Washington Office
505 South 336th St., Ste 620
Federal Way, WA 98003

TEL 253/661-5437
FAX 253/661-5430
arwa@reservestudy.com
www.reservestudy.com

ASSOCIATION RESERVES
Est. 1986
Reserve Studies for Community Associations

Corporate Office
Calabasas, CA

Regional Offices
Phoenix, AZ
San Francisco, CA
Denver, CO
Honolulu, HI
Las Vegas, NV
Miami, FL

Update "No Site-Visit" Reserve Study

HMC Water System
Herron Island, WA

Report #: **26621-2**
For Period Beginning: **October 1, 2016**
Expires: **September 30, 2017**

Date Prepared: **June 2, 2016**

MIKE FLEMING
CAI-RS
00153
DESIGNATION
RESERVE SPECIALIST

Hello, and welcome to your Reserve Study!

We don't want you to be surprised. This Report is designed to help you anticipate, and prepare for, the major common area expenses your association will face. Inside you will find:

1) **<u>The Reserve Component List</u> (the "Scope and Schedule" of your Reserve projects) – telling you what your association is Reserving for, what condition they are in now, and what they'll cost to replace.**

2) **<u>An Evaluation of your current Reserve Fund Size and Strength</u> (Percent Funded). This tells you your financial starting point, revealing your risk of deferred maintenance and special assessments.**

3) **<u>A Recommended Multi-Year Reserve Funding Plan</u>, answering the question… "What do we do now?"**

More Questions?

Visit our website at www.ReserveStudy.com or call us at:

253/661-5437

<u>Relax</u>, it's from

ASSOCIATION RESERVES
Est. 1986
Reserve Studies for Community Associations

Table of Contents

3- Minute Executive Summary i
Reserve Study Summary i
Reserve Component List – Table 1 ii

Introduction, Objectives, and Methodology 1
Which Physical Assets are Funded by Reserves? 2
How do we establish Useful Life and Remaining Useful Life estimates? 2
How do we establish Current Repair/Replacement Cost Estimates? 2
How much Reserves are enough? 3
How much should we contribute? 4
What is our Recommended Funding Goal? 4

Projected Expenses 5
Expense Graph – Figure 1 5

Reserve Fund Status & Recommended Funding Plan 6
Funding Plan Graph – Figure 2 6
Cash Flow Graph – Figure 3 7
% Funded Graph – Figure 4 7

Table Descriptions 8
Reserve Component List Detail – Table 2 9
Contribution & Fund Breakdown – Table 3 10
Component Significance – Table 4 11
30 Year Reserve Plan Summary – Table 5 12
30 Year Reserve Plan Year by Year Detail – Table 6 13

Accuracy, Limitations, and Disclosures 25

Terms and Definitions 26

Component Details ..... Appendix

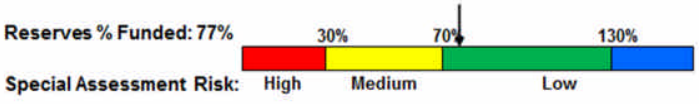
3- Minute Executive Summary

Association: HMC Water System #: 26621-2
Location: Herron Island, WA # of Units: 397
Report Period: October 1, 2016 through September 30, 2017

Findings/Recommendations as-of 10/1/2016:

Projected Starting Reserve Balance:	$211,628
Current Fully Funded Reserve Balance:	$276,281
Average Reserve Deficit (Surplus) Per Unit:	$163
100% 2016/2017 Annual "Full Funding" Contributions:	$72,800
70% 2016/2017 Annual "Threshold Funding" Contributions:	$57,000
Baseline contribution (min to keep Reserves above $0):	$22,019
Recommended 2016/2017 Special Assessment for Reserves:	$0

Most Recent Budgeted Reserve Contribution Rate: $35,406



Economic Assumptions:

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

- **This is an "Update No-Site-Visit" Reserve Study, based on our most recent NSV Report prepared for your 2015/2016 Fiscal Year. Refer to photo pages of 2014/2015 Full report for additional component information. No site inspection was performed as part of this Reserve Study, which was prepared by, or under the supervision of a credentialed Reserve Specialist (RS 153).**
- **Your Reserve Fund is currently 77% Funded. This means the association's special assessment & deferred maintenance risk is currently low. 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 substantially increase your Reserve contributions to within the 70% to 100% level as noted above in order to maintain/improve current strong status. Going forward, collection of reserve monies to provide for fair distribution of expense burden to offset ongoing deterioration of reserve category projects and to maintain/improve strong status should be undertaken. In other words, current owners should contribute "their fair share" to maintenance reserves. The reader should note that the FY 2016/2017 "Annual Deterioration" of reserve components is $56,916.**
- **100% "Full" and 70% contribution rates are designed to achieve these funding objectives *by the end of* our 30-year report scope. No assets appropriate for Reserve designation were excluded. See appendix for component details; the basis of our assumptions.**

Table 1: Executive Summary				26621-2
#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Cost Estimate
	Capacity / Storage			
901	Well Pumps/Motors - Replace	30	26	$16,995
904	Well Controls - Replace	30	26	$4,275
910	Storage Tank, Concrete - Replace	80	69	$206,250
914	Storage Tank, Exterior - Clean	5	3	$3,090
	Boost			
920	Booster Pumps, 5 HP - Replace	20	16	$15,965
922	Booster Pump, 15 HP - Replace	40	36	$21,630
924	Booster Pumps VFD Control - Replace	20	16	$15,965
	Distribution			
940	Distribution Lines, 6"-8" - Replace	70	66	$1,024,850
941	Distribution Lines, 2" - Replace	40	36	$66,435
945	Service Connect/Lines - Replace	40	36	$252,350
946	Service Meters - Replace	10	6	$123,600
947	Service Meter Box/Setters - Replace	20	16	$123,600
950	Pressure Reducing Valves - Replace	20	16	$12,515
954	Blow-Out/Isolation Valves - Replace	30	26	$37,595
958	Hydrants - Replace	40	36	$154,500
	Buildings/Site			
964	Building Roofs - Replace	40	37	$3,195
967	Storage Shed, Vinyl - Replace	20	17	$2,675
969	Building Electrical - Replace	30	26	$10,405
970	Chain Link Fence - Replace	35	32	$16,995
	Systems/Equipment			
980	Generator, Emergency - Replace	50	8	$42,230
999	Meter Reader System - Replace	5	1	$5,305
	Financial/Professional			
1006	SWSMP - Update	6	0	$3,705
1013	Sanitary Survey - Update	5	3	$2,065
23	Total Funded Components			

Note:

A Useful Life of “N/A” means a one-time expense, not expected to repeat.

Yellow highlighted line items are expected to require attention in the initial year.

Green highlighted items are expected to occur within the first five years.

Cross reference component numbers with inventory appendix.

A reserve-funding threshold of $2,000 is recommended for your association (expenses below this level expected to be factored within operating budget).

Introduction

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

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

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

Methodology

For this Update No-Site-Visit Reserve Study, we started with a review of your prior Reserve Study, then looked into recent Reserve expenditures, evaluated how expenditures are handled (ongoing maintenance vs Reserves), and researched any well-established association precedents. We *updated and adjusted* your Reserve Component List on the basis of time elapsed since the last Reserve Study and interviews with association representatives.

Which Physical Assets are Funded by Reserves?

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 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 Board members to recommend to their association. Remember, it is the Board's job to provide for the ongoing care of the common areas. Board members 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.

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. Your *first five years* of projected Reserve expenses total $14,802. Adding the next five years, your *first ten years* of projected Reserve expenses are $233,171. Please be aware of your near-term expenses, which we are able to project more accurately than the more distant projections.

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 Table 5, while details of the projects that make up these expenses are shown in Table 6.

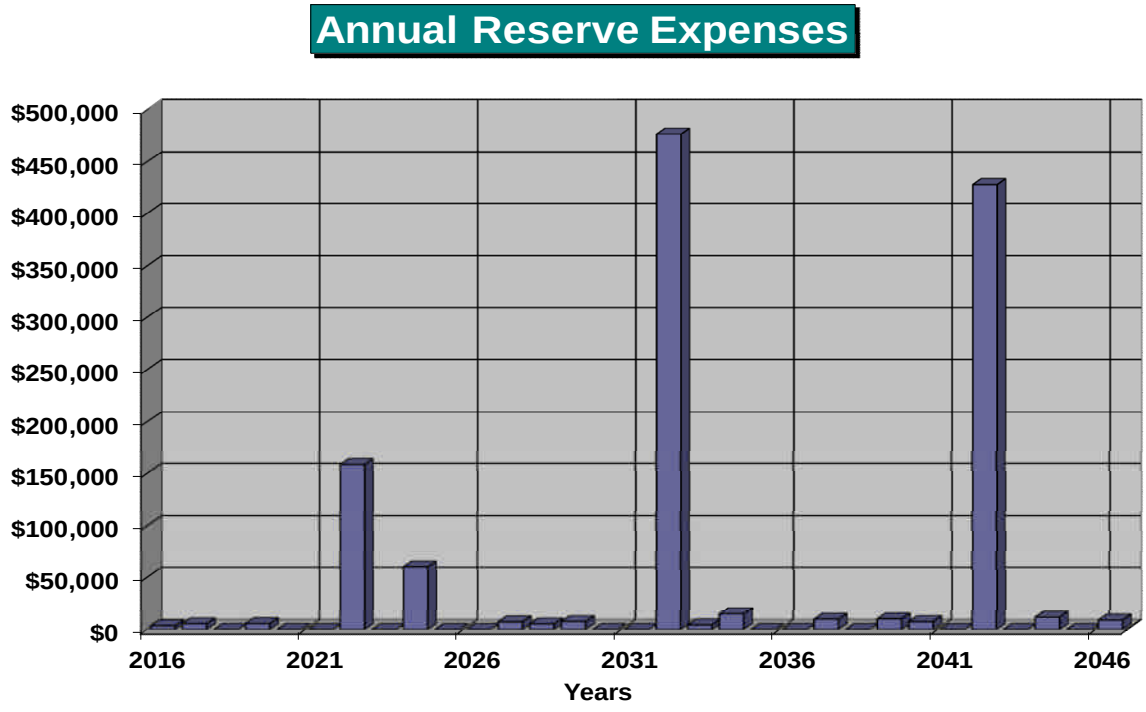


Figure 1

Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be $211,628 as-of the start of your Fiscal Year on October 1, 2016. As of October 1, 2016, your Fully Funded Balance is computed to be $276,281 (see Table 3). This figure represents the deteriorated value of your common area components. Comparing your Reserve Balance to your Fully Funded Balance indicates your Reserves are 77% Funded. Across the country, approx 2% of associations in this range experience special assessments or deferred maintenance.

Recommended Funding Plan

Based on your current Percent Funded and your near-term and long-term Reserve needs, we are recommending budgeted contributions of $72,800 this Fiscal Year. The overall 30-yr plan, in perspective, is shown below. This same information is shown numerically in both Table 5 and Table 6.

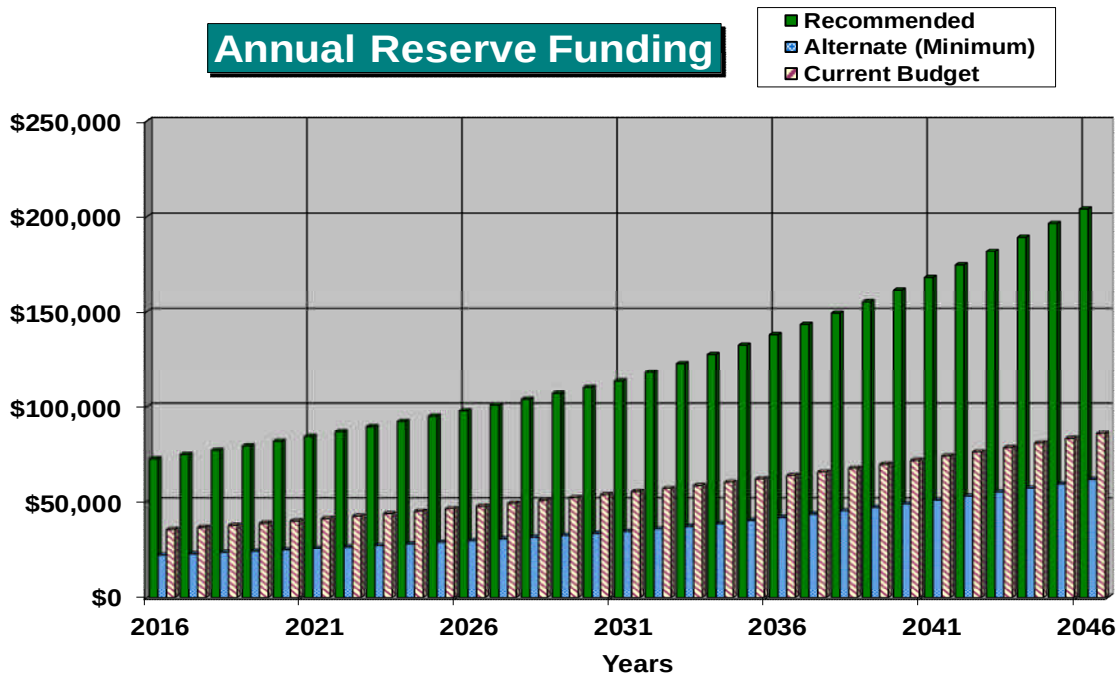


Figure 2

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, compared to your always-changing Fully Funded Balance target.

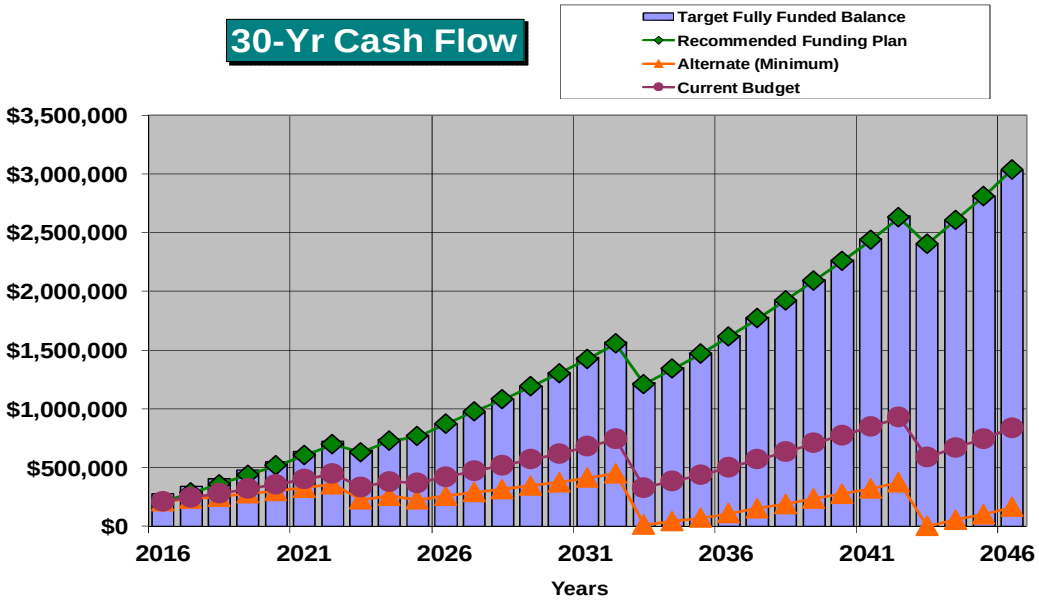


Figure 3

This figure shows this same information, plotted on a Percent Funded scale.

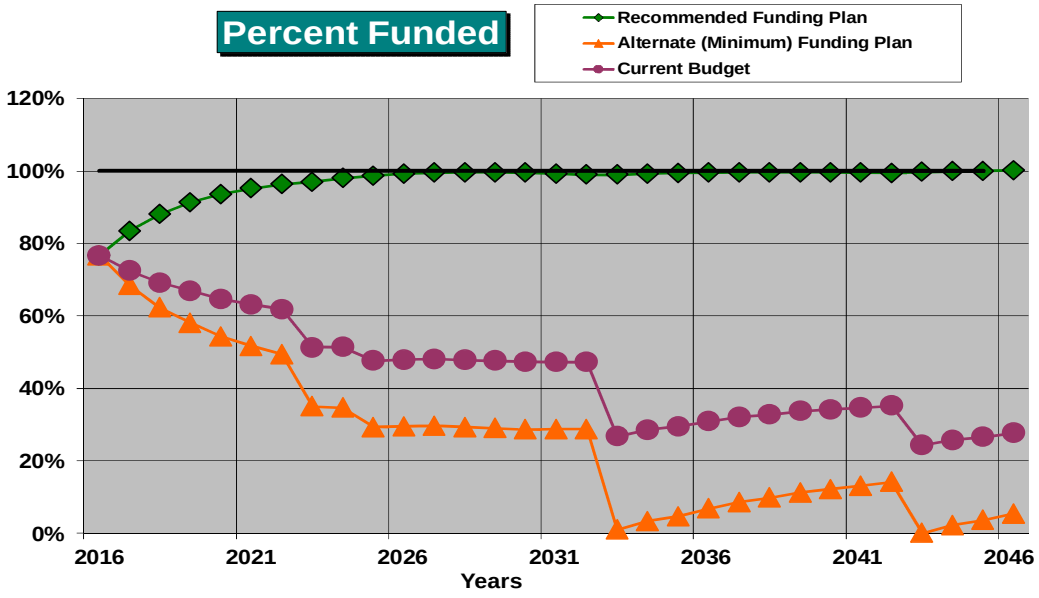


Figure 4

Table Descriptions

The tabular information in this Report is broken down into six tables.

Table 1 is a summary of your Reserve Components (your Reserve Component List), the information found in Table 2.

Table 2 is your Reserve Component List, which forms the foundation of this Reserve Study. This table represents the information from which all other tables are derived.

Table 3 shows the calculation of your Fully Funded Balance, the measure of your current Reserve component deterioration. For each component, the Fully Funded Balance is the fraction of life used up multiplied by its estimated Current Replacement Cost.

Table 4 shows the significance of each component to Reserve 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/year of each component is calculated by dividing the estimated Current Replacement Cost by Useful Life, then that component's percentage of the total is displayed.

Table 5: This table 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 for each year.

Table 6: This table shows the cash flow detail for the next 30 years. This table makes it possible to see which components are projected to require repair or replacement each year, and the size of those individual expenses.

Table 2: Reserve Component List Detail 26621-2

#	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	26	$14,420	$19,570
904	Well Controls - Replace	(1) two-motor control	30	26	$3,190	$5,360
910	Storage Tank, Concrete - Replace	(1) 99,000 gallon	80	69	$185,900	$226,600
914	Storage Tank, Exterior - Clean	(1) 99,000 gallon	5	3	$2,575	$3,605
	Boost					
920	Booster Pumps, 5 HP - Replace	(2) Nidec, 5 HP	20	16	$12,360	$19,570
922	Booster Pump, 15 HP - Replace	(1) Baldor, 15 HP	40	36	$19,570	$23,690
924	Booster Pumps VFD Control - Replace	(1) three pump control	20	16	$12,360	$19,570
	Distribution					
940	Distribution Lines, 6"-8" - Replace	Approx 26,650 LF	70	66	$916,700	$1,133,000
941	Distribution Lines, 2" - Replace	Approx 2,500 LF	40	36	$58,710	$74,160
945	Service Connect/Lines - Replace	(397) connections	40	36	$236,900	$267,800
946	Service Meters - Replace	(397) meters	10	6	$103,000	$144,200
947	Service Meter Box/Setters - Replace	(397) boxes/setters	20	16	$103,000	$144,200
950	Pressure Reducing Valves - Replace	(60) metal	20	16	$9,580	$15,450
954	Blow-Out/Isolation Valves - Replace	(38) total, assorted	30	26	$33,990	$41,200
958	Hydrants - Replace	(41) hydrants	40	36	$144,200	$164,800
	Buildings/Site					
964	Building Roofs - Replace	Approx 500 square feet	40	37	$2,680	$3,710
967	Storage Shed, Vinyl - Replace	(1) 8'x8'	20	17	$2,160	$3,190
969	Building Electrical - Replace	Extensive systems	30	26	$8,450	$12,360
970	Chain Link Fence - Replace	Approx 720 linear feet	35	32	$15,450	$18,540
	Systems/Equipment					
980	Generator, Emergency - Replace	(1) Marathon, 60KW	50	8	$37,080	$47,380
999	Meter Reader System - Replace	(1) meter, software	5	1	$4,220	$6,390
	Financial/Professional					
1006	SWSMP - Update	Every 6 years	6	0	$3,190	$4,220
1013	Sanitary Survey - Update	Every 5 years	5	3	$1,550	$2,580
23	Total Funded Components					

Table 3: Fully Funded Balance 26621-2

#	Component	Current Cost Estimate		Effective Age		Useful Life		Fully Funded Balance
	Capacity / Storage							
901	Well Pumps/Motors - Replace	$16,995	X	4	/	30	=	$2,266
904	Well Controls - Replace	$4,275	X	4	/	30	=	$570
910	Storage Tank, Concrete - Replace	$206,250	X	11	/	80	=	$28,359
914	Storage Tank, Exterior - Clean	$3,090	X	2	/	5	=	$1,236
	Boost							
920	Booster Pumps, 5 HP - Replace	$15,965	X	4	/	20	=	$3,193
922	Booster Pump, 15 HP - Replace	$21,630	X	4	/	40	=	$2,163
924	Booster Pumps VFD Control - Replace	$15,965	X	4	/	20	=	$3,193
	Distribution							
940	Distribution Lines, 6"-8" - Replace	$1,024,850	X	4	/	70	=	$58,563
941	Distribution Lines, 2" - Replace	$66,435	X	4	/	40	=	$6,644
945	Service Connect/Lines - Replace	$252,350	X	4	/	40	=	$25,235
946	Service Meters - Replace	$123,600	X	4	/	10	=	$49,440
947	Service Meter Box/Setters - Replace	$123,600	X	4	/	20	=	$24,720
950	Pressure Reducing Valves - Replace	$12,515	X	4	/	20	=	$2,503
954	Blow-Out/Isolation Valves - Replace	$37,595	X	4	/	30	=	$5,013
958	Hydrants - Replace	$154,500	X	4	/	40	=	$15,450
	Buildings/Site							
964	Building Roofs - Replace	$3,195	X	3	/	40	=	$240
967	Storage Shed, Vinyl - Replace	$2,675	X	3	/	20	=	$401
969	Building Electrical - Replace	$10,405	X	4	/	30	=	$1,387
970	Chain Link Fence - Replace	$16,995	X	3	/	35	=	$1,457
	Systems/Equipment							
980	Generator, Emergency - Replace	$42,230	X	42	/	50	=	$35,473
999	Meter Reader System - Replace	$5,305	X	4	/	5	=	$4,244
	Financial/Professional							
1006	SWSMP - Update	$3,705	X	6	/	6	=	$3,705
1013	Sanitary Survey - Update	$2,065	X	2	/	5	=	$826
								$276,281

Table 4: Component Significance 26621-2

#	Component	Useful Life	Current Cost Estimate	Deterioration Cost/yr	Deterioration Significance
	Capacity / Storage				
901	Well Pumps/Motors - Replace	30	$16,995	$567	1.0%
904	Well Controls - Replace	30	$4,275	$143	0.3%
910	Storage Tank, Concrete - Replace	80	$206,250	$2,578	4.5%
914	Storage Tank, Exterior - Clean	5	$3,090	$618	1.1%
	Boost				
920	Booster Pumps, 5 HP - Replace	20	$15,965	$798	1.4%
922	Booster Pump, 15 HP - Replace	40	$21,630	$541	1.0%
924	Booster Pumps VFD Control - Replace	20	$15,965	$798	1.4%
	Distribution				
940	Distribution Lines, 6"-8" - Replace	70	$1,024,850	$14,641	25.7%
941	Distribution Lines, 2" - Replace	40	$66,435	$1,661	2.9%
945	Service Connect/Lines - Replace	40	$252,350	$6,309	11.1%
946	Service Meters - Replace	10	$123,600	$12,360	21.7%
947	Service Meter Box/Setters - Replace	20	$123,600	$6,180	10.9%
950	Pressure Reducing Valves - Replace	20	$12,515	$626	1.1%
954	Blow-Out/Isolation Valves - Replace	30	$37,595	$1,253	2.2%
958	Hydrants - Replace	40	$154,500	$3,863	6.8%
	Buildings/Site				
964	Building Roofs - Replace	40	$3,195	$80	0.1%
967	Storage Shed, Vinyl - Replace	20	$2,675	$134	0.2%
969	Building Electrical - Replace	30	$10,405	$347	0.6%
970	Chain Link Fence - Replace	35	$16,995	$486	0.9%
	Systems/Equipment				
980	Generator, Emergency - Replace	50	$42,230	$845	1.5%
999	Meter Reader System - Replace	5	$5,305	$1,061	1.9%
	Financial/Professional				
1006	SWSMP - Update	6	$3,705	$618	1.1%
1013	Sanitary Survey - Update	5	$2,065	$413	0.7%
23	Total Funded Components			$56,916	100.0%

Table 5: 30-Year Reserve Plan Summary 26621-2

Fiscal Year Start: 10/01/16

Interest:	1.0%	Inflation:	3.0%

Reserve Fund Strength Calculations

(All values as of Fiscal Year Start Date)

Projected Reserve Balance Changes

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Special Assmt Risk	Reserve Contribs.	Loans or Special Assmts	Interest Income	Reserve Expenses
2016	$211,628	$276,281	76.6%	Low	$72,800	$0	$2,473	$3,705
2017	$283,196	$339,377	83.4%	Low	$74,984	$0	$3,194	$5,464
2018	$355,910	$404,312	88.0%	Low	$77,234	$0	$3,963	$0
2019	$437,107	$478,636	91.3%	Low	$79,551	$0	$4,762	$5,633
2020	$515,787	$551,252	93.6%	Low	$81,937	$0	$5,593	$0
2021	$603,317	$633,771	95.2%	Low	$84,395	$0	$6,485	$0
2022	$694,197	$720,746	96.3%	Low	$86,927	$0	$6,615	$158,343
2023	$629,396	$649,274	96.9%	Low	$89,535	$0	$6,773	$0
2024	$725,703	$740,852	98.0%	Low	$92,221	$0	$7,452	$60,026
2025	$765,351	$775,514	98.7%	Low	$94,987	$0	$8,166	$0
2026	$868,504	$875,270	99.2%	Low	$97,837	$0	$9,216	$0
2027	$975,557	$980,314	99.5%	Low	$100,772	$0	$10,270	$7,343
2028	$1,079,256	$1,083,308	99.6%	Low	$103,795	$0	$11,337	$5,282
2029	$1,189,106	$1,193,950	99.6%	Low	$106,909	$0	$12,445	$7,570
2030	$1,300,889	$1,308,062	99.5%	Low	$110,117	$0	$13,622	$0
2031	$1,424,628	$1,435,978	99.2%	Low	$113,420	$0	$14,881	$0
2032	$1,552,929	$1,570,391	98.9%	Low	$117,957	$0	$13,800	$476,518
2033	$1,208,168	$1,220,763	99.0%	Low	$122,675	$0	$12,731	$4,421
2034	$1,339,153	$1,349,728	99.2%	Low	$127,582	$0	$14,018	$15,084
2035	$1,465,670	$1,474,487	99.4%	Low	$132,685	$0	$15,391	$0
2036	$1,613,746	$1,621,519	99.5%	Low	$137,993	$0	$16,905	$0
2037	$1,768,643	$1,776,046	99.6%	Low	$143,513	$0	$18,439	$9,869
2038	$1,920,726	$1,928,219	99.6%	Low	$149,253	$0	$20,045	$0
2039	$2,090,024	$2,098,395	99.6%	Low	$155,223	$0	$21,725	$10,174
2040	$2,256,798	$2,266,567	99.6%	Low	$161,432	$0	$23,445	$7,532
2041	$2,434,144	$2,445,977	99.5%	Low	$167,889	$0	$25,297	$0
2042	$2,627,330	$2,642,101	99.4%	Low	$174,605	$0	$25,124	$427,382
2043	$2,399,676	$2,407,588	99.7%	Low	$181,589	$0	$25,019	$0
2044	$2,606,285	$2,610,035	99.9%	Low	$188,853	$0	$27,072	$11,794
2045	$2,810,415	$2,810,315	100.0%	Low	$196,407	$0	$29,220	$0

Table 6: 30-Year Income/Expense Detail (yrs 0 through 4) 26621-2

	Fiscal Year	2016	2017	2018	2019	2020
	Starting Reserve Balance	$211,628	$283,196	$355,910	$437,107	$515,787
	Annual Reserve Contribution	$72,800	$74,984	$77,234	$79,551	$81,937
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$2,473	$3,194	$3,963	$4,762	$5,593
	Total Income	$286,901	$361,374	$437,107	$521,420	$603,317
#	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
914	Storage Tank, Exterior - Clean	$0	$0	$0	$3,377	$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	$5,464	$0	$0	$0
	Financial/Professional					

Table 6: 30-Year Income/Expense Detail (yrs 0 through 4) 26621-2

	Fiscal Year	2016	2017	2018	2019	2020
1006	SWSMP - Update	$3,705	$0	$0	$0	$0
1013	Sanitary Survey - Update	$0	$0	$0	$2,256	$0
	Total Expenses	$3,705	$5,464	$0	$5,633	$0
	Ending Reserve Balance:	$283,196	$355,910	$437,107	$515,787	$603,317

Table 6: 30-Year Income/Expense Detail (yrs 5 through 9) 26621-2

	Fiscal Year	2021	2022	2023	2024	2025
	Starting Reserve Balance	$603,317	$694,197	$629,396	$725,703	$765,351
	Annual Reserve Contribution	$84,395	$86,927	$89,535	$92,221	$94,987
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$6,485	$6,615	$6,773	$7,452	$8,166
	Total Income	$694,197	$787,739	$725,703	$825,376	$868,504
#	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
914	Storage Tank, Exterior - Clean	$0	$0	$0	$3,914	$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	$147,585	$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	$53,496	$0
999	Meter Reader System - Replace	$0	$6,334	$0	$0	$0
	Financial/Professional					

Table 6: 30-Year Income/Expense Detail (yrs 5 through 9) 26621-2

	Fiscal Year	2021	2022	2023	2024	2025
1006	SWSMP - Update	$0	$4,424	$0	$0	$0
1013	Sanitary Survey - Update	$0	$0	$0	$2,616	$0
	Total Expenses	$0	$158,343	$0	$60,026	$0
	Ending Reserve Balance:	$694,197	$629,396	$725,703	$765,351	$868,504

Table 6: 30-Year Income/Expense Detail (yrs 10 through 14) 26621-2

	Fiscal Year	2026	2027	2028	2029	2030
	Starting Reserve Balance	$868,504	$975,557	$1,079,256	$1,189,106	$1,300,889
	Annual Reserve Contribution	$97,837	$100,772	$103,795	$106,909	$110,117
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$9,216	$10,270	$11,337	$12,445	$13,622
	Total Income	$975,557	$1,086,599	$1,194,388	$1,308,460	$1,424,628
#	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
914	Storage Tank, Exterior - Clean	$0	$0	$0	$4,538	$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	$7,343	$0	$0	$0
	Financial/Professional					

Table 6: 30-Year Income/Expense Detail (yrs 10 through 14) 26621-2

	Fiscal Year	2026	2027	2028	2029	2030
1006	SWSMP - Update	$0	$0	$5,282	$0	$0
1013	Sanitary Survey - Update	$0	$0	$0	$3,033	$0
	Total Expenses	$0	$7,343	$5,282	$7,570	$0
	Ending Reserve Balance:	$975,557	$1,079,256	$1,189,106	$1,300,889	$1,424,628

Table 6: 30-Year Income/Expense Detail (yrs 15 through 19) 26621-2

	Fiscal Year	2031	2032	2033	2034	2035
	Starting Reserve Balance	$1,424,628	$1,552,929	$1,208,168	$1,339,153	$1,465,670
	Annual Reserve Contribution	$113,420	$117,957	$122,675	$127,582	$132,685
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$14,881	$13,800	$12,731	$14,018	$15,391
	Total Income	$1,552,929	$1,684,686	$1,343,574	$1,480,753	$1,613,746
#	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
914	Storage Tank, Exterior - Clean	$0	$0	$0	$5,261	$0
	Boost					
920	Booster Pumps, 5 HP - Replace	$0	$25,619	$0	$0	$0
922	Booster Pump, 15 HP - Replace	$0	$0	$0	$0	$0
924	Booster Pumps VFD Control - Replace	$0	$25,619	$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	$198,342	$0	$0	$0
947	Service Meter Box/Setters - Replace	$0	$198,342	$0	$0	$0
950	Pressure Reducing Valves - Replace	$0	$20,083	$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	$4,421	$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	$8,513	$0	$0	$0
	Financial/Professional					

Table 6: 30-Year Income/Expense Detail (yrs 15 through 19) 26621-2

	Fiscal Year	2031	2032	2033	2034	2035
1006	SWSMP - Update	$0	$0	$0	$6,308	$0
1013	Sanitary Survey - Update	$0	$0	$0	$3,516	$0
	Total Expenses	$0	$476,518	$4,421	$15,084	$0
	Ending Reserve Balance:	$1,552,929	$1,208,168	$1,339,153	$1,465,670	$1,613,746

Table 6: 30-Year Income/Expense Detail (yrs 20 through 24) 26621-2

#	Fiscal Year	2036	2037	2038	2039	2040
	Starting Reserve Balance	$1,613,746	$1,768,643	$1,920,726	$2,090,024	$2,256,798
	Annual Reserve Contribution	$137,993	$143,513	$149,253	$155,223	$161,432
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$16,905	$18,439	$20,045	$21,725	$23,445
	Total Income	$1,768,643	$1,930,595	$2,090,024	$2,266,972	$2,441,675
#	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
914	Storage Tank, Exterior - Clean	$0	$0	$0	$6,098	$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	$9,869	$0	$0	$0
	Financial/Professional					

Table 6: 30-Year Income/Expense Detail (yrs 20 through 24) 26621-2

	Fiscal Year	2036	2037	2038	2039	2040
1006	SWSMP - Update	$0	$0	$0	$0	$7,532
1013	Sanitary Survey - Update	$0	$0	$0	$4,075	$0
	Total Expenses	$0	$9,869	$0	$10,174	$7,532
	Ending Reserve Balance:	$1,768,643	$1,920,726	$2,090,024	$2,256,798	$2,434,144

Table 6: 30-Year Income/Expense Detail (yrs 25 through 29) 26621-2

	Fiscal Year	2041	2042	2043	2044	2045
	Starting Reserve Balance	$2,434,144	$2,627,330	$2,399,676	$2,606,285	$2,810,415
	Annual Reserve Contribution	$167,889	$174,605	$181,589	$188,853	$196,407
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$25,297	$25,124	$25,019	$27,072	$29,220
	Total Income	$2,627,330	$2,827,059	$2,606,285	$2,822,209	$3,036,042
#	Component					
	Capacity / Storage					
901	Well Pumps/Motors - Replace	$0	$36,651	$0	$0	$0
904	Well Controls - Replace	$0	$9,219	$0	$0	$0
910	Storage Tank, Concrete - Replace	$0	$0	$0	$0	$0
914	Storage Tank, Exterior - Clean	$0	$0	$0	$7,070	$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	$266,555	$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	$81,077	$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	$22,439	$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	$11,441	$0	$0	$0
	Financial/Professional					

Table 6: 30-Year Income/Expense Detail (yrs 25 through 29) 26621-2

	Fiscal Year	2041	2042	2043	2044	2045
1006	SWSMP - Update	$0	$0	$0	$0	$0
1013	Sanitary Survey - Update	$0	$0	$0	$4,725	$0
	Total Expenses	$0	$427,382	$0	$11,794	$0
	Ending Reserve Balance:	$2,627,330	$2,399,676	$2,606,285	$2,810,415	$3,036,042

Accuracy, Limitations, and Disclosures

Washington disclosure, per RCW:

This 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 circumstance, 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.

Because we have no control over future events, we do not expect that all the events we anticipate will occur as planned. We expect that inflationary trends will continue, and we expect Reserve funds to continue to earn interest, so we believe that reasonable estimates for these figures are much more accurate than ignoring these economic realities. We can control measurements, which we attempt to establish within 5% accuracy through a combination of on-site measurements, drawings, and satellite imagery. The starting Reserve Balance and interest rate earned on deposited Reserve funds that you provided to us were considered reliable and were not confirmed independently. We have considered the association's representation of current and historical Reserve projects reliable, and we have considered the representations made by its vendors and suppliers to also be accurate and reliable. Component Useful Life, Remaining Useful Life, and Current Cost estimates assume a stable economic environment and lack of natural disasters.

Because the physical condition of your components, the association's Reserve balance, the economic environment, and legislative environment change each year, this Reserve Study is by nature a "one-year" document. Because a long-term perspective improves the accuracy of near-term planning, this Report projects expenses for the next 30 years. It is our recommendation and that of the Financial Accounting Standards Board (FASB) that your Reserve Study be updated each year as part of the annual budget process.

Association Reserves and its employees have no ownership, management, or other business relationships with the client other than this Reserve Study engagement. James D. Talaga R.S., company president, is a credentialed Reserve Specialist (#66). All work done by Association Reserves WA, LLC is performed under his Responsible Charge. There are no material issues to our knowledge that have not been disclosed to the client that would cause a distortion of the association's situation.

Component quantities indicated in this Report were found in prior Reserve Studies unless otherwise noted. No destructive or intrusive testing was performed. This Report and this site inspection were accomplished only for Reserve budget purposes (to help identify and address the normal deterioration of properly built and installed components with predictable life expectancies). The Funding Plan in this Report was developed using the cash-flow methodology to achieve the specified Funding Objective.

Association Reserves' 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.

FFB = (Current Cost X Effective Age) / Useful Life

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 Table 6.

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 Annually 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 appendix Is to provide the reader with the basis of our funding assumptions resulting from our physical analysis and subsequent research. The appendix herein represent a wide range of elements that were observed and measured against National Reserve Study Standards to determine if they meet the criteria for reserve funding.

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

Some components are recommended for reserve funding, while others are not. The components that meet these criteria in our judgment are shown with corresponding maintenance, repair or replacement cycles (UL = Useful Life or how often the project is expected to occur, RUL = Remaining Useful Life or how many hears from our reporting period) and a representative market cost ranged termed "Best Cost" and "Worst Cost". There are many factors that can result in a wide variety of potential costs, we are attempting to represent a market average for budget purposes. Where there is no UL, the component is expected to be a one-time expense. Where no pricing, the component deemed inappropriate for Reserve Funding.

Client: 26621 HMC Water System

Inventory Appendix

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:	26 years
Best Case:	$14,420	Worst Case:	$19,570
	Lower allowance		Higher allowance
Cost Source:	Client Cost History/Research with Local Contractor		

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:	26 years
Best Case:	$3,190	Worst Case:	$5,360
	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:			

Client: 26621 HMC Water System

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:	69 years
Best Case:	$185,900	Worst Case:	$226,600
	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?:	No Cost projected to be too small		
History:			
Comments:			
Useful Life:		Remaining Life:	
Best Case:		Worst Case:	
Cost Source:			

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:	FY 2014/2015 project at expense of $2,800		
Comments:	Deducted 1 yr. from RUL, annual inflation adjustment 3%		
Useful Life:	5 years	Remaining Life:	3 years
Best Case:	$2,575	Worst Case:	$3,605
	Lower allowance		Higher allowance
Cost Source:	ARI Cost Database: Similar Project Cost History		

Client: 26621 HMC Water System

Comp #:	**916 Storage Tank, Old - Demolish/Remove**	**Quantity:**	**(1) project**
Location:	421 West Madrona (Lots 7 and 8, Block 3, Division 5)		
Funded?:	No No plans for expense to demolish and remove this decommissioned concrete reservoir		
History:	Re-purpose of interior ongoing in FY 2015/2016, utilizing as storage space; expense for project from operating funds		
Comments:			
Useful Life:		Remaining Life:	
Best Case:		Worst Case:	
Cost Source:			

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:	16 years
Best Case:	$12,360	Worst Case:	$19,570
	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:	36 years
Best Case:	$19,570	Worst Case:	$23,690
	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:	16 years
Best Case:	$12,360	Worst Case:	$19,570
	Lower allowance		Higher allowance
Cost Source:	ARI Cost Database: Similar Project Cost History		

Client: 26621 HMC Water System

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:

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: 66 years
Best Case: $916,700 Worst Case: $1,133,000
Lower allowance Higher allowance
Cost Source: Client Cost History/Research with Local Contractor

---

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: 36 years
Best Case: $58,710 Worst Case: $74,160
Lower allowance Higher allowance
Cost Source: Client Cost History/Research with Local Contractor

---

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: 36 years
Best Case: $236,900 Worst Case: $267,800
Lower allowance Higher allowance
Cost Source: Client Cost History/Research with Local Contractor

---

Client: 26621 HMC Water System

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:			
Comments:	Deducted 1 yr. from RUL, annual inflation adjustment 3%		
Useful Life:	10 years	Remaining Life:	6 years
Best Case:	$103,000	Worst Case:	$144,200
	Lower allowance		Higher allowance
Cost Source:	Client Cost History/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:	16 years
Best Case:	$103,000	Worst Case:	$144,200
	Lower allowance		Higher allowance
Cost Source:	Client Cost History/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:	16 years
Best Case:	$9,580	Worst Case:	$15,450
	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:	26 years
Best Case:	$33,990	Worst Case:	$41,200
	Lower allowance		Higher allowance
Cost Source:	ARI Cost Database: Similar Project Cost History		

Client: 26621 HMC Water System

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:	36 years
Best Case:	$144,200	Worst Case:	$164,800
	Lower allowance		Higher allowance
Cost Source:	Client Cost History/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		
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		
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:	37 years
Best Case:	$2,680	Worst Case:	$3,710
	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:	17 years
Best Case:	$2,160	Worst Case:	$3,190
	Lower allowance		Higher allowance
Cost Source:	ARI Cost Database: Similar Project Cost History		

Client: 26621 HMC Water System

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:	26 years
Best Case:	$8,450	Worst Case:	$12,360
	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:	32 years
Best Case:	$15,450	Worst Case:	$18,540
	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:			

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:	8 years
Best Case:	$37,080	Worst Case:	$47,380
	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		
History:			
Comments:			
Useful Life:		Remaining Life:	
Best Case:		Worst Case:	
Cost Source:			

Client: 26621 HMC Water System

Comp #: 991 Small Equipment/Tools - Replace **Quantity:** Minor equipment
Location: 421 West Madrona (Lots 7 and 8, Block 3, Division 5)
Funded?: No
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: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 5 years Remaining Life: 1 years
Best Case: $4,220 Worst Case: $6,390
Lower allowance Higher allowance
Cost Source: Client Cost History/Similar Project Cost History

---

Comp #: 1002 Loan - Payoff **Quantity:** Principal of ~$1,302,000
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 reportedly $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:
Comments: No change in RUL, annual inflation adjustment 3%
Useful Life: 6 years Remaining Life:
Best Case: $3,190 Worst Case: $4,220
Lower allowance Higher allowance
Cost Source: Research with Local Contractor

Comp #: 1013 Sanitary Survey - Update **Quantity:** Every 5 years
Location: Community water system
Funded?: Yes Meets National Reserve Study Standards criteria for Reserve Funding
History: Plans for FY 2014/2015 project
Comments: Deducted 1 yr. from RUL, annual inflation adjustment 3%
Useful Life: 5 years Remaining Life: 3 years
Best Case: $1,550 Worst Case: $2,580
Lower allowance Higher allowance
Cost Source: ARI Cost Database: Similar Project Cost History

Client: 26621 HMC Water System