



Update "With-Site-Visit" Reserve Study



HMC Water System Lakebay, WA

Report #: 26621-6

For Period Beginning: October 1, 2020

Expires: September 30, 2021

Date Prepared: September 1, 2020



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



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RESERVES™**



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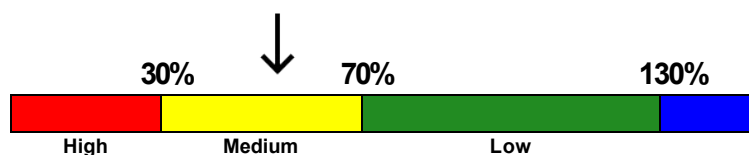
3- Minute Executive Summary

Association: HMC Water System **Assoc. #: 26621-6**
Location: Lakebay, WA **# of Units: 402**
Report Period: October 1, 2020 through September 30, 2021

Findings/Recommendations as-of: October 1, 2020

Starting Reserve Balance	\$310,242
Current Fully Funded Reserve Balance	\$573,547
Percent Funded	54.1 %
Average Reserve (Deficit) or Surplus Per Unit	(\$655)
2020 100% Annual "Full Funding" Contributions	\$93,400
2020 70% Annual "Threshold Funding" Contributions	\$71,880
2020 "Alternate / Baseline Funding" to keep Reserves above \$0	\$26,886
Recommended 2020 Special Assessment	\$0
Planned 2020/2021 Budgeted Contribution Rate	\$35,000

Reserves % Funded: 54.1%



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 "With-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).

• Your Reserve Fund is currently 54.1 % 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 Reserve cash flow problems.

• Based on this starting point and your anticipated future expenses, our recommendation is to significantly increase your Reserve Contributions to within the 70% to 100% range as noted above. The 100% "Full" and 70% contribution rates are designed to gradually achieve the funding objectives by the end of our 30-year report scope.

• No assets appropriate for Reserve designation are 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
Capacity / Storage				
901	Well Pumps/Motors - Replace	30	22	\$19,700
904	Well Controls - Replace	30	22	\$6,000
910	Storage Tank, Concrete - Replace	80	65	\$232,000
912	Storage Tank, Interior - Clean	10	0	\$4,500
914	Storage Tank, Exterior - Clean	5	0	\$3,500
Boost				
920	Booster Pumps, 5 HP - Replace	20	12	\$17,450
922	Booster Pump, 15 HP - Replace	40	32	\$24,000
924	Booster Pumps VFD Control - Replace	20	12	\$17,450
Distribution				
940	Distribution Lines, 6"-8" - Replace	70	62	\$1,140,000
941	Distribution Lines, 2" - Replace	40	32	\$73,750
945	Service Connect/Lines - Replace	40	32	\$280,000
946	Service Meters - Replace	10	2	\$140,000
947	Service Meter Box/Setters - Replace	20	12	\$140,000
950	Pressure Reducing Valves - Replace	20	12	\$13,800
954	Blow-Out/Isolation Valves - Replace	30	22	\$41,550
958	Hydrants - Replace	40	32	\$172,500
Buildings/Site				
964	Building Roofs - Replace	40	33	\$3,650
967	Storage Shed, Vinyl - Replace	20	13	\$2,955
969	Building Electrical - Replace	30	22	\$11,500
970	Chain Link Fence - Replace	35	28	\$18,900
Systems/Equipment				
980	Generator, Emergency - Replace	50	4	\$54,650
999	Meter Reader System - Replace	7	0	\$14,000
Financial/Professional				
1006	SWSMP - Update	6	0	\$3,500

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 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 With-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 performed an on-site inspection to evaluate your common areas, updating and adjusting your Reserve Component List as appropriate.

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?



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.*



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.

Site Inspection Notes

During our site visit on 6/4/2020, we visually inspected all visible common areas, while compiling a photographic inventory, noting: current condition, make & model information where appropriate, apparent levels of care and maintenance, exposure to weather elements and other factors that may affect the components useful life.

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.

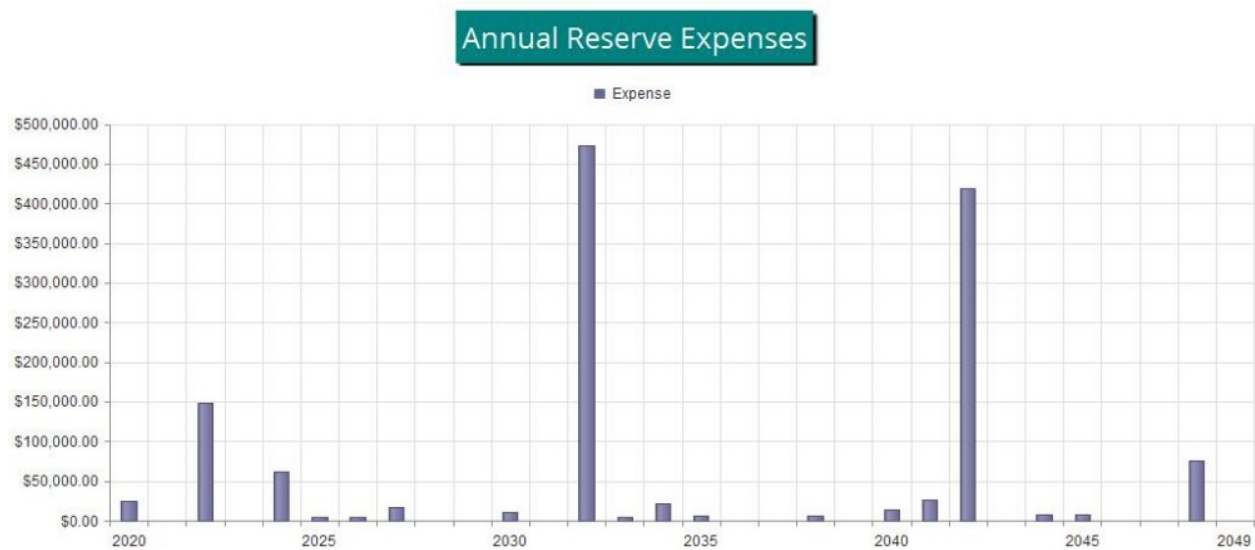


Figure 1

Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be \$310,242 as-of the start of your Fiscal Year on 10/1/2020. As of that date, your Fully Funded Balance is computed to be \$573,547 (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 \$93,400 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.

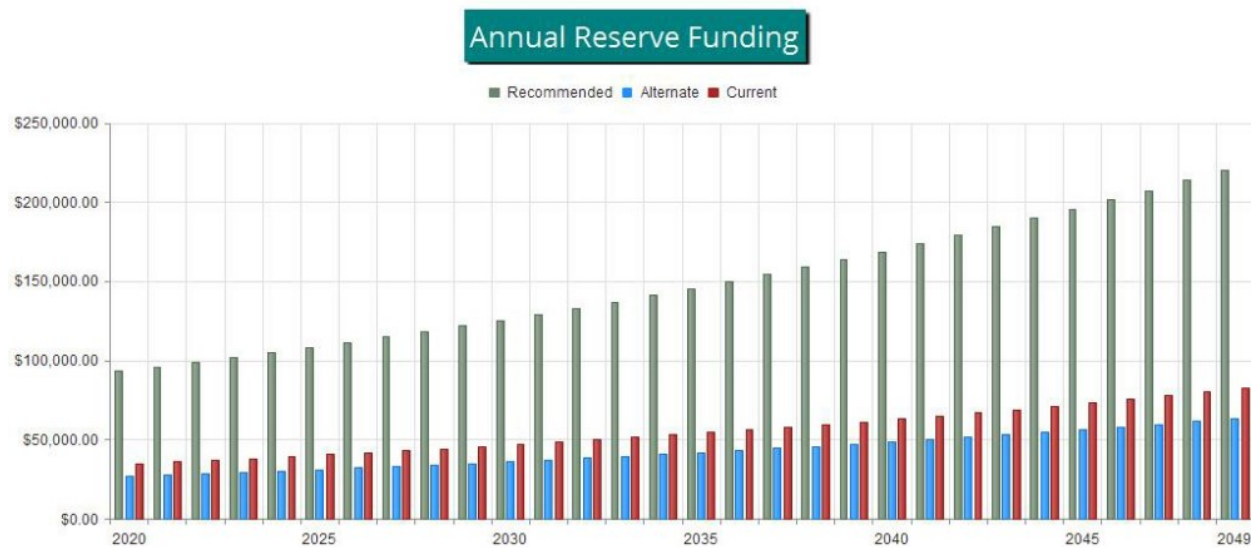


Figure 2

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.

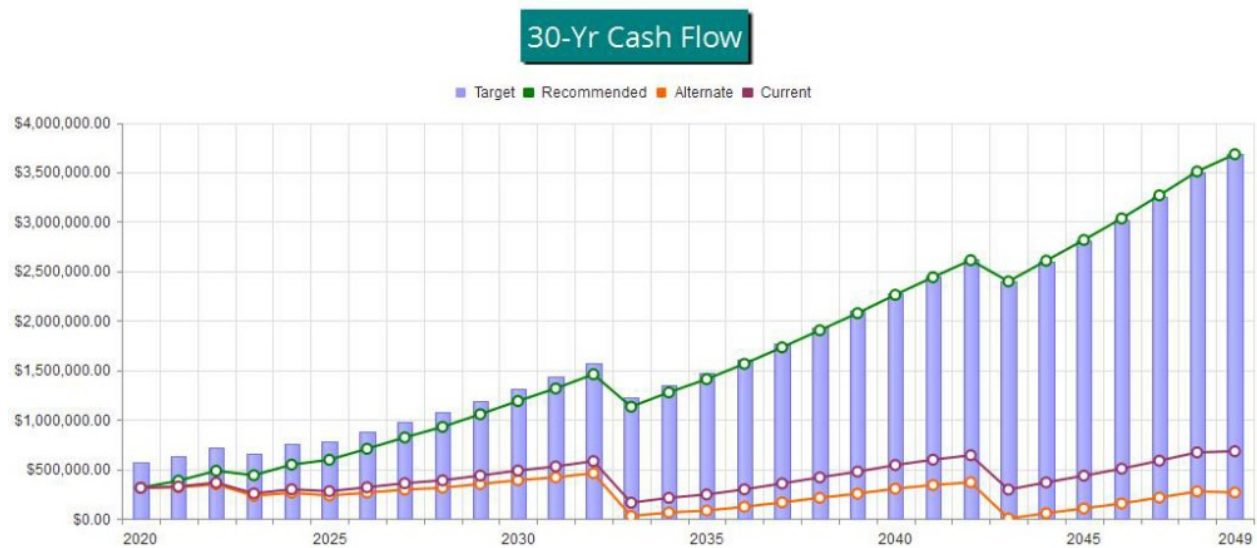


Figure 3

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

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#	Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate	
					Best Case	Worst Case
Capacity / Storage						
901	Well Pumps/Motors - Replace	(2) 5 HP submersible, 4"	30	22	\$17,600	\$21,800
904	Well Controls - Replace	(1) two-motor control	30	22	\$5,000	\$7,000
910	Storage Tank, Concrete - Replace	(1) 99,000 gallon	80	65	\$216,000	\$248,000
912	Storage Tank, Interior - Clean	(1) 99,000 gallon	10	0	\$3,400	\$5,600
914	Storage Tank, Exterior - Clean	(1) 99,000 gallon	5	0	\$3,000	\$4,000
Boost						
920	Booster Pumps, 5 HP - Replace	(2) Nidec, 5 HP	20	12	\$15,200	\$19,700
922	Booster Pump, 15 HP - Replace	(1) Baldor, 15 HP	40	32	\$21,800	\$26,200
924	Booster Pumps VFD Control - Replace	(1) three pump control	20	12	\$15,200	\$19,700
Distribution						
940	Distribution Lines, 6"-8" - Replace	Approx 26,650 LF	70	62	\$1,020,000	\$1,260,000
941	Distribution Lines, 2" - Replace	Approx 2,500 LF	40	32	\$68,300	\$79,200
945	Service Connect/Lines - Replace	~(400) connections	40	32	\$240,000	\$320,000
946	Service Meters - Replace	~(400) meters	10	2	\$120,000	\$160,000
947	Service Meter Box/Setters - Replace	~(400) boxes/setters	20	12	\$120,000	\$160,000
950	Pressure Reducing Valves - Replace	(60) metal	20	12	\$10,500	\$17,100
954	Blow-Out/Isolation Valves - Replace	(38) total, assorted	30	22	\$37,400	\$45,700
958	Hydrants - Replace	(41) hydrants	40	32	\$162,000	\$183,000
Buildings/Site						
964	Building Roofs - Replace	Approx 500 square feet	40	33	\$3,100	\$4,200
967	Storage Shed, Vinyl - Replace	(1) 8'x8'	20	13	\$2,410	\$3,500
969	Building Electrical - Replace	Extensive systems	30	22	\$9,300	\$13,700
970	Chain Link Fence - Replace	Approx 720 linear feet	35	28	\$17,300	\$20,500
Systems/Equipment						
980	Generator, Emergency - Replace	(1) Marathon, 60KW	50	4	\$43,700	\$65,600
999	Meter Reader System - Replace	(1) meter, software	7	0	\$12,000	\$16,000
Financial/Professional						
1006	SWSMP - Update	Every 6 years	6	0	\$3,000	\$4,000

23 Total Funded Components

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
Capacity / Storage								
901	Well Pumps/Motors - Replace	\$19,700	X	8	/	30	=	\$5,253
904	Well Controls - Replace	\$6,000	X	8	/	30	=	\$1,600
910	Storage Tank, Concrete - Replace	\$232,000	X	15	/	80	=	\$43,500
912	Storage Tank, Interior - Clean	\$4,500	X	10	/	10	=	\$4,500
914	Storage Tank, Exterior - Clean	\$3,500	X	5	/	5	=	\$3,500
Boost								
920	Booster Pumps, 5 HP - Replace	\$17,450	X	8	/	20	=	\$6,980
922	Booster Pump, 15 HP - Replace	\$24,000	X	8	/	40	=	\$4,800
924	Booster Pumps VFD Control - Replace	\$17,450	X	8	/	20	=	\$6,980
Distribution								
940	Distribution Lines, 6"-8" - Replace	\$1,140,000	X	8	/	70	=	\$130,286
941	Distribution Lines, 2" - Replace	\$73,750	X	8	/	40	=	\$14,750
945	Service Connect/Lines - Replace	\$280,000	X	8	/	40	=	\$56,000
946	Service Meters - Replace	\$140,000	X	8	/	10	=	\$112,000
947	Service Meter Box/Setters - Replace	\$140,000	X	8	/	20	=	\$56,000
950	Pressure Reducing Valves - Replace	\$13,800	X	8	/	20	=	\$5,520
954	Blow-Out/Isolation Valves - Replace	\$41,550	X	8	/	30	=	\$11,080
958	Hydrants - Replace	\$172,500	X	8	/	40	=	\$34,500
Buildings/Site								
964	Building Roofs - Replace	\$3,650	X	7	/	40	=	\$639
967	Storage Shed, Vinyl - Replace	\$2,955	X	7	/	20	=	\$1,034
969	Building Electrical - Replace	\$11,500	X	8	/	30	=	\$3,067
970	Chain Link Fence - Replace	\$18,900	X	7	/	35	=	\$3,780
Systems/Equipment								
980	Generator, Emergency - Replace	\$54,650	X	46	/	50	=	\$50,278
999	Meter Reader System - Replace	\$14,000	X	7	/	7	=	\$14,000
Financial/Professional								
1006	SWSMP - Update	\$3,500	X	6	/	6	=	\$3,500
								\$573,547

Component Significance

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#	Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
Capacity / Storage					
901	Well Pumps/Motors - Replace	30	\$19,700	\$657	1.02 %
904	Well Controls - Replace	30	\$6,000	\$200	0.31 %
910	Storage Tank, Concrete - Replace	80	\$232,000	\$2,900	4.49 %
912	Storage Tank, Interior - Clean	10	\$4,500	\$450	0.70 %
914	Storage Tank, Exterior - Clean	5	\$3,500	\$700	1.08 %
Boost					
920	Booster Pumps, 5 HP - Replace	20	\$17,450	\$873	1.35 %
922	Booster Pump, 15 HP - Replace	40	\$24,000	\$600	0.93 %
924	Booster Pumps VFD Control - Replace	20	\$17,450	\$873	1.35 %
Distribution					
940	Distribution Lines, 6"-8" - Replace	70	\$1,140,000	\$16,286	25.21 %
941	Distribution Lines, 2" - Replace	40	\$73,750	\$1,844	2.85 %
945	Service Connect/Lines - Replace	40	\$280,000	\$7,000	10.83 %
946	Service Meters - Replace	10	\$140,000	\$14,000	21.67 %
947	Service Meter Box/Setters - Replace	20	\$140,000	\$7,000	10.83 %
950	Pressure Reducing Valves - Replace	20	\$13,800	\$690	1.07 %
954	Blow-Out/Isolation Valves - Replace	30	\$41,550	\$1,385	2.14 %
958	Hydrants - Replace	40	\$172,500	\$4,313	6.67 %
Buildings/Site					
964	Building Roofs - Replace	40	\$3,650	\$91	0.14 %
967	Storage Shed, Vinyl - Replace	20	\$2,955	\$148	0.23 %
969	Building Electrical - Replace	30	\$11,500	\$383	0.59 %
970	Chain Link Fence - Replace	35	\$18,900	\$540	0.84 %
Systems/Equipment					
980	Generator, Emergency - Replace	50	\$54,650	\$1,093	1.69 %
999	Meter Reader System - Replace	7	\$14,000	\$2,000	3.10 %
Financial/Professional					
1006	SWSMP - Update	6	\$3,500	\$583	0.90 %
23	Total Funded Components			\$64,607	100.00 %

Accounting-Tax Summary

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#	Component	UL	RUL	Current Cost Estimate	Fully Funded Balance	Current Fund Balance	Proportional Reserve Contribs
Capacity / Storage							
901	Well Pumps/Motors - Replace	30	22	\$19,700	\$5,253	\$5,253	\$949.31
904	Well Controls - Replace	30	22	\$6,000	\$1,600	\$1,600	\$289.13
910	Storage Tank, Concrete - Replace	80	65	\$232,000	\$43,500	\$0	\$4,192.41
912	Storage Tank, Interior - Clean	10	0	\$4,500	\$4,500	\$4,500	\$650.55
914	Storage Tank, Exterior - Clean	5	0	\$3,500	\$3,500	\$3,500	\$1,011.96
Boost							
920	Booster Pumps, 5 HP - Replace	20	12	\$17,450	\$6,980	\$6,980	\$1,261.34
922	Booster Pump, 15 HP - Replace	40	32	\$24,000	\$4,800	\$4,800	\$867.39
924	Booster Pumps VFD Control - Replace	20	12	\$17,450	\$6,980	\$6,980	\$1,261.34
Distribution							
940	Distribution Lines, 6"-8" - Replace	70	62	\$1,140,000	\$130,286	\$0	\$23,543.56
941	Distribution Lines, 2" - Replace	40	32	\$73,750	\$14,750	\$14,750	\$2,665.43
945	Service Connect/Lines - Replace	40	32	\$280,000	\$56,000	\$0	\$10,119.60
946	Service Meters - Replace	10	2	\$140,000	\$112,000	\$112,000	\$20,239.20
947	Service Meter Box/Setters - Replace	20	12	\$140,000	\$56,000	\$56,000	\$10,119.60
950	Pressure Reducing Valves - Replace	20	12	\$13,800	\$5,520	\$5,520	\$997.50
954	Blow-Out/Isolation Valves - Replace	30	22	\$41,550	\$11,080	\$11,080	\$2,002.24
958	Hydrants - Replace	40	32	\$172,500	\$34,500	\$1,620	\$6,234.40
Buildings/Site							
964	Building Roofs - Replace	40	33	\$3,650	\$639	\$0	\$131.92
967	Storage Shed, Vinyl - Replace	20	13	\$2,955	\$1,034	\$1,034	\$213.60
969	Building Electrical - Replace	30	22	\$11,500	\$3,067	\$3,067	\$554.17
970	Chain Link Fence - Replace	35	28	\$18,900	\$3,780	\$3,780	\$780.65
Systems/Equipment							
980	Generator, Emergency - Replace	50	4	\$54,650	\$50,278	\$50,278	\$1,580.10
999	Meter Reader System - Replace	7	0	\$14,000	\$14,000	\$14,000	\$2,891.31
Financial/Professional							
1006	SWSMP - Update	6	0	\$3,500	\$3,500	\$3,500	\$843.30
23 Total Funded Components					\$573,547	\$310,242	\$93,400

30-Year Reserve Plan Summary

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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					
					% Increase					
	Starting	Fully		Special	In Annual		Loan or			
Year	Reserve Balance	Funded Balance	Percent Funded	Assmt Risk	Reserve Contribs.	Reserve Contribs.	Special Assmts	Interest Income	Reserve Expenses	
2020	\$310,242	\$573,547	54.1 %	Medium	166.86 %	\$93,400	\$0	\$3,458	\$25,500	
2021	\$381,600	\$631,034	60.5 %	Medium	3.00 %	\$96,202	\$0	\$4,317	\$0	
2022	\$482,118	\$718,507	67.1 %	Medium	3.00 %	\$99,088	\$0	\$4,595	\$148,526	
2023	\$437,276	\$657,678	66.5 %	Medium	3.00 %	\$102,061	\$0	\$4,906	\$0	
2024	\$544,242	\$750,125	72.6 %	Low	3.00 %	\$105,123	\$0	\$5,687	\$61,509	
2025	\$593,542	\$784,171	75.7 %	Low	3.00 %	\$108,276	\$0	\$6,486	\$4,057	
2026	\$704,247	\$880,662	80.0 %	Low	3.00 %	\$111,524	\$0	\$7,614	\$4,179	
2027	\$819,206	\$982,236	83.4 %	Low	3.00 %	\$114,870	\$0	\$8,720	\$17,218	
2028	\$925,578	\$1,075,811	86.0 %	Low	3.00 %	\$118,316	\$0	\$9,893	\$0	
2029	\$1,053,787	\$1,192,383	88.4 %	Low	3.00 %	\$121,866	\$0	\$11,198	\$0	
2030	\$1,186,851	\$1,314,981	90.3 %	Low	3.00 %	\$125,522	\$0	\$12,500	\$10,751	
2031	\$1,314,121	\$1,432,789	91.7 %	Low	3.00 %	\$129,287	\$0	\$13,851	\$0	
2032	\$1,457,260	\$1,567,887	92.9 %	Low	3.00 %	\$133,166	\$0	\$12,929	\$473,638	
2033	\$1,129,718	\$1,221,955	92.5 %	Low	3.00 %	\$137,161	\$0	\$12,016	\$4,340	
2034	\$1,274,555	\$1,351,868	94.3 %	Low	3.00 %	\$141,276	\$0	\$13,407	\$21,176	
2035	\$1,408,062	\$1,471,268	95.7 %	Low	3.00 %	\$145,514	\$0	\$14,849	\$5,453	
2036	\$1,562,973	\$1,613,466	96.9 %	Low	3.00 %	\$149,880	\$0	\$16,454	\$0	
2037	\$1,729,306	\$1,768,656	97.8 %	Low	3.00 %	\$154,376	\$0	\$18,148	\$0	
2038	\$1,901,830	\$1,931,705	98.5 %	Low	3.00 %	\$159,007	\$0	\$19,874	\$5,959	
2039	\$2,074,754	\$2,096,808	98.9 %	Low	3.00 %	\$163,777	\$0	\$21,666	\$0	
2040	\$2,260,197	\$2,276,400	99.3 %	Low	3.00 %	\$168,691	\$0	\$23,481	\$14,449	
2041	\$2,437,919	\$2,449,999	99.5 %	Low	3.00 %	\$173,752	\$0	\$25,233	\$26,044	
2042	\$2,610,860	\$2,620,467	99.6 %	Low	3.00 %	\$178,964	\$0	\$25,022	\$419,148	
2043	\$2,395,698	\$2,394,867	100.0 %	Low	3.00 %	\$184,333	\$0	\$24,993	\$0	
2044	\$2,605,024	\$2,598,047	100.3 %	Low	3.00 %	\$189,863	\$0	\$27,088	\$7,115	
2045	\$2,814,860	\$2,803,933	100.4 %	Low	3.00 %	\$195,559	\$0	\$29,223	\$7,328	
2046	\$3,032,314	\$3,019,835	100.4 %	Low	3.00 %	\$201,426	\$0	\$31,474	\$0	
2047	\$3,265,214	\$3,253,941	100.3 %	Low	3.00 %	\$207,468	\$0	\$33,844	\$0	
2048	\$3,506,527	\$3,499,376	100.2 %	Low	3.00 %	\$213,692	\$0	\$35,922	\$75,273	
2049	\$3,680,868	\$3,679,078	100.0 %	Low	3.00 %	\$220,103	\$0	\$38,083	\$0	

30-Year Reserve Plan Summary (Alternate Funding Plan)

26621-6
WSV

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					
					% Increase					
	Starting	Fully		Special	In Annual		Loan or			
Year	Reserve Balance	Funded Balance	Percent Funded	Assmt Risk	Reserve Contribs.	Reserve Contribs.	Special Assmts	Interest Income	Reserve Expenses	
2020	\$310,242	\$573,547	54.1 %	Medium	-23.18 %	\$26,886	\$0	\$3,124	\$25,500	
2021	\$314,752	\$631,034	49.9 %	Medium	3.00 %	\$27,693	\$0	\$3,301	\$0	
2022	\$345,745	\$718,507	48.1 %	Medium	3.00 %	\$28,523	\$0	\$2,871	\$148,526	
2023	\$228,613	\$657,678	34.8 %	Medium	3.00 %	\$29,379	\$0	\$2,444	\$0	
2024	\$260,437	\$750,125	34.7 %	Medium	3.00 %	\$30,260	\$0	\$2,459	\$61,509	
2025	\$231,647	\$784,171	29.5 %	High	3.00 %	\$31,168	\$0	\$2,463	\$4,057	
2026	\$261,221	\$880,662	29.7 %	High	3.00 %	\$32,103	\$0	\$2,764	\$4,179	
2027	\$291,910	\$982,236	29.7 %	High	3.00 %	\$33,066	\$0	\$3,012	\$17,218	
2028	\$310,770	\$1,075,811	28.9 %	High	3.00 %	\$34,058	\$0	\$3,293	\$0	
2029	\$348,122	\$1,192,383	29.2 %	High	3.00 %	\$35,080	\$0	\$3,673	\$0	
2030	\$386,875	\$1,314,981	29.4 %	High	3.00 %	\$36,133	\$0	\$4,014	\$10,751	
2031	\$416,270	\$1,432,789	29.1 %	High	3.00 %	\$37,217	\$0	\$4,369	\$0	
2032	\$457,856	\$1,567,887	29.2 %	High	3.00 %	\$38,333	\$0	\$2,413	\$473,638	
2033	\$24,964	\$1,221,955	2.0 %	High	3.00 %	\$39,483	\$0	\$427	\$4,340	
2034	\$60,535	\$1,351,868	4.5 %	High	3.00 %	\$40,667	\$0	\$706	\$21,176	
2035	\$80,732	\$1,471,268	5.5 %	High	3.00 %	\$41,888	\$0	\$994	\$5,453	
2036	\$118,161	\$1,613,466	7.3 %	High	3.00 %	\$43,144	\$0	\$1,404	\$0	
2037	\$162,709	\$1,768,656	9.2 %	High	3.00 %	\$44,438	\$0	\$1,858	\$0	
2038	\$209,005	\$1,931,705	10.8 %	High	3.00 %	\$45,772	\$0	\$2,300	\$5,959	
2039	\$251,118	\$2,096,808	12.0 %	High	3.00 %	\$47,145	\$0	\$2,760	\$0	
2040	\$301,022	\$2,276,400	13.2 %	High	3.00 %	\$48,559	\$0	\$3,195	\$14,449	
2041	\$338,327	\$2,449,999	13.8 %	High	3.00 %	\$50,016	\$0	\$3,519	\$26,044	
2042	\$365,818	\$2,620,467	14.0 %	High	3.00 %	\$51,516	\$0	\$1,828	\$419,148	
2043	\$16	\$2,394,867	0.0 %	High	3.00 %	\$53,062	\$0	\$267	\$0	
2044	\$53,344	\$2,598,047	2.1 %	High	3.00 %	\$54,654	\$0	\$775	\$7,115	
2045	\$101,658	\$2,803,933	3.6 %	High	3.00 %	\$56,293	\$0	\$1,267	\$7,328	
2046	\$151,890	\$3,019,835	5.0 %	High	3.00 %	\$57,982	\$0	\$1,817	\$0	
2047	\$211,689	\$3,253,941	6.5 %	High	3.00 %	\$59,722	\$0	\$2,427	\$0	
2048	\$273,837	\$3,499,376	7.8 %	High	3.00 %	\$61,513	\$0	\$2,682	\$75,273	
2049	\$262,760	\$3,679,078	7.1 %	High	3.00 %	\$63,359	\$0	\$2,958	\$0	

30-Year Income/Expense Detail

26621-6
WSV

Fiscal Year	2020	2021	2022	2023	2024
Starting Reserve Balance	\$310,242	\$381,600	\$482,118	\$437,276	\$544,242
Annual Reserve Contribution	\$93,400	\$96,202	\$99,088	\$102,061	\$105,123
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$3,458	\$4,317	\$4,595	\$4,906	\$5,687
Total Income	\$407,100	\$482,118	\$585,802	\$544,242	\$655,051
# 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	\$4,500	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Clean	\$3,500	\$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	\$148,526	\$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	\$61,509
999 Meter Reader System - Replace	\$14,000	\$0	\$0	\$0	\$0
Financial/Professional					
1006 SWSMP - Update	\$3,500	\$0	\$0	\$0	\$0
Total Expenses	\$25,500	\$0	\$148,526	\$0	\$61,509
Ending Reserve Balance	\$381,600	\$482,118	\$437,276	\$544,242	\$593,542

Fiscal Year	2025	2026	2027	2028	2029
Starting Reserve Balance	\$593,542	\$704,247	\$819,206	\$925,578	\$1,053,787
Annual Reserve Contribution	\$108,276	\$111,524	\$114,870	\$118,316	\$121,866
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$6,486	\$7,614	\$8,720	\$9,893	\$11,198
Total Income	\$708,304	\$823,385	\$942,796	\$1,053,787	\$1,186,851
# 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	\$4,057	\$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	\$17,218	\$0	\$0
Financial/Professional					
1006 SWSMP - Update	\$0	\$4,179	\$0	\$0	\$0
Total Expenses	\$4,057	\$4,179	\$17,218	\$0	\$0
Ending Reserve Balance	\$704,247	\$819,206	\$925,578	\$1,053,787	\$1,186,851

Fiscal Year	2030	2031	2032	2033	2034
Starting Reserve Balance	\$1,186,851	\$1,314,121	\$1,457,260	\$1,129,718	\$1,274,555
Annual Reserve Contribution	\$125,522	\$129,287	\$133,166	\$137,161	\$141,276
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$12,500	\$13,851	\$12,929	\$12,016	\$13,407
Total Income	\$1,324,873	\$1,457,260	\$1,603,355	\$1,278,895	\$1,429,239
# 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	\$6,048	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Clean	\$4,704	\$0	\$0	\$0	\$0
Boost					
920 Booster Pumps, 5 HP - Replace	\$0	\$0	\$24,880	\$0	\$0
922 Booster Pump, 15 HP - Replace	\$0	\$0	\$0	\$0	\$0
924 Booster Pumps VFD Control - Replace	\$0	\$0	\$24,880	\$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	\$199,607	\$0	\$0
947 Service Meter Box/Setters - Replace	\$0	\$0	\$199,607	\$0	\$0
950 Pressure Reducing Valves - Replace	\$0	\$0	\$19,676	\$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	\$4,340	\$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	\$0	\$21,176
Financial/Professional					
1006 SWSMP - Update	\$0	\$0	\$4,990	\$0	\$0
Total Expenses	\$10,751	\$0	\$473,638	\$4,340	\$21,176
Ending Reserve Balance	\$1,314,121	\$1,457,260	\$1,129,718	\$1,274,555	\$1,408,062

Fiscal Year	2035	2036	2037	2038	2039
Starting Reserve Balance	\$1,408,062	\$1,562,973	\$1,729,306	\$1,901,830	\$2,074,754
Annual Reserve Contribution	\$145,514	\$149,880	\$154,376	\$159,007	\$163,777
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$14,849	\$16,454	\$18,148	\$19,874	\$21,666
Total Income	\$1,568,425	\$1,729,306	\$1,901,830	\$2,080,712	\$2,260,197
# 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	\$5,453	\$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	\$0	\$0
Financial/Professional					
1006 SWSMP - Update	\$0	\$0	\$0	\$5,959	\$0
Total Expenses	\$5,453	\$0	\$0	\$5,959	\$0
Ending Reserve Balance	\$1,562,973	\$1,729,306	\$1,901,830	\$2,074,754	\$2,260,197

Fiscal Year	2040	2041	2042	2043	2044
Starting Reserve Balance	\$2,260,197	\$2,437,919	\$2,610,860	\$2,395,698	\$2,605,024
Annual Reserve Contribution	\$168,691	\$173,752	\$178,964	\$184,333	\$189,863
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$23,481	\$25,233	\$25,022	\$24,993	\$27,088
Total Income	\$2,452,368	\$2,636,904	\$2,814,846	\$2,605,024	\$2,821,975
# Component					
Capacity / Storage					
901 Well Pumps/Motors - Replace	\$0	\$0	\$37,747	\$0	\$0
904 Well Controls - Replace	\$0	\$0	\$11,497	\$0	\$0
910 Storage Tank, Concrete - Replace	\$0	\$0	\$0	\$0	\$0
912 Storage Tank, Interior - Clean	\$8,128	\$0	\$0	\$0	\$0
914 Storage Tank, Exterior - Clean	\$6,321	\$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	\$268,254	\$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	\$79,614	\$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	\$22,035	\$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	\$26,044	\$0	\$0	\$0
Financial/Professional					
1006 SWSMP - Update	\$0	\$0	\$0	\$0	\$7,115
Total Expenses	\$14,449	\$26,044	\$419,148	\$0	\$7,115
Ending Reserve Balance	\$2,437,919	\$2,610,860	\$2,395,698	\$2,605,024	\$2,814,860

Fiscal Year	2045	2046	2047	2048	2049
Starting Reserve Balance	\$2,814,860	\$3,032,314	\$3,265,214	\$3,506,527	\$3,680,868
Annual Reserve Contribution	\$195,559	\$201,426	\$207,468	\$213,692	\$220,103
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$29,223	\$31,474	\$33,844	\$35,922	\$38,083
Total Income	\$3,039,643	\$3,265,214	\$3,506,527	\$3,756,141	\$3,939,055
# 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	\$7,328	\$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	\$43,242	\$0
Systems/Equipment					
980 Generator, Emergency - Replace	\$0	\$0	\$0	\$0	\$0
999 Meter Reader System - Replace	\$0	\$0	\$0	\$32,031	\$0
Financial/Professional					
1006 SWSMP - Update	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$7,328	\$0	\$0	\$75,273	\$0
Ending Reserve Balance	\$3,032,314	\$3,265,214	\$3,506,527	\$3,680,868	\$3,939,055

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: There are two wells on the property; both are active and located within 65' of each other. Well #1 was reportedly drilled in in either 1955 or 1959 and Well #2 in perhaps 1982 or 1983. Reported depth is ~200' for each with combined 370 GPM pumping output. Detailed information about background, depth, supply, etc... should be found within the eleven year old comprehensive Water System Plan by Anchor Environmental, LLC (dated September 2009) and the subsequent 2011 Distribution System Replacement Project Report by Northwest Water Systems, Inc.. Note that the WSP should detail current and future projected water needs; best practice is to regularly update your plan to help inform accurate budget forecasting. Previous information within the old WSP plan and our current research did not indicate any predictable time frame for the need to drill a new well within the current water system planning period which ends in 2028 nor for the distant foreseeable future. Note that without any known deficiencies of aquifer, service life of wells can be very extended, often 100 years or more. Further, existing wells may have potential to be extended rather than selecting new wells/locations. As the community ages and your WSP or SWSMP is updated, begin accruing reserve funds to add, modify or replace any wells when basis for future needs or useful life is confirmed to be less than 30 years and then update your long term budget accordingly.

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: Both active 5 HP submersible, 4" well pumps/motors were replaced last in September 2012.

Comments: Both active 5 HP submersible, 4" well pumps/motors were replaced last in September 2012. Previous research with installing contractor indicated replacement at the typical useful life projection of between 15-30 years for most applications, with longer end of this range for these systems. Going forward, regular testing and inspection should be factored within the operating budget. Minor repairs/replacements (below \$2,000) of miscellaneous valves, piping, hardware, etc... should also be considered maintenance items. The inactive well pump/motor is not currently factored for replacement intervals.

Useful Life:
30 yearsRemaining Life:
22 years

Best Case: \$ 17,600

Worst Case: \$ 21,800

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: Well control panels without reported problems. Assumption for eventual intervals of well controller system replacement to ensure functionality and offset potential parts obsolescence.

Useful Life:
30 yearsRemaining Life:
22 years

Best Case: \$ 5,000

Worst Case: \$ 7,000

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: Age and model appear to vary but no reported problems; both are assumed to be within allowable accuracy tolerances. Typical life is in the 10-20 year range. Roughly \$1,000-\$1,500 expense for individual replacements, when needed, do not merit reserve designation.

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: Good water quality reported; historically water has met applicable health standards without apparent needs to add filtration or treatment systems. Incorporate any significant changes or predictable expense in future reserve study updates as conditions merit.

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: This above grade concrete tank was reportedly installed in 2005. It is our understanding that water storage capacity is 94,000 gallons for this 99,000 gallon reservoir. No significant cracking, damage or spalling was apparent during our limited scope visual inspection. As before, local efflorescence (mineral staining) was noted. This condition is reportedly consistent since initial 2005 construction and apparently not indicative of significant water loss. We assume ongoing evaluation for stability and leak detection will occur. Interior of concrete tank is without any liner requiring renewal or replacement. Our research suggests planning for typical service life of between 60-80 years for concrete tanks. Continue to monitor closely and perhaps have engineer evaluate if cracking/spalling, or actual leaks become prevalent. Also, inspect access metal work and keep in good repair as ongoing maintenance. Note; some possibility of increased storage needs may exist for future years, as well as multitude of other design criteria. Update your WSP or SWSMP and adjust in future reserve updates as conditions merit.

Useful Life:
80 yearsRemaining Life:
65 years

Best Case: \$ 216,000

Worst Case: \$ 248,000

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: No image of interior available; exterior of tank represented below. As already mentioned, no type of interior tank liner presently exists with no anticipating of such applications for the foreseeable future. Note that if needs arise, beginning such application of interior coatings, typical life expectancy is 10-15 years and cost would likely be in the \$10,000-\$16,000 range.

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, then deferred to FY 2019/2020 and now once again deferred to occur in FY 2020/2021

Comments: Interior was not inspected. Research for this update informed us regarding your previous plans for interior cleaning project to occur in FY 2018/2019, then deferred to FY 2019/2020 and now once again deferred to occur in FY 2020/2021. No current bids were available for our review. In any event, anticipate this type of project every 10 years or so going forward. Track any other significant needs and expense patterns carefully; adjust in future reserve study updates.

Useful Life:
10 years

Remaining Life:
0 years



Best Case: \$ 3,400

Worst Case: \$ 5,600

Lower allowance

Higher allowance

Cost Source: Previous Estimate Provided by Client, adjusted for inflation

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 exterior cleaning project to occur in FY 2018/2019, then deferred to FY 2019/2020 and now once again deferred to occur in FY 2020/2021

Comments: Exterior surface is without any protective coating (as typical for concrete reservoir). General grime, mildew and staining was illustrated. Last exterior cleaning project reportedly occurred in FY 2014/2015 project at expense of \$2,800.

Research for this update informed us regarding your previous plans for exterior cleaning project to occur in FY 2018/2019, then deferred to FY 2019/2020 and now once again deferred to occur in FY 2020/2021. No current bids were available for our review.

As before, we have factored an allowance for cleaning intervals every 4-5 years to benefit aesthetics.

Useful Life:
5 years

Remaining Life:
0 years



Best Case: \$ 3,000

Worst Case: \$ 4,000

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: Decommissioned, old concrete reservoir previously in process of being repurposed since FY 2015/2016. Conversion to utilization as storage space was planned; expense for project previously assumed from operating funds. Incorporate into future reserve study update as conditions warrant.

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: Existing domestic supply booster pumps were installed in 2012 as part of system improvements. No reported problems at present. Note that typical life expectancy is roughly 10-20 years with ordinary maintenance. Upper end of range is likely assuming present "clean" power and VFD controls.

Useful Life:
20 years

Remaining Life:
12 years



Best Case: \$ 15,200

Worst Case: \$ 19,700

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: Large fire suppression booster pump was also installed in 2012 as part of system improvements. Anticipate longer life as compared to domestic pumps due to assumed minimal usage over time. Continue to confidence test to ensure performance.

Useful Life:
40 years

Remaining Life:
32 years



Best Case: \$ 21,800

Worst Case: \$ 26,200

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: Significant electricity savings assumed since installation of VFD (Variable Frequency Drive) controls. Assume integrated replacement along with booster pump replacement intervals to maintain contemporary efficiency.

Useful Life:
20 years

Remaining Life:
12 years



Best Case: \$ 15,200

Worst Case: \$ 19,700

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: There are numerous small connections, meters, gauges, valve assemblies, etc... These ancillary water system components will need rebuilding or replacement from time to time but are expected to be below reserve funding threshold, therefore should be expensed as general maintenance from within the operating budget per occurrence.

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: These small steel pressure tanks appear to be in fair condition. Replacement cost is minimal (~\$1,600 for both) so replace if needed from operating funds.

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: No reported problems at present. We noted provided NWS 2011 water line project report and maps indicated that PVC Schedule 40 was to be specified during previous FY 2012/2013 project. Instead, installation of primarily PVC C900 products was utilized. In any event, replacements were indicated primarily to replace deteriorated and leaking sections but also improvements to flow and fire protection. Majority of PVC C900 main line is now 6" (25,200 LF) with minor amount of 8" locations. Our previous review of provided materials and research with representative of your current SMA (Satellite Management Agency), Northwest Water Systems (NWS), confirmed anticipation for long replacement intervals factored below for existing PVC C900 piping. Although this is a extended life component, eventual and very significant expense is predictable and should be included in prudent planning. We noted 2012 project design and oversight by NWS and assume related connections, road repair, etc... were included in cost projections. Note; image is representative, not necessarily indicative of project locations.

Useful Life:
70 years

Remaining Life:
62 years



Best Case: \$ 1,020,000

Worst Case: \$ 1,260,000

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: Some locations utilize smaller 2" (or less) PVC Schedule 40 with a useful life assumption of roughly 30-40 years as factored below. Track needs and any expense patterns that may emerge and adjust as conditions merit in future reserve study updates. Note; image is representative, not necessarily indicative of project locations.

Useful Life:
40 years

Remaining Life:
32 years



Best Case: \$ 68,300

Worst Case: \$ 79,200

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 945 Service Connect/Lines - Replace

Quantity: ~(400) connections

Location: Service connections throughout community

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

History:

Comments: The service lines off of the main water distribution lines are primarily 1.5" poly connecting lines and we have factored a service life of roughly 30-40 years for these lines and associated connections. Some local leak repairs since large project was completed. Continue proactive leak detection, treat minor repair/replacement as needed using operating funds. Note, image is representative, not necessarily indicative of project locations.

Useful Life:
40 years

Remaining Life:
32 years



Best Case: \$ 240,000

Worst Case: \$ 320,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 946 Service Meters - Replace**Quantity: ~(400) 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: Water meters with sensors were installed as part of FY 2012/2013 improvements. Estimated useful life of meters is roughly 10 years with proactive replacement scheduling recommend to help ensure minimal leakage, function and accuracy.

Anticipate some local replacement needs (due to spot additions and/or early failure) in between large scale projects; treat such as ongoing maintenance items.

Useful Life:
10 yearsRemaining Life:
2 years

Best Case: \$ 120,000

Worst Case: \$ 160,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 947 Service Meter Box/Setters - Replace**Quantity: ~(400) boxes/setters**

Location: Water service points of community

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

History:

Comments: Note that associated water meter boxes, setters/shut-off valves are life limited as well. Unless more urgent needs arise, we recommend integrated replacement timed to coincide with every other meter replacement project.

Useful Life:
20 yearsRemaining Life:
12 years

Best Case: \$ 120,000

Worst Case: \$ 160,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 950 Pressure Reducing Valves - Replace**Quantity: (60) metal**

Location: Select water service points of community

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

History:

Comments: PRV's (pressure reducing valves) were installed in select service locations. For general planning purposes, assume estimated useful life of roughly 20 years. No significant changes reported; document/track history of any replacement and adjust in future reserve study updates as conditions merit. Note; image is from previous 2017 site inspection.

Useful Life:
20 years

Remaining Life:
12 years



Best Case: \$ 10,500

Worst Case: \$ 17,100

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: Roughly (33) isolation valves [well or gate] and (5) blow-out valves of varying sizes are installed thorough out community at present. Replacement last in FY 2012/2013 without reported problems at present. We assume routine inspections, exercising and minor repair from operating funds. Anticipate significant replacement at roughly the time frame below for purposes of long term budgeting. Carefully track actual replacement needs and expense history; update future reserve study updates as conditions merit.

Useful Life:
30 years

Remaining Life:
22 years



Best Case: \$ 37,400

Worst Case: \$ 45,700

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: This component represents the existing fire hydrants that are all "newer"; installations indicated in 2012. Current coverage is assumed to be code compliant. Anticipated useful life of hydrants is factored below. Testing, cleaning, painting, minor repair, etc..., to sustain until that time is assumed to occur as operating expense..

Useful Life:
40 years

Remaining Life:
32 years



Best Case: \$ 162,000

Worst Case: \$ 183,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Buildings/Site

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: Ages vary with no significant deterioration or instability of the older structures evident; no reported problems. Water system buildings are utility structures, clad largely with vertically installed plywood. Present permanent building inventory includes; Booster Pump Station/Well #1 Housing (~10'x16'), Generator Housing (~10'x16') plus the small Well #2 Dog House (~5x5). Assuming ordinary care, no anticipation of large scale expenses for the foreseeable future. Our previous research indicated projects for painting and minor repair utilizing operating monies, occasional labor, staff and volunteer will likely continue. Under this pattern of care, no impact upon reserves is factored. Monitor, track expenses closely and adjust as needed within future reserve study updates.

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: As with exteriors, similar assumptions regarding interior maintenance of these utility structures will apply for projects such as repainting, replacement of lighting, heaters, etc... (maintenance by occasional labor, staff, volunteers and operating funds).

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: No reported problems with standing seam metal roofing; 2013 replacement expense was not provided. Inspect and repair from operating budget. Metal roofing is a long lived product but eventual replacement near the 40 year mark of life due to typical material deterioration (including underlying membrane) is predictable. Also, replace any gutter/downspout along with this project.

Useful Life:
40 years

Remaining Life:
33 years



Best Case: \$ 3,100

Worst Case: \$ 4,200

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: Small vinyl shed in fair condition. Plan for replacement due to typical material deterioration and wear at roughly the interval indicated below.

Useful Life:
20 years

Remaining Life:
13 years



Best Case: \$ 2,410

Worst Case: \$ 3,500

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: Previous electrical service upgrades were indicated. No reported problems at this time. Anticipate allowance for similar panel and service replacements at roughly the time frame below. Treat electrical system inspection and any minor repair needs as ongoing maintenance expense.

Useful Life:
30 years

Remaining Life:
22 years



Best Case: \$ 9,300

Worst Case: \$ 13,700

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: Fair condition; installed in 2013 as a required security improvement. Also, further improvement to add secondary gate in 2016; segregated expense for either events was not provided. In any event, inspect, clean and treat for corrosion; spot repair promptly as needed from operating funds. For purposes of long term budgeting, eventual replacement of chain link fencing is factored below.

Useful Life:
35 years

Remaining Life:
28 years



Best Case: \$ 17,300

Worst Case: \$ 20,500

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: Extensive tree removal occurred in FY 2014/2015; one-time expense of ~\$8,000 to remove (53) trees was noted.

Although typically funded as ongoing maintenance item, this component may be utilized for setting aside funds for larger expenses that do not occur on an annual basis, such as large scale plantings, common area drainage projects, extensive bark mulch every two/three years, resodding lawn areas, landscape improvement projects, etc.. As before, no stated desire for cyclical reserve funding to supplement the operating budget. These types of expenses may be incorporated into future reserve study updates.

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)

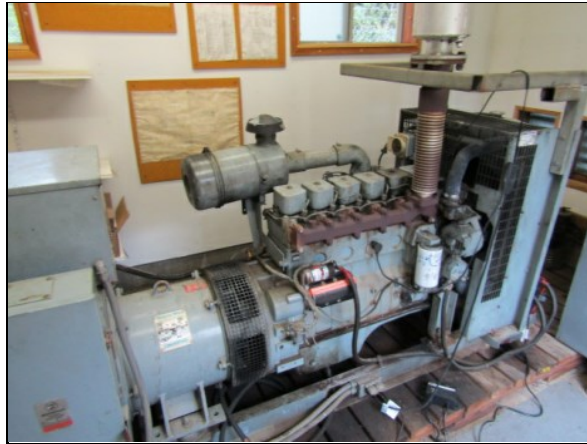
Funded?: Yes. Meets National Reserve Study Standards criteria for Reserve Funding

History: Likely from either the mid 1970's or perhaps early 1980's

Comments: Old emergency generator, likely from either the mid 1970's or perhaps early 1980's. No previous repair history or cost was provided. No reported performance problems nor imminent plans for replacement at the moment. Regular inspections, confidence testing and repairs are assumed from the operating budget. Our experience is that typical service expectations are in the 30-50 year range and somewhat driven by actual usage. As before, eventual intervals of replacement to offset parts obsolescence and maintain functionality are factored below. Include integrated controls, fuel storage tank improvements, etc... in this project as needed.

Useful Life:
50 years

Remaining Life:
4 years



Best Case: \$ 43,700

Worst Case: \$ 65,600

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: Office equipment and furniture is considered the responsibility of HMC Management, not HMC Water System. In any event, varying useful life cycles and modest individual replacement expenses should be funded from HMC Management general operating monies.

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: Assorted small tools/equipment, portable fuel tanks, utility shelving and benches observed; nothing meriting reserve designation. Evaluate such minor replacement needs as ongoing maintenance and provide from annual operating funds.

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: Your current plan for contemporary system replacement in FY 2020/2021 at expense of \$14,000; last FY 2012/2013 installation at an expense of ~\$5,000

Comments: Old Badger brand meter reader system was installed FY 2012/2013 at an expense of ~\$5,000; obsolete since manufacturer no longer supporting existing system. Your current plan for contemporary system replacement in FY 2020/2021 at expense of \$14,000. Going forward, assume similar events every 5-8 year interval.

Useful Life:
7 years

Remaining Life:
0 years



Best Case: \$ 12,000

Worst Case: \$ 16,000

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:

Comments: Water system obtained loan from USDA with proceeds utilized to help pay for distribution, metering and fire suppression improvements; previous expense of \$1,738,000 was indicated. Previous total of annual P&I payments were \$53,278 with a 40 year term but we are not currently tracking since no impact upon water system maintenance reserves is factored due to collections and payments handled in a separate account for this debt obligation.

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, then deferred to FY 2019/2020 and now once again deferred to occur in FY 2020/2021. No current bids were available for our review.

Comments: It is our understanding that a comprehensive Water System Plan (WSP) was completed last in 2009. Going forward, your Group A water system (under 1,000 connections) does not currently have to update such a WSP. However, note that preparation/update of a Small Water System Management Program (SWSMP) is anticipated as an ongoing requirement into the future. We note that DOH expectations are that SWSMP will include comprehensive Operations and Maintenance (O&M) program, plus documenting (among others); short and long lived asset inventory along with current condition assessment, remaining life assumptions (with annual updates), asset replacement and improvement schedule including costs (with annual updates), six year budget (with annual updates) and evaluation of current and future capacity. HMC Water System doesn't currently have to submit SWSMP to DOH, nor is there a regulatory time frame for updating the plan. We recommend such planning be provided by expert at minimum of the time frame below. Your previous plans for SWSMP update project to occur in FY 2017/2018 were apparently deferred, then deferred to FY 2019/2020 and now once again deferred to occur in FY 2020/2021. No current bids were available for our review.

Useful Life:
6 years

Remaining Life:
0 years



Best Case: \$ 3,000

Worst Case: \$ 4,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

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 2019/2020; expense was not provided

Comments: This component factors cyclical funding for the Washington State required water system sanitary survey, required at least once every five years for your community. Completed last in FY 2019/2020 and previously in FY 2015/2016; expenses were not provided. update in future reserve updates as conditions merit.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:
