

Technical Memorandum
Southwest Florida Water Management District

Title: Operational Guidelines for the Tsala Apopka Chain of Lakes

Document Owner: Operations, Lands and Resource
Monitoring Bureau Chief

Approved By: District Staff

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PURPOSE

To provide guidelines for the operation of the water control structures for the Floral City Pool, Inverness Pool, and Hernando Pool of the Tsala Apopka Chain of Lakes in Citrus County, Florida (Map 1). This document serves as a general guideline for lake levels and the routine operation of these structures. The District's operation goals are to maintain appropriate water levels to promote the environmental health and recreational value of the lakes, and the protection of life and property of lake residents in response to weather events or conditions within the watershed.

SCOPE

The operation of water conservation structures and the lake water levels are driven by rainfall within the watershed. The abundance or lack of rainfall is the main factor that affects lake water levels. In addition to rainfall, structures will be operated to maintain the lakes within their Normal Operating Ranges (Figure 1) whenever possible. The operational goal is to allow each lake to annually fluctuate between its established Low Level and High Level, while attempting to maintain the lake's Normal Level throughout the rainy season (June - September).

GUIDELINE

During the rainy season (June – September), structures may be operated to maintain each lake at its Normal Level as often as possible. In anticipation of a high rainfall event, such as a tropical storm or hurricane, structures may be operated to lower water levels to increase available storage in advance of the event. The amount each lake may be lowered will be based on rainfall amounts predicted by weather forecasting agencies, District flood models, operational data analyses, state statutes, local permits and the discharge capacity of the system. In mid-September, if the probability of significant rainfall is reduced, structures on each pool may be operated to allow water levels to rise above its Normal Level in anticipation of the approaching dry season. Structures may be closed to aid in conserving water within the lakes during the dry season (October – May). Inflow from the Withlacoochee River will be allowed when the lakes are below Normal Level and the river water elevation is higher than the Floral City Pool water elevation. Inflow from the river will be equally distributed among the Floral City Pool, Inverness Pool, and Hernando Pool whenever possible. When the water elevation in the Hernando Pool is above Normal Level and weather forecasts indicate additional rainfall, the outflow priority will be to send water to Two Mile Prairie as conditions allow.

DATUM

Previous versions of the guidelines referenced the National Geodetic Vertical Datum of 1929 (NGVD29) elevation datum which is also commonly referred to as "mean sea level". The datum has been updated and this guideline references the North American Vertical Datum of 1988 (NAVD88), a more recent elevation standard for "mean sea level." Both datums are referenced in Table 1 for comparison. The staff gauge on each lake is set to the NAVD88 datum. The operation of water control structures is based on the NAVD88 datum.

Figure 1 – Normal Operating Ranges for the Tsala-Apopka Chain of Lakes

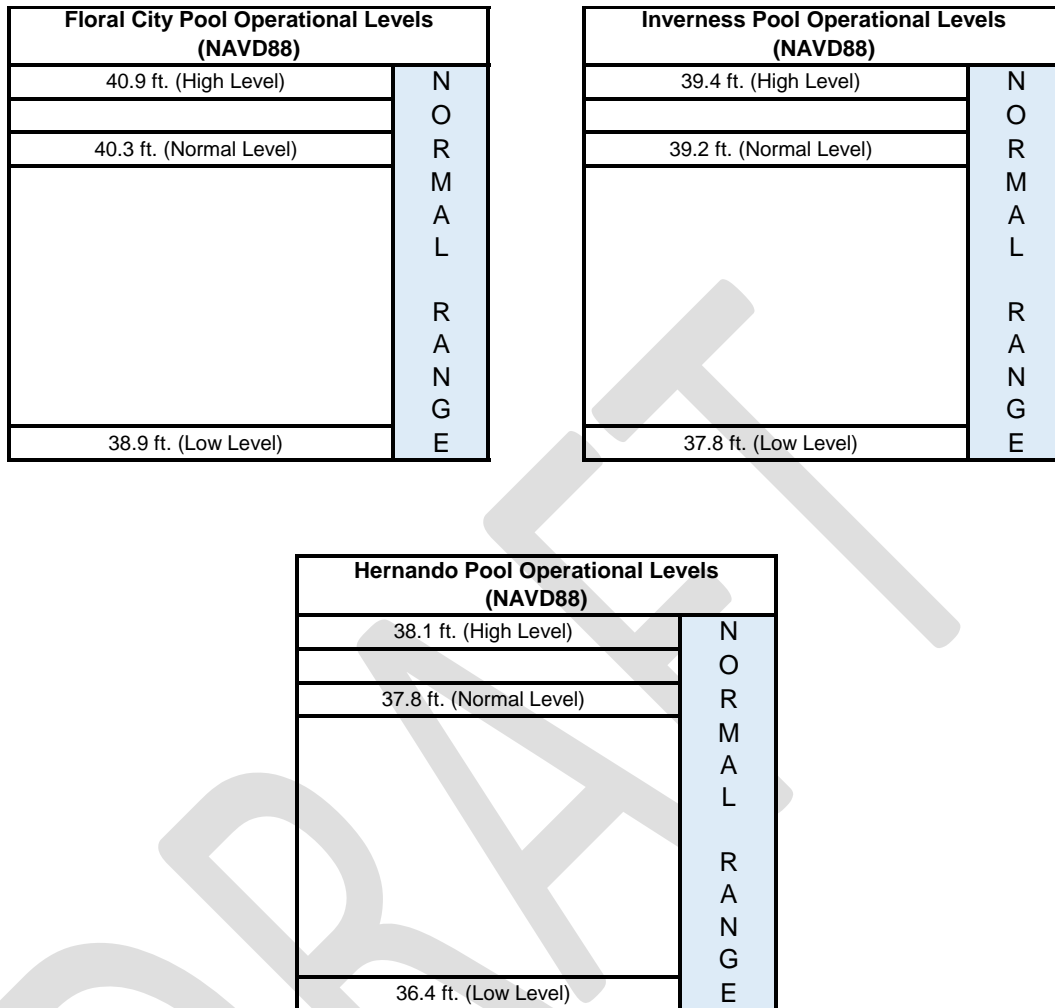


Table 1 - Normal Operating Ranges for the Tsala-Apopka Chain of Lakes

Operating Level	Floral City Pool		Inverness Pool		Hernando Pool	
	NGVD29	NAVD88	NGVD29	NAVD88	NGVD29	NAVD88
High Level	41.8	40.9	40.3	39.4	39.0	38.1
Normal Level	41.2	40.3	40.1	39.2	38.7	37.8
Low Level	39.8	38.9	38.7	37.8	37.3	36.4

NGVD29 = National Geodeitic Vertical Datum of 1929

NAVD88 = North American Vertical Datum of 1988

DISTRIBUTION

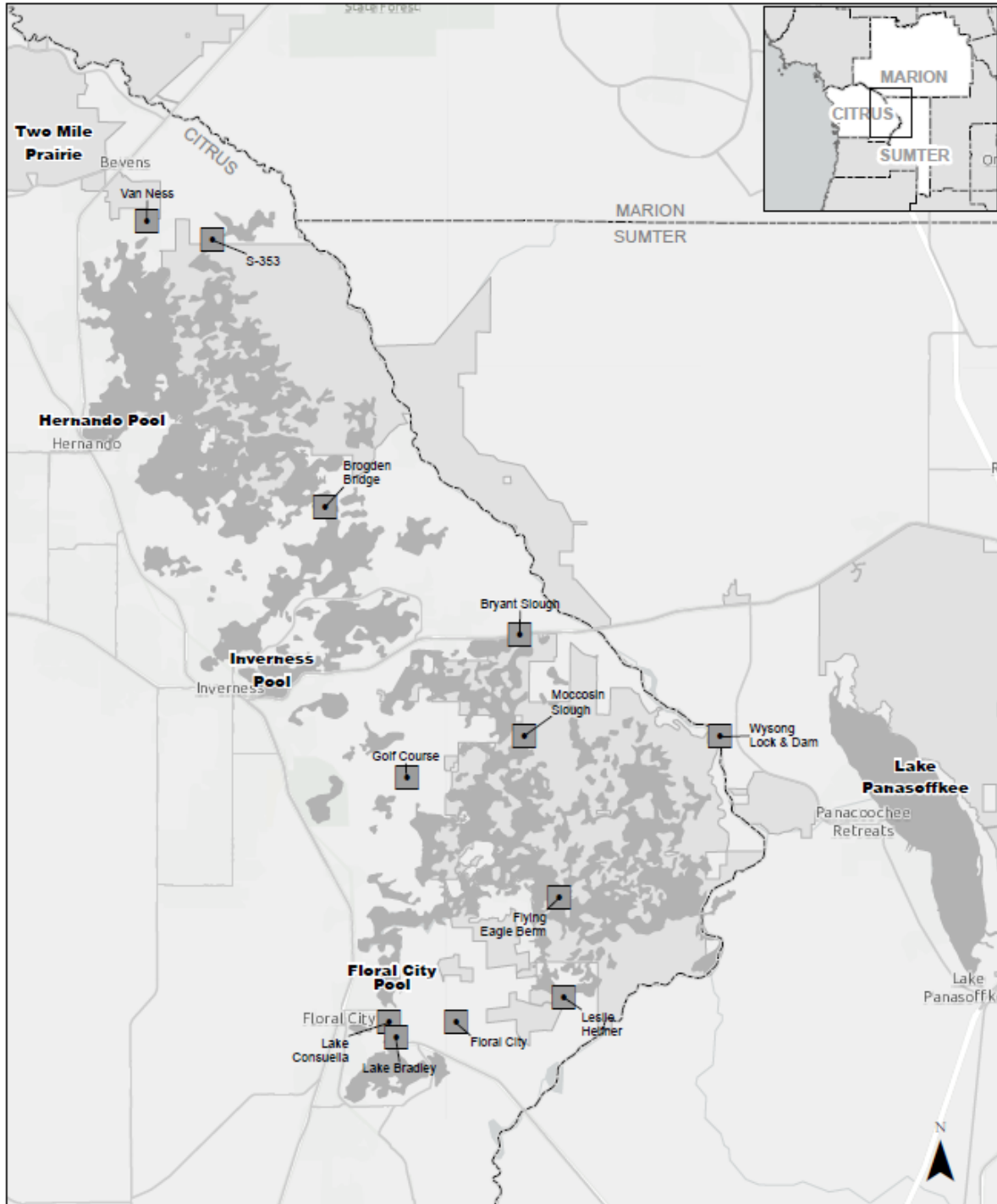
This guideline will be stored in the District's Guideline Repository. All Structure Operations staff and the public will be provided a copy of the guideline. The guideline will be made available on the District's external webpage.

PERIODIC REVIEW

This guideline will be reviewed every five years or as needed by the Operations, Lands and Resource Monitoring Bureau Chief.

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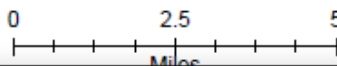
Tsala Apopka Chain of Lakes



Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Water Control Structure
 Tsala Apopka Chain of Lakes
 District Owned Lands

Southwest Florida
Water Management District



Date: 6/23/2020