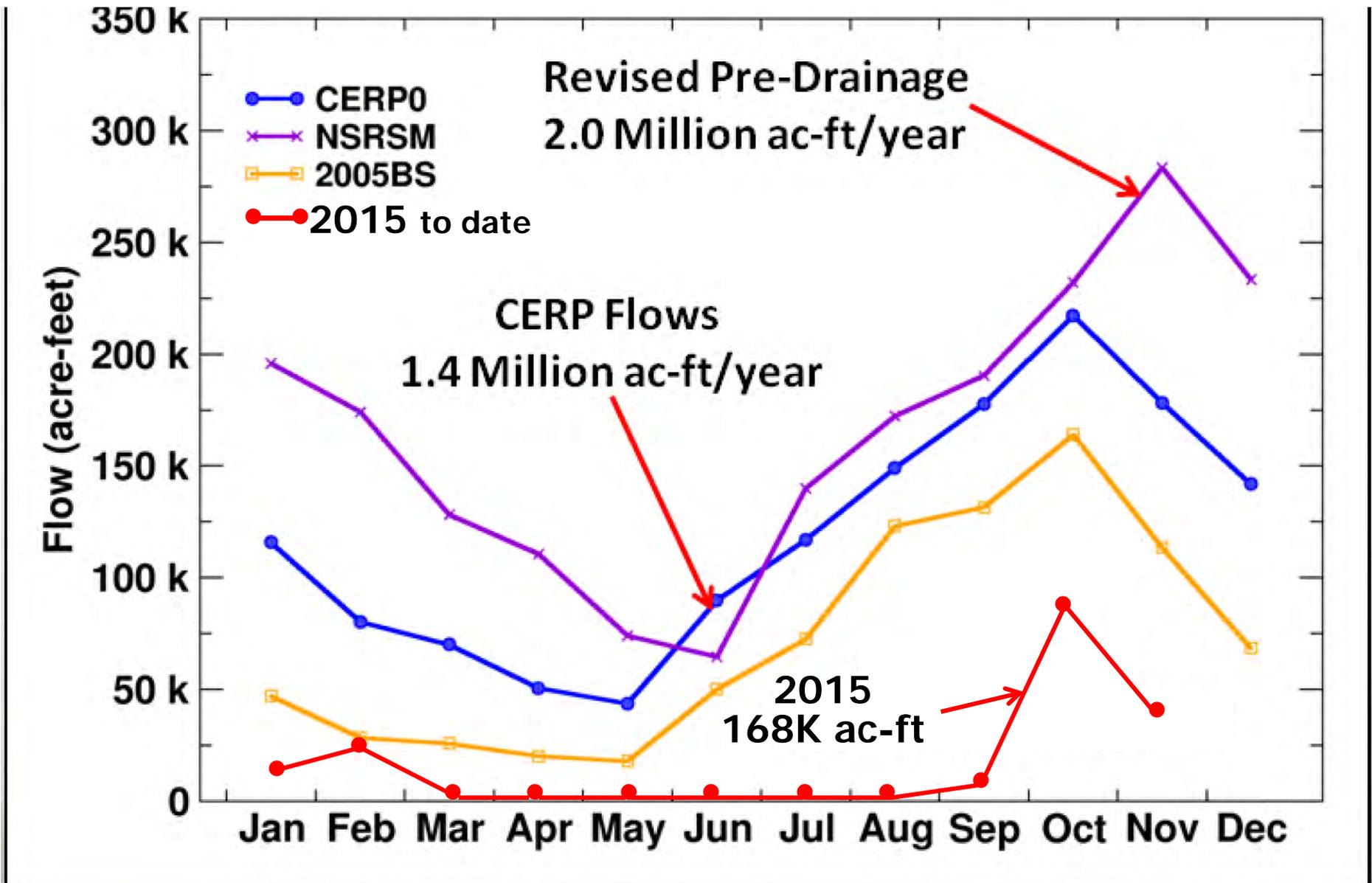
A satellite-style map of Florida Bay, showing the intricate network of waterways and islands. The water is a mix of deep blue and green, indicating varying depths and vegetation. The land is a mix of green and brown, showing marshes and other coastal features. The text is overlaid on the map in white, bold font.

Florida Bay Conditions Update

**South Florida Ecosystem Restoration
Task Force Meeting
November 19, 2015**

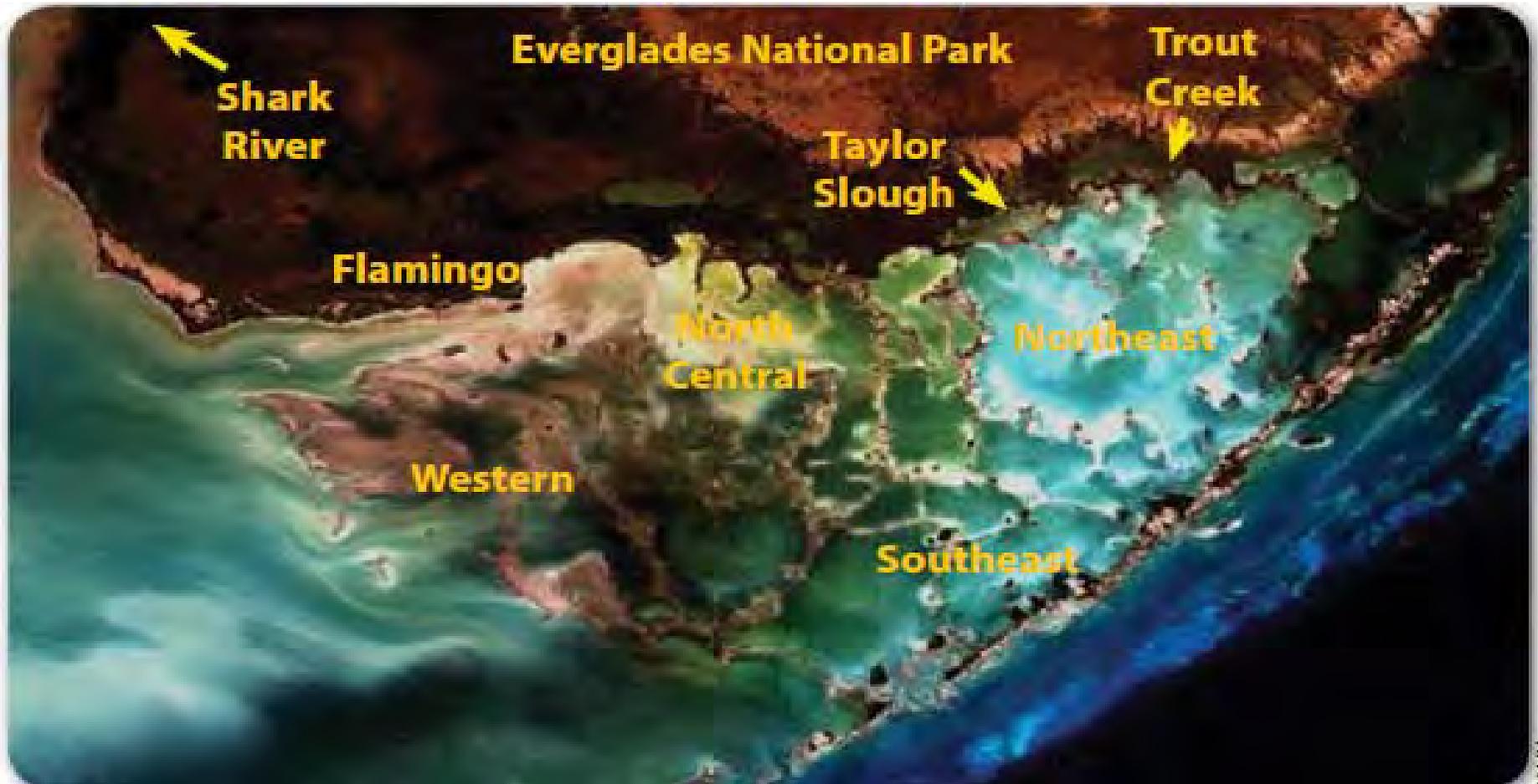
**Robert Johnson - NPS
Lt. COL Reynolds – USACE
Jeff Kivett – SFWMD**

Chronic Problem – Inadequate Water Deliveries to ENP/Shark River Slough



Florida Bay - A Complex System of Basins and Mud Banks

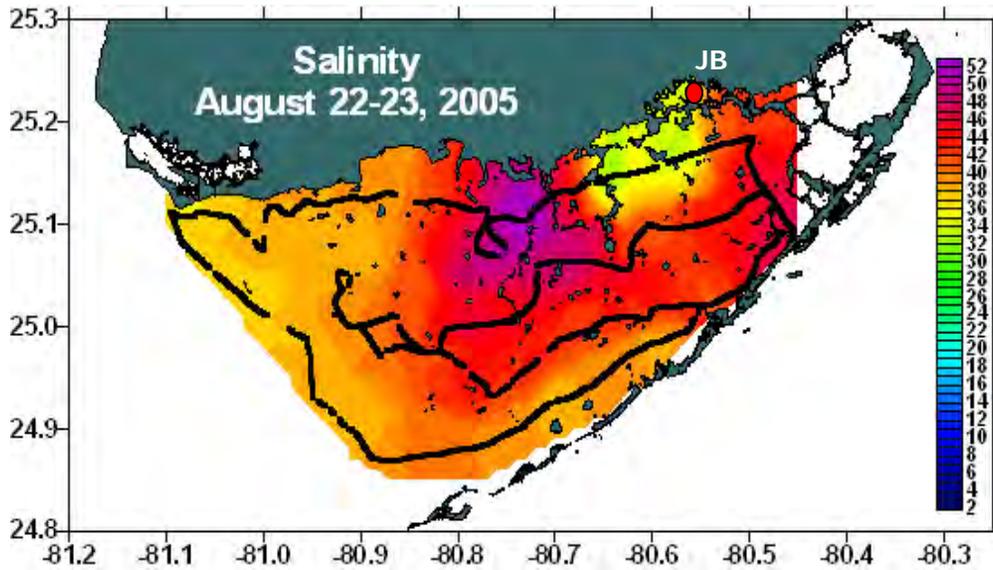
The highly productive seagrass meadows of Florida Bay, the Florida Keys, and the SW Florida Shelf are the largest in the world.



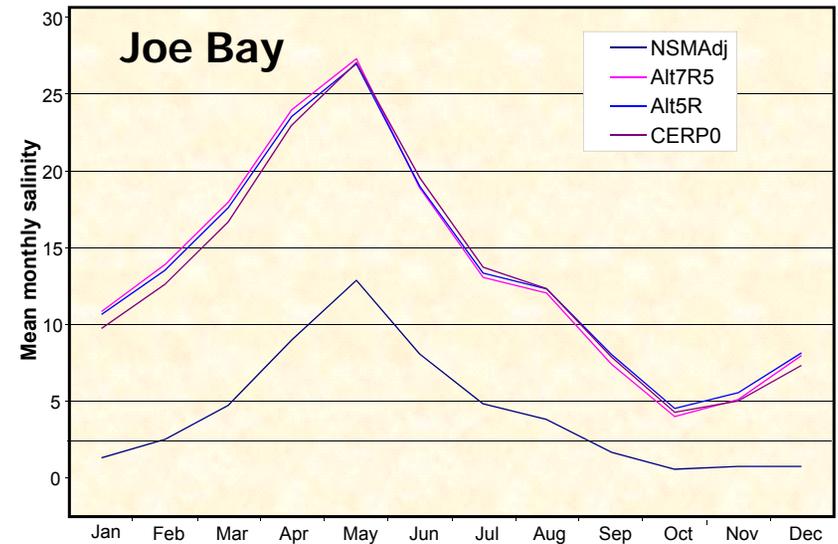
Florida Bay mud banks restrict water exchange. The Central zone is the most isolated (persistent high salinity).

Florida Bay Salinity & Restoration Targets

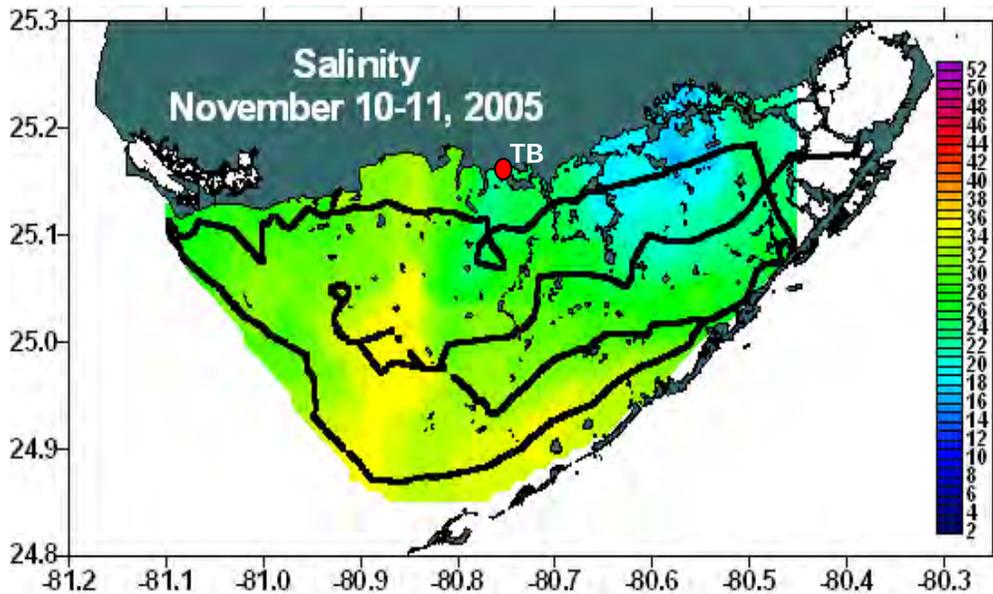
Pre-Katrina Salinities



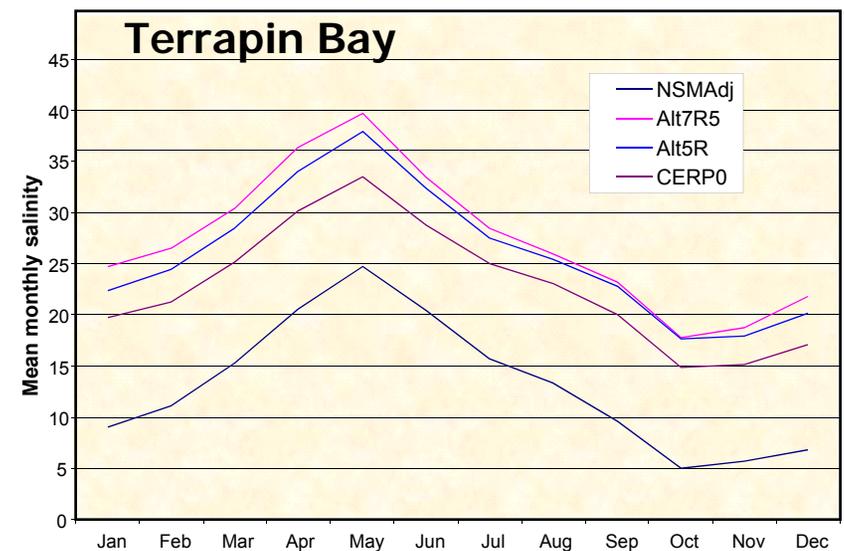
Northeast Florida Bay Embayments



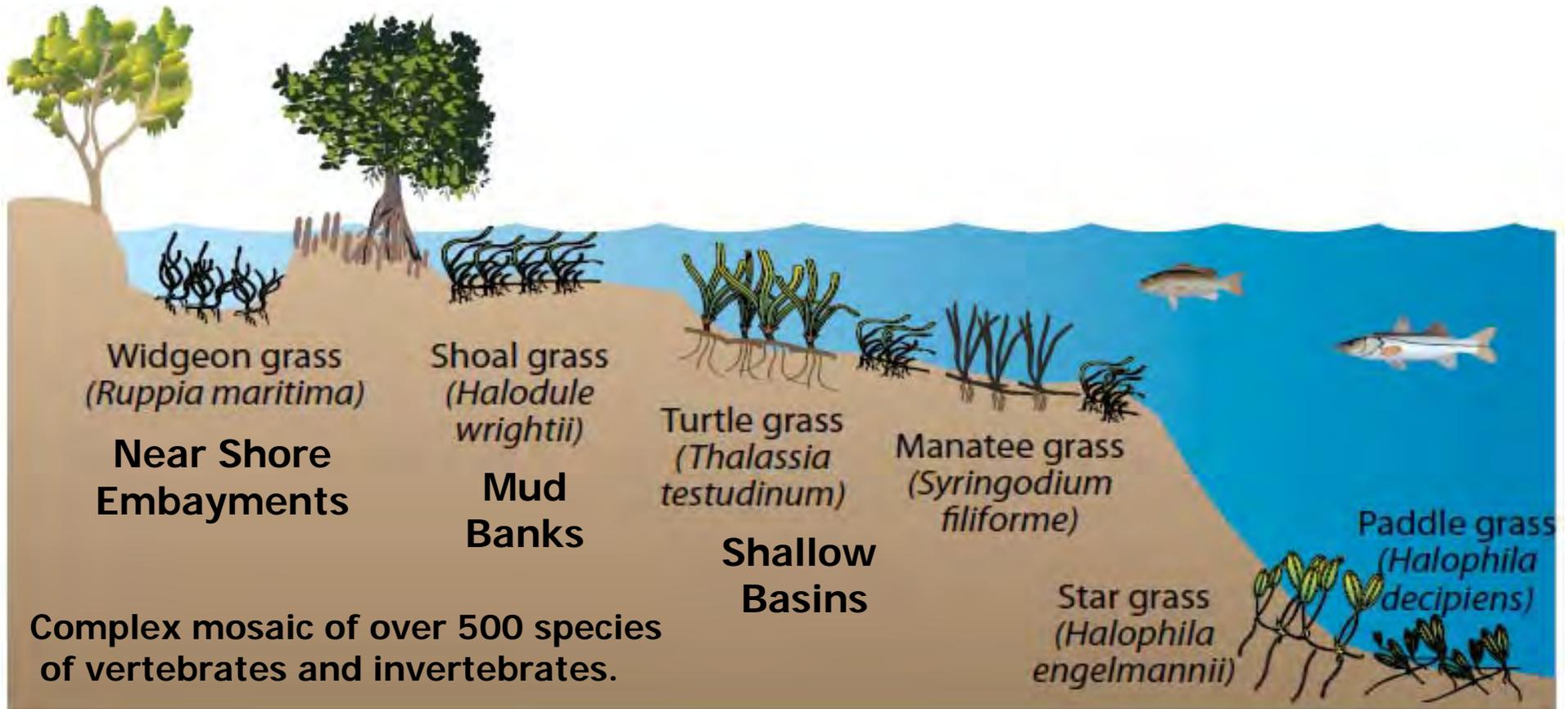
Post-Katrina Salinities



Central Florida Bay Embayments



Generalized Seagrass Distribution with Water Depth and Salinity Regimes



Everglades

Freshwater

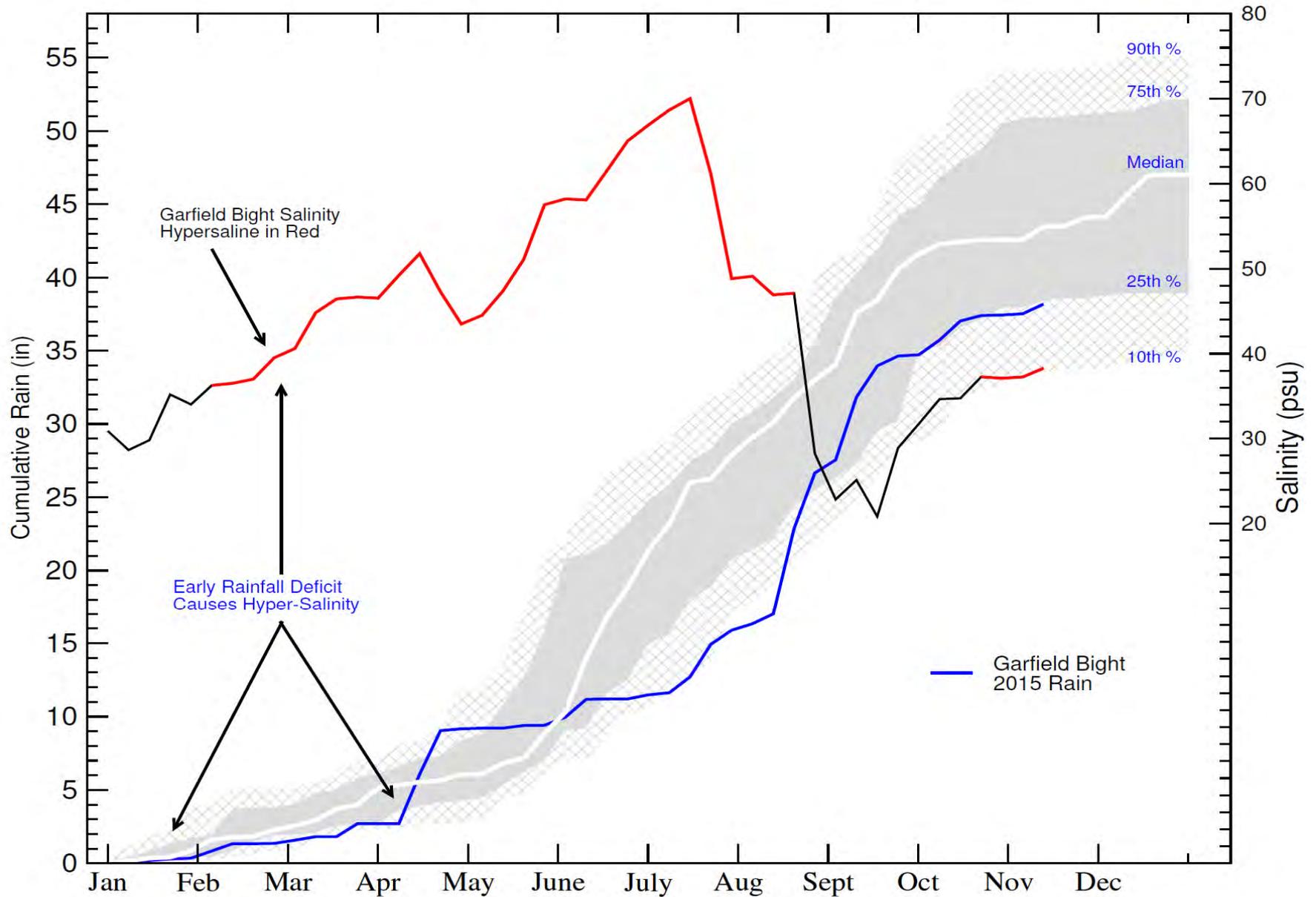


Offshore

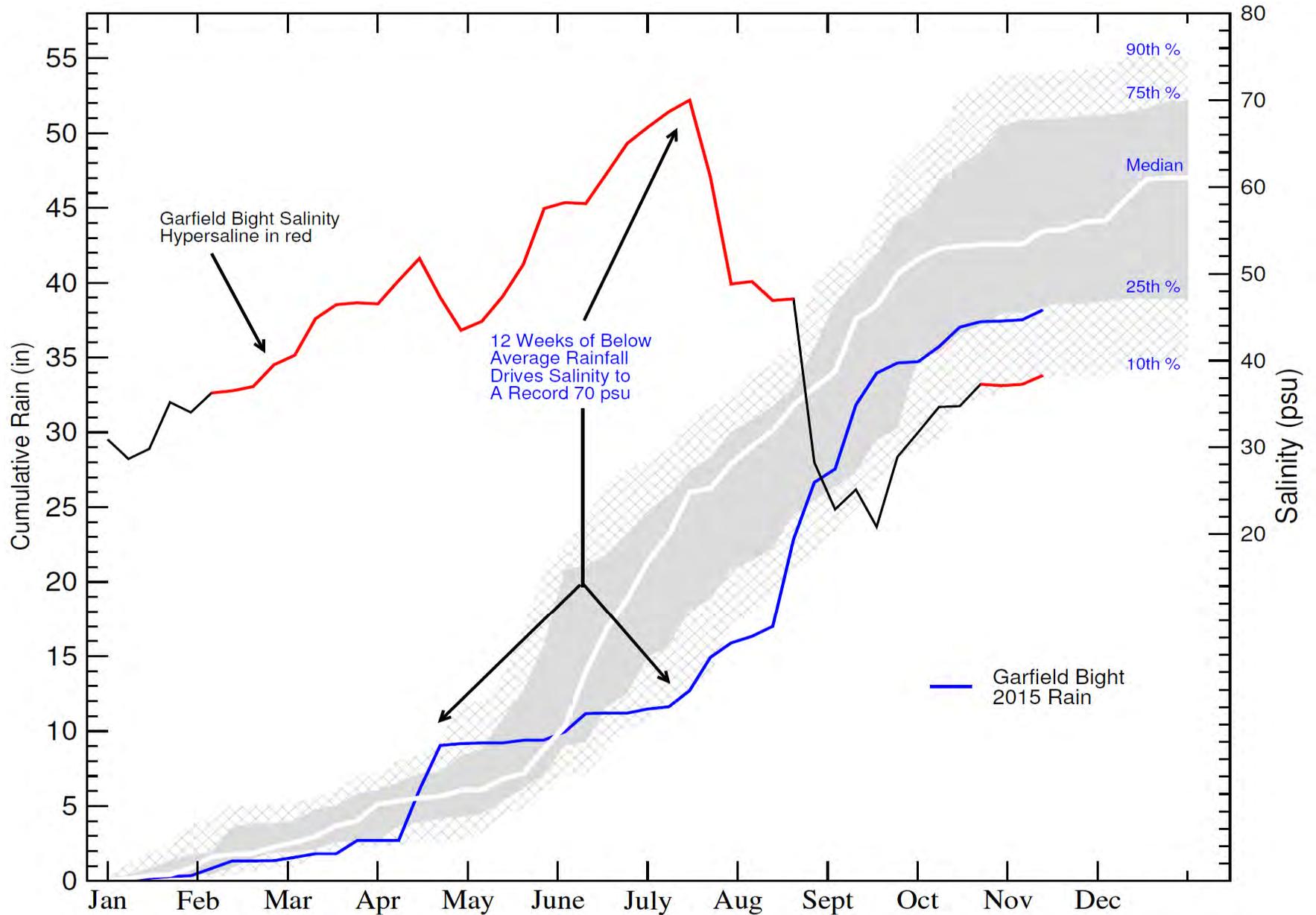
Marine

Widgeon grass grows in the freshwater transition zones. Shoal grass grows on the mud banks with shallow water and disturbance. Turtle grass grows in the shallow basins, and Manatee grass grows in the deeper basins, and they both tolerate higher salinities.

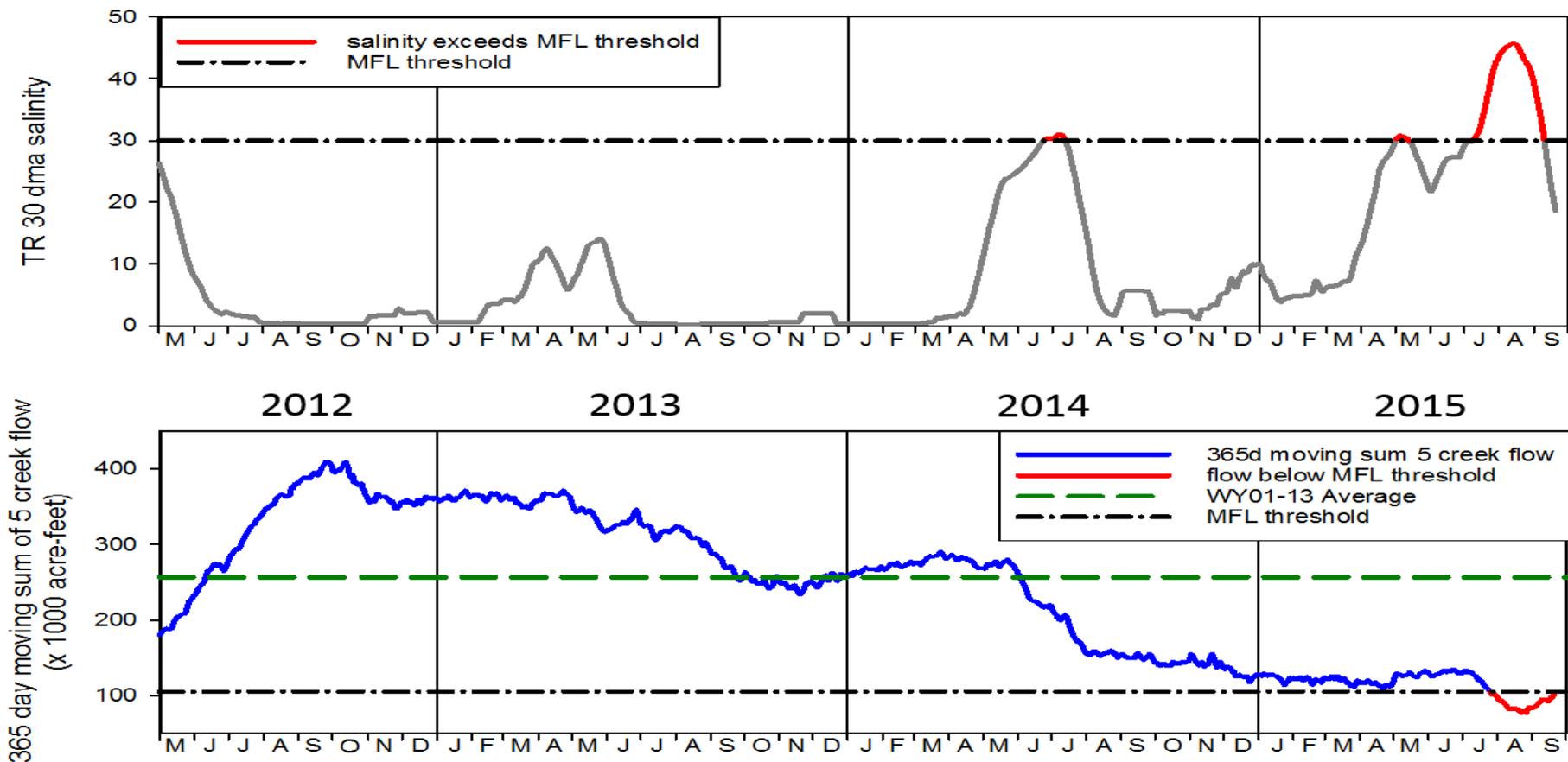
Acute Problem - Rainfall Deficits Trigger Florida Bay Hypersalinity



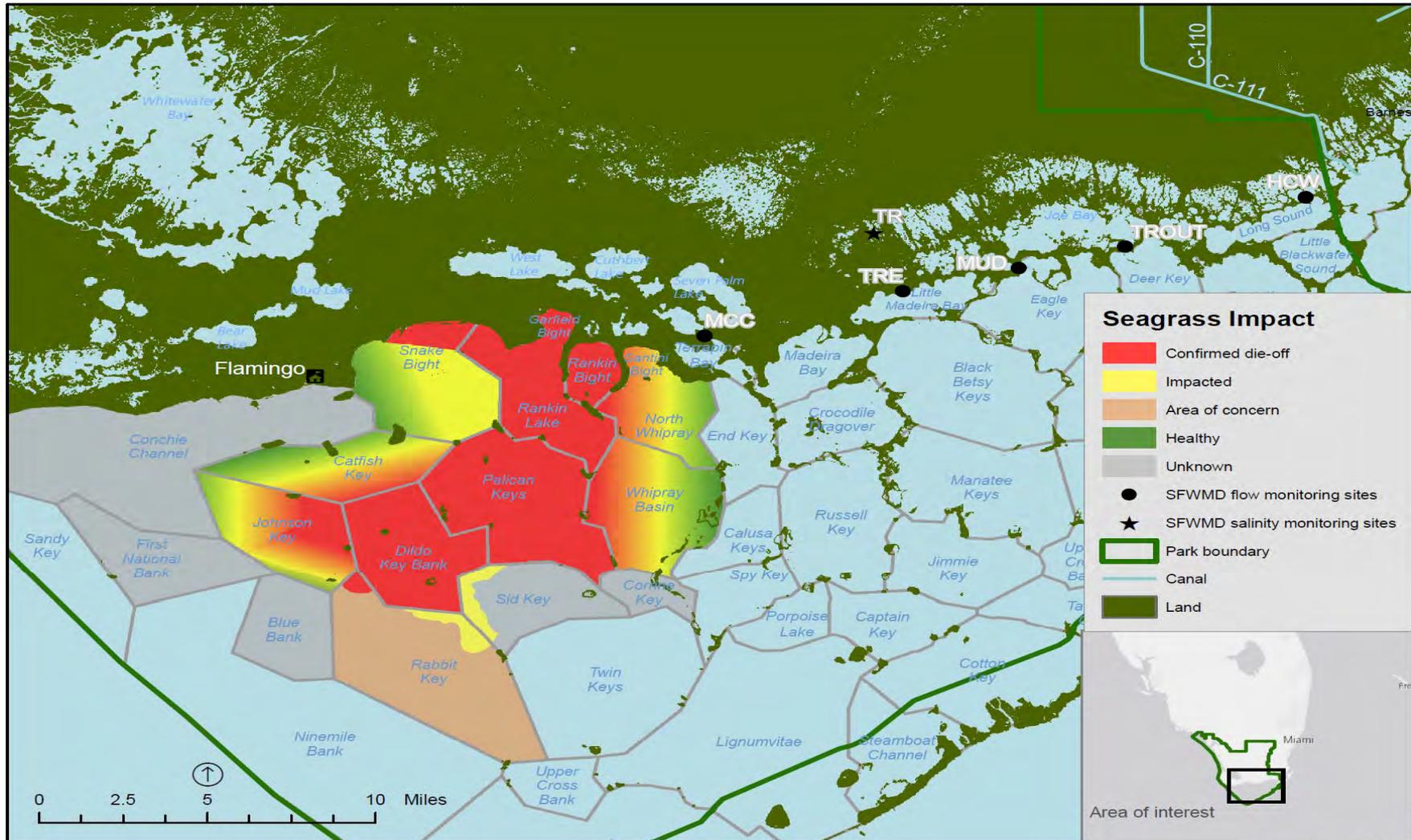
Acute Problem - Rainfall Deficits Trigger Florida Bay Hypersalinity



2012-2015 Florida Bay Conditions (MFL Criteria)

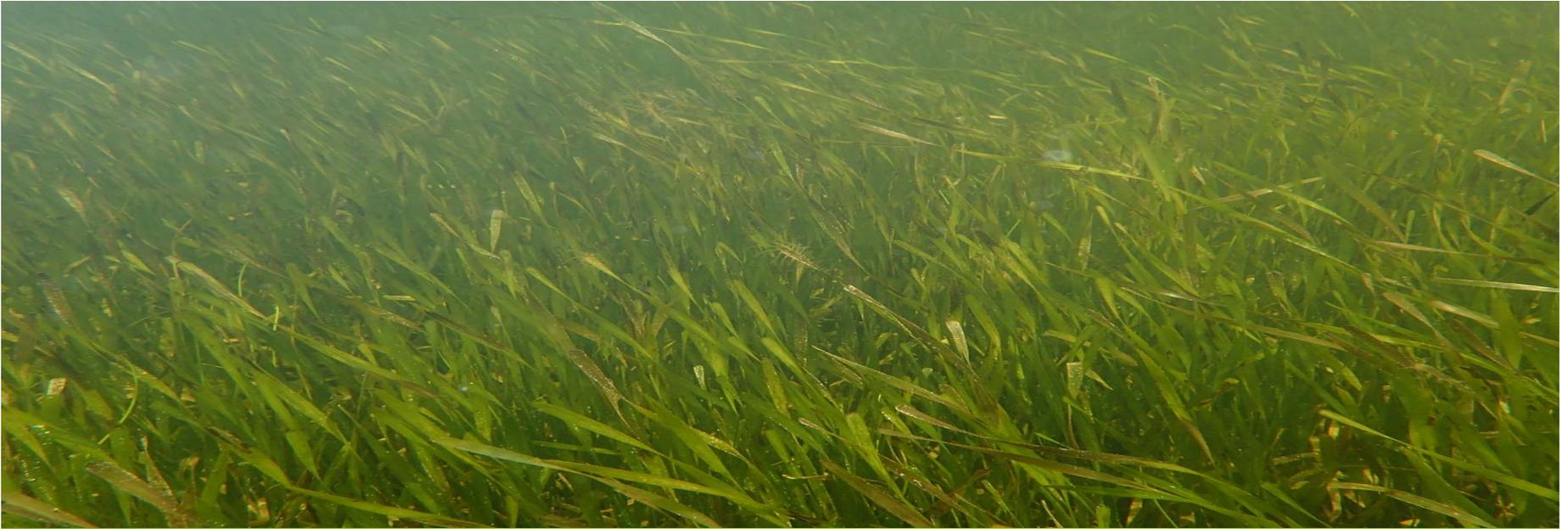


Florida Bay – Seagrass Dieoff Spatial Extent (November 2015)

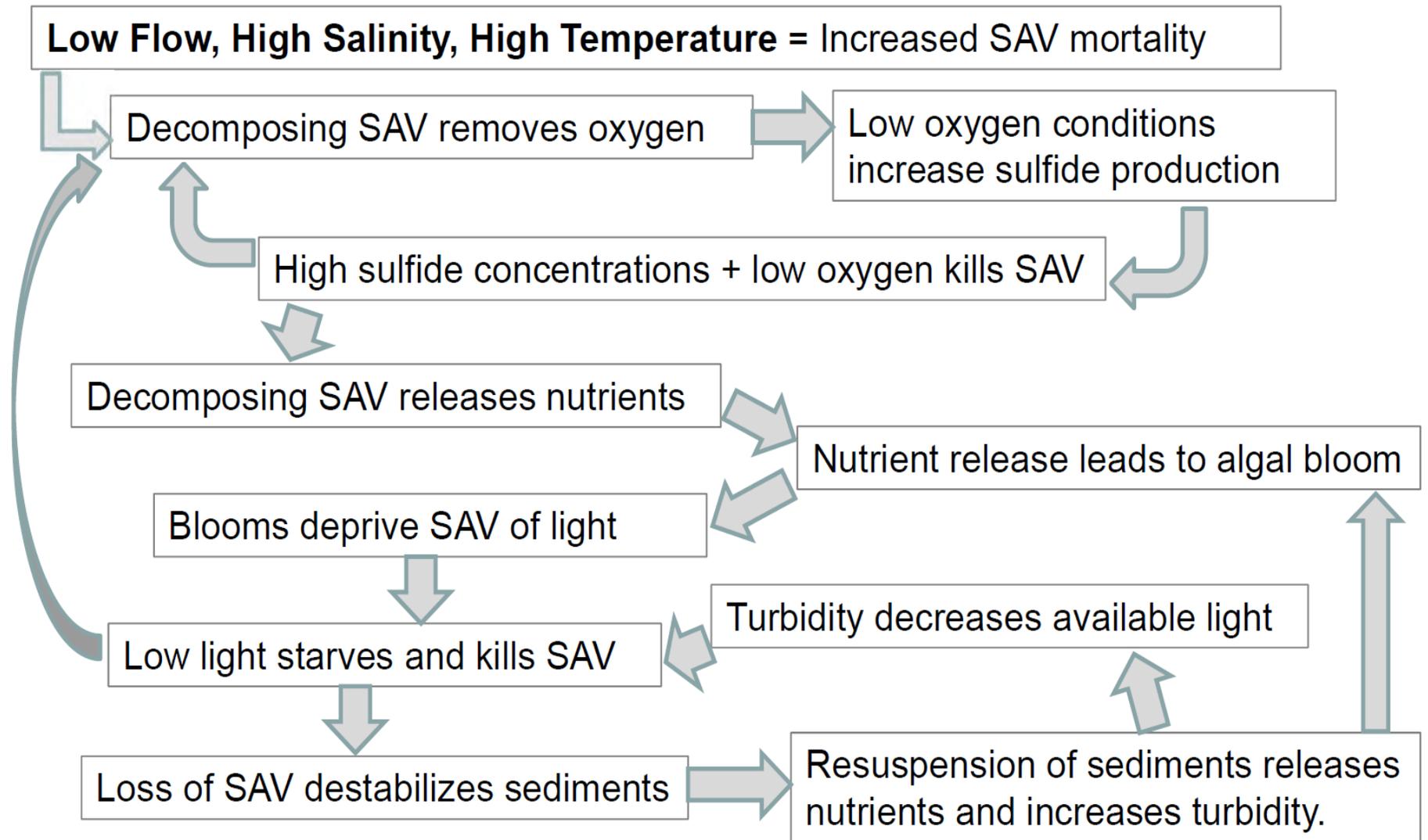


Seagrass dieoff is tied to low freshwater inflows, and high water salinity and temperatures, which reduces dissolved oxygen and increases toxic sulfides. The floating seagrass blocks light penetration and the released nutrients can trigger algal blooms.

Healthy Versus Dead Seagrass



A Cascade of Ecological Stressors Contribute to Seagrass Dieoff and Algal Blooms in Florida Bay



Adapted from Marguerite Koch and Fred Sklar

