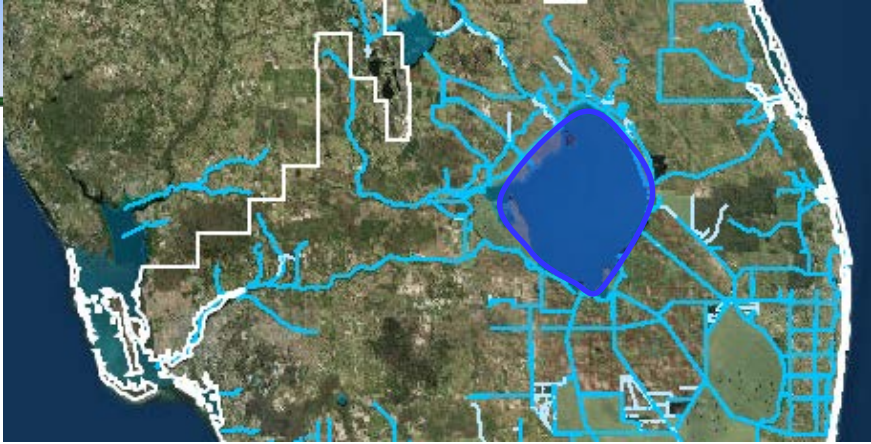


Infrastructure Responsible for Moving Water from Lake Okeechobee to the Central Everglades (Water Conservation Areas)

Water Resources Accountability and Collaboration Public Forum March 25, 2021

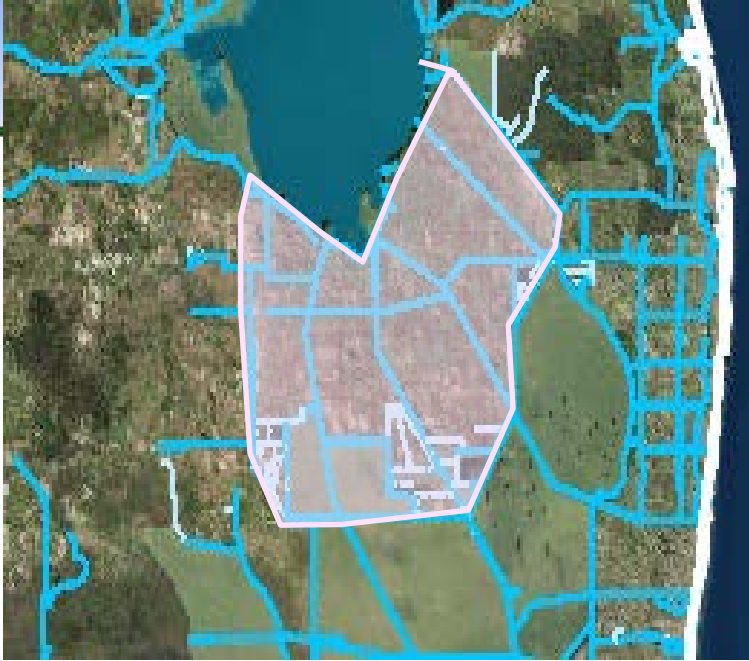


Suelynn Kirkland, P.E.
Office Chief – Water Management
Office of Operations



Lake Okeechobee

- Lake Okeechobee is the “heart” of the South Florida water resources system
- Surface area ~ 730 mi², about 1/5th of the tributary basins area.
- Structural outflow capacity is less than inflow capacity. This added to the size of the tributary basins make lake stage increase rapidly. It takes substantially longer periods to return the lake to pre-storm stages.
- Lake is managed to provide flood control (public health and safety), water supply (agricultural, urban and environmental), preservation of fish and wildlife, recreation, navigation and prevention of saltwater intrusion.
- Lake Okeechobee flood control operations are dictated by USACE’s 2008 LORS Water Control Plan. Provides guidance on discharges from the lake to the Caloosahatchee Estuary, St. Lucie Estuary and to the Central Everglades (the Water Conservation Areas (WCAs))



Agricultural Area Runoff and Treatment

- Major canals provide flood control to the agricultural areas (pump from ag fields) or supplemental irrigation for agriculture (pump to ag fields)
 - Agricultural and local basin runoff and lake releases moving south into the Everglades needs to meet strict WQ standards.
 - SFWMD constructed and further expanded 4 STAs (1W, 2, 3/4 and 5/6) and two FEBs (A-1 and L-8). One STA (1E) was designed and built by USACE and then transferred to the SFWMD
 - These STAs are located at the boundary between the agricultural areas and the Everglades
- Water is moved and filtered through these constructed wetlands (STAs or Stormwater Treatment Areas) and flow equalization basins (FEBs)
 - FEBs are used to help the STAs achieve WQ requirements by capturing peak runoff during storm events. These volumes are then released gradually to the STAs
 - The primary design purpose of the canals and STAs is to provide flood control to the local basins. Once flood conditions are alleviated, canals may be able to send lake regulatory releases south
 - Hydraulic and treatment capacity for the STAs are not unlimited. Prolonged periods of flow will inundate and overload the cells and damage the vegetation in the STAs

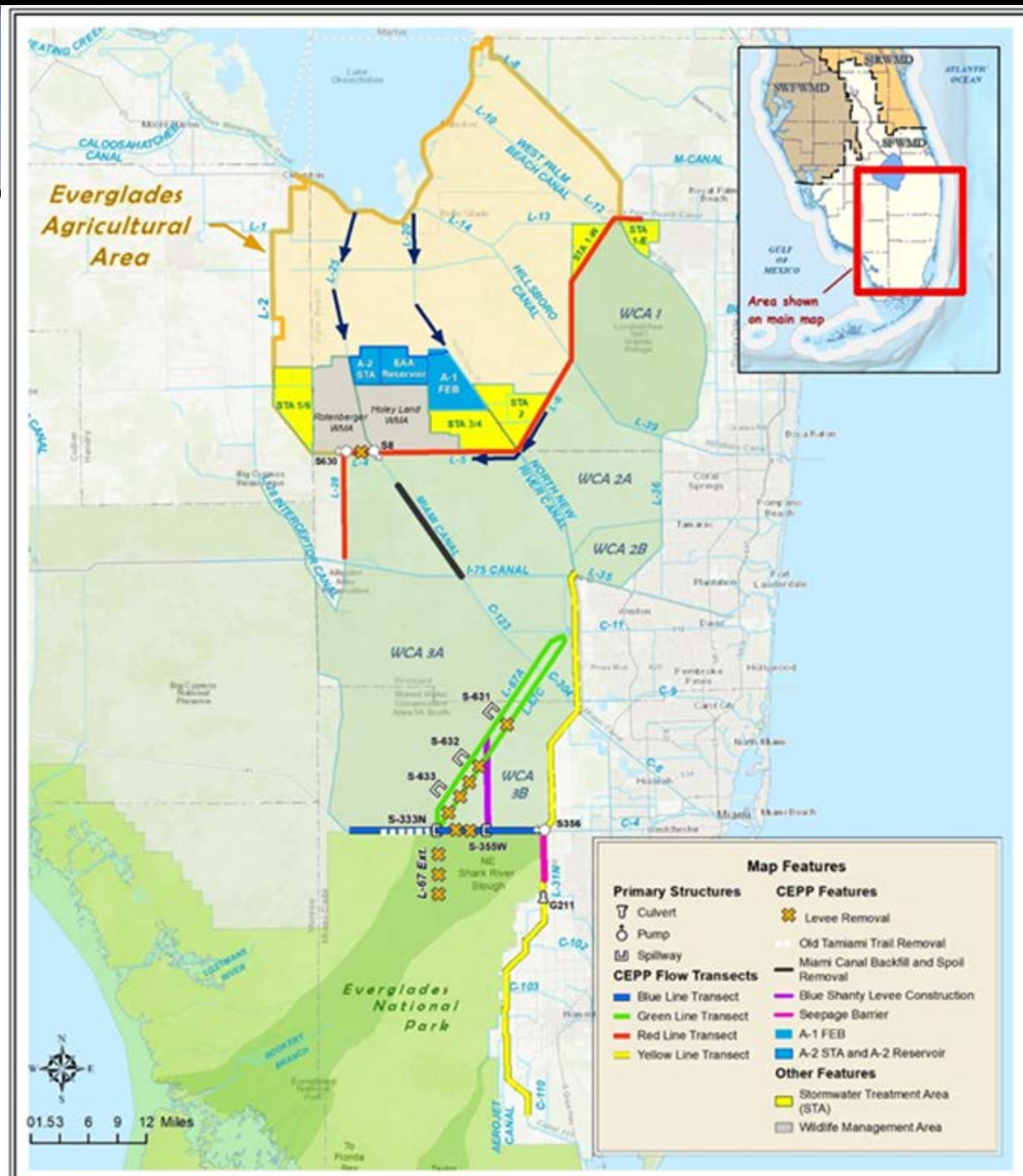
Projects Recently Complete or in the Queue

Three major projects necessary to consistently move excess water to the south are either complete, underway or in process. When completed an additional 370,000 acre-feet (annual average) of water can be sent south.

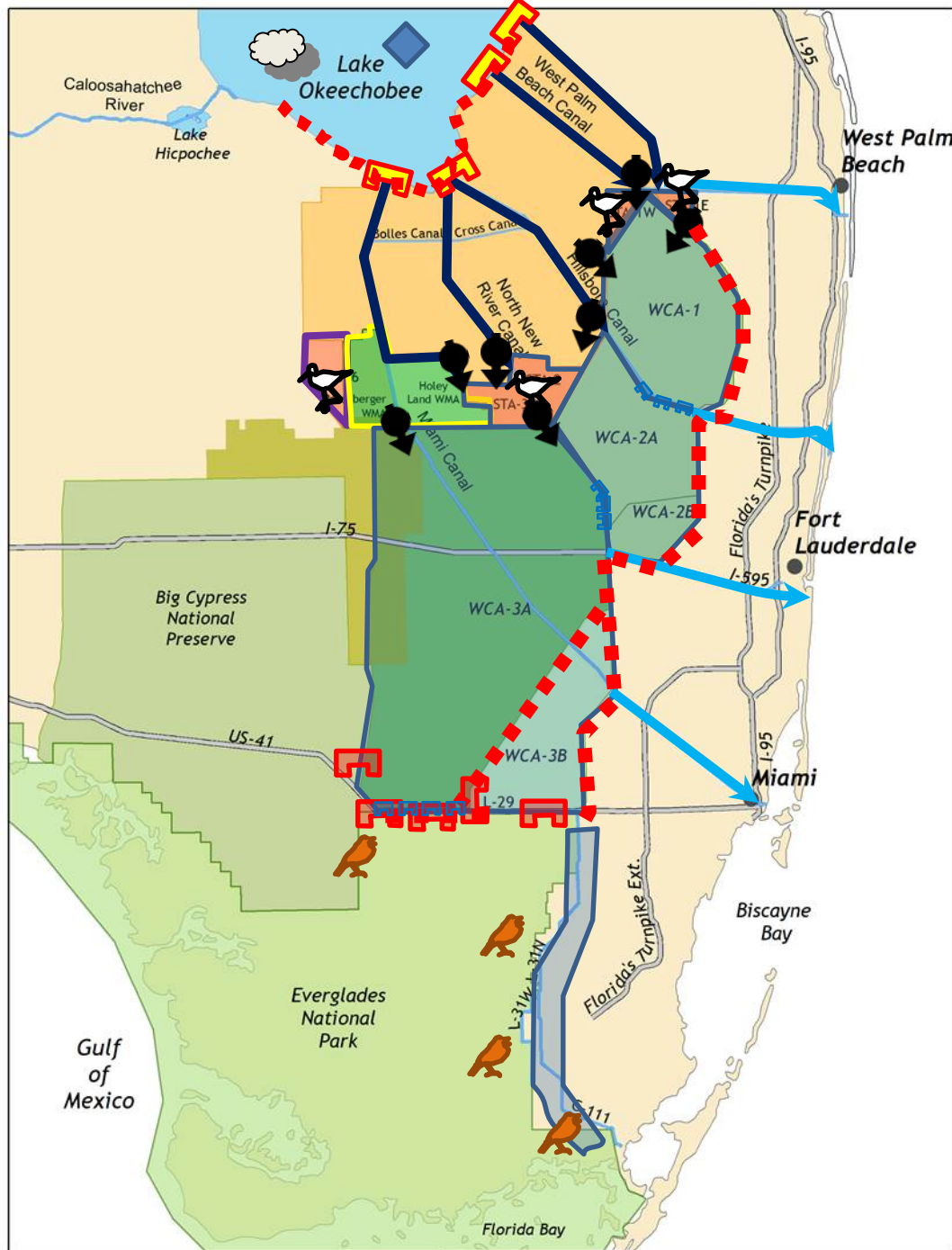
The **Restoration Strategies Project** was implemented so basin runoff, and a limited amount of Lake water, can meet final water quality standards. (L8 FEB, A1 FEB, STA 1W Exp, C139 FEB)

The **Modified Water Deliveries Project** is complete and operating under the COP WCP. However, additional flood mitigation efforts for 8.5 SMA are needed to maximize COP operations. Cutoff wall was approved at the March 2021 Governing Board.

The **Central Everglades Planning Project (CEPP)** is necessary to move additional water south. Individual features are coming online or are under construction.

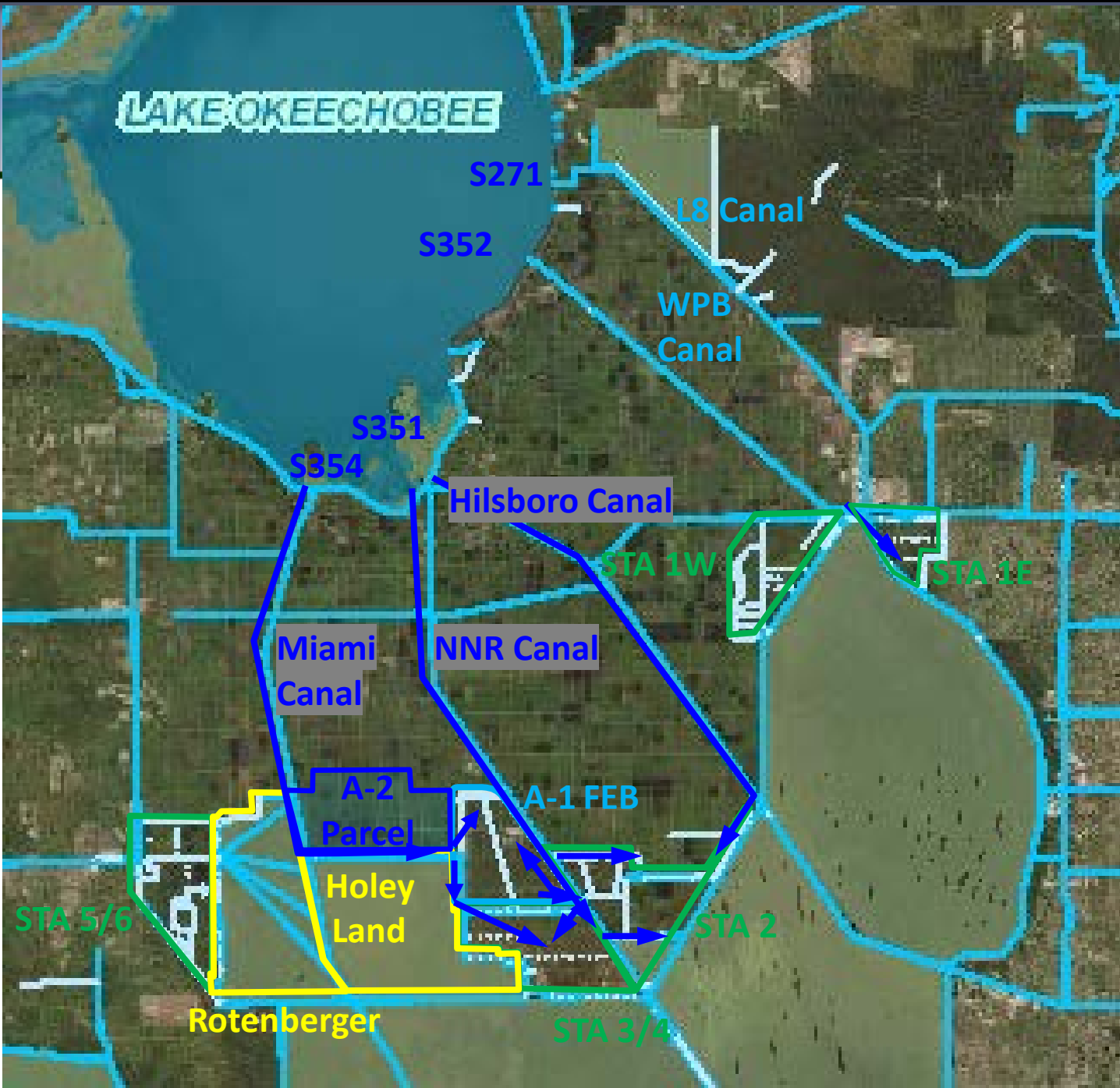


Considerations in Moving Water South



Symbol	Factors to Consider in Operations
	Weather Patterns
	Herbert Hoover Dike
	2008 LORS
	Structure Capacity
	Canal Conveyance
	Species protection
	STA Treatment Capability
	Pump Capacity
	STA 5 / 6 Connectivity
	Wildlife Management Area
	Water Level Limitation (Tree Islands & Wildlife)
	LEC Canal Conveyance
	Levee Safety
	Flow Limitation
	Flood Risk (L29 FDOT Constraint, 8.5 SMA)

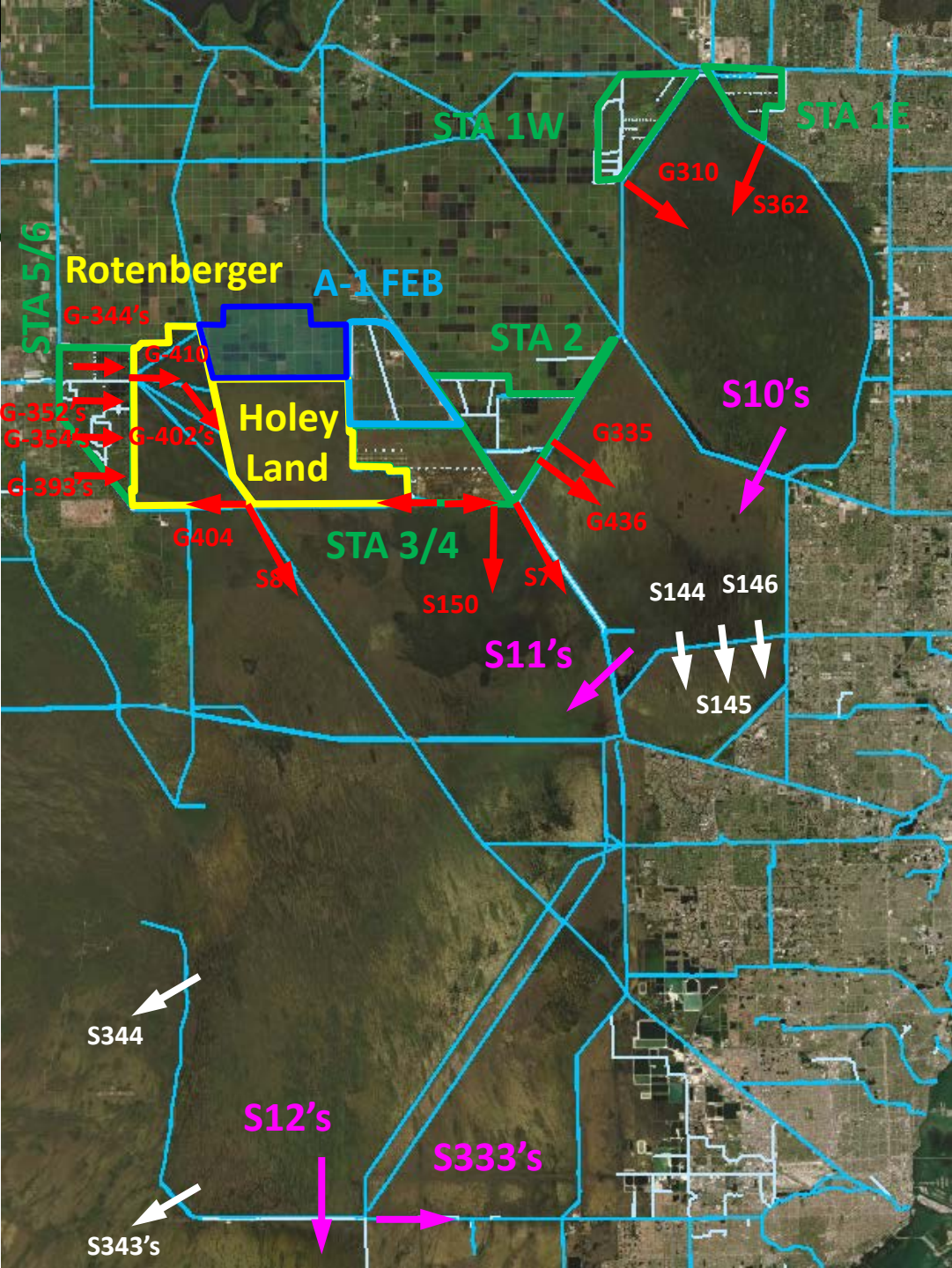
Primary Routes to Send Lake Releases South to the Central Everglades



Reasons for sending releases South

- Regulatory – To STAs and Central Everglades (WCAs) LORS 2008
- Supplemental Irrigation - To LOSA Basins
- Water Supply to Urban Areas – To Municipalities and LEC Urban Areas
- Environmental – To Everglades and WMAs
- STA Hydration – To STAs 1E, 1W, 2 and 3/4

STA Releases to the Central Everglades



STAs to the Central Everglades (WCAs)

Runoff and Lake Releases

- STA 2 to WCA 2A
- STA 3/4 to WCA 3A

Runoff Only

- STA 1E to WCA 1
- STA 1W to WCA 1
- STA 5/6 to WCA 3A

Thank You!