

Bi-Monthly Town of Keene Board Meeting  
January 28<sup>th</sup>, 2025  
5:30 P.M. Town Hall  
Meeting # 4-2025  
Resolutions #68-75

**Board Members Present:** Joe-Pete Wilson Supervisor, Christopher Daly, Ann Hough, Robert Biesemeyer, Teresa Cheetham-Palen, Council Members

**Absent:**

**Town Officials Present:** Ann Whitney Town Clerk, Savana Li Water Superintendent

**Town Counsel Present:**

**Members of the Public:** Glen VanWie

**Call to Meeting to Order** at 5:31 P.M. by Joe Pete Wilson

**Pledge of Allegiance:**

**Approval of Minutes:**

**RESOLUTION TO APPROVE THE JANUARY 14TH 2025 PUBLIC HEARING AND BI-MONTHLY BOARD MINUTES  
RESOLUTION NUMBER: 68-2024  
INTRODUCED BY: TERESA CHEETHAM-PALEN WHO MOVED FOR ITS ADOPTION, SECONDED BY CHRISTOPH DALY  
RESOLVED** that the Town Board of Keene has approved the January 14<sup>th</sup>, 2025 Public Hearing and Regular Board Meeting Minutes  
Duly adopted this 28th day of January 2025 by the following vote:  
**AYES:** Christopher Daly, Ann Hough, Robert Biesemeyer, Joe Pete Wilson, Teresa Cheetham-Palen  
**NAYS:** None

**Privilege of the Floor:**

**Town Operations**

- **Town Clerk:**

- **Highway Department:**

Mr. Wilson explained he and Reggie are working with the Town Wide Road and Culvert Resilience Plan. They expanded and made sure they got stuff from Savana and Roger and are working to get this put into the County's Hazard Mitigation Plan, which helps with grant money.

Mr. Wilson then explained he was just notified from NYSAC that the Feds suspended payments. Unsure how this will affect our FEMA disasters.

- **Water Department**

Ms. Li explained the chemical feed pump quit today and she needs to replace it.

**RESOLUTION TO APPROVE THE PURCHASE OF A CHEMICAL FEED PUMP FOR THE WATER DEPARTMENT**

**RESOLUTION NUMBER: 69-2024**

**INTRODUCED BY: ROBERT CHEETHAM-PALEN WHO MOVED FOR ITS ADOPTION, SECONDED BY ROBERT BIESEMEYER**

**RESOLVED** that the Town Board of Keene has approved the purchase from ESC Environmental for a feed pump, \$3,441.00

Duly adopted this 28th day of January 2025 by the following vote:

**AYES:** Christopher Daly, Ann Hough, Robert Biesemeyer, Joe Pete Wilson, Teresa Cheetham-Palen

**NAYS:** None

Mr. Wilson wanted to than give some bright financial news, after three cycles with the Northern Boarder Regional Commission Grant; we were awarded \$1,000,000.00 for our Water District #2 project.

Ms. Cheetham-Palen thanked everyone for the hard work to get this.

Dylan Thisse, from Wright Pierce with a presentation of the Asset Management Plan he has set up for the Water Department. This was done with a grant through Essex County.

Attached is his whole presentation;

*Attachment #4-12025*

**Town Discussion of Old Business:**

- **Farmers Market**

Mr. VanWie stated after talking with Ann Hough he felt there might be some misconceptions.

Mr. Wilson explained Ann took the agreement and then in the red are what Ann added.

Ms. Hough explained the fees need to be increased but the board is uncertain that amount. She asked Glen how the Market was doing.

Mr. Van Wie stated they are nonprofit and no one is on payroll, the only one paid is our secretary/treasurer \$3,000. He explained they do pay their Executive Director a consulting fee. In addition, they pay their insurance. He thinks it will hurt if we raise our fee because they in turn pass it onto the vendors. He stated \$20-\$30 would be hard for some.

Mr. Biesemeyer asked what they charge the Vendors.

Mr. Van Wie said \$350 for the year.

Mr. Biesemeyer asked how many Vendors they had.

Mr. Van Wie stated around 70. He then said if we raise the fee to \$6,000, they would have to charge additionally \$43 to each vendor for the season.

Mr. Biesemeyer asked if that would cause a hardship for some.

Mr. Van Wie said yes it would.

Ms. Hough would propose to do the increase in increments.

Mr. Van Wie stated that is hard to chew on.

Mr. Daly wanted to ask, \$350 X's 70 vendors is \$24,500, so if you pay the Town \$6,000 that seems to still leave a fair amount on the table, he is unclear why the membership fee would have to increase.

Mr. Van Wie said their budget tells them they have to, they have other expenses.

Ms. Hough asked if it was fair to take this draft to their Board to go over so we could then hear back with their thoughts.

Mr. Van Wie also stated the Library, and the Fire Departments, set up at the Market. He also said they have to have an update on the bathrooms.

Mr. Wilson added the Town provides 2 bathrooms, and the Town pays for them, also pays to have them cleaned. If there is a need for another bathroom, he feels it should be part of the Market to pay for.

Ms. Cheetham-Palen brought up the cancellation of the Famers Market, if necessary, due to things out of our control. She also explained we are not trying to insulate anyone, we are trying to make things clear.

Mr. Van Wie stated maybe have an increase and have that set for a few years before another increase.

- **Community Day**

Ms. Cheetham-Palen wanted to ask for an additional amount for the Community Days.

**RESOLUTION TO APPROVE AN ADDITIONAL \$2,000 FOR  
COMMUNITY DAYS FROM THE COMMUNITY ENHANCEMENT FUND  
RESOLUTION NUMBER: 70-2024**

**INTRODUCED BY: TERESA CHEETHAM-PALEN WHO MOVED FOR  
ITS ADOPTION, SECONDED BY ANN HOUGH**

**RESOLVED** that the Town Board of Keene has approved to spend an additional \$2,000 for Community Days if needed.

Duly adopted this 28th day of January 2025 by the following vote:

**AYES:** Christopher Daly, Ann Hough, Robert Biesemeyer, Joe Pete Wilson,  
Teresa Cheetham-Palen

**NAYS:** None

- **Library**

Mr. Biesemeyer wanted to let everyone know that he met with Hometown Electric in regards to the electrical upgrade. They will get back to us with estimates.

**New Business:**

- **Annual Audit of the Books**

Postponed until next meeting due to sickness, February 11<sup>th</sup>, 2025

- **Ausable Freshwater Center Earth Day Cleanup**

Mr. Wilson stated they would like to use the Pavilion at the Community Center as they did last year.

**RESOLUTION TO GRANT USE OF THE COMMUNITY CENTER  
PAVILION ON APRIL 19<sup>TH</sup>, 2025 TO THE AUSABLE FRESHWATER  
CENTER**

**RESOLUTION NUMBER: 71-2024**

**INTRODUCED BY: ROBERT BIESEMEYER WHO MOVED FOR ITS  
ADOPTION, SECONDED BY TERESA CHEETHAM-PALEN**

**RESOLVED** that the Town Board of Keene has approved to let the Ausable Freshwater Center use the Community Center Pavilion on April 19<sup>th</sup> for their Earth Day cleanup.

Duly adopted this 28th day of January 2025 by the following vote:

**AYES:** Christopher Daly, Ann Hough, Robert Biesemeyer, Joe Pete Wilson,  
Teresa Cheetham-Palen  
**NAYS:** None

**Local Law Process:**

- **Draft Leash Law discussion**

Mr. Wilson stated we have two things, schedule the Public Hearing and to get feedback to Liam.

**RESOLUTION TO SET PUBLIC HEARING AND SPECIAL MEETING ON  
FEBRUARY 18<sup>TH</sup>, 2025 5:30 P.M. TO INTRODUCE THE  
COMPREHENSIVE DOG LAW  
RESOLUTION NUMBER: 72-2025**

**INTRODUCED BY: TERESA CHEETHAM-PALEN WHO MOVED FOR  
ITS ADOPTION, SECONDED BY CHRISTOPHER DALY**

**RESOLVED** that the Town Board of Keene has set a Public Hearing and Special Meeting on February 18<sup>th</sup>, 2025 at 5:30P.M.

Duly adopted this 28th day of January 2025 by the following vote:

**AYES:** Christopher Daly, Ann Hough, Robert Biesemeyer, Joe Pete Wilson,  
Teresa Cheetham-Palen  
**NAYS:** None

**Budget Resolutions:**

- **Resolution to Transfer Funds:**
- **Resolution to amend the 2024 budget:**

**Audit Bills:**

**RESOLUTION TO PAY THE ONLINE BILLS  
RESOLUTION NUMBER: 73-2025**

**INTRODUCED BY TERESA CHEETHAM-PALEN WHO MOVED FOR  
ITS ADOPTION, SECONDED BY ROBERT BIESEMEYER**

**RESOLVED** that the Town Board approve to pay the online bills.

Duly adopted this 28th day of January 2025 by the following vote:

**AYES:** Ann Hough, Christopher Daly, Joe Pete Wilson, Robert Biesemeyer,  
Teresa Cheetham-Palen  
**NAYS:** None

**RESOLUTION TO AUDIT THE VOUCHERS  
55 THROUGH 92,2025**

**RESOLUTION NUMBER: 74-2025**

**INTRODUCED BY ANN HOUGH WHO MOVED FOR ITS ADOPTION,  
SECONDED BY ROBERT BIESEMEYER**

**RESOLVED** that the Town Board approve the following bills and prepaid bills.  
Multi-Fund Vouchers numbered 44 through 92, 2025 totaling \$501,625.97 as  
follows:

General Fund Bills \$27,084.16

Highway Fund Bills \$22,895.07

Library \$37.97

Water District #1 \$1,324.71

Water District #2 \$3,177.51

Trust & Agency Fund \$444,835.00

Duly adopted this 28th day of January 28<sup>th</sup>, 2025 by the following vote:

**AYES:** Ann Hough, Christopher Daly, Joe Pete Wilson, Robert Biesemeyer,  
Teresa Cheetham-Palen  
**NAYS:** None

**Adjourn:**

**RESOLUTION TO ADJOURN**

**RESOLUTION NUMBER: 75-2025**

**INTRODUCED BY: ROBERT BIESEMEYER WHO MOVED FOR ITS  
ADOPTION, SECONDED BY ANN HOUGH**

**RESOLVED** that the Town Board of Keene has completed all business and  
hereby adjourns the Regular Meeting at 7:08 P.M.,

Duly adopted this 28th day of January 2025 by the following vote:

**AYES:** Ann Hough, Christopher Daly, Joe Pete Wilson, Robert Biesemeyer,  
Teresa Cheetham-Palen  
**NAYS:** None

Ann Whitney  
Town Clerk  
Town of Keene



# Asset Management Program for Essex County Water & Sewer Districts

Town of Keene

January 28, 2025

Dylan Thisse, PE- Wright-Pierce

Attachment  
#4-12025

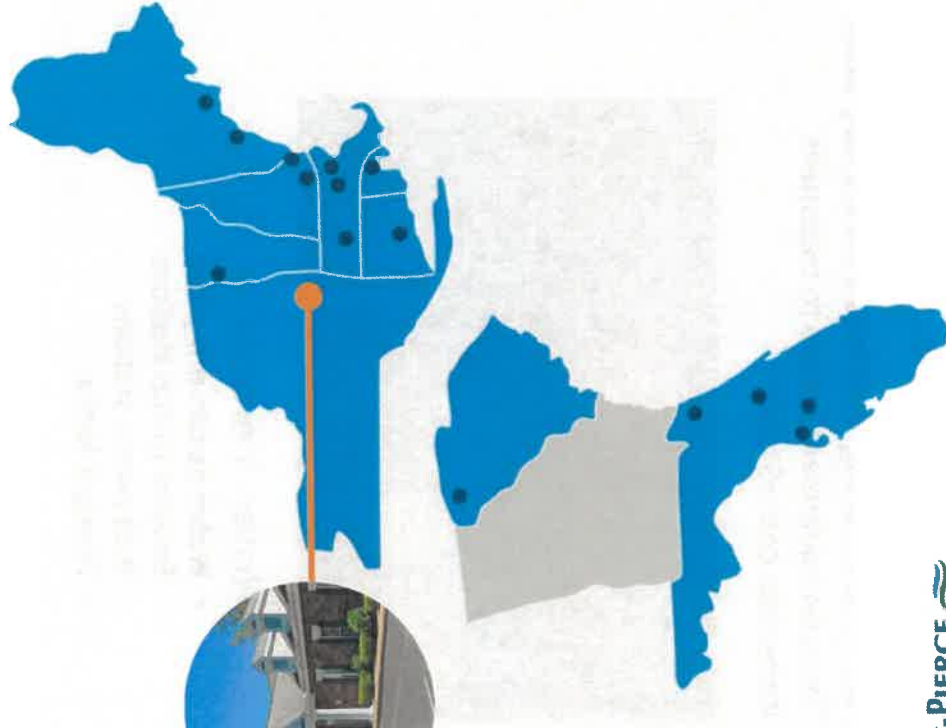
# Presentation Overview

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Who is Wright-Pierce?  
What are Assets?  
What is Asset Management?  
Existing Infrastructure  
Level of Service  
Risk Analysis and Prioritization  
Capital Improvement Plan  
Understanding Outputs  
Next Steps



# Who We Are – Firm Overview



Established  
in 1947



WPEC in NY  
2011



Clifton Park  
Office



300+  
Employees



Comprehensive  
Services



Award  
Winning

## What are Assets?

- An asset is something that has a monetary value and functional value.
  - Focus on equipment critical to treatment
  - Items that cost >\$1,000



### **Water- Vertical**

- Water treatment plant
- Booster pump stations
- Well pump stations
- Storage tanks



### **Water Horizontal**

#### **Not Included**

- Water mains (pipes)
- Hydrants
- Valves

## What is Asset Management?

“asset management is a process designed to help people decide how, where, and when to spend money to achieve a result.”

- NYS Asset Management Guide

“A method to create an inventory of the specific items in water and wastewater systems, determine their condition and remaining useful life, as well as determine the approximate time frame, priority and estimated costs for their repair, replacement, or upgrade.”

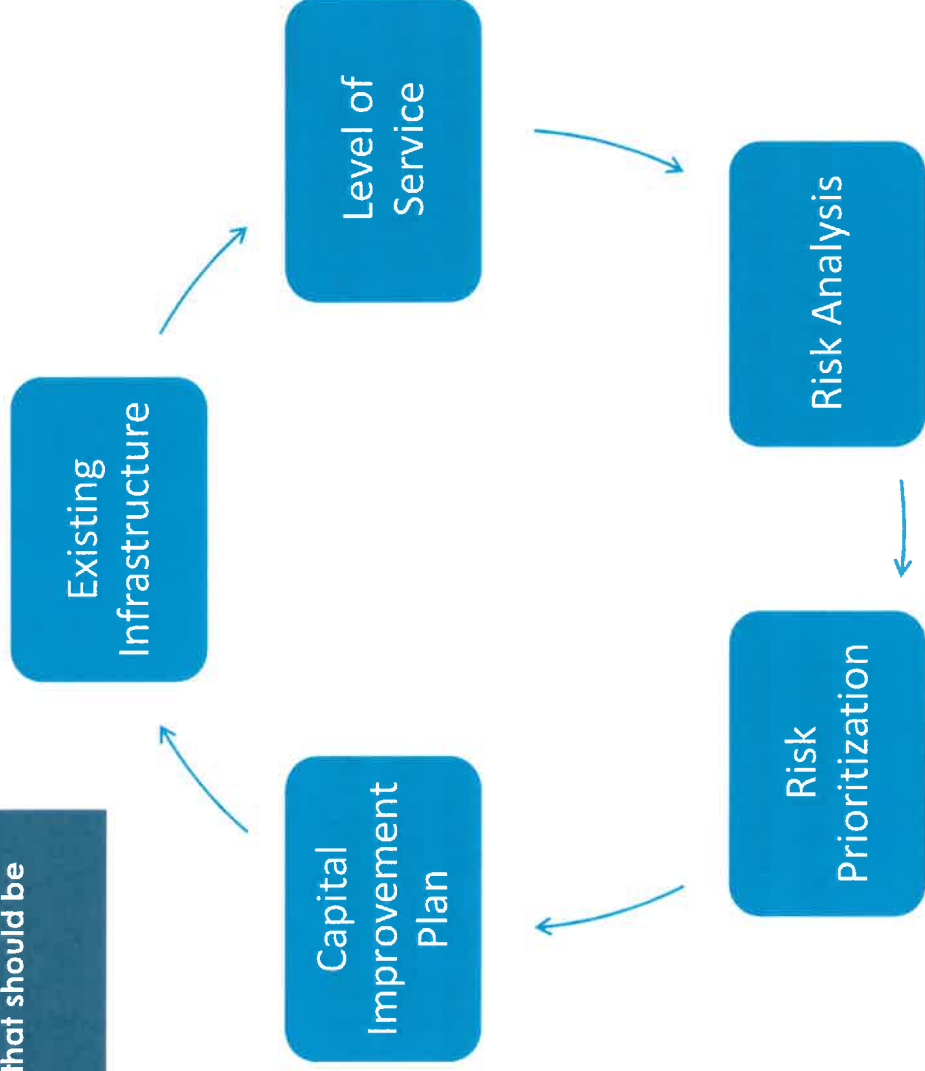
- Wright-Pierce

*Ultimately, a Planning Tool...*



# What is Asset Management?

This is a continuous process that should be revisited annually.



## Existing Infrastructure – Water District #1 - Summary

A variety of assets were evaluated at each facility including process, mechanical, instrumentation, structural, and electrical assets.

Location	Number of Assets Evaluated
Water Treatment Plant	33
Tank Site	8
<b>TOTAL</b>	<b>41</b>

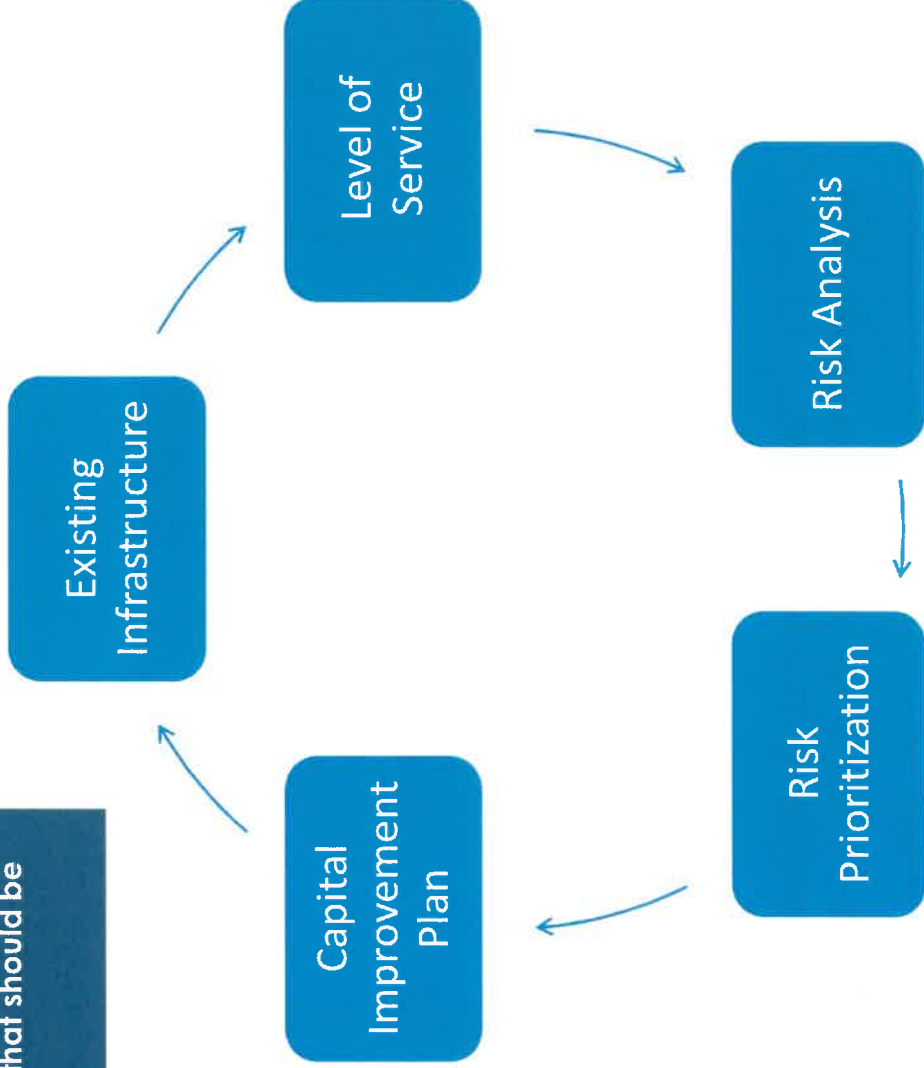
## Existing Infrastructure – Water District #2 - Summary

A variety of assets were evaluated at each facility including process, mechanical, instrumentation, structural, and electrical assets.

Location	Number of Assets Evaluated
Water Treatment Plant	34
Water Tank	2
Booster Pump Station	20
<b>TOTAL</b>	<b>56</b>

# What is Asset Management?

This is a continuous process that should be revisited annually.



## What is Level of Service?

**Level of Service (LOS)** defines how the utility owners, managers, and operators **want the system to perform** over the long term.

Community provides a service

- Treating Drinking Water
- Treating Wastewater

Stakeholder Expectations/Requirements

- Customers that benefit from the service have expectations
- Regulatory agencies have requirements
- Utility owners, managers, and operators have expectations

Community commits to meeting those expectations/requirements

- Make Goals
- Track goals



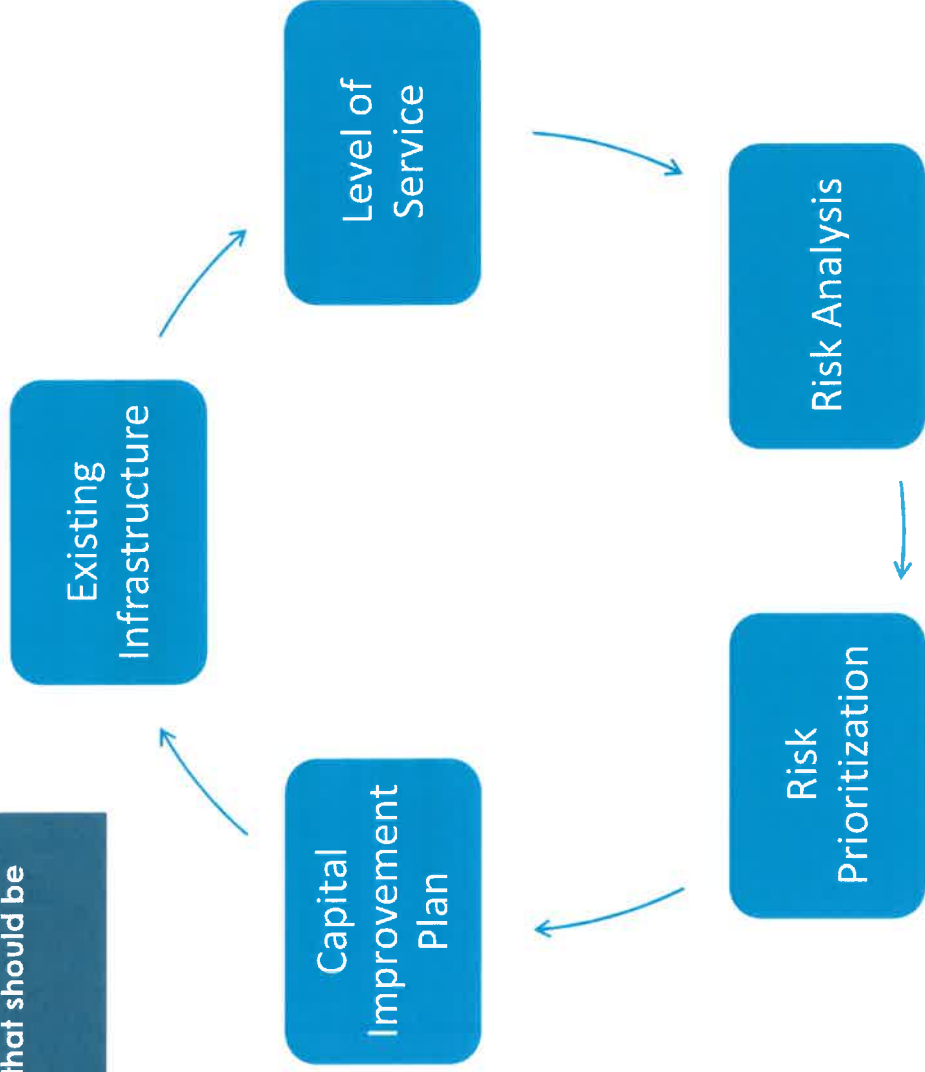
# Level of Service

## Level of Service Goals

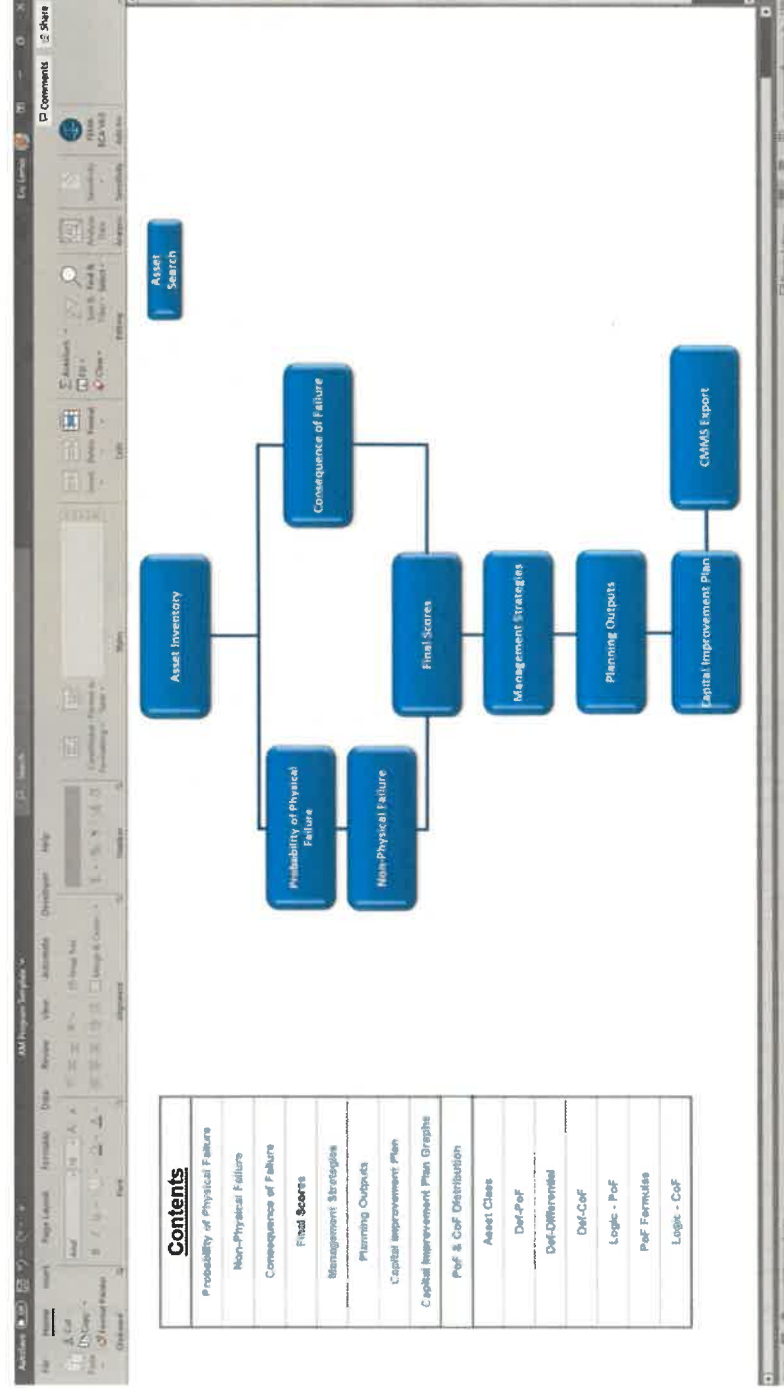
Goal	Focus of Goals	Priority Weighting
Health and Safety	Safe working environment	35%
System Reliability	Customer service, minimized disruptions, regular inspection, appropriately staffed	30%
Regulatory Compliance	Conform to state and federal regulations for treatment works, proper training,	20%
Fiscal Impact	Minimize emergency spending, rates, budgeting, maintain appropriate capital reserves	15%

# What is Asset Management?

This is a continuous process that should be revisited annually.



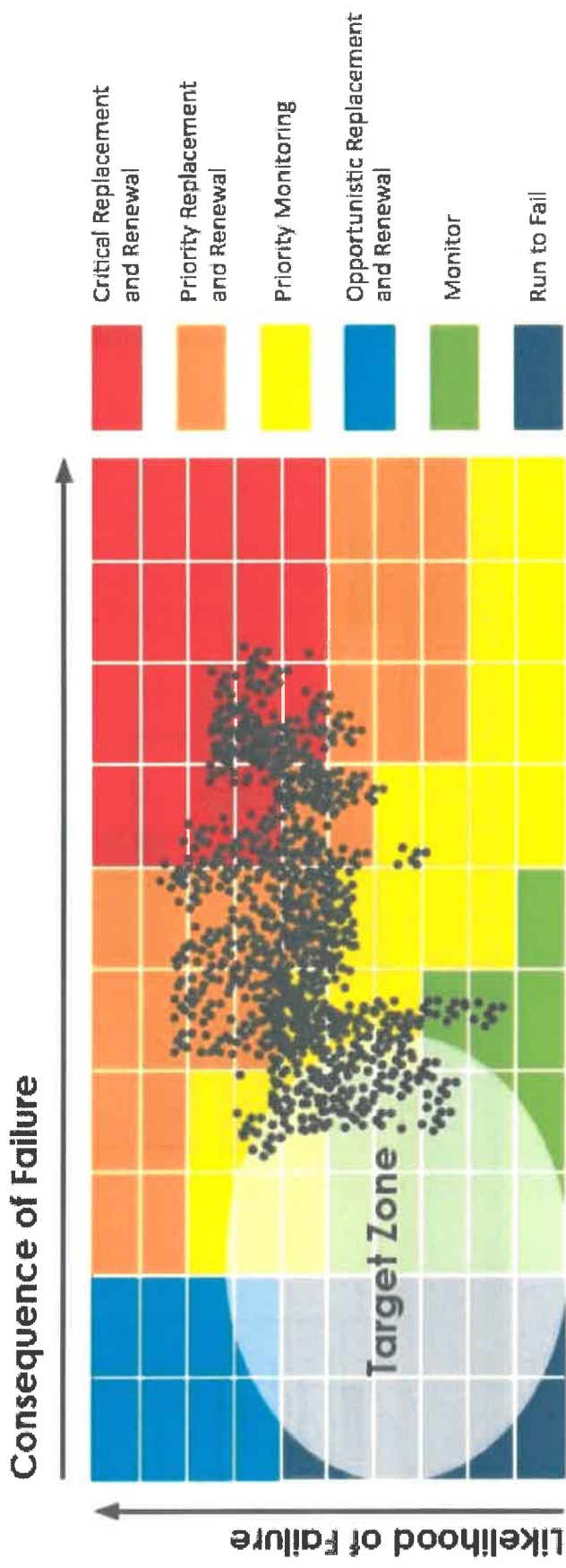
# Digital Asset Management System



- **Wright-Pierce Spreadsheet**
- **Developed in-house**
- **Microsoft Excel based**
- **Provided to Town**
- **No annual fee**
- **Separate training session held for operators and supervisors**

## Risk Analysis

- Likelihood of Failure (LoF)
- Consequence of Failure (CoF)



# Risk Analysis – Water District #1

## Management Strategies Output

Probability of Failure	Consequence of Failure									
	1	2	3	4	5	6	7	8	9	10
10	1	-	-	-	2	-	-	-	-	-
9	-	-	1	-	-	-	-	-	-	-
8	-	-	-	2	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-
6	1	3	-	1	-	-	-	-	-	-
5	-	1	2	1	-	-	-	-	-	-
4	-	-	-	2	-	-	-	-	-	-
3	-	3	1	-	-	-	-	-	-	-
2	-	-	-	2	1	-	-	-	-	-
1	2	2	3	6	1	2	1	-	-	-

## Summary of Assets by Strategy

Group	Strategy	Count	% Assets
A	Critical R&R	2	5%
B	Priority R&R	3	7%
C	Add PdM Schedule	2	5%
D	Opportunistic R&R	1	2%
E	Rt or PM Schedule	15	37%
F	Run to Fail	18	44%
G	(undefined)	0	0%
<b>TOTAL</b>		<b>41</b>	

# Risk Analysis – Water District #2

## Management Strategies Output

Probability of Failure	Consequence of Failure									
	1	2	3	4	5	6	7	8	9	10
10	-	1	-	1	1	-	-	-	-	-
9	-	1	-	-	-	-	-	-	-	-
8	-	4	2	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-
6	-	3	2	3	-	1	1	-	-	-
5	-	1	1	1	-	-	-	-	-	-
4	-	3	-	1	3	-	-	-	-	-
3	-	1	1	3	-	1	-	-	-	-
2	-	1	2	2	4	2	-	-	-	-
1	1	2	4	1	-	-	-	1	-	-

## Summary of Assets by Strategy

Group	Strategy	Count	% Assets
A	Critical R&R	1	2%
B	Priority R&R	3	5%
C	Add PdM Schedule	11	20%
D	Opportunistic R&R	6	11%
E	Rt or PM Schedule	15	27%
F	Run to Fail	20	36%
G	(undefined)	0	0%
<b>TOTAL</b>		<b>56</b>	

# Risk Prioritization- Top Probability of Failure- Next 5 Years – WD #1

ASSET INFORMATION							FINAL SCORES		
Asset ID	Equipment Description	Location	Room/Area	Discipline	Consequence Score	Probability of Failure Score	Probability of Failure Score (in next 5 years)		
100-110-101-PP-01	Pump - Sodium Hypochlorite Metering	Water Treatment Plant	Chemical Room	Process	5	10	10		
100-110-101-PP-02	Pump - Phosphate Metering	Water Treatment Plant	Chemical Room	Process	5	10	10		
100-110-102-IC-01	Chart Recorder	Water Treatment Plant	Generator Room	I&C	1	10	10		
100-110-102-VD-01	VFD - Well Pump No. 1	Water Treatment Plant	Generator Room	Electrical	4	8	6		
100-110-102-VD-02	VFD - Well Pump No. 2	Water Treatment Plant	Generator Room	Electrical	4	8	6		
100-110-103-AN-01	Analyzer - Chlorine	Water Treatment Plant	Treatment Room	I&C	2	1	6		
100-110-103-DH-01	Dehumidifier	Water Treatment Plant	Treatment Room	Mechanical	2	6	6		
200-201-001-TM-01	Transmitter - Pressure	Tank Site	Valve Vault	I&C	3	9	6		



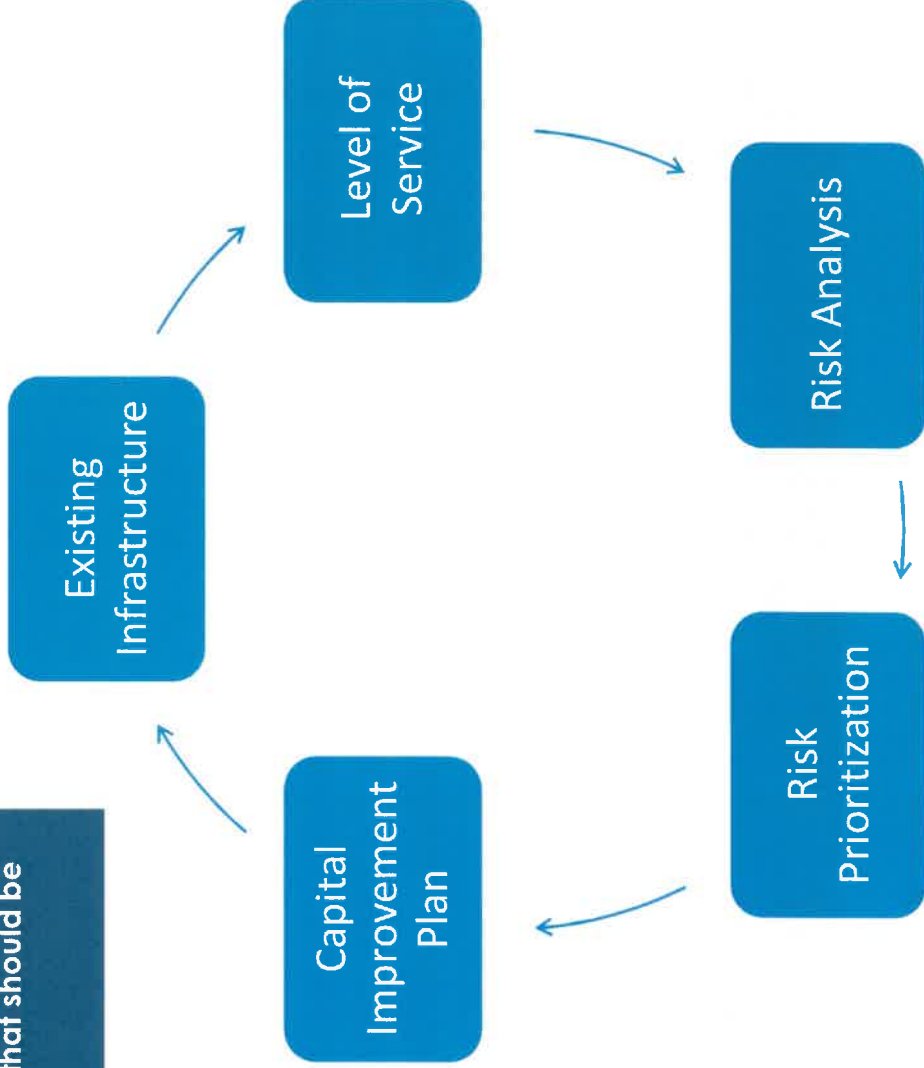
# Risk Prioritization - Top Probability of Failure - Next 5 Years - WD #2

ASSET INFORMATION							FINAL SCORES		
Asset ID	Equipment Description	Location	Room/Area	Discipline	Consequence Score	Probability of Failure Score	Probability of Failure Score (in next 5 years)		
100-110-101-PP-01	Pump - Sodium Hypochlorite	Water Treatment Plant	Chemical Room	Process	4	10	10		
100-110-101-PP-02	Pump - Phosphate	Water Treatment Plant	Chemical Room	Process	5	10	10		
100-110-101-UH-01	Unit Heater - Electric	Water Treatment Plant	Chemical Room	Mechanical	2	9	6		
100-110-102-AN-01	Analyzer - Chlorine	Water Treatment Plant	Treatment Room	I&C	2	10	8		
100-110-102-VD-01	VFD - Well Pump No 1	Water Treatment Plant	Treatment Room	Electrical	3	8	6		
100-110-102-VD-03	VFD - Well Pump No 3	Water Treatment Plant	Treatment Room	Electrical	3	8	6		



# What is Asset Management?

This is a continuous process that should be revisited annually.



# Results- Renewal/Repair- Water - 2025-2037 – WD #1

- Renewal

ASSET INFORMATION				PLANNING OUTPUTS		
Asset ID	Equipment Description	Location	Room/Area	Discipline	Estimated Renewal Date	Approximate Value of Equipment Cost at Renewal Date
100-110-101-CO-01	Control Panel - Hypochlorite Pump	Water Treatment Plant	Chemical Room	I&C	2029	\$ 49,240.00
100-110-101-CO-02	Control Panel - Corrosion Control Pump	Water Treatment Plant	Chemical Room	I&C	2029	\$ 49,240.00
100-110-101-PP-01	Pump - Sodium Hypochlorite Metering	Water Treatment Plant	Chemical Room	Process	2025	\$ 8,750.00
100-110-101-PP-02	Pump - Phosphate Metering	Water Treatment Plant	Chemical Room	Process	2025	\$ 8,750.00
100-110-102-AD-01	Auto Dialer	Water Treatment Plant	Generator Room	I&C	2026	\$ 4,180.00
100-110-102-BC-01	Battery Charger	Water Treatment Plant	Generator Room	Electrical	2027	\$ 1,990.00
100-110-102-CO-01	Control Panel	Water Treatment Plant	Generator Room	I&C	2029	\$ 112,550.00
100-110-102-EP-01	Panel - Electrical PP-1	Water Treatment Plant	Generator Room	Electrical	2033	\$ 6,330.00
100-110-102-EC-01	Chart Recorder	Water Treatment Plant	Generator Room	I&C	2025	\$ 5,630.00
100-110-102-VD-01	VFD - Well Pump No. 1	Water Treatment Plant	Generator Room	Electrical	2025	\$ 4,380.00
100-110-102-VD-02	VFD - Well Pump No. 2	Water Treatment Plant	Generator Room	Electrical	2025	\$ 10,000.00
100-110-103-AN-01	Analyzer - Chlorine	Water Treatment Plant	Treatment Room	I&C	2030	\$ 400.00
100-110-103-DH-01	Dehumidifier	Water Treatment Plant	Treatment Room	Mechanical	2027	\$ 4,620.00
100-110-103-FM-01	Flowmeter	Water Treatment Plant	Treatment Room	I&C	2029	\$ 4,620.00
100-110-103-UH-01	Unit Heater - Gas	Water Treatment Plant	Treatment Room	Mechanical	2026	\$ 2,580.00
200-201-001-TM-01	Transmitter - Pressure	Tank Site	Valve Vault	I&C	2025	\$ 2,730.00
200-201-CO-01	Control Panel	Tank Site		I&C	2027	\$ 46,410.00
200-201-EP-01	Panel - Electrical	Tank Site		Electrical	2033	\$ 3,170.00

# Results- Renewal/Repair- Water - 2025-2037 - WD #1

- Potential Repair

ASSET INFORMATION				PLANNING OUTPUTS				PLANNING INPUTS			
Equipment Description	Location	Room/Area	Discipline	Estimated Renewal Date	Approximate Value of Equipment Cost at Renewal Date	Install %	Install Labor Costs	Repair	Repair Date	Repair Material Costs	Repair Install Labor Costs
Line - Electrical pp. 1 nt Heater - Propane	Water Treatment Plant	Generator Room	Electrical	2033	\$ 6,330.00	30%	\$ 1,900.00	Verify that there is at least 3 ft clearance in front of	2025	\$ -	\$ -
nt Heater - Gas	Water Treatment Plant	Generator Room	Mechanical	2036	\$ 3,120.00	20%	\$ 620.00	Install appliance gas isolation valve.	2025	\$ 100.00	\$ 100.00
Water Treatment Plant	Water Treatment Plant	Treatment Room	Mechanical	2026	\$ 2,580.00	20%	\$ 520.00	Replace utility corrosion resistant unit if installed by	-	\$ -	\$ -
Water Treatment Plant	Water Treatment Plant	Exterior	Electrical	2048	\$ -	-	\$ -	Remediate minor staining on concrete floor by c	2026	\$ 450.00	\$ 1,620.00
Water Treatment Plant	Water Treatment Plant	Exterior	Process	2052	\$ -	-	\$ -	Verify wiring adheres to utility underground require	2025	\$ -	\$ 500.00
Water Treatment Plant	Water Treatment Plant	Exterior	Process	2070	\$ -	-	\$ -	Replace broken conduit.	2025	\$ 250.00	\$ 250.00
Water Treatment Plant	Water Treatment Plant	Exterior	Process	2070	\$ -	-	\$ -	Install vent	2026	\$ 20,000.00	\$ 20,000.00
Water Treatment Plant	Water Treatment Plant	Valve Vault	Process	2204	\$ -	-	\$ -	Flood evaluation	2026	\$ -	\$ 20,000.00
Water Treatment Plant	Water Treatment Plant	Valve Vault	Structural	2070	\$ -	-	\$ -	Remediation would entail cleaning the existing rust	2027	\$ 550.00	\$ 1,650.00
Water Treatment Plant	Water Treatment Plant	Valve Vault	Electrical	2040	\$ -	-	\$ -	Install conduit expansion fittings.	2025	\$ 500.00	\$ 500.00
Water Treatment Plant	Water Treatment Plant	Valve Vault	Electrical	2033	\$ 3,170.00	30%	\$ 950.00	Install conduit expansion fittings	2025	\$ 500.00	\$ 500.00
Water Treatment Plant	Water Treatment Plant	Valve Vault	Structural	2070	\$ -	-	\$ -	Remediation of cracking and staining would entail r	2033	\$ 3,500.00	\$ 7,500.00

# Results- Renewal/Repair- Water - 2025-2037 - WD #2

- **Renewal**

ASSET INFORMATION				PLANNING OUTPUTS				
Asset ID	Equipment Description	Location	Room/Area	Discipline	Estimated Renewal Date	Approximate Value of Equipment Cost at Renewal Date	Install %	Install/Labor Costs
100-110-101-EV-01	Eye Wash	Water Treatment Plant	Chemical Room	Process	2028	\$ 550.00	30%	\$ 160.00
100-110-101-PP-01	Pump - Sodium hypochlorite	Water Treatment Plant	Chemical Room	Process	2025	\$ 8,750.00	30%	\$ 2,630.00
100-110-101-PP-02	Pump - Phosphate	Water Treatment Plant	Chemical Room	Process	2025	\$ 8,750.00	30%	\$ 2,630.00
100-110-101-TK-01	Tank - Sodium Hypochlorite	Water Treatment Plant	Chemical Room	Process	2028	\$ 450.00	20%	\$ 90.00
100-110-101-TK-02	Tank - Phosphate	Water Treatment Plant	Chemical Room	Process	2028	\$ 450.00	20%	\$ 90.00
100-110-101-JH-01	Unit Heater - Electric	Water Treatment Plant	Chemical Room	Mechanical	2025	\$ 2,130.00	20%	\$ 430.00
100-110-102-AH-01	Analyzer - Chlorine	Water Treatment Plant	Treatment Room	IEC	2025	\$ 6,630.00	30%	\$ 2,890.00
100-110-102-CO-01	Control Panel	Water Treatment Plant	Treatment Room	IEC	2028	\$ 47,810.00	30%	\$ 14,340.00
100-110-102-DH-01	Dehumidifier	Water Treatment Plant	Treatment Room	Mechanical	2025	\$ 3,130.00	30%	\$ 940.00
100-110-102-EP-01	Panel - Electrical	Water Treatment Plant	Treatment Room	Electrical	2028	\$ 6,830.00	30%	\$ 2,050.00
100-110-102-EP-02	Panel - Electrical	Water Treatment Plant	Treatment Room	Electrical	2028	\$ 5,740.00	30%	\$ 1,720.00
100-110-102-FH-01	Flowmeter - Well No. 1	Water Treatment Plant	Treatment Room	IEC	2028	\$ 4,410.00	30%	\$ 1,320.00
100-110-102-FH-02	Flowmeter - Total	Water Treatment Plant	Treatment Room	IEC	2027	\$ 4,540.00	30%	\$ 1,360.00
100-110-102-TX-01	Transformer	Water Treatment Plant	Treatment Room	Electrical	2035	\$ -	-	\$ -
100-110-102-JH-01	Unit Heater - Electric No. 1	Water Treatment Plant	Treatment Room	Mechanical	2025	\$ 1,500.00	20%	\$ 300.00
100-110-102-JH-02	Unit Heater - Electric No. 2	Water Treatment Plant	Treatment Room	Mechanical	2025	\$ 3,500.00	20%	\$ 700.00
100-110-102-JH-03	Unit Heater - Electric No. 3	Water Treatment Plant	Treatment Room	Mechanical	2025	\$ 3,500.00	20%	\$ 700.00
100-110-102-VD-01	VFD - Well Pump No. 1	Water Treatment Plant	Treatment Room	Electrical	2025	\$ 4,390.00	30%	\$ 1,310.00
100-110-102-VD-02	VFD - Well Pump No. 2	Water Treatment Plant	Treatment Room	Electrical	2025	\$ 2,500.00	30%	\$ 750.00
100-110-102-VD-03	VFD - Well Pump No. 3	Water Treatment Plant	Treatment Room	Electrical	2025	\$ 2,500.00	30%	\$ 750.00
200-201-001-DF-01	Exhaust Fan	Water Treatment Plant	Roof	Mechanical	2035	\$ -	-	\$ -
200-201-001-DH-01	Dehumidifier	Booster Pump Station	Pump Room	Mechanical	2033	\$ 480.00	30%	\$ 140.00
200-201-001-JH-01	Unit Heater - Electric	Booster Pump Station	Pump Room	Mechanical	2027	\$ 3,710.00	20%	\$ 740.00
200-201-101-CO-01	Control Panel	Booster Pump Station	Control Room	IEC	2027	\$ 46,410.00	30%	\$ 13,920.00
200-201-101-TM-01	Transmitter - Pressure	Booster Pump Station	Control Room	IEC	2027	\$ 2,890.00	30%	\$ 870.00
200-201-101-TM-02	Transmitter - Flowmeter	Booster Pump Station	Control Room	IEC	2031	\$ 5,110.00	30%	\$ 1,530.00
200-201-101-VD-01	VFD - Booster Pump No. 1	Booster Pump Station	Control Room	Electrical	2028	\$ 6,440.00	30%	\$ 1,930.00
200-201-101-VD-02	VFD - Booster Pump No. 2	Booster Pump Station	Control Room	Electrical	2028	\$ 6,440.00	30%	\$ 1,930.00

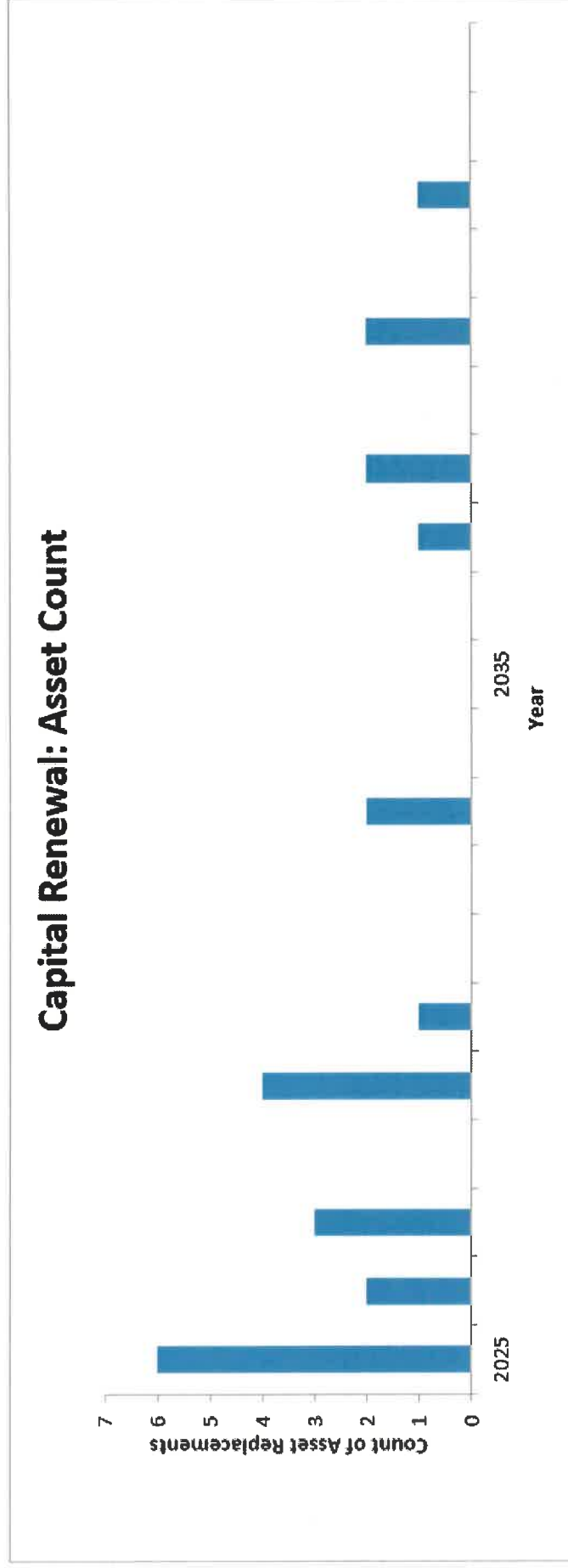


# Results- Renewal/Repair- Water - 2025-2037 - WD #2

- Repair

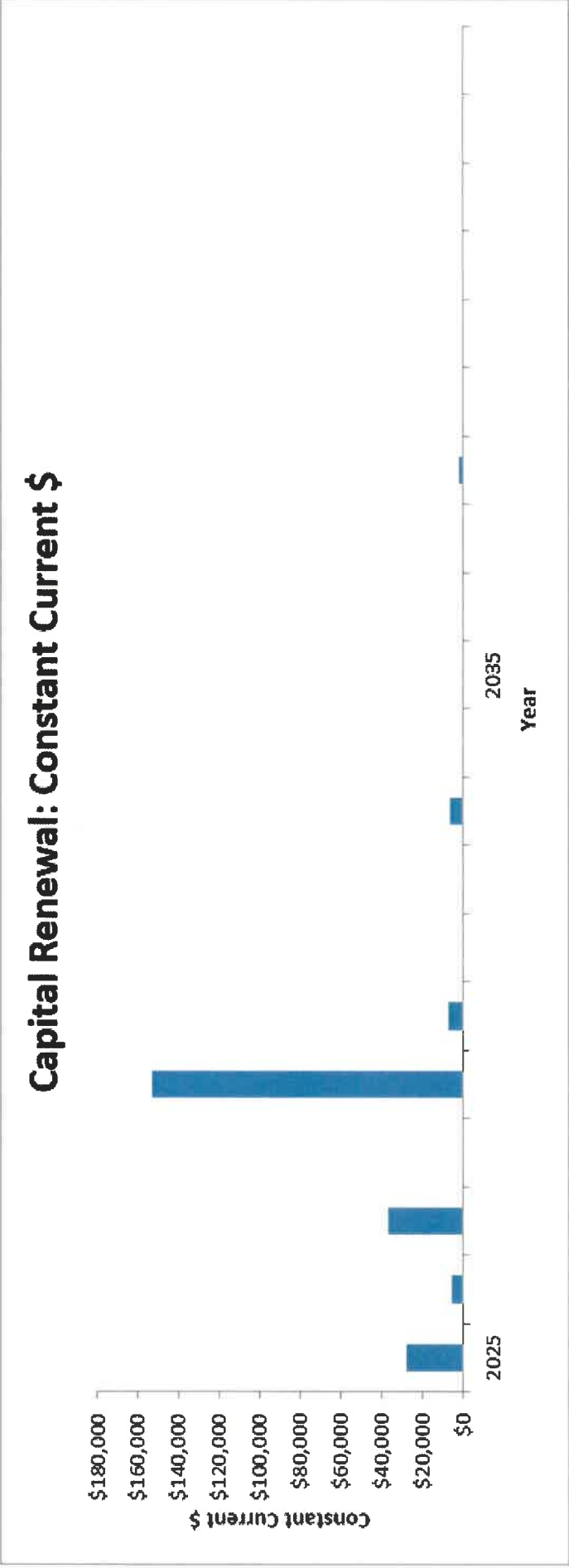
ASSET INFORMATION				PLANNING OUTPUTS				PLANNING INPUTS			
Equipment Description	Location	Room/Area	Discipline	Estimated Renewal Date	Approximate Value of Equipment Cost at Renewal Date	Install %	Install Labor Costs	Repair	Repair Date	Repair Material Costs	Repair Install Labor Costs
Unit Heater - Electric	Water Treatment Plant	Chemical Room	Mechanical	2025	\$ 2,130.00	20%	\$ 430.00	Recommend corrosion resistance unit if installed in	2025	\$ 250.00	\$ 250.00
Unit Heater - Electric No. 1	Water Treatment Plant	Treatment Room	Mechanical	2025	\$ 1,500.00	20%	\$ 300.00	Recommend corrosion resistant unit if installed in a	-	\$ -	\$ -
Unit Heater - Electric No. 2	Water Treatment Plant	Treatment Room	Mechanical	2025	\$ 3,566.00	20%	\$ 700.00	Recommend corrosion resistant unit if installed in a	-	\$ -	\$ -
VFD - Well Pump No. 1	Water Treatment Plant	Treatment Room	Electrical	2025	\$ 4,380.00	30%	\$ 1,310.00	Ensure VFD cable is used. Verify if harmonic mag;	2025	\$ -	\$ 500.00
VFD - Well Pump No. 3	Water Treatment Plant	Treatment Room	Electrical	2025	\$ 2,500.00	30%	\$ 750.00	Ensure VFD cable is used. Verify if harmonic mag;	2025	\$ -	\$ 500.00
Generator	Water Treatment Plant	Exterior	Architectural	2035	\$ -	-	\$ -	Remediation of hairline crack would entail crack se	2026	\$ 3,475.00	\$ 7,250.00
Exhaust Fan	Water Treatment Plant	Roof	Mechanical	2035	\$ -	-	\$ -	Ensure required servicing distance is met between	2025	\$ -	\$ -
Water Treatment Plant	Water Treatment Plant	Roof	Process	2199	\$ -	-	\$ -	Add OSHA compliant maintenance access if there	2026	\$ 200.00	\$ 1,000.00
Dehumidifier	Booster Pump Station	Pump Room	Mechanical	2033	\$ 480.00	30%	\$ 140.00	Repair broken section of fence and fix rear gate	2026	\$ 500.00	\$ 500.00
Disconnector - Man	Booster Pump Station	Control Room	Electrical	2030	\$ -	-	\$ -	Repair leak above equipment or move equipment	2025	\$ 250.00	\$ 250.00
Transfer Switch - Automatic	Booster Pump Station	Control Room	Electrical	2045	\$ -	-	\$ -	Move bus tank to at least 3ft away from panel. Ve	2025	\$ 200.00	\$ 500.00
VFD - Booster Pump No. 1	Booster Pump Station	Control Room	Electrical	2026	\$ 6,440.00	30%	\$ 1,930.00	Ensure breaker rating is adequate.	2025	\$ -	\$ 500.00
VFD - Booster Pump No. 2	Booster Pump Station	Control Room	Electrical	2026	\$ 6,440.00	30%	\$ 1,930.00	Ensure a VFD cable is being used, and verify if ad;	2026	\$ -	\$ 500.00
Generator	Booster Pump Station	Exterior	Architectural	2053	\$ -	-	\$ -	Verify manufacturer required clearances. Ensure t	2025	\$ 925.00	\$ 13,525.00
Water Tank Site	Water Tank	Exterior	Process	2209	\$ -	-	\$ -	The siding should be abated and assessed to preser	2025	\$ -	\$ -
Tank - Water Storage	Water Tank	Exterior	Structural	2059	\$ -	-	\$ -	Flood e/ri	2025	\$ -	\$ -
				2059	\$ -	-	\$ -	Remediation would entail high strength concrete	2030	\$ 8,400.00	\$ 15,600.00

# Capital Improvement Plan- Water - Asset Renewal Count – WD #1



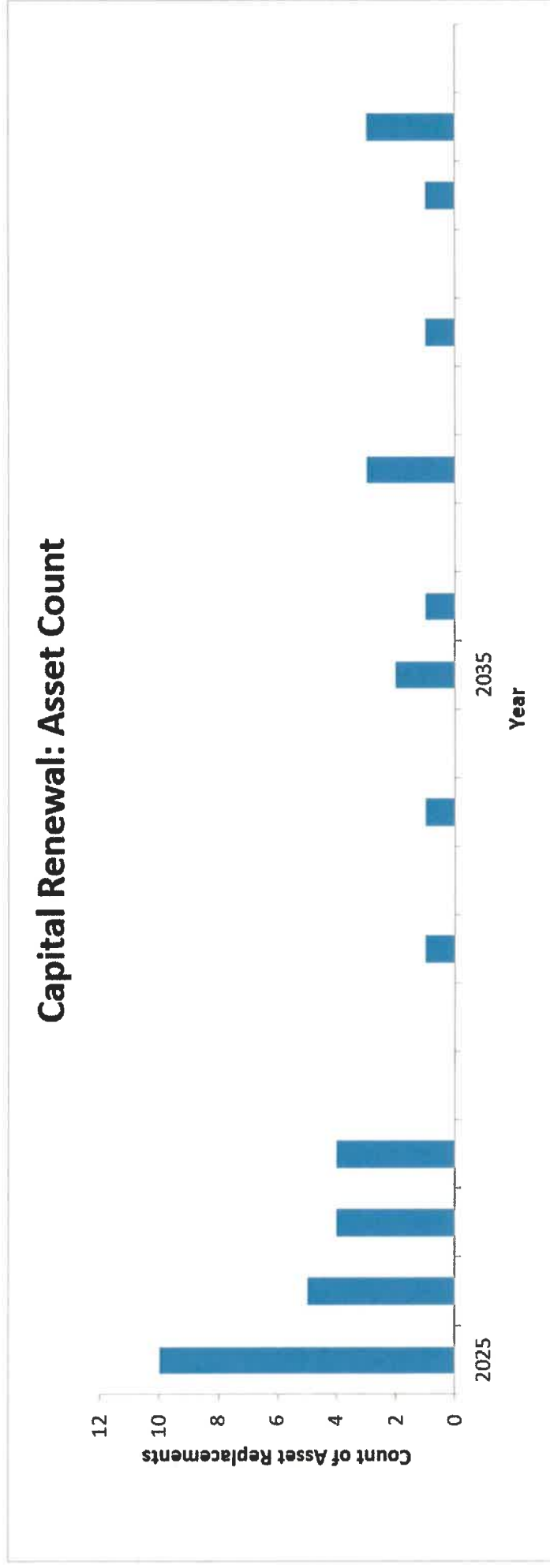
\*Based on Renewal Year

# Capital Improvement Plan- Water - Renewal Cost – WD #1



\*Based on renewal year.  
Costs after 2035 not accounted for all items.  
Only Material Costs Shown

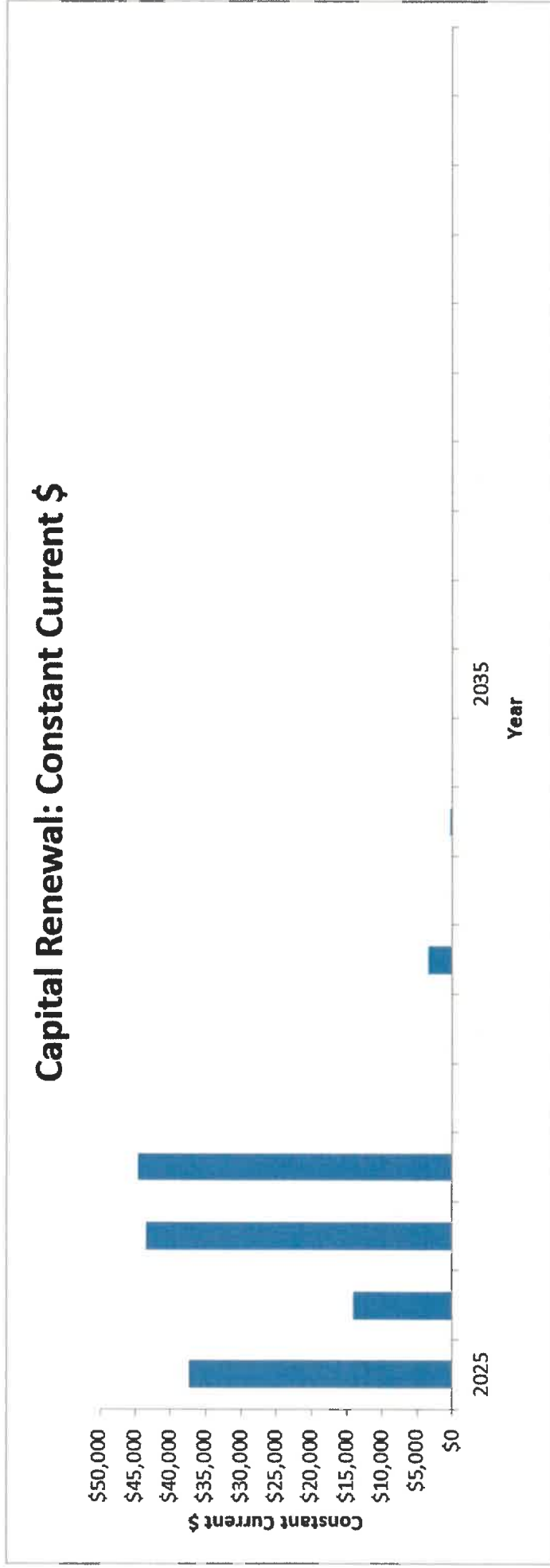
## Capital Improvement Plan- Water - Asset Renewal Count – WD #2



\*Based on Renewal Year



# Capital Improvement Plan- Water - Renewal Cost – WD #2



\*Based on renewal year.  
Costs after 2035 not accounted for all items.  
Only Material Costs Shown

# Capital Improvement Plan- WD #1

- 20%: General DR&P
- 3%: Bond and Insurance
- 90%: Project Contingency
- 20%: Engineering Design and Bidding Services
- 5%: Engineering Construction Services
- 5%: Material Testing
- 0%: Legal/Admin and Easements
- 0%: Wetlands & Con.Com

Outputs

Improvement Plan Graphs



## 20-Year Implementation Plan

LOCATION	FISCAL YEAR													TOTAL								
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037		2038	2039	2040	2041	2042	2043	2044	
Flash Site	\$ 13,300	\$ -	\$ 156,340	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37,800	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 240,000
Water Treatment Plant	\$ 996,100	\$ 177,000	\$ 1,540	\$ -	\$ 101,300	\$ 33,800	\$ -	\$ -	\$ 28,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,059,300
<b>GRAND TOTAL</b>	\$ 1,009,400	\$ 177,000	\$ 157,880	\$ -	\$ 101,300	\$ 33,800	\$ -	\$ -	\$ 66,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,264,300

Note: All budgetary costs include a 0.02% per year escalation.



# Capital Improvement Plan- WD #2

- 301: General OH&P
- 501: Bond and Insurance
- 502: Project Contingency
- 503: Engineering Design and Bidding Services
- 504: Engineering Construction Services
- 505: Material Testing
- 506: Legal/Admin and Exemptions
- 507: Wetlands & Con.Com
- 508:



Planning Outputs

Improvement Plan Outputs

## 20-Year Implementation Plan

LOCATION	FISCAL YEAR																			TOTAL
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2037	2038	2039	2040	2041	2042	2043	2044	
Breaker Pump Station	\$ 48,400	\$ 44,400	\$ 171,300	\$ -	\$ 16,500	\$ -	\$ 16,500	\$ -	\$ 16,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 374,200
Water Tank	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,000
Water Treatment Plant	\$ 853,100	\$ 483,400	\$ 14,800	\$ 186,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,415,300
<b>GRAND TOTAL</b>	<b>\$ 218,500</b>	<b>\$ 521,800</b>	<b>\$ 186,100</b>	<b>\$ 186,000</b>	<b>\$ -</b>	<b>\$ 80,000</b>	<b>\$ 16,000</b>	<b>\$ -</b>	<b>\$ 1,600</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 774,400</b>

Note: All budgetary costs include a 0.83% per year escalation.



## Understanding Outputs

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- **The Capital Improvement outputs are planning tools**
  - Not exact amounts
  - Estimates of possible magnitude of costs
- **Based on renewal year**
- **No requirement to take action**
  - Probability of failure will increase
  - Consequence of failure may remain the same. Improving redundancy may lower.
- **Asset management is a process**
  - The outputs are only as good as the input
- **Conceptual design level estimates encouraged**

## **Next Steps- Maintenance and Planning**

- **Maintain and revisit your asset managements plan at least annually**
- **Revise asset information as inspections, rehabilitation, and repair projects are completed.**
- **Begin planning and budgeting now!!**
  - **~7 year funded project cycle**
  - **Funding programs**
  - **Study phases and/or quotes**
  - **Conceptual/design level estimates**
- **Think of implementing rate adjustments ahead of schedule**
- **Delivery of final reports and digital asset management tool**

# THANK YOU

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