LIVINGSTON COUNTY
WSA
WATER & SEWER AUTHORITY

Executive Director
Jason Molino

Deputy Director
Lauren Monaghan

Agenda
January 15, 2025 at 8:00 a.m.
Watershed Education Center (Vitale Park)
Lakeville, NY 14480
All attachments and reports may be found at
www.lcwsa.us

1. **Call to Order**

2. **Approval of Agenda**

3. **Approval of Minutes**
   a. December 20, 2024 – Regular Meeting

4. **Reports**
   a. Financial Report – December 2024
   b. Operations Report
   c. Capital Report
   d. Executive Director's Report

5. **Other Business**

Resolution No.: 2025 - 02	RESOLUTION TO APPROVE THE CLARK, PATTERSON & LEE RATES FOR GENERAL PROFESSIONAL ENGINEERING SERVICES TO THE LIVINGSTON COUNTY WATER AND SEWER AUTHORITY
Resolution No.: 2025 - 03	RESOLUTION TO STANDARDIZE VARIOUS EQUIPMENT FOR THE LIVINGSTON COUNTY WATER AND SEWER AUTHORITY
Resolution No.: 2025 - 04	RESOLUTION IN SUPPORT OF LIVINGSTON COUNTY WATER AND SEWER AUTHORITY'S LOCAL GOVERNMENT EFFICIENCY IMPLEMENTATION GRANT APPLICATION FOR THE LIVINGSTON/WYOMING WATER LOSS CONTROL PILOT PROGRAM AND TO PROVIDE THE LOCAL MATCH OF 10% FOR THE IMPLEMENTATION OF THE PROJECT

6. **Adjournment**

Next Regular Meeting: Wednesday, February 19, 2025 @ 8:00 am

LIVINGSTON COUNTY
WSA
WATER & SEWER AUTHORITY

Executive Director
Jason Molino

Deputy Director
Lauren Monaghan

Unreviewed Minutes
REGULAR MEETING
December 20, 2024 at 10:00 a.m.
Watershed Education Center (Vitale Park)
Lakeville, NY 14480

Members Attending: M. McKeown, D, Higgins, T. Saunders, S. Beardsley, and M. Falk (arrived at 11:02 a.m.)

Others attending: J. Molino (Executive Director), L. Monaghan (Deputy Director), R. Lewis (Principal Accountant), E. Weis (Engineer), S. Wright (Secretary), and J. Campbell (via phone)

Call to Order: 10:04 a.m.

Approval of Minutes:

November 20, 2024 - Regular Meeting

Motion: S. Beardsley moved, and D. Higgins seconded to approve the regular meeting minutes dated November 20, 2024. Carried unanimously.

Reports:

Financial Report November 2024

R. Lewis reviewed the November Financial Report.

Motion: T. Saunders moved, and S. Bearsley seconded to approve the November 2024 Financial Report. Carried unanimously.

Operations Report

J. Molino reviewed the Operations Report.

Capital Report

L. Monaghan reviewed the status of the capital projects.

Executive Director Report

J. Molino reviewed:

- The County approved the Management Agreement for the Regional Project.
- The Conesus Lake Pump Station SCADA bid package for the panel construction will be ready soon.
- We are still waiting on the results of the DOCCS bid we submitted.
- J. Molino will be submitting for a Local Government Efficiencies grant to fund water auditing and a water loss initiative by partnering with other communities in the area.

Other Business:

Resolutions:

2024-48 RESOLUTION SETTING THE LIVINGSTON COUNTY WATER AND SEWER AUTHORITY MEETING SCHEDULE FOR 2025

Motion: S. Beardsley moved, and T. Saunders seconded to approve Resolution 2024-48. Carried unanimously.

2024-49 RESOLUTION APPROVING ADJUSTMENTS TO THE 2024 BUDGET

Motion: D. Higgins moved, and T. Saunders seconded to approve Resolution 2024-49. Carried unanimously.

M. Falk arrived at 11:02 a.m.

J. Molino reviewed the details of the Water and Sewer Lease Agreements with the Town of Springwater. After a brief discussion and an explanation of the differences between these agreements and previous lease agreements, the following resolutions were presented:

2024-50 RESOLUTION APPROVING A LEASE AGREEMENT BETWEEN THE TOWN OF SPRINGWATER AND LIVINGSTON COUNTY WATER AND SEWER ATHORITY FOR THE TOWN OF SPRINGWATER WATER DISTRICTS
Motion: D. Higgins moved, and T. Saunders seconded to approve Resolution 2024-50. Carried unanimously.

2024-51 RESOLUTION APPROVING A LEASE AGREEMENT BETWEEN THE TOWN OF SPRINGWATER AND LIVINGSTON COUNTY WATER AND SEWER ATHORITY FOR THE TOWN OF SPRINGWATER SEWER DISTRICTS
Motion: M. Falk moved, and S. Beardsley seconded to approve Resolution 2024-51. Carried unanimously.

Mark McKeown presented Don Higgins with a plaque recognizing his 4 years of service to the Authority Board and thanked him for his time and service.

Adjournment: 11:35 a.m.
M. McKeown ended the meeting.

LCWSA OPERATIONS REPORT

January 15, 2025

Water and Sewer Work Program	
Customer Work Orders	Staff completed 42 workorders down72 from last month.
UFPO	Staff completed 41 stakeouts down 43 from last month
PM Maintenance	All PM maintenance was completed.
Sampling & Testing	All sampling and testing was completed.
Water Work Program	
Curb Box Replacement	Staff replaced 4 curb boxes and rods.
Curb Box Locations	Staff have been locating curb boxes for GPS locations
Water Sampling Stations	Staff installed 1 sampling station on South St Leicester.
Sewer Work Program	
Gauging Sewer Pump Stations	Staff has completed the gauging of the sewer pump stations around the lake.
Oil Changes In Sewer Pump Stations	Staff also have started doing the annual maintanance of oil changes in all the sewer pumps.

LCWSA CAPITAL PROJECTS REPORT	
January 15, 2024	
31131 Countywide Water System Improvements	
Shelly Tank	CPL is revising plans based on DOH comments. We are working with the School district on transfer of property/easements as well as the residential neighbor for construction easements. Hope to have bid documents out once approved by the agencies.
SCADA - Water Assets	Design is underway on water assets. Expect to bid in 2025.
31450 Leicester-York Regional Water Supply Project	
	Working on finalizing supply agreements. Hope to issue design RFP by the end of the month.
31455 Conesus Lake Pump Station Improvements	
	The DEC, EFC and EPA are currently reviewing the Plans and Specs. Bidding as two separte contracts for SCADA panel construction and pump replacement and construction separately. Bid Date TBD
Space Needs Assessment	
	Flextech report sent to NYSERDA; awaiting EFC style report to use for funding applications, should have this by the end of the month.
Camp Run EPG	
	Additional televising is scheduled for February 2025 to investigate additional areas that may contribute to I&I. Flow meters are being serviced this month and will then be deployed again in the Spring to get additional high rainfall/snowmelt events. We will also be installing 2 new rain gauges to gather more rain data at different locations within the service area.

December 28, 2024

Jason Molino, Executive Director
Livingston County Water & Sewer Authority
1997 D'Angelo Drive
Lakeville, NY 14480

RE: 2025 PROPOSAL GENERAL PROFESSIONAL ENGINEERING SERVICES

Dear Mr. Molino:

CPL is excited to have the opportunity to continue working with the Livingston County Water & Sewer Authority (LCWSA) by providing general professional engineering services for 2025. We have valued the long-term relationship, but more importantly, we value the relationship we have built with you and your team over the last 3-years.

We are proud to be a part of that team helping to secure funding for critical infrastructure projects, problem solving during critical events, and providing solid technical guidance. We feel that we are a valued partner and are looking forward to helping the LCWSA accomplish more in 2025 and beyond

The billing rates under this agreement are based on reduced multiplier and only apply to our fees billed under general services. The rates are broken down as follows, showing the 2024 and the proposed 2025 rates:

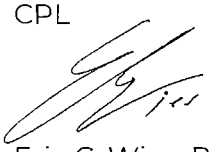
Team Member	**2024**	**2025**
Principal	$220	$230
Resource Principal	$150	$158
Project Manager	$120	$126
Senior Engineer	$110	$116
Junior Engineer	$100	$105
CADD or Technical Staff	$90	$95
Resident Engineer	$100	$105
Intern	$60	$63

Any expenses (postage, copies, mileage, etc.) will be billed directly with no multiplier.

Please contact me directly at (585) 402-7529 should you have any questions or require additional information.

Very truly yours,

CPL



Eric C. Wies, P.E.
Principal

Acceptance of Proposal:

Signature: _____ Date: _____

LIVINGSTON COUNTY
WSA
WATER & SEWER AUTHORITY

RESOLUTION NO. 2025 - 02

RESOLUTION TO APPROVE THE CLARK, PATTERSON & LEE RATES FOR GENERAL PROFESSIONAL ENGINEERING SERVICES TO THE LIVINGSTON COUNTY WATER AND SEWER AUTHORITY

WHEREAS, under the Public Authorities Law, Title 8-G, §1199-cccc, Section 3, the Livingston County Water and Sewer Authority ("LCWSA") is authorized to contract with expert professional services, and

WHEREAS, The LCWSA Board has reviewed the engagement letter from Clark, Patterson & Lee, dated December 28, 2024 including proposed billing rates for 2025, and

WHEREAS, The Executive Director recommends that Clark, Patterson & Lee continue to provide the LCWSA with general professional engineering services, and now therefore be it,

RESOLVED, The Livingston County Water and Sewer Authority Board accepts the proposed billing rates from Clark, Patterson & Lee effective January 1, 2025.

January 15, 2025
Livingston County Water & Sewer Authority
Moved By:
Seconded By:
AYES:
NAYS:

LIVINGSTON COUNTY
WSA
WATER & SEWER AUTHORITY

Executive Director
Jason Molino
Deputy Director
Lauren Monaghan

To: Livingston County Water and Sewer Authority Board

From: Lauren Monaghan, Deputy Executive Director

Date: January 10, 2025

Subject: Standardization of Sewer Lift Station Infrastructure

1. Action Requested:

Board approval of standardizing equipment for sewer lift station infrastructure.

2. Background:

As part of an effort to improve operational and administrative efficiencies, standardization of commonly used equipment provides the Authority with the ability to: procure equipment easily, simplify and improve inventory, is more compatible and familiar with existing Authority equipment, and has a good history of reliability. In addition, standardizing equipment makes procurement when utilizing grant funding easier and ensures equipment for specific improvements and capital improvements are consistent across projects.

During the detailed design phase of the Conesus Lake Pump Station Improvement Project, Clark Patterson Engineers, Surveyor, Architects, and Landscape Architect D.P.C dba. CPL ("CPL") will specify the replacement of equipment within the existing sewer lift stations as part of the Bid Documents.

With input from our Director of Operations as well as our maintenance staff, we have finalized the list of equipment as follows:

Lift Station Standardized Equipment	
Equipment	**Manufacturers**
Electric Motors	Baldor Electric TEFC*
	US Motor TEFC*
Sump Pump	Liberty Pumps
	Dayton
Plug Valve	Dezurik
	Pratt
Check Valve	Kennedy Valve
	Pratt

* Totally Enclosed Fan Cooled

Once the project moves forward to the construction phase, CPL will not need to review any additional equipment submittals the that may be considered as "equal" to those specified in the construction documents. This equipment will not only be used for the Conesus Lake Pump station project, but also for any future pump station construction or replacement project.

3. Financial Implications:

Standardization will allow for the Authority to easily procure equipment on a more consistent basis. Selecting more than one manufacturer will still allow for a competitive bid between the two manufacturers while at the same time limiting the number of potential alternatives.

LIVINGSTON COUNTY
WSA
WATER & SEWER AUTHORITY

RESOLUTION NO. 2025 - 03

RESOLUTION TO STANDARDIZE VARIOUS EQUIPMENT FOR THE LIVINGSTON COUNTY WATER AND SEWER AUTHORITY

WHEREAS, The Livingston County Water & Sewer Authority ("Authority") has been and is engaged in improving and standardizing procurement of equipment; and for reasons of efficiency and economy there is a need for standardization upon a particular brand of certain equipment; and

WHEREAS, the Authority Board after recommendation from the Deputy Executive Director and Director of Operations has selected the following equipment as standardized equipment for the Authority:

Lift Station Standardized Equipment	
Equipment	**Manufacturers**
Electric Motors	Baldor Electric TEFC*
	US Motor TEFC*
Sump Pump	Liberty Pumps
	Dayton
Plug Valve	Dezurik
	Pratt
Check Valve	Kennedy Valve
	Pratt

*Totally Enclosed Fan Cooled

And now therefore be it further,

RESOLVED, That the Authority Board does hereby standardize the following equipment throughout the Authority water and wastewater systems for the following reasons:

1. Ease of repair;
2. Less inventory to maintain and stock;
3. Compatible with existing Authority equipment;
4. Good history of reliability;
5. Existing familiarity with use and maintenance of equipment;
6. Ease of integration with manufactures.

And be it further,

RESOLVED, that the current Purchasing, Disposition, and Capital Projects Policy is hereby amended to include standardized equipment from Resolution 2025-03.

January 15, 2025
Livingston County Water & Sewer Authority
Moved By:
Seconded By:
AYES:
NAYS:

LIVINGSTON COUNTY
WSA
WATER & SEWER AUTHORITY

Executive Director
Jason Molino

Deputy Director
Lauren Monaghan

To: Livingston County Water and Sewer Authority Board

From: Jason Molino, Executive Director

Date: January 10, 2025

Subject: Local Government Efficiency (LGE) Grant

1. Action Requested:

Approval of a resolution supporting the 2025 LGE grant application and authorizing the submission of an application for the Livingston/Wyoming Water Loss Control Pilot Program.

2. Background:

LGE Grant Program

The Local Government Efficiency (LGE) Grant program is provided to municipalities as a funding opportunity to expand or develop new local service delivery initiatives that will reduce the cost of current or future municipal operations and incorporate enhanced technologies and processes to modernize the delivery of local services. The LGE program requires that local governments work together in these efforts to meet the current and emerging needs of their constituents. This year the LGE program will support the following applications:

- Regionally scaled projects (Regional Projects) that include those developed in cooperation with Regional Planning Boards and counties with four or more Co-Applicants (Eligible Counties).
- Local Projects that do not have a Regional Planning Board or Eligible County as a Lead Applicant.
- Qualification Grants that help Regional Planning Boards and Eligible Counties evaluate and develop a project that may be proposed for the next round of the LGE program.

In addition, the program is prioritizing the following Local Government Functions: information technology services (ITS) and cybersecurity; emergency services; countywide or multi-government code enforcement and planning; water and wastewater management systems; and climate change mitigation (Target Functions).

Applicants must illustrate significant commitment to project completion and clearly demonstrate, through financial estimates, service delivery changes, administrative modifications and performance measures, the long-term benefit to New York residents and taxpayers.

Prior Grant Efforts

Over the past year the Authority has unsuccessfully applied for grant funding to address water loss control efforts. In both attempts, the Authority partnered with Livingston County for grant funding. They included the EPA Climate Pollution Reduction Grant and Climate Smart Communities Grants.

The 2025 LGE program prioritizes several Target Function areas, two of which fit squarely in the Authority's mission: water and wastewater management systems and climate change mitigation. After discussing the opportunities with staff and our partners at the Genesee Finger Lakes Regional Planning Council and Wyoming County Water Resources Agency, we developed the Livingston/Wyoming Water Loss Control Pilot Program.

In short, the grant application is seeking funding to establish a pilot program for small rural water systems within Livingston and Wyoming Counties that will provide technical assistance to complete a water audit for each of the participants water systems. The pilot program will involve technical assistance from water loss consultants familiar with implementing the water audit process consistent with AWWA best practices and developing water loss control strategies and leakage reduction programs. In addition, the grant funds would provide funding for a full-time Water Resource Sustainability position to support participating communities through the water audit process and leak detection services. Lastly, the grant will support a regional Water Loss Summitt with all participating utilities from the pilot program inviting interested parties throughout the Genesee-Finger Lakes Region from municipal and county officials, state agencies, contractors, and non-governmental organizations. The purpose of the Water Loss Summitt will be to share the participant experience and possibly develop a model for other municipalities in the State to follow.

The intent of the grant application is to provide technical assistance and staff support to water operators and municipal staff to address water loss and establish best practices for long-term water loss control. Attached please find a summary of the proposed Livingston/Wyoming Water Loss Control Pilot Program. The program, if funded, would be offered at no cost to any municipality interested in participating within Wyoming and Livingston County. Attached please find a summary of the proposed pilot program.

3. Financial Implications:

The LGE Implementation grants are a 90%/10% - State/local match. This is a significant State supported grant with limited local match compared to most State grant programs. We are currently finalizing the proposed budget in time for next weeks Board meeting but expect the local match not to exceed $75,000. Also, it is proposed that the Authority cover the local match as lead applicant responsible for implementing the program, hiring staff and operation of leak detection equipment.

The Authority has been successful with prior LGE applications as we received $450,000 in 2022 for the vacuum truck and $1,000,000 in 2024 for the Regional Water Project.

Livingston/Wyoming Water Loss Control Pilot Program

The Livingston County Water and Sewer Authority (LCWSA), in partnership with the Wyoming County Water Resource Agency, are interested in developing a Pilot Program for small water utilities within our two-county region to learn how to improve water efficiency within our systems and to control water loss through a water system audit process. Similar to financial audits conducted by accountants, a water audit compares volumes of water treated (or purchased) and pumped to volumes consumed by customers, and other uses such as firefighting, water breaks and community uses. Estimated volumes of losses due to leakage and poor metering and accounting can also be quantified in the water audit process. A reliable water audit methodology was developed jointly by the International Water Association (IWA) and the American Water Works Association (AWWA) and is described in detail in the AWWA M36 Manual.

Background – Water Loss Control and the AWWA M36 Methodology

Every year - *every* utility spends money on waste through water losses, which creates a financial and water resource burden on the utility. Even those with no active programs to find and fix it – they still spend, and many over-spend, through uncaptured revenues and wasted expenses. Those with active programs spend through intervention costs plus their remaining losses. The American Water Works Association (AWWA) M36 Manual for Water Audits and Loss Control Programs details the industry best-practice for water loss accounting.

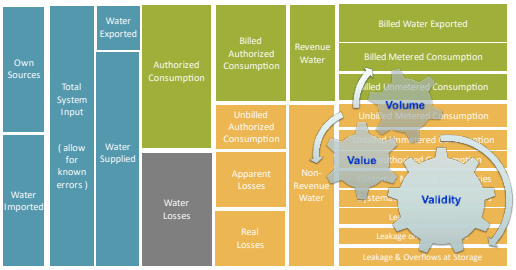


Figure 1: AWWA Water Balance and 3V Metrics

Water auditing is growing in adoption across the U.S., and supplies are becoming more constrained and conservation objectives are growing. As this happens, recognition is spreading that water losses represent both uncaptured revenue and new supply.

Water loss control is an essential part of water resource management for water utilities, as it represents an opportunity for natural resource recovery, financial recovery and energy efficiency. Best practices for water loss management have been established by the American Water Works Association Manual 36 (AWWA M36), including the AWWA Free Water Audit Software (FWAS) for conducting and validating annual water audits. The AWWA M36 methodology aims to reach and maintain the economic optimum loss levels within a utility's operation. The foundation of the FWAS is the Water Balance (Fig 1), indicating a mass balance approach and accounting for all potable volumes of water entering the distribution system. The results from the FWAS look at water losses in terms of volume, value, and validity, rather than a percentage.

Every year, all utilities have wasted expenses and uncaptured revenues due to water losses, which create financial and water resource burdens on utilities. Even utilities with active programs to detect and address water losses often spend more than is necessary or financially sound through intervention costs plus their remaining losses (Fig. 2), especially if such programs are not part of a more comprehensive utility-wide water loss control program.

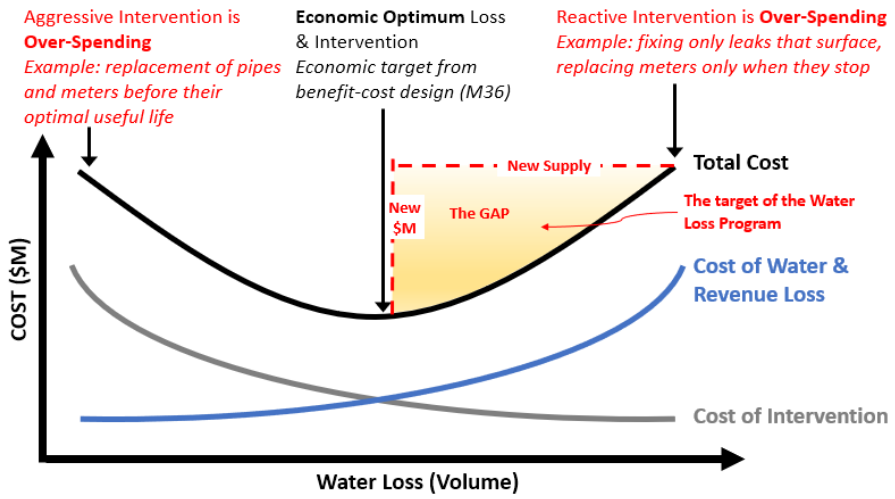


Figure 2: The AWWA-M36 methodology helps a utility determine their Economic Optimum, a target that can be used to design a loss and intervention program that balances costs and benefits.

When an industry standard program, such as the AWWA M36 process is used, reduction of distribution system leakage results in a direct reduction of water production and/or water purchase costs, and results in a direct reduction of water extracted from the source. Reduction in losses from metering, billing, and theft results in top-line revenue growth. These benefits serve the environment, the utility, and the ratepayer alike. The financial recovery that is possible under such a program can help a utility become more self-sustaining over time and rely on more local funding solutions to infrastructure needs. For example, in addition to simply minimizing lost revenues, utility funds can be targeted towards more prioritized and strategic needs within the utility, which maximizes long-term impact of spending.

As utilities begin to perform standard water audits and have those audits move them to quantification of the components of a Non-Revenue Water program, they then can evaluate the economics and implement cost effective recovery strategies. Without this process, utilities and state agencies will continue to misapply recovery tools and strategies and critical funding.

The outcomes of implementing a program such as the AWWA M36 methodology can help a utility have access to a range of different capital sources and decrease long-term reliance on grant funds. In the long-term, these financial management outcomes help promote overall affordability of water and wastewater services by helping utilities become better stewards of water and financial resources.

The purpose of this pilot program will be to provide technical assistance to a pilot group of 10 water systems across Livingston and Wyoming counties to implement best-management practices for water loss control following the methods established in the AWWA Manual of Water Supply Practices M36 Water Audits and Loss Control Programs.

Phase 1 of the pilot program will include ten (10) utilities of small system sizes and variety level of water loss management experience, within Livingston County and Wyoming County, New York. The program will provide the pilot group with a foundational understanding of the M36 methodology and the accompanying AWWA Free Water Audit Software, how they are applied, and how utility data collected and analyzed with the methodology may be used to assess and improve water loss performance at the utility level. The conclusion of this process will assist each participant in establishing its Water Balance, quantifying the amounts of both billed and lost water (leakage).

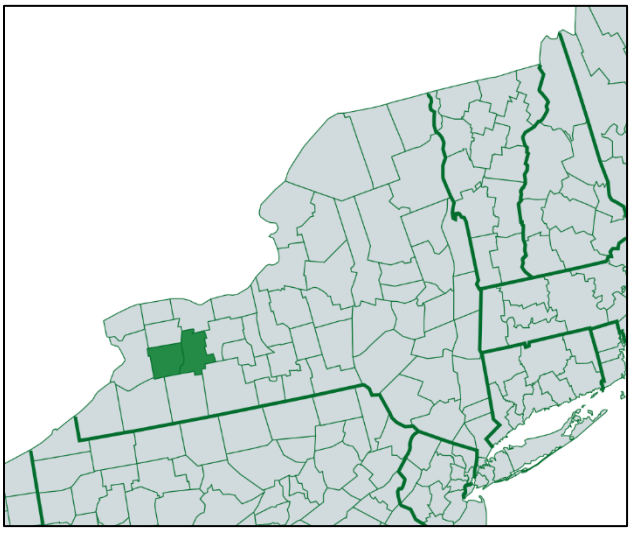


Figure 3: Placeholder for Counties image

In addition, the Water Balance will assist in developing a specific energy carbon intensity and apply it to quantify carbon emissions for each component of the standard Water Balance. This is known as a Carbon Balance which can be conducted annually in conjunction with leakage reduction initiatives, to track metric tons of carbon emissions avoided as a result of the leakage reduction intervention. The result of developing a Carbon Balance will be to quantify carbon emissions as a component of leakage.

The M36 key concepts gained by participating utilities in this training and technical assistance program will equip staff to:

- Establish an annual water balance that disaggregates all subcomponents of water loss in terms of volume and value
- Conduct a rigorous assessment of data validity to benchmark audit reliability and identify where data improvements are warranted
- Plan next steps toward improved data and water loss management, particularly with a focus on cost justification

Utilities who adopt AWWA M36 best practices are also positioned to make better capital investment decisions for asset management, maintain resiliency for drought, and proactively show efficiency improvements to their customers ahead of necessary rate increases.

The Water Loss Pilot Program (Program) proposed herein would provide participating water utilities with effective tools and methods to promote accountability and efficiency in their supply operations,

and more fully realize the benefits of infrastructure management. By helping utilities achieve and maintain aggregate economic optimum loss levels – in other words, minimize water loss and waste while maximizing financial sustainability for the utility – the outputs of the program can promote utility viability through better infrastructure management and financial management. The additional benefits of the program, such as peer-to-peer learning, sharing of best practices, and building regional connections and cooperation among utilities, and can help achieve organizational management.

Participating Utilities

The selection of participating utilities will be important for the success of the Program, but also for its impact on follow up activities for water loss management and statewide training and technical assistance in New York. The Program aims to recruit up to ten participating small to medium-sized utilities reflecting a range of water loss management experience. Utilities will be identified through consultations between the project team and Livingston and Wyoming County collaborators. Each utility will be represented by 2-4 team members, as different staff positions within a utility will bring different data and expertise to the process. Prior experience with the AWWA M36 methodology is neither a pre-requisite nor a deterrent for pilot utility participation in this program.

Program Approach, Timeline and Deliverables

The following approach, timeline, and deliverables framing out the training and technical assistance are provided below.

Phase I: Program Approach

- Establish baseline AWWA M36 Top-Down Water Audit using most recently completed year (calendar/fiscal) as benchmark. We will walk the participants through this for the 2024 audit. For the 2025 audit, more responsibility will be given to the utility to prepare their audit and supporting data prior to Level 1 Validation
- Employ guided implementation of the Level 1 Validation on the Top-Down Water Audit (methods per AWWA Water Audit Data Initiative and forthcoming WRF Project 5057).
- Conduct a technical assistance workshop to train the pilot participants in these foundational concepts and equip them to implement this practice for future years.
- Demonstrate both the accessibility and the power of the M36 method for water and financial conservation.
- Reinforce that supply-side conservation also offers better positions the utility to compel demand side conservation from their customers.

To accommodate the inclusion of the selected utilities in a meaningful, thorough, and impactful program, the program tasks are outlined below and will balance the objectives of:

- Economy of shared workshop space to the program budget.
- Intrinsic value to participants to engage with and be exposed to the practices of peer utilities (this is lost with a sole workshop approach). Intend for at least 2-4 participants per utility.

- Convenience of a close workshop event for the participating utilities, allowing them to bring the appropriate team members and minimizing their time and travel impacts

Phase II: Program Approach

Phase 2 of the pilot program will provide one utility, the Livingston County Water and Sewer Authority, with Level 2 validation of water balance with uncertainty analysis, non-revenue water economic analysis and non-revenue water program design. Phase 2 objectives will be to prepare an effective, achievable strategy for successful transition to a comprehensive water loss control program.

- To validate the source data from the originating data systems feeding the water balance inputs and establish statistical confidence levels on the water balance outputs.
- To assess the magnitude of volumes and costs between the current and optimal non- revenue water at the component and aggregate levels and design a comprehensive, dynamic model to assist the utility reach the optimal economic level of water loss.
- To prepare an effective, achievable strategy for successful transition to a comprehensive program.

At the end of Phase 1 and Phase 2 the Livingston County Water and Sewer Authority and Wyoming County Water Resource Agency will conduct a regional Water Loss Summit with all participating utilities and inviting all interest parties throughout the Genesee Finger Lakes Region (9-County Region including the City of Rochester) from municipal and county officials, state agencies, contractors and non-governmental organizations. The purpose of the Water Loss Summitt will be to share the participant experience and possibly develop a model for other municipalities in the State to follow. Also, it is anticipated the Water Loss Summitt will provide Continuing Education credits (CEU's) for water operators and Professional Development Hours (PDH's) for professional engineers that attend.

Water Loss Summitt

Following the Water Loss Summitt, the Livingston County Water and Sewer Authority will dedicate a webpage on its website showcasing the pilot program and Water Loss Summitt for public viewing. In addition, the Authority will incorporate, update and publish on its website and in its annual report, the Authority's annual Water Audit, highlighting both Water Balances and Carbon Balances.

Water Resource Sustainability Analyst

To assist with the implementation management of the pilot program, the program will provide funding for a Water Resource Sustainability Analyst position, to be hired by the Livingston County Water and Sewer Authority, to manage the program and support the participating municipalities by coordinating with municipal staff and consultants to navigate the water audit process. The Water Resource Sustainability Analyst position will also coordinate with all program participants in organizing and hosting the Water Loss Summit at the conclusion of the Pilot Program. Following the grant terms, the Authority intends to permanently fund the position through financial savings achieved from implementing its water loss control program.

Water Loss Strategies

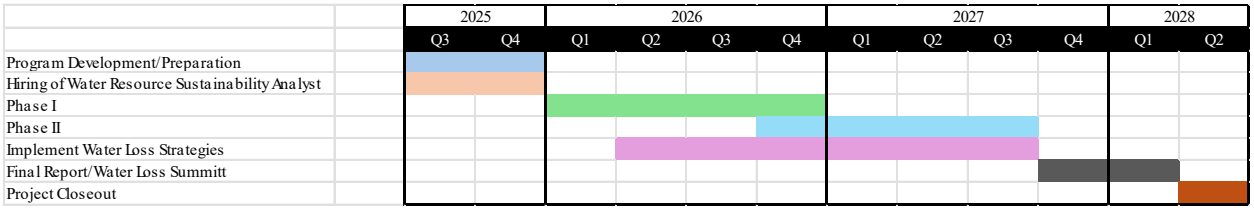
Lastly, the pilot program will support the use of several leak detection strategies to demonstrate and provide water loss control options and initiatives for consideration:

1. The program will fund acoustic leak detection equipment and training for the Water Resource Sustainability Analyst who will then be available to all participating municipalities as part of water loss control efforts and leakage reduction initiatives. This will assist municipalities in identifying non-surface leakage by implementing proactive leak detection capabilities through intermunicipal collaboration. Proactive water leak detection is essential in making serious headway in water loss reduction.
2. The program will fund a pilot partnership with a K-9 (dog) leak detection services to demonstrate to program participants affordable resources and tools available in the region for identifying sub-surface leakage. Based out of Livingston County, NY, Shadow, the first K-9 H2O leak detection dog in New York State, will cover approximately 20 miles of water main in selected areas throughout the pilot program area. Dogs have extremely sensitive noses, and water leak detection dogs have been specially trained to locate chemicals like chlorine. Water leak detection dogs can detect the chlorine that off gases from sub-surface leaks and make its way to the surface, even when the water has not yet surfaced.

The result of the pilot program will be the first of its kind in the United States of America that specifically targets water leakage and carbon emission reduction, creating a model for measuring and monitoring a utility's water balance and carbon balance. In addition, it will provide insight to the benefits of water conversation through reduced leakage, increased water availability, reduced production and maintenance costs, greater water distribution system resiliency and improved public water supply safety.

Program Timeline

The full project is intended to be completed within 20-24 months.



Phase I & Phase II Program Tasks/Deliverables

Program Development

- Webpage development/Kick-off webcast
    - Work with LCWSA to confirm participant utilities
    - Develop Program website
    - Develop and deliver webcast with program overview
    - Deliverables:
        - Program Website
        - Kick-off webcast and slides/materials

Phase 1 – 10 Utilities

- Data request
    - Distribute data request to participants and communicate deadline to submit data
    - Data to be submitted through the program website
    - Deliverables:
        - Data Request sheet
- Receipt of any preliminary audit and data request information
- On-going, regular communication and updates with participants
    - Reminder and promotion to bring all interested parties from the utility to the workshop
    - Sharing resources via program website
    - Deliverables:
        - Regular written progress reports at the preferred frequency of [Grantor]
- Schedule/Hold individual in-person workshops
    - Deliverables:
        - Slides and applicable materials
- Review and guidance of preparation of 2024 audit
    - Check-in with participants on data gathering, preparation for audit, and any questions
- Level 1 Validation of 2024 audit remotely
    - Level 1 Validations will be conducted according to the WRF 5057 Guidance
    - Remote sessions via Microsoft Teams application
    - Deliverables (for each participating water purveyor):
        - Level 1 Validated Water Audit (.xls format)
        - Validation Notes and Recommendations (.pdf format)
- Level 1 Validation of 2025 audit remotely
    - Level 1 Validations will be conducted according to the WRF 5057 Guidance
    - Remote sessions via Microsoft Teams application
    - Deliverables (for each participating water purveyor):
        - Level 1 Validated Water Audit (.xls format)
        - Validation Notes and Recommendations (.pdf format)

Phase 2 of the pilot program will provide one utility, the Livingston County Water and Sewer Authority, with Level 2 validation of water balance with uncertainty analysis, non-revenue water economic analysis and non-revenue water program design. Phase 2 objectives will be to prepare an effective, achievable strategy for successful transition to a comprehensive water loss control program.

Phase 2 Program Tasks/Deliverables - LCWSA

Level 2 Validation of Water Balance with Uncertainty Analysis

- Coordination with Production/IT staff to extract detailed historical supply volume database(s);
- Detailed analysis of same for identification of trends, anomalies and areas of concern;
- Flowcharting of existing business processes from meter reading to customer billing;
- Coordination with Billing/IT staff to extract detailed historical customer consumption database(s);
- Detailed analysis of same for:
    - Development of customer consumption profile for use in composite retail rate calculation;
    - Development of customer meter profile for use in NRW Program Recommendations;
    - Development of consumption profiles to identify trends, anomalies and areas of concern;
    - Validation of consumption totals by account, customer class, rate code, and monthly global totals;
    - Assessment of lag-time adjustments needed for the 12-month water balance;
    - Assessment of 95% statistical confidence limits of the water balance at the component and aggregate levels to provide a confidence band (+/-) on the NRW components;
    - Assessment of any validity improvements needed to support advanced NRW control efforts;
    - Main line & service line break data for use in the development of a component analysis of real losses.
- Level 3 Validation (as needed)
    - Coordinate with the Owner and/or their technical assistance providers in the collection of:
        - Finished Water Meters
            - Electronic Calibration
            - Flow Accuracy Testing
        - Customer Meters
            - Small meter test results
            - Large meter test results

Non-Revenue Water Economic Analysis

- NRW Gap Analysis
  - Evaluation of current practices and policies against best-practices detailed in the M36 Manual;
  - Preliminary economic analysis to determine cost of current NRW program versus cost of optimized NRW program, to establish preliminary business case and prioritization of NRW components;
  - Development of NRW component mapping and economic analysis for preliminary target setting:
    - Unbilled Consumption components;
    - Apparent Loss components with emphasis on optimizing metering losses;
    - Real Loss components with emphasis on optimizing unreported losses;
    - Aggregated NRW economic target setting;

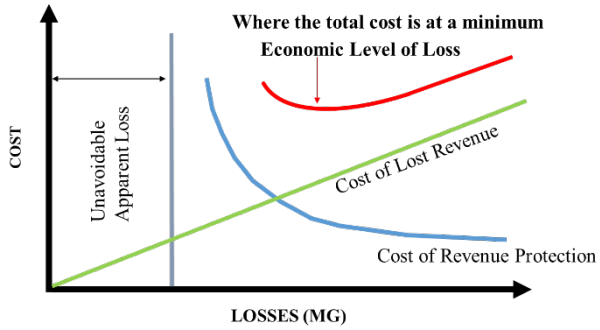


Figure 1 – Apparent losses economic curve

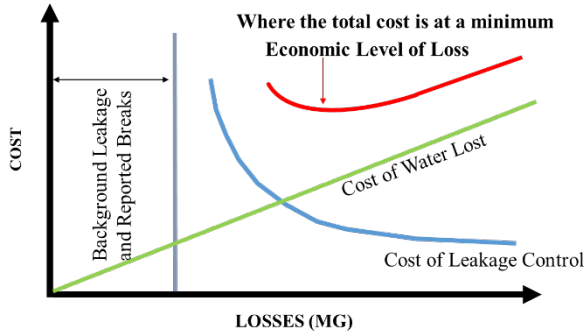


Figure 2 – Real losses economic curve

- Final Report
  - Prepare a summary report including
    - Economic analysis of NRW cost & revenue recovery;
    - Recommendations for areas of improvements and next steps on enhancement of overall NRW management;

Non-Revenue Water Program Design

- Design of near- and long-term NRW Program recommendations for the management and reduction of Non-Revenue Water, and improvements in system efficiency

benchmarking and Data Validity;
- Evaluation of existing demand management program, and gap analysis for long-term conservation objectives;
- Incorporation of long-term water loss management (supply side conservation) objectives into overall utility demand forecasting;
- Development of Program implementation plan, with prioritization and benefit/cost estimations.

Water Loss Summit Tasks/Deliverables

- Host a summit to cover the following water loss topics:
    - National Landscape
    - New York state perspective
    - Program highlights and results
    - Panel discussions
    - Small break-out groups
- Deliverables:
    - Slides and applicable materials

LIVINGSTON COUNTY
WSA
WATER & SEWER AUTHORITY

RESOLUTION NO. 2025 - 04

RESOLUTION IN SUPPORT OF LIVINGSTON COUNTY WATER AND SEWER AUTHORITY'S LOCAL GOVERNMENT EFFICIENCY IMPLEMENTATION GRANT APPLICATION FOR THE LIVINGSTON/WYOMING WATER LOSS CONTROL PILOT PROGRAM AND TO PROVIDE THE LOCAL MATCH OF 10% FOR THE IMPLEMENTATION OF THE PROJECT

WHEREAS, the Local Government Efficiency ("LGE") Grant Program is a competitive grant program for municipalities to implement projects focused on new local service delivery initiatives that will reduce the cost of current or future municipal operations and incorporate enhanced technologies and processes to modernize the delivery of local services by requiring that local governments work together in these efforts to meeting current and emerging needs of their constituents; and

WHEREAS, the Livingston County Water and Sewer Authority ("Authority") is an eligible applicant under the LGE Grantt; and

WHEREAS, the Authority would like to partner with surrounding municipalities in Livingston County, NY and Wyoming County, NY to implement the Livingston/Wyoming Water Loss Control Pilot Program; and

WHEREAS, the Livingston/Wyoming Water Loss Control Pilot Program will be the first of its kind in the United States of America that specifically targets water leakage and carbon emission reduction, creating a model for measuring and monitoring a utility's water balance and carbon balance while undertaking leakage reduction initiatives. The result of the Livingston/Wyoming Water Loss Control Pilot Program will be an opportunity for small water utilities within our two-county region to learn how to improve water efficiency within our systems and to control water loss through a water system audit process, as well as quantifying carbon emissions as a component of leakage. The program will also provide benefits in the form of water conversation through reduced leakage, increased water availability, reduced production and maintenance costs, greater water distribution system resiliency and improved public water supply safety; and

WHEREAS, the cost of completing the Livingston/Wyoming Water Loss Control Pilot Program is estimated at $xx; and

WHEREAS, the reduction in water leakage and greenhouse gas emissions are a priority to the Authority and surrounding municipalities, and now therefore be it,

RESOLVED, that the Livingston County Water and Sewer Authority supports the LGE grant application for the Livingston/Wyoming Water Loss Control Pilot Program, and be it further,

RESOLVED, the Livingston County Water and Sewer Authority Board authorizes and appropriates the 10% local match as required by the LGE program for the Livingston/Wyoming Water Loss Control Pilot Program. The local match shall be a $xx cash match based upon a total estimated

maximum project cost of $xx to be incurred between the estimated start and end dates of the program, September 1, 2025 and June 30, 2028 respectively, and be it further,

RESOLVED, the Executive Director is hereby authorized to sign any and all necessary documents to effectuate successful completion and submission of the Livingston/Wyoming Water Loss Control Pilot Program LGE grant application.

January 15, 2025
Livingston County Water & Sewer Authority
Moved By:
Seconded By:
AYES: 0
NAYS: 0