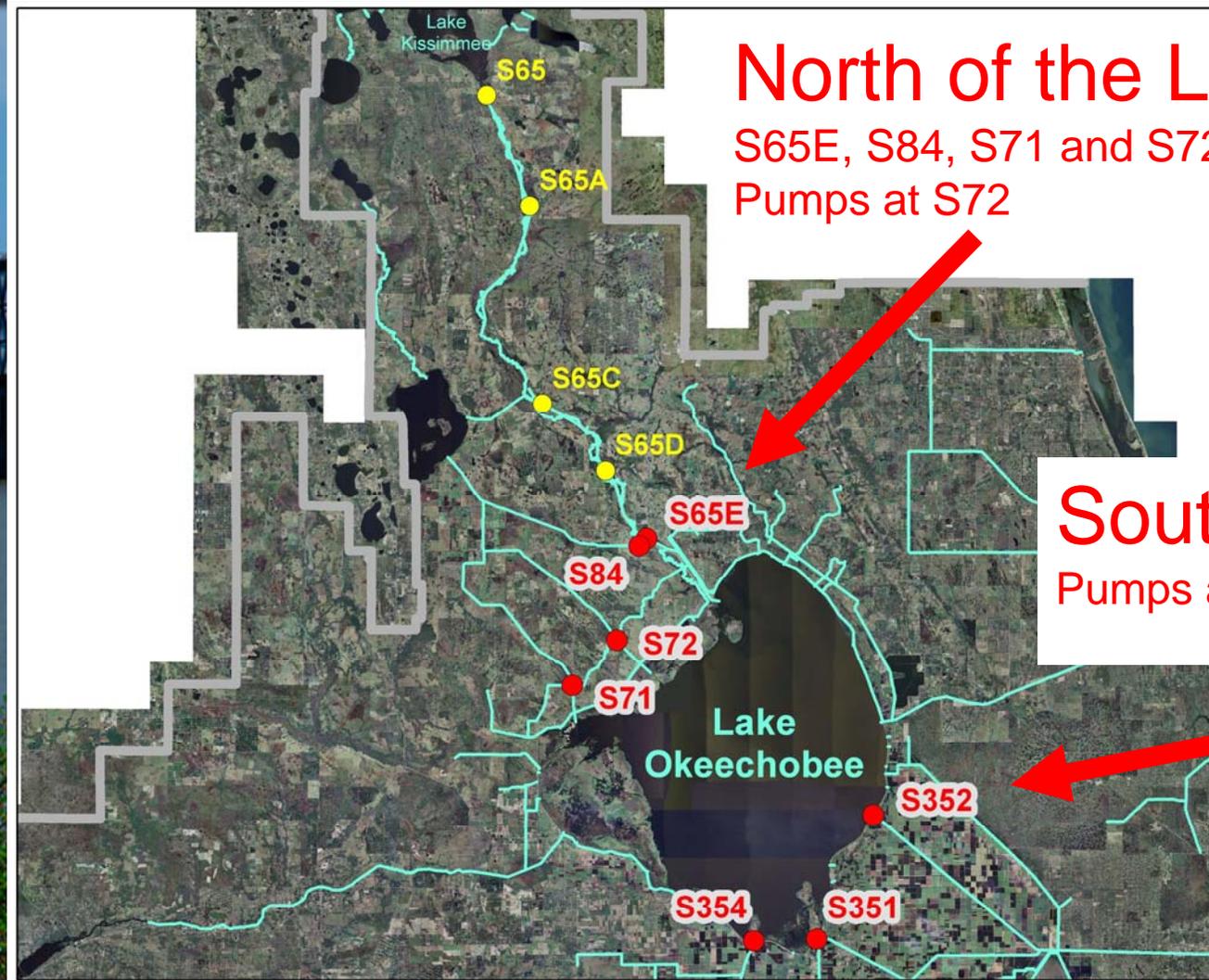




Emergency Conditions Historic Low Water Levels on Lake Okeechobee Structure Stability & Pumps

Cledwyn R. Weldon, P.E.
Director, Engineering Dept
Operations & Maintenance
February 14, 2008

Structure Stability Concerns & Water Shortage Pumps



North of the Lake

S65E, S84, S71 and S72 Stability Pumps at S72

South of the Lake

Pumps at S351, S352, S354

North of the Lake :

Structure Stability Concerns at S65E, S71, S72, and S84

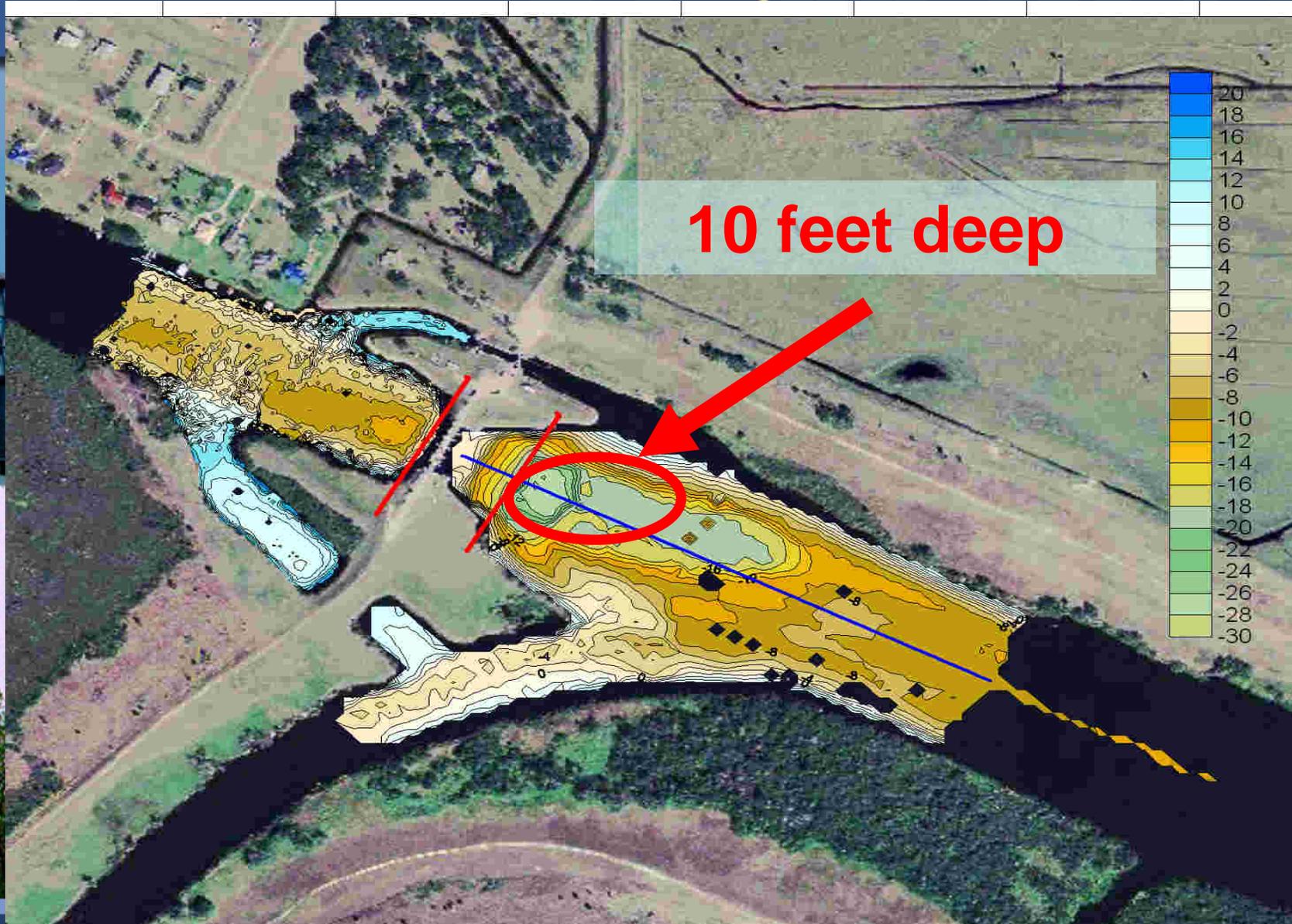


- Potential for unprecedented head differentials
- Hydrostatic pressure cause flotation & sliding
- High velocity flows
- Severe scouring undermines the structure

S65E – 22,000 cfs discharge

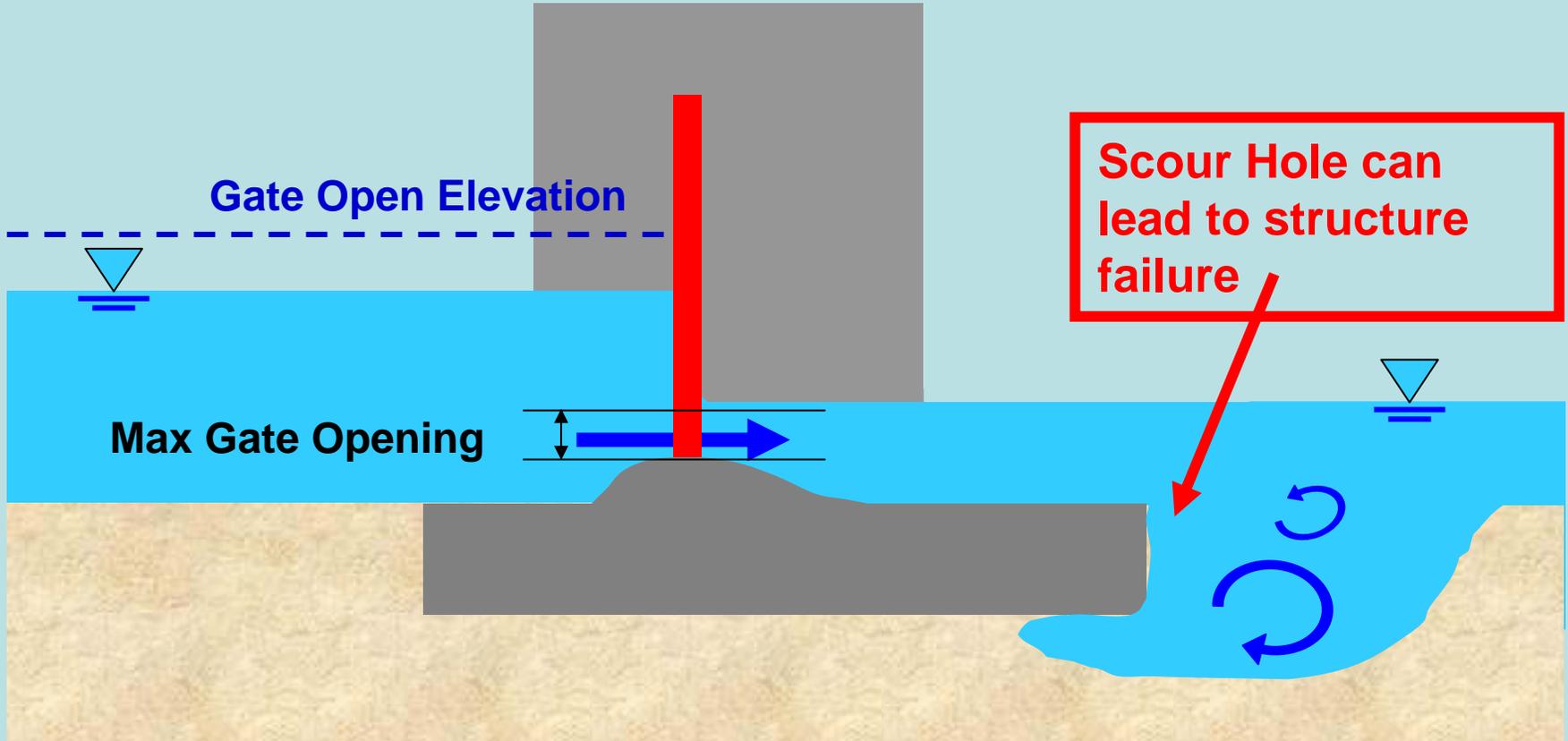


S-65E – Found Large Scour Hole

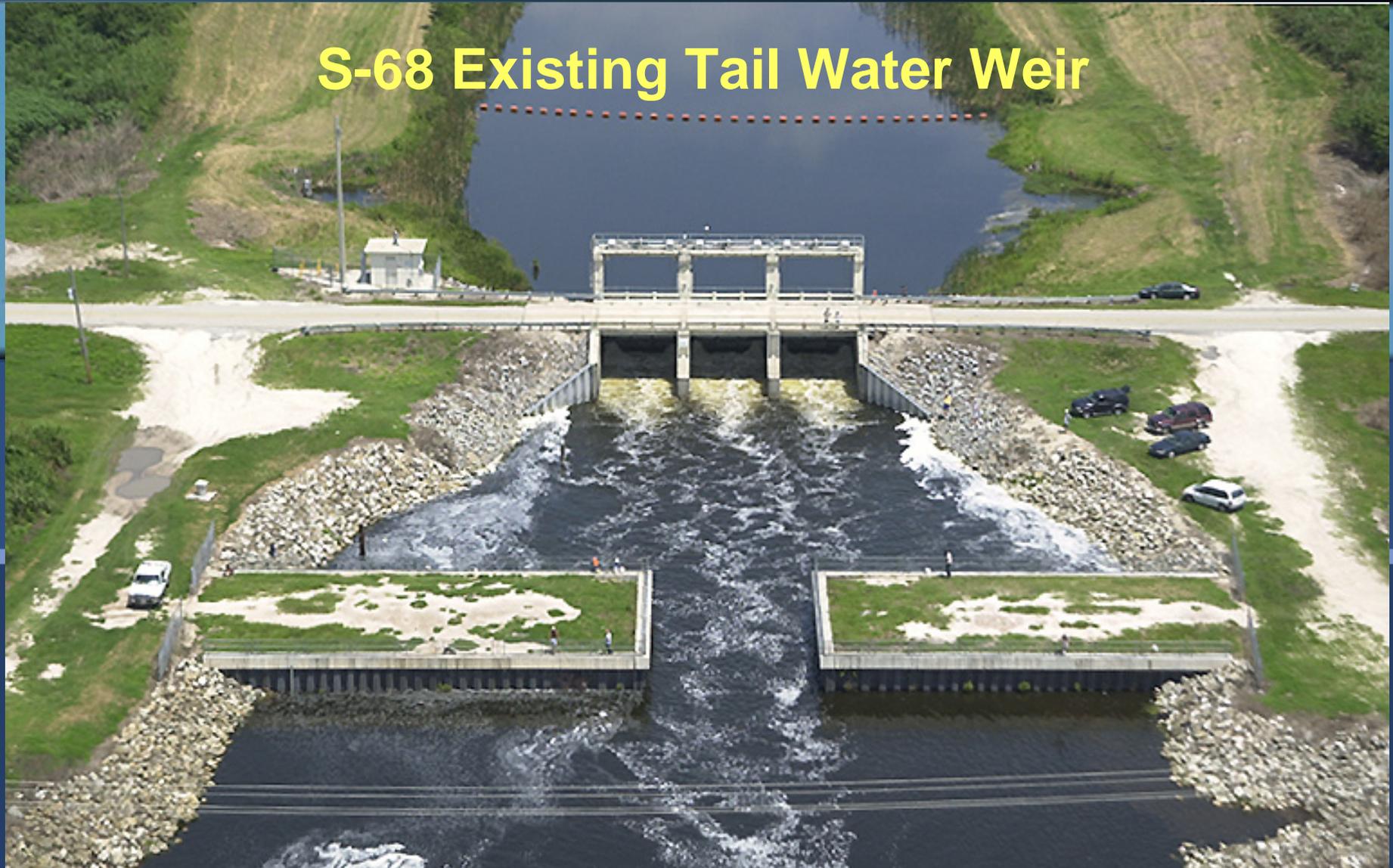


Upstream
Head Waters

Downstream
Tail Waters

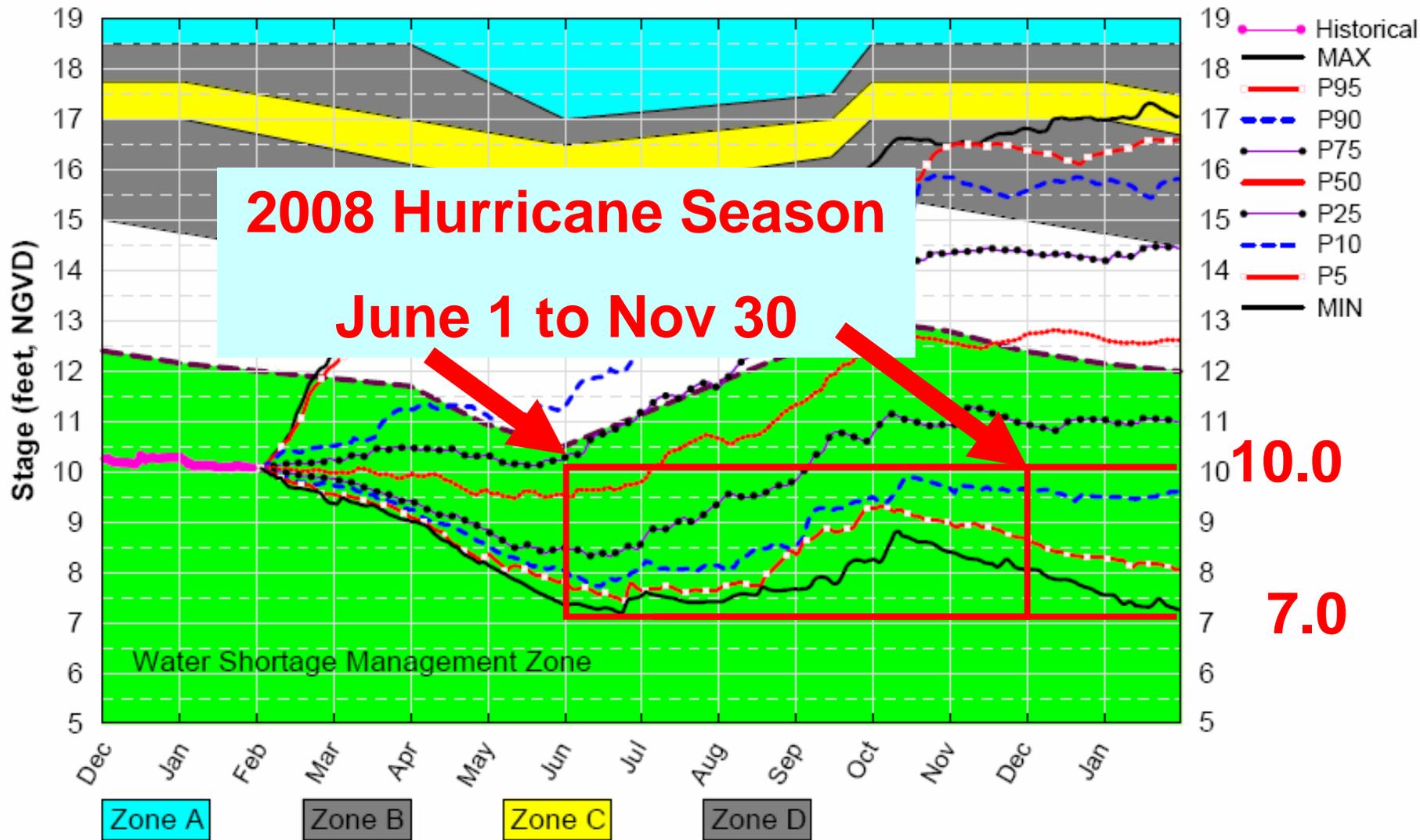


S-68 Existing Tail Water Weir



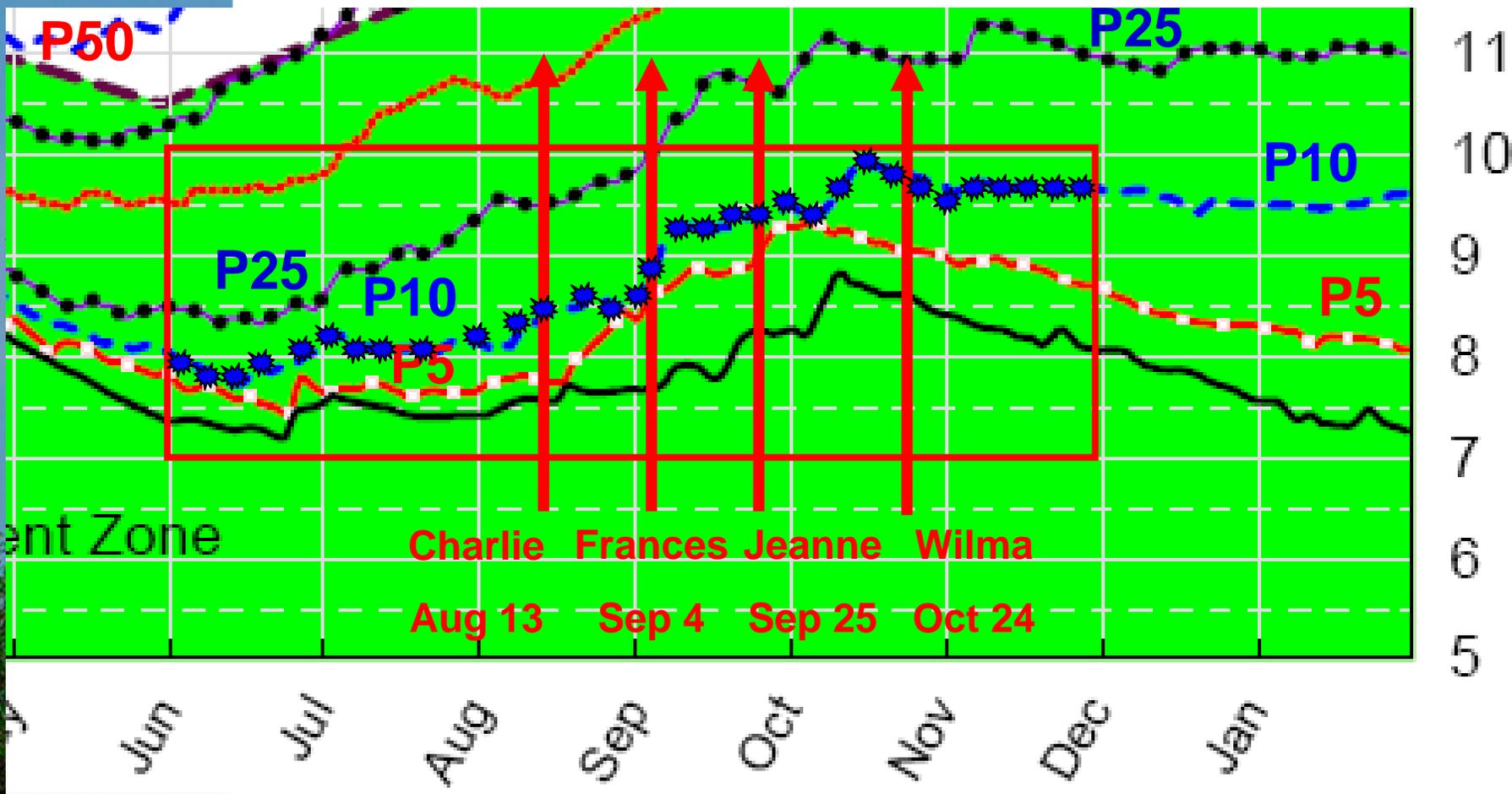
Lake Okeechobee SFWMM February 2008 Position Analysis

PA



(See assumptions on the Position Analysis Results website)

2008 Hurricane Season
June 1 to Nov 30



Site of Planned Weir

S65E

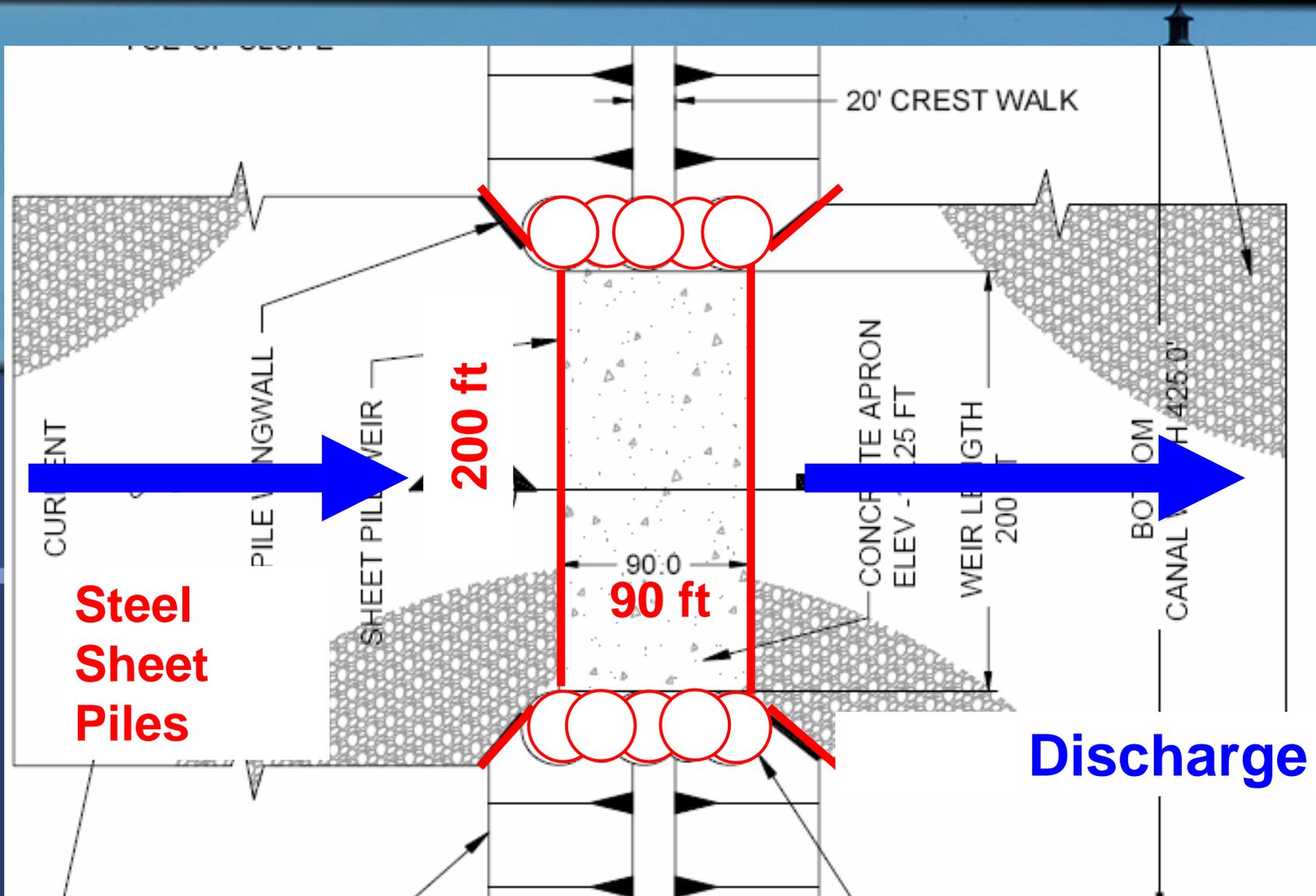
Southwest 16th Drive

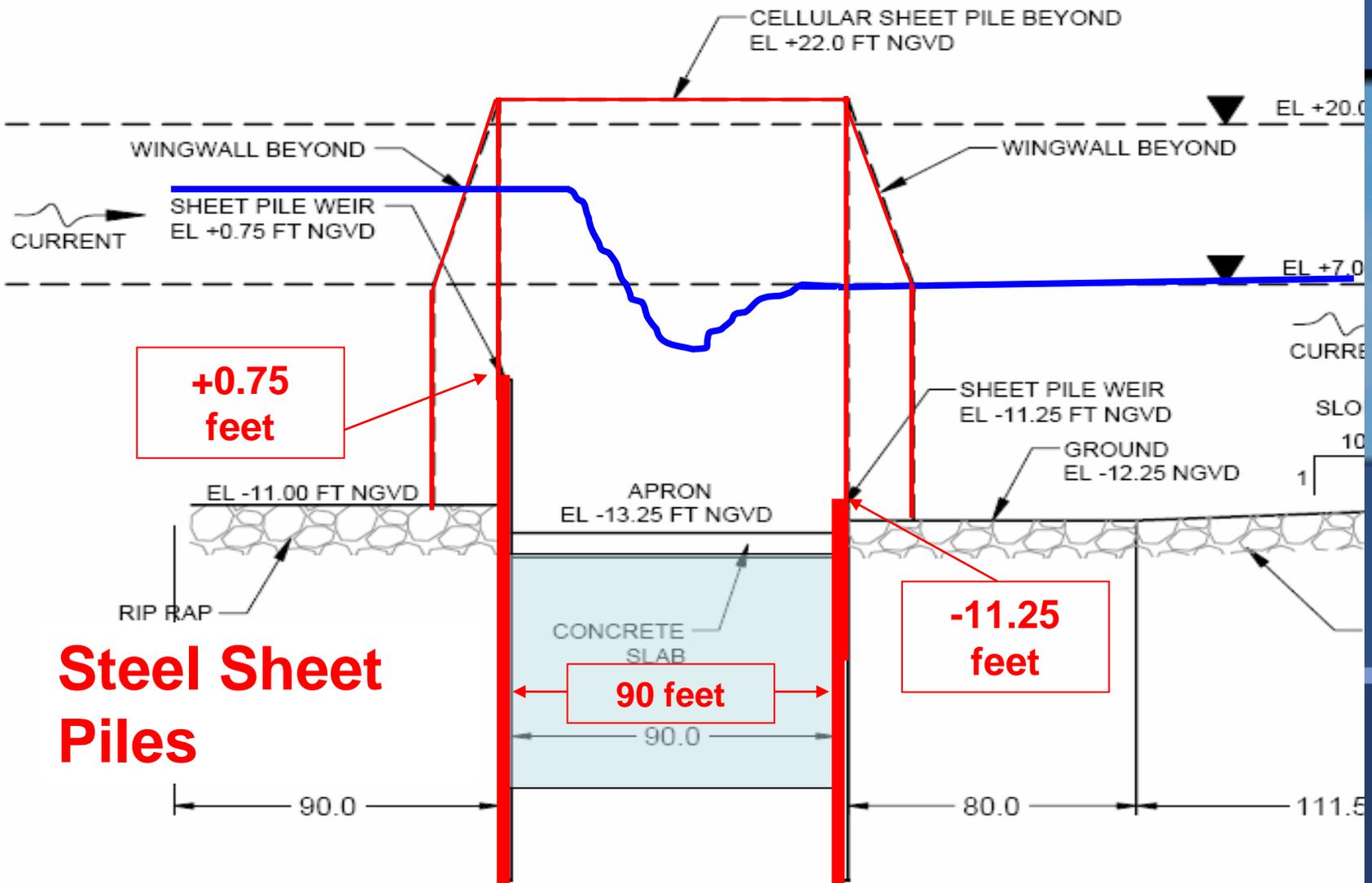
Southwest 144th Parkway

S84



S65E Tail Water Weir Concept





+0.75 feet

-11.25 feet

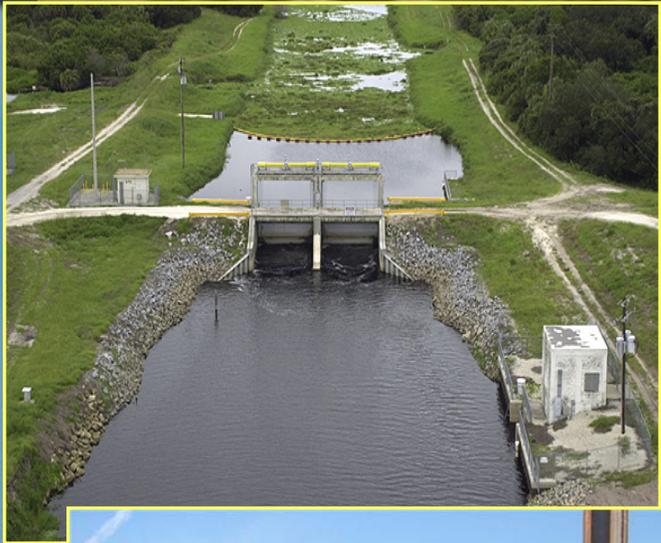
90 feet

Steel Sheet Piles

RIP RAP VOLUME TOTALS

S-65E Tail Water Weir

S72 Tail Water Weir



Site

North of Lake Tail Water Weir / Scour Repair Costs & Schedule

Item	Cost*	Schedule	Notes
S72 Tail Water Weir with Rental Pumps	\$2.4 M	100% Complete June 1	Work in Progress
S71 Tail Water Weir	\$2.0 M	100% Complete June 13	NTP Pending
S65E Scour Repair	\$2.2 M	100% Complete June 13	Award Pending
S65E Tail Water Weir	\$22.6 M	Goal August 11	Subject to Final Design

\$29.2 M

* Costs include: surveys, soil borings, engineering / construction services, construction costs, changes and incentives

South of Lake Pump Costs & Schedule

Item	Cost	Schedule	Notes
Bonnets S352	\$0.06 M	Install by April 30	Need Environmental Permits
Manatee Screen Modifications	\$0.21 M	Complete by March 15	Need Environmental Permits
Rental Pumps S351 & S354	\$0.67 M	Available by March 15	Need Environmental Permits
Purchase Pumps	\$1.86 M	Available by August 30	Custom Specs Long Lead

\$2.8 M

Pumps and Structure Recommendations

- Continue with construction of S-72
- Proceed with S65E Scour Repairs and S-71 Tail Water Weirs
- Prepare S-65E tail water weir detail design and obtain bids by March 12
- Proceed with rental of Lake Side Pumps & purchase pumps to replace rentals
- Update costs & schedule at March 13 meeting



Emergency Conditions Resolution

A RESOLUTION OF THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT RELATING TO PROCUREMENT RESULTING FROM EMERGENCY CONDITIONS AND AMENDING THE DISTRICT'S FISCAL YEAR 2007-2008 BUDGET; AUTHORIZING THE EXECUTIVE DIRECTOR PURSUANT TO SEC. 155-6(5)(A), SOUTH FLORIDA WATER MANAGEMENT DISTRICT POLICIES AND PROCEDURES FOR THE PURPOSE OF PROCEEDING WITH PROCUREMENT OF THE EQUIPMENT, SERVICES, AND COMMODITIES NECESSITATED BY EMERGENCY CONDITIONS CREATED BY UNPRECEDENTED LOW WATER LEVELS FOR LAKE OKEECHOBEE RESULTING IN WATER SUPPLY DISRUPTIONS AT S-351, S-352, AND S-354 AS WELL AS UNACCEPTABLE HEAD WATER DIFFERENTIALS AT DISTRICT STRUCTURES S-65E, S-71, S-72 AND S-84 AND AUTHORIZE BUDGET TRANSFERS IN AN AMOUNT NOT TO EXCEED \$32,000,000 FROM RESERVES, VARIOUS PROGRAMS AND RESOURCE AREAS AS NEEDED TO THE OPERATIONS AND MAINTENANCE PROGRAM; AMENDING THE DISTRICT'S 2007-2008 FISCAL YEAR BUDGET TO ACCOMMODATE PROCUREMENTS AUTHORIZED IN THIS RESOLUTION; RESCINDING RESOLUTION 2008-120 RELATING TO THE SAME SUBJECT; PROVIDING AN EFFECTIVE DATE.



Questions ?