

**STRUCTURE G-300
(STA-1 Diversion Structure)**

Diversion structure G-300 consists of a concrete ogee-shaped spillway with two 20-foot wide x 8.4 ft high vertical lift gates installed on the crest of the spillway. Structure G-300 is located in the L-40 borrow canal approximately 0.5 miles southeast of S-5A and adjacent to the west side of STA-1E.

PURPOSE

Structure G-300 is intended to divert untreated stormwater around STA-1E or STA-1W into the Loxahatchee National Wildlife Refuge should the inflow capacity of these STAs be exceeded. G-300 can act in parallel with diversion structure G-301 to divert the entire capacity of pump station S-5A (4800 cfs) in the event of severe rainfall in the S-5A basin.

OPERATION

G-300 can be operated remotely or manually as required to divert water away from STA-1E or STA-1W. The structure is controlled by Operations staff in response to upstream/downstream stages, environmental conditions (storms, drought, etc.), and Operation Plan guidelines. Flow diversion to WCA-1 will begin at Inflow Basin stages of 18.0 ft NGVD. Other operational strategies may be applied to maintain Inflow Basin stages below 19.0 ft NGVD for large storm events. Diversion of untreated stormwater around STA-1E or STA-1W is discouraged according to the Settlement Agreement but may be necessary following severe storm events. Additional information is contained in the STA-1E and STA-1W Operation Plans which are revised on a regular basis.

FLOOD DISCHARGE CHARACTERISTICS

	<u>Design</u>	<u>Standard Project Flood</u>
Discharge Rate	3080 cfs	15-80 cfs
Headwater Elevation	18.5 ft	19.4 ft
Tailwater Elevation	14 ft	19.0 ft
Type Discharge	uncontrolled free	submerged controlled

DESCRIPTION OF STRUCTURE

Type:	Reinforced concrete gated spillway
Gates:	Vertical lift
Number	2
Size	8.4 ft high x 20 ft wide
Weir Crest	
Net Length	40 ft
Elevation	11.0 ft NGVD
Service Bridge Elevation:	21.5 ft NGVD

STATION POWER

Normal: Commercial electricity
Emergency: Generator

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Gate Position: Remote digital recorders on both gates
Water Level: Remote digital recorders upstream and downstream
Water quality monitoring: Samples collected biweekly on HW side

DATE OF ACCEPTANCE INTO SERVICE

January, 1999

ACCESS

From S-5A, south along L-40 approximately 0.75 mile (G-300).

*Must have Area-1 key to access this structure.