Serving the Pacific Northwest
505 South 336th Street, Suite 620
Federal Way, WA 98003

Tel : (253) 661-5437 / (866) 900-2792
Fax : (253) 661-5430
www.reservestudy.com

ASSOCIATION RESERVES™
Planning For The Inevitable™

Regional Offices
Arizona
California
Colorado
Florida
Hawaii
Nevada
North Carolina
Texas
Washington

Update "No-Site-Visit" Reserve Study

HMC Water System
Lakebay, WA

Report #: 26621-5
For Period Beginning: October 1, 2019
Expires: September 30, 2020

Date Prepared: April 18, 2019

Hello, and welcome to your Reserve Study!

This 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.

With 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 or call us at:

253-661-5437

ASSOCIATION RESERVES™

Table of Contents

3-Minute Executive Summary 1

Reserve Study Summary 1

Executive Summary (Component List) 3

Introduction, Objectives, and Methodology 4

Which Physical Assets are Funded by Reserves? 5

How do we establish Useful Life and Remaining Useful Life estimates? 5

How do we establish Current Repair/Replacement Cost Estimates? 5

How much Reserves are enough? 6

How much should we contribute? 7

What is our Recommended Funding Goal? 7

Projected Expenses 8

Annual Reserve Expenses Graph 8

Reserve Fund Status & Recommended Funding Plan 9

Annual Reserve Funding Graph 9

30-Yr Cash Flow Graph 10

Percent Funded Graph 10

Table Descriptions 11

Reserve Component List Detail 12

Fully Funded Balance 13

Component Significance 14

Accounting-Tax Summary 15

30-Year Reserve Plan Summary 16

30-Year Reserve Plan Summary (Alternate Funding Plan) 17

30-Year Income/Expense Detail 18

Accuracy, Limitations, and Disclosures 24

Terms and Definitions 25

Component Details 26

Capacity / Storage 27

Boost 29

Distribution 30

Buildings/Site 32

Systems/Equipment 34

Financial/Professional 35

3- Minute Executive Summary

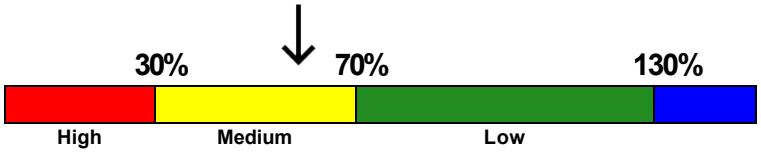
Association:	**HMC Water System**	**Assoc. #: 26621-5**
Location:	**Lakebay, WA**	**# of Units: 400**
Report Period:	**October 1, 2019 through September 30, 2020**	

Findings/Recommendations as-of: October 1, 2019

Starting Reserve Balance	**$291,650**
Current Fully Funded Reserve Balance	**$488,035**
Percent Funded	**59.8 %**
Average Reserve Deficit or (Surplus) Per Unit	**$491**
2019/2020 100% Annual "Full Funding" Contributions	**$87,100**
2019/2020 70% Annual "Threshold Funding" Contributions	**$66,740**
2019/2020 "Alternate/Baseline Funding" to keep Reserves above $0	**$24,032**
Recommended 2019 Special Assessment	**$0**
Most Recent Budgeted Contribution Rate	**$42,572**

Reserves % Funded: 59.8%

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 or exceeding all requirements of the RCW. This study was prepared by, or under the supervision of a credentialed Reserve Specialist (RS 153).

• Your Reserve Fund is currently 59.8 % Funded. This means the association's special assessment and/or deferred maintenance risk is currently Medium. The objective of your multi-year Funding Plan is to fund your Reserves to a level where you will enjoy a low risk of such 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 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.

Executive Summary 26621-5

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
	Capacity / Storage			
901	Well Pumps/Motors - Replace	30	23	$19,100
904	Well Controls - Replace	30	23	$5,305
910	Storage Tank, Concrete - Replace	80	66	$225,500
912	Storage Tank, Interior - Clean	10	0	$4,240
914	Storage Tank, Exterior - Clean	5	0	$3,390
	Boost			
920	Booster Pumps, 5 HP - Replace	20	13	$16,950
922	Booster Pump, 15 HP - Replace	40	33	$23,300
924	Booster Pumps VFD Control - Replace	20	13	$16,950
	Distribution			
940	Distribution Lines, 6"-8" - Replace	70	63	$1,105,000
941	Distribution Lines, 2" - Replace	40	33	$71,600
945	Service Connect/Lines - Replace	40	33	$273,500
946	Service Meters - Replace	10	3	$134,500
947	Service Meter Box/Setters - Replace	20	13	$134,500
950	Pressure Reducing Valves - Replace	20	13	$13,400
954	Blow-Out/Isolation Valves - Replace	30	23	$40,350
958	Hydrants - Replace	40	33	$167,500
	Buildings/Site			
964	Building Roofs - Replace	40	34	$3,500
967	Storage Shed, Vinyl - Replace	20	14	$2,870
969	Building Electrical - Replace	30	23	$11,160
970	Chain Link Fence - Replace	35	29	$18,350
	Systems/Equipment			
980	Generator, Emergency - Replace	50	5	$53,050
999	Meter Reader System - Replace	6	0	$5,700
	Financial/Professional			
1006	SWSMP - Update	6	0	$3,190
23	**Total Funded Components**			

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 STUDY RESULTS

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?

RESERVE COMPONENT "FOUR-PART TEST"

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 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.

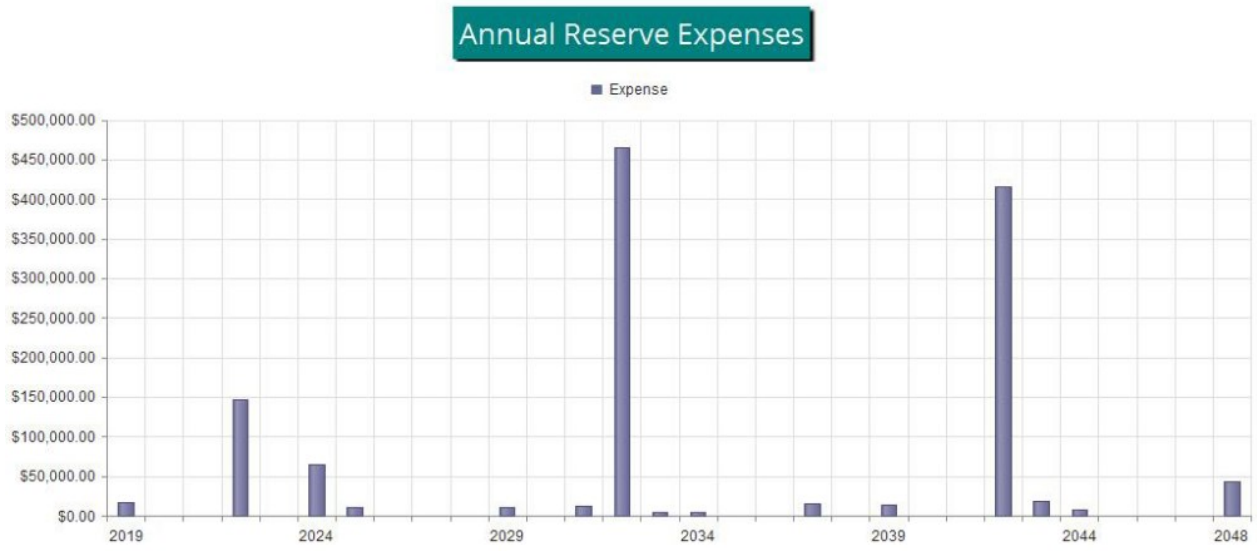


Figure 1

Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be $291,650 as-of the start of your Fiscal Year on 10/1/2019. As of that date, your Fully Funded Balance is computed to be $488,035 (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 $87,100 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.

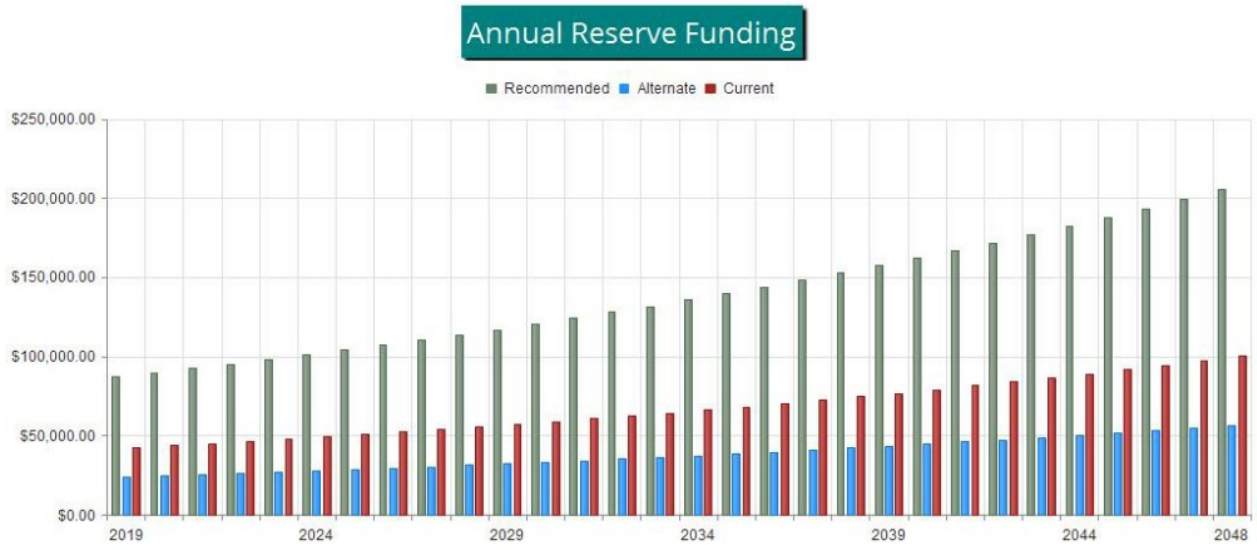


Figure 2

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.

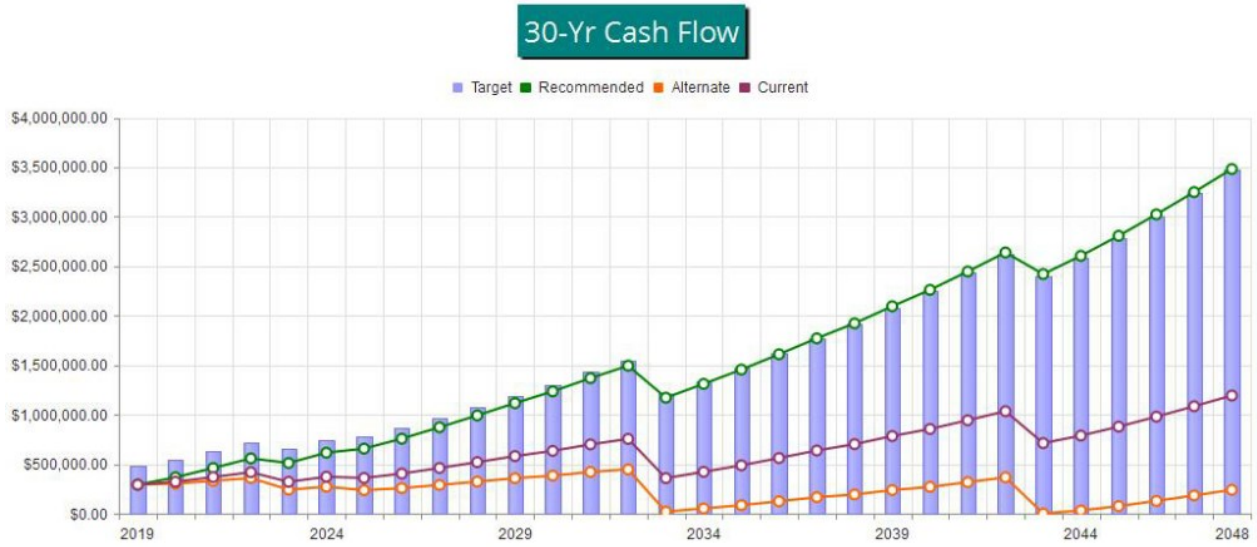


Figure 3

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.

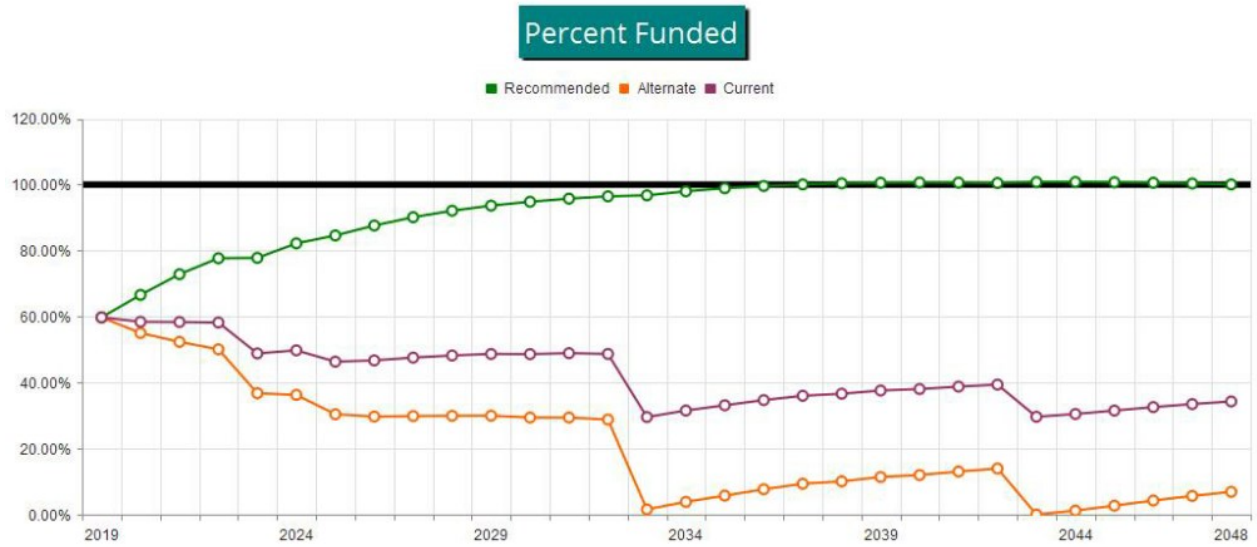


Figure 4

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 association 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 association, 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.

#	Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate Best Case	Current Cost Estimate Worst Case
	Capacity / Storage					
901	Well Pumps/Motors - Replace	(2) 5 HP submersible, 4"	30	23	$17,000	$21,200
904	Well Controls - Replace	(1) two-motor control	30	23	$4,240	$6,370
910	Storage Tank, Concrete - Replace	(1) 99,000 gallon	80	66	$210,000	$241,000
912	Storage Tank, Interior - Clean	(1) 99,000 gallon	10	0	$3,180	$5,300
914	Storage Tank, Exterior - Clean	(1) 99,000 gallon	5	0	$2,860	$3,920
	Boost					
920	Booster Pumps, 5 HP - Replace	(2) Nidec, 5 HP	20	13	$14,800	$19,100
922	Booster Pump, 15 HP - Replace	(1) Baldor, 15 HP	40	33	$21,200	$25,400
924	Booster Pumps VFD Control - Replace	(1) three pump control	20	13	$14,800	$19,100
	Distribution					
940	Distribution Lines, 6"-8" - Replace	Approx 26,650 LF	70	63	$990,000	$1,220,000
941	Distribution Lines, 2" - Replace	Approx 2,500 LF	40	33	$66,300	$76,900
945	Service Connect/Lines - Replace	(397) connections	40	33	$252,000	$295,000
946	Service Meters - Replace	(397) meters	10	3	$113,000	$156,000
947	Service Meter Box/Setters - Replace	(397) boxes/setters	20	13	$113,000	$156,000
950	Pressure Reducing Valves - Replace	(60) metal	20	13	$10,200	$16,600
954	Blow-Out/Isolation Valves - Replace	(38) total, assorted	30	23	$36,300	$44,400
958	Hydrants - Replace	(41) hydrants	40	33	$157,000	$178,000
	Buildings/Site					
964	Building Roofs - Replace	Approx 500 square feet	40	34	$2,970	$4,030
967	Storage Shed, Vinyl - Replace	(1) 8'x8'	20	14	$2,340	$3,400
969	Building Electrical - Replace	Extensive systems	30	23	$9,020	$13,300
970	Chain Link Fence - Replace	Approx 720 linear feet	35	29	$16,800	$19,900
	Systems/Equipment					
980	Generator, Emergency - Replace	(1) Marathon, 60KW	50	5	$42,400	$63,700
999	Meter Reader System - Replace	(1) meter, software	6	0	$4,700	$6,700
	Financial/Professional					
1006	SWSMP - Update	Every 6 years	6	0	$2,660	$3,720

23 Total Funded Components

Fully Funded Balance

26621-5 NSV

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
	Capacity / Storage							
901	Well Pumps/Motors - Replace	$19,100	X	7	/	30	=	$4,457
904	Well Controls - Replace	$5,305	X	7	/	30	=	$1,238
910	Storage Tank, Concrete - Replace	$225,500	X	14	/	80	=	$39,463
912	Storage Tank, Interior - Clean	$4,240	X	10	/	10	=	$4,240
914	Storage Tank, Exterior - Clean	$3,390	X	5	/	5	=	$3,390
	Boost							
920	Booster Pumps, 5 HP - Replace	$16,950	X	7	/	20	=	$5,933
922	Booster Pump, 15 HP - Replace	$23,300	X	7	/	40	=	$4,078
924	Booster Pumps VFD Control - Replace	$16,950	X	7	/	20	=	$5,933
	Distribution							
940	Distribution Lines, 6"-8" - Replace	$1,105,000	X	7	/	70	=	$110,500
941	Distribution Lines, 2" - Replace	$71,600	X	7	/	40	=	$12,530
945	Service Connect/Lines - Replace	$273,500	X	7	/	40	=	$47,863
946	Service Meters - Replace	$134,500	X	7	/	10	=	$94,150
947	Service Meter Box/Setters - Replace	$134,500	X	7	/	20	=	$47,075
950	Pressure Reducing Valves - Replace	$13,400	X	7	/	20	=	$4,690
954	Blow-Out/Isolation Valves - Replace	$40,350	X	7	/	30	=	$9,415
958	Hydrants - Replace	$167,500	X	7	/	40	=	$29,313
	Buildings/Site							
964	Building Roofs - Replace	$3,500	X	6	/	40	=	$525
967	Storage Shed, Vinyl - Replace	$2,870	X	6	/	20	=	$861
969	Building Electrical - Replace	$11,160	X	7	/	30	=	$2,604
970	Chain Link Fence - Replace	$18,350	X	6	/	35	=	$3,146
	Systems/Equipment							
980	Generator, Emergency - Replace	$53,050	X	45	/	50	=	$47,745
999	Meter Reader System - Replace	$5,700	X	6	/	6	=	$5,700
	Financial/Professional							
1006	SWSMP - Update	$3,190	X	6	/	6	=	$3,190
								$488,035

Component Significance

26621-5
NSV

#	Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
	Capacity / Storage				
901	Well Pumps/Motors - Replace	30	$19,100	$637	1.04 %
904	Well Controls - Replace	30	$5,305	$177	0.29 %
910	Storage Tank, Concrete - Replace	80	$225,500	$2,819	4.59 %
912	Storage Tank, Interior - Clean	10	$4,240	$424	0.69 %
914	Storage Tank, Exterior - Clean	5	$3,390	$678	1.10 %
	Boost				
920	Booster Pumps, 5 HP - Replace	20	$16,950	$848	1.38 %
922	Booster Pump, 15 HP - Replace	40	$23,300	$583	0.95 %
924	Booster Pumps VFD Control - Replace	20	$16,950	$848	1.38 %
	Distribution				
940	Distribution Lines, 6"-8" - Replace	70	$1,105,000	$15,786	25.68 %
941	Distribution Lines, 2" - Replace	40	$71,600	$1,790	2.91 %
945	Service Connect/Lines - Replace	40	$273,500	$6,838	11.12 %
946	Service Meters - Replace	10	$134,500	$13,450	21.88 %
947	Service Meter Box/Setters - Replace	20	$134,500	$6,725	10.94 %
950	Pressure Reducing Valves - Replace	20	$13,400	$670	1.09 %
954	Blow-Out/Isolation Valves - Replace	30	$40,350	$1,345	2.19 %
958	Hydrants - Replace	40	$167,500	$4,188	6.81 %
	Buildings/Site				
964	Building Roofs - Replace	40	$3,500	$88	0.14 %
967	Storage Shed, Vinyl - Replace	20	$2,870	$144	0.23 %
969	Building Electrical - Replace	30	$11,160	$372	0.61 %
970	Chain Link Fence - Replace	35	$18,350	$524	0.85 %
	Systems/Equipment				
980	Generator, Emergency - Replace	50	$53,050	$1,061	1.73 %
999	Meter Reader System - Replace	6	$5,700	$950	1.55 %
	Financial/Professional				
1006	SWSMP - Update	6	$3,190	$532	0.86 %
23	Total Funded Components			$61,472	100.00 %

#	Component	UL	RUL	Current Cost Estimate	Fully Funded Balance	Current Fund Balance	Proportional Reserve Contribs
	Capacity / Storage						
901	Well Pumps/Motors - Replace	30	23	$19,100	$4,457	$4,457	$902.09
904	Well Controls - Replace	30	23	$5,305	$1,238	$1,238	$250.55
910	Storage Tank, Concrete - Replace	80	66	$225,500	$39,463	$39,463	$3993.87
912	Storage Tank, Interior - Clean	10	0	$4,240	$4,240	$4,240	$600.76
914	Storage Tank, Exterior - Clean	5	0	$3,390	$3,390	$3,390	$960.66
	Boost						
920	Booster Pumps, 5 HP - Replace	20	13	$16,950	$5,933	$5,933	$1200.82
922	Booster Pump, 15 HP - Replace	40	33	$23,300	$4,078	$4,078	$825.34
924	Booster Pumps VFD Control - Replace	20	13	$16,950	$5,933	$5,933	$1200.82
	Distribution						
940	Distribution Lines, 6"-8" - Replace	70	63	$1,105,000	$110,500	$110,500	$22366.71
941	Distribution Lines, 2" - Replace	40	33	$71,600	$12,530	$12,530	$2536.24
945	Service Connect/Lines - Replace	40	33	$273,500	$47,863	$47,863	$9688.02
946	Service Meters - Replace	10	3	$134,500	$94,150	$52,028	$19057.25
947	Service Meter Box/Setters - Replace	20	13	$134,500	$47,075	$0	$9528.62
950	Pressure Reducing Valves - Replace	20	13	$13,400	$4,690	$0	$949.32
954	Blow-Out/Isolation Valves - Replace	30	23	$40,350	$9,415	$0	$1905.72
958	Hydrants - Replace	40	33	$167,500	$29,313	$0	$5933.25
	Buildings/Site						
964	Building Roofs - Replace	40	34	$3,500	$525	$0	$123.98
967	Storage Shed, Vinyl - Replace	20	14	$2,870	$861	$0	$203.32
969	Building Electrical - Replace	30	23	$11,160	$2,604	$0	$527.09
970	Chain Link Fence - Replace	35	29	$18,350	$3,146	$0	$742.86
	Systems/Equipment						
980	Generator, Emergency - Replace	50	5	$53,050	$47,745	$0	$1503.33
999	Meter Reader System - Replace	6	0	$5,700	$5,700	$0	$1346.05
	Financial/Professional						
1006	SWSMP - Update	6	0	$3,190	$3,190	$0	$753.32
23	**Total Funded Components**				**$488,035**	**$291,650**	**$87,100**

30-Year Reserve Plan Summary

26621-5 NSV

Fiscal Year Start: 2019 | **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
2019	$291,650	$488,035	59.8 %	Medium	$87,100	$0	$3,284	$16,520
2020	$365,514	$548,977	66.6 %	Medium	$89,713	$0	$4,123	$0
2021	$459,350	$630,663	72.8 %	Low	$92,404	$0	$5,079	$0
2022	$556,833	$716,755	77.7 %	Low	$95,177	$0	$5,334	$146,972
2023	$510,372	$656,065	77.8 %	Low	$98,032	$0	$5,620	$0
2024	$614,023	$747,010	82.2 %	Low	$100,973	$0	$6,347	$65,429
2025	$655,913	$775,429	84.6 %	Low	$104,002	$0	$7,058	$10,615
2026	$756,359	$863,362	87.6 %	Low	$107,122	$0	$8,136	$0
2027	$871,617	$967,134	90.1 %	Low	$110,336	$0	$9,310	$0
2028	$991,263	$1,076,356	92.1 %	Low	$113,646	$0	$10,529	$0
2029	$1,115,438	$1,191,260	93.6 %	Low	$117,055	$0	$11,742	$10,254
2030	$1,233,981	$1,301,528	94.8 %	Low	$120,567	$0	$13,002	$0
2031	$1,367,550	$1,428,219	95.8 %	Low	$124,184	$0	$14,298	$12,675
2032	$1,493,357	$1,548,285	96.5 %	Low	$127,909	$0	$13,312	$464,497
2033	$1,170,081	$1,209,284	96.8 %	Low	$131,747	$0	$12,395	$4,341
2034	$1,309,881	$1,336,863	98.0 %	Low	$135,699	$0	$13,814	$5,282
2035	$1,454,112	$1,470,174	98.9 %	Low	$139,770	$0	$15,310	$0
2036	$1,609,192	$1,615,884	99.6 %	Low	$143,963	$0	$16,889	$0
2037	$1,770,044	$1,769,013	100.1 %	Low	$148,282	$0	$18,451	$15,135
2038	$1,921,642	$1,914,287	100.4 %	Low	$152,730	$0	$20,072	$0
2039	$2,094,444	$2,082,742	100.6 %	Low	$157,312	$0	$21,762	$13,781
2040	$2,259,738	$2,245,387	100.6 %	Low	$162,032	$0	$23,515	$0
2041	$2,445,285	$2,430,536	100.6 %	Low	$166,893	$0	$25,404	$0
2042	$2,637,581	$2,624,773	100.5 %	Low	$171,899	$0	$25,275	$415,272
2043	$2,419,482	$2,400,747	100.8 %	Low	$177,056	$0	$25,105	$18,072
2044	$2,603,572	$2,582,865	100.8 %	Low	$182,368	$0	$27,036	$7,098
2045	$2,805,878	$2,785,611	100.7 %	Low	$187,839	$0	$29,131	$0
2046	$3,022,848	$3,005,727	100.6 %	Low	$193,474	$0	$31,339	$0
2047	$3,247,662	$3,236,543	100.3 %	Low	$199,279	$0	$33,627	$0
2048	$3,480,567	$3,478,503	100.1 %	Low	$205,257	$0	$35,779	$43,243

30-Year Reserve Plan Summary (Alternate Funding Plan)

26621-5 NSV

Fiscal Year Start: 2019	**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**
2019	$291,650	$488,035	59.8 %	Medium	$24,032	$0	$2,968	$16,520
2020	$302,130	$548,977	55.0 %	Medium	$24,753	$0	$3,160	$0
2021	$330,042	$630,663	52.3 %	Medium	$25,496	$0	$3,444	$0
2022	$358,981	$716,755	50.1 %	Medium	$26,260	$0	$3,000	$146,972
2023	$241,270	$656,065	36.8 %	Medium	$27,048	$0	$2,560	$0
2024	$270,878	$747,010	36.3 %	Medium	$27,860	$0	$2,533	$65,429
2025	$235,841	$775,429	30.4 %	Medium	$28,695	$0	$2,460	$10,615
2026	$256,381	$863,362	29.7 %	High	$29,556	$0	$2,724	$0
2027	$288,661	$967,134	29.8 %	High	$30,443	$0	$3,053	$0
2028	$322,157	$1,076,356	29.9 %	High	$31,356	$0	$3,394	$0
2029	$356,907	$1,191,260	30.0 %	High	$32,297	$0	$3,696	$10,254
2030	$382,646	$1,301,528	29.4 %	High	$33,266	$0	$4,011	$0
2031	$419,924	$1,428,219	29.4 %	High	$34,264	$0	$4,327	$12,675
2032	$445,839	$1,548,285	28.8 %	High	$35,292	$0	$2,323	$464,497
2033	$18,957	$1,209,284	1.6 %	High	$36,351	$0	$351	$4,341
2034	$51,318	$1,336,863	3.8 %	High	$37,441	$0	$677	$5,282
2035	$84,154	$1,470,174	5.7 %	High	$38,564	$0	$1,039	$0
2036	$123,758	$1,615,884	7.7 %	High	$39,721	$0	$1,443	$0
2037	$164,922	$1,769,013	9.3 %	High	$40,913	$0	$1,786	$15,135
2038	$192,486	$1,914,287	10.1 %	High	$42,140	$0	$2,145	$0
2039	$236,772	$2,082,742	11.4 %	High	$43,404	$0	$2,527	$13,781
2040	$268,923	$2,245,387	12.0 %	High	$44,707	$0	$2,926	$0
2041	$316,556	$2,430,536	13.0 %	High	$46,048	$0	$3,411	$0
2042	$366,015	$2,624,773	13.9 %	High	$47,429	$0	$1,829	$415,272
2043	$1	$2,400,747	0.0 %	High	$48,852	$0	$155	$18,072
2044	$30,937	$2,582,865	1.2 %	High	$50,318	$0	$528	$7,098
2045	$74,684	$2,785,611	2.7 %	High	$51,827	$0	$1,011	$0
2046	$127,522	$3,005,727	4.2 %	High	$53,382	$0	$1,549	$0
2047	$182,453	$3,236,543	5.6 %	High	$54,983	$0	$2,109	$0
2048	$239,546	$3,478,503	6.9 %	High	$56,633	$0	$2,474	$43,243

	Fiscal Year	2019	2020	2021	2022	2023
	Starting Reserve Balance	$291,650	$365,514	$459,350	$556,833	$510,372
	Annual Reserve Contribution	$87,100	$89,713	$92,404	$95,177	$98,032
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$3,284	$4,123	$5,079	$5,334	$5,620
	Total Income	$382,034	$459,350	$556,833	$657,343	$614,023
#	Component					
	Capacity / Storage					
901	Well Pumps/Motors - Replace	$0	$0	$0	$0	$0
904	Well Controls - Replace	$0	$0	$0	$0	$0
910	Storage Tank, Concrete - Replace	$0	$0	$0	$0	$0
912	Storage Tank, Interior - Clean	$4,240	$0	$0	$0	$0
914	Storage Tank, Exterior - Clean	$3,390	$0	$0	$0	$0
	Boost					
920	Booster Pumps, 5 HP - Replace	$0	$0	$0	$0	$0
922	Booster Pump, 15 HP - Replace	$0	$0	$0	$0	$0
924	Booster Pumps VFD Control - Replace	$0	$0	$0	$0	$0
	Distribution					
940	Distribution Lines, 6"-8" - Replace	$0	$0	$0	$0	$0
941	Distribution Lines, 2" - Replace	$0	$0	$0	$0	$0
945	Service Connect/Lines - Replace	$0	$0	$0	$0	$0
946	Service Meters - Replace	$0	$0	$0	$146,972	$0
947	Service Meter Box/Setters - Replace	$0	$0	$0	$0	$0
950	Pressure Reducing Valves - Replace	$0	$0	$0	$0	$0
954	Blow-Out/Isolation Valves - Replace	$0	$0	$0	$0	$0
958	Hydrants - Replace	$0	$0	$0	$0	$0
	Buildings/Site					
964	Building Roofs - Replace	$0	$0	$0	$0	$0
967	Storage Shed, Vinyl - Replace	$0	$0	$0	$0	$0
969	Building Electrical - Replace	$0	$0	$0	$0	$0
970	Chain Link Fence - Replace	$0	$0	$0	$0	$0
	Systems/Equipment					
980	Generator, Emergency - Replace	$0	$0	$0	$0	$0
999	Meter Reader System - Replace	$5,700	$0	$0	$0	$0
	Financial/Professional					
1006	SWSMP - Update	$3,190	$0	$0	$0	$0
	Total Expenses	$16,520	$0	$0	$146,972	$0
	Ending Reserve Balance	$365,514	$459,350	$556,833	$510,372	$614,023

	Fiscal Year	2024	2025	2026	2027	2028
	Starting Reserve Balance	$614,023	$655,913	$756,359	$871,617	$991,263
	Annual Reserve Contribution	$100,973	$104,002	$107,122	$110,336	$113,646
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$6,347	$7,058	$8,136	$9,310	$10,529
	Total Income	$721,343	$766,974	$871,617	$991,263	$1,115,438
#	Component					
	Capacity / Storage					
901	Well Pumps/Motors - Replace	$0	$0	$0	$0	$0
904	Well Controls - Replace	$0	$0	$0	$0	$0
910	Storage Tank, Concrete - Replace	$0	$0	$0	$0	$0
912	Storage Tank, Interior - Clean	$0	$0	$0	$0	$0
914	Storage Tank, Exterior - Clean	$3,930	$0	$0	$0	$0
	Boost					
920	Booster Pumps, 5 HP - Replace	$0	$0	$0	$0	$0
922	Booster Pump, 15 HP - Replace	$0	$0	$0	$0	$0
924	Booster Pumps VFD Control - Replace	$0	$0	$0	$0	$0
	Distribution					
940	Distribution Lines, 6"-8" - Replace	$0	$0	$0	$0	$0
941	Distribution Lines, 2" - Replace	$0	$0	$0	$0	$0
945	Service Connect/Lines - Replace	$0	$0	$0	$0	$0
946	Service Meters - Replace	$0	$0	$0	$0	$0
947	Service Meter Box/Setters - Replace	$0	$0	$0	$0	$0
950	Pressure Reducing Valves - Replace	$0	$0	$0	$0	$0
954	Blow-Out/Isolation Valves - Replace	$0	$0	$0	$0	$0
958	Hydrants - Replace	$0	$0	$0	$0	$0
	Buildings/Site					
964	Building Roofs - Replace	$0	$0	$0	$0	$0
967	Storage Shed, Vinyl - Replace	$0	$0	$0	$0	$0
969	Building Electrical - Replace	$0	$0	$0	$0	$0
970	Chain Link Fence - Replace	$0	$0	$0	$0	$0
	Systems/Equipment					
980	Generator, Emergency - Replace	$61,499	$0	$0	$0	$0
999	Meter Reader System - Replace	$0	$6,806	$0	$0	$0
	Financial/Professional					
1006	SWSMP - Update	$0	$3,809	$0	$0	$0
	Total Expenses	$65,429	$10,615	$0	$0	$0
	Ending Reserve Balance	$655,913	$756,359	$871,617	$991,263	$1,115,438

	Fiscal Year	2029	2030	2031	2032	2033
	Starting Reserve Balance	$1,115,438	$1,233,981	$1,367,550	$1,493,357	$1,170,081
	Annual Reserve Contribution	$117,055	$120,567	$124,184	$127,909	$131,747
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$11,742	$13,002	$14,298	$13,312	$12,395
	Total Income	$1,244,235	$1,367,550	$1,506,032	$1,634,578	$1,314,222
#	Component					
	Capacity / Storage					
901	Well Pumps/Motors - Replace	$0	$0	$0	$0	$0
904	Well Controls - Replace	$0	$0	$0	$0	$0
910	Storage Tank, Concrete - Replace	$0	$0	$0	$0	$0
912	Storage Tank, Interior - Clean	$5,698	$0	$0	$0	$0
914	Storage Tank, Exterior - Clean	$4,556	$0	$0	$0	$0
	Boost					
920	Booster Pumps, 5 HP - Replace	$0	$0	$0	$24,892	$0
922	Booster Pump, 15 HP - Replace	$0	$0	$0	$0	$0
924	Booster Pumps VFD Control - Replace	$0	$0	$0	$24,892	$0
	Distribution					
940	Distribution Lines, 6"-8" - Replace	$0	$0	$0	$0	$0
941	Distribution Lines, 2" - Replace	$0	$0	$0	$0	$0
945	Service Connect/Lines - Replace	$0	$0	$0	$0	$0
946	Service Meters - Replace	$0	$0	$0	$197,518	$0
947	Service Meter Box/Setters - Replace	$0	$0	$0	$197,518	$0
950	Pressure Reducing Valves - Replace	$0	$0	$0	$19,678	$0
954	Blow-Out/Isolation Valves - Replace	$0	$0	$0	$0	$0
958	Hydrants - Replace	$0	$0	$0	$0	$0
	Buildings/Site					
964	Building Roofs - Replace	$0	$0	$0	$0	$0
967	Storage Shed, Vinyl - Replace	$0	$0	$0	$0	$4,341
969	Building Electrical - Replace	$0	$0	$0	$0	$0
970	Chain Link Fence - Replace	$0	$0	$0	$0	$0
	Systems/Equipment					
980	Generator, Emergency - Replace	$0	$0	$0	$0	$0
999	Meter Reader System - Replace	$0	$0	$8,127	$0	$0
	Financial/Professional					
1006	SWSMP - Update	$0	$0	$4,548	$0	$0
	Total Expenses	$10,254	$0	$12,675	$464,497	$4,341
	Ending Reserve Balance	$1,233,981	$1,367,550	$1,493,357	$1,170,081	$1,309,881

	Fiscal Year	2034	2035	2036	2037	2038
	Starting Reserve Balance	$1,309,881	$1,454,112	$1,609,192	$1,770,044	$1,921,642
	Annual Reserve Contribution	$135,699	$139,770	$143,963	$148,282	$152,730
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$13,814	$15,310	$16,889	$18,451	$20,072
	Total Income	$1,459,394	$1,609,192	$1,770,044	$1,936,777	$2,094,444
#	Component					
	Capacity / Storage					
901	Well Pumps/Motors - Replace	$0	$0	$0	$0	$0
904	Well Controls - Replace	$0	$0	$0	$0	$0
910	Storage Tank, Concrete - Replace	$0	$0	$0	$0	$0
912	Storage Tank, Interior - Clean	$0	$0	$0	$0	$0
914	Storage Tank, Exterior - Clean	$5,282	$0	$0	$0	$0
	Boost					
920	Booster Pumps, 5 HP - Replace	$0	$0	$0	$0	$0
922	Booster Pump, 15 HP - Replace	$0	$0	$0	$0	$0
924	Booster Pumps VFD Control - Replace	$0	$0	$0	$0	$0
	Distribution					
940	Distribution Lines, 6"-8" - Replace	$0	$0	$0	$0	$0
941	Distribution Lines, 2" - Replace	$0	$0	$0	$0	$0
945	Service Connect/Lines - Replace	$0	$0	$0	$0	$0
946	Service Meters - Replace	$0	$0	$0	$0	$0
947	Service Meter Box/Setters - Replace	$0	$0	$0	$0	$0
950	Pressure Reducing Valves - Replace	$0	$0	$0	$0	$0
954	Blow-Out/Isolation Valves - Replace	$0	$0	$0	$0	$0
958	Hydrants - Replace	$0	$0	$0	$0	$0
	Buildings/Site					
964	Building Roofs - Replace	$0	$0	$0	$0	$0
967	Storage Shed, Vinyl - Replace	$0	$0	$0	$0	$0
969	Building Electrical - Replace	$0	$0	$0	$0	$0
970	Chain Link Fence - Replace	$0	$0	$0	$0	$0
	Systems/Equipment					
980	Generator, Emergency - Replace	$0	$0	$0	$0	$0
999	Meter Reader System - Replace	$0	$0	$0	$9,704	$0
	Financial/Professional					
1006	SWSMP - Update	$0	$0	$0	$5,431	$0
	Total Expenses	$5,282	$0	$0	$15,135	$0
	Ending Reserve Balance	$1,454,112	$1,609,192	$1,770,044	$1,921,642	$2,094,444

	Fiscal Year	2039	2040	2041	2042	2043
	Starting Reserve Balance	$2,094,444	$2,259,738	$2,445,285	$2,637,581	$2,419,482
	Annual Reserve Contribution	$157,312	$162,032	$166,893	$171,899	$177,056
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$21,762	$23,515	$25,404	$25,275	$25,105
	Total Income	$2,273,518	$2,445,285	$2,637,581	$2,834,755	$2,621,643
#	Component					
	Capacity / Storage					
901	Well Pumps/Motors - Replace	$0	$0	$0	$37,696	$0
904	Well Controls - Replace	$0	$0	$0	$10,470	$0
910	Storage Tank, Concrete - Replace	$0	$0	$0	$0	$0
912	Storage Tank, Interior - Clean	$7,658	$0	$0	$0	$0
914	Storage Tank, Exterior - Clean	$6,123	$0	$0	$0	$0
	Boost					
920	Booster Pumps, 5 HP - Replace	$0	$0	$0	$0	$0
922	Booster Pump, 15 HP - Replace	$0	$0	$0	$0	$0
924	Booster Pumps VFD Control - Replace	$0	$0	$0	$0	$0
	Distribution					
940	Distribution Lines, 6"-8" - Replace	$0	$0	$0	$0	$0
941	Distribution Lines, 2" - Replace	$0	$0	$0	$0	$0
945	Service Connect/Lines - Replace	$0	$0	$0	$0	$0
946	Service Meters - Replace	$0	$0	$0	$265,447	$0
947	Service Meter Box/Setters - Replace	$0	$0	$0	$0	$0
950	Pressure Reducing Valves - Replace	$0	$0	$0	$0	$0
954	Blow-Out/Isolation Valves - Replace	$0	$0	$0	$79,634	$0
958	Hydrants - Replace	$0	$0	$0	$0	$0
	Buildings/Site					
964	Building Roofs - Replace	$0	$0	$0	$0	$0
967	Storage Shed, Vinyl - Replace	$0	$0	$0	$0	$0
969	Building Electrical - Replace	$0	$0	$0	$22,025	$0
970	Chain Link Fence - Replace	$0	$0	$0	$0	$0
	Systems/Equipment					
980	Generator, Emergency - Replace	$0	$0	$0	$0	$0
999	Meter Reader System - Replace	$0	$0	$0	$0	$11,587
	Financial/Professional					
1006	SWSMP - Update	$0	$0	$0	$0	$6,485
	Total Expenses	$13,781	$0	$0	$415,272	$18,072
	Ending Reserve Balance	$2,259,738	$2,445,285	$2,637,581	$2,419,482	$2,603,572

	Fiscal Year	2044	2045	2046	2047	2048
	Starting Reserve Balance	$2,603,572	$2,805,878	$3,022,848	$3,247,662	$3,480,567
	Annual Reserve Contribution	$182,368	$187,839	$193,474	$199,279	$205,257
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$27,036	$29,131	$31,339	$33,627	$35,779
	Total Income	$2,812,976	$3,022,848	$3,247,662	$3,480,567	$3,721,603
#	Component					
	Capacity / Storage					
901	Well Pumps/Motors - Replace	$0	$0	$0	$0	$0
904	Well Controls - Replace	$0	$0	$0	$0	$0
910	Storage Tank, Concrete - Replace	$0	$0	$0	$0	$0
912	Storage Tank, Interior - Clean	$0	$0	$0	$0	$0
914	Storage Tank, Exterior - Clean	$7,098	$0	$0	$0	$0
	Boost					
920	Booster Pumps, 5 HP - Replace	$0	$0	$0	$0	$0
922	Booster Pump, 15 HP - Replace	$0	$0	$0	$0	$0
924	Booster Pumps VFD Control - Replace	$0	$0	$0	$0	$0
	Distribution					
940	Distribution Lines, 6"-8" - Replace	$0	$0	$0	$0	$0
941	Distribution Lines, 2" - Replace	$0	$0	$0	$0	$0
945	Service Connect/Lines - Replace	$0	$0	$0	$0	$0
946	Service Meters - Replace	$0	$0	$0	$0	$0
947	Service Meter Box/Setters - Replace	$0	$0	$0	$0	$0
950	Pressure Reducing Valves - Replace	$0	$0	$0	$0	$0
954	Blow-Out/Isolation Valves - Replace	$0	$0	$0	$0	$0
958	Hydrants - Replace	$0	$0	$0	$0	$0
	Buildings/Site					
964	Building Roofs - Replace	$0	$0	$0	$0	$0
967	Storage Shed, Vinyl - Replace	$0	$0	$0	$0	$0
969	Building Electrical - Replace	$0	$0	$0	$0	$0
970	Chain Link Fence - Replace	$0	$0	$0	$0	$43,243
	Systems/Equipment					
980	Generator, Emergency - Replace	$0	$0	$0	$0	$0
999	Meter Reader System - Replace	$0	$0	$0	$0	$0
	Financial/Professional					
1006	SWSMP - Update	$0	$0	$0	$0	$0
	Total Expenses	$7,098	$0	$0	$0	$43,243
	Ending Reserve Balance	$2,805,878	$3,022,848	$3,247,662	$3,480,567	$3,678,360

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

BTU	British Thermal Unit (a standard unit of energy)
DIA	Diameter
GSF	Gross Square Feet (area). Equivalent to Square Feet
GSY	Gross Square Yards (area). Equivalent to Square Yards
HP	Horsepower
LF	Linear Feet (length)
Effective Age	The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.
Fully Funded Balance (FFB)	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.
Inflation	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.
Interest	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.
Percent Funded	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.
Remaining Useful Life (RUL)	The estimated time, in years, that a common area component can be expected to continue to serve its intended function.
Useful Life (UL)	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 / Storage

Comp #: 900 Wells - Replace **Quantity: (2) active**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Useful life not predictable or extended
History: Well #1 was reportedly drilled in in either 1955 or 1959 and Well #2 in perhaps 1982 or 1983
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 901 Well Pumps/Motors - Replace **Quantity: (2) 5 HP submersible, 4"**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Replaced last in September 2012
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 30 years Remaining Life: 23 years
Best Case: $ 17,000 Worst Case: $21,200
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 904 Well Controls - Replace **Quantity: (1) two-motor control**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 30 years Remaining Life: 23 years
Best Case: $ 4,240 Worst Case: $6,370
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 905 Source Flow Meters - Replace **Quantity: (2) Badger, assorted**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Cost projected to be too small
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 907 Filter/Treatment Systems - Add **Quantity: None at present**
Location: None at present
Funded?: No. No apparent needs or plans to add such systems
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 910 Storage Tank, Concrete - Replace **Quantity: (1) 99,000 gallon**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Reportedly installed in 2005
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 80 years Remaining Life: 66 years
Best Case: $ 210,000 Worst Case: $241,000
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 911 Storage Tank, Interior - Seal **Quantity: None at present**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Presently no type of interior tank liner exists
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 912 Storage Tank, Interior - Clean **Quantity: (1) 99,000 gallon**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Your previous plans for interior cleaning project to occur in FY 2018/2019 are now deferred to FY 2019/2020
Comments: Your previous plans for interior cleaning project to occur in FY 2018/2019 are now deferred to FY 2019/2020
No change in RUL, no current bids, annual inflation adjustment 3%
Useful Life: 10 years Remaining Life: 0 years
Best Case: $ 3,180 Worst Case: $5,300
Lower allowance Higher allowance
Cost Source: Estimate Provided by Client

Comp #: 914 Storage Tank, Exterior - Clean **Quantity: (1) 99,000 gallon**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Your previous plans for interior cleaning project to occur in FY 2018/2019 are now deferred to FY 2019/2020; last FY 2014/2015 project at expense of $2,800
Comments: Your previous plans for exterior cleaning project to occur in FY 2018/2019 are now deferred to FY 2019/2020
No change in RUL, no current bids, annual inflation adjustment 3%
Useful Life: 5 years Remaining Life: 0 years
Best Case: $ 2,860 Worst Case: $3,920
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 916 Storage Tank, Old - Repurpose **Quantity: (1) project**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Annual cost best handled as operating expense
History: Repurpose ongoing since FY 2015/2016; expense for project from operating funds
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Boost

Comp #: 920 Booster Pumps, 5 HP - Replace **Quantity: (2) Nidec, 5 HP**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Existing domestic supply booster pumps were installed in 2012
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 20 years Remaining Life: 13 years
Best Case: $ 14,800 Worst Case: $19,100
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 922 Booster Pump, 15 HP - Replace **Quantity: (1) Baldor, 15 HP**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Large fire suppression booster pump was also installed in 2012
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 40 years Remaining Life: 33 years
Best Case: $ 21,200 Worst Case: $25,400
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 924 Booster Pumps VFD Control - Replace **Quantity: (1) three pump control**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 20 years Remaining Life: 13 years
Best Case: $ 14,800 Worst Case: $19,100
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

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: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 930 Pressure Tanks - Replace **Quantity: (2) 81 gallon**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5) of Block 3, Division 5
Funded?: No. Cost projected to be too small
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Distribution

Comp #: 940 Distribution Lines, 6"-8" - Replace **Quantity: Approx 26,650 LF**
Location: Throughout community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Installation of primarily PVC C900 products utilized during 2012 project
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 70 years Remaining Life: 63 years
Best Case: $ 990,000 Worst Case: $1,220,000
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 941 Distribution Lines, 2" - Replace **Quantity: Approx 2,500 LF**
Location: Throughout community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 40 years Remaining Life: 33 years
Best Case: $ 66,300 Worst Case: $76,900
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 945 Service Connect/Lines - Replace **Quantity: (397) connections**
Location: Service connections throughout community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 40 years Remaining Life: 33 years
Best Case: $ 252,000 Worst Case: $295,000
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 946 Service Meters - Replace **Quantity: (397) meters**
Location: Water service points of community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Water meters with sensors were installed as part of FY 2012/2013 improvements
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 10 years Remaining Life: 3 years
Best Case: $ 113,000 Worst Case: $156,000
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 947 Service Meter Box/Setters - Replace **Quantity: (397) boxes/setters**
Location: Water service points of community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 20 years Remaining Life: 13 years
Best Case: $ 113,000 Worst Case: $156,000
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 950 Pressure Reducing Valves - Replace **Quantity: (60) metal**
Location: Water service points of community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 20 years Remaining Life: 13 years
Best Case: $ 10,200 Worst Case: $16,600
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 954 Blow-Out/Isolation Valves - Replace **Quantity: (38) total, assorted**
Location: Water service points of community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 30 years Remaining Life: 23 years
Best Case: $ 36,300 Worst Case: $44,400
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 958 Hydrants - Replace **Quantity: (41) hydrants**
Location: Water distribution throughout community
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Installations indicated in 2012
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 40 years Remaining Life: 33 years
Best Case: $ 157,000 Worst Case: $178,000
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 960 Building Exteriors-Maintain/Repair **Quantity: Approx 1,400 GSF**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Annual cost best handled as operating expense
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 962 Building Interiors-Maintain/Repair **Quantity: Moderate GSF**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Annual cost best handled as operating expense
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 964 Building Roofs - Replace **Quantity: Approx 500 square feet**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: 2013 replacement; expense was not provided
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 40 years Remaining Life: 34 years
Best Case: $ 2,970 Worst Case: $4,030
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 967 Storage Shed, Vinyl - Replace **Quantity: (1) 8'x8'**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 20 years Remaining Life: 14 years
Best Case: $ 2,340 Worst Case: $3,400
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 969 Building Electrical - Replace **Quantity: Extensive systems**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History:
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 30 years Remaining Life: 23 years
Best Case: $ 9,020 Worst Case: $13,300
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 970 Chain Link Fence - Replace **Quantity: Approx 720 linear feet**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Installed in 2013 as a required security improvement; segregated expense was not provided
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 35 years Remaining Life: 29 years
Best Case: $ 16,800 Worst Case: $19,900
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 972 Landscape/Trees - Refurbish **Quantity: Extensive square feet**

Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Annual cost best handled as operating expense going forward
History: FY 2014/2015 one-time expense of ~$8,000 to remove (53) trees
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Systems/Equipment

Comp #: 980 Generator, Emergency - Replace **Quantity: (1) Marathon, 60KW**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Likely from either the mid 1970's or perhaps early 1980's
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 50 years Remaining Life: 5 years
Best Case: $ 42,400 Worst Case: $63,700
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project
Cost History

Comp #: 990 Office Equipment/Furniture-Replace **Quantity: Minor equipment**
Location: Community Building
Funded?: No. Considered the responsibility of HMC Management, not HMC Water System
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 991 Small Equipment/Tools - Replace **Quantity: Minor equipment**
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No. Annual cost best handled as operating expense
History:
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 999 Meter Reader System - Replace **Quantity: (1) meter, software**
Location: MPC office
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: FY 2012/2013 installation at an expense of ~$5,000
Comments: Your previous plans for meter reader system replacement to occur in FY 2018/2019 are now deferred to FY 2019/2020
No change in RUL, current estimate per client
Useful Life: 6 years Remaining Life: 0 years
Best Case: $ 4,700 Worst Case: $6,700
Lower allowance Higher allowance
Cost Source: Estimate Provided by Client

Financial/Professional

Comp #: 1002 Loan - Payoff **Quantity: Unknown principal**
Location: USDA loan
Funded?: No. Collections and payments are handled in a separate account for this debt obligation
History: Total of annual P&I payments are $53,278 with a 40 year term
Comments:
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:

Comp #: 1006 SWSMP - Update **Quantity: Every 6 years**
Location: Community water system
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding
History: Your previous plans for SWSMP update project to occur in FY 2017/2018 were apparently deferred, now assumed for FY 2019/2020
Comments: Your previous plans for SWSMP update project to occur in FY 2017/2018 were apparently deferred, now assumed for FY 2019/2020
Adjusted RUL, no current bids, annual inflation adjustment 3%
Useful Life: 6 years Remaining Life: 0 years
Best Case: $ 2,660 Worst Case: $3,720
Lower allowance Higher allowance
Cost Source: Previous research with Local Vendor/Contractor, Inflated

---

Comp #: 1013 Sanitary Survey - Update **Quantity: Every 5 years**
Location: Community water system
Funded?: No. Cost projected to be too small
History: Completed last in FY 2015/2016; expense was not provided
Comments: Moved to operating budget item since expense now projected to be too small to merit reserve designation
Useful Life: Remaining Life:
Best Case: Worst Case:
Cost Source:
