr. Wantland has undertaken Water Use Permit (WUP) application preparation, including agricultural, mining, dewatering, recreational, aesthetic, and industrial/commercial water uses. Mr. Wantland has worked with private developers, agricultural and commercial clients to assist with WUP application preparation, application submittals, and groundwater flow modeling to fulfill the various Water Management Districts WUP conditions of issuance requirements.

Geographic Information System (ArcGIS) - Mr. Wantland was introduced to Geographic Information Systems (ArcGIS) while at the University of South Florida and utilizes ArcMap 10.5 daily for tasks regarding Permitting, Commercial/Residential Development, and Hydrologic Impact Analyses. Mr. Wantland produces professional quality graphics for Agricultural Operations, Commercial/Residential Development, Mining, etc. and has experience with both X-Tools Pro and Spatial Analyst and their various applications used in queries and analysis of metadata. Additionally, Mr. Wantland analyzes site topography (i.e. LiDAR), surficial soils, hydrologic gradients, historic aerial imagery, etc. using the capabilities of ArcGIS.

Tamiami Citrus, LLC – Indian Prairie Grove, Highlands County, FL

Mr. Wantland provided oversight for the installation and testing of a new Surficial Aquifer well for Tamiami Citrus, LLC for use in their agricultural operation. He utilized the data collected from the pumping test to run an analytical model in AquiferWin32 to assess potential impacts to the Surficial Aquifer and proximate wetlands. Mr. Wantland used the results from AquiferWin32 to create maps within ArcGIS portraying drawdown contours for use in the WUP application.

Cutrale Farms, Inc. – Rosana Grove, Highlands County, FL
Mr. Wantland provided oversight for the installation and testing of a new Surficial Aquifer well for Tamiami Citrus, LLC for use in their agricultural operation. He utilized the data collected from the pumping test to run an analytical model in AquiferWin32 to assess potential impacts to the Surficial Aquifer and proximate wetlands. Mr. Wantland used the results from AquiferWin32 to create maps within ArcGIS portraying drawdown contours for use in the WUP application.

Citrus Well Drilling, Inc. – Duke Energy Replacement Wells, Citrus County, FL
PWR was retained by Citrus Well Drilling, Inc. to perform oversight services and document the installation of two (2) replacement potable production wells for Duke Energy at the Crystal River Power Plant in Citrus County, Florida. PWR oversaw the construction, vertical alignment tests, and documented the results of the variable-rate Aquifer Performance Tests (APT) for each new well. Mr. Wantland provided technical documentation for use within the report and created maps and cross sections for analysis of the geology within the project area using ArcGIS software.

Tarpon Blue – Babcock Ranch Preserve, Charlotte County, FL
Mr. Wantland's efforts for this project included: analysis of the Florida Administrative Code; ArcGIS mapping of prospective agricultural operation fields with the delineation of wetlands, historic farm fields, Above Ground Impoundments, LiDAR imagery analysis, and delineation of soil types within the project limits; and the creation and submittal of a WUP application.

Mosaic Fertilizer, LLC – New Wales Phosphogypsum Complex, Polk County, FL
Mr. Wantland performed a variety of technical support efforts including a comprehensive analysis of data collected and aerial imagery for the client utilizing ArcGIS, hydrologic data collection and evaluation, and creation of supporting documentation and map figures to assist with technical reports.