Bridging the Gap: Integrating Water Resource Management and Ecosystem Science for Climate Adaptation in Florida

Project Update

June 26, 2026

FLORIDA Water & Climate Alliance

UF | Water Institute UNIVERSITY of FLORIDA

SOUTHEAST Climate Adaptation Science Center

USGS science for a changing world

Why Bridging the Gap?

More Frequent Droughts, Flooding, & Extreme Weather

Sea Level Rise & Changing Water Availability

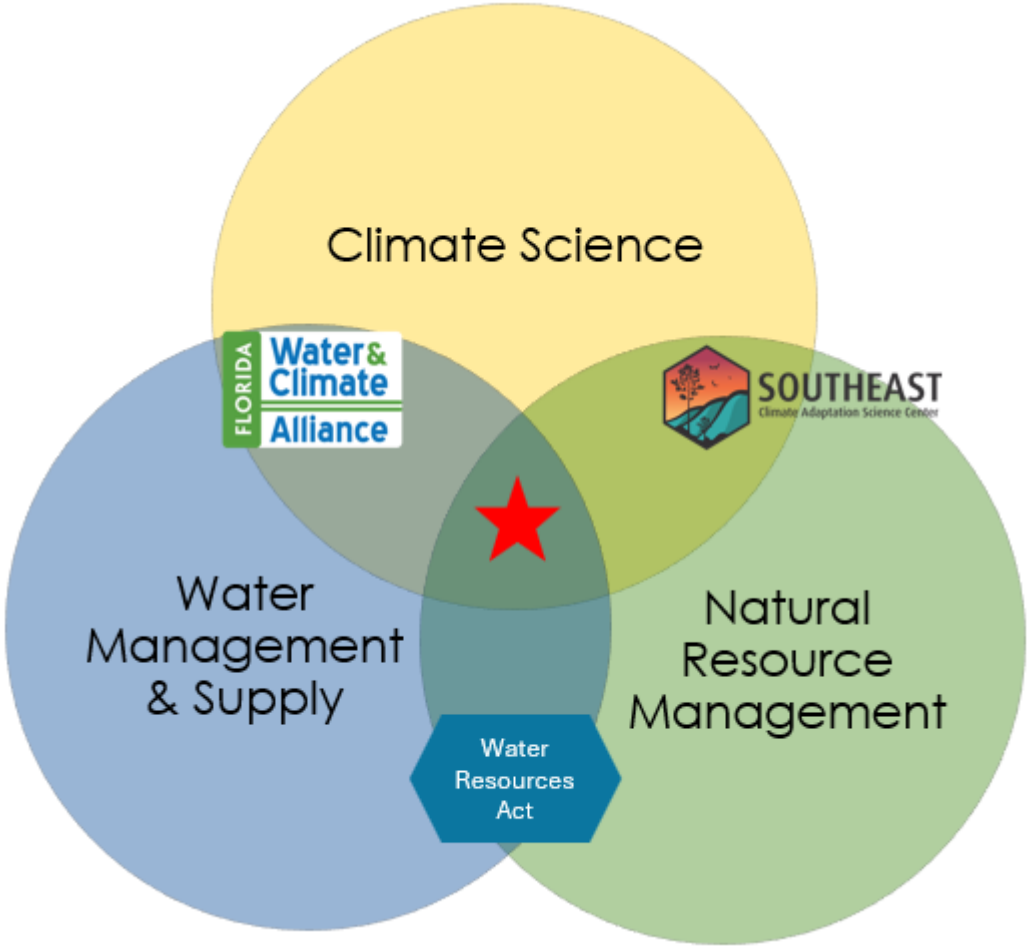
Shifting Rainfall Patterns & Climate Variability

Rapid Population Growth and Land-Use Change

Bridging the Gap

WATER & ECOSYSTEM SCIENCE FOR CLIMATE ADAPTION IN FLORIDA

Project Objective



Foster collaboration among water managers, natural resource managers, and climate scientists to co-develop research questions that foster integrated water supply and aquatic ecosystem management for climate adaptation in Florida.

Timeline

March 2026

Workshop 1:

Identify challenges & opportunities

Build a shared vision

Identify action items and research needs

October 2026

Workshop 2:

Finalize shared research agenda

Develop implementation strategies

Establish working groups

Spring 2027

Project Outreach :

Webinars

Conferences

Workshop Reports

White Papers

Shared Vision- What Success Looks Like

Data and Models

- Strategic monitoring to understand systems and inform models
- Increased data integration and information sharing
- Improved localized Florida-specific climate models
- Integrated water models

Planning and Policy

- Increased collaboration and communication across sectors
- Incorporating and communicating risk and variability in decision-making
- Strategic policy development, implementation, and enforcement
- Incorporation of natural resources and water in land use planning

Potential Challenges- What is Blocking Us

Communication and Coordination

- Building trust and communicating across diverse stakeholder interests
- Gaps in coordination among agencies, sectors, and stakeholders
- Structural barriers to coordination and implementation

Planning and Policy

- Constraints in planning processes do not support integrated rulemaking
- Reactive policy making with limited political will for long-term planning

Resources & Capacity

- Difficulties in demonstrating return on investment to justify budgets and prioritize actions
- Gaps in expertise, time, and training

Actions – Where Can We Start

Communication and Coordination

- Leverage mechanisms to foster co-production across sectors
- Improve public outreach and education
- Improve interagency coordination

Data and Models

- Develop a persistent, centralized repository for sharing data and information
- Co-develop new tools to support integration of climate data into water and natural resource models

Planning and Policy

- Initiate internal conversations about where and how best to incorporate climate risk and variability

Resources and Capacity

- Create or leverage existing capacity to inform and educate legislators
- Build workforce capacity

Research and Knowledge Gap Themes

Data & Modeling

- Targeted/ “Better” monitoring and better data sharing
- Designing data products specifically for effective integration into planning models
- Need for improved Florida-specific ocean-atmosphere climate models/ projections
- Need for integrated hydrologic and ecosystem models

Climate-Informed Planning

- Where and how best to incorporate climate data into existing decision-making processes?
- Need to plan for both drought and flood extremes
- Need to incorporate risk and uncertainty into decision-making
- Need to account for non-stationarity (moving target/ moving baselines)

Bridging the Gap: Integrating Water Resource Management and Ecosystem Science for Climate Adaptation in Florida

Questions?