

STRUCTURE-332

This structure is a six unit pumping plant located at the head of Taylor Slough in the Everglades National Park on L-31W about 6 miles west of Homestead, Florida. It consists of a reinforced concrete and concrete block masonry superstructure. The pumping station is equipped with six Goulds pumps, each of which is driven by the U.S. Motors electric motor. Each motor is directly connected through a line shaft to its respective pump. Three temporary pumps, 100 cfs each, were added at the site in 1993. The U.S. Army Corps of Engineers built pumps #7-#9 later to replace temporary pumps. The new pumps have been in service since December 1995.

PURPOSE

The purpose of the structure is to make water deliveries to the Everglades National Park via Taylor Slough.

OPERATION

Pumps will be operated according to Test Iteration 7, entered into on the 5th day of October, 1995, between the Corps of Engineers, the Everglades National Park and the District. Iteration 7 commenced on November 1, 1995.

S-332 will be operated as needed to maintain the L-31W Canal Target level. The pumps are designed to operate between headwater stages of 3.0 and 5.0 feet. If the headwater stage drops to 2.8 feet, the sump float causes the power to the motor to be cut off.

DESCRIPTION OF STRUCTURE

Type:	6 existing pumping units in a reinforced concrete and concrete block building, 3 new pumps in another building
Type of pumps:	Vertical axial flow
Control:	Remote pump control

Number and size of pumps:

Pump Number	#1	#2	#3	#4	#5	#6	#7-#9
Size	30"	30"	20"	24"	10"	14"	42"
Design Rating in CFS:	50	50	20	30	5	10	100
Impeller Speed in RPM:	590	590	875	700	1745	1165	360
Motor Horsepower:	100	100	40	50	10	20	150
Pump Manufacturer:				Gloucs			M&W
Motor Make & Type:	U.S. Motors - Electric						
Intake Cutoff Elevation:	2.8	2.8	2.8	2.8	2.5	2.5	2.85

The US. Geological Survey made flow measurements for pumps 1-6. Based on the results, the actual pump discharge capacities in cfs are:

#1	#2	#3	#4	#5	#6
50	45	27	40	10	20

Starting April 10, 1996, S-332 operation is based on the actual discharge capacity.

GATES

Type & location: Flap gates on downstream end of discharge

POWER SOURCE

Normal: Commercial Electricity

Emergency: None

Date of Transfer: August 15, 1980 - Pumps #1 - #6

December 1995 - Pumps #7 - #9

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level: Remote digital upstream and downstream recorder

Pump on indicator: Remote indicators for all pumps

Control: All pumps can be operated remotely

DESIGN DISCHARGE CHARACTERISTICS

Discharge rate: 465 CFS
Headwater stage: 3.0 Feet
Tailwater Stage: Anything below 6.1 Feet

ACCESS: Via the east levee of L-31W from SR27 to S-175, crossing at S-175 to the west levee of L-31W and then via about 4 1/2 miles of the west levee of L-31W