



**Central Lake Erie Regional  
Water Reclamation (CLERWTR) District  
Financial Feasibility Analysis Summary**

**DRAFT FOR PUBLIC COMMENT  
August 26, 2025**

## 1 Executive Summary

In 2009, a group of Lorain County jurisdictions, supported by federal funding, commissioned a study to explore the feasibility of forming a regional wastewater authority in Lorain County. The study, which was completed in 2012, provided a high-level assessment and presented its findings to what was then called the Lorain County Regional Wastewater Authority Work Group.

In 2023, Lorain County led renewed efforts to develop a regional wastewater authority under Ohio Revised Code (R.C.) Section 6119, aiming to provide cost-effective wastewater treatment services for the region. The participants named this potential regional authority Central Lake Erie Regional Water Reclamation (“CLERWTR”) District.

Lorain County engaged Raftelis, a firm with extensive expertise in water-industry financial and rate consulting, to conduct a financial feasibility assessment of the proposed R.C. 6119 regional wastewater authority. Raftelis applied fundamental principles of ratemaking and industry best practices to establish costs and assess the feasibility of potential rates. The assessment was based on reasonable inputs and assumptions, considering existing costs, historical flows, and mutually agreeable terms for operations of regional water reclamation<sup>1</sup> facility and asset transfer for wastewater conveyance facilities.

This document provides a summary of the financial feasibility analysis based on the proposed Plan of Operations and relevant data on costs and valuations. **Based on the analysis herein the proposed CLERWTR authority is financially viable.** CLERWTR, from its initiation, will be positioned to sustain cost-effective regional wastewater treatment and conveyance services to its original customers and has a solid foundation to add customers in the region.

## 2 Raftelis Background

Raftelis has the largest water-industry financial and rate consulting practice in the nation. Raftelis staff play a key role in shaping industry standards by leading and participating in various American Water Works Association (AWWA) and Water Environment Federation (WEF) committees. Staff have authored significant publications, including Water and Wastewater Financing and Pricing: The Changing Landscape, and co-authored AWWA’s Manual M1, Principle of Water Rates, Fees and Charges and WEF’s Manual of Practice No. 27, Financing and Charges for Wastewater Systems. Raftelis also conducts the biennial national Water and Wastewater Rate Survey with AWWA and contributed to the

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<sup>1</sup> “Water reclamation” means the treatment of “wastewater.” The terms are used interchangeable herein because the terms vary between applicable statutes and regulations.

"Developing a Framework for Household Affordability and Financial Capability Assessment in the Water Sector" report developed for AWWA, WEF, and the National Association of Clean Water Agencies (NACWA).

### 3 Approach

Relying on this expert knowledge, Raftelis completed this financial feasibility assessment based on the fundamental principles of ratemaking and industry best practices. To establish costs and assess the financial feasibility of potential rates for the proposed R.C. 6119 authority, Raftelis used a series of reasonable inputs and assumptions founded in existing costs, known needs, historical flows, and mutually agreeable terms for water reclamation operations and regional wastewater conveyance asset transfer. Inputs and assumptions are described in more detail below. The goal of the financial feasibility assessment was to ensure that rates for the new entity were reasonable, fair, understandable, and sufficient to cover target revenue requirements under a reasonable near-term scenario while planning for the long-term financial health of the new utility.

### 4 Service Area and Facilities

As stated in the proposed Plan for the Operations of the Central Lake Erie Regional Water Reclamation (CLERWTR) District ("Plan of Operations") the Service Area of CLERWTR will initially include all the areas that are presently served, or presently capable of being served, by sanitary sewers tributary to the Avon Lake Water Reclamation Facility (the "Service Area").

Data provided by the current operators of the relevant water reclamation assets in the Service Area has been used to conduct the financial feasibility analysis for CLERWTR and is described in further detail below.

### 5 Inputs and Assumptions

The inputs and assumptions used for the financial feasibility analysis are summarized below. Note: Additional details on all of the inputs and assumptions can be found in the Attachments to this report.

#### 5.1 General Assumptions

- **Start Date** – January 2026 (assumes petition filing and approval in 2025)
- **Operational & Administration Cost Input Data Sources** – The stakeholders that provided data utilized for the financial feasibility analysis include:

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- Avon Lake Regional Water (Avon Lake WRF) (current/planned future info)
- LORCO (current/planned future info)
- Lorain County (current/planned future info)
- Publicly-available water reclamation industry information (planned future administration costs)

Refer to **Attachment A** for additional details on data inputs and sources used for this financial feasibility assessment.

## 5.2 Revenue Requirements

Utility financial feasibility analyses require modeling that begins with developing a financial plan and using the financial plan to inform the revenue target for the utility. The financial plan is the foundation of the revenue requirements for establishing how much revenue must be recovered through rates and charges. The relevant costs include cost of acquisition of assets and operational costs. Data for CLERWTR's costs are thorough and provide a clear basis for evaluating financial feasibility.

### 5.2.1 Facility Acquisition & Lease Terms

As stated in Section 4 *Service Area and Facilities*, CLERWTR will utilize existing wastewater conveyance and wastewater treatment assets – the Avon Lake Reclamation Facility (the “Facility”) and 4Plex Pump Station and associated force mains.

In 2023, a system valuation for the Avon Lake Regional Water (*March 2023 draft report from Raftelis*) wastewater treatment assets calculated the valuation to be \$75,800,000 using the replacement cost new less depreciation method.

The 4Plex Pump Station and associated force mains recently have been valued (*August 21, 2025 final report from 1898 & Co.*) at a reproduction new cost of \$17,848,000.

CLERWTR will lease the Facility to provide regional wastewater treatment services and will purchase the 4Plex Pump Station and associated forces mains in accordance with the mutually agreed-upon terms below.

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5.2.2 Operation & Maintenance Costs

Detailed historical operation and maintenance budgets and costs associated with the Facility already exist, providing a robust basis for estimating costs. The table below summarizes the existing O&M budget for the Facility and 4Plex Pump Station.

*Table 1. Wastewater Treatment and Conveyance O&M Cost Summary (2026)*

Cost Category	2026 Estimate
ALRW WRF Personnel Costs	\$ 1,639,515
ALRW WRF Operating Costs	\$ 2,323,623
4Plex Operating Costs	\$ 30,000
<i>O&amp;M Subtotal</i>	\$ 3,993,138

The O&M budget for the Facility was isolated from the overall Avon Lake Regional Water budget, which also includes costs associated with the collection system and administration. Relevant costs were added to reflect the separate administrative structure and requirements of CLERWTR. These added costs are summarized in the table below.

*Table 2. Additional Operations & Administration Cost Summary (2026)*

Cost Category	2026 Estimate
Admin Costs (Salaries, Benefits, Misc)	\$ 206,701
Professional Services	\$ 300,000
Minor Capital (as operating expense)	\$ 250,000
<i>Additional O&amp;M Subtotal</i>	\$ 756,701

The overall O&M cost inputs for CLERWTR are summarized in the table below.

*Table 3. Summary 2026 O&M Cost Inputs for CLERWTR*

Cost Category	2026 Estimate
O&M Subtotal	\$ 3,993,138
Admin Subtotal	\$ 756,701
<i>2026 O&amp;M Cost Input Total</i>	\$ 4,749,839
<i>Note</i>	<i>The O&amp;M Cost Input totals change on an annual basis due to cost escalation factors and various programmatic needs.</i>

Refer to Attachment B for additional details on the O&M and administration cost inputs and sources used for this financial feasibility assessment.

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5.2.3 Debt Service

CLERWTR will take over debt service for the following loans related to the Facility and 4Plex Pump Stations and associated force mains. This is in accordance with terms described in Avon Lake WRF Ground Lease Letter of Intent and Letter of Intent to Purchase Sanitary Wastewater Assets.

Table 4. Debt Service for CLERWTR

Facility	Loan	Total Annual Principal & Interest	Final Payment Date
Avon Lake WRF *1	Acct. # 7349	\$ 1,341,343	1/1/2050
Avon Lake WRF	Acct. # 9170	\$ 38,351	7/1/2041
Avon Lake – LORCO Force Main (4Plex)	Acct. # 5164	\$ 547,958	1/1/2042
<i>Debt Service Annual Cost</i>	<i>All</i>	<i>\$ 1,927,652</i>	
*1 – Acct. #7349 includes loans for 2 WPCLF Projects – NRD1 (\$36,202,854 original loan total) and NRD2 (\$1,399,931 original loan total)			

Refer to Attachment C for additional details on the Debt Service cost inputs and sources used for this financial feasibility assessment.

5.2.4 Capital Investments

Prudent utility management requires anticipating expenses, and Avon Lake Regional Water and LORCO have developed and maintained capital improvement plans (CIPs) for the Facility and the regional conveyance assets. The currently planned CIP cost inputs that would be funded by CLERWTR are summarized in the table below.

Table 5. CIP Cost Inputs for CLERWTR

Cost Category	Cost Estimate (used for Analysis)	Estimated Completion Date	Notes
Facility Solids Treatment Repair - Plan	\$ 300,000	2028	Analysis assumes 90% debt financed and 10% cash financed *1
Facility Solids Treatment Repair – Design & Construction	\$ 6,000,000	2031	Analysis assumes 90% debt financed and 10% cash financed *1
*1 – Analysis used OWDA loan rate from website - <a href="https://www.owda.org/">https://www.owda.org/</a> Loan Terms 21-30 Years – Standard Rate: 3.70 % for 30 years – as of 7/31/2025			

Refer to Attachment D for additional details on the CIP cost inputs used for this financial feasibility assessment.

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5.2.5 Cost Escalation Factor Assumptions

For costs not fixed in future years by agreement, the financial model assumes reasonable escalations that align with historical trends. The cost escalation factor assumptions used in this financial feasibility analysis were based on the cost escalation factors utilized as part of the Avon Lake Regional Water Rates Study (April 2023) completed by Raftelis, current information and professional best judgment. These factors are summarized in the table below and apply to both Facility and 4Plex assets:

*Table 6. Cost Escalation Factors*

Category	Annual Escalation Factor	Applies To
Salaries	3.0 %	CLERWTR and Facility operational staff salaries
Benefits	5.0 %	CLERWTR and Facility operational staff benefits
Administration	3.0 %	Training, Building Costs, Insurance, etc.
Equipment	2.5 %	Facility Equipment-related Items
Operations	3.0 %	Facility Operations-related Items
Contracts	5.0 %	Professional Services (e.g., Legal, Financial, etc.)
Utilities	7.0 %	Facility Utilities (Gas, Electricity, etc.)

5.2.6 Reserve Policies

In addition to meeting ongoing expenses, CLERWTR will build its own financial reserve as quickly as is economically feasible and eliminate reliance on ALRW start-up funding as financial reserves. Industry recommended best practice is 90 days of operating expenses as a reserve (O&M expenses, cash funded capital expenses and debt service coverage). During the implementation stage of CLERWTR, as CLERWTR builds up its own financial reserve based on best practice recommendations, it will rely on start-up funding from Avon Lake Regional Water as set forth in the **Operating Agreement**, and ongoing rate collections. Based on the financial feasibility assessment, and absent grant funding from state or federal sources to support regionalization, the build-up of this reserve fund balance to the desired 90-day level is estimated to occur over a period of 2 years. This assumes uniform collection of treatment fees and no significant changes in treated flow volumes that could negatively impact revenue.

In the initial (first three) years of CLERWTR operations, the financial reserve buildup is estimated to occur as indicated in table below.

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*Table 7. Estimated Annual Reserve Fund Buildup*

Year	Modeled Target Balance (# Days O&M)	Modeled Target Balance Needed	Modeled Ending Balance* <sup>1</sup>	# Days O&M In Reserve
2026	30 days	\$ 391,000	\$647k	> 30 Days
2027	60 days	\$ 866,000	\$1.287M	> 90 Days
2028	90 days	\$ 1,411,000	\$1.816M	> 90 Days

\*1 The modeled operating fund ending balances shown assume the following conditions:

- The average annual treated wastewater flow is achieved and there are no significant deviations which would negatively impact (i.e., decrease) anticipated revenue,
- 5% annual CLERWTR rate increase, and
- Expenditures substantially similar to those modeled as part of the financial feasibility assessment and described in this report.

Refer to Attachment E for additional details on the revenue requirements/reserve policy-related cost inputs and sources used for this financial feasibility assessment.

### 5.3 Units of Service

Projected units of service for 2026 and beyond for CLERWTR are conservatively based upon existing retail customer accounts (# of connections to tributary collection system) and flow data (total treated flow at the Facility) for the areas that will be served by CLERWTR. As part of the margin of safety, this feasibility modeling does not rely upon growth in the Service Area or more than historical average flows to the Facility.

#### 5.3.1 Customers

CLERWTR will serve ALRW, LORCO and Lorain County as wholesale customers. Additionally, a portion of the anticipated wastewater treatment fee that will be charged to each wholesale customer will be based on the number of retail customer connections/accounts connected to their respective wastewater collection systems and receiving treatment services at the Facility.

The number of connections for these entities are shown in the table below. This number represents the number of connections in 2025 for each of these areas and were considered to be steady over time (i.e., no customer connection growth or decline). New wholesale or regional customers within Lorain County beyond the Eaton Estates connections are anticipated over time. While development providing additional connections is anticipated in the near future, additional customers were not included in the financial feasibility analysis as a conservative assumption.

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*Table 8. # of Retail Customers/Accounts per Wholesale Customer*

<b>Proposed 6119 Wholesale Customer</b>	<b># of Retail Customers/Accounts (Connections to local collection system)</b>
Avon Lake	9015
LORCO	1603
Lorain County (Eaton Estates)	481 <sup>*1</sup>
*1 For the financial feasibility analysis, it was assumed that the Lorain County – Eaton Estates customers would not be connected to 4Plex conveyance system and part of the Service Area until July 2026 (i.e., 6 months of service).	

5.3.2 Total Flow (Treated Wastewater Volume)

Wholesale customers will be master metered and associated billing will be based on the volume of water flowing through those meters, i.e., total flow receiving treatment at the Facility. For CLERWTR, an average of three years of total treated flow was used to establish an average treated flow volume to support the financial feasibility analysis efforts. Table 9 provides a summary of historical treatment volumes and calculated volume used. No increases or decreases were assumed for this analysis.

*Table 9. Historical and Modeled Treatment Volumes*

	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Average</b>	<b>Note</b>
<b>ALRW (MGD <sup>*2</sup>)</b>		4.554	4.679	4.553	4.562 <sup>*1</sup>	4.229 (Modeled)
*1 – Note: The volumes above include ALRW & LORCO flow volumes, therefore the volumes assumed for ALRW in the financial analysis = 4.229 MGD (which is 4.562 - .333 LORCO volume)						
*2: MGD = Million Gallons per Day						
	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Average</b>	<b>Note</b>
<b>LORCO (MGD)</b>		.2915	.3666	.3402	.333	.333 (Modeled)
	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Average</b>	<b>Note</b>
<b>Lorain County (MGD)</b>	.1997	.1943	.1908		.1950	.195 (Modeled)
*1 For the financial feasibility analysis, it was assumed that the Lorain County – Eaton Estates would contribute .0975 MGD of flow as customers would only be connected for six months of service vs. full year of service (.195 MGD of modeled flow).						

Additional flow from new customers or services areas is not included in the projections.

Refer to Attachment F for additional details on the data used to develop the modeled treatment flow volumes for this financial feasibility assessment.

## 6 Billing Approach

The CLERWTR rate structure evaluated in this study includes a fixed fee based on the number of accounts connected to the local collection system of the Wholesale Customer, as well as a charge per volumetric unit of master metered wastewater that will be treated at the Facility.

- a) Rate Components
  - i) Volumetric Treatment Rate
  - ii) Fixed Fee per Retail Connection
- b) Potential Annual Rate Increases (that would need to be approved by CLERWTR Board of Trustees)

For purposes of the financial feasibility analysis, 5% annual rate increases are modeled beginning in 2027, for both the volumetric treatment rate and the fixed fee per retail account. These rate adjustments reflect the estimated changing cost of service and revenue requirements during the first five years of CLERWTR operations. The 5% rate increases extend the rate increase recommendations identified in the Avon Lake Regional Water rate study in 2023. **It is important to note that actual rates in any given year must be based on the then-current needs and projections of CLERWTR, and as approved by the CLERWTR Board of Trustees.**

The analyzed rate structure values for the initial five years of the proposed 6119 authority are listed in table below.

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*Table 10. – Proposed Rate Schedule*

Rate Component	2026	2027 <sup>*2</sup>	2028	2029	2030
<b>Volumetric Treatment Rate<sup>*1</sup></b>	3.874	4.068	4.271	4.485	4.709
<b>Fixed Fee (per Retail Connection)</b>	4.893	5.138	5.395	5.664	5.947
<i>*1: Volumetric Treatment Rate is per 1000 gallons (kgal) of wastewater (\$/kgal)</i>					
<i>*2: Annual Rate increases of 5% were estimated for the period of 2027-2030</i>					

Potential Rate Comparison	2026	2027	2028	2029	2030
<b>CLERWTR Volumetric Treatment Rate</b>	3.874	4.068	4.271	4.485	4.709
<b>ALRW Treatment Rate (52% of Overall Rate)</b>	3.874	4.068	4.271	4.485	4.709

## 7 Feasibility Assessment Results

### 7.1 Summary of Revenue Requirements

The analyzed rate structure values for the initial five years of the proposed 6119 authority are listed in the table below.

*Table 11. Summary of Rate Revenue Needs*

Revenue Requirement	2026	2027	2028	2029	2030
<i>Volume Treatment Rate</i>	3.874	4.068	4.271	4.485	4.709
<i>Treated Volume*1</i>	1,700,7185	1,736,305	1,736,305	1,736,305	1,736,305
<i>CIP (Cash + Loan)</i>	0	0	\$52,326	\$17,597	\$17,597
<i>To Reserves (Policy)</i>	\$192,765	\$192,765	\$194,392	\$194,392	\$194,392
<b><i>Annual Total Requirement</i></b>	<b><i>\$6,870,256</i></b>	<b><i>\$7,388,265</i></b>	<b><i>\$7,893,536</i></b>	<b><i>\$8,300,669</i></b>	<b><i>\$8,701,523</i></b>
<i>O&amp;M &amp; Admin Costs include the following 4Plex Purchase Term Schedule:</i>					
<b><i>4Plex Purchase</i></b>	<b><i>0</i></b>	<b><i>\$250,000</i></b>	<b><i>\$500,000</i></b>	<b><i>\$750,000</i></b>	<b><i>\$1,000,000</i></b>
<i>*1 – Treated Volume is a sum of volumes listed in Table 9 and converted to billing unit (kgal)</i>					

### 7.2 Estimated Revenues

The estimated revenues for CLERWTR’s implementation and operation scenario for the first five years of operations are summarized in the table below.

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*Table 12. Estimated Revenues*

Estimated Revenue	2026	2027	2028	2029	2030
Volume Treatment Rate	3.874	4.068	4.271	4.485	4.709
Treated Volume <sup>*1</sup>	1,700,718	1,736,305	1,736,305	1,736,305	1,736,305
<b>Volume Rate Revenue (a)</b>	<b>\$6,588,580</b>	<b>\$7,062,768</b>	<b>\$7,415,906</b>	<b>\$7,786,702</b>	<b>\$8,176,037</b>
Fixed Fee (per Connection)	\$ 5.528	\$ 5.804	\$ 6.095	\$ 6.399	\$ 6.719
Total # Connections <sup>*2</sup>	11,099	11,099	11,099	11,099	11,099
<b>Fixed Fee Revenue (b)</b>	<b>\$736,263</b>	<b>\$773,076</b>	<b>\$811,730</b>	<b>\$852,317</b>	<b>\$894,933</b>
<b>Total Estimated Revenue (a + b)</b>	<b>\$7,324,843</b>	<b>\$7,835,844</b>	<b>\$8,227,636</b>	<b>\$8,639,018</b>	<b>\$9,070,969</b>
<b>Revenue Requirement <sup>*3</sup></b>	<b>\$6,870,256</b>	<b>\$7,388,265</b>	<b>\$7,893,536</b>	<b>\$8,300,669</b>	<b>\$8,701,523</b>
<i>*1 – Treated Volume is a sum of volumes listed in Table 9 and converted to billing unit (kgal)</i>					
<i>*2 – Total # Connections is sum of customers listed in Table 8 and includes Lorain County Eaton Estates customers billed for 6 months in 2026</i>					
<i>*3 – Revenue Requirements is from Table 11</i>					

**Financial Analysis Assumptions:**

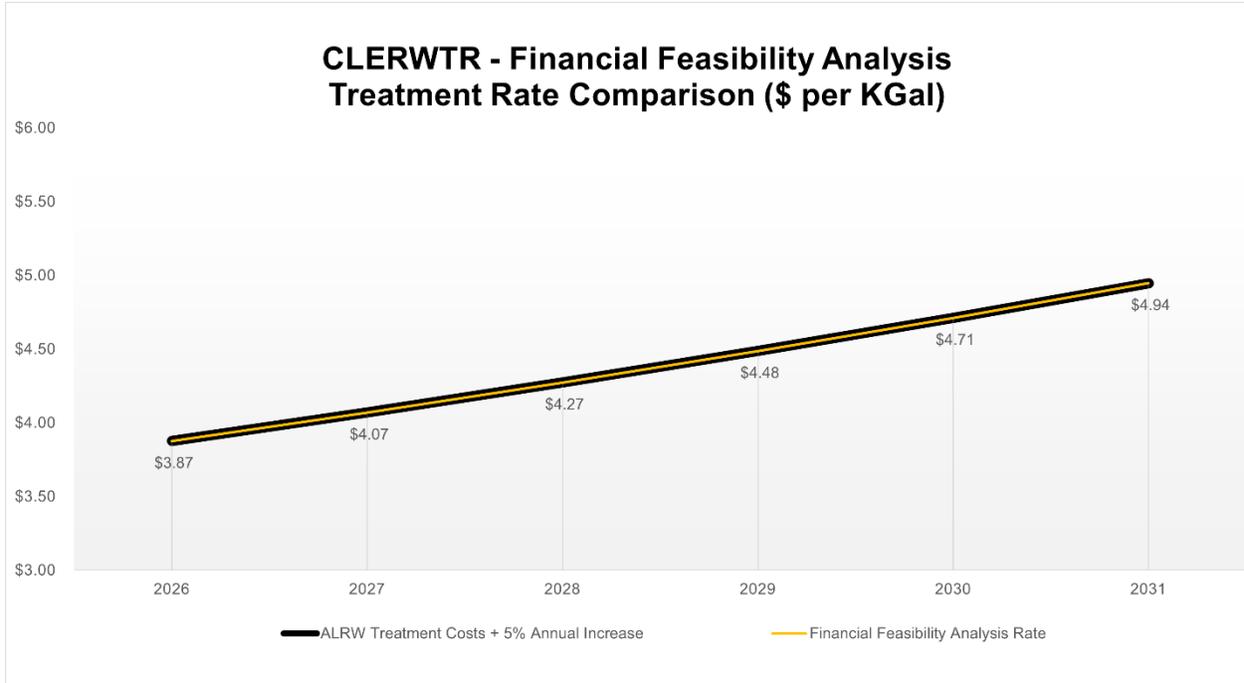
The estimated revenues for CLERWTR listed in Table 12 are based on the following scenario conditions met:

- Treated Flow – Average annual treated wastewater flow is achieved and there are no significant dry periods which would negatively impact (i.e., decrease) anticipated revenue;
- Rates – 5% annual CLERWTR rate increase (starting in Year Two through Year Five);
- Expenses – O&M, cash funded capital and administration expenditures substantially similar to those modeled and detailed in the appendices; and
- Retail customer connections – There is no decrease in the number of that would negatively impact anticipated revenue.

**7.3 Conclusion = Feasibility Analysis Summary Statement**

In summary, based on the reasonable assumptions in the modeled scenario CLERWTR is calculated to be financially feasible. CLERWTR’s feasibility is demonstrated in the fact that the modeled rates match the projected treatment rates for the Facility over the same period if CLERWTR is not formed.

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The inputs to this feasibility analysis model have a built-in margin of safety by conservatively excluding growth of customers or flow and using historically based averages of actual operations. In addition, CLERWTR under its agreements has backing of ALRW that enables it to have the financial flexibility and stability to meet and sustain feasibility over a broad range of future scenarios.

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## Appendices

Attachment A	Input Summary (Data Sources)
Attachment B	O&M & Administration Cost Inputs
Attachment C	Existing Debt Service Costs Inputs
Attachment D	CIP Cost Inputs
Attachment E	Target Revenue Requirements
Attachment F	Flow Volume Data

**Attachment A**  
**Input Summary (Data Sources)**

<b>Data Input</b>	<b>Description</b>	<b>Input Type</b>	<b>Source</b>
<b>Category: General</b>			
6119 Start Date	Estimated start date of Lorain County 6119 authority (CLER WTR) based on petition approval in 2025. This is needed to support various financial feasibility calculations throughout this workbook.	Scenario Requirement	Stakeholder Input
Service Areas	List of "Service Areas" that make up the proposed 6119 District.	Scenario Requirement	Stakeholder Input
<b>Category: O&amp;M and Admin Costs</b>			
ALRW WRF Personnel Expense Categories	Personnel cost categories for ALRW WRF	ALRW	ALRW 2025 Budget
ALRW WRF Personnel Expense Costs	Budgeted & Estimated personnel costs for ALRW WRF for analytical period	Scenario Calculated	ALRW 2025 Budget
ALRW WRF Operating Cost Categories	Operations cost categories for ALRW WRF	ALRW	ALRW 2025 Budget
ALRW WRF Operating Costs	Budgeted & Estimated operating costs for ALRW WRF for analytical period	Scenario Calculated	ALRW 2025 Budget
ALRW WRF Lease Payments	Proposed lease/purchase payment for ALRW WRF facility	Agreement - Terms	Stakeholder Input
LORCO 4Plex PS & FMs - Parcel Lease	Cost for lease of parcel where FourPlex Pump Station is located. CLERWTR will start paying for this upon asset transfer.	Agreement - Terms	Existing Lease
LORCO 4Plex PS & FMs - Purchase Terms	Proposed FourPlex Purchase Terms for years 2027-2043	Agreement - Terms	Stakeholder Input
LORCO 4Plex PS & FMs - Contract Maintenance	Maintenance costs (ALRW Contract) for FourPlex PS & FMs	Scenario Assumption	Stakeholder Input (LORCO)
LORCO 4Plex PS & FMs - Utilities	Utility costs for FourPlex PS & FMs	Scenario Assumption	Stakeholder Input (LORCO)
LORCO 4Plex PS & FMs - Insurance	Insurance costs for FourPlex PS & FMs	Scenario Assumption	Stakeholder Input (LORCO)
Salary (New CEO)	Anticipated salary of new CEO for 6119	Scenario Assumption	Stakeholder Input
Benefit Costs	Benefit expenses for 6119 employee(s)	Scenario Assumption	Stakeholder Input (ALRW)
CLERWTR Utilities	Utilities/Rent Payments (based on Agreement Terms)	Scenario Assumption	Stakeholder Input
Legal Professional Services	Estimated Legal professional services for CLERWTR	Scenario Assumption	Stakeholder Input
Other Professional Services	Estimated other professional services for CLERWTR	Scenario Assumption	Stakeholder Input
Minor Capital Expenses (as O&M Expense)	Minor capital expenses (annual estimate). Estimated to be built up as O&M fund balance if not spent annually.	Scenario Assumption	Stakeholder Input (follows ALRW approach)
Escalation Factors	List of Escalation Factors used for O&M Costs	Scenario Assumption	ALRW 2023 Rate Study & stakeholder input
Escalation Table	Table of assumed annual cost escalation factors for analytical period	Scenario Assumption	ALRW 2023 Rate Study & stakeholder input
Escalation Years	Analytical period (year range) used for feasibility analysis	Scenario Requirement	Stakeholder Input
<b>Category: Debt</b>			
WPCLF 7349 - Water Pollution Control Center Rehab NRD 1 & NRD 2	Principal and interest payments as well as subordinate or senior designation for WPCLF 7349 - Water Pollution Control Center Rehab NRD 1 & NRD 2	Agreement - Terms	OWDA Website
OWDA 9170 - Plant Effluent Flow Diversion	Principal and interest payments as well as subordinate or senior designation for OWDA 9170 - Plant Effluent Flow Diversion	Agreement - Terms	OWDA Website
OWDA 5164 - ALRW - FourPlex	Principal and interest payments as well as subordinate or senior loan designation for the FourPlex Pump Station & Force Main loan	Agreement - Terms	OWDA Website

**Attachment A**  
**Input Summary (Data Sources)**

Data Input	Description	Input Type	Source
<b>Category: CIP</b>			
WRF Solids Treatment Repair Plan	Estimated project cost for Avon Lake Water Reclamation Facility solids treatment plan	Scenario Assumption	Stakeholder Input
WRF Solids Treatment Repair (Upgrades)	Designated amount towards updating Avon Lake Water Reclamation Facility treatment upgrades	Scenario Assumption	Stakeholder Input
Inflation Factor	Adjustable inflation factor for capital projects	Scenario Assumption	Stakeholder Input
Inflation Adjustment	Cumulative inflation adjustment	Scenario Calculated	Model Calculation
Debt Funding - Funding Allocation	Designated percentage of total anticipated capital needs funded by debt	Scenario Assumption	Stakeholder Input
Grant Funding - Funding Allocation	Designated percentage of total anticipated capital needs funded by grants	Scenario Assumption	Stakeholder Input
Cash Funding - New Cash	Amount of on-hand cash needed for capital project funding	Scenario Calculated	Model Calculation
Debt Service Calculation Inputs	Adjustable rate, term, and cost percentage	Scenario Calculated	<a href="https://www.owda.org/">https://www.owda.org/</a>
<b>Category: Cashflow (Revenue Requirements)</b>			
Target Days (# Days of Operation Expenses)	Target # of Days of O&M Expenses in Reserve (e.g. Rainy Day Fund)	Scenario Assumption	Best Practice & Stakeholder Input
Target Coverage, Senior Debt	Target Debt Coverage Factor for Senior Debt	Scenario Assumption	Best Practice
Target Coverage, All-In	Target Debt Coverage Factor for all debt	Scenario Assumption	Best Practice

**Attachment B**  
**O&M & Administration Cost Inputs**

Cost Input - Area	Escalation Factor	Years:	2025	2026	2027	2028	2029	2030
<b>Avon Lake WRF</b>								
<b><u>ALRW WRF Personnel (Treatment)</u></b>		Budgeted	Estimated =>					
Salaries	Salaries	\$ 780,000	\$ 799,500	\$ 823,485	\$ 848,190	\$ 873,635	\$ 899,844	
Salaries - Allocated	Salaries	145,000	148,625	153,084	157,676	162,407	167,279	
Part Time Wages	Salaries	11,265	11,547	11,893	12,250	12,617	12,996	
Overtime Wages - WRF	Salaries	70,000	71,750	73,903	76,120	78,403	80,755	
Employee Time Buy Back	Benefits	99,235	38,049	39,951	41,949	44,046	46,249	
Uniform & Shoe Allowance	Benefits	2,313	2,370	2,489	2,613	2,744	2,881	
CDL Allowance	Benefits	2,713	2,780	2,919	3,065	3,219	3,379	
Workers Compensation	Benefits	25,875	26,522	27,848	29,240	30,702	32,238	
Hospitalization	Benefits	328,915	337,138	353,995	371,695	390,279	409,793	
Group Life Insurance	Benefits	2,750	2,819	2,960	3,108	3,263	3,426	
Longevity	Benefits	11,500	11,788	12,377	12,996	13,646	14,328	
OPERS Employer Share	Benefits	156,380	160,290	168,304	176,719	185,555	194,833	
Medicare	Benefits	16,197	16,601	17,431	18,303	19,218	20,179	
Uniform/Clothing & Laundry	Benefits	4,500	4,613	4,843	5,085	5,340	5,607	
Education Allowance	Benefits	5,000	5,125	5,381	5,650	5,933	6,229	
<b>Subtotal: ALRW WRF Personnel (Treatment)</b>		<b>\$ 1,661,642</b>	<b>\$ 1,639,516</b>	<b>\$ 1,700,863</b>	<b>\$ 1,764,659</b>	<b>\$ 1,831,007</b>	<b>\$ 1,900,016</b>	
<b><u>ALRW WRF Operating Expenses (Treatment)</u></b>		Budgeted	Estimated =>					
Employment Physicals/Background Checks	Administration	442	453	\$ 467	\$ 481	\$ 495	\$ 510	
Education, Training & Mileage	Administration	18,564	19,028	19,599	20,187	20,793	21,416	
Office Supplies	Operations	25,000	25,625	26,394	27,186	28,001	28,841	
Gasoline and Oil	Operations	3,220	3,301	3,400	3,502	3,607	3,715	
Equipment Maintenance	Operations	85,000	87,550	90,177	92,882	95,668	98,538	
Operating Supplies	Operations	450,000	463,500	477,405	491,727	506,479	521,673	
Repair & Maintenance Supplies/Services	Operations	4,500	4,635	4,774	4,917	5,065	5,217	
Repair and Maintenance Supplies/Services-WRF	Operations	15,000	15,450	15,914	16,391	16,883	17,389	
Repair and Maintenance Supplies/Services-Other	Operations	3,320	3,420	3,522	3,628	3,737	3,849	
Meters	Contracts	-	15,000	-	-	-	-	
Lab Supplies & Lab Work	Operations	77,500	79,825	82,220	84,686	87,227	89,844	
Contractual Services	Utilities	46,500	49,755	53,238	56,964	60,952	65,219	
Contractual Services-Operating Leases	Utilities	2,000	2,140	2,290	2,450	2,622	2,805	
Contractual Services-Other	Utilities	35,000	37,450	40,072	42,877	45,878	49,089	
Residuals Hauling/Disposal	Utilities	625,000	668,750	715,563	765,652	819,248	876,595	
Utility - Gas Service - WRF	Utilities	106,000	113,420	121,359	129,855	138,944	148,670	
Utility - Electric Service - WRF	Utilities	293,550	314,099	336,085	359,611	384,784	411,719	
Utility - Electric Service - Other	Utilities	1,350	1,445	1,546	1,654	1,770	1,893	
Utility - Water	Utilities	-	120,000	128,400	137,388	147,005	157,296	
Communications	Administration	4,000	4,100	4,223	4,350	4,480	4,615	
Maintenance of Building Facilities	Administration	10,000	10,250	10,558	10,874	11,200	11,536	
Maintenance of Building Facilities - WRF	Administration	22,000	22,550	23,227	23,923	24,641	25,380	
Maintenance of Building Facilities - Other	Administration	2,500	2,563	2,639	2,719	2,800	2,884	
Insurance Premium	Administration	77,138	79,066	81,438	83,881	86,397	88,989	
Equipment Purchases	Operations	125,000	128,750	132,613	136,591	140,689	144,909	
Equipment Purchases - Vehicles	Operations	25,000	25,750	26,523	27,318	28,138	28,982	
Engineering/Architectural Fees	Operations	25,000	25,750	26,523	27,318	28,138	28,982	
<b>Subtotal: ALRW WRF Operating Expenses (Treatment)</b>		<b>\$ 2,082,584</b>	<b>\$ 2,323,623</b>	<b>\$ 2,430,164</b>	<b>\$ 2,559,011</b>	<b>\$ 2,695,639</b>	<b>\$ 2,840,556</b>	
<b>Subtotal: ALRW WRF O&amp;M Costs (Treatment-related)</b>		<b>\$ 3,744,225</b>	<b>\$ 3,963,138</b>	<b>\$ 4,131,027</b>	<b>\$ 4,323,669</b>	<b>\$ 4,526,646</b>	<b>\$ 4,740,572</b>	
<b>4Plex Assets</b>		<b>Escalation Factor</b>						
Parcel Lease (Annual Cost)	4Plex Assets	\$ -	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Purchase Terms (Payment/Years)	4Plex Assets	-	-	250,000	500,000	750,000	1,000,000	1,000,000
Maintenance (ALRW Personnel) (Annual Estimate)	Contracts	18,000	18,000	18,900	19,845	20,837	21,879	
Utilities (Annual Estimate)	Utilities	6,000	6,000	6,420	6,869	7,350	7,865	
Insurance (Annual Estimate)	Equipment	2,000	2,000	2,050	2,101	2,154	2,208	
<b>Subtotal: 4Plex Assets</b>		<b>\$ 26,000</b>	<b>\$ 30,000</b>	<b>\$ 281,370</b>	<b>\$ 532,816</b>	<b>\$ 784,341</b>	<b>\$ 1,035,952</b>	

**Attachment B**  
**O&M & Administration Cost Inputs**

<b>Cost Input - Area</b>	<b>Escalation Factor</b>	<b>Years:</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
<b>CLERWTR Administration</b>								
Salary (New CEO)	Salaries	\$	-	150,000	\$ 154,500	\$ 159,135	\$ 163,909	\$ 168,826
Benefits (New CEO)	Benefits		-	45,000	\$ 47,250	\$ 49,613	\$ 52,093	\$ 54,698
PC (Purchase/Software)	Contracts		-	10,000	2,000	2,100	2,205	10,000
Office Equip/Communications	Equipment		-	1,200	1,200	1,200	1,200	1,200
Legal Professional Services	Contracts		-	180,000	180,000	180,000	180,000	180,000
Other Professional Services	Contracts		-	70,000	70,000	70,000	70,000	70,000
Lease - WRF	WRF Lease		-	1	1	1	1	1
Insurance (Misc - if needed)	Administration		-	-	-	-	-	-
Master Planning (Easterly-CLER WTR)	Operations		-	50,000	150,000	150,000	50,000	50,000
Financial Planning/Rate Studies	Operations		-	-	-	-	80,000	-
Bank Fees	Flat		-	500	500	500	500	500
Minor Capital	Flat		-	250,000	250,000	250,000	250,000	250,000
<b>Subtotal: CLERWTR Administration</b>		\$	-	\$ 756,701	\$ 855,451	\$ 862,549	\$ 849,908	\$ 785,225
<hr/>								
<b>Total: CLERWTR O&amp;M and Administration Cost Inputs</b>				<b>\$ 4,749,839</b>	<b>\$ 5,267,848</b>	<b>\$ 5,719,034</b>	<b>\$ 6,160,895</b>	<b>\$ 6,561,749</b>

**Attachment C**  
**Existing Debt Service Cost Inputs**

Debt Input - Loan:	Years:	2026	2027	2028	2029	2030
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<i>Loan:</i>	OWDA Acct # 7349				
<i>Project:</i>	Avon Lake Water Pollution Control Center Rehab (NRD 1 & NRD 2)				
Principal	\$ 1,202,821	\$ 1,208,240	\$ 1,213,683	\$ 1,219,151	\$ 1,224,643
Interest	138,522	133,103	127,660	122,192	116,700
	<b>\$ 1,341,343</b>	<b>\$ 1,341,343</b>	<b>\$ 1,341,343</b>	<b>\$ 1,341,343</b>	<b>\$ 1,341,343</b>

<i>Loan:</i>	OWDA Acct # 9170				
<i>Project:</i>	Avon Lake - Plant Effluent Flow Diversion				
Principal	\$ 31,369	\$ 31,772	\$ 32,180	\$ 32,593	\$ 33,012
Interest	6,982	6,579	6,171	5,758	5,339
	<b>\$ 38,351</b>	<b>\$ 38,351</b>	<b>\$ 38,351</b>	<b>\$ 38,351</b>	<b>\$ 38,351</b>

<i>Loan:</i>	OWDA Acct # 5164				
<i>Project:</i>	Avon Lake - LORCO (PS & FM Assets)				
Principal	\$ 302,983	\$ 314,235	\$ 325,905	\$ 338,009	\$ 350,562
Interest	244,975	233,723	222,053	209,949	197,396
	<b>\$ 547,958</b>	<b>\$ 547,958</b>	<b>\$ 547,958</b>	<b>\$ 547,958</b>	<b>\$ 547,958</b>

**Total: CLERWTR Existing Debt Service Cost Inputs**

Principal	\$ 1,537,173	\$ 1,554,247	\$ 1,571,768	\$ 1,589,753	\$ 1,608,217
Interest	\$ 390,479	\$ 373,405	\$ 355,884	\$ 337,899	\$ 319,435
<b>Total</b>	<b>\$ 1,927,652</b>				

**Attachment D  
CIP Cost Inputs**

<b>Projects</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>
<b>Avon Lake Regional Water - Water Reclamation Facility (WRF)</b>								
WRF Solids Treatment Repair Plan					\$300,000			
WRF Solids Treatment Repair Construction								\$6,000,000
<b>Total Capital Projects</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$300,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$6,000,000</b>
Inflation Factor	0.00%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Inflation Adjustment	100.00%	100.00%	105.00%	110.25%	115.76%	121.55%	127.63%	134.01%
<b>Total Anticipated Capital Needs</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$347,288</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$8,040,574</b>
<b>Capital Funding Plan</b>	<b>%</b>							
Debt Funding	90%	\$ -	\$ -	\$ -	\$ -	\$312,559	\$ -	\$ -
Cash Funding (New Cash)	10%	-	-	-	-	34,729	-	804,057



**Attachment E**  
**Target Revenue Requirements**

Revenue Requirements	2026	2027	2028	2029	2030
<b>Expenses</b>					
Operating Expenses	\$ 4,749,839	\$ 5,267,848	\$ 5,719,034	\$ 6,160,895	\$ 6,561,749
Total Debt Service	\$ 1,927,652	\$ 1,927,652	\$ 1,945,249	\$ 1,945,249	\$ 1,945,249
Cash Funded Capital	\$ -	\$ -	\$ 34,729	\$ -	\$ -
<b>Subtotal (O&amp;M, Debt, Capital)</b>	<b>\$ 6,677,491</b>	<b>\$ 7,195,499</b>	<b>\$ 7,699,011</b>	<b>\$ 8,106,144</b>	<b>\$ 8,506,998</b>
<b>O&amp;M Reserves (Target Balance)</b>					
Target Days (# of Days of Operating Expenses)	30	60	90	90	90
<b>Target Balance (\$ Needed)</b>	<b>\$ 391,000</b>	<b>\$ 866,000</b>	<b>\$ 1,411,000</b>	<b>\$ 1,520,000</b>	<b>\$ 1,618,000</b>
<b>Debt Coverage (Target Requirement)</b>					
Total Debt Service	\$ 1,927,652	\$ 1,927,652	\$ 1,945,249	\$ 1,945,249	\$ 1,945,249
Target Coverage, All-In	1.10	1.10	1.10	1.10	1.10
<b>Coverage Requirement, All-In</b>	<b>\$ 2,120,417</b>	<b>\$ 2,120,417</b>	<b>\$ 2,139,774</b>	<b>\$ 2,139,774</b>	<b>\$ 2,139,774</b>
<b>Revenue Target</b>					
Operating Expenses	\$ 4,749,839	\$ 5,267,848	\$ 5,719,034	\$ 6,160,895	\$ 6,561,749
Cash Funded Capital	\$ -	\$ -	\$ 34,729	\$ -	\$ -
Coverage Requirement, All-In	\$ 2,120,417	\$ 2,120,417	\$ 2,139,774	\$ 2,139,774	\$ 2,139,774
<b>Revenue Target Total</b>	<b>\$ 6,870,256</b>	<b>\$ 7,388,265</b>	<b>\$ 7,893,536</b>	<b>\$ 8,300,669</b>	<b>\$ 8,701,523</b>

## Attachment F Flow Volume Data

### ALRW

#### 2022-2024 Plant Effluent Flows

Note: Total Flow at ALRW WRF includes the LORCO Metered Flows

Flow Measurement	2022	2023	2024	3-Year Average	Ave (3-yr) LORCO	Modeled Annual Flow (MGD) *1
Minimum Daily (MGD)	3.327	2.678	3.105	3.037	(Deduct)	
Maximum Daily (MGD)	13.579	18.567	15.402	15.849		
<b>Average Daily (MGD)</b>	<b>4.554</b>	<b>4.679</b>	<b>4.453</b>	<b>4.562</b>	<b>0.333</b>	<b>4.229</b>
Sum (Annual - MGD)	1657.544	1707.764	1629.862	1665.057		

\*1: This value will be used as the Average Daily Treated Flow (MGD) for Avon Lake/Avon service area

### LORCO

#### 2022-2024 Metered Flows

Total Metered Flow for LORCO service area tributary to 4Plex PS

Flow Measurement	2022	2023	2024	3-Year Average		Modeled Annual Flow (MGD) *1
Annual (Gallons)	106400570	133799200	124498200			
Annual (MG)	106.401	133.799	124.498			
Average Daily (Gal/Day)	291508	366573	340159			
<b>Average Daily (MGD)</b>	<b>0.2915</b>	<b>0.3666</b>	<b>0.3402</b>	<b>0.333</b>		<b>0.333</b>

\*2: This value will be used at the Average Daily Treated Flow (Metered) for LORCO service area tributary to 4Plex PS

### Lorain County

#### 2021-2023 Eaton Estates Flows

Flow Measurement	2021	2022	2023	3-Year Average		Modeled Annual Flow (MGD) *3
Annual (MG)	71.9219	69.9457	68.6714			
Monthly Average (MG)	5.9935	5.8288	5.7226			
<b>Average Daily (MGD)</b>	<b>0.1998</b>	<b>0.1943</b>	<b>0.1908</b>	<b>0.195</b>		<b>0.195</b>

\*3: This value will be used as the Average Daily Treated Flow (Metered) for Lorain County - Eaton Estates area