

Everglades Geological Society

BULLETIN

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Meeting This Month: Tuesday, September 20, 2011

Speaker: Robert Maliva, Ph.D., P.G.

Topic:

Wastewater Managed Aquifer Recharge Opportunities

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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 September 20, 2011
6 pm (Social hour starts at 5 pm)

The Edison
3583 McGregor Boulevard
Fort Myers, Florida

Welcome to the first meeting of the 2011/2012 year! Members and prospective members, please come show your support for EGS. It is a great networking opportunity and you might learn something!

Thank you to our Sponsors! Please check them out in this newsletter.

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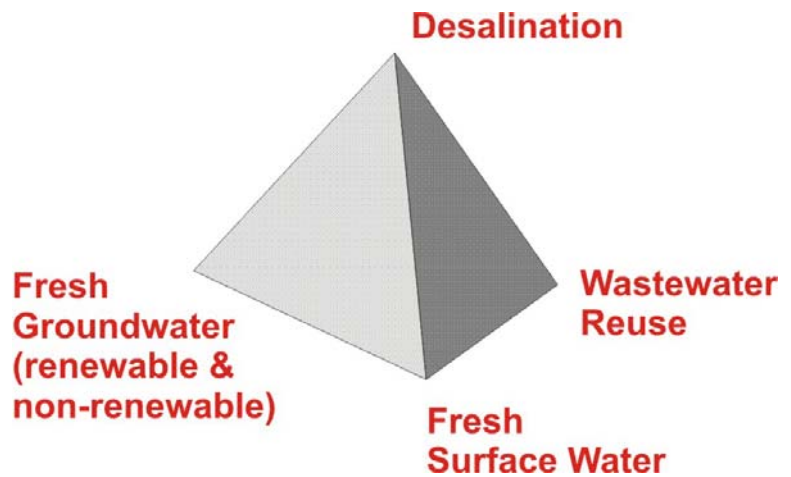
This Month's Topic

Wastewater Managed Aquifer Recharge Opportunities

Robert Maliva Ph.D., P.G.

Abstract

Reuse of treated wastewater is the most important additional source of water for non-potable use in water scarce regions. Managed aquifer recharge (MAR) of reclaimed water (treated sewage effluent) can be an integral tool for the optimizing the reuse of reclaimed water. Storage of excess available reclaimed water in aquifers can achieve multiple benefits including creation of a strategic water reserve that could be tapped during droughts, elimination of adverse impacts associated with wastewater disposal, reduction of demands on higher quality freshwater resources, and improvement in reclaimed water through natural contaminant attenuation processes. MAR can help to enhance reclaimed water use through providing a more reliable and higher quality irrigation or industrial supply source. MAR options include aquifer storage and recovery, aquifer recharge through land application, and salinity barrier systems. In the case of salinity barrier systems, reclaimed water MAR can provide protection to potable supplies not through offset of potable water use, but through direct protection of those potable supplies.



Public health can be protected by hyper-treatment of reclaimed water, which involves multiple additional treatment steps including reverse osmosis. However, the great costs of hyper-treatment make it unviable in developing countries. Public safety can alternatively be protected by locating reclaimed MAR systems (both geographically and in the choice of aquifers) so that potable water supplies will not be impacted (i.e., indirect potable reuse will not occur). Aquifer characterization and groundwater modeling are critical for determining the fate and transport of any contaminants remaining in reclaimed water. Public outreach and education are also important for gaining public confidence and acceptance of wastewater reuse.

Biography

Robert Maliva completed his Ph.D., from Harvard University and has held research positions at the University of Cambridge, England, and University of Miami, Florida. Dr. Maliva has been a consulting hydrogeologist since 1992, and is currently a Principal Hydrogeologist with Schlumberger Water Services. He specializes in the development of alternative water supplies for municipal and industrial clients.

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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