

Lake Okeechobee Regulation Schedule WSE

- South Florida Water Management District
- U.S. Army Corps of Engineers



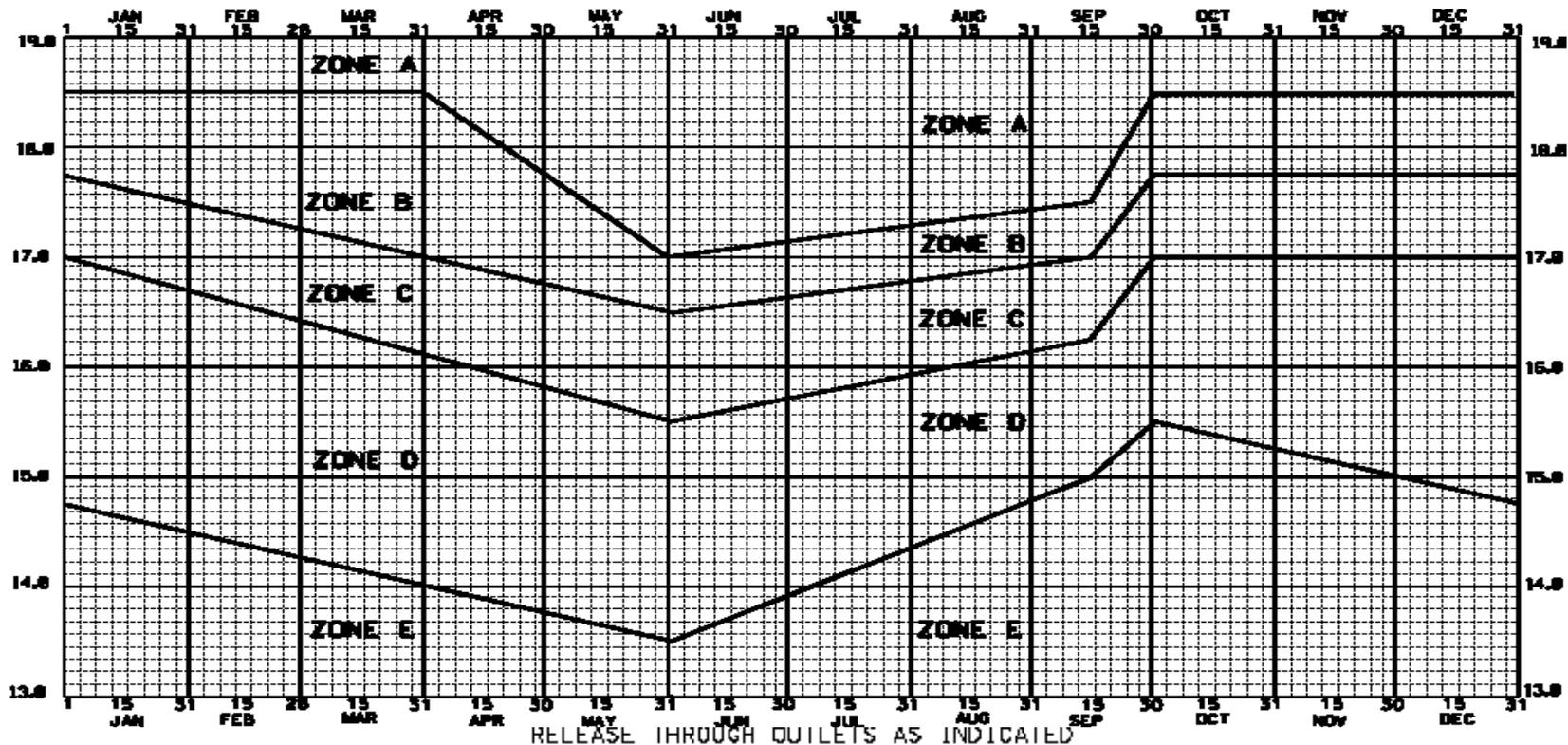
What is a Regulation Schedule?

- Tool for managing water levels
- Triggers releases for flood control
- Doesn't trigger water supply deliveries
- Designed to balance multiple & competing objectives

Major Water Control Structures



LAKE STAGE IN FT. NGVD



ZONE	AGRICULTURAL CANALS TO WCA _B (1,2)	CALOOSAHATCHEE RIVER AT S-77 (1,2,4)	ST. LUCIE CANAL AT S-80 (1,2,4)
A	PUMP MAXIMUM PRACTICABLE	UP TO MAXIMUM CAPACITY	UP TO MAXIMUM CAPACITY
B (3)	MAXIMUM PRACTICABLE RELEASES	RELEASES PER DECISION TREE (THESE CAN RANGE FROM MAXIMUM PULSE RELEASE UP TO MAXIMUM CAPACITY)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM MAXIMUM PULSE RELEASE UP TO MAXIMUM CAPACITY)
C (3)	MAXIMUM PRACTICABLE RELEASES	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 6500 CFS)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 3500 CFS)
D (3,5)	AS NEEDED TO MINIMIZE ADVERSE IMPACTS TO THE LITTORAL ZONE WHILE NOT ADVERSELY IMPACTING THE EVERGLADES. (SEE NOTE 5.)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 4500 CFS)	RELEASES PER DECISION TREE (THESE CAN RANGE FROM NO DISCHARGE UP TO 2500 CFS)
E	NO REGULATORY DISCHARGE	NO REGULATORY DISCHARGE	NO REGULATORY DISCHARGE

- NOTES: (1) SUBJECT TO FIRST REMOVAL OF RUNOFF FROM DOWNSTREAM BASINS
 (2) GUIDELINES FOR WET, DRY AND NORMAL CONDITIONS ARE BASED ON: 1) SELECTED CLIMATIC INDICES AND TROPICAL FORECASTS AND 2) PROJECTED INFLOW CONDITIONS. RELEASES ARE SUBJECT TO THE GUIDELINES IN THE WSE OPERATIONAL DECISION TREE, PARTS 1 AND 2.
 (3) RELEASES THROUGH VARIOUS OUTLETS MAY BE MODIFIED TO MINIMIZE DAMAGES OR OBTAIN ADDITIONAL BENEFITS. CONSULTATION WITH EVERGLADES AND ESTUARINE BIOLOGISTS IS ENCOURAGED TO MINIMIZE ADVERSE EFFECTS TO DOWNSTREAM ECOSYSTEMS.
 (4) PULSE RELEASES ARE MADE TO MINIMIZE ADVERSE IMPACTS TO THE ESTUARIES
 (5) ONLY WHEN THE WCA_B ARE BELOW THEIR RESPECTIVE SCHEDULES

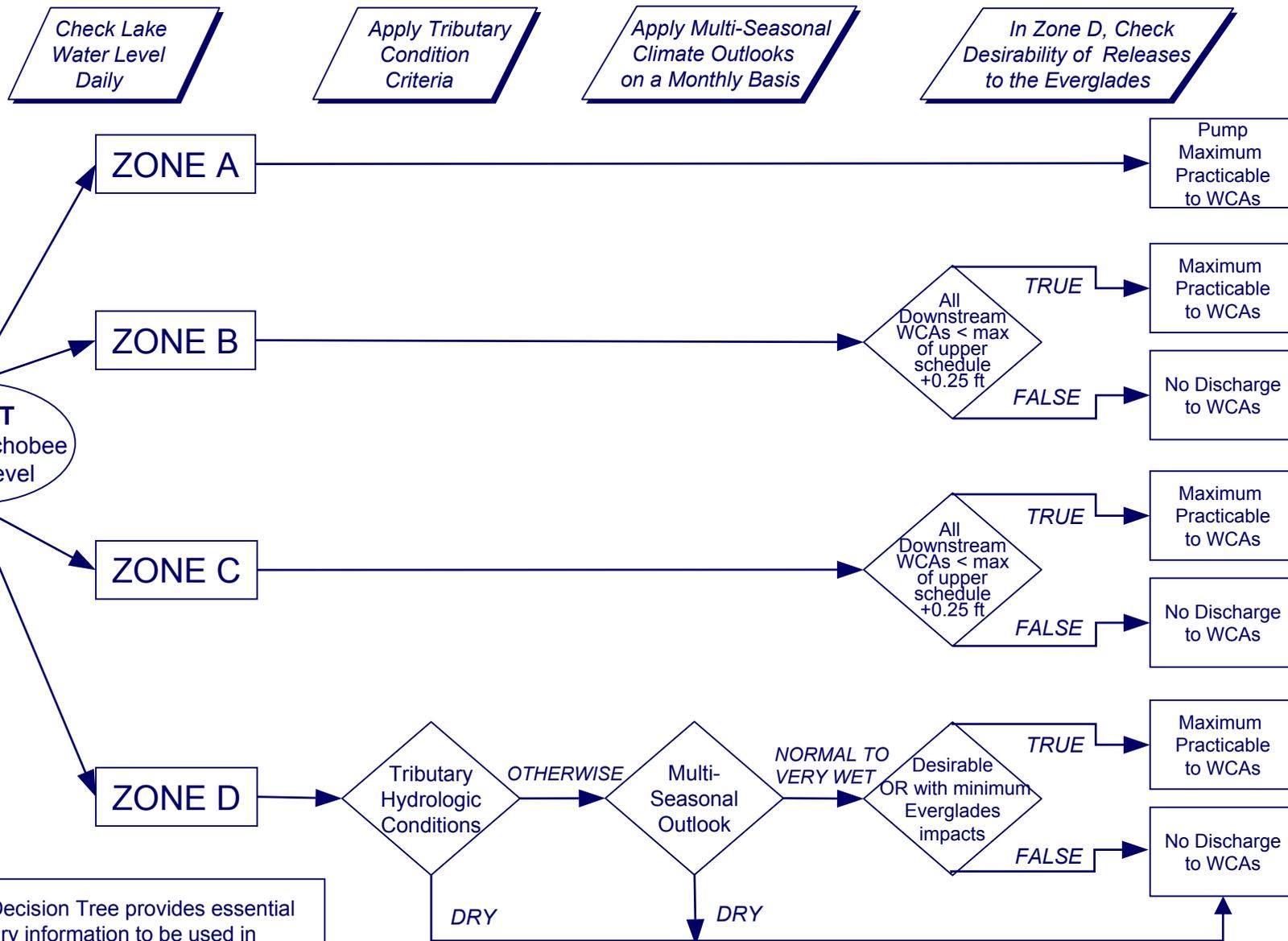
CENTRAL AND SOUTHERN FLORIDA
 INTERIM REGULATION SCHEDULE
 LAKE OKEECHOBEE

DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT
 CORPS OF ENGINEERS, JACKSONVILLE, FLORIDA
 DATED: 5 NOVEMBER 1999

WSE (WITH CLIMATE OUTLOOK)

WSE Operational Guidelines Decision Tree

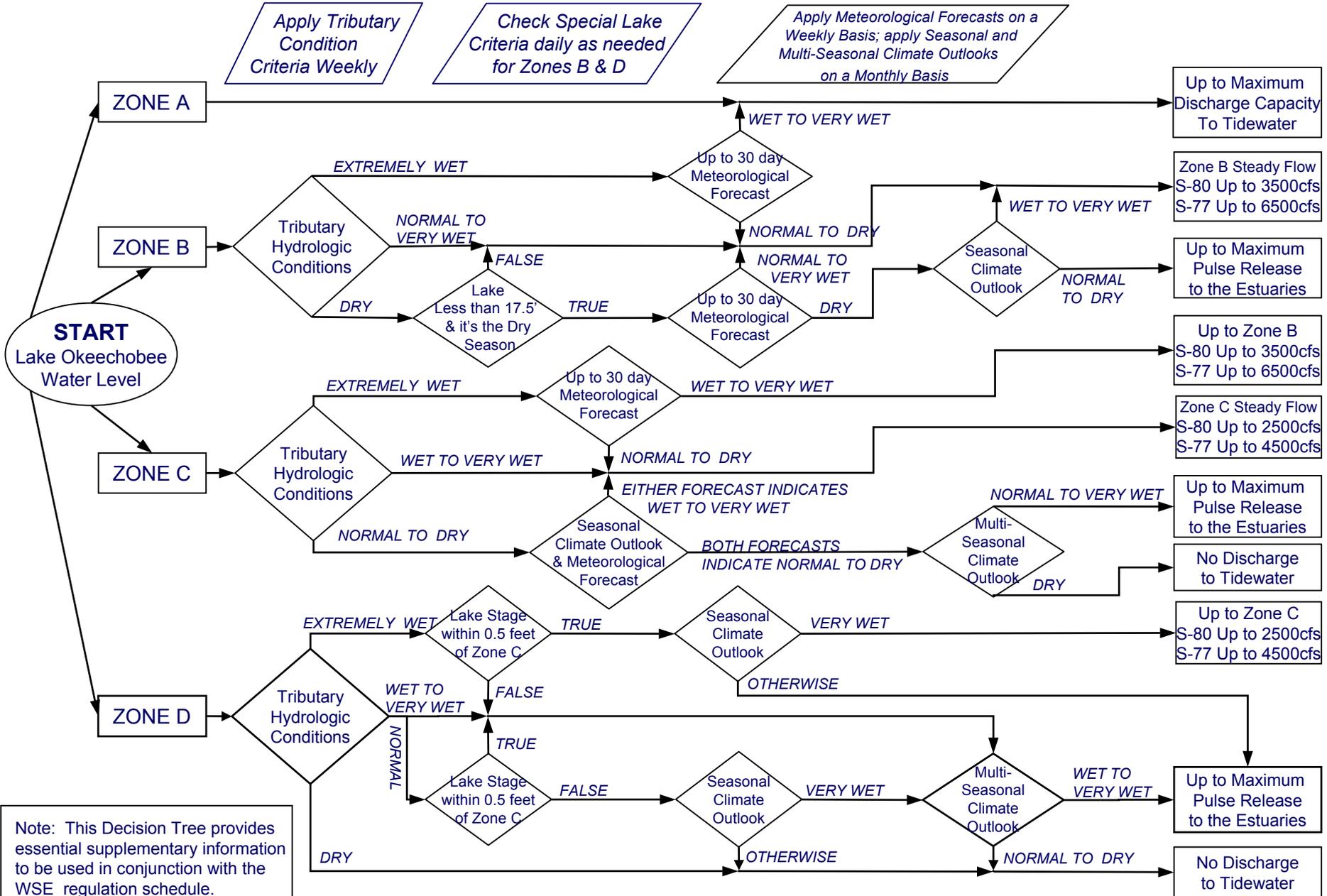
Part 1: Define Lake Okeechobee Discharges to the Water Conservation Areas



Note: This Decision Tree provides essential supplementary information to be used in conjunction with the WSE regulation schedule.

WSE Operational Guidelines Decision Tree

Part 2: Define Lake Okeechobee Discharges to Tidewater (Estuaries)



WSE Regulation Schedule

Major Features

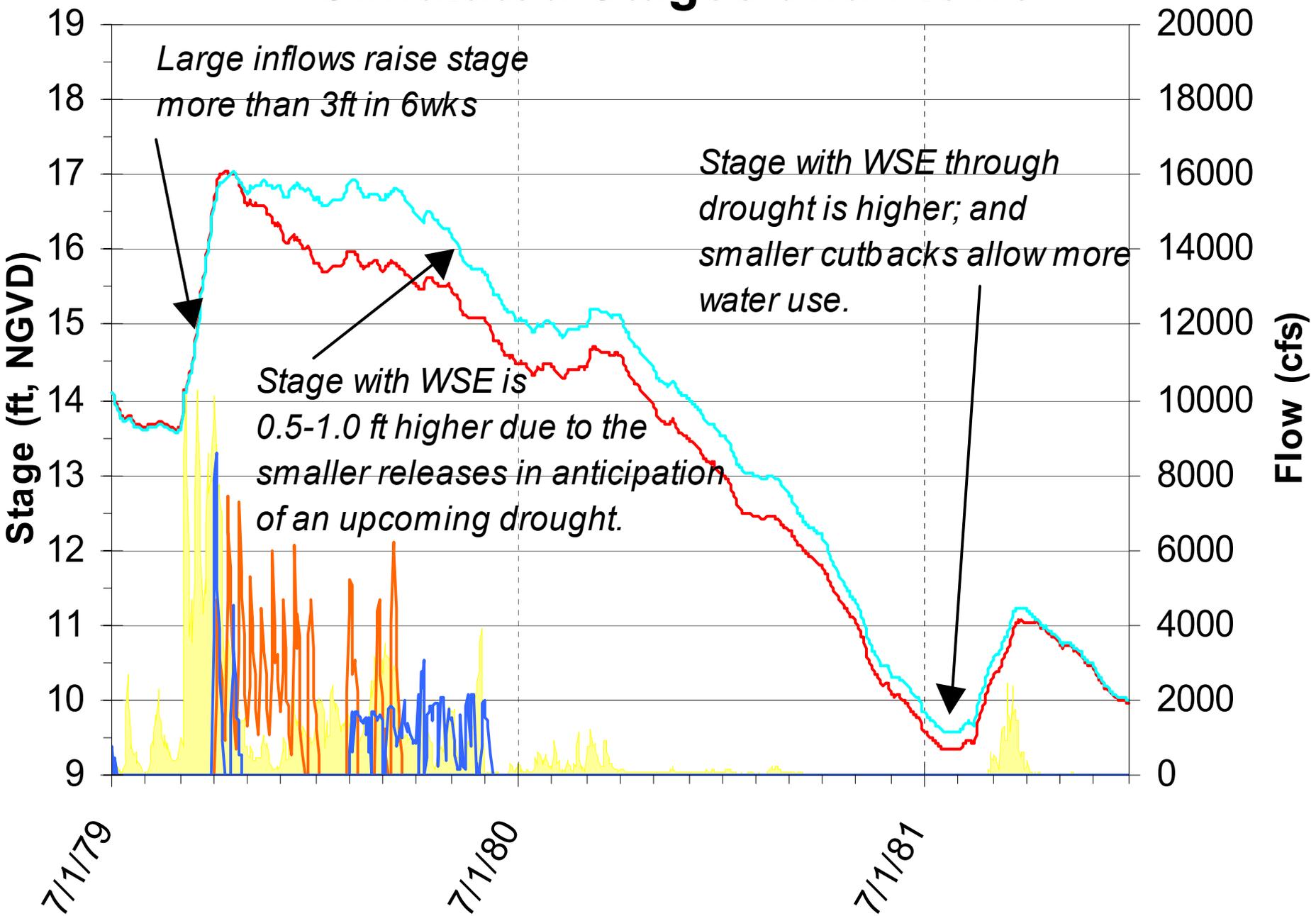
- Initiates discharges at lower stages under special conditions to WCAs & estuaries
- Pulse releases made to estuaries for extended periods when very large inflows are expected
- Discharges not required when drier conditions are expected - benefits water supply
- Provides more flexibility in release decisions
 - Uses climate forecasting
 - decision trees are part of the schedule
 - outflow rules provide ranges vs fixed rates

WSE Regulation Schedule

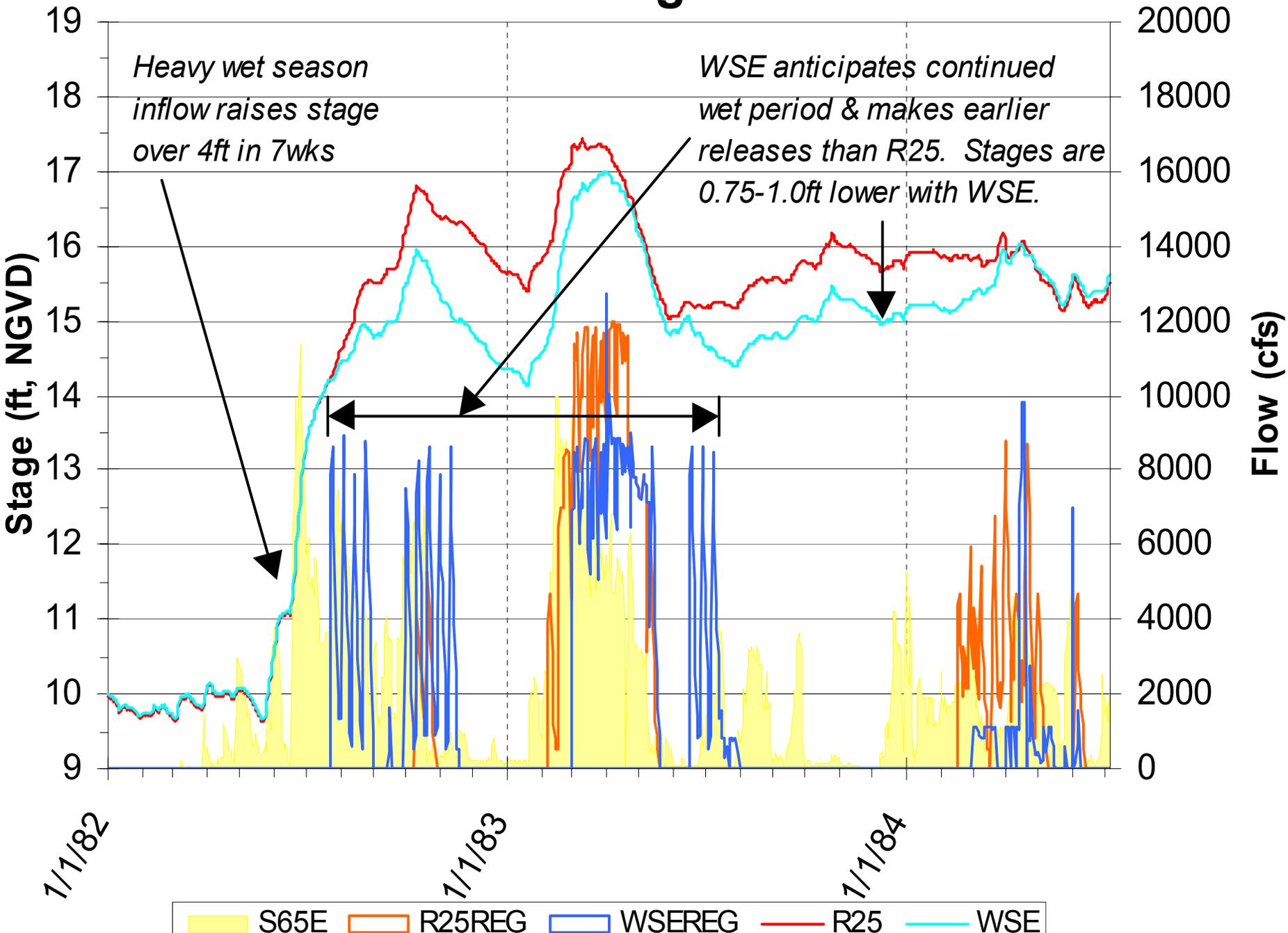
Adaptive Management

- Lake Okeechobee Water Level Criteria
- Tributary Hydrologic Conditions
 - 30 Day Net Rainfall
 - Average Kissimmee River inflow
- Seasonal Climatic Outlook (wet/dry season)
 - NOAA Climate Prediction Center
- Multi-seasonal Climate Outlook (~12 months)
 - NOAA Climate Prediction Center
- Lake Okeechobee Net Inflow Outlook
 - SFWMD's HSM Department

Simulated Stages and Flows



Simulated Stages and Flows



WSE FAQs

- ***"Will WSE stop all discharges to the estuaries?"***
 - **NO:** WSE will reduce the frequency and duration of large continuous discharges, but small "Pulse Releases" are expected to increase.

WSE FAQs

- ***"Will WSE immediately drop the lake stage 2 ft. to benefit the littoral zone"***
 - **NO:** WSE will hold water in the lake during low inflow and forecast dry periods (La Nina). It will tend release more water when there are high inflows and forecast wet periods (El Nino).
 - The lower zone (D) of WSE is approximately 2 ft. lower than the previous schedule, but it is a conditional release zone.

WSE FAQs

- ***"Will WSE send more water south to the Water Conservation Areas than the present schedule"***
 - **YES:** WSE will send more water to the WCAs when they will not be adversely affected from the additional water.
 - However, the hydraulic capacity of the southern structures remains very limited, and will continue to be a restriction to large flows into the WCAs

WSE FAQs

- ***"Will WSE negatively impact the water supply capability of the lake"***
 - **NO:** WSE actually allows more water to be held in Lake during dry and forecast dry periods.

Summary

- WSE provides best balance of competing objectives
- WSE provides needed flexibility in lake operations
- Good example of how state-of-the-art technologies are providing new opportunities to improve operations
- **Authorized July 7, 2000**

