

# Regional Simulation Model for South Florida

## SOUTH FLORIDA WATER MANAGEMENT DISTRICT

### PROJECT SUMMARY

The South Florida Water Management District needed an integrated data management and modeling solution for regional surface water and groundwater management. Riverside Technology, inc. provided database analysis, software development, and hydrologic modeling to help the South Florida Water Management District implement its regional simulation model.

LOCATION  
Florida, U.S.A.

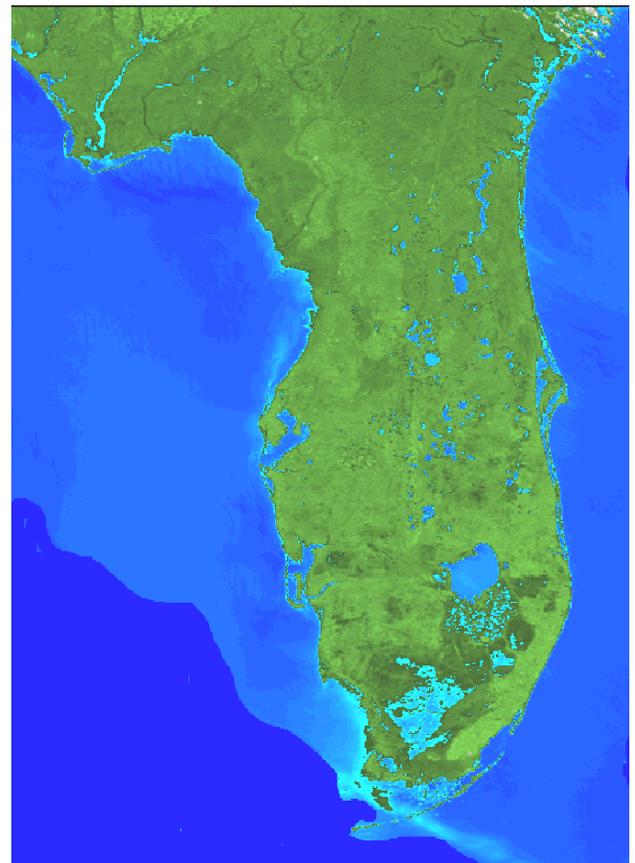
PERIOD  
1994 – 1997

### PROJECT DETAILS

Riverside Technology, inc. (Riverside) and a team of consultants developed the South Florida Regional Simulation Model (SFRSM) for the South Florida Water Management District (SFWMD). The SFWMD uses this model as its central analytical tool for evaluating management alternatives.

The model provides:

- Boundary conditions for evaluating permit applications
- Evaluation of the long-term impacts of proposed regulations
- Comparison of expected and actual impacts of SFWMD programs
- Evaluation of long-term, operational change impacts
- Use of medium-term hydrologic operation forecasts
- The basis for environmental impact assessments
- Basic input for environmental and other research efforts



These functions are available not only to the SFWMD, but also to other state, federal, and local agencies with water resources management responsibilities. The challenge of the project was to design the model with a great deal of flexibility, given the diversity of its potential uses.

Data, and the mechanism for accessing it, are key to any successful model. SFRSM used a Versant-based, object-oriented database engine to retrieve data. Database software components include utilities to load and manipulate data, as well as basic interfaces to view and verify the information. A prototype system was developed using legacy data accessed through a web-based interface. Full database implementation considered integration with Argonne National Laboratory's Dynamic Environmental Effects Model as well as a Java database interface.

### RELATED PROJECTS

Hydrologic Simulation Engine  
Graphical User Interface for  
South Florida

Development of Identified  
Projects and Processes Database  
for Colorado

Development of Surface Water  
Availability Website for Georgia

RIVERSIDE

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