

STRUCTURE OPERATIONS
Southwest Florida Water Management District

Title: **OPERATIONAL GUIDELINES
FOR THE UPPER SWEETWATER CREEK CHAIN:
MAGDALENE, BAY, AND ELLEN-LIPSEY WATER CONSERVATION STRUCTURES**

Bureau: **OPERATIONS & LAND MANAGEMENT**

Number: HR-2

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Approved By: _____


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PURPOSE: To provide guidelines for the operation of the water conservation structures for Magdalene, Bay and Ellen-Lipsey in Hillsborough County, Florida. This document serves as a general guideline for the routine operation of the structures and may be modified, as necessary, to ensure the environmental health, recreational and aesthetic value of the lakes, or in response to specific weather events or conditions.

General Statement of Intent

During non-flooding conditions the structures will be operated within their Normal Operating Ranges (see Table 1). The operational goal is to allow each lake to fluctuate between their established Low Level and Target Water Conservation Level without causing flooding or damages to lake front properties. The filling to their respective Normal Operating Levels will typically begin in June, with the goal of "topping off" each lake at its Target Water Conservation Level by the end of September to conserve water going into the dry season. Lake levels may increase above the Target Water Conservation Level and possibly reach the High Level for short durations in response to rainfall events; however, these higher levels will not be intentionally sustained.

Low Water Conditions – Water Levels Below Low Guidance Level

Low Water Conditions typically occur during the dry season (November through May). At the end of the rainy season (June through October) water levels will naturally decline over the dry season months. During Low Water Conditions, as a general guideline, the structures will remain closed.

Normal Operating Range – Water Levels Between Low Guidance and Target Water Conservation Levels

The Normal Operating Range will typically occur during the rainy season. The structures will remain closed until each lake reaches its Normal Operating Level. The structures will be operated in coordination with each other to maintain their respective Normal Operating Levels through mid-September, allowing excess water to be discharged downstream to Sweetwater Creek.

In mid-September when the probability of significant rainfall is reduced, the water levels in the lakes will be allowed to rise to their Target Water Conservation Levels prior to entering the dry season.

If it becomes necessary to create flood storage in any of the lakes in anticipation of a high rainfall event such as a tropical storm or hurricane landfall, structures will be operated in coordination with each other to lower water levels to increase available storage below each lake's respective Target Water Conservation Level in advance of the event.

High Water Conditions - Water Levels Greater than the Target Water Conservation Level

The infrastructure around the lakes can tolerate water levels up to the respective High Guidance Level of each lake. During high water or flooding conditions the structures will be operated in coordination with each other to minimize the impact and duration of flooding conditions on the lakes in the system.

It should be noted that Lakes Magdalene, Bay, and Ellen have grass carp barriers. Should structure operators note that levels of the lakes are not reacting to gate openings as needed, field crews will be dispatched to remove debris, and if necessary, the barrier itself, to allow water flow and to prevent flooding.

Flood levels are generally determined by the lowest permitted dwelling slab elevation adjacent to a lake. Outbuildings, docks, and non-living areas of dwellings could be subject to flooding under high water conditions.

Table 1 – Normal Operating Ranges for Lakes Magdalene, Bay, Ellen, and Lipsey

Operating Level	Elevation (NGVD) ¹		
	Magdalene	Bay	Ellen and Lipsey
High Level ²	50.00	46.75	41.50
Target Water Conservation Level	49.50	46.00	40.80
Normal Operating Level	49.00	45.75	40.50
Low Level ³	47.50	44.00	39.00

¹NGVD = National Geodetic Vertical Datum of 1929. NAVD 88 elevations will be added to the guidelines when these data have been finalized for the lake system.

²Minimum Flood Level

³Low Levels for these lakes were established prior to August 7, 2000 (refer to 40D-8, Florida Administrative Code). Shaded area indicates normal operating range.

NOTE: Final Guidelines will be reprinted with NAVD88 Elevations when available.