

SOUTHWEST FL FEASIBILITY STUDY

Services Provided

- Integrated Hydrologic Modeling
- Multi-Disciplinary Project Management

Client

South Florida Water Management District

SDI Environmental Services, Inc. (SDI) was contracted by the South Florida Water Management District (SFWMD) to integrate four existing sub-regional integrated surface and groundwater hydrologic models developed for southwest Florida into one regional scale model and to expand the model domain to include the Big Cypress National Park area. SDI and its project team members completed this work as part of its General Engineering Services Contract. The SFWMD, in partnership with the U.S. Army Corps of Engineers (USACE), is conducting the Southwest Florida Feasibility Study (SWFFS) as recommended by the Central and Southern Florida Project Comprehensive Review Study. Objectives of the SWFFS include improving the quantity, timing, distribution, and quality of freshwater discharges to the estuary and coastal

systems in southwest Florida. The study area includes all of Lee and Collier counties, most of Hendry County, and parts of Charlotte, Glades, and Monroe counties.

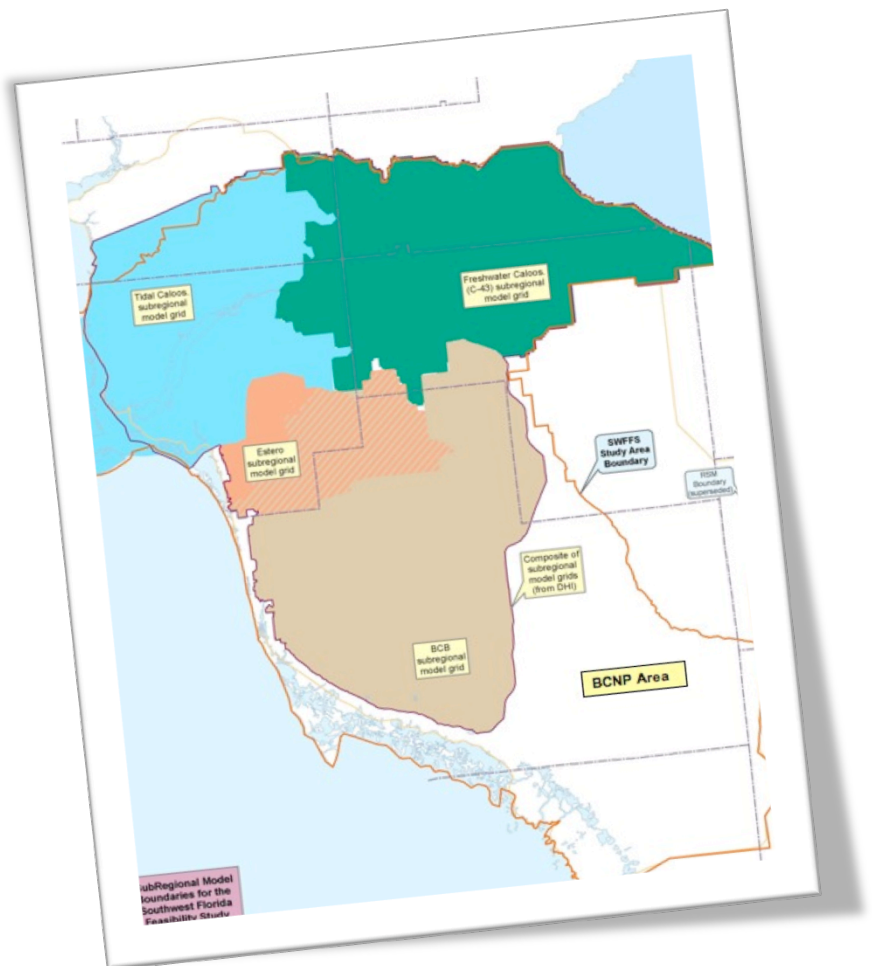
Integrated Hydrologic Modeling

The SFWMD previously funded the development of four Integrated Surface Water Groundwater Model (ISGM) applications: Estero Basin, Big Cypress Basin, the Caloosahatchee River Basin (aka C-43), and the Tidal Caloosahatchee River Basin (TCRB). These four models are considered “sub-regional” in scale.

These existing models were developed with the MIKE SHE integrated hydrologic model coupled with the MIKE 11 hydraulic model. The SDI team integrated the four sub-regional models, maintaining the same model grid size with a simpler surface water network.

Model Scenario Development

The SDI team developed a pre-development model scenario representing the topography and river network present about 1890 that was used to define historical ecological restoration targets. A 2025 scenario simulated future conditions.



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