

STRUCTURE 5AS

This structure is a reinforced concrete, gated spillway with discharge controlled by two cable operated, vertical lift gates. The gates are manually operated in accordance with the operational criteria. The structure is located on Levee 40 borrow canal, at the point where L-7 crosses that canal, on the northern perimeter of Conservation Area No. 1.

PURPOSE

This structure functions with S-5AE, S-5AW, and Pumping Plant S-5A to control flood runoff from the L-8 area, and to make irrigation releases from Water Conservation Area 1 to the L-10, L-12, the L-8 and C-51 basins.

OPERATING CRITERIA

This structure is operated under either flood or irrigation conditions as follows:

Flood Conditions

The gates are opened to pass flood flows into Water Conservation Area 1 when the headwater (L-8) stage exceeds the tailwater (WCA) stage, a very rare condition.

Irrigation Conditions

The gates may be used to discharge flows from WCA 1 when stages in canals in the C-51, L-10, L-12 or L-8 basins are low.

FLOOD DISCHARGE CHARACTERISTICS

	Design
Discharge Rate	<u>2000</u> cfs
	* <u> </u> % SPF
Headwater Elevation	<u>18.0</u> feet
Tailwater Elevation	<u>17.9</u> feet
Type Discharge	<u>Uncontrolled Submerged</u>

* Design discharge not related to Standard Project Flood

DESCRIPTION OF STRUCTURE

Type: Reinforced concrete, gated spillway

Weir Crest

New Elevation: 44.0 feet
Elevation: 1.0 feet
Service Bridge Elevation: 21.25 feet
Water Level which will by-pass structure 29.0 feet

Gates

Number: 2
Size: 19.33 feet height by 22.8 ? feet wide
Type: Vertical lift gates
Bottom elevation of gates, full open: 21.4 feet
Top elevation of gates, full closed: 20.33 feet
Control: Manual and remote control

Lifting Mechanism

Normal power source: commercial power
Emergency power source: manual
Type Hoist: electric motor gear connected by flexible couplings
and bevel-gears to lift stems

Date of Transfer: April 15, 1954

ACCESS: from U.S. Hwy. #441 via access road on either side of L-8 borrow canal

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level: Remote digital upstream (L-8) and downstream (S-5AS)
recorders and U.S.G.S. on-site digital (L-8) recorder.

Gate Position Recorder: Remote digital recorder on both gates

DEWATERING FACILITIES

Storage: West Palm Beach Field Station
Type: Steel needle beams and aluminum needles
Beams: 27W145, 23'-10" long
Needles: 5 @ 4', 1 @ 2' wide

NOTE: Other instrumentation at S-5A, S-5AE, and S-5AW.