MICHAEL LOHR P.S.M.

GIS Director

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Years Experience
35 years

Licensing & Registration
Florida Professional Surveyor & Mapper, License No. LS5916

Education/Training
AA Chemical Engineering (1974), Jefferson Technical College

Professional Affiliations
Florida Surveying and Mapping Association

National Institute for Certification in Engineering Technologies

Mike began working for Johnson Engineering in 1984. His responsibilities included construction inspection and materials testing for various agencies including the Federal Aviation Administration, Florida Department of Transportation, Florida Department of Environmental Protection, Charlotte County, Lee County, Big Cypress Basin, and the City of Fort Myers as well as many private construction projects. He is a registered Surveyor and Mapper licensed to practice in the State of Florida.

In 1995, Mike began performing geographic information system (GIS) work for the State of Florida, Bureau of Survey and Mapping. This work included ownership mapping for the Florida Department of Environmental Protection's C.A.R.L. land acquisition program, cataloging more than 70,000 parcels slated for purchase by the State of Florida Since then he has overseen many large GIS specific projects as well as continuing to support other efforts in the Water Resource Group at Johnson Engineering. Some of those major surface water efforts include Lee County Surface Water Master Plans in 1990, 1991, 1992 and 1997, The South Lee County Water Management Plan for SFWMD in 1999, and Six Mile Cypress Water Management Plan 1990. Mike participated directly in the permitting, design, and construction of numerous large water control structures (weirs) including L Canal, Galloway, Six Mile Cypress, Briarcliff, for Lee County and 10 weirs for Lee County Port Authority at Southwest Florida International Airport along with major outfall conveyances. Mike has participated in water level and stream flow measurements during his tenure at Johnson Engineering and has access to measurements back to the 1970s, critical data for surface water modeling efforts.

Mike coordinates GIS projects for the company and is currently developing Internet and mobile mapping capabilities using iPhones and iPads for use by in-house staff and clients, including digital conversions and digital imagery in a GIS environment, as he continues to support other water management efforts at the company. Areas of expertise include imagery assessment and processing, thematic and spatial analysis as well as positional accuracy of GIS datasets and imagery products including aerial ground control and ongoing development of tablet and phone based online mobile mapping and data collection efforts.

Relevant Experience

- **Lee County 2017 Flood Analysis Study, Lee County, FL** -This project involved field reconnaissance, GIS data input for flow obstructions, permit and plan research and mobile mapping technology, to assess and document obstructions to stormwater drainage in multiple watersheds in Lee County. The study area included portions of Ten Mile Canal North and South, Six Mile Cypress, Mullock Creek and Hendry Creek watersheds. Data was used by Lee County to efficiently assign maintenance crews to the documented obstructions located by field operations.
- **Stormwater Facilities Geodatabase, Collier County, FL** -This project, completed in 2012, input data from a variety of in house, county and external sources, beginning with Livingston Road. The data was overlaid on georeferenced imagery and supplemented with conventional survey GPS data collection, resulting in over 4500 inlets mapped, 1470 junction boxes, 260 control structures, and over 1 million linear feet of associated piping along with numerous related structures.
- **Southwest Florida International Airport Midfield Terminal Expansion, Lee County, FL** – This project included permitting, design and construction of a large surface water management system designed to handle run off for expansion activities in the early 2000s and well as future improvements on Port Authority lands up to and including the I-75 interchange and the upcoming parallel runway. Work included ten major water control structures and associated conveyances and berms within SWFIA.
- **Lee County Surface Water Master Plans 1990-1991 and 1997 Lee County, FL** – This comprehensive group of projects included developing watershed specific master plans characterizing existing and proposed conditions for a majority of the Lee County watersheds. Data development included topographic information, structural data, assessment of sensitive lands, rights-of way, groundwater, hydrology assessment and modeling, system capacities, potential improvements, funding and implementation. Many portions of this work carried over to current planning and development guidelines.

- **South Lee County Watershed Plan, Lee County, FL –** This project completed for SFWMD in 1999 developed new knowledge regarding the interrelationship of the Estero, Imperial River, Cocohatchee and Camp Keais watersheds, providing data explaining the extended duration of the 1995 flooding seen in Bonita Springs, an area of intensive development that continues today. The combined watershed area totaled approximately 315 square miles. Study goals included maintaining and improving levels of flood control in the developed and developing areas, Restoring surface water flow characteristics on conservation and public lands, reducing salt water intrusion, providing a basis for offsite mitigation, and others. SHEET2D and XP_SWMM were utilized for hydraulic modeling
- **Lee County Best Management Practices (BMP) Effectiveness Study, Lee County Department of Natural Resources, FL** - This project started in 2004 and a final PDF report suitable for web publishing was delivered to Lee County in November of 2009. Mike served as project manager for this work which involved literature research, site selection, development of a monitoring plan and sampling of rain event based water quality data from inflows and outflows for three typical wet detention based developments common to south Florida. The project utilized on site instrumentation to monitor rainfall and water levels as well as automated, programmable, refrigerated ISCO solar powered sampling units. Johnson Engineering staff collected samples and delivered them to the County laboratory for wet chemistry analysis. The final report analyzed the BMP effectiveness by comparing inflow and outflow loading for a typical group of wet chemistry and nutrient parameters.
- **Florida Department of Environmental Protection (FDEP) Water Quality Research Projects** - Mike served as the project manager for an ongoing series of water quality research projects sponsored by FDEP and Eric Livingston through Bonita Bay Group. These projects have included developing monitoring plans and implementing monitoring and sampling programs for a variety of water quality projects and developing final reports describing projects and presenting results. Project topics have included littoral planting and copper sulfate uptake assessment, pervious/impervious pavement study, green roof water quality study, deep and shallow lake dissolved oxygen study and long term discharge study. The discharge study is ongoing work that has recently had a groundwater monitoring and sampling program added to it. All projects involve sophisticated field sampling equipment, remote data telemetry and the use of both manual and automated sampling procedures as well as end of project web based reports.