

**UF Water Institute Water Symposium**  
**Florida Challenges and Global Solutions for Sustainable Water Resources**

**Challenges in Everglades Seepage Management**  
**Abstract**

One of the largest ecosystem restoration efforts is currently ongoing in south Florida, in an environment where not only the fish and wildlife are counting on decisions made today for their survival tomorrow, so are the people of south Florida. Water resource sustainability is an integral part of Everglades's restoration. The Everglades restoration initiative faces many challenges, including present day water supply shortages. Everglades's restoration relies on four main principles: getting the quality, quantity, timing and distribution of water to the Everglades right. The Comprehensive Everglades Restoration Plan lays out 68 components, including:

- Water storage
- Remove flow obstructions
- Seepage management

Seepage management is an essential component in achieving successful Everglades' restoration. The seepage management challenges and issues we face today include:

- Unique south Florida geology - highly permeable limestone layer (Biscayne Aquifer). Identification of the highly variable geologic profile. Accurate representation of existing geologic conditions in a model
- Geology may require utilization of specialized technology and equipment
- Meeting varying water quality criteria (Everglades, Canals, Water Supply)
- Interagency, collaborative process - varying interests (water quality, wildlife protection, contamination, water supply, flood protection). Meeting project objectives while conforming to other interests can be a challenge

Solutions to challenges

- Regulations were established to provide guidance on complex issues (water supply and flood protection)
- Utilize after action reports from previous seepage management projects
- Implementation of a pilot project prior to full scale seepage management (test constructability, functionality, model verification)
- Monitor 2 years, present recommendations in Technical Data Report
- Continued coordination with stakeholders and public (initiate permitting process early, notify project delivery team of changes, public involvement)
- Performance based contract to allow for innovative ideas from contractors

Keywords: Everglades' seepage management

Addresses: Water availability & allocation, public perceptions