STRUCTURE 65-B

This structure is a reinforced concrete, gated spillway with discharge controlled by three cable operated vertical lift gates and a reinforced concrete lock structure with two pairs of sector gates. Operation of the spillway gates is manually controlled for all operations. The structure is located on Canal 38 about 9 miles downstream from S-65A and 23 miles downstream from Lake Kissimmee.

PURPOSE

This structure maintains optimum upstream water control stages in Canal 38, the Kissimmee River; it is designed to pass the design flood (30% of the Standard Project Flood) without exceeding the upstream flood design stage; and restricts downstream flood stages and channel velocities to non-damaging levels of the design flood, even if the inflow exceeds that flood; and it passes sufficient discharge during low-flow periods to maintain downstream stages and irrigation demands.

SPILLWAY OPERATION

This structure will be operated according to the flow chart entitled, "Operation of Kissimmee River Demonstration Project", dated November 1985, subject to hydraulic restraint, to maintain an optimum headwater elevation which varies throughout the year in accordance with the "Interim Regulation Schedule - Kissimmee River Pools", dated July 1982, between 39.0 and 42.0 feet, insofar as possible. S-65B headwater should be raised to 42 feet during high discharges (e.g., > 3000 cfs).

If the headwater stage rises above the Schedule during the period May 15 to October 15, no effort will be made to return to the Schedule. Rather, the stage will be maintained until the rising Schedule is reached, whereupon the Schedule will again be followed.

If the headwater stage rises above the Schedule during the remainder of the year, return to Schedule will be coordinated with the Environmental Sciences staff.

The hydraulic restraint prevents damage from high velocity discharge by limiting the gate opening in accordance with the "Maximum Allowable Gate Openings" (MAGO) curve.

LOCK OPERATION

The hydraulic system is designed to provide two gate speeds of operation. The normal speed is determined by the hydraulic pump capacity and will result in a peripheral gate speed of approximately 6.75 feet per minute which is equivalent to a full gate travel in three minutes. A manually variable slow speed is available to effect a three feet per minute peripheral gate speed.

Starting and stopping of pump power unit and the direction and normal or slow speed of gate travel will be manually controlled by the operator except that the gate speed will automatically shift to slow for the last six inches of gate travel to either the full open or closed position. This six inch limit may be changed in the field as conditions dictate and the slow speed is manually variable to compensate for seasonal or other extreme variations of differential water levels.

The schedule of lock operation, as established by the U.S. Corps of Engineers in accordance with the River and Harbor Act of August 8, 1917, (49 Stat. 226; 33 U.S.C. 1), is as follows:

Mon. through Fri.	All Year	8:00 a.m. to 5:00 p.m.
Sat. and Sun.	Mar. 1 thru Oct. 31	5:30 a.m. to 7:30 p.m.
Sat. and Sun.	Nov. 1 thru Feb. 28	5:30 a.m. to 6:30 p.m.

FLOOD DISCHARGE CHARACTERISTICS

	Design	Standard Project Flood
Discharge Rate	14,000 cfs	16,700 cfs
	30% SPF	100% SPF
Headwater Elevation	40.0 feet	44.5 feet
Tailwater Elevation	35.7 feet	39.0 feet
Type Discharge	uncontrolled submerged	uncontrolled submerged

DESCRIPTION OF SPILLWAY STRUCTURE

Type reinforced concrete gated spillway

Weir Crest

Net Length	81.0 feet
Elevation	26.3 feet

Service Bridge Elevation 46.5 feet

Water Level which will by-pass structure 46.5 feet

Gates

Number 3

Size 13.8 ft. high by 27.8 ft. wide

Type Vertical lift gates

Bottom elevation of gates, full open 41.2 ft. Normal, 44.4 ft. Maximum

Top elevation of gates, full closed 42.0 feet

Control Manual

Lifting Mechanism

Normal power source Commercial electricity

Emergency power source Gasoline motor driven generator

Type Hoist Each gate operated by a hydraulic cylinder, activated by electric motor driven pump, with emergency hand pump, connected to gate by steel cables.

Date of Transfer: 65B closure September 15, 1966

ACCESS: Via 4 mile access road from a point on U.S. 98 about one mile east of Lorida.

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level Upstream recorder in lock control house, downstream recorder on lock wingwall. Remote digital headwater and tailwater recorder.

Gate Position Recorder Remote digital recorder

SPILLWAY DEWATERING FACILITIES

Storage Okeechobee Field Station

Type Steel bulkhead

Size and Number (per bay)

The spillway gate section can be dewatered by using 11 standard bulkheads and one special bulkhead. The bulkheads shall be oriented and placed in the bulkhead recesses of S-65B spillway with the skin plate side of the bulkheads facing the spillway gate. The bulkheads can be stacked on top of each other to a maximum of six bulkheads on the upstream side and six bulkheads on the downstream side in order to dewater the spillway gate section. The one special bulkhead shall be placed first in the upstream bulkhead recess and then up to five standard bulkheads may be stacked on top of the special bulkhead. Each bulkhead is 3'-5" high, 1'-9" wide, and 28'-7" long.

DESCRIPTION OF AUXILIARY STRUCTURE

Additional releases may be made through culvert structure into the old channel of the Kissimmee River. This structure is located in the tie-back levee west of S-65B. Details of the structure are as follows:

Designation	Barrels	Length	Diameter	Invert Elev.	Distance from S-65B
BX-2	1	66'	54"	29.66	3320 feet (New)

S-65BX2 is used to control the water level in the Boney Marsh area, which was separated from Pool B by the Old Boney Dike, to elevation below 40. feet. S-65BX2 was rebuilt in 1994. The new S-65BX2 is controlled by flashboards to keep the headwater below 40.0. The top of the riser is 42.0.

DESCRIPTION OF LOCK STRUCTURE

Type reinforced concrete lock, with two pairs of gates

Operating Deck Elevations 46.5 feet

Lock

Length 90 feet

Width 30 feet

Invert Elevations 25.0 & 31.0 feet

Gates

Type Sector

Size upper 13.5 feet
lower 19.5 feet; 18.8 feet radius

Control manual

Operating Mechanism

Normal Power Source commercial electricity

Emergency Power Source LP engine driven generator

Type double wire rope drum unit, with worm type special reducer, powered by electric motor driven hydraulic motor

Dewatering Facilities

Location Okeechobee Field Station

Type Steel bulkheads

Size and Number 5 upstream and downstream
1'-6" wide X 3'-6" high X 31'-3" long