

*Everglades Geological Society*

# ***BULLETIN***



Volume 18, Number 2

November 2011

Meeting This Month: Tuesday, November 15, 2011

Speaker: **Ed Rectenwald, P.G.** - MWH Americas, Inc

Topic:

***Tampa Electric Company***

***Utilization of Reclaimed and Process Water Requires Disposal into  
Upper Cretaceous Formation***

#### INSIDE THIS ISSUE

2

Announcements/News

3

President's Address

4

Topic, Abstract, Biography of Speaker

5

Map, and Application Locations

6

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The Everglades Geological Society is an organization which seeks to promote interest in and understanding of Geology and the related Earth Sciences, and to provide a common organization for those individuals interested in geology and the related earth sciences. The Bulletin is a publication of the Everglades Geological Society, Inc.

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**Meeting This Month:**  
**TUESDAY November 15, 2011**  
**6 pm (Social hour starts at 5 pm)**

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***Do you know someone that would like speak at one our meetings? Please let us know.***

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## *Newly Elected President's Address*

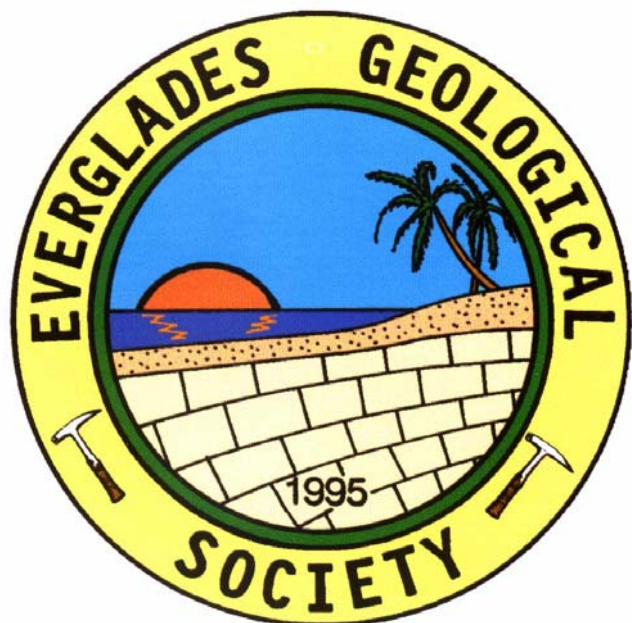
*Kim Arnold, P.G.*

*Hydrogeologist, JOHNSON ENGINEERING, INC.*

Welcome to another year of EGS. For those of you who are long-time members, we hope you like the slate of speakers for this year and continue to find topics to whet your intellectual appetites. As always, we will try to feature some of our very own, home-grown experts, as well as others from around the state and region. For the newer members—and, yes, we have had several join us recently—we hope you find the opportunity to connect with fellow geologists both beneficial professionally and enjoyable socially.

With busy schedules brought about by current economic circumstances (is there anyone who hasn't had to do "more with less" lately?), family obligations, work-related travel, etc., it can be difficult to carve out time for "optional" activities like EGS. Nonetheless, as the introduction of and subsequent prudent withdrawal of House Bill 5005, which would have deregulated geologists as a profession in the State of Florida, this past spring reminds us, maintaining involvement in professional organizations remains vital for our profession as a whole and our own personal development. These organizations help improve our professional visibility so that others can be more informed about the unique contributions of geologists in this state. We may work with engineers, ecologists, environmental scientists and any number of other allied professions, but we possess distinct skill sets that cannot always be reduced to cook-book calculations or model code. I hope our EGS presentations this year celebrate those aspects of geology and help us get plugged in to some intriguing current topics and innovative projects. I think Dr. Bob Maliva's talk on creative ASR approaches at our September meeting accomplished this goal, and no doubt Ed Rectenwald's presentation on a deep exploratory injection well into Upper Cretaceous Formation at our upcoming November meeting will follow this trend.

We really hope you will continue to join us throughout the year to hear some exciting speakers over good beer with great friends. And if you have an idea for a talk, club project, field trip or anything else, by all means let us know. This is your club; let's make the most of it.



## **This Month's Topic**

### ***Tampa Electric Company***

## ***Utilization of Reclaimed and Process Water Requires Disposal into Upper Cretaceous Formation***

***Ed Rectenwald, P.G. - MWH Americas, Inc.***

### ***Abstract***

Over the past year and a half, MWH has been providing Underground Injection Control (UIC) well construction and testing oversight services for a deep exploratory injection well at the Tampa Electric Company (TEC) Polk Power Station in Polk County. The exploratory well was expected to have a total depth of approximately 5,800 feet below land surface (bls) but has since been drilled to a total depth 8,000 feet bls to identify the potential for additional permeable zones. This exploratory injection well is currently being evaluated for the potential to dispose non-hazardous grey wastewater and reclaimed water treatment system blowdown water into the Lower Lawson Formation and deeper Cretaceous aged rock formations. A significant amount of hydrogeologic testing has been conducted during construction of the exploratory well. The data is currently being evaluated to identify a suitable injection zone to accept the potential waste stream. If the Class V exploratory well proves successful, it will be converted to a Class I injection well and constructed to meet Florida Department of Environmental Protection (FDEP) UIC Class I requirements. The construction of a dual zone monitor well is currently underway. Once completed, this will be the deepest UIC well permitted for operation by the FDEP in addition to the deepest hydrogeologic data collected in the state. MWH engineers and hydrogeologists lead the industry with their UIC well construction experience and have designed and/or monitored the construction of over 45 Class V Aquifer Storage and Recovery wells and over 40 Class I deep injection wells throughout Florida

### ***PROFESSIONAL SUMMARY***

***Ed Rectenwald, P.G.***

***Supervising Hydrogeologist***

***MWH Americas, Inc. – Fort Myers***

Mr. Rectenwald has over 16 years of experience in various hydrologic, geologic, and environmental investigations. This experience includes project management, construction and testing oversight of Class I injection wells, Class V Aquifer Storage and Recovery (ASR) wells, public and industrial supply wells, irrigation wells, monitor wells, and rehabilitation of deteriorated wells. Mr. Rectenwald has successfully managed Class I and



Class V injection well facility construction, ASR system construction, and wellfield construction and expansion projects. Mr. Rectenwald is also involved with regional studies of the Floridan Aquifer System by constructing detailed subsurface hydrostratigraphy maps from data obtained from exploratory well drilling, geophysical logging, and aquifer hydraulic testing and analysis results.

His investigational experience includes borehole geophysical log analyses, formation lithology interpretation, and long term water level/water quality studies, as well as analysis and interpretation of stable isotopes, carbon-14, and noble gases to better define different water bodies and flow patterns within the Floridan Aquifer System. Mr. Rectenwald has also written various technical specifications for the construction and testing of Class I deep injection wells, Class V aquifer storage and recovery wells, monitor wells, deep exploratory wells, and raw water production wells. Mr. Rectenwald has analyzed and interpreted various geophysical logs for many surficial and Floridan aquifer wells throughout the state of Florida.



## Everglades Geological Society

Meets on the Third Tuesday every other month at The Edison on McGregor Blvd at the Fort Myers Country Club in Fort Myers, Florida. Social hour starts at 5:00 PM. The meeting begins at 6:00 PM. No meetings are held in July or August.



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