

STRUCTURE 351

This structure is a reinforced concrete, gated spillway, with three vertical lift gates, located in L-D2, the perimeter dike of Lake Okeechobee, at the north end of the Hillsboro and North New River Canals. It is a replacement for Hurricane Gate Structure (HGS)-4. Structure completed on March 22, 1989.

PURPOSE

This structure will permit releases to be made from Lake Okeechobee to meet water requirements in the Hillsboro and North New River service areas. It will permit flood flows to be discharged from the Agricultural Area into Lake Okeechobee when the lake level is low. It will also prevent hurricane tides from entering the Hillsboro or North New River Canals. It will be used, under certain conditions, to make regulatory releases from Lake Okeechobee into Water Conservation Area 2 via the North New River Canal and WCA 1 via the Hillsboro Canal.

OPERATION

The gates will normally be closed. They will be opened for three purposes:

- A) To meet agricultural requirements in the area served by the Hillsboro or North New River Canals between Lake Okeechobee and the Water Conservation Areas or to meet requirements in the Coastal Area of Broward and Dade Counties, Everglades National Park, etc. These requirements generally occur in the dry season between mid-October and mid-May. The former requirement is gauged by a dry season stage below 11.5 feet in the Hillsboro or North New River Canals in the Everglades Agricultural Area (EAA), along with other factors.
- B) To discharge flood flows from the Everglades Agricultural Area in the Hillsboro or North New River Canal when Lake Okeechobee is low (generally below 11.5 feet). Such occasions are very rare but could occur in the late spring.

- C) When Lake Okeechobee is above schedule, when weather conditions are dry in the EAA, when canal stage in the Hillsboro and North New River Canals are low (generally below 11.5 feet) and when the stage in Water Conservation Area 2 is below schedule. Such occasions are also very rare.

FLOOD DISCHARGE CHARACTERISTICS

	Design	Standard Project Flood
Discharge Rate	<u>1500</u> cfs	<u>2400</u> cfs
Headwater Elevation	<u>10.5</u> feet	<u>24.5</u> feet
Tailwater Elevation	<u>10.0</u> feet	<u>13.5</u>
Maximum Hurricane Tide Elev.	<u>31.5</u> feet	
Wave run-up (above hurricane tide)	<u>7.8</u> feet	

DESCRIPTION OF STRUCTURE

Weir Crest

Net Length 60 feet

Elevation 4.5 feet

Service Bridge Elevation 30.0 feet

Water Level which will by-pass structure 38.0 feet

Gates

Number 3

Width X Height (ft) 20.0 X 7.5

Bottom Elevation of gates, full open: 11.5 feet

Top Elevation of gates, full closed: 11.5 feet

Breastwall Elevation (feet) 11.5 X 45.0

Control Remote Computer Control

Lifting Mechanism

Normal power source Commercial Electricity

