

Shannon Gonzalez, PWS

Senior Ecologist/Principal



Expertise

Wetland Delineation,
Assessment and Permitting
Wildlife Ecology
Aquatic Systems Evaluation
Environmental Permit
Compliance
Water Use Permitting Support

Education

M.S. Zoology, University of
South Florida, 2004

B.S. Biology, University of
South Florida, 1998

Certifications

Certified Mining Safety and
Health Administration
Instructor

Professional Wetland Scientist,
#1507, Society of Wetland
Scientists

FWC Authorized Gopher
Tortoise Agent, GTA-09-00071

FDEP Stream Condition Index
Certification, 2004/2012

FDEP Habitat Assessment
Certification

Memberships & Affiliations

Board of Directors - Florida
Association of Water Quality
Control

Member - Coastal
Conservation Association

Life Member - University of
South Florida Alumni
Association

Shannon Gonzalez has a broad educational and professional background with interests in wildlife ecology and wetland function. His experience includes wetland delineation, evaluation, and permitting, wildlife ecology, and water use permitting support. Projects have involved the use of numerous ecological evaluation techniques, field identification of plants and animals, and agency interactions. His extensive field experience has enabled him to evaluate environmental resources and make effective strategic recommendations based on sound science and regulatory knowledge. He has also built an excellent working relationship with many biologists, regulators, and academicians that increase the potential for collaboration across different levels.

WETLAND DELINEATION, ASSESSMENT AND PERMITTING

Project Manager – Wetland Assessment and Permitting, Hardee County, Florida

Obtained a formal determination of wetlands and approval of all Uniform Mitigation Assessment Method (UMAM) scoring through the Florida Department of Environmental Protection (FDEP) for a $\pm 7,500$ -acre mine extension. The project was ultimately approved by FDEP through the issuance of an Environmental Resource Permit (ERP) in 2012. Mr. Gonzalez also worked as the applicant's consultant in the preparation of a U.S. Army Corps of Engineers (USACE)-authored Areawide Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA). Other work included USACE wetland delineations and jurisdictional determination in accordance with Rapanos Guidance, and preparation of application materials in pursuit of a Section 404 dredge and fill permit that was issued in late 2016.

Project Manager – Wetland Assessment and Permitting, Hardee County, Florida

Managed data collection efforts required to gather information that will ultimately be used to obtain federal, state and local approvals for a $\pm 6,000$ -acre site in Hardee County, Florida. These efforts were concurrent with the FDEP wetland delineation review and included land cover and stream mapping, wetland and stream assessments, and wildlife surveys. Wetland assessments included the UMAM as well as completion of the semi-quantitative FDEP 3-1 sheets on approximately 275 assessment areas. The centerline of each conveyance was mapped using sub-meter Global Positioning System (GPS) and streams were classified to Rosgen level 2 based on physical measurements collected in the field. All data were organized and displayed using Geographic Information Systems (GIS) software and Microsoft Access databases. These data may be used in future permitting efforts and application preparation.

Project Manager – Wetland Assessment and Permitting, Hardee County, Florida

Obtained approval of all Uniform Mitigation Assessment Method (UMAM) scoring through the FDEP and USACE for a $\pm 25,000$ -acre mine. The project was ultimately approved by FDEP through the issuance of an ERP in 2015. Other work included revision of the USACE Compensatory Mitigation Plan (CMP) and review of permit conditions to identify compliance benchmarks and ensure consistency.

WILDLIFE ECOLOGY

Project Manager – Holistic Habitat Management Plan Development for a $\pm 15,000$ -Acre Parcel, Hardee County, Florida

This plan included presentation of baseline habitat, flora and fauna information and proposed management activities for preserved, enhanced and created habitat areas. This management plan was written according to the Florida Department of Community Affairs guidelines and the Florida Fish and Wildlife Conservation Commission (FWC).

Project Manager – Gopher Tortoise Permitting and Relocation, Multiple Counties, Florida

Prepared, submitted and obtained a total of seven Gopher Tortoise Conservation Permits to allow relocation of over 500 tortoises from the construction workspace of a 515-mile interstate pipeline. Bucket trapping was the primary method of capture; however hand-shovel excavation, mechanical excavation and the pull-rod were also used. The effort included supervision of over 25 assistants and the field work was completed in 78 days.

Project Manager – Amphibian Monitoring and Translocation Study, Hillsborough, Manatee, Polk, and Hardee Counties, Florida

Designed, implemented, and managed a multi-year amphibian study comparing unmined land to land that was mined and reclaimed. Remote frogloggers were used to measure breeding activity on 21 sites in Central Florida. Species found to be underrepresented on reclaimed lands were translocated from lands permitted for mining.

AQUATIC SYSTEMS EVALUATION

Project Manager – Stream Evaluation, Multiple Counties, Florida

Managed the sampling of high-quality, first-order Reference Streams as required by Specific Condition 30(b)(2) within ERP #0294666-001. The selection of Reference Streams was submitted to the FDEP as part of the Reference Stream System Sampling Plan and approved in a letter dated December 10, 2013. The sampling included continuous stage recording over one-year, topographic survey, stream Habitat Assessment (HA), Stream Conditions Index (SCI), fish collection and in-situ water quality measurements.

Project Manager – Stream Mapping and Evaluation, Hardee County, Florida

Developed a detailed baseline depiction of the ±88,000 linear feet of stream on a 7,500-acre site using a combination of high-resolution aerial imagery and GPS equipment. For conveyances in areas of primarily native upland or wetland land cover, and for conveyances in agricultural areas exhibiting more-or-less natural stream sinuosity, a Trimble sub-meter GPS unit was used to record a track along center of the channel. The line features collected this way were later traced at a scale of 1:600 using ArcGIS software. This smoothed centerline was created in order to remove the extra "noise" from the GPS antenna movement during data collection. Nested GPS points and photographs were collected to demarcate and illustrate changes in channel dimensions, substrate or overbank area characteristics. Overall segment sinuosity ratios and local bend geometries (radius of curvature) were calculated from these GPS lines of each stream segment. Each stream segment was also observed for barriers to fish passage, such as hanging culverts.

Project Coordinator – Sampling and analysis of macroinvertebrate and algal communities in selected streams, Hardee, DeSoto and Sarasota Counties, FL

This effort involved wet season and dry season sampling of the benthic and periphyton communities at ten different stations on six streams as part of the data collection effort for two proposed phosphate mines. Data analysis included a series of statistical and ecological indices to characterize the communities and allow for comparison among stations and between pre-mining and post-mining conditions.

ENVIRONMENTAL PERMIT COMPLIANCE

Project Manager – Reference Wetland Selection Monitoring Plan Preparation and Implementation, Hardee County, Florida

Managed the selection and monitoring data collection of twenty-three high-quality Reference Wetlands as required by Specific Condition 30(b)(1) of Environmental Resource Permit (ERP) #0294666-001. Reference Wetland location and monitoring methods were submitted to and approved by the FDEP prior to implementation. Reference wetlands were sampled once during the dry season and once during or immediately after the summer growing season at least one year prior to the commencement of mining. Representative photographs were taken at the start and end of each transect toward the wetland interior. Additionally, photographs in each of the four cardinal directions were taken at the midpoint of each transect.

Project Manager – FDEP Conservation Easement Baseline Documentation, Hardee County, Florida

Completed a baseline documentation report for a ±1,600-acre conservation easement consisting of Category "A" lands to be preserved in their existing state. These efforts included documentation of historic conditions and land use as well as a description of existing habitats and use by listed species. Supporting documentation (i.e., photos, etc.) were provided in support of form CE-10 and the narrative description.

WATER USE PERMITTING SUPPORT

Project Manager – Environmental Management Plan Development, Hardee, Polk, Manatee, and Hillsborough Counties, Florida

Coordinated the development of Environmental Management Plans (EMP) to satisfy several conditions of WUPs for clients in Central Florida. These plans include well installation and transect establishment to allow for standardized vegetative, soils, and hydrologic monitoring. Interpretive Reports are typically required annually by the SWFWMD.

Project Manager – Environmental Management Plan Development and Implementation, Hardee County, Florida

Developed and implemented the Environmental Management Plan (EMP) to satisfy several conditions of a WUP for a client in Central Florida. This plan included the installation and monitoring of permanent monitoring transects to allow for standardized vegetative, soils, and hydrologic monitoring. Wetland evaluation procedures included WAP, the United States Department of Agriculture Stream Visual Assessment Procedure (SVAP), and Uniform Mitigation Assessment Method (UMAM). Data collected during this effort was compiled, organized, analyzed, and stored in a Microsoft Access database as part of the environmental monitoring.