Clean Waterways Act
Wastewater Treatment Plant Plan

AVO 043826.314
January 2024

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Section 1: Introduction

1.1 Background

The Clean Waterways Act – Senate Bill 712 (2020) subparagraph 403.067(7)(a)9 Florida Statutes requires all counties and municipalities within a Basin Management Action Plan (BMAP) to develop a wastewater treatment plant remediation plan to quantify nitrogen and phosphorus loading in the wastewater effluent and develop a list and ranking of improvement projects required to meet the nutrient removal goals of the BMAP, along with an implementation schedule.

The City of Clermont is located entirely within the Upper Ocklawaha River Basin Management Action Plan. The BMAP specifically references phosphorus loadings to a number of waterbodies including the Palatlakaha River. However, the identified source of the phosphorus loading is stormwater runoff. Discharge from wastewater treatment facilities or proposed limits from those facilities is not mentioned in the BMAP. Nitrogen loading is not addressed at all.

1.2 Wastewater Service Area

The City's wastewater service area includes both the area within the city limits, as well as portions of unincorporated Lake County. While the City's wastewater collection system has been extended throughout the City limits a small number of OSTDS remain, primarily within the historic downtown area. The limits of the City's current wastewater service area are presented in **Figure 1-1**.

Wastewater generated within the City's service area is treated at the Clermont East Wastewater Treatment Facility (WWTF).

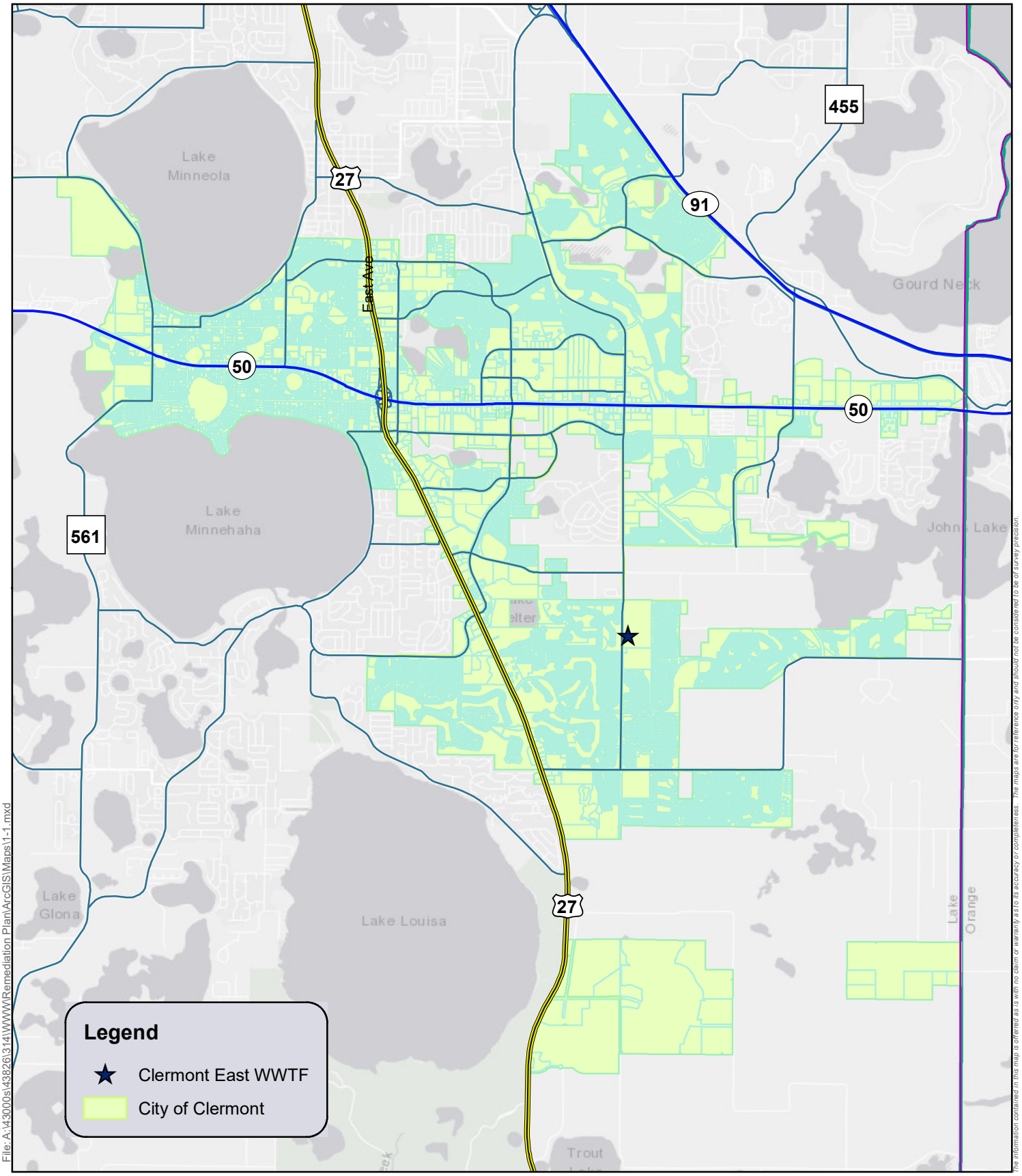

Figure 1-1
Clermont City Limits

902 N. Sinclair Ave
Tavares, Florida 32778
852-343-8481

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City of Clermont
OSTDS Remediation Plan

Section 2: Wastewater Treatment Facilities

2.1 FDEP Permit Summary

The Clermont East Wastewater Treatment Facility, located on Hancock Drive, treats the wastewater generated within the City's service area. Currently permitted by the Florida Department of Environmental Protection (FDEP) at an annual average daily flow (AADF) of 4.00 MGD, the current treatment processes at the WRF were not originally designed to provide high levels of nutrient removal. Wastewater is treated to public access reuse standards prior to be being used for landscape irrigation in the City's service area. Rapid infiltration basins are used for the disposal of effluent during periods of wet weather or when water quality parameters are not met. A site plan of the Clermont East WWTF is shown in **Figure 2-1**.

The Clermont East WWTF is currently operating under FDEP Permit Number FLA010515, a ten-year permit with an expiration date of May 24, 2033. Effluent total nitrogen, nitrate, and total phosphorus concentrations are required to be measured weekly. However, the only nutrient limit contained within the current permit is a 12.0 mg/L nitrate limit when discharging to the rapid infiltration basins. A summary of the FDEP permit limits for the Clermont East WWTF are presented in **Table 2-1.**

Table 2-1: Summary of Permitted Clermont – East WWTF Discharge Limits

Parameter	Land Application R-001 Rapid Infiltration Basins	Land Application R-002 Public Access Reuse
Flow	0.75 MGD	4.00 MGD
BOD_5	20 mg/L	20 mg/L
Total Suspended Solids	20 mg/L	5 mg/L
Fecal Coliform	200 cfu/100mL	75% Non-Detect
Nitrate	12 mg/L	No Limit
Total Nitrogen	No Limit	No Limit
Total Phosphorus	No Limit	No Limit
Total Residual Chlorine	0.5 mg/L Min.	1.0 mg/L Min.
pH	6.0 to 8.5	6.0 to 8.5

2.2 Historical Nutrient Loading

Discharge monitoring reports for the Clermont East WWTF were reviewed for the period from January 2018 to November 2023. Effluent total nitrogen concentrations peaked at 13.8 mg/L, while averaging 2.8 mg/L. Total phosphorus concentrations in the effluent peaked at 3.36 mg/L, with an average of 0.33 mg/L. A summary of total nitrogen and total phosphorus loadings for the Clermont East WWTF are presented in **Table 2-2.**

Table 2-2: Summary of Annual Nutrient Loadings for the Clermont East WWTF

Year	Annual Average Daily Flow (MGD)	Total Annual Flow (MG/Yr)	Total Nitrogen (mg/L)	Total Nitrogen (lb/yr)	Total Phosphorus (mg/L)	Total Phosphorus (lb/yr)
2018	2.93	1,071	2.10	18,743	1.64	14,681
2019	3.02	1,102	2.22	20,488	1.48	13,591
2020	3.09	1,129	2.21	20,808	1.10	10,392
2021	3.15	1,148	3.82	36,430	1.02	9,870
2022	3.25	1,187	2.77	27,399	1.23	12,155
2023	3.46	1,156	3.91	37,747	1.46	14,190

Note: 2023 includes data from January through November

Total nitrogen and total phosphorus concentrations in the effluent from the WWTF reached peak or near peak levels in 2023 in part due to on-going construction related to that expansion of the WWTF that began in June 2023.

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Certificate of Authorization Number: 33380

N

0 250 500 Feet

Figure 2-1

Clermont East WWTF Site Plan

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WWTP Remediation Plan

Section 3: Capacity Analysis

3.1 Historical Wastewater Flow

Historical wastewater flow data from 2018 to 2023 was reviewed in an effort to determine current wastewater flow in the City's service area as well as to establish a baseline for future growth. Flows have increased annually over the past five-year period, with the increase observed in 2023 being significantly larger than prior years. This is consistent with the on-going development in the City's service area, particularly in the Wellness Way area. A summary of the yearly average daily flows is presented in **Table 3-1.**

Table 3-1: Summary of 2018 to 2023 Wastewater Flows

Year	Clermont East WWTF (MGD)
2018	2.93
2019	3.02
2020	3.09
2021	3.15
2022	3.25
2023	3.46

3.2 Wastewater Flow Projections

The Clermont East WWTF's currently permitted capacity of 4.00 MGD is insufficient to meet the needs of the service area based upon on-going and projected growth. Design and permitting of an expansion of the WWTF to a capacity of 6.5 MGD, with provisions for expansion to an ultimate capacity of 8.0 MGD is complete. Construction of the expansion to 6.5 MGD broke ground in June 2023, with an anticipated completion date of November 2025.

Section 4: Wastewater Treatment Facility Improvements

4.1 Clermont East WWTF

Improvements to the Clermont East WWTF are being constructed in order to increase the capacity from the currently permitted 4.00 MGD to 6.5 MGD. Historically the WWTF has discharged effluent with total nitrogen concentrations below 3.0 mg/L, and total phosphorus concentrations below 1.5 mg/L. While total nitrogen and phosphorus concentrations in the effluent have increased during construction, it is anticipated that the levels will return to historic values once construction is complete. Completion of construction is currently projected to occur in November 2025.

The Upper Ocklawaha River BMAP does not specify discharge limits for wastewater treatment facilities. No additional improvements beyond the expansion of the WWTF to provide additional capacity or nutrient removal are proposed at this time.

Section 5: Implementation Plan

5.1 Implementation Plan Development

The proposed implementation plan includes expansion of the WWTF to provide additional capacity for future growth within the City's service area. The construction of the expansion is currently on-going with an expected completion date of November 2025.