# PRELIMIINARY ENGINEERING REPORT 

## SYSTEM IMPROVEMENTS PROJECT

## NEBO WATER DISTRICT HOPKINS COUNTYYKENTUCKY



Prepared By:


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## I. INTRODUCTION

This Preliminary Engineering Report will examine Nebo Water District's proposed System Improvements Project. Nebo Water District (NWD) has determined that several issues need to be addressed in the short term in order to keep their system reliable, functional and efficient. Therefore, NWD is currently pursuing funding to upgrade the Supervisory Control and Data Acquisition (SCADA) System, implement an Automatic Meter Reading (AMR) System and replace its Main Pump Station. The scope of the work is either beyond the capabilities of the District's personnel to complete internally or large enough in scope that the District's personnel would not be able to complete the work in a reasonable time while continuing to maintain and operate the distribution system. It is estimated that the proposed project will have a construction cost of $\$ 1,285,000$ and a project cost of \$1,542,000.

## II. DESCRIPTION OF WATER DISTRICT

The NWD was formed in 1965 to provide safe and reliable potable water to the residents of rural Hopkins County. The Board of Commissioners is made up of 3 members. Each of the commissioners is nominated by the Judge Executive of Hopkins County and must be approved by the Fiscal Court. These Commissioners transact and administer all business of the District at its office located at 45 N Bernard Street, Nebo, Kentucky. The day-to-day work is handled by the Office Manager, System Manager and staff.

## III EXISTING WATER SYSTEM

NWD provides reliable safe potable water service to approximately 1,600 customers of rural Hopkins County. The water system is comprised of approximately 106 miles of water line ranging in size from 2 -inch to 10 -inch, 3 booster pump stations and three (3) water storage tanks with a combined capacity of 500,000 gallons. NWD purchases majority of its water from the City of Madisonville through a master meter located along Nebo Road (Alt 41). The District is required by contract to purchase one (1) million gallons per month and has a not to exceed amount of eighteen (18) million gallons per month. The average monthly purchased in 2021 was approximately eight million four-hundred thousand (8.4 $\mathrm{MG})$ gallons per month. The District is currently purchasing water from Madisonville at a rate of $\$ 4.52 / 1,000$ gallons. The District also purchases approximately 49,000 gallons per month from Webster County Water District at a rate of $\$ 3.70 / 1,000$ gallons.

## IV NEED FOR PROJECT

A. SCADA System Improvements

The existing SCADA system has served NWD well for many years but has reached the end of its useful life. The system has become outdated, and it has become difficult to acquire replacement parts to keep the system operating when components fail. Additionally, not all the components are monitored by the existing SCADA system.

The proposed SCADA improvements will include the installation of new systems
at the three (3) tanks and three (3) pump stations as well as upgrades to the existing system at the NWD offices. The new system will provide better information on the operation of the system and will allow for remote monitoring, control and alarms using a smartphone.
B. AMR System/Meter Replacement

NWD's entire distribution system is maintained by four (4) full time employees and one (1) part time employee. These employees are also required to manually read all 1,600 water meters monthly. This task typically takes approximately four (4) days. With the installation of an automated meter reading (AMR) system, all water meters could be read in one day by one employee freeing up more time to complete other system requirements. An AMR system is also helpful in identifying water leaks on the customer side of the meter.

Additionally, most of the existing water meters have reached the end of their useful life. As a water meter ages, it typically runs slower causing it to not record all the water flowing through it. Replacing the existing meters could improve the Districts revenue and decrease the overall water loss rate.
C. Main Pump Station Replacement

The Main Pump Station is located along Alt 41 near Calumet Lane (See Appendix A - Project Map). It is used to pump a majority of the water purchased from Madisonville into the District distribution system. In addition to housing the pumps, the building has a chemical room for the storage and application of chemicals into the distribution system. Like the other components of the system previously mentioned, the metal building covering the main pump station has reached the end of its useful life. Years of exposure to Cl and other chemicals have caused the metal building to rust and decay beyond the point of repair, as can be seen in the picture below.


The District proposes to replace the existing pump station with a prefabricated pump station equipped with chlorine feed and chemical resistant coating to provide better protection. The pump station will also utilize VFD controls for a more energy efficient system. Because there is not sufficient room on the site of the existing pump station, the new pump station will be located on a vacant lot along US 41 with a coordinate of $37^{\circ} 21^{\prime} 34.75^{\prime \prime} \mathrm{N}, 87^{\circ} 33^{\prime} 31.32^{\prime \prime} \mathrm{W}$.

## V THE PROPOSED PROJECT

To address the identified issues, NWD proposes the following:

- Replace the existing SCADA system with a new SCADA system including the installation of new systems at the three (3) tanks and three (3) pump stations as well as upgrades to the existing system at the NWD offices.
- Replace 1600 existing water meters with new meters including AMR compatible registers. The District also proposes to acquire the necessary components and training to place a drive by meter reading system in service.
- Replace the existing pump station with a prefabricated pump station with chlorine feed and equipment and VFD drives. The new pump station will be located along US 41 approximately 500 feet east of the existing pump station.


## VI COST SUMMARY

The estimated construction cost for the System Improvements Project is $\$ 1,285,000$ and is summarized in Table 1. The estimated project cost is $\$ 1,542,000$ and is summarized in Table 2.



## FUNDING

Proposed funding for this project is being made available by the following:

## TABLE 3 <br> PROPOSED FUNDING

| RUS Grant | $\$ 0$ |
| :--- | :--- |
| RUS Loan ${ }^{(1)}$ | $\$ 1,542,000$ |
|  |  |
| TOTAL PROJECT FUNDING | $\$ 1,542,000$ |

(1) $1.75 \%$ loan for 40 years with principal deferred for 2 years.

## VIII FINANCIAL

As part of the Preliminary Engineering Report, NWD's finances were evaluated in the Summary Addendum (See Appendix B). It was determined that a rate increase is needed to meet future O\&M costs, short-lived assets and debt repayment required for this Project. Table 4 below shows the Proposed Rates.

| TABLE 4 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Proposed Water Rates |  |  |  |  |  |
| For |  |  |  |  |  |
| Nebo Water District |  |  |  |  |  |
| Water Meter Size |  |  |  |  |  |
|  |  | 5/8"x3/4" |  |  |  |
| First | 2,000 | Gallons @ | \$28.40 | Min. |  |
| Next | 2,000 | Gallons @ | \$10.50 | per 1 | Gallons |
| Next | 6,000 | Gallons @ | \$10.00 | per 1 | Gallons |
| Next | 10,000 | Gallons @ | \$9.51 | per 1 | Gallons |
| All Over | 20,000 | Gallons @ | \$9.01 | per 1,000 Gallons |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Water Meter Size |  | 1" |  |  |  |
|  |  |  |  |  |  |
| First | 4,000 | Gallons @ | \$49.40 | Min. |  |
| Next | 6,000 | Gallons @ | \$10.00 | per 1 | Gallons |
| Next | 10,000 | Gallons @ | \$9.51 | per 1 | Gallons |
| All Over | 20,000 | Gallons @ | \$9.01 | per 1,000 Gallons |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Water Meter Size |  | 1-1/2" |  |  |  |
|  |  |  |  |  |  |
| First | 10,000 | Gallons @ | \$109.40 | Min. |  |
| Next | 10,000 | Gallons @ | $\frac{\$ 9.51}{\$ 9.01}$ | per 1,000 Gallons |  |
| All Over | 20,000 | Gallons @ |  | per 1,000 Gallons |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Water Meter Size |  | 2" |  |  |  |
|  |  |  |  |  |  |
| First | 20,000 | Gallons @ | \$204.50 | Min. |  |
| All Over | 20,000 | Gallons @ | \$9.01 | per 1,000 Gallons |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Water Meter Size |  | 3" |  |  |  |
|  |  |  |  |  |  |
| First | 30,000 | Gallons @ | \$294.60 | Min. |  |
| All Over | 30,000 | Gallons @ | \$9.01 | per 1,000 Gallons |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Water Meter Size |  | 4" |  |  |  |
|  |  |  |  |  |  |
| First | 50,000 | Gallons @ | \$474.80 | Min. |  |
| All Over | 50,000 | Gallons @ | \$9.01 | per 1 | Gallons |

## IX RECOMMENDATIONS

It is recommended that the project be funded by Rural Development and a Letter of Conditions be issued as soon as possible.

## X REMAINING FUNDS

NWD proposes to use any remaining funds to make improvements within the system. These improvements will be either bid as alternates or added as a change order to the contractor. These improvements include the following:

- Purchase additional AMR meters and equipment
- Purchase spare pumps
- Install Flush/Fire Hydrants
- Install Zone Meters
- Install leak detection meters
- Repaint water storage tank
- Purchase spare parts

Prepared By:
HMB Professional Engineers, Inc.


## Appendix A

## Project Map



## Appendix B

## Summary Addendum

TO

PRELIMINARY ENGINEERING REPORT

DATED
2/8/2022

FOR
Nebo Water District - System Improvements Project
(Name of Project)
APPLICANT CONTACT PERSON Mark Matheny

APPLICANT PHONE NUMBER 270-249-3709

## APPLICANT TAX IDENTIFICATION NUMBER (TIN)

## ITEMS IN BOLD ITALIC PRINT ARE APPLICABLE TO SEWER SYSTEMS.

In order to avoid unnecessary delays in application processing, the applicant and its consulting engineer should prepare a summary of the preliminary report in accordance with

Please complete the applicable sections of the Summary Addendum. Please note, if water and sewer revenue will both be taken as security for the loan, all user information and characteristics of both utility systems will be needed even though the project will

Feasibility review and grant determinations may be processed more accurately and more rapidly if the summary/Addendum is submitted simultaneously with the preliminary engineering report, or as soon thereafter as possible.

Proposed Project: provide a brief description of the proposed project. In addition to this summary, the applicant/engineer should submit a A. project map of the service area.

The proposed project consists of a new SCADA system, an AMR meter reading system and replacing the main pump station.

## II. FACILITY CHARACTERISTICS OF EXISTING SEWER SYSTEM

A. Sewage Treatment:

1. Type $\qquad$
2. Method of Sludge Disposal
$\qquad$
3. Cost per 1,000 gallons if sewage treatment is contracted: \$
4. Date Constructed
B. Treatment Capacity of Sewage Treatment Plant
C. Type of Sewage Collector System (Describe)
$\qquad$
$\qquad$
D. Number and Capacity of Sewage Lift Stations
E. Sewage Collection System:

Lineal Feet of Collector Lines, by size 6" 8" $\qquad$
$10 "$ $\qquad$ 12" $\qquad$ , Larger $\qquad$
Date(s) Constructed $\qquad$
$F$.
Conditions of Existing System: Briefly describe the conditions and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.
$\qquad$
$\qquad$
$\qquad$
III. FACILITY CHARACTERISTICS OF EXISTING WATER SYSTEM
A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

Nebo purchases water from the City of Madisonville and Webster County Water District

If the applicant purchases water:
Seller(s):

1. City of Madisonville
2. Webster County Water District
3. 

Price/1,000 gallons:

1. $\$ 4.52$
2. 

$\$ 3.70$
3.

Present Estimated Market Value of Existing System \$
B. Water Storage:

Type: Ground Storage Tank $\qquad$ Elevated Tank
Total Storage Volume Capacity $\quad$ 500k

Date Storage Tank(s) Constructed 1979, 1979, 2010
C. Water Distribution System: (Information below from WRIS Portal)

Pipe Material PVC

| Lineal Feet of Pipe: 2"-3" Diameter | 116,940 |  | $4 "$ | 209,663 |
| ---: | ---: | ---: | ---: | ---: |
| $6 "$ | 130,871 |  | $8 "$ | 70,340 |
| $10 "$ | 4,089 | $12 "$ |  |  |

Date(s) Wter Lines Constructed $\qquad$
Number and Capacity of Pump Station(s) 5
D. Condition of Existing Water System:

Briefly describe the condition and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.

Nebo's water system is in fairly good shape and no major renovations outside of this project are anticipated at this time.
E. Percentage of Water Loss Existing System
14.6

## IV. EXISTING LONG-TERM INDEBTEDNESS

A. List of Bonds and Notes:
(From 2020 Audit)

| Date of Issue |  | Bond/Note $\qquad$ | Principal Balance | Payment Date | Bond Type Water/Sewer* |  | Amount on Deposit in Reserve Account |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Issue | KIA | 63,870 |  | 100 \% | \% |  |
| 2007 | Issue | KRWA | 29,000 |  | 100 \% | \% |  |
| 19 | Issue |  | \$ |  | _\% | \% |  |
| 19 | Issue |  | \$ |  | -\% | \% |  |
| 19 | Issue |  | \$ | - | [ $\%$ | \% | —— |

* If a combined issue, show attributable portion to each system.
B. Principal and Interest Payments: (Begin with Next Fiscal Year Payment)

| Payment | Payment | Payment |
| :---: | :---: | :---: |
| Year | Year | Year |
| 2021 | 2022 | 2023 |


| Date of Issue |  | Bond/Note Holder | Principal Payment | Interest Payment | Principal Payment | Interest Payment | Principal Payment | Interest Payment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Issue | KIA | 4,348 | 1,256 | 4,435 | 1,169 | 4,525 | 1,079 |
| 2007 | Issue | KRWA | 14,000 | 891 | 15,000 | 304 | 0 | 0 |
| 19 | Issue |  |  |  |  |  |  |  |
| 19 | Issue |  |  |  | 促 |  |  |  |
| 19 | Issue |  |  |  |  |  |  |  |

## V. EXISTING SHORT-TERM INDEBTEDNESS


VI. LAND AND RIGHTS - EXISTING SYSTEMS(S)

Number of Treatment Plant Sites: Water
Sewer $\qquad$
Number of Storage Tank Sites: Water 3 Sewer
Number of Pump Stations:
Water $\qquad$ 5 Sewer $\qquad$
Total Acreage:
Water $\qquad$ Sewer $\qquad$
Purchase Price:
Water $\qquad$ Sewer $\qquad$
VII. NUMBER OF EXISTING USERS

Residential (In Town)*
Residential (Out of Town)*
Non-Residential (In Town)
Non-Residential (Out of Town)
Total


* Note: Residental Users: classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence.

| Meter Size  Water Connection Fee <br>    <br> $5 / 8^{\prime \prime} \times 3 / 4^{\prime \prime}$ $\$$ $\$$ <br> 1 Sewer Connection Fee   | $\$$ | $\$$ |
| :--- | :--- | :--- | :--- |

IX. SEWER RATES - EXISTING SYSTEM

Percentage of Water Bill $\qquad$ \% Minimum Charge \$

Other: (If Charge Not Based on Water Bill) $\qquad$

Date This Rate Went Into Effect
X.

WATER RATES - EXISTING SYSTEM
(See Appendix A - Existing Rates)
Existing Rate Schedule:

| First | 2,000 | Gallons @ \$ | 23.15 | Minimum |
| :---: | :---: | :---: | :---: | :---: |
| Next | 2,000 | Gallons @ \$ | 9.57 | per 1,000 Gallons. |
| Next | 6,000 | Gallons @ \$ | 9.07 | per 1,000 Gallons. |
| Next | 10,000 | Gallons @ \$ | 8.58 | per 1,000 Gallons. |
| Next |  | Gallons @ \$ |  | per 1,000 Gallons. |
| Next |  | Gallons @ \$ |  | per 1,000 Gallons. |
| All Ove | 20,000 | Gallons @ \$ | 8.08 | per 1,000 Gallons. |

Date This Rate Went Into Effect 3/31/2019

If More Than One Rate Schedule, Please Include All Schedules.
XI. ANALYSIS OF ACTUAL SEWER USAGE - EXISTING SYSTEM -

For Period $\qquad$ to $\qquad$ .

All Meter
Sizes
Monthly Sewer Usage Average

| Residential |  |  | Non-Residential |  |
| :--- | :--- | :--- | :--- | :---: |
|  | No. of | Usage |  |  |
| No. of | Usage |  |  |  |
| Users | (1000) | Users | (1000) |  |


XII. ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD

For Period $\qquad$ to $\qquad$ .

All Meter
Sizes
Monthly Water Usage Average

| Residential |  |  | Non-Residential |  |
| :--- | :--- | :--- | :--- | :---: |
| No. of | Usage |  | No. of |  |
| Users | (1000) | Users | (1000) |  |



Total Water Purchased and/or Produced Total Water Sold $\qquad$
A. Sewage Treatment:

1. Type $\qquad$
2. Method of Sludge Disposal
3. Cost per 1,000 gallons if sewage treatment is contracted: \$
4. Date Constructed
B. Treatment Capacity of Sewage Treatment Plant $\qquad$
C. Type of Sewage Collector System (Describe)
$\qquad$
$\qquad$
D. Number and Capacity of Sewage Lift Stations
E. Sewage Collection System:

Lineal Feet of Collector Lines, by size 6" $\qquad$ 8" $\qquad$
10" 12" $\qquad$ , Larger $\qquad$
XIV.

LAND AND RIGHTS - PROPOSED SEWER SYSTEM
Number of Treatment Plant Sites
Number of Pump Sites $\qquad$
Number of Other Sites

Total Acreage
Acres
Purchase Price
\$

FACILITY CHARACTERISTICS OF PROPOSED WATER SYSTEM
A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.
Nebo purchases its potable water from the City of Madisonville.
The proposed project conists of a new SCADA system, an AMR system and replacing the existing main pump station.
B. Water Storage:

Type: Ground Storage Tank $\qquad$ Elevated Tank

Standpipe $\qquad$ Other $\qquad$

Number of Storage Structures
Total Storage Volume Capacity
C. Water Distribution System:

Pipe Material
Lineal Feet of Pipe: 3" Diameter
6" 8"

10" $\qquad$ 12" $\qquad$
Number and Capacity of Pump Station(s) $1-500$ gpm
XVI. LAND AND RIGHTS - PROPOSED WATER SYSTEM

Number of Treatment Plant Sites
Number of Pump Sites
Number of Other Sites
Total Acreage
Purchase Price

0

1

0

|  | $<0.25$ | Acres |
| :--- | :--- | :--- |
| $\$$ | Unknown |  |

Residential (In Town)* $\qquad$
Residential (Out of Town) $\qquad$
Non-Residential (In Town) $\qquad$
Non-Residential (Out of Town) $\qquad$
Total $\qquad$
Number to Total Potential Users Living in the Service Area $\qquad$

* Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residences.
XVIII. PROPOSED SEWER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION

| $\frac{\text { Meter Size }}{}$ | Connection Fee |
| :--- | :--- |
| $\frac{5 / 8 " \times 3 / 4}{1-\operatorname{Inch}}$ | $\$$ <br> $1-1 / 2$ Inch <br> $2-$ Inch |
| $3-$ Inch <br> $4-$ Inch | $\$$ |
| $\frac{5-\text { Inch }}{6-\text { Inch }}$ | $\$$ |

XIX. NUMBER OF NEW WATER USERS

Residential (In Town)*
Residential (Out of Town)*
Non-Residential (In Town)*
Non-Residential (Out of Town)*
Total

| 0 |
| :---: |
| 0 |

Number to Total Potential Users Living in the Service Area

| 0 |
| :---: |
| 0 |
| 0 |

Unknown

* Note:

Residential Users: Classify by type of user regardless of quantity of water used. This classificaiton should include those meters serving individual rural residences.
XX.

| Meter Size | Connection Fee |
| :---: | :---: |
| 5/8" $\times 3 / 4$ | \$ |
| 1 - Inch | \$ |
| 1-1/2 Inch | \$ |
| 2-Inch | \$ |
| 3 - Inch | \$ |
| 4 - Inch | \$ |
| 5 - Inch | \$ |
| 6 - Inch | \$ |

A. Proposed Rate Schedule without RUS Grant:

Percent of Water Bill
\% Minimum charge \$
Other: (If Charge Not Based on Water Bill)

Proposed Rate Schedule: (Without RUS Grant)

| First | Gallons @ \$ | Minimum. |
| :---: | :---: | :---: |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| All Over | Gallons @ \$ | per 1,000 Gallons. |

The above proposed rate, without RUS grant, must be completed for each grant. If the applicant/engineer desires, there is no objection to recommending a proposed rate with an estimated RUS grant in the Table below. However, the preparer should remember that the Table (A) above must be completed prior to Table (B).
B. Recommended Rate Schedule with RUS Grant:

Percentage of Water Bill
\% Minimum Charge \$
Other: (If Charge Not Based on Water Bill)

Recommended Rate Schedule: (With RUS Grant)

| First | Gallons @ \$ | Minimum. |
| :---: | :---: | :---: |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| All Over | Gallons @ \$ | per 1,000 Gallons. |

If more than one rate, use additional sheets.
A. Proposed Rate Schedule without RUS Grant:

| First | Gallons @ \$ | Minimum. |
| :---: | :---: | :---: |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| All Over | Gallons @ \$ | per 1,000 Gallons. |

The above proposed rate, without RUS grant, must be completed for each grant. If the applicant/engineer desires, there is no objection to recommending a proposed rate with an estimated RUS grant in the Table below. However, the preparer should remember that the Table (A) above must be completed prior to Table (B).
B. Recommended Rate Schedule with RUS Grant:

| First | Gallons @ \$ | Minimum. |
| :---: | :---: | :---: |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| Next | Gallons @ \$ | per 1,000 Gallons. |
| All Over | Gallons @ \$ | per 1,000 Gallons. |

If more than one rate, use additional sheets.

Meter
Sizes* Monthly Sewer Usage

Average

Average Rate \begin{tabular}{c}
Residential <br>

| No. of Usage |
| :---: |
| Users** (1000) | <br>

\end{tabular}



Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

Number of users should reflect the actual number of "meter settings".

Sizes* Monthly Sewer Usage

Average



Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

Number of users should reflect the actual number of "meter settings".

## XXV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM - EXISTING USERS

(See Appendix C - User Income \& Rate Structures)

## Meter

Sizes* Monthly Sewer Usage

Average



Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

Number of users should reflect the actual number of "meter settings".

## Meter

Sizes* Monthly Sewer Usage

Average



Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

Number of users should reflect the actual number of "meter settings".
A. Operating Income:

## Sewer Revenue

Late Charge Fees
Other (Describe)
Less Allowances and Deductions
Total Operating Income
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Operation Expense
Maintenance Expense
Customer Accounts Expense
Administrative and General Expense
Total Operating and Maintenance Expenses
Net Operating Income
C. Non-Operating Income:

Interest on Deposits
Other (Identify)
Total Non-Operating Income
D. Net Income
E. Debt Repayment:

RUS Interest
RUS Principal
Non-RUS Interest
Non-RUS Principal
Total Debt Repayment
F. Balance Available for Coverage
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
A. Operating Income:

Sewer Revenue
Late Charge Fees
Other (Describe)
Less Allowances and Deductions
Total Operating Income
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Operation Expense
Maintenance Expense
Customer Accounts Expense
Administrative and General Expense
Total Operating and Maintenance Expenses
Net Operating Income
C. Non-Operating Income:

Interest on Deposits
Other (Identify)
Total Non-Operating Income
D. Net Income
E. Debt Repayment:

RUS Interest
RUS Principal
Non-RUS Interest
Non-RUS Principal
Total Debt Repayment
F. Balance Available for Coverage
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
A. Operating Income:

Sewer Revenue
Late Charge Fees
Other (Describe)
Less Allowances and Deductions

Total Operating Income
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

## Operation Expense

## Maintenance Expense

Customer Accounts Expense
Administrative and General Expense
Total Operating and Maintenance Expenses
Net Operating Income
C. Non-Operating Income:

Interest on Deposits
Other (Identify)
Total Non-Operating Income
D. Net Income
E. Debt Repayment:

RUS Interest
RUS Principal
Non-RUS Interest
Non-RUS Principal
Total Debt Repayment
F. Balance Available for Coverage
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
A. Operating Income:
Water Sales
\$ $\qquad$
969,684

|  | 9,259 |
| :---: | :---: |
| 1 | ) |
| \$ | 978,943 |

Disconnect/Reconnect/Late Charge Fee
Other (Describe)
B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Source of Supply Expense
Pumping Expense (Purchase Power)
Water Treatment Expense
Transmission and Distribution Expense
Customer Accounts Expense
Administrative and General Expense
Total Operating Expense
Net Operating Expense
C. Non-Operating Income:

Interest on Deposits
Other (Identify)
Total Non-Operating Income
D. Net Income
E. Debt Repayment:
\$

| \$ | 515,023 |
| :--- | ---: |
| $\$$ | 12,731 |
| $\$$ | 70,112 |
| $\$$ |  |
| $\$$ | 305,591 |
| $\$$ | 903,457 |

\$ 5,513
$\qquad$
\$
$\qquad$
$\qquad$

|  | 39,528 |
| ---: | ---: |
| 5,604 |  |
| $\$ 44,891$ |  |
| $\$ 00,023$ |  |
| 20,976 |  |

XXXI. CURRENT OPERATING BUDGET - (WATER SYSTEM) - EXISTING SYSTEM
A. Operating Income:
Water Sales
\$ $\qquad$
$\qquad$

Disconnect/Reconnect/Late Charge Fee
Other (Describe)
B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Source of Supply Expense
Pumping Expense
Water Treatment Expense
Transmission and Distribution Expense
Customer Accounts Expense
Administrative and General Expense
Total Operating Expense
Net Operating Expense
C. Non-Operating Income:

Interest on Deposits
Other (Identify)
Total Non-Operating Income
D. Net Income
E. Debt Repayment:

RUS P\&I Payment
Short Term Borrowing
KIA Loan B12-03 (P\&I Payment)
KRWA Series 2007A (P\&I Payment)
Total Debt Repayment
F. Short Lived Assets

| $\$$ | 455,190 |  |
| :--- | ---: | ---: |
| $\$$ | 14,329 | $(1)$ |

\$ $\qquad$
\$ 78,911 (1)
\$ $\qquad$
\$ 343,943 (1)
\$ 892,373
\$ 181,827
$\qquad$
\$ 5,500
$\qquad$
\$
187,327
\$ $\qquad$
56,000

| $-\quad(4)$ |
| :--- |


|  | 14,891 |
| :---: | :---: |
| $\$$ | 70,891 |
| $\$$ | 70,000 |

(1) It is assumed O\&M Expenses will increase 3\% per year from the 2020 Audit.
(2) Assume RD Loan of $\$ 1,542,000$ @ $1.75 \%$ for 38 year. P\&I Payment of $\$ 56,000$
(3) Short Term Borrowing will be paid off in 2022.
(4) KIA Loan B12-03 is will be paid off in2022.
$\qquad$
A. Operating Income:
\$ $\qquad$
Water Sales
Disconnect/Reconnect/Late Charge Fee
Other (Describe)
Less Allowances and Deductions
Total Operating Income

B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Source of Supply Expense
Pumping Expense
Water Treatment Expense
Transmission and Distribution Expense
Customer Accounts Expense
Administrative and General Expense
Total Operating Expense
Net Operating Expense
C. Non-Operating Income:

Interest on Deposits
Other (Identify)
Total Non-Operating Income
D. Net Income
E. Debt Repayment:

RUS Interest
RUS Principal
Non-RUS Interest
Non-RUS Principal
Total Debt Repayment
F. Balance Available for Coverage
\$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
$\qquad$
\$ $\qquad$
\$ $\qquad$
\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
\$
\$ $\qquad$
$\qquad$
XXXIII. ESTIMATED PROJECT COST-SEWER

| Collection | Treatment | Total |
| :---: | :---: | :---: |
| Development |  |  |
| Land and Rights |  |  |
| Legal |  |  |
| Engineering |  |  |
| Interest |  |  |
| Contingencies |  |  |
| Initial Operating and Maintenance |  |  |
| Other |  |  |
| TOTAL |  |  |
| XXXIV. PROPOSED PROJECT FUNDING - SEWER |  | N/A |
| Collection | Treatment | Total |
| Applicant - User Contribution Fees |  |  |
| Other - Applicant Contribution |  |  |
| RUS Loan |  |  |
| RUS Grant |  |  |
| ARC Grant (If applicable) |  |  |
| CDBG (If applicable) |  |  |
| Other (Specify) | - |  |
| Other (Specify) |  |  |

XXXV. ESTIMATED PROJECT COST - WATER

| Development | \$ | 1,165,000 |
| :---: | :---: | :---: |
| Land and Rights |  | 10,000 |
| Legal |  | 17,500 |
| Engineering |  | 147,000 |
| Interest |  | 15,000 |
| Contingencies |  | 120,500 |
| Initial Operating and Maintenance |  |  |
| Other |  | 67,000 |
| TOTAL | \$ | 1,542,000 |

XXXVI. PROPOSED PROJECT FUNDING

Applicant - User Connection Fees
Other Applicant Contribution
RUS Loan
$\$$

|  |
| :--- |
|  |
|  |
|  |
|  |
| 1,542,000 |

## APPENDIX A EXISTING RATES

$\qquad$ Community, Town or City
P.S.C. KY. NO. $\qquad$ $4^{\text {th }}$ Revised $\quad$ SHEET NO. $\qquad$
CANCELLING P.S.C. KY. NO. $\qquad$ 1
$\qquad$
$3^{\text {rd }}$ Revised $\qquad$ SHEET NO.

## Minimum Water Rates Based on Size Connections

| Size of Water |
| :--- |
| Meter Connections |

$5 / 8$ inch by $3 / 4$ inch
1 inch
$1-1 / 2$ inch
2 inch
3 inch
4 inch

| Number of Gallons or Less <br> Per Month to be Provided for the <br> Minimum Rate | Minimum monthly <br> Water Rate <br> Per Connection |
| :--- | :---: |
| 2,000 gallons | $\$ 23.15$ |
| 4,000 gallons | 42.28 |
| 10,000 gallons | 96.71 |
| 20,000 gallons | 182.51 |
| 30,000 gallons | 263.31 |
| 50,000 gallons | 424.91 |

[I]

$$
20.10
$$

$$
42.28
$$

96.71
182.51
424.91

## Meter Rates for Water Usage in Addition to Minimum Charge

Subject to the minimum monthly water rate specified above, the following metered charges shall be made for water consumption per month to customers of all size connection:

| Number of Gallons <br> of Water per Month | Monthly Charge <br> per 1,000 Gallons |
| :--- | :---: |
| First 2,000 gallons | $\$ 23.15$ |
| Next 2,000 gallons | 9.57 |
| Next 6,000 gallons | 9.07 |
| Next 10,000 gallons | 8.58 |
| Over 20,000 gallons | 8.08 |


| DATE OF ISSUE $\quad$ April 16, 2019 | KENTUCKY <br> PUBLIC SERVICE COMMISSION |
| :---: | :---: |
|  | Gwen R. Pinson <br> Executive Director <br> Qwen R. Punson |
| title Chicsmen | $\begin{aligned} & \text { EFFECTIVE } \\ & 3 / 31 / 2019 \end{aligned}$ |
| BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION <br> IN CASE NO. $\qquad$ 2019-00099 DATED $\qquad$ April 16, 2019 | PURSUANT TO 807 KAR 5:011 SECTION 9 (1) |

## APPENDIX B PROPOSED RATES

# TABLE 4 <br> Proposed Water Rates <br> For <br> Nebo Water District 

| Water Me |  | 5/8"x3/4" |  |
| :---: | :---: | :---: | :---: |
| First | 2,000 | Gallons @ | \$28.40 Min. |
| Next | 2,000 | Gallons @ | \$10.50 per 1,000 Gallons |
| Next | 6,000 | Gallons @ | \$10.00 per 1,000 Gallons |
| Next | 10,000 | Gallons @ | \$9.51 per 1,000 Gallons |
| All Over | 20,000 | Gallons @ | \$9.01 per 1,000 Gallons |


| Water Me |  | $1 "$ |  |
| :---: | :---: | :---: | :---: |
| First | 4,000 | Gallons @ | \$49.40 Min. |
| Next | 6,000 | Gallons @ | \$10.00 per 1,000 Gallons |
| Next | 10,000 | Gallons @ | \$9.51 per 1,000 Gallons |
| All Over | 20,000 | Gallons @ | \$9.01 per 1,000 Gallons |


| Water Meter Size |  | 1-1/2" |  |
| :---: | :---: | :---: | :---: |
| First | 10,000 | Gallons @ | \$109.40 |
| Next | 10,000 | Gallons @ | \$9.51 |
| All Over | 20,000 | Gallons @ | \$9.01 |

Water Meter Size 2"

| First | 20,000 | Gallons @ | \$204.50 Mi |
| :---: | :---: | :---: | :---: |
| All Over | 20,000 | Gallons @ | \$9.01 per |

Water Meter Size 3"


Water Meter Size $\qquad$


## APPENDIX C

 USER INCOME \& RATE STRUCTURE
## User Income and Rate Schedules

| Customer Name: | Nebo Water District |
| :--- | :--- |
|  |  |
| Project Name: |  |
|  |  |

## D. USER INCOME CALCULATIONS

| RATE SCHEDULE 01 Residential 5/8" |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| First | 2,000 Gallons | For | \$28.40 | Per | Minimum Gallons | (Minimum Bill) |
| Next | 2,000 Gallons | For | \$10.50 | Per | 1,000 Gallons |  |
| Next | 6,000 Gallons | For | \$10.00 | Per | 1,000 Gallons |  |
| Next | 10,000 Gallons | For | \$9.51 | Per | 1,000 Gallons |  |
| Next | Gallons | For | \$0.00 | Per | 1,000 Gallons |  |
| Next | Gallons | For | \$0.00 | Per | 1,000 Gallons |  |
| Next | Gallons | For | \$0.00 | Per | 1,000 Gallons |  |
| All Over | 20,000 Gallons | For | \$9.01 | Per | 1,000 Gallons |  |


| USER GROUP: | Residential |  | TYPE of SERVICE: |  | Water | Residential/non-residential? |  |  | Total Annual Usage 6,049,400 | (input R or N) $\square$ <br> R |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5,816 | Users @ | 1,040 | Gallons | $=$ | \$28.40 | per user - | \$165,174.40 | annual |  |  |
| 6,924 | Users @ | 2,994 | Gallons | = | \$38.84 | per user - | \$268,928.16 | annual | 20,730,700 |  |
| 5,203 | Users @ | 5,749 | Gallons | = | \$66.89 | per user - | \$348,028.67 | annual | 29,910,400 |  |
| 485 | Users @ | 13,114 | Gallons | = | \$139.02 | per user - | \$67,424.70 | annual | 6,360,400 |  |
| 135 | Users @ | 34,701 | Gallons | = | \$336.96 | per user - | \$45,489.60 | annual | 4,684,700 |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
|  | Users @ |  | Gallons | = | \$28.40 | per user - | \$0.00 | annual |  |  |
| TOTALS: |  |  |  |  |  |  |  |  |  |  |
| 18,563 | Users | 35,600 | Gallons |  |  | MONTHL | \$74,587.13 |  |  |  |
|  | avg. | /user $=3$ | 3,649 |  |  | ANNUA | \$895,045.53 |  |  |  |

RATE SCHEDULE 212 Min. Residential 5/8" (Duplex)

| First | $\mathbf{4 , 0 0 0}$ Gallons | For | $\mathbf{\$ 5 6 . 8 0}$ | Per | Minimum Gallons (Minimum Bill) |
| :---: | ---: | :--- | ---: | :--- | ---: |
| Next | $\mathbf{6 , 0 0 0}$ Gallons | For | $\mathbf{\$ 1 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | $\mathbf{1 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 5 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |



RATE SCHEDULE 03 Residential 1"

| First | $\mathbf{4 , 0 0 0}$ Gallons | For | $\mathbf{\$ 4 9 . 4 0}$ | Per | Minimum Gallons (Minimum Bill) |
| :---: | ---: | :--- | ---: | :--- | ---: |
| Next | $\mathbf{6 , 0 0 0}$ Gallons | For | $\mathbf{\$ 1 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | $\mathbf{1 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 5 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |


| USER GROUP: | Residential |  | TYPE of | CE: | ReSIDENTIAL/NON-RESIDENTIAL? |  | Total Annual Usage | $\begin{gathered} \text { (input } \mathbf{R} \text { or } \mathrm{I} \\ \hline \mathbf{R} \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 70 Users @ | 1,881 | Gallons |  | \$49.40 per user - | \$3,458.00 annual | 131,700 |  |
|  | 73 Users @ | 6,475 | Gallons | = | \$74.15 per user - | \$5,412.95 annual | 472,700 |  |
|  | 25 Users @ | 14,236 | Gallons | = | \$149.68 per user - | \$3,742.00 annual | 355,900 |  |
|  | 18 Users @ | 44,333 | Gallons | = | \$423.74 per user - | \$7,627.32 annual | 798,000 |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$49.40 per user - | \$0.00 annual |  |  |
| TOTALS: |  |  |  |  |  |  |  |  |
|  | 86 Users | 1,758,300 | Gallons |  | MONTHL | \$1,686.69 |  |  |
|  |  | $\text { lume/user }=$ | 9,453 |  | ANNUA | \$20,240.27 |  |  |

RATE SCHEDULE 07 Residential 2"

| First | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 2 0 4 . 5 0}$ | Per | Minimum Gallons (Minimum Bill) |
| :---: | :---: | :---: | ---: | :---: | ---: |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |



RATE SCHEDULE $3^{\prime \prime}$ Meter

| First | $\mathbf{3 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 2 9 4 . 6 0}$ | Per | Minimum Gallons (Minimum Bill) |
| ---: | ---: | ---: | ---: | ---: | ---: |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{3 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |


|  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |



## GRAND TOTALS: MONTHLY <br> \$78,182.46 <br> ANNUAL $\$ 938,189.56$



## User Income and Rate Schedules

| Customer Name: | Nebo Water District |
| :--- | :--- |
|  |  |
| Project Name: |  |
|  |  |

## D. USER INCOME CALCULATIONS

| RATE SCHEDULE Commercial 5/8" |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |
| First | $\mathbf{2 , 0 0 0}$ Gallons | For | $\mathbf{\$ 2 8 . 4 0}$ | Per | Minimum Gallons (Minimum Bill) |
| Next | $\mathbf{2 , 0 0 0}$ Gallons | For | $\mathbf{\$ 1 0 . 5 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | $\mathbf{6 , 0 0 0}$ Gallons | For | $\mathbf{\$ 1 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | $\mathbf{1 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 5 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |



RATE SCHEDULE 222 Min. Com 5/8" (2 Businesses)

| First | $\mathbf{4 , 0 0 0}$ Gallons | For | $\mathbf{\$ 5 6 . 8 0}$ | Per | Minimum Gallons (Minimum Bill) |
| :---: | ---: | :--- | ---: | :--- | ---: |
| Next | $\mathbf{6 , 0 0 0}$ Gallons | For | $\mathbf{\$ 1 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | $\mathbf{1 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 5 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |



| RATE SCHEDULE Commercial 1" |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |
| First | $\mathbf{4 , 0 0 0}$ Gallons | For | $\mathbf{\$ 4 9 . 4 0}$ | Per | Minimum Gallons (Minimum Bill) |
| Next | $\mathbf{6 , 0 0 0}$ Gallons | For | $\mathbf{\$ 1 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | $\mathbf{1 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 5 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |



| RATE SCHEDULE Commercial 1-1/2" |  |  |  |  |  |
| :---: | :---: | :---: | ---: | :--- | ---: |
|  |  |  |  |  |  |
| First | $\mathbf{1 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 1 0 9 . 4 0}$ | Per | Minimum Gallons (Minimum Bill) |
| Next | $\mathbf{1 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 5 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |



| RATE SCHEDULE Commercial 2" |  |  |  |  |  |
| :---: | :---: | :---: | ---: | :--- | ---: |
|  |  |  |  |  |  |
| First | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 2 0 4 . 5 0}$ | Per | Minimum Gallons (Minimum Bill) |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{2 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |



RATE SCHEDULE 10 Meter 4

| First | $\mathbf{5 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 4 7 4 . 8 0}$ | Per | Minimum Gallons (Minimum Bill) |
| :---: | ---: | :--- | ---: | :--- | ---: |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| Next | Gallons | For | $\mathbf{\$ 0 . 0 0}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |
| All Over | $\mathbf{5 0 , 0 0 0}$ Gallons | For | $\mathbf{\$ 9 . 0 1}$ | Per | $\mathbf{1 , 0 0 0}$ Gallons |


| USER GROUP: | Non-Residential |  | TYPE of SERVICE: |  | RESIDENTIAL/NON-RESIDENTIAL? |  | Total Annual Usage$127,100$ | (input R or N) $\square$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4 Users @ | 31,775 | Gallons | $=$ | \$474.80 per user - | \$1,899.20 annual |  |  |
|  | 20 Users @ | 107,270 | Gallons | $=$ | $\mathbf{\$ 9 9 0 . 8 0}$ per user - | \$19,816.00 annual | 2,145,400 |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | = | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
|  | Users @ |  | Gallons | $=$ | \$474.80 per user - | \$0.00 annual |  |  |
| TOTALS: |  |  |  |  |  |  |  |  |
|  | 24 Users | 2,272,500 | Gallons |  | MONTHL | \$1,809.60 |  |  |
|  | avg | ume/user = | 94,688 |  | ANNUA | \$21,715.20 |  |  |

# GRAND TOTALS: MONTHLY \$10,641.66 <br> ANNUAL $\quad \$ 127,699.88$ 

| Total Residential Users Total Residential Gallons | $\begin{aligned} & \mathbf{0} \\ & \mathbf{0} \\ & \hline \end{aligned}$ | Total Non-Residential Users Total Non-Residential Gallons | $\begin{gathered} 360 \\ 12,803,300 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: |
|  | Total Users | $=\quad 360$ |  |
|  | Gallons/EDU | = \#DIV/0! |  |
|  | Commercial EDU's | = \#DIV/0! |  |
|  | Residential EDU's |  |  |
|  | Total EDU's | = \#DIV/0! |  |
|  | Monthly Cost per EDU | = \#DIV/0! |  |

## APPENDIX D SHORT-LIVED ASSETS

## Nebo Water District

| Water Replacement Reserve - Short Lived Assets |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Type of Reserve | Use/Description | Replacement Cost | Reserve on Hand | Annual Reserve |
| 1-5 Years | Meters | \$40,000 | \$0 | \$8,000 |
| 1-5 Years | Computers \& Software | \$25,000 | \$0 | \$5,000 |
| 1-5 Years | Pumps | \$10,000 | \$0 | \$2,000 |
| 1-5 Years | General Maintenance | \$25,000 | \$0 | \$5,000 |
| 1-5 Years | Misc. Repairs | \$25,000 | \$0 | \$5,000 |
| Subtotal 1-5 Years |  |  |  | \$25,000 |
| 5-10 Years | Meters | \$40,000 | \$0 | \$4,000 |
| 5-10 Years | Trucks (2 Truck) | \$80,000 | \$0 | \$8,000 |
| 5-10 Years | Misc. Repairs | \$25,000 | \$0 | \$2,500 |
| 5-10 Years | Backhoe | \$75,000 | \$0 | \$7,500 |
| 5-10 Years | General Maintenance | \$25,000 | \$0 | \$2,500 |
| 5-10 Years | Pumps | \$10,000 | \$0 | \$1,000 |
| Subtotal 5-10 Years |  |  |  | \$25,500 |
| 10-15 Years | Misc. Repairs | \$25,000 | \$0 | \$1,667 |
| 10-15 Years | Meters | \$40,000 | \$0 | \$2,667 |
| 10-15 Years | General Maintenance | \$25,000 | \$0 | \$1,667 |
| 10-15 Years | Tank Repaint | \$200,000 | \$0 | \$13,333 |
| Subtotal 10-15 years |  |  |  | \$19,333 |
| Replacement Reserve - Short Lived Assets |  |  |  | \$69,833 |

