

## STRUCTURE G-123

This structure is a 4 unit pumping plant located on the North New River Canal at the point where it emerges from Conservation Area 2, about 17 miles west of Fort Lauderdale, Florida, next to S-34.

### PURPOSE

The purpose of the structure is to pump water, which would otherwise be discharged to tidewater, into Conservation Area #3 from the eastern North New River and C-13 basins.

### OPERATION

Operation of this station will be manually controlled in response to the headwater and tailwater stages. Subject to tailwater stages, discussed below, pumping will be a function of the headwater stage, when CA-3A needs additional water, as follows:

Increase No. of pumps when the headwater stage rises as follows: _____	Number of pumps in operation: _____	Decrease No. of pumps when the headwater stage falls as follows: _____
<3.7	0	<3.5
3.7 - 3.8	1	3.5 - 3.6
3.8 - 3.9	2	3.6 - 3.7
3.9 - 4.0	3	3.7 - 3.8
>4.0	4	<3.8

#### Example:

If the stage is 3.86, 2 pumps will be put in operation. If, then, the stage continues to rise, a third pump will be placed on-line when the stage reaches 3.90. On the other hand, if the stage drops, the number of pumps will be cut to 1 only when the stage drops to 3.60.

Regardless of the headwater stage, if the tailwater stage rises to 11.5, pumping will be curtailed, one unit at a time, until the tailwater stage drops below 11.5. The structure is operated in conjunction with structures S-124 and S-125, the divide structures between C-13 and the North New River. It is also affected by the operation of G-54. Please see these structures for details of their operation.

**DESIGN DISCHARGE CHARACTERISTICS**

Discharge Rate: 400 cfs (4 unit total)  
Headwater Stage: 2.0 feet  
Tailwater Stage: 12.0 feet  
Normal Rate: 444 cfs (4 unit total)  
Headwater Stage: 3.5 feet  
Tailwater Stage: 11.0 feet

**DESCRIPTION OF STRUCTURE**

Type: 4 pumping units in a concrete block building  
Type of Pumps: Inclined, axial flow  
Size of Pumps: 42-inch  
Design Rating in cfs: 100  
Impeller Speed in r.p.m.: 1800  
Horsepower: 200  
Pump Manufacturer: M & W Corp  
Motor Make and Type : Hydraulic motor driven by electric motor

**GATES**

Type and Location: 46-inch flap gate on downstream end of discharge pipe.

**POWER SOURCE**

Normal: Commercial electricity  
Emergency: None

**HYDRAULIC AND HYDROLOGIC MEASUREMENTS**

Water Level: Telemetry recorders, upstream and downstream  
Pump Hours: Telemetry recorders

**ACCESS:** Site located on U.S. Highway 27 about 1/4 mile north of junction with SR-84.