

Technical Memorandum
Southwest Florida Water Management District

Title: Operational Guidelines for the North Winter Haven Chain of Lakes: P-5, P-6, P-7 and P-8 Water Conservation Structures

Document Owner: Operations and Land Management Bureau
Chief

Approved By: Jerry Mallams, P.G.
Jerry Mallams

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PURPOSE

To provide guidelines for the operation of the water conservation structures for Lakes Henry (P-5), Smart (P-6), Fannie (P-7) and Hamilton (P-8) in Polk County, Florida (Map One). Lakes Haines, Rochelle and Conine are included in this system, but do not have structures. This document serves as a general guideline for lake levels and the routine operation of these water conservation 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 condition 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 analysis, state statutes, local permits and the discharge capacity of the system. In mid-September, if the probability of significant rainfall is reduced, the structure at each lake 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).

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 conservation structures is based on NAVD88 datum.

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Figure 1 – Normal Operating Ranges for the North Winter Haven Chain of Lakes

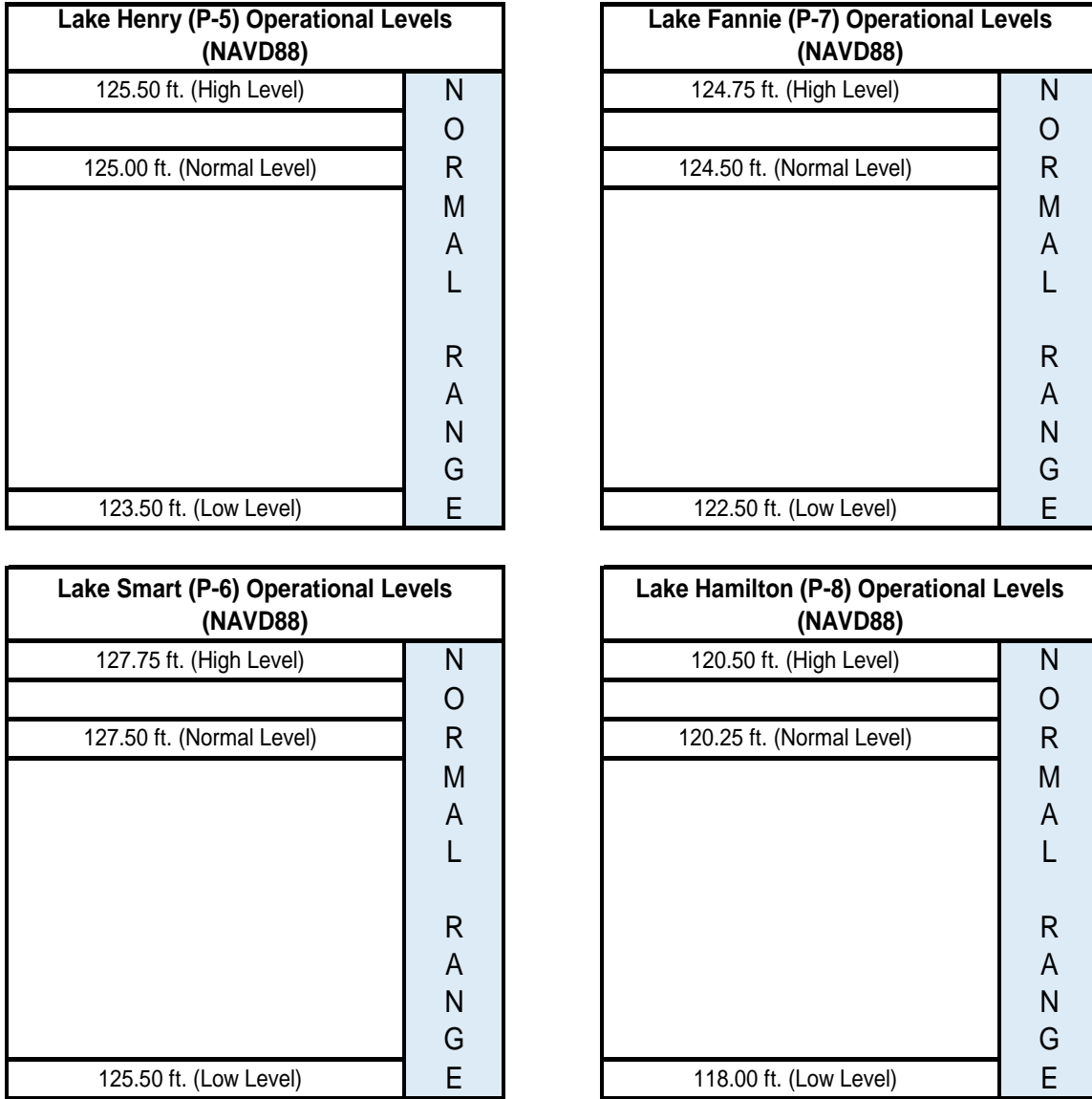
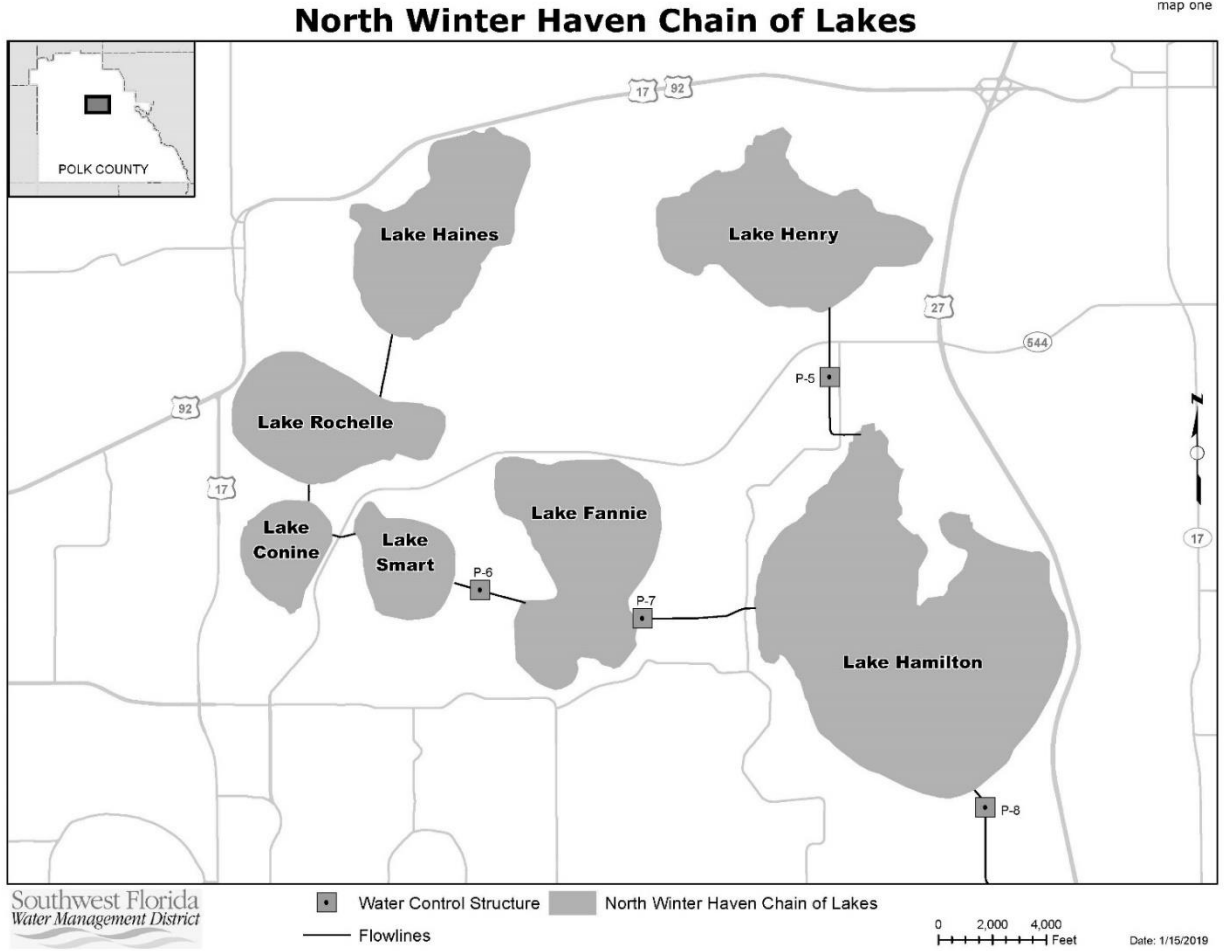


Table 1 – Lake water level comparison between the current datum (NAVD88) and the previous datum (NGVD29)

Operating Level	Lake Henry (P-5)		Lake Smart (P-6)		Lake Fannie (P-7)		Lake Hamilton (P-8)	
	NGVD29	NAVD88	NGVD29	NAVD88	NGVD29	NAVD88	NGVD29	NAVD88
High Level	126.50	125.50	128.75	127.75	125.75	124.75	121.50	120.50
Normal Level	126.00	125.00	128.50	127.50	125.50	124.50	121.25	120.25
Low Level	124.50	123.50	126.50	125.50	123.50	122.50	119.00	118.00

NGVD29 = National Geodetic 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 and Land Management Bureau Chief.