

*Everglades Geological Society*

# **BULLETIN**

Volume 17, Number 2

November 2010

**Meeting This Month:** November 16, 2010  
6:00 P.M. at the Edison, Tower Room  
*(Social hour starts at 5:00)*

**Speaker:** Thomas M. Missimer Ph.D., P.G.  
Schlumberger Water Services

**Topic: Reclaimed Water ASR in a Barrier Island Shallow  
Aquifer, Destin, Florida**

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**THIS MONTH'S MEETING SPONSORED BY**



**EGS MEETING THIS MONTH  
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**TUESDAY November 16, 2010**

**The Edison**

3583 McGregor Boulevard  
Fort Myers, Florida

***Everglades Geological  
Society***  
***P.O. Box 61684***  
***Fort Myers, FL 33906***

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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***Members and prospective members come  
join us!***

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[www.evergladesgeologicalsociety.com](http://www.evergladesgeologicalsociety.com)



**NOVEMBER 2010 TOPIC**

**Reclaimed Water ASR in a Barrier Island  
Shallow Aquifer, Destin, Florida**

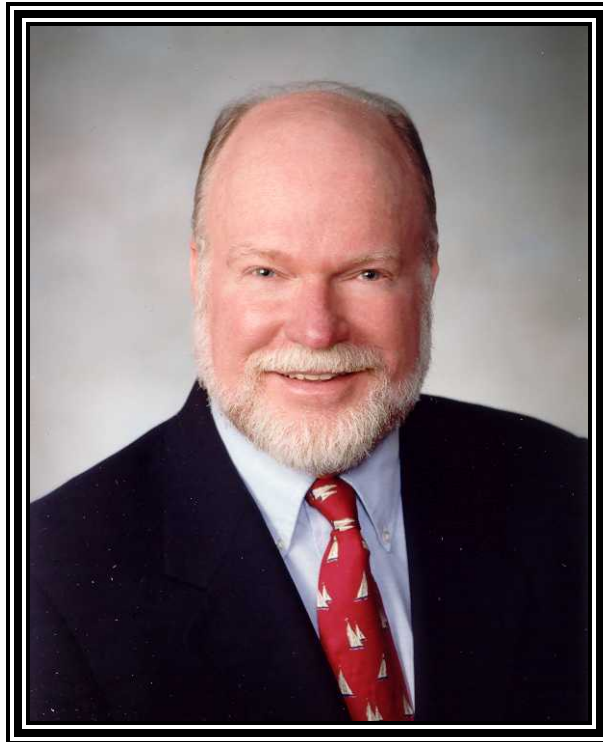
Thomas M. Missimer Ph.D., P.G.  
Schlumberger Water Services

***Abstract***

Management of reclaimed water in coastal communities is an increasing challenge because of growing populations and associated reclaimed water flows, environmental concerns, and usually great land acquisition costs. Destin Water Users, Inc. (DWU) implemented an aquifer storage and recovery (ASR) program that will provide cost-effective and environmentally sound additional peak “disposal” capacity and additional water to meet reuse demands during peak irrigation periods, which will reduce demands on freshwater resources. Tertiary-treated wastewater is stored in the shallow Sand-and-Gravel Aquifer that contains freshwater, but has poor quality. The DWU ASR system is designed and permitted to consist of seven ASR wells with a total capacity of 8,040 m<sup>3</sup>/d. Initial testing and solute-transport modeling results indicate that the storage zone has a low dispersivity and high effective porosity, which results in low degrees of mixing and migration of the injected water. Despite its apparent clean quartz sand storage zone, arsenic leaching has occurred in the recovered water with a maximum reported value of 41 µg/L. Concentrations have subsequently decreased suggesting depletion of a limited leachable arsenic supply. The DWU ASR project is the first of its kind in Florida and may serve as a prototype for similar systems on barrier islands elsewhere in the world.

## ***BIOGRAPHY***

Thomas Missimer has 37 years of experience as a hydrogeologist. He has a B.A. in geology from Franklin & Marshall College, an M.S. in geology from Florida State University, and a Ph.D. in marine geology and geophysics from the University of Miami. He is licensed as a geologist in Florida and five other states. He has managed hundreds of hydrogeological and water supply projects in 25 different states in the US and in 15 foreign countries. He has published 6 books and more than 270 technical publications in the fields of geology, hydrogeology, and water policy. He has managed projects for the development of all types of water supplies for municipal governments, agriculture, and industry. He is currently the global water resources sector leader for Schlumberger Water Services and a Research Advisor to Schlumberger Limited



## 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



## EGS MEETING CALENDAR 2010- 2011

*November 16*  
*January 18*  
*March 15*  
*May 17*

### Join Everglades Geological Society

*Application forms are available:  
at meetings, by mail and on our web site.*  
[www.evergladesgeologicalsociety.com](http://www.evergladesgeologicalsociety.com)

