

STRUCTURE OPERATIONS
Southwest Florida Water Management District


Title: **OPERATIONAL GUIDELINES FOR STRUCTURE G-90 (LAKE JUNE-IN-WINTER)**


Department: **OPERATIONS**

Number: 20-1

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Approved By:


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PURPOSE: To provide guidelines for the operation of Structure G-90 on Lake June-In-Winter, Highlands County, Florida. This document serves as a general guideline for the routine operation of the structure and may be modified, as necessary, to ensure the environmental health, recreational and aesthetic value of the lake and associated system, or in response to specific weather events or conditions.

General Statement of Intent

During non-flooding conditions Structure G-90 will be operated within the Normal Operating Range (see Table 1). Structure G-90 is operated in conjunction with inoperable Structure G-91(owned by Highlands County) which provides a base flow from Lake June-In-Winter into Lake Francis for water quality purposes. The operational goal is to allow Lake June-In-Winter to fluctuate between the established Low Guidance Level and Target Water Conservation Level without causing flooding or damages to Lake June-In-Winter, or Jack Creek and Josephine Creek waterfront properties. The filling of Lake June-In-Winter to the Normal Operating Level will typically begin in June, with the goal of "topping off" the lake at its Target Water Conservation Level by the end of September.

Low Water Conditions – Water Level 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), Lake June-In-Winter water levels will be allowed to naturally decline over the dry season months. During Low Water Conditions Structure G-90 will remain closed. Under Low Water Conditions no water is being diverted into Lake Francis since the water level in Lake June-In-Winter is below the control elevation (73.4 NGVD) of Structure G-91.

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

The Normal Operating Range will typically occur during the rainy season. Structure G-90 will remain closed until Lake June-In-Winter reaches its Normal Operating Level. Once Lake June-In-Winter has achieved its Normal Operating Level excess water will be discharged through Structure G-90 to maintain the lake at its Normal Operating Level though mid-September. In the Normal Operating Range, base flow is diverted into Lake Francis through Structure G-91 once the level of Lake June-In-Winter exceeds elevation of 73.4 NGVD.

In mid-September when the probability of significant rainfall is reduced, the water level in Lake June-In-Winter will be allowed to rise to the Target Water Conservation Level in anticipation of entering the dry season. If water is still flowing through the system once the Target Water Conservation Level has been achieved, Structure G-90 will be operated to maintain the lake's Target Water Conservation Level.

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If it becomes necessary to create flood storage in Lake June-In-Winter in anticipation of a high rainfall event such as a tropical storm or hurricane landfall, Structure G-90 will be operated to lower the water level to increase available storage below the Minimum Flood Level in advance of the event.

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

The infrastructure around Lake June-In-Winter can tolerate water levels in excess of its Minimum Flood Level. During and immediately after a high rainfall event, Structure G-90 gates will remain closed until the lake elevation exceeds 75.5 to allow the flood peak from the Josephine Creek watershed to pass in order to reduce the flood potential to the downstream properties adjacent to Jack and Josephine Creeks. Once Lake June-In-Winter exceeds elevation 75.5, and depending on the outflow from the Lake Josephine Structure and the flooding potential adjacent to Jack and Josephine Creeks, the gates of Structure G-90 will be operated to lower the lake to its Target Conservation Level.

Table 1 – Normal Operating Range for Lake June-In-Winter

Operating Level	Elevation (NGVD) ¹
Minimum Flood Level ²	75.5
Target Water Conservation Level	75.0
Normal Operating Level	74.5
Low Guidance (P ₉₀) ³	73.2

¹ NGVD = National Geodetic Vertical Datum of 1929

² "Old" Minimum Flood Guidance Level

³ "New" Low Guidance Level: the level the lake should exceed 90 percent of the time on a long term basis.

Normal Operating Range

Note: Low floor slab and low road elevations based October 2003 MFL Report were 76.30 NGVD and 75.85 NGVD, respectively.