

Case No. 2024-00024  
North Manchester Water Association, Inc.  
Response to Staff's First Request for Information

**STAFF DR 1-1:**

Refer to the Capital Improvements Plan filed on September 3, 2024.

- a. Identify each of the listed projects North Manchester Water intends to complete using water loss surcharge funds. Provide the list in chronological order with an estimated start date by year.
- b. For each of the listed projects, provide the specific dollar amount of water loss surcharge funds that will be used.
- c. For each project funded by water loss surcharge funds, state how each project is anticipated to reduce unaccounted for water loss and the estimated impact on the water loss percentage.

**Response:** Please see the attached PSC Surcharge Expenditure Plan and Revised 2024 Capital Improvements Plan for detailed responses to each question.

**Witness:** Mike Maggard, Sisler-Maggard Engineering, PLLC.

# 2024 PSC SURCHARGE EXPENDITURE PLAN

FOR THE

**NORTH MANCHESTER WATER ASSOCIATION**  
CLAY COUNTY, KENTUCKY

December 19, 2024

SME NO. 23014

PREPARED BY:



**SISLER-MAGGARD ENGINEERING, PLLC**

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## **Surcharge Expenditure Plan**

The Surcharge Expenditure Plan is a multi – year planning tool used to identify community infrastructure needs prioritizing water loss reduction and sources of financing. The proposed expenditure plan is to facilitate the planning of infrastructure improvements prioritizing water loss reduction and maintaining the North Manchester Water Association existing water distribution system, and to provide for acquisition or replacement of equipment to ensure expedient delivery of services to the Clay County community.

The current proposed projects outlined in the Association’s current plan to both serve residents and anticipate maintenance and replacement needs. Since things change continuously, the proposed projects will be updated as new needs come to light. At least once a year, all projects should be reviewed, completed projects removed, new projects added, and adjustments to existing projects made depending on circumstances.

### **Prioritization and Criteria**

NMWA is a medium sized water system covering most of the Northern portion of Clay County. Nearly all roads within the NMWA boundary have water service.

Presently, the Associations’ biggest problems or needs are four– fold: 1) Cutting water losses in the distribution system; 2) filling out the system with short, small – diameter waterline extensions and upgrades to fulfill a small list of new service requests; 3) replacing selected aging and or undersized primary transmission lines; and 4) installing strategic interconnections to improve system hydraulics and provide redundant feeds within the existing system.

All capital projects were evaluated by the operator and commission and ranked the following projects accordingly:

- 1.) Needmore Hollow Waterline Replacement**
- 2.) System Wide Meter Service Replacement**
- 3.) Waterline Extension and Line Upgrade**
- 4.) System Wide Zone Meters**
- 5.) Lead Line Service Replacement**

**Project discussion and cost.**

- 1.) Needmore Hollow currently has approximately 1,600 linear feet of 1” service line serving 8 residences all attached to one water meter.

Since the discovery of the situation, NMWA has made the replacement of the line a top priority. NMWA plans to replace the existing 1” service line with a new 3” CL250 PVC main with gate valves, blow off, and 8 new individual water meters for each residence. This will eliminate monthly water revenue loss because the residences are currently using one meter and minimum bills. The new individual water meters will determine actual usage and eliminate a maintenance problem, increase revenue, and reduce water loss from the more accurate reading of water used on the line.

The proposed project is approximately \$115,000 and is NMWA's first priority to use the PSC surcharge money for this project once monies are available.

- 2.) System Wide Meter Replacement Project has approximately 1920 new residential water replacements for its existing customers.

The replacement of the proposed water meters will reduce the existing water loss by approximately 5%, as recommended by the manufacturer. This project will be constructed in phases as the money becomes available.

The proposed project is approximately \$1,260,000 and is second priority to use the PSC surcharge money as it becomes available. NMWA has applied for other funds and is awaiting final approval.

- 3.) Waterline Extension and Line Upgrade Project proposes to extend waterline to current unserved areas in Clay County and replace an existing Asbestos Cement waterline with new PVC pipe. Its also contains an hydro-pneumatic water booster to supply water to low pressure areas.

The proposed project is approximately \$890,000 and is third priority for a surcharge expenditure. NMWA has applied for other funds and is awaiting approval. The removal of the existing asbestos pipe would eliminate a high water loss area along US 421 near Island Creek.

- 4.) System Wide Zone Meter Installation project proposes the installation of approximately 10 zone meters and valves to help determine specific areas of water loss and is fourth priority to use PSC surcharge money as it becomes available. The project cost is approximately \$200,000.

- 5.) Lead Line Service Line Replacement project proposes the installation of approximately 5,000 linear feet of service line replacement to eliminate existing lead or galvanized service line. This project is fifth priority to use PSC surcharge money as it becomes available. The proposed project cost is approximately \$350,000.

**PRELIMINARY PROJECT BUDGET**  
**NORTH MANCHESTER WATER ASSOCIATION**  
**NEEDMORE HOLLOW WATERLINE REPLACEMENT**  
**2024 CAPITAL IMPROVEMENTS PLAN**  
**SME #23014**

<b>Engineer's Estimate</b>					
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT QUANTITY</b>		<b>UNIT COST</b>	<b>TOTAL COST</b>
1	3" CL250 PVC Waterline	1,600	LF	\$25.00	\$40,000.00
2	1" CL200 SERVICE LINE	500	LF	\$16.00	\$8,000.00
3	¾" Service Line CL200	500	LF	\$15.00	\$7,500.00
4	3" Gate Valves	1	EA	\$1,750.00	\$1,750.00
5	Tie New 3" pvc to Existing 10" PVC	1	EA	\$3,500.00	\$3,500.00
6	2" Blow Offs	1	EA	\$2,000.00	\$2,000.00
7	Air Release Valves	1	EA	\$1,750.00	\$1,750.00
8	New 5/8" X 3/4" Water Meters	8	EA	\$1,750.00	\$14,000.00
9	Utility Markers	5	EA	\$60.00	\$300.00
10	Gravel Replacement	150	SY	\$40.00	\$6,000.00
11	Locate Existing Utilities	5	HR	\$225.00	\$1,125.00
<b>TOTAL ITEMS (11)</b>				<b>\$85,925.00</b>	
<b>Contingency</b>				<b>\$8,575.00</b>	
<b>Non - Construction Items</b>					
					Administrative \$500.00
					Legal Costs \$500.00
					Land, Easements
					Preliminary Engineering \$500.00
					Design Engineering \$7,500.00
					Construction Phase Eng \$2,500.00
					Construction Inspection \$9,000.00
					Total Non Construction \$20,500.00
<b>Total Estimated Project Cost</b>					<b>\$115,000.00</b>

System - Wide Meter/Service Replacement  
Preliminary Project Budget  
North Manchester Water Association  
2024 Capital Improvements plan  
SME #23014

Item	Description	Quantity	Units	unit cost	total
1	5/8" X 3/4" Water Meters	1920	LF	\$500.00	\$960,000.00
Total Estimated construction					\$960,000.00
Contingency					\$92,900.00
Total					\$1,052,900.00
<b>Non - Construction Items</b>					
Administrative					\$20,000.00
Legal Costs					\$30,000.00
Land, Easements, etc.					\$2,600.00
Preliminary engineering					\$2,500.00
Design Engineering					\$69,750.00
Construction Phase Engineering					\$23,250.00
Construction Inspection					\$59,000.00
Total Non Construction					\$207,100.00
Total Estimated Project Cost					\$1,260,000.00

Waterline Extension and Line Upgrade  
Preliminary Project Budget  
North Manchester Water Association  
2024 Capital Improvements plan  
SME #23014

Item	Description	Quantity	Units	unit cost	total
1	Waterline Extension	16000	LF	\$30.00	\$480,000.00
2	Booster Pump Station	1	LS	170000	\$170,000.00
Total Estimated construction					\$650,000.00
Contingency					\$65,000.00
Total					\$715,000.00
Non - Construction Items					
Administrative					\$20,000.00
Legal Costs					\$9,500.00
Land, Easements, etc.					\$7,600.00
Preliminary engineering					\$2,500.00
Design Engineering					\$46,875.00
Construction Phase Engineering					\$15,625.00
Miscellaneous					\$30,000.00
Construction Inspection					\$42,900.00
Total Non Construction					\$175,000.00
Total Estimated Project Cost					\$890,000.00



System - Wide Zone Meter Installation  
 Preliminary Project Budget  
 North Manchester Water Association  
 2024 Capital Improvements plan  
 SME #23014

Item	Description	Quantity	Units	unit cost	total
1	Leak Detection Meters	10	LF	\$12,000.00	\$120,000.00
Total Estimated construction					\$120,000.00
Contingency					\$17,920.00
Total					\$137,920.00
<b>Non - Construction Items</b>					
Administrative					\$20,000.00
Legal Costs					\$5,000.00
Land, Easements, etc.					\$2,600.00
Preliminary engineering					\$2,500.00
Design Engineering					\$12,400.00
Construction Phase Engineering					\$4,100.00
Construction Inspection					\$15,480.00
Total Non Construction					\$62,080.00
Total Estimated Project Cost					\$200,000.00

Lead Line Service Line Replacement  
Preliminary Project Budget  
North Manchester Water Association  
2024 Capital Improvements plan  
SME #23014

Item	Description	Quantity	Units	unit cost	total
1	3/4" hdpe Water service line	5000	LF	\$50.00	\$250,000.00
Total Estimated construction					\$250,000.00
Contingency					\$16,600.00
Total					\$266,600.00
<b>Non - Construction Items</b>					
Administrative					\$20,000.00
Legal Costs					\$5,000.00
Land, Easements, etc.					\$2,600.00
Preliminary engineering					\$2,500.00
Design Engineering					\$21,900.00
Construction Phase Engineering					\$7,400.00
Construction Inspection					\$24,000.00
Total Non Construction					\$83,400.00
Total Estimated Project Cost					\$350,000.00

# 2024 CAPITAL IMPROVEMENTS PLAN

**FOR THE**

**NORTH MANCHESTER WATER ASSOCIATION  
CLAY COUNTY, KENTUCKY**

September 3, 2024  
REVISED DECEMBER 19, 2024

SME NO. 23014

PREPARED BY:



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## Capital Improvements Plan

The Capital Improvements Plan (CIP) is a multi – year planning tool used to identify community infrastructure needs and sources of financing. The purpose of the CIP is to facilitate the planning of infrastructure improvements, to maintain the North Manchester Water Association existing water distribution system, and to provide for acquisition or replacement of equipment to ensure expedient delivery of services to the Clay County community.

A CIP is an essential tool for maintaining the well – being of the system. The plan is necessary to strengthen the quality of both facilities and services, and to set community goals into action while also informing residents and stakeholders of how the municipality plans to address significant needs over the next ten years.

The projects outlined in the CIP represent the Association's current plan to both serve residents and anticipate maintenance and replacement needs. Since things change continuously, a CIP should not be a static document. At least each year, all projects should be reviewed, completed projects removed, new projects added, and adjustments to existing projects made depending on circumstances.

## Budgeting

The CIP provides a link between planning and budgeting for capital projects. NMWA acknowledges that these projects represent a reasonable interpretation of the upcoming needs for the community and that projects contained in the first year of the plan are suitable for inclusion in the upcoming budget.

## Prioritization and & Criteria

The NMWA is a medium sized water system covering most of the Northern portion of Clay County. Nearly all roads within the NMWA boundary have water service.

Presently, the Associations' biggest problems or needs are four-fold: 1) Cutting water losses in the distribution system; 2) filling out the system with short, small – diameter waterline extensions and upgrades to fulfill a small list of new service requests; 3) replacing selected aging and or undersized primary transmission lines; and 4) installing strategic interconnections to improve system hydraulics and provide redundant feeds within the existing system.

All capital projects were evaluated by the operator and commission and ranked the following projects accordingly:

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- 3.) Waterline Extension and Line Upgrade**
- 4.) System Wide Zone Meters**
- 5.) Lead Line Service Replacement**

### **Funding Availability**

Funding availability is an important factor in determining the scope and timing of any infrastructure improvements. Usually, funding for rural public water projects are available from public sources such as USDA RD, Kentucky Infrastructure Authority, and other more specialized programs like the Community Development Block Grant program; Appalachian Regional Commission and private funding available from the Kentucky Rural Water Association and Kentucky League of Cities.

The public programs have limited funds, a long and complicated application and approval process, and an uncertain timeline for funding availability. The private programs are generally quicker and simpler to secure, but often have higher rates and shorter terms. Public programs often have some grant component to their funding while private programs do not.

With funding uncertainties, governing boards are reluctant to take on new debt for projects when the potential for these projects to be funded with grants appears to be so close on the horizon.

For the purposes of this plan, the new funding sources are largely ignored, and the established sources emphasized. Should the new sources come to fruition, the funding and timing of these improvements will likely change significantly.

**PRELIMINARY PROJECT BUDGET**  
**NORTH MANCHESTER WATER ASSOCIATION**  
**NEEDMORE HOLLOW WATERLINE REPLACEMENT**  
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