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## Update "No-Site-Visit" Reserve Study



### **Timberlake Water System Shelton, WA**

**Report #: 23247-6**  
**For Period Beginning: October 1, 2020**  
**Expires: September 30, 2021**

**Date Prepared: May 14, 2020**



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**Hello, and welcome to your Reserve Study!**

**T**his Report is a valuable budget planning tool, for with it you control the future of your association. It contains all the fundamental information needed to understand your current and future Reserve obligations, the most significant expenditures your association will face.

**W**ith respect to Reserves, this Report will tell you "where you are," and "where to go from here."

In this Report, you will find...

- 1) A List of What you're Reserving For**
- 2) An Evaluation of your Reserve Fund Size and Strength**
- 3) A Recommended Multi-Year Reserve Funding Plan**

**More Questions?**

Visit our website at [www.ReserveStudy.com](http://www.ReserveStudy.com) or call us at:

253-661-5437



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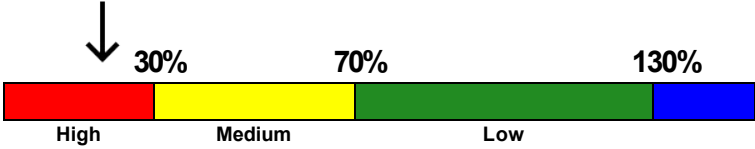
## 3- Minute Executive Summary

**Association:** Timberlake Water System **Assoc. #: 23247-6**  
**Location:** Shelton, WA **# of Units: 1,377**  
**Report Period:** October 1, 2020 through September 30, 2021

**Findings/Recommendations as-of: October 1, 2020**

Starting Reserve Balance . . . . .	\$1,559,793
Current Fully Funded Reserve Balance . . . . .	\$7,847,477
Percent Funded . . . . .	19.9 %
Average Reserve (Deficit) or Surplus Per Unit . . . . .	(\$4,566)
2020/2021 100% Annual "Full Funding" Contributions . . . . .	\$554,000
2020/2021 70% Annual "Threshold Funding" Contributions . . . . .	\$426,500
2020/2021 "Alternate/Baseline Funding" to keep Reserves above \$0 . . . . .	\$139,644
Recommended 2020/2021 Special Assessment . . . . .	\$0
Most Recent Budgeted Contribution Rate . . . . .	\$313,956

Reserves % Funded: 19.9%



Special Assessment Risk:

**Economic Assumptions:**

**Net Annual "After Tax" Interest Earnings Accruing to Reserves . . . . . 1.00 %**  
**Annual Inflation Rate . . . . . 3.00 %**

- This is a Update "No-Site-Visit" Reserve Study, meeting all requirements of the Revised Code of Washington (RCW). This study was prepared by, or under the supervision of a credentialed Reserve Specialist (RS 153). As a matter of record, we note your Fiscal Year has changed as compared to previous years. Now understood as October-September (10.1-9.30), no longer July-June (7.1-6.30).
- Your Reserve Fund is currently 19.9 % Funded. This means the association’s special assessment and/or deferred maintenance risk is currently High. The objective of your multi-year Funding Plan is to fund your Reserves to a level where you will enjoy a low risk of Reserve cash flow problems.
- Based on this starting point and your anticipated future expenses, our recommendation is to budget Reserve Contributions to within the 70% to 100% range as noted above. The 100% “Full” and 70% contribution rates are designed to gradually achieve these funding objectives by the end of our 30-year report scope.
- No assets appropriate for Reserve designation known to be excluded. See appendix for important component information and the basis of our assumptions. "Alternate Funding" in this report is synonymous with Baseline Funding, as defined within the RCW " to maintain the reserve account balance above zero throughout the thirty-year study period, without special assessments." Funding plan contribution rates are presented as an

**aggregate total, assuming average percentage of ownership. The actual ownership allocation may vary - refer to your governing documents.**

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
<b>Capacity/Filter</b>				
106	Water System Plan - Update	6	2	\$57,300
901	Well Pump/Motor #1 - Replace	20	4	\$23,300
901	Well Pump/Motor #2 - Replace	10	0	\$23,300
901	Well Pump/Motor #3 - Replace	10	0	\$25,500
904	Well #1 Control - Replace	30	4	\$14,900
904	Well #2 Control - Replace	30	14	\$14,900
904	Well #3 Control - Replace	30	18	\$14,900
907	Filter System - Maintain/Replace	35	20	\$120,800
<b>Store/Monitor</b>				
910	Storage Tank, Steel - Replace	50	25	\$509,000
911	Storage Tank, Concrete - Replace	60	12	\$138,000
914	Storage Tank, Exterior - Recoat	10	5	\$23,900
915	Storage Tank, Exterior-Blast/Recoat	20	5	\$81,700
916	Storage Tank, Interior-Blast/Recoat	20	12	\$136,000
918	Reservoir Control System - Replace	30	15	\$35,000
919	Telemetry System - Replace	15	0	\$4,225
<b>Treatment/Boost</b>				
920	Hypochlorite Generator - Replace	30	12	\$40,350
922	Hypochlorite Cell - Replace	10	2	\$14,900
926	Treatment/Monitoring - Replace	20	5	\$21,250
930	Booster System, Primary - Replace	20	18	\$204,500
934	Booster System, Back Up - Maintain	10	1	\$6,335
<b>Distribution</b>				
940	Water Main Line Project, A-Replace	100	1	\$320,000
940	Water Main Line Project, B-Replace	100	6	\$420,000
940	Water Main Line Project, C-Replace	100	11	\$504,000
940	Water Main Line Project, D-Replace	100	16	\$588,000
945	Remaining Main Lines, E- Replace	100	46	\$2,424,000
945	Remaining Main Lines, F- Replace	100	47	\$2,424,000
945	Remaining Main Lines, G - Replace	100	48	\$2,424,000
945	Remaining Main Lines, H - Replace	100	49	\$2,424,000
946	Water Main Lines, 2009 - Replace	100	89	\$520,000
947	Water Main Lines, 2019/2020-Replace	100	99	\$201,600
950	Hydrants - Add/Replace	1	0	\$10,625
955	Pressure Reducing Valves - Replace	25	12	\$42,350
956	Water Meters - Replace	15	11	\$138,500
957	Water Meter Setters - Replace	45	26	\$256,000
<b>Buildings/Site</b>				
964	Building Roof - Replace	40	27	\$38,200
970	Chain Link Fence - Replace	30	9	\$11,700
<b>Systems/Equipment</b>				
980	Generator, 200 KW - Upgrade	40	37	\$122,000
994	Compact Tractor/Loader - Replace	25	1	\$39,250
995	Truck (1/3) - Replace	12	4	\$6,900
996	Truck - Replace	12	7	\$20,200

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
998	Leak Detector - Replace	12	0	\$4,735
999	Meter Reader System - Replace	5	0	\$4,225
<b>42 Total Funded Components</b>				

Note 1: Yellow highlighted line items are expected to require attention in this initial year, green highlighted items are expected to occur within the first-five years.

## Introduction



A Reserve Study is the art and science of anticipating, and preparing for, an association's major common area repair and replacement expenses. Partially art, because in this field we are making projections about the future. Partially science, because our work is a combination of research and well-defined computations, following consistent National Reserve Study Standard principles.

The foundation of this and every Reserve Study is your Reserve Component List (what you are reserving for). This is because the Reserve Component List defines the *scope and schedule* of all your anticipated upcoming Reserve projects. Based on that List and your starting balance, we calculate the association's Reserve Fund Strength (reported in terms of "Percent Funded"). Then we compute a Reserve Funding Plan to provide for the Reserve needs of the association. These form the three results of your Reserve Study.



Reserve contributions are not “for the future”. Reserve contributions are designed to offset the ongoing, daily deterioration of your Reserve assets. Done well, a stable, budgeted Reserve Funding Plan will collect sufficient funds from the owners who enjoyed the use of those assets, so the association is financially prepared for the irregular expenditures scattered through future years when those projects eventually require replacement.

## Methodology



For this [Update No-Site-Visit Reserve Study](#), we started with a review of your prior Reserve Study, then looked into recent Reserve expenditures, evaluated how expenditures are handled (ongoing maintenance vs Reserves), and researched any well-established association

precedents. We updated and adjusted your Reserve Component List on the basis of time elapsed since the last Reserve Study and interviews with association representatives.



## *Which Physical Assets are Funded by Reserves?*

There is a national-standard four-part test to determine which expenses should appear in your Reserve Component List. First, it must be a common area maintenance responsibility. Second, the component must have a limited life. Third, the remaining life must be predictable (or it by definition is a *surprise* which cannot be accurately anticipated). Fourth, the component must be above a minimum threshold cost (often between .5% and 1% of an association's total budget). This limits Reserve



RESERVE COMPONENT "FOUR-PART TEST"

Components to major, predictable expenses. Within this framework, it is inappropriate to include *lifetime* components, unpredictable expenses (such as damage due to fire, flood, or earthquake), and expenses more appropriately handled from the Operational Budget or as an insured loss.

## *How do we establish Useful Life and Remaining Useful Life estimates?*

- 1) Visual Inspection (observed wear and age)
- 2) Association Reserves database of experience
- 3) Client History (install dates & previous life cycle information)
- 4) Vendor Evaluation and Recommendation

## *How do we establish Current Repair/Replacement Cost Estimates?*

In this order...

- 1) Actual client cost history, or current proposals
- 2) Comparison to Association Reserves database of work done at similar associations
- 3) Vendor Recommendations
- 4) Reliable National Industry cost estimating guidebooks

## How much Reserves are enough?

Reserve adequacy is not measured in cash terms. Reserve adequacy is found when the *amount* of current Reserve cash is compared to Reserve component deterioration (the *needs of the association*). Having *enough* means the association can execute its projects in a timely manner with existing Reserve funds. Not having *enough* typically creates deferred maintenance or special assessments.

Adequacy is measured in a two-step process:

- 1) Calculate the *value of deterioration* at the association (called Fully Funded Balance, or FFB).
- 2) Compare that to the Reserve Fund Balance, and express as a percentage.



Each year, the *value of deterioration* at the association changes. When there is more deterioration (as components approach the time they need to be replaced), there should be more cash to offset that deterioration and prepare for the expenditure. Conversely, the *value of deterioration* shrinks after projects are accomplished. The *value of deterioration* (the FFB) changes each year, and is a moving but predictable target.

There is a high risk of special assessments and deferred maintenance when the Percent Funded is *weak*, below 30%. Approximately 30% of all associations are in this high risk range. While the 100% point is Ideal (indicating Reserve cash is equal to the *value of deterioration*), a Reserve Fund in the 70% - 130% range is considered strong (low risk of special assessment).

Measuring your Reserves by Percent Funded tells how well prepared your association is for upcoming Reserve expenses. New buyers should be very aware of this important disclosure!

## How much should we contribute?



RESERVE FUNDING PRINCIPLES

According to National Reserve Study Standards, there are four Funding Principles to balance in developing your Reserve Funding Plan. Our first objective is to design a plan that provides you with sufficient cash to perform your Reserve projects on time. Second, a stable contribution is desirable because it keeps these naturally irregular expenses from unsettling the budget.

Reserve contributions that are evenly distributed over current and future owners enable each owner to pay their fair share of the association's Reserve expenses over the years. And finally, we develop a plan that is fiscally responsible and safe for Boardmembers to recommend to their association. Remember, it is the Board's job to provide for the ongoing care of the common areas. Boardmembers invite liability exposure when Reserve contributions are inadequate to offset ongoing common area deterioration.

## What is our Recommended Funding Goal?

Maintaining the Reserve Fund at a level equal to the *value* of deterioration is called "Full Funding" (100% Funded). As each asset ages and becomes "used up," the Reserve Fund grows proportionally. **This is simple, responsible, and our recommendation.** Evidence shows that associations in the 70 - 130% range *enjoy a low risk of special assessments or deferred maintenance.*



FUNDING OBJECTIVES

Allowing the Reserves to fall close to zero, but not below zero, is called Baseline Funding. Doing so allows the Reserve Fund to drop into the 0 - 30% range, where there is a high risk of special assessments & deferred maintenance. Since Baseline Funding still provides for the timely execution of all Reserve projects, and only the "margin of safety" is different, Baseline Funding contributions average only 10% - 15% less than Full Funding contributions. Threshold Funding is the title of all other Cash or Percent Funded objectives *between* Baseline Funding and Full Funding.

## Projected Expenses

While this Reserve Study looks forward 30 years, we have no expectation that all these expenses will all take place as anticipated. This Reserve Study needs to be updated annually because we expect the timing of these expenses to shift and the size of these expenses to change. We do feel more certain of the timing and cost of near-term expenses than expenses many years away.

The figure below summarizes the projected future expenses at your association as defined by your Reserve Component List. A summary of these expenses are shown in the 30-yr Summary Table, while details of the projects that make up these expenses are shown in the Cash Flow Detail Table.

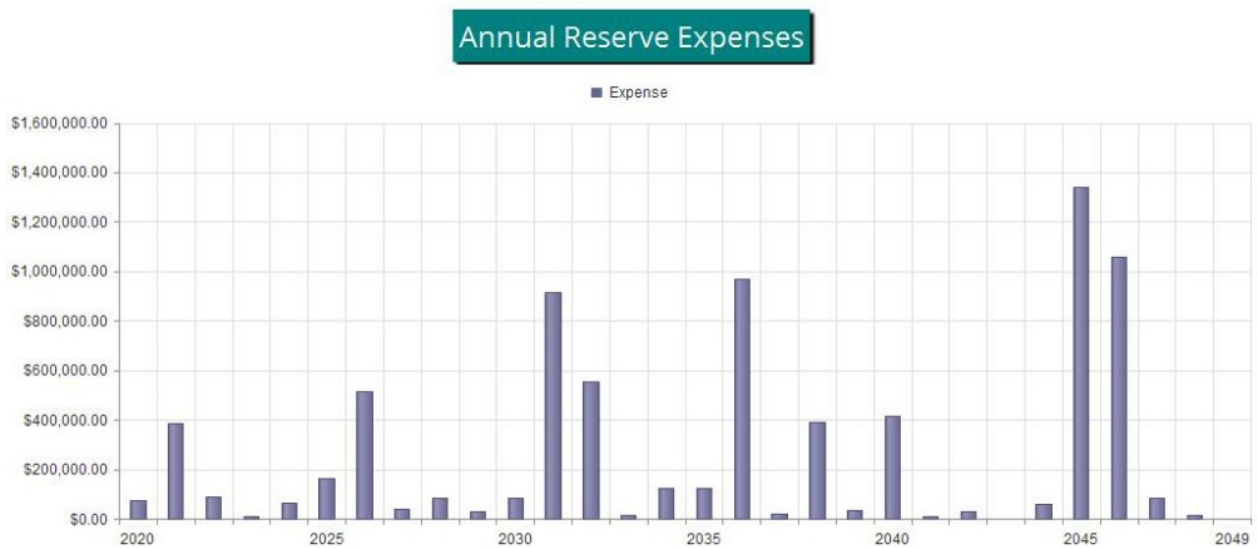


Figure 1

## Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be \$1,559,793 as-of the start of your Fiscal Year on 10/1/2020. As of that date, your Fully Funded Balance is computed to be \$7,847,477 (see Fully Funded Balance Table). This figure represents the deteriorated value of your common area components.

## Recommended Funding Plan

Based on your current Percent Funded and your near-term and long-term Reserve needs, we are recommending budgeted contributions of \$554,000 this Fiscal Year. The overall 30-yr plan, in perspective, is shown below. This same information is shown numerically in both the 30-yr Summary Table and the Cash Flow Detail Table.

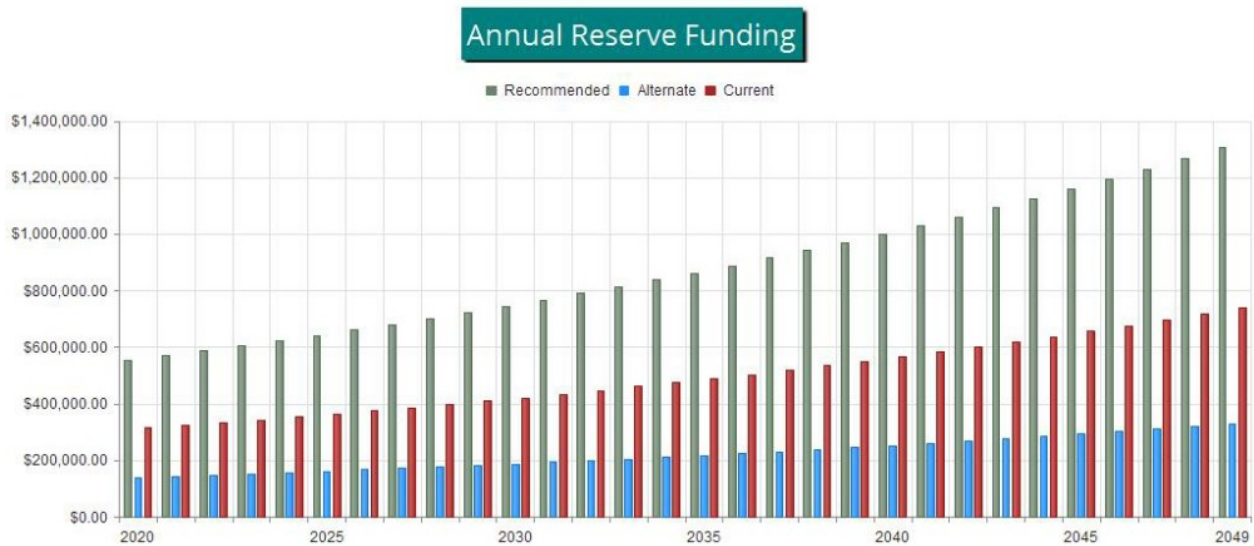


Figure 2

The following chart shows your Reserve balance under our recommended Full Funding Plan, an alternate Baseline Funding Plan, and at your current budgeted contribution rate (assumes future increases), compared to your always-changing Fully Funded Balance target.

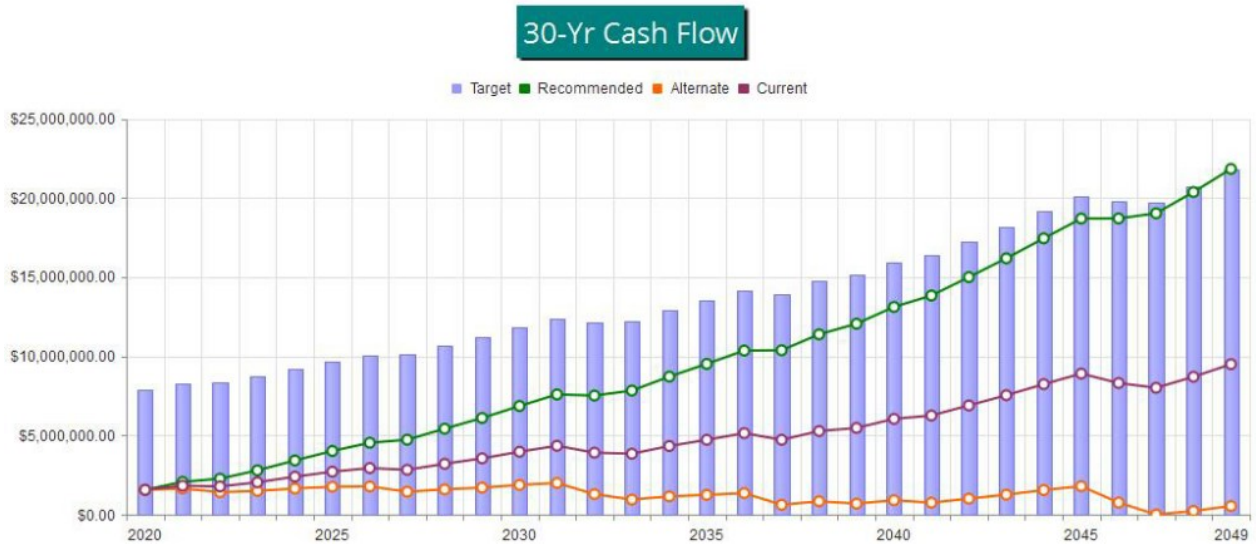


Figure 3

This figure shows the same information plotted on a Percent Funded scale. It is clear here to see how your Reserve Fund strength approaches the 100% Funded level under our recommended multi-yr Funding Plan.

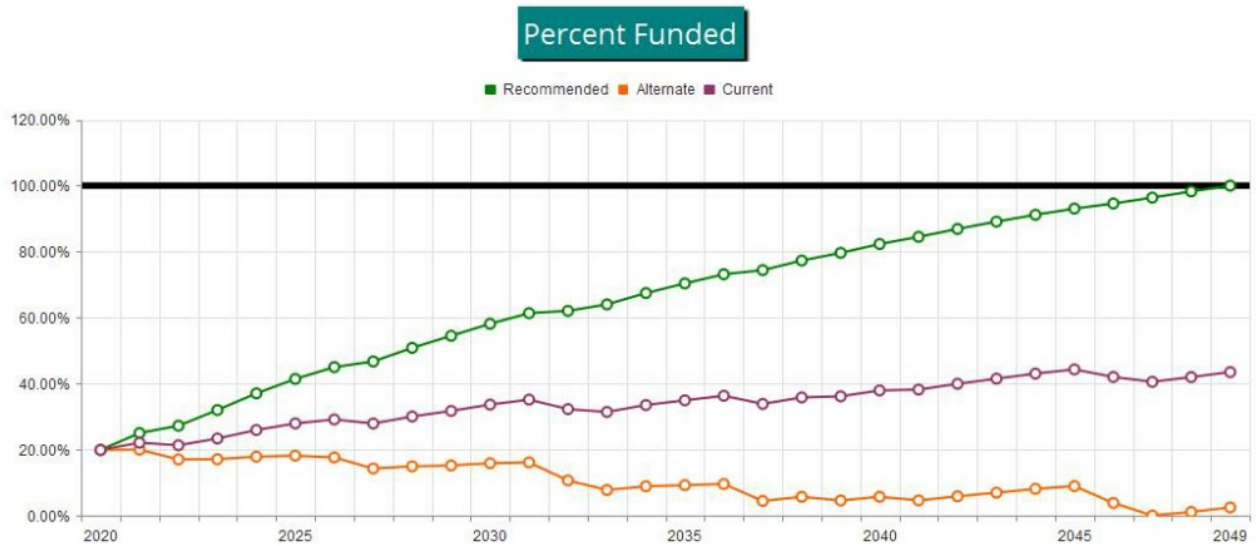


Figure 4

## **Table Descriptions**

Executive Summary is a summary of your Reserve Components

Reserve Component List Detail discloses key Component information, providing the foundation upon which the financial analysis is performed.

Fully Funded Balance shows the calculation of the Fully Funded Balance for each of your components, and their contributions to the property total. For each component, the Fully Funded Balance is the fraction of life used up multiplied by its estimated Current Replacement Cost.

Component Significance shows the relative significance of each component to Reserve funding needs of the property, helping you see which components have more (or less) influence than others on your total Reserve contribution rate. The deterioration cost/yr of each component is calculated by dividing the estimated Current Replacement Cost by its Useful Life, then that component's percentage of the total is displayed.

Accounting-Tax Summary provides information on each Component's proportionate portion of key totals, valuable to accounting professionals primarily during tax preparation time of year.

30-Yr Reserve Plan Summary provides a one-page 30-year summary of the cash flowing into and out of the Reserve Fund, with a display of the Fully Funded Balance, Percent Funded, and special assessment risk at the beginning of each year.

30-Year Income/Expense Detail shows the detailed income and expenses for each of the next 30 years. This table makes it possible to see which components are projected to require repair or replacement in a particular year, and the size of those individual expenses.

# Reserve Component List Detail

23247-6  
NSV

# Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate		
				Best Case	Worst Case	
<b>Capacity/Filter</b>						
106	Water System Plan - Update	Every 6 years	6	2	\$52,000	\$62,600
901	Well Pump/Motor #1 - Replace	(1) 25 HP submersible 6"	20	4	\$21,200	\$25,400
901	Well Pump/Motor #2 - Replace	(1) 25 HP submersible 6"	10	0	\$21,200	\$25,400
901	Well Pump/Motor #3 - Replace	(1) 30 HP submersible 8"	10	0	\$23,400	\$27,600
904	Well #1 Control - Replace	(1) motor control	30	4	\$12,800	\$17,000
904	Well #2 Control - Replace	(1) motor control	30	14	\$12,800	\$17,000
904	Well #3 Control - Replace	(1) motor control	30	18	\$12,800	\$17,000
907	Filter System - Maintain/Replace	(6) tank system	35	20	\$97,600	\$144,000
<b>Store/Monitor</b>						
910	Storage Tank, Steel - Replace	(1) 200,000 gallon	50	25	\$456,000	\$562,000
911	Storage Tank, Concrete - Replace	(1) 60,000 gallon	60	12	\$116,000	\$160,000
914	Storage Tank, Exterior - Recoat	(1) 200,000 gallon	10	5	\$21,200	\$26,600
915	Storage Tank, Exterior-Blast/Recoat	(1) 200,000 gallon	20	5	\$76,400	\$87,000
916	Storage Tank, Interior-Blast/Recoat	(1) 200,000 gallon	20	12	\$128,000	\$144,000
918	Reservoir Control System - Replace	(1) control panel	30	15	\$29,700	\$40,300
919	Telemetry System - Replace	(1) system	15	0	\$3,710	\$4,740
<b>Treatment/Boost</b>						
920	Hypochlorite Generator - Replace	(1) US Filter	30	12	\$34,000	\$46,700
922	Hypochlorite Cell - Replace	(1) US Filter	10	2	\$12,800	\$17,000
926	Treatment/Monitoring - Replace	Pumps, sensors, monitors	20	5	\$19,100	\$23,400
930	Booster System, Primary - Replace	(1) Paco 9000	20	18	\$189,000	\$220,000
934	Booster System, Back Up - Maintain	(1) system, quad pump	10	1	\$5,250	\$7,420
<b>Distribution</b>						
940	Water Main Line Project, A-Replace	Approx 1,600 LF	100	1	\$304,000	\$336,000
940	Water Main Line Project, B-Replace	Approx 2,000 LF	100	6	\$380,000	\$460,000
940	Water Main Line Project, C-Replace	Approx 2,400 LF	100	11	\$456,000	\$552,000
940	Water Main Line Project, D-Replace	Approx 2,800 LF	100	16	\$532,000	\$644,000
945	Remaining Main Lines, E- Replace	~(1/4) of 59,000 LF	100	46	\$2,024,000	\$2,824,000
945	Remaining Main Lines, F- Replace	~(1/4) of 59,000 LF	100	47	\$2,024,000	\$2,824,000
945	Remaining Main Lines, G - Replace	~(1/4) of 59,000 LF	100	48	\$2,024,000	\$2,824,000
945	Remaining Main Lines, H - Replace	~(1/4) of 59,000 LF	100	49	\$2,024,000	\$2,824,000
946	Water Main Lines, 2009 - Replace	Approx 2,600 LF	100	89	\$494,000	\$546,000
947	Water Main Lines, 2019/2020-Replace	Approx 960 LF	100	99	\$182,400	\$220,800
950	Hydrants - Add/Replace	(18) hydrants, existing	1	0	\$8,450	\$12,800
955	Pressure Reducing Valves - Replace	~(570) Cash Acme EB86U	25	12	\$36,300	\$48,400
956	Water Meters - Replace	(1,270) meters	15	11	\$122,000	\$155,000
957	Water Meter Setters - Replace	(1,270) boxes/setters	45	26	\$242,000	\$270,000
<b>Buildings/Site</b>						
964	Building Roof - Replace	Approx 3,800 GSF	40	27	\$31,800	\$44,600
970	Chain Link Fence - Replace	Approx 500 linear feet	30	9	\$10,600	\$12,800
<b>Systems/Equipment</b>						
980	Generator, 200 KW - Upgrade	(1) 200 KW, new	40	37	\$106,000	\$138,000
994	Compact Tractor/Loader - Replace	(1) Kubota B20	25	1	\$36,100	\$42,400



#	Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate	
					Best Case	Worst Case
995	Truck (1/3) - Replace	(1) 1992 GMC 3500HD	12	4	\$5,870	\$7,930
996	Truck - Replace	(1) 2008 Ford F150	12	7	\$17,000	\$23,400
998	Leak Detector - Replace	(1) system	12	0	\$4,220	\$5,250
999	Meter Reader System - Replace	(2) meters, software	5	0	\$3,710	\$4,740
42	Total Funded Components					

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
<b>Capacity/Filter</b>								
106	Water System Plan - Update	\$57,300	X	4	/	6	=	\$38,200
901	Well Pump/Motor #1 - Replace	\$23,300	X	16	/	20	=	\$18,640
901	Well Pump/Motor #2 - Replace	\$23,300	X	10	/	10	=	\$23,300
901	Well Pump/Motor #3 - Replace	\$25,500	X	10	/	10	=	\$25,500
904	Well #1 Control - Replace	\$14,900	X	26	/	30	=	\$12,913
904	Well #2 Control - Replace	\$14,900	X	16	/	30	=	\$7,947
904	Well #3 Control - Replace	\$14,900	X	12	/	30	=	\$5,960
907	Filter System - Maintain/Replace	\$120,800	X	15	/	35	=	\$51,771
<b>Store/Monitor</b>								
910	Storage Tank, Steel - Replace	\$509,000	X	25	/	50	=	\$254,500
911	Storage Tank, Concrete - Replace	\$138,000	X	48	/	60	=	\$110,400
914	Storage Tank, Exterior - Recoat	\$23,900	X	5	/	10	=	\$11,950
915	Storage Tank, Exterior-Blast/Recoat	\$81,700	X	15	/	20	=	\$61,275
916	Storage Tank, Interior-Blast/Recoat	\$136,000	X	8	/	20	=	\$54,400
918	Reservoir Control System - Replace	\$35,000	X	15	/	30	=	\$17,500
919	Telemetry System - Replace	\$4,225	X	15	/	15	=	\$4,225
<b>Treatment/Boost</b>								
920	Hypochlorite Generator - Replace	\$40,350	X	18	/	30	=	\$24,210
922	Hypochlorite Cell - Replace	\$14,900	X	8	/	10	=	\$11,920
926	Treatment/Monitoring - Replace	\$21,250	X	15	/	20	=	\$15,938
930	Booster System, Primary - Replace	\$204,500	X	2	/	20	=	\$20,450
934	Booster System, Back Up - Maintain	\$6,335	X	9	/	10	=	\$5,702
<b>Distribution</b>								
940	Water Main Line Project, A-Replace	\$320,000	X	99	/	100	=	\$316,800
940	Water Main Line Project, B-Replace	\$420,000	X	94	/	100	=	\$394,800
940	Water Main Line Project, C-Replace	\$504,000	X	89	/	100	=	\$448,560
940	Water Main Line Project, D-Replace	\$588,000	X	84	/	100	=	\$493,920
945	Remaining Main Lines, E- Replace	\$2,424,000	X	54	/	100	=	\$1,308,960
945	Remaining Main Lines, F- Replace	\$2,424,000	X	53	/	100	=	\$1,284,720
945	Remaining Main Lines, G - Replace	\$2,424,000	X	52	/	100	=	\$1,260,480
945	Remaining Main Lines, H - Replace	\$2,424,000	X	51	/	100	=	\$1,236,240
946	Water Main Lines, 2009 - Replace	\$520,000	X	11	/	100	=	\$57,200
947	Water Main Lines, 2019/2020-Replace	\$201,600	X	1	/	100	=	\$2,016
950	Hydrants - Add/Replace	\$10,625	X	1	/	1	=	\$10,625
955	Pressure Reducing Valves - Replace	\$42,350	X	13	/	25	=	\$22,022
956	Water Meters - Replace	\$138,500	X	4	/	15	=	\$36,933
957	Water Meter Setters - Replace	\$256,000	X	19	/	45	=	\$108,089
<b>Buildings/Site</b>								
964	Building Roof - Replace	\$38,200	X	13	/	40	=	\$12,415
970	Chain Link Fence - Replace	\$11,700	X	21	/	30	=	\$8,190
<b>Systems/Equipment</b>								
980	Generator, 200 KW - Upgrade	\$122,000	X	3	/	40	=	\$9,150
994	Compact Tractor/Loader - Replace	\$39,250	X	24	/	25	=	\$37,680
995	Truck (1/3) - Replace	\$6,900	X	8	/	12	=	\$4,600

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
996	Truck - Replace	\$20,200	X	5	/	12	=	\$8,417
998	Leak Detector - Replace	\$4,735	X	12	/	12	=	\$4,735
999	Meter Reader System - Replace	\$4,225	X	5	/	5	=	\$4,225
								\$7,847,477

# Component Significance

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NSV

#	Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
<b>Capacity/Filter</b>					
106	Water System Plan - Update	6	\$57,300	\$9,550	4.31 %
901	Well Pump/Motor #1 - Replace	20	\$23,300	\$1,165	0.53 %
901	Well Pump/Motor #2 - Replace	10	\$23,300	\$2,330	1.05 %
901	Well Pump/Motor #3 - Replace	10	\$25,500	\$2,550	1.15 %
904	Well #1 Control - Replace	30	\$14,900	\$497	0.22 %
904	Well #2 Control - Replace	30	\$14,900	\$497	0.22 %
904	Well #3 Control - Replace	30	\$14,900	\$497	0.22 %
907	Filter System - Maintain/Replace	35	\$120,800	\$3,451	1.56 %
<b>Store/Monitor</b>					
910	Storage Tank, Steel - Replace	50	\$509,000	\$10,180	4.59 %
911	Storage Tank, Concrete - Replace	60	\$138,000	\$2,300	1.04 %
914	Storage Tank, Exterior - Recoat	10	\$23,900	\$2,390	1.08 %
915	Storage Tank, Exterior-Blast/Recoat	20	\$81,700	\$4,085	1.84 %
916	Storage Tank, Interior-Blast/Recoat	20	\$136,000	\$6,800	3.07 %
918	Reservoir Control System - Replace	30	\$35,000	\$1,167	0.53 %
919	Telemetry System - Replace	15	\$4,225	\$282	0.13 %
<b>Treatment/Boost</b>					
920	Hypochlorite Generator - Replace	30	\$40,350	\$1,345	0.61 %
922	Hypochlorite Cell - Replace	10	\$14,900	\$1,490	0.67 %
926	Treatment/Monitoring - Replace	20	\$21,250	\$1,063	0.48 %
930	Booster System, Primary - Replace	20	\$204,500	\$10,225	4.61 %
934	Booster System, Back Up - Maintain	10	\$6,335	\$634	0.29 %
<b>Distribution</b>					
940	Water Main Line Project, A-Replace	100	\$320,000	\$3,200	1.44 %
940	Water Main Line Project, B-Replace	100	\$420,000	\$4,200	1.89 %
940	Water Main Line Project, C-Replace	100	\$504,000	\$5,040	2.27 %
940	Water Main Line Project, D-Replace	100	\$588,000	\$5,880	2.65 %
945	Remaining Main Lines, E- Replace	100	\$2,424,000	\$24,240	10.93 %
945	Remaining Main Lines, F- Replace	100	\$2,424,000	\$24,240	10.93 %
945	Remaining Main Lines, G - Replace	100	\$2,424,000	\$24,240	10.93 %
945	Remaining Main Lines, H - Replace	100	\$2,424,000	\$24,240	10.93 %
946	Water Main Lines, 2009 - Replace	100	\$520,000	\$5,200	2.35 %
947	Water Main Lines, 2019/2020-Replace	100	\$201,600	\$2,016	0.91 %
950	Hydrants - Add/Replace	1	\$10,625	\$10,625	4.79 %
955	Pressure Reducing Valves - Replace	25	\$42,350	\$1,694	0.76 %
956	Water Meters - Replace	15	\$138,500	\$9,233	4.16 %
957	Water Meter Setters - Replace	45	\$256,000	\$5,689	2.57 %
<b>Buildings/Site</b>					
964	Building Roof - Replace	40	\$38,200	\$955	0.43 %
970	Chain Link Fence - Replace	30	\$11,700	\$390	0.18 %
<b>Systems/Equipment</b>					
980	Generator, 200 KW - Upgrade	40	\$122,000	\$3,050	1.38 %
994	Compact Tractor/Loader - Replace	25	\$39,250	\$1,570	0.71 %
995	Truck (1/3) - Replace	12	\$6,900	\$575	0.26 %
996	Truck - Replace	12	\$20,200	\$1,683	0.76 %

# Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
998 Leak Detector - Replace	12	\$4,735	\$395	0.18 %
999 Meter Reader System - Replace	5	\$4,225	\$845	0.38 %
42 Total Funded Components			\$221,696	100.00 %

#	Component	UL	RUL	Current Cost Estimate	Fully Funded Balance	Current Fund Balance	Proportional Reserve Contribs
<b>Capacity/Filter</b>							
106	Water System Plan - Update	6	2	\$57,300	\$38,200	\$38,200	\$23,864.67
901	Well Pump/Motor #1 - Replace	20	4	\$23,300	\$18,640	\$18,640	\$2,911.24
901	Well Pump/Motor #2 - Replace	10	0	\$23,300	\$23,300	\$23,300	\$5,822.48
901	Well Pump/Motor #3 - Replace	10	0	\$25,500	\$25,500	\$25,500	\$6,372.24
904	Well #1 Control - Replace	30	4	\$14,900	\$12,913	\$12,913	\$1,241.13
904	Well #2 Control - Replace	30	14	\$14,900	\$7,947	\$0	\$1,241.13
904	Well #3 Control - Replace	30	18	\$14,900	\$5,960	\$0	\$1,241.13
907	Filter System - Maintain/Replace	35	20	\$120,800	\$51,771	\$0	\$8,624.84
<b>Store/Monitor</b>							
910	Storage Tank, Steel - Replace	50	25	\$509,000	\$254,500	\$0	\$25,438.99
911	Storage Tank, Concrete - Replace	60	12	\$138,000	\$110,400	\$0	\$5,747.51
914	Storage Tank, Exterior - Recoat	10	5	\$23,900	\$11,950	\$11,950	\$5,972.42
915	Storage Tank, Exterior-Blast/Recoat	20	5	\$81,700	\$61,275	\$61,275	\$10,208.08
916	Storage Tank, Interior-Blast/Recoat	20	12	\$136,000	\$54,400	\$54,400	\$16,992.65
918	Reservoir Control System - Replace	30	15	\$35,000	\$17,500	\$0	\$2,915.40
919	Telemetry System - Replace	15	0	\$4,225	\$4,225	\$4,225	\$703.86
<b>Treatment/Boost</b>							
920	Hypochlorite Generator - Replace	30	12	\$40,350	\$24,210	\$0	\$3,361.05
922	Hypochlorite Cell - Replace	10	2	\$14,900	\$11,920	\$11,920	\$3,723.39
926	Treatment/Monitoring - Replace	20	5	\$21,250	\$15,938	\$15,938	\$2,655.10
930	Booster System, Primary - Replace	20	18	\$204,500	\$20,450	\$0	\$25,551.44
934	Booster System, Back Up - Maintain	10	1	\$6,335	\$5,702	\$5,702	\$1,583.06
<b>Distribution</b>							
940	Water Main Line Project, A-Replace	100	1	\$320,000	\$316,800	\$316,800	\$7,996.54
940	Water Main Line Project, B-Replace	100	6	\$420,000	\$394,800	\$394,800	\$10,495.46
940	Water Main Line Project, C-Replace	100	11	\$504,000	\$448,560	\$448,560	\$12,594.55
940	Water Main Line Project, D-Replace	100	16	\$588,000	\$493,920	\$0	\$14,693.64
945	Remaining Main Lines, E- Replace	100	46	\$2,424,000	\$1,308,960	\$0	\$60,573.79
945	Remaining Main Lines, F- Replace	100	47	\$2,424,000	\$1,284,720	\$0	\$60,573.79
945	Remaining Main Lines, G - Replace	100	48	\$2,424,000	\$1,260,480	\$0	\$60,573.79
945	Remaining Main Lines, H - Replace	100	49	\$2,424,000	\$1,236,240	\$0	\$60,573.79
946	Water Main Lines, 2009 - Replace	100	89	\$520,000	\$57,200	\$0	\$12,994.38
947	Water Main Lines, 2019/2020-Replace	100	99	\$201,600	\$2,016	\$0	\$5,037.82
950	Hydrants - Add/Replace	1	0	\$10,625	\$10,625	\$10,625	\$26,551.01
955	Pressure Reducing Valves - Replace	25	12	\$42,350	\$22,022	\$266	\$4,233.17
956	Water Meters - Replace	15	11	\$138,500	\$36,933	\$36,933	\$23,073.35
957	Water Meter Setters - Replace	45	26	\$256,000	\$108,089	\$0	\$14,216.07
<b>Buildings/Site</b>							
964	Building Roof - Replace	40	27	\$38,200	\$12,415	\$0	\$2,386.47
970	Chain Link Fence - Replace	30	9	\$11,700	\$8,190	\$8,190	\$974.58
<b>Systems/Equipment</b>							
980	Generator, 200 KW - Upgrade	40	37	\$122,000	\$9,150	\$0	\$7,621.70
994	Compact Tractor/Loader - Replace	25	1	\$39,250	\$37,680	\$37,680	\$3,923.30
995	Truck (1/3) - Replace	12	4	\$6,900	\$4,600	\$4,600	\$1,436.88

#	Component	UL	RUL	Current Cost Estimate	Fully Funded Balance	Current Fund Balance	Proportional Reserve Contribs
996	Truck - Replace	12	7	\$20,200	\$8,417	\$8,417	\$4,206.51
998	Leak Detector - Replace	12	0	\$4,735	\$4,735	\$4,735	\$986.03
999	Meter Reader System - Replace	5	0	\$4,225	\$4,225	\$4,225	\$2,111.59
<b>42 Total Funded Components</b>					<b>\$7,847,477</b>	<b>\$1,559,793</b>	<b>\$554,000</b>

# 30-Year Reserve Plan Summary

23247-6  
NSV

Fiscal Year Start: 2020

Interest:

1.00 %

Inflation:

3.00 %

Reserve Fund Strength Calculations: (All values of Fiscal Year Start Date)

Projected Reserve Balance Changes

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Special Assmt Risk	% Increase		Loan or Special Assmts	Interest Income	Reserve Expenses
					In Annual Reserve Contribs.	Reserve Contribs.			
2020	\$1,559,793	\$7,847,477	19.9 %	High	76.46 %	\$554,000	\$0	\$18,088	\$72,610
2021	\$2,059,271	\$8,236,460	25.0 %	High	3.00 %	\$570,620	\$0	\$21,607	\$387,496
2022	\$2,264,002	\$8,319,630	27.2 %	High	3.00 %	\$587,739	\$0	\$25,255	\$87,869
2023	\$2,789,126	\$8,720,967	32.0 %	Medium	3.00 %	\$605,371	\$0	\$31,002	\$11,610
2024	\$3,413,888	\$9,220,158	37.0 %	Medium	3.00 %	\$623,532	\$0	\$37,113	\$62,719
2025	\$4,011,814	\$9,689,168	41.4 %	Medium	3.00 %	\$642,238	\$0	\$42,703	\$164,269
2026	\$4,532,486	\$10,075,363	45.0 %	Medium	3.00 %	\$661,505	\$0	\$46,273	\$514,189
2027	\$4,726,075	\$10,120,667	46.7 %	Medium	3.00 %	\$681,350	\$0	\$50,710	\$37,911
2028	\$5,420,225	\$10,666,077	50.8 %	Medium	3.00 %	\$701,791	\$0	\$57,544	\$86,045
2029	\$6,093,514	\$11,186,695	54.5 %	Medium	3.00 %	\$722,844	\$0	\$64,700	\$29,129
2030	\$6,851,929	\$11,790,234	58.1 %	Medium	3.00 %	\$744,530	\$0	\$72,144	\$85,540
2031	\$7,583,063	\$12,362,713	61.3 %	Medium	3.00 %	\$766,866	\$0	\$75,446	\$912,847
2032	\$7,512,527	\$12,109,448	62.0 %	Medium	3.00 %	\$789,872	\$0	\$76,667	\$551,712
2033	\$7,827,353	\$12,230,035	64.0 %	Medium	3.00 %	\$813,568	\$0	\$82,641	\$15,603
2034	\$8,707,959	\$12,916,200	67.4 %	Medium	3.00 %	\$837,975	\$0	\$91,060	\$125,280
2035	\$9,511,713	\$13,520,043	70.4 %	Low	3.00 %	\$863,114	\$0	\$99,280	\$121,483
2036	\$10,352,624	\$14,156,274	73.1 %	Low	3.00 %	\$889,007	\$0	\$103,587	\$971,690
2037	\$10,373,529	\$13,946,551	74.4 %	Low	3.00 %	\$915,678	\$0	\$108,723	\$17,562
2038	\$11,380,368	\$14,724,281	77.3 %	Low	3.00 %	\$943,148	\$0	\$117,097	\$391,602
2039	\$12,049,011	\$15,132,774	79.6 %	Low	3.00 %	\$971,442	\$0	\$125,746	\$35,421
2040	\$13,110,778	\$15,931,491	82.3 %	Low	3.00 %	\$1,000,586	\$0	\$134,640	\$417,437
2041	\$13,828,566	\$16,372,129	84.5 %	Low	3.00 %	\$1,030,603	\$0	\$144,039	\$11,785
2042	\$14,991,423	\$17,255,588	86.9 %	Low	3.00 %	\$1,061,521	\$0	\$155,792	\$28,550
2043	\$16,180,186	\$18,160,416	89.1 %	Low	3.00 %	\$1,093,367	\$0	\$168,037	\$0
2044	\$17,441,590	\$19,134,292	91.2 %	Low	3.00 %	\$1,126,168	\$0	\$180,588	\$56,989
2045	\$18,691,357	\$20,091,558	93.0 %	Low	3.00 %	\$1,159,953	\$0	\$186,867	\$1,340,175
2046	\$18,698,002	\$19,769,118	94.6 %	Low	3.00 %	\$1,194,752	\$0	\$188,521	\$1,058,994
2047	\$19,022,281	\$19,740,277	96.4 %	Low	3.00 %	\$1,230,594	\$0	\$196,852	\$84,853
2048	\$20,364,874	\$20,728,001	98.2 %	Low	3.00 %	\$1,267,512	\$0	\$210,872	\$15,787
2049	\$21,827,471	\$21,830,984	100.0 %	Low	3.00 %	\$1,305,537	\$0	\$225,836	\$0



# 30-Year Reserve Plan Summary (Alternate Funding Plan)

23247-6  
NSV

Fiscal Year Start: 2020

Interest:

1.00 %

Inflation:

3.00 %

Reserve Fund Strength Calculations: (All values of Fiscal Year Start Date)				Projected Reserve Balance Changes				
Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Special Assmt Risk	Reserve Contribs.	Loan or Special Assmts	Interest Income	Reserve Expenses
2020	\$1,559,793	\$7,847,477	19.9 %	High	\$139,644	\$0	\$16,006	\$72,610
2021	\$1,642,833	\$8,236,460	19.9 %	High	\$143,833	\$0	\$15,280	\$387,496
2022	\$1,414,450	\$8,319,630	17.0 %	High	\$148,148	\$0	\$14,512	\$87,869
2023	\$1,489,242	\$8,720,967	17.1 %	High	\$152,593	\$0	\$15,669	\$11,610
2024	\$1,645,893	\$9,220,158	17.9 %	High	\$157,171	\$0	\$17,009	\$62,719
2025	\$1,757,354	\$9,689,168	18.1 %	High	\$161,886	\$0	\$17,642	\$164,269
2026	\$1,772,613	\$10,075,363	17.6 %	High	\$166,742	\$0	\$16,062	\$514,189
2027	\$1,441,229	\$10,120,667	14.2 %	High	\$171,745	\$0	\$15,151	\$37,911
2028	\$1,590,213	\$10,666,077	14.9 %	High	\$176,897	\$0	\$16,432	\$86,045
2029	\$1,697,496	\$11,186,695	15.2 %	High	\$182,204	\$0	\$17,822	\$29,129
2030	\$1,868,393	\$11,790,234	15.8 %	High	\$187,670	\$0	\$19,283	\$85,540
2031	\$1,989,805	\$12,362,713	16.1 %	High	\$193,300	\$0	\$16,375	\$912,847
2032	\$1,286,633	\$12,109,448	10.6 %	High	\$199,099	\$0	\$11,154	\$551,712
2033	\$945,174	\$12,230,035	7.7 %	High	\$205,072	\$0	\$10,447	\$15,603
2034	\$1,145,090	\$12,916,200	8.9 %	High	\$211,224	\$0	\$11,935	\$125,280
2035	\$1,242,969	\$13,520,043	9.2 %	High	\$217,561	\$0	\$12,969	\$121,483
2036	\$1,352,017	\$14,156,274	9.6 %	High	\$224,088	\$0	\$9,827	\$971,690
2037	\$614,242	\$13,946,551	4.4 %	High	\$230,810	\$0	\$7,242	\$17,562
2038	\$834,732	\$14,724,281	5.7 %	High	\$237,735	\$0	\$7,613	\$391,602
2039	\$688,477	\$15,132,774	4.5 %	High	\$244,867	\$0	\$7,968	\$35,421
2040	\$905,892	\$15,931,491	5.7 %	High	\$252,213	\$0	\$8,271	\$417,437
2041	\$748,937	\$16,372,129	4.6 %	High	\$259,779	\$0	\$8,769	\$11,785
2042	\$1,005,701	\$17,255,588	5.8 %	High	\$267,572	\$0	\$11,304	\$28,550
2043	\$1,256,027	\$18,160,416	6.9 %	High	\$275,600	\$0	\$14,002	\$0
2044	\$1,545,629	\$19,134,292	8.1 %	High	\$283,868	\$0	\$16,667	\$56,989
2045	\$1,789,174	\$20,091,558	8.9 %	High	\$292,384	\$0	\$12,711	\$1,340,175
2046	\$754,093	\$19,769,118	3.8 %	High	\$301,155	\$0	\$3,769	\$1,058,994
2047	\$23	\$19,740,277	0.0 %	High	\$310,190	\$0	\$1,132	\$84,853
2048	\$226,492	\$20,728,001	1.1 %	High	\$319,495	\$0	\$3,801	\$15,787
2049	\$534,001	\$21,830,984	2.4 %	High	\$329,080	\$0	\$7,018	\$0

# 30-Year Income/Expense Detail

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NSV

Fiscal Year	2020	2021	2022	2023	2024
Starting Reserve Balance	\$1,559,793	\$2,059,271	\$2,264,002	\$2,789,126	\$3,413,888
Annual Reserve Contribution	\$554,000	\$570,620	\$587,739	\$605,371	\$623,532
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$18,088	\$21,607	\$25,255	\$31,002	\$37,113
<b>Total Income</b>	<b>\$2,131,881</b>	<b>\$2,651,498</b>	<b>\$2,876,995</b>	<b>\$3,425,499</b>	<b>\$4,074,533</b>
# Component					
<b>Capacity/Filter</b>					
106 Water System Plan - Update	\$0	\$0	\$60,790	\$0	\$0
901 Well Pump/Motor #1 - Replace	\$0	\$0	\$0	\$0	\$26,224
901 Well Pump/Motor #2 - Replace	\$23,300	\$0	\$0	\$0	\$0
901 Well Pump/Motor #3 - Replace	\$25,500	\$0	\$0	\$0	\$0
904 Well #1 Control - Replace	\$0	\$0	\$0	\$0	\$16,770
904 Well #2 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #3 Control - Replace	\$0	\$0	\$0	\$0	\$0
907 Filter System - Maintain/Replace	\$0	\$0	\$0	\$0	\$0
<b>Store/Monitor</b>					
910 Storage Tank, Steel - Replace	\$0	\$0	\$0	\$0	\$0
911 Storage Tank, Concrete - Replace	\$0	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Recoat	\$0	\$0	\$0	\$0	\$0
915 Storage Tank, Exterior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
916 Storage Tank, Interior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
918 Reservoir Control System - Replace	\$0	\$0	\$0	\$0	\$0
919 Telemetry System - Replace	\$4,225	\$0	\$0	\$0	\$0
<b>Treatment/Boost</b>					
920 Hypochlorite Generator - Replace	\$0	\$0	\$0	\$0	\$0
922 Hypochlorite Cell - Replace	\$0	\$0	\$15,807	\$0	\$0
926 Treatment/Monitoring - Replace	\$0	\$0	\$0	\$0	\$0
930 Booster System, Primary - Replace	\$0	\$0	\$0	\$0	\$0
934 Booster System, Back Up - Maintain	\$0	\$6,525	\$0	\$0	\$0
<b>Distribution</b>					
940 Water Main Line Project, A-Replace	\$0	\$329,600	\$0	\$0	\$0
940 Water Main Line Project, B-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, C-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, D-Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, E- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, F- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, G - Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, H - Replace	\$0	\$0	\$0	\$0	\$0
946 Water Main Lines, 2009 - Replace	\$0	\$0	\$0	\$0	\$0
947 Water Main Lines, 2019/2020-Replace	\$0	\$0	\$0	\$0	\$0
950 Hydrants - Add/Replace	\$10,625	\$10,944	\$11,272	\$11,610	\$11,959
955 Pressure Reducing Valves - Replace	\$0	\$0	\$0	\$0	\$0
956 Water Meters - Replace	\$0	\$0	\$0	\$0	\$0
957 Water Meter Setters - Replace	\$0	\$0	\$0	\$0	\$0
<b>Buildings/Site</b>					
964 Building Roof - Replace	\$0	\$0	\$0	\$0	\$0
970 Chain Link Fence - Replace	\$0	\$0	\$0	\$0	\$0
<b>Systems/Equipment</b>					
980 Generator, 200 KW - Upgrade	\$0	\$0	\$0	\$0	\$0
994 Compact Tractor/Loader - Replace	\$0	\$40,428	\$0	\$0	\$0
995 Truck (1/3) - Replace	\$0	\$0	\$0	\$0	\$7,766
996 Truck - Replace	\$0	\$0	\$0	\$0	\$0
998 Leak Detector - Replace	\$4,735	\$0	\$0	\$0	\$0
999 Meter Reader System - Replace	\$4,225	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$72,610</b>	<b>\$387,496</b>	<b>\$87,869</b>	<b>\$11,610</b>	<b>\$62,719</b>
Ending Reserve Balance	\$2,059,271	\$2,264,002	\$2,789,126	\$3,413,888	\$4,011,814

<b>Fiscal Year</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>
Starting Reserve Balance	\$4,011,814	\$4,532,486	\$4,726,075	\$5,420,225	\$6,093,514
Annual Reserve Contribution	\$642,238	\$661,505	\$681,350	\$701,791	\$722,844
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$42,703	\$46,273	\$50,710	\$57,544	\$64,700
<b>Total Income</b>	<b>\$4,696,755</b>	<b>\$5,240,264</b>	<b>\$5,458,136</b>	<b>\$6,179,560</b>	<b>\$6,881,058</b>
# Component					
<b>Capacity/Filter</b>					
106 Water System Plan - Update	\$0	\$0	\$0	\$72,586	\$0
901 Well Pump/Motor #1 - Replace	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #2 - Replace	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #3 - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #1 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #2 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #3 Control - Replace	\$0	\$0	\$0	\$0	\$0
907 Filter System - Maintain/Replace	\$0	\$0	\$0	\$0	\$0
<b>Store/Monitor</b>					
910 Storage Tank, Steel - Replace	\$0	\$0	\$0	\$0	\$0
911 Storage Tank, Concrete - Replace	\$0	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Recoat	\$27,707	\$0	\$0	\$0	\$0
915 Storage Tank, Exterior-Blast/Recoat	\$94,713	\$0	\$0	\$0	\$0
916 Storage Tank, Interior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
918 Reservoir Control System - Replace	\$0	\$0	\$0	\$0	\$0
919 Telemetry System - Replace	\$0	\$0	\$0	\$0	\$0
<b>Treatment/Boost</b>					
920 Hypochlorite Generator - Replace	\$0	\$0	\$0	\$0	\$0
922 Hypochlorite Cell - Replace	\$0	\$0	\$0	\$0	\$0
926 Treatment/Monitoring - Replace	\$24,635	\$0	\$0	\$0	\$0
930 Booster System, Primary - Replace	\$0	\$0	\$0	\$0	\$0
934 Booster System, Back Up - Maintain	\$0	\$0	\$0	\$0	\$0
<b>Distribution</b>					
940 Water Main Line Project, A-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, B-Replace	\$0	\$501,502	\$0	\$0	\$0
940 Water Main Line Project, C-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, D-Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, E- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, F- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, G - Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, H - Replace	\$0	\$0	\$0	\$0	\$0
946 Water Main Lines, 2009 - Replace	\$0	\$0	\$0	\$0	\$0
947 Water Main Lines, 2019/2020-Replace	\$0	\$0	\$0	\$0	\$0
950 Hydrants - Add/Replace	\$12,317	\$12,687	\$13,067	\$13,459	\$13,863
955 Pressure Reducing Valves - Replace	\$0	\$0	\$0	\$0	\$0
956 Water Meters - Replace	\$0	\$0	\$0	\$0	\$0
957 Water Meter Setters - Replace	\$0	\$0	\$0	\$0	\$0
<b>Buildings/Site</b>					
964 Building Roof - Replace	\$0	\$0	\$0	\$0	\$0
970 Chain Link Fence - Replace	\$0	\$0	\$0	\$0	\$15,266
<b>Systems/Equipment</b>					
980 Generator, 200 KW - Upgrade	\$0	\$0	\$0	\$0	\$0
994 Compact Tractor/Loader - Replace	\$0	\$0	\$0	\$0	\$0
995 Truck (1/3) - Replace	\$0	\$0	\$0	\$0	\$0
996 Truck - Replace	\$0	\$0	\$24,843	\$0	\$0
998 Leak Detector - Replace	\$0	\$0	\$0	\$0	\$0
999 Meter Reader System - Replace	\$4,898	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$164,269</b>	<b>\$514,189</b>	<b>\$37,911</b>	<b>\$86,045</b>	<b>\$29,129</b>
Ending Reserve Balance	\$4,532,486	\$4,726,075	\$5,420,225	\$6,093,514	\$6,851,929

<b>Fiscal Year</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>
Starting Reserve Balance	\$6,851,929	\$7,583,063	\$7,512,527	\$7,827,353	\$8,707,959
Annual Reserve Contribution	\$744,530	\$766,866	\$789,872	\$813,568	\$837,975
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$72,144	\$75,446	\$76,667	\$82,641	\$91,060
<b>Total Income</b>	<b>\$7,668,603</b>	<b>\$8,425,374</b>	<b>\$8,379,066</b>	<b>\$8,723,563</b>	<b>\$9,636,994</b>
# Component					
<b>Capacity/Filter</b>					
106 Water System Plan - Update	\$0	\$0	\$0	\$0	\$86,671
901 Well Pump/Motor #1 - Replace	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #2 - Replace	\$31,313	\$0	\$0	\$0	\$0
901 Well Pump/Motor #3 - Replace	\$34,270	\$0	\$0	\$0	\$0
904 Well #1 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #2 Control - Replace	\$0	\$0	\$0	\$0	\$22,538
904 Well #3 Control - Replace	\$0	\$0	\$0	\$0	\$0
907 Filter System - Maintain/Replace	\$0	\$0	\$0	\$0	\$0
<b>Store/Monitor</b>					
910 Storage Tank, Steel - Replace	\$0	\$0	\$0	\$0	\$0
911 Storage Tank, Concrete - Replace	\$0	\$0	\$196,755	\$0	\$0
914 Storage Tank, Exterior - Recoat	\$0	\$0	\$0	\$0	\$0
915 Storage Tank, Exterior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
916 Storage Tank, Interior-Blast/Recoat	\$0	\$0	\$193,903	\$0	\$0
918 Reservoir Control System - Replace	\$0	\$0	\$0	\$0	\$0
919 Telemetry System - Replace	\$0	\$0	\$0	\$0	\$0
<b>Treatment/Boost</b>					
920 Hypochlorite Generator - Replace	\$0	\$0	\$57,529	\$0	\$0
922 Hypochlorite Cell - Replace	\$0	\$0	\$21,244	\$0	\$0
926 Treatment/Monitoring - Replace	\$0	\$0	\$0	\$0	\$0
930 Booster System, Primary - Replace	\$0	\$0	\$0	\$0	\$0
934 Booster System, Back Up - Maintain	\$0	\$8,769	\$0	\$0	\$0
<b>Distribution</b>					
940 Water Main Line Project, A-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, B-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, C-Replace	\$0	\$697,654	\$0	\$0	\$0
940 Water Main Line Project, D-Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, E- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, F- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, G - Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, H - Replace	\$0	\$0	\$0	\$0	\$0
946 Water Main Lines, 2009 - Replace	\$0	\$0	\$0	\$0	\$0
947 Water Main Lines, 2019/2020-Replace	\$0	\$0	\$0	\$0	\$0
950 Hydrants - Add/Replace	\$14,279	\$14,707	\$15,149	\$15,603	\$16,071
955 Pressure Reducing Valves - Replace	\$0	\$0	\$60,381	\$0	\$0
956 Water Meters - Replace	\$0	\$191,716	\$0	\$0	\$0
957 Water Meter Setters - Replace	\$0	\$0	\$0	\$0	\$0
<b>Buildings/Site</b>					
964 Building Roof - Replace	\$0	\$0	\$0	\$0	\$0
970 Chain Link Fence - Replace	\$0	\$0	\$0	\$0	\$0
<b>Systems/Equipment</b>					
980 Generator, 200 KW - Upgrade	\$0	\$0	\$0	\$0	\$0
994 Compact Tractor/Loader - Replace	\$0	\$0	\$0	\$0	\$0
995 Truck (1/3) - Replace	\$0	\$0	\$0	\$0	\$0
996 Truck - Replace	\$0	\$0	\$0	\$0	\$0
998 Leak Detector - Replace	\$0	\$0	\$6,751	\$0	\$0
999 Meter Reader System - Replace	\$5,678	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$85,540</b>	<b>\$912,847</b>	<b>\$551,712</b>	<b>\$15,603</b>	<b>\$125,280</b>
Ending Reserve Balance	\$7,583,063	\$7,512,527	\$7,827,353	\$8,707,959	\$9,511,713

<b>Fiscal Year</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>
Starting Reserve Balance	\$9,511,713	\$10,352,624	\$10,373,529	\$11,380,368	\$12,049,011
Annual Reserve Contribution	\$863,114	\$889,007	\$915,678	\$943,148	\$971,442
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$99,280	\$103,587	\$108,723	\$117,097	\$125,746
<b>Total Income</b>	<b>\$10,474,107</b>	<b>\$11,345,219</b>	<b>\$11,397,930</b>	<b>\$12,440,613</b>	<b>\$13,146,199</b>
# Component					
<b>Capacity/Filter</b>					
106 Water System Plan - Update	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #1 - Replace	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #2 - Replace	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #3 - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #1 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #2 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #3 Control - Replace	\$0	\$0	\$0	\$25,366	\$0
907 Filter System - Maintain/Replace	\$0	\$0	\$0	\$0	\$0
<b>Store/Monitor</b>					
910 Storage Tank, Steel - Replace	\$0	\$0	\$0	\$0	\$0
911 Storage Tank, Concrete - Replace	\$0	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Recoat	\$37,235	\$0	\$0	\$0	\$0
915 Storage Tank, Exterior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
916 Storage Tank, Interior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
918 Reservoir Control System - Replace	\$54,529	\$0	\$0	\$0	\$0
919 Telemetry System - Replace	\$6,582	\$0	\$0	\$0	\$0
<b>Treatment/Boost</b>					
920 Hypochlorite Generator - Replace	\$0	\$0	\$0	\$0	\$0
922 Hypochlorite Cell - Replace	\$0	\$0	\$0	\$0	\$0
926 Treatment/Monitoring - Replace	\$0	\$0	\$0	\$0	\$0
930 Booster System, Primary - Replace	\$0	\$0	\$0	\$348,148	\$0
934 Booster System, Back Up - Maintain	\$0	\$0	\$0	\$0	\$0
<b>Distribution</b>					
940 Water Main Line Project, A-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, B-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, C-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, D-Replace	\$0	\$943,567	\$0	\$0	\$0
945 Remaining Main Lines, E- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, F- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, G - Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, H - Replace	\$0	\$0	\$0	\$0	\$0
946 Water Main Lines, 2009 - Replace	\$0	\$0	\$0	\$0	\$0
947 Water Main Lines, 2019/2020-Replace	\$0	\$0	\$0	\$0	\$0
950 Hydrants - Add/Replace	\$16,553	\$17,050	\$17,562	\$18,088	\$0
955 Pressure Reducing Valves - Replace	\$0	\$0	\$0	\$0	\$0
956 Water Meters - Replace	\$0	\$0	\$0	\$0	\$0
957 Water Meter Setters - Replace	\$0	\$0	\$0	\$0	\$0
<b>Buildings/Site</b>					
964 Building Roof - Replace	\$0	\$0	\$0	\$0	\$0
970 Chain Link Fence - Replace	\$0	\$0	\$0	\$0	\$0
<b>Systems/Equipment</b>					
980 Generator, 200 KW - Upgrade	\$0	\$0	\$0	\$0	\$0
994 Compact Tractor/Loader - Replace	\$0	\$0	\$0	\$0	\$0
995 Truck (1/3) - Replace	\$0	\$11,072	\$0	\$0	\$0
996 Truck - Replace	\$0	\$0	\$0	\$0	\$35,421
998 Leak Detector - Replace	\$0	\$0	\$0	\$0	\$0
999 Meter Reader System - Replace	\$6,582	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$121,483</b>	<b>\$971,690</b>	<b>\$17,562</b>	<b>\$391,602</b>	<b>\$35,421</b>
Ending Reserve Balance	\$10,352,624	\$10,373,529	\$11,380,368	\$12,049,011	\$13,110,778

<b>Fiscal Year</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>	<b>2044</b>
Starting Reserve Balance	\$13,110,778	\$13,828,566	\$14,991,423	\$16,180,186	\$17,441,590
Annual Reserve Contribution	\$1,000,586	\$1,030,603	\$1,061,521	\$1,093,367	\$1,126,168
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$134,640	\$144,039	\$155,792	\$168,037	\$180,588
<b>Total Income</b>	<b>\$14,246,003</b>	<b>\$15,003,208</b>	<b>\$16,208,736</b>	<b>\$17,441,590</b>	<b>\$18,748,346</b>
# Component					
<b>Capacity/Filter</b>					
106 Water System Plan - Update	\$103,490	\$0	\$0	\$0	\$0
901 Well Pump/Motor #1 - Replace	\$0	\$0	\$0	\$0	\$47,364
901 Well Pump/Motor #2 - Replace	\$42,082	\$0	\$0	\$0	\$0
901 Well Pump/Motor #3 - Replace	\$46,056	\$0	\$0	\$0	\$0
904 Well #1 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #2 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #3 Control - Replace	\$0	\$0	\$0	\$0	\$0
907 Filter System - Maintain/Replace	\$218,178	\$0	\$0	\$0	\$0
<b>Store/Monitor</b>					
910 Storage Tank, Steel - Replace	\$0	\$0	\$0	\$0	\$0
911 Storage Tank, Concrete - Replace	\$0	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Recoat	\$0	\$0	\$0	\$0	\$0
915 Storage Tank, Exterior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
916 Storage Tank, Interior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
918 Reservoir Control System - Replace	\$0	\$0	\$0	\$0	\$0
919 Telemetry System - Replace	\$0	\$0	\$0	\$0	\$0
<b>Treatment/Boost</b>					
920 Hypochlorite Generator - Replace	\$0	\$0	\$0	\$0	\$0
922 Hypochlorite Cell - Replace	\$0	\$0	\$28,550	\$0	\$0
926 Treatment/Monitoring - Replace	\$0	\$0	\$0	\$0	\$0
930 Booster System, Primary - Replace	\$0	\$0	\$0	\$0	\$0
934 Booster System, Back Up - Maintain	\$0	\$11,785	\$0	\$0	\$0
<b>Distribution</b>					
940 Water Main Line Project, A-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, B-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, C-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, D-Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, E- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, F- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, G - Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, H - Replace	\$0	\$0	\$0	\$0	\$0
946 Water Main Lines, 2009 - Replace	\$0	\$0	\$0	\$0	\$0
947 Water Main Lines, 2019/2020-Replace	\$0	\$0	\$0	\$0	\$0
950 Hydrants - Add/Replace	\$0	\$0	\$0	\$0	\$0
955 Pressure Reducing Valves - Replace	\$0	\$0	\$0	\$0	\$0
956 Water Meters - Replace	\$0	\$0	\$0	\$0	\$0
957 Water Meter Setters - Replace	\$0	\$0	\$0	\$0	\$0
<b>Buildings/Site</b>					
964 Building Roof - Replace	\$0	\$0	\$0	\$0	\$0
970 Chain Link Fence - Replace	\$0	\$0	\$0	\$0	\$0
<b>Systems/Equipment</b>					
980 Generator, 200 KW - Upgrade	\$0	\$0	\$0	\$0	\$0
994 Compact Tractor/Loader - Replace	\$0	\$0	\$0	\$0	\$0
995 Truck (1/3) - Replace	\$0	\$0	\$0	\$0	\$0
996 Truck - Replace	\$0	\$0	\$0	\$0	\$0
998 Leak Detector - Replace	\$0	\$0	\$0	\$0	\$9,625
999 Meter Reader System - Replace	\$7,631	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$417,437</b>	<b>\$11,785</b>	<b>\$28,550</b>	<b>\$0</b>	<b>\$56,989</b>
Ending Reserve Balance	\$13,828,566	\$14,991,423	\$16,180,186	\$17,441,590	\$18,691,357

<b>Fiscal Year</b>	<b>2045</b>	<b>2046</b>	<b>2047</b>	<b>2048</b>	<b>2049</b>
Starting Reserve Balance	\$18,691,357	\$18,698,002	\$19,022,281	\$20,364,874	\$21,827,471
Annual Reserve Contribution	\$1,159,953	\$1,194,752	\$1,230,594	\$1,267,512	\$1,305,537
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$186,867	\$188,521	\$196,852	\$210,872	\$225,836
<b>Total Income</b>	<b>\$20,038,177</b>	<b>\$20,081,275</b>	<b>\$20,449,727</b>	<b>\$21,843,258</b>	<b>\$23,358,844</b>
# Component					
<b>Capacity/Filter</b>					
106 Water System Plan - Update	\$0	\$123,573	\$0	\$0	\$0
901 Well Pump/Motor #1 - Replace	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #2 - Replace	\$0	\$0	\$0	\$0	\$0
901 Well Pump/Motor #3 - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #1 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #2 Control - Replace	\$0	\$0	\$0	\$0	\$0
904 Well #3 Control - Replace	\$0	\$0	\$0	\$0	\$0
907 Filter System - Maintain/Replace	\$0	\$0	\$0	\$0	\$0
<b>Store/Monitor</b>					
910 Storage Tank, Steel - Replace	\$1,065,733	\$0	\$0	\$0	\$0
911 Storage Tank, Concrete - Replace	\$0	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Recoat	\$50,041	\$0	\$0	\$0	\$0
915 Storage Tank, Exterior-Blast/Recoat	\$171,062	\$0	\$0	\$0	\$0
916 Storage Tank, Interior-Blast/Recoat	\$0	\$0	\$0	\$0	\$0
918 Reservoir Control System - Replace	\$0	\$0	\$0	\$0	\$0
919 Telemetry System - Replace	\$0	\$0	\$0	\$0	\$0
<b>Treatment/Boost</b>					
920 Hypochlorite Generator - Replace	\$0	\$0	\$0	\$0	\$0
922 Hypochlorite Cell - Replace	\$0	\$0	\$0	\$0	\$0
926 Treatment/Monitoring - Replace	\$44,493	\$0	\$0	\$0	\$0
930 Booster System, Primary - Replace	\$0	\$0	\$0	\$0	\$0
934 Booster System, Back Up - Maintain	\$0	\$0	\$0	\$0	\$0
<b>Distribution</b>					
940 Water Main Line Project, A-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, B-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, C-Replace	\$0	\$0	\$0	\$0	\$0
940 Water Main Line Project, D-Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, E- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, F- Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, G - Replace	\$0	\$0	\$0	\$0	\$0
945 Remaining Main Lines, H - Replace	\$0	\$0	\$0	\$0	\$0
946 Water Main Lines, 2009 - Replace	\$0	\$0	\$0	\$0	\$0
947 Water Main Lines, 2019/2020-Replace	\$0	\$0	\$0	\$0	\$0
950 Hydrants - Add/Replace	\$0	\$0	\$0	\$0	\$0
955 Pressure Reducing Valves - Replace	\$0	\$0	\$0	\$0	\$0
956 Water Meters - Replace	\$0	\$298,688	\$0	\$0	\$0
957 Water Meter Setters - Replace	\$0	\$552,087	\$0	\$0	\$0
<b>Buildings/Site</b>					
964 Building Roof - Replace	\$0	\$0	\$84,853	\$0	\$0
970 Chain Link Fence - Replace	\$0	\$0	\$0	\$0	\$0
<b>Systems/Equipment</b>					
980 Generator, 200 KW - Upgrade	\$0	\$0	\$0	\$0	\$0
994 Compact Tractor/Loader - Replace	\$0	\$84,646	\$0	\$0	\$0
995 Truck (1/3) - Replace	\$0	\$0	\$0	\$15,787	\$0
996 Truck - Replace	\$0	\$0	\$0	\$0	\$0
998 Leak Detector - Replace	\$0	\$0	\$0	\$0	\$0
999 Meter Reader System - Replace	\$8,846	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$1,340,175</b>	<b>\$1,058,994</b>	<b>\$84,853</b>	<b>\$15,787</b>	<b>\$0</b>
Ending Reserve Balance	\$18,698,002	\$19,022,281	\$20,364,874	\$21,827,471	\$23,358,844

## Accuracy, Limitations, and Disclosures

"The reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair or replacement of a reserve component."

Association Reserves and its employees have no ownership, management, or other business relationships with the client other than this Reserve Study engagement. James Talaga, company President, is a credentialed Reserve Specialist (#066). All work done by Association Reserves WA, LLC is performed under his responsible charge and is performed in accordance with National Reserve Study Standards (NRSS). There are no material issues to our knowledge that have not been disclosed to the client that would cause a distortion of the client's situation.

Per NRSS, information provided by official representative(s) of the client, vendors, and suppliers regarding financial details, component physical details and/or quantities, or historical issues/conditions will be deemed reliable, and is not intended to be used for the purpose of any type of audit, quality/forensic analysis, or background checks of historical records. As such, information provided to us has not been audited or independently verified.

Estimates for interest and inflation have been included, because including such estimates are more accurate than ignoring them completely. When we are hired to prepare Update reports, the client is considered to have deemed those previously developed component quantities as accurate and reliable, whether established by our firm or other individuals/firms (unless specifically mentioned in our Site Inspection Notes). During inspections our company standard is to establish measurements within 5% accuracy, and our scope includes visual inspection of accessible areas and components and does not include any destructive or other testing. Our work is done only for budget purposes. Uses or expectations outside our expertise and scope of work include, but are not limited to: project audit, quality inspection, and the identification of construction defects, hazardous materials, or dangerous conditions. Identifying hidden issues such as but not limited to, plumbing or electrical problems are also outside our scope of work. Our estimates assume proper original installation & construction, adherence to recommended preventive maintenance, a stable economic environment, and do not consider frequency or severity of natural disasters. Our opinions of component Useful Life, Remaining Useful Life, and current or future cost estimates are not a warranty or guarantee of actual costs or timing.

Because the physical and financial status of the property, legislation, the economy, weather, owner expectations, and usage are all in a continual state of change over which we have no control, we do not expect that the events projected in this document will all occur exactly as planned. This Reserve Study is by nature a "one-year" document in need of being updated annually so that more accurate estimates can be incorporated. It is only because a long-term perspective improves the accuracy of near-term planning that this Report projects expenses into the future. We fully expect a number of adjustments will be necessary through the interim years to the cost and timing of expense projections and the funding necessary to prepare for those estimated expenses.

In this engagement our compensation is not contingent upon our conclusions, and our liability in any matter involving this Reserve Study is limited to our fee for services rendered.



## Terms and Definitions

<b>BTU</b>	British Thermal Unit (a standard unit of energy)
<b>DIA</b>	Diameter
<b>GSF</b>	Gross Square Feet (area). Equivalent to Square Feet
<b>GSY</b>	Gross Square Yards (area). Equivalent to Square Yards
<b>HP</b>	Horsepower
<b>LF</b>	Linear Feet (length)
<b>Effective Age</b>	The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.
<b>Fully Funded Balance (FFB)</b>	The value of the deterioration of the Reserve Components. This is the fraction of life "used up" of each component multiplied by its estimated Current Replacement. While calculated for each component, it is summed together for an association total.
<b>Inflation</b>	Cost factors are adjusted for inflation at the rate defined in the Executive Summary and compounded annually. These increasing costs can be seen as you follow the recurring cycles of a component on the "30-yr Income/Expense Detail" table.
<b>Interest</b>	Interest earnings on Reserve Funds are calculated using the average balance for the year (taking into account income and expenses through the year) and compounded monthly using the rate defined in the Executive Summary. Annual interest earning assumption appears in the Executive Summary.
<b>Percent Funded</b>	The ratio, at a particular point in time (the first day of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.
<b>Remaining Useful Life (RUL)</b>	The estimated time, in years, that a common area component can be expected to continue to serve its intended function.
<b>Useful Life (UL)</b>	The estimated time, in years, that a common area component can be expected to serve its intended function.

## Component Details

The primary purpose of the Component Details appendix is to provide the reader with the basis of our funding assumptions resulting from our research and analysis. The information presented here represents a wide range of components that were observed and measured against National Reserve Study Standards to determine if they meet the criteria for reserve funding.

- 1) Common area repair & replacement responsibility
- 2) Component must have a limited useful life
- 3) Life limit must be predictable
- 4) Above a minimum threshold cost (board's discretion – typically ½ to 1% of Annual operating expenses).

Not all your components may have been found appropriate for reserve funding. In our judgment, the components meeting the above four criteria are shown with the Useful Life (how often the project is expected to occur), Remaining Useful Life (when the next instance of the expense will be) and representative market cost range termed “Best Cost” and “Worst Cost”. There are many factors that can result in a wide variety of potential costs, and we have attempted to present the cost range in which your actual expense will occur.

Where no Useful Life, Remaining Useful Life, or pricing exists, the component was deemed inappropriate for Reserve Funding.

## Capacity/Filter

**Comp #: 102 Loans - Payoff****Quantity: Significant principals**

Location: Interfund and Washington State loans  
Funded?: No. Annual cost best handled as operating expense  
History:  
Comments:  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 106 Water System Plan - Update****Quantity: Every 6 years**

Location: Community water system  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History: FY 2014/2015, FY 2015/2016 and FY 2016/2017, total expense of ~\$50,000  
Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study.  
Useful Life: 6 years  
Best Case: \$ 52,000  
Lower allowance  
Cost Source: Client Cost History Inflated

Remaining Life: 2 years  
Worst Case: \$62,600  
Higher allowance

**Comp #: 113 Sanitary Survey - Update****Quantity: Every 5 years**

Location: Water system components  
Funded?: No. Cost projected to be too small  
History: Expense of only ~\$870 in FY 2017/2018  
Comments: No change in funding status from prior 2018/2019 Reserve Study.  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 900 Wells - Replace****Quantity: (2) active (1) reserve**

Location: In the vicinity of 2880 East Timberlake Drive West  
Funded?: No. Useful life not predictable or extended  
History: Well #1 was drilled in 1967 (currently a "non-active" reserve), Well #2 in 1971 and Well # 3 was drilled in 2001  
Comments:  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 901 Well Pump/Motor #1 - Replace****Quantity: (1) 25 HP submersible 6"**

Location: Pump house adjacent to Watershed, 2880 East Timberlake Drive West  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History: Reportedly replaced last in 2004  
Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study  
Useful Life: 20 years  
Best Case: \$ 21,200  
Lower allowance  
Cost Source: ARI Cost Database: Similar Project  
Cost History

Remaining Life: 4 years  
Worst Case: \$25,400  
Higher allowance

**Comp #: 901 Well Pump/Motor #2 - Replace****Quantity: (1) 25 HP submersible 6"**

Location: 700' SE of Well #1  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History: Reportedly replaced last in 2004  
Comments: Work deferred; RUL remains 0. Cost inflated ~3% from prior 2019/2020 Reserve Study  
Useful Life: 10 years  
Best Case: \$ 21,200  
Lower allowance  
Cost Source: ARI Cost Database: Similar Project  
Cost History

Remaining Life: 0 years  
Worst Case: \$25,400  
Higher allowance

**Comp #: 901 Well Pump/Motor #3 - Replace****Quantity: (1) 30 HP submersible 8"**

Location: 150' SE of Well #1

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Installation in 2001 but this well went online in 2008

Comments: Work deferred; RUL remains 0. Cost inflated ~3% from prior 2019/2020 Reserve Study

Useful Life: 10 years

Remaining Life: 0 years

Best Case: \$ 23,400

Worst Case: \$27,600

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 904 Well #1 Control - Replace****Quantity: (1) motor control**

Location: Pump house adjacent to Watershed, 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History:

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 30 years

Remaining Life: 4 years

Best Case: \$ 12,800

Worst Case: \$17,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 904 Well #2 Control - Replace****Quantity: (1) motor control**

Location: 700' SE of Well #1

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Reportedly replaced last in 2004

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 30 years

Remaining Life: 14 years

Best Case: \$ 12,800

Worst Case: \$17,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 904 Well #3 Control - Replace****Quantity: (1) motor control**

Location: 150' SE of Well #1

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Installation in 2001; usage since 2008 reported

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 30 years

Remaining Life: 18 years

Best Case: \$ 12,800

Worst Case: \$17,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 905 Source Flow Meters - Replace****Quantity: (3) source meters**

Location: Wells

Funded?: No. Individual cost projected to be too small

History:

Comments:

Useful Life: 0 years

Remaining Life:

Best Case:

Worst Case:

Cost Source:

**Comp #: 907 Filter System - Maintain/Replace****Quantity: (6) tank system**

Location: 2880 East Timberlake Drive West, Pump House

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Reportedly replaced last in 2005; segregated portion ~\$80,000

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 35 years

Remaining Life: 20 years

Best Case: \$ 97,600

Worst Case: \$144,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 908 Backwash Infiltration Pond-Maintain**

**Quantity: Extensive square feet**

Location: 2880 East Timberlake Drive West, adjacent to Pump Station

Funded?: No. Useful life not predictable or extended

History:

Comments:

Useful Life: 0 years

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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## Store/Monitor

**Comp #: 910 Storage Tank, Steel - Replace****Quantity: (1) 200,000 gallon**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Installed in 1995 at an expense of ~\$300,000

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 50 years

Remaining Life: 25 years

Best Case: \$ 456,000

Worst Case: \$562,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 911 Storage Tank, Concrete - Replace****Quantity: (1) 60,000 gallon**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Reportedly installed in the late 1960's/early 1970's

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 60 years

Remaining Life: 12 years

Best Case: \$ 116,000

Worst Case: \$160,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 912 Storage Tank, Interiors - Clean****Quantity: (1) 200k gal (1) 60k gal**

Location: 2880 East Timberlake Drive West

Funded?: No. Annual cost best handled as operating expense

History:

Comments:

Useful Life: 0 years

Remaining Life:

Best Case:

Worst Case:

Cost Source:

**Comp #: 914 Storage Tank, Exterior - Recoat****Quantity: (1) 200,000 gallon**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: FY 2015/2016 painting project at reported expense of \$20,800

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 10 years

Remaining Life: 5 years

Best Case: \$ 21,200

Worst Case: \$26,600

Lower allowance

Higher allowance

Cost Source: Client Cost History/Similar Project

Cost History

**Comp #: 915 Storage Tank, Exterior-Blast/Recoat****Quantity: (1) 200,000 gallon**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History:

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 20 years

Remaining Life: 5 years

Best Case: \$ 76,400

Worst Case: \$87,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 916 Storage Tank, Interior-Blast/Recoat****Quantity: (1) 200,000 gallon**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Interior was refurbished in 2012 at an expense of \$112,000

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 20 years

Remaining Life: 12 years

Best Case: \$ 128,000

Worst Case: \$144,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 918 Reservoir Control System - Replace**

**Quantity: (1) control panel**

Location: 2880 East Timberlake Drive West, Pump House

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Installed in 2005; no segregated cost history was provided

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 30 years

Remaining Life: 15 years

Best Case: \$ 29,700

Worst Case: \$40,300

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

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**Comp #: 919 Telemetry System - Replace**

**Quantity: (1) system**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Installed in 2005

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 15 years

Remaining Life: 0 years

Best Case: \$ 3,710

Worst Case: \$4,740

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

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## Treatment/Boost

**Comp #: 920 Hypochlorite Generator - Replace****Quantity: (1) US Filter**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Installed in 2005

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 30 years

Remaining Life: 12 years

Best Case: \$ 34,000

Worst Case: \$46,700

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 922 Hypochlorite Cell - Replace****Quantity: (1) US Filter**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Equipment upgrade to facilitate improved design / type in 2012 / 2013 at project expense of \$12,000

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 10 years

Remaining Life: 2 years

Best Case: \$ 12,800

Worst Case: \$17,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 926 Treatment/Monitoring - Replace****Quantity: Pumps, sensors, monitors**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Equipment installed in 2005; no segregated expense provided.

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 20 years

Remaining Life: 5 years

Best Case: \$ 19,100

Worst Case: \$23,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 929 Cla-Val Valves - Replace****Quantity: (2) flow control**

Location: Water system, before filter and between resevoirs

Funded?: No. Annual cost best handled as operating expense

History:

Comments:

Useful Life: 0 years

Remaining Life:

Best Case:

Worst Case:

Cost Source:

**Comp #: 929 System Components, Small - Replace****Quantity: Assorted systems**

Location: Water system, various

Funded?: No. Annual cost best handled as operating expense

History:

Comments:

Useful Life: 0 years

Remaining Life:

Best Case:

Worst Case:

Cost Source:

**Comp #: 930 Booster System, Primary - Replace****Quantity: (1) Paco 9000**

Location: 2880 East Timberlake Drive West, Pump Station

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Replaced 2018 at \$198,575

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 20 years

Remaining Life: 18 years

Best Case: \$ 189,000

Worst Case: \$220,000

Lower allowance

Higher allowance

Cost Source: Client Cost History



**Comp #: 934 Booster System, Back Up - Maintain**

**Quantity: (1) system, quad pump**

Location: 2880 East Timberlake Drive West, Water Shed

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Installed in 1967; replacements of pumps in 1991

Comments: Cost inflated 3%, deducted one year remaining useful life from prior 2018/2019 Reserve Study.

Useful Life: 10 years

Remaining Life: 1 years

Best Case: \$ 5,250

Worst Case: \$7,420

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

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## Distribution

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**Comp #: 940 Water Main Line Project, A-Replace****Quantity: Approx 1,600 LF**

Location: Agate Drive (from West Lakeshore Drive to Pickering Drive)

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History:

Comments: Quantity adjusted to reflect FY 2019/2020 planned completion

Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.

Useful Life: 100 years

Remaining Life: 1 years

Best Case: \$ 304,000

Worst Case: \$336,000

Lower allowance

Higher allowance

Cost Source: Extrapolated FY 2019/2020 Estimate

Provided by Client

---

**Comp #: 940 Water Main Line Project, B-Replace****Quantity: Approx 2,000 LF**

Location: McClane Drive and Totten Place

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History:

Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.

Useful Life: 100 years

Remaining Life: 6 years

Best Case: \$ 380,000

Worst Case: \$460,000

Lower allowance

Higher allowance

Cost Source: Extrapolated FY 2019/2020 Estimate

Provided by Client

---

**Comp #: 940 Water Main Line Project, C-Replace****Quantity: Approx 2,400 LF**

Location: Lakeshore Drive West and Timber Parkway

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History:

Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.

Useful Life: 100 years

Remaining Life: 11 years

Best Case: \$ 456,000

Worst Case: \$552,000

Lower allowance

Higher allowance

Cost Source: Extrapolated FY 2019/2020 Estimate

Provided by Client

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**Comp #: 940 Water Main Line Project, D-Replace****Quantity: Approx 2,800 LF**

Location: Pickering Drive, Park Drive and Lakeshore Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History:

Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.

Useful Life: 100 years

Remaining Life: 16 years

Best Case: \$ 532,000

Worst Case: \$644,000

Lower allowance

Higher allowance

Cost Source: Extrapolated FY 2019/2020 Estimate

Provided by Client

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**Comp #: 945 Remaining Main Lines, E- Replace****Quantity: ~(1/4) of 59,000 LF**

Location: Throughout community

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History:

Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.

Useful Life: 100 years

Remaining Life: 46 years

Best Case: \$ 2,024,000

Worst Case: \$2,824,000

Lower allowance

Higher allowance

Cost Source: Extrapolated FY 2019/2020 Estimate

Provided by Client

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**Comp #: 945 Remaining Main Lines, F- Replace** **Quantity: ~(1/4) of 59,000 LF**  
 Location: Throughout community  
 Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
 History:  
 Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.  
 Useful Life: 100 years Remaining Life: 47 years  
 Best Case: \$ 2,024,000 Worst Case: \$2,824,000  
 Lower allowance Higher allowance  
 Cost Source: Extrapolated FY 2019/2020 Estimate  
 Provided by Client

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**Comp #: 945 Remaining Main Lines, G - Replace** **Quantity: ~(1/4) of 59,000 LF**  
 Location: Throughout community  
 Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
 History:  
 Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.  
 Useful Life: 100 years Remaining Life: 48 years  
 Best Case: \$ 2,024,000 Worst Case: \$2,824,000  
 Lower allowance Higher allowance  
 Cost Source: Extrapolated FY 2019/2020 Estimate  
 Provided by Client

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**Comp #: 945 Remaining Main Lines, H - Replace** **Quantity: ~(1/4) of 59,000 LF**  
 Location: Throughout community  
 Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
 History:  
 Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.  
 Useful Life: 100 years Remaining Life: 49 years  
 Best Case: \$ 2,024,000 Worst Case: \$2,824,000  
 Lower allowance Higher allowance  
 Cost Source: Extrapolated FY 2019/2020 Estimate  
 Provided by Client

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**Comp #: 946 Water Main Lines, 2009 - Replace** **Quantity: Approx 2,600 LF**  
 Location: Eastlake Drive from E Timberlake Drive W to Timberlake Drive E  
 Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
 History: First phase of project was completed in 2009  
 Comments: Cost adjusted/reduced to 2019/2020 estimate extrapolation, deducted one year remaining useful life from prior 2019/2020 Reserve Study.  
 Useful Life: 100 years Remaining Life: 89 years  
 Best Case: \$ 494,000 Worst Case: \$546,000  
 Lower allowance Higher allowance  
 Cost Source: Extrapolated FY 2019/2020 Estimate  
 Provided by Client

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**Comp #: 947 Water Main Lines, 2019/2020-Replace** **Quantity: Approx 960 LF**  
 Location: E Timberlake Drive W from Timberlake Drive E to E Stavis Road  
 Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
 History: This phase of project will be completed in FY 2019/2020 at reported expense of \$210,000  
 Comments: Added separate component for future reserve funding for quantity being replaced in FY 2019/2020  
 Useful Life: 100 years Remaining Life: 99 years  
 Best Case: \$ 182,400 Worst Case: \$220,800  
 Lower allowance Higher allowance  
 Cost Source: FY 2019/2020 Estimate Provided by Client

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**Comp #: 948 Service Lines - Replace** **Quantity: Extensive linear feet**  
 Location: Service connections throughout community  
 Funded?: No. Annual cost best handled as operating expense  
 History:  
 Comments:  
 Useful Life: 0 years Remaining Life:  
 Best Case: Worst Case:  
 Cost Source:

---

**Comp #: 949 Service Connections - Replace**

**Quantity: ~(700) steel fittings**

Location: Service connections throughout community  
Funded?: No. Annual cost best handled as operating expense  
History:  
Comments:  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 950 Hydrants - Add/Replace**

**Quantity: (18) hydrants, existing**

Location: Water distribution throughout community  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History:  
Comments: No change in RUL/remains 0. Cost inflated ~3% from prior 2019/2020 Reserve Study.  
Useful Life: 1 years  
Best Case: \$ 8,450  
Lower allowance  
Cost Source: Review of FY 2016/2017 WSP and your expert consultant, adjusted for inflation

Remaining Life: 0 years  
Worst Case: \$12,800  
Higher allowance

**Comp #: 954 Blow-Out/Isolation Valves - Replace**

**Quantity: (65) total, assorted**

Location: Water service points of community  
Funded?: No. Annual cost best handled as operating expense  
History:  
Comments:  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 955 Pressure Reducing Valves - Replace**

**Quantity: ~(570) Cash Acme EB86U**

Location: Water service points of community  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History:  
Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study  
Useful Life: 25 years  
Best Case: \$ 36,300  
Lower allowance  
Cost Source: ARI Cost Database: Similar Project  
Cost History

Remaining Life: 12 years  
Worst Case: \$48,400  
Higher allowance

**Comp #: 956 Water Meters - Replace**

**Quantity: (1,270) meters**

Location: Water service points of community  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History: All reportedly replaced in FY 2016/2017, previously installed between 1997-1999  
Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study  
Useful Life: 15 years  
Best Case: \$ 122,000  
Lower allowance  
Cost Source: Inflated Client Cost History/Similar Project Cost History

Remaining Life: 11 years  
Worst Case: \$155,000  
Higher allowance

**Comp #: 957 Water Meter Setters - Replace**

**Quantity: (1,270) boxes/setters**

Location: Water service points of community  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History: Reportedly installed between 1997-1999  
Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study  
Useful Life: 45 years  
Best Case: \$ 242,000  
Lower allowance  
Cost Source: ARI Cost Database: Similar Project  
Cost History

Remaining Life: 26 years  
Worst Case: \$270,000  
Higher allowance

## Buildings/Site

**Comp #: 960 Building Exterior - Maintain/Repair****Quantity: Approx 3,200 GSF**

Location: In the vicinity of 2880 East Timberlake Drive West  
Funded?: No. Annual cost best handled as operating expense  
History:  
Comments:  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 962 Building Interior - Maintain/Repair****Quantity: Extensive GSF**

Location: In the vicinity of 2880 East Timberlake Drive West  
Funded?: No. Annual cost best handled as operating expense  
History:  
Comments:  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 964 Building Roof - Replace****Quantity: Approx 3,800 GSF**

Location: In the vicinity of 2880 East Timberlake Drive West  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History:  
Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study  
Useful Life: 40 years  
Best Case: \$ 31,800  
Lower allowance  
Cost Source: ARI Cost Database: Similar Project  
Cost History

Remaining Life: 27 years  
Worst Case: \$44,600  
Higher allowance

**Comp #: 966 Electrical/Plumbing-Repair/Replace****Quantity: Extensive systems**

Location: Throughout buildings  
Funded?: No. Useful life not predictable or extended  
History:  
Comments:  
Useful Life: 0 years  
Best Case:  
Cost Source:

Remaining Life:  
Worst Case:

**Comp #: 970 Chain Link Fence - Replace****Quantity: Approx 500 linear feet**

Location: Adjacent to Shop and Wells  
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding  
History:  
Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study  
Useful Life: 30 years  
Best Case: \$ 10,600  
Lower allowance  
Cost Source: ARI Cost Database: Similar Project  
Cost History

Remaining Life: 9 years  
Worst Case: \$12,800  
Higher allowance

## Systems/Equipment

**Comp #: 980 Generator, 200 KW - Upgrade****Quantity: (1) 200 KW, new**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Replaced in FY 2017/2018 at expense of \$115,000; previous 100 KW unit installed in 1996 at expense of \$36,000

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 40 years

Remaining Life: 37 years

Best Case: \$ 106,000

Worst Case: \$138,000

Lower allowance

Higher allowance

Cost Source: FY 2017/2018 Client Cost History,  
adjusted for inflation

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**Comp #: 990 Office Equipment/Furniture-Replace****Quantity: Minor equipment**

Location: 2880 East Timberlake Drive West, Water Shed

Funded?: No. Annual cost best handled as operating expense

History:

Comments:

Useful Life: 0 years

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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**Comp #: 991 Small Equipment/Tools - Replace****Quantity: Minor equipment**

Location: 2880 East Timberlake Drive West, Water Shed

Funded?: No. Annual cost best handled as operating expense

History:

Comments:

Useful Life: 0 years

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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**Comp #: 994 Compact Tractor/Loader - Replace****Quantity: (1) Kubota B20**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Purchased new in 1996 at an expense of \$26,000

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study.

Useful Life: 25 years

Remaining Life: 1 years

Best Case: \$ 36,100

Worst Case: \$42,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

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**Comp #: 995 Truck (1/3) - Replace****Quantity: (1) 1992 GMC 3500HD**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Purchased used in 2012 at a total expense of only \$6,500 (cost split = 2/3 HOA and 1/3 Water System)

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 12 years

Remaining Life: 4 years

Best Case: \$ 5,870

Worst Case: \$7,930

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

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**Comp #: 996 Truck - Replace****Quantity: (1) 2008 Ford F150**

Location: 2880 East Timberlake Drive West

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Reportedly purchased used in FY 2015/2016 at an expense of \$14,500

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 12 years

Remaining Life: 7 years

Best Case: \$ 17,000

Worst Case: \$23,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

**Comp #: 998 Leak Detector - Replace**

**Quantity: (1) system**

Location: MPC office

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Replaced last in 2005 at an expense of \$3,000

Comments: Work deferred; RUL remains 0. Cost inflated ~3% from prior 2019/2020 Reserve Study

Useful Life: 12 years

Remaining Life: 0 years

Best Case: \$ 4,220

Worst Case: \$5,250

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

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**Comp #: 999 Meter Reader System - Replace**

**Quantity: (2) meters, software**

Location: MPC office

Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Replaced last in FY 2015/2016; previous 2010

Comments: Cost inflated ~3%, deducted one year remaining useful life from prior 2019/2020 Reserve Study

Useful Life: 5 years

Remaining Life: 0 years

Best Case: \$ 3,710

Worst Case: \$4,740

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project

Cost History

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