

STRUCTURE S-9A

This structure is a four unit pumping station with a design capacity of 500 cfs. It is equipped with two 175 cfs diesel engines driven pumps, and two 75 cfs electric motor driven pumps and a trash rack system. The structure is located at the western terminus of the C-11 borrow canal in the alignment of Levee 37, about 0.5 miles west of U.S. Highway 27, just north of and directly adjacent to the S-9 Pump Station in Broward County. The structure is positioned immediately east of Water Conservation Area 3A (WCA-3A)

PURPOSE

The purpose of pump station S-9A is to improve the quality and timing of stormwater discharges from the Western C-11 basin into WCA-3A by back pumping seepage lost from WCA-3A back into WCA-3A at the same approximate rate it enters the canal. The use of the S-9A reduces the operational dependency placed on the larger S-9 Pumping Station.

OPERATION

The structure is remotely operated to maintain optimum headwater stages in the C-11 borrow canal. Additional operational guidance for S-9A is based on best professional judgement of operating personnel, taking field condition factors into consideration such as existing water levels within the C-11 borrow canal, rainfall and seasonality.

DISCHARGE CHARACTERISTICS

Design Discharge Rate (combined): 500 cfs

DESCRIPTION OF STRUCTURE

Number of Pumps: 4

Motor Size:
2-75-cfs electric pumps: 250 hp
2- 175-cfs diesel pumps: 650 hp

Design Headwater elevation: 3.0 feet NGVD
Design Tailwater elevation: 10.5 feet NGVD

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Nominal pump operating speed:
Electric: rpm
Diesel 175-cfs: 1800 rpm

Motor Speed:
Electric: 588 rpm
Diesel: 1800 rpm

Pump Manufacturer (diesel only) Caterpillar
Model Number (diesel only) 3412C

POWER SOURCE

Prime Movers Commercial electricity
Commercial Diesel

STATION POWER

Normal Commercial electricity
Emergency Electrical generator backup

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Stilling wells and staff gauges located at upstream and downstream of structure.

ACCESS: Access to S-9A is from the C-11 canal right-of-way via Griffin Road.