Jeffrey B. Rupe
GIS Analyst

Expertise
GIS

Spatial Analysis

Raster Analysis

Geostatistics

GPS

Education
B.A., History, University of South Florida, 2000

B.A., Geography (Environmental), University of South Florida, 2001

Master Certificate GIS, University of South Florida, in progress

Jeff Rupe has a substantial background in Geographic Information Systems (GIS) and Global Positioning System (GPS) and has participated in a wide variety of cartographic map production and spatial analysis. Jeff has extensive experience in aerial wetland determinations, raster analysis using ET Geowizards, Spatial Analyst, 3D Analyst, statistical analysis, geodatabase creation and management, metadata creation, database creation and management, mobile GIS, as well as verification of GPS data and differential correction. In addition to ArcInfo and its extensions, Jeff uses AutoCAD for CAD to GIS conversions, as well as Trimble Pathfinder Office for GPS data correction and analysis. Jeff incorporates his field experience, including GPS data collection for wetland determinations, listed species locations, as well as Gopher Tortoise transects surveys, to make the end GIS product a more meaningful and useful resource.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

GIS Project Manager -Avian Protection Plan, Statewide
Created a predictive risk model for Transmission Corridors throughout the state of Florida. Used Model Builder to allow for an effective, repeatable process. Incorporated a large and diverse variety of data to be input into the model. Each variable was assigned a weighting system that resulted in an accurate forecast of the present and future risk to Avian Species in the Transmission Corridors. This model was used to evaluate which lines had the most risk, and decide which lines needed to be fitted or replaced with Avian Protection measures.

GIS Project Manager – St George Island Living Shoreline, Franklin County, Florida
Designed a Living Shoreline Mitigation Area In Apalachicola Bay. Apalachicola Bay is a diverse and productive estuarine System. The Bay is part of the Nation Estuarine Research Preserve and renowned for its Oysters. Used ArcGIS to design Oyster Reefs and Planting Zones, as well as calculate the amount of materials needed. Calculated proper Oyster Reef placement in relation to the MHWL, which is critical for Reef survival as well as the success of the landward Planting Zones.

GIS Project Manager – Rapanos Determination, Hardee County, Florida
Created DEM based off LiDAR contours to determine connectivity of wetland systems. Used 3D Analyst in ArcGIS to create a TIN to analyze elevations and their relations to approved wetland determinations. Created Cross-sections through each wetland, using the base LiDAR data to better show isolation, or connectivity of wetlands in question.

GIS Project Manager – Landfill Alternatives Analysis, Brevard County, Florida
Responsible for creating an alternatives analysis study for Brevard County. Used spatial analysis to combine, overlay, and weight layers by rank and importance to produce data showing those areas which were rated as most likely to be used for Landfill purposes.

GIS Project Manager– Limerock Mine, Levy County, Florida
Responsible for all spatial aspects of mitigation planning and impact calculations. Worked with project engineers using multiple mine plans to reduce impacts and calculate amount and types of mitigation needed. Used LiDAR data to create a Triangulated Irregular Network to better analyze areas of upland islands, and depressions to aid ecologists in their field endeavors.

Senior GIS Analyst – DRC Marine Services, Mobile, Alabama
Conducted bathymetric digital elevation model (DEM) generation, index grid creation; GPS coordinate reports, and spatial statistics analysis on a 278-square-mile area in Mississippi Sound, which was devastated by Hurricane Katrina. The project area was divided into one-square-mile cells, and a unique identifier was generated for each cell. These grid cells were then overlaid onto a DEM generated from the National Oceanic and Atmospheric Administration (NOAA). Zonal statistics were used to determine the minimum, maximum, and mean depth. The grid cells were then symbolized into two depth categories and overlaid onto NOAA nautical charts. The client then used these data to decide the size of boats to deploy to specific waterways, which allowed for maximum and effective use of their equipment.

Senior GIS Analyst– Mid-Atlantic Power Pathway (MAPP) Transmission Line, Maryland
GIS Analyst for routing and siting a corridor for the Mid-Atlantic Power Pathway (MAPP) Project, a 500 kilovolt (kV) transmission line (landside Southern Maryland) and 640-kV DC (waterside & Eastern Shore), proposed by Pepco Holdings, Inc. (PHI) to improve reliability

and increase energy imports into the Mid-Atlantic Region. Mr. Rupe used the project specific LiDAR database to determine slopes along stream banks and determine the Stream Management Zones for the project. Other GIS analyses including but not limited to; environmental baseline data collection, alternatives analyses and GIS support for all environmental approvals for routing and siting a corridor across the Chesapeake Bay (submarine) and the lower Eastern Shore of Maryland. This project will represent the first utility crossing of Chesapeake Bay, and key environmental concerns include maintenance of water quality and potential impacts to native oyster beds. After crossing the Bay, the project will be routed through Dorchester County, Maryland, much of which is designated for preservation at the federal and state levels.

GLOBAL POSITIONING SYSTEM (GPS)

GPS Project Manager – Limerock Mine, Levy County, Florida
Responsible for all GPS activities associated with wetland delineation. He developed the methodology and performed differential correction to ensure all GPS data met the project specific standard set by the FDEP. Other responsibilities included GPS mission planning, GPS field testing, data integration into GIS format, deriving accurate wetland polygons from GPS point data, and assuring spatially correct data so that further GIS analysis was possible.

GPS Project Manager - Mean High Water Determination, Rattlesnake Key, Manatee County, Florida
Participated in the installation and was responsible for the data download of three tidal gauges around the island to determine tidal fluctuations. Performed GPS data collection of Mean High Water, as well as differential correction and GIS integration. The final product included an accurate sub-meter Mean High Water Line of the entire island.

GPS Project Manager– Mid-Atlantic Power Pathway (MAPP) Transmission Line, Maryland
Coordinated DGPS field data capture effort for the Mid-Atlantic Power Pathway (MAPP) Project, a 500 kilovolt (kV) transmission line (landside Southern Maryland) and 640-kV DC (waterside & Eastern Shore), proposed by Pepco Holdings, Inc. (PHI) to improve reliability and increase energy imports into the Mid-Atlantic Region. Responsible for DGPS coordination including mission planning, Data QA/QC, Differential Correction, technical support, data accuracy, and submitting final deliverables.