# PONDEROSA PINES WATER COMPANY MAINTENANCE PLAN UPDATE RESERVE STUDY UPDATE LEVEL III: UPDATE WITH NO VISUAL SITE INSPECTION 2015



# PONDEROSA PINES WATER COMPANY

# **Executive Summary**

## Year of Report:

January 1, 2015 to December 31, 2015

# Number of Units:

490 Units

### **Parameters:**

Beginning Balance: \$237,365

Year 2015 Suggested Contribution: \$61,250

Year 2015 Projected Interest Earned: \$50

Inflation: 2.50%

Annual Increase to Suggested Contribution: 0.00%

Lowest Cash Balance Over 30 Years (Threshold): -\$12,452,886

Average Reserve Assessment per Unit: \$8.58

Prior Year's Actual Contribution: \$36,750

# **TABLE OF CONTENTS**

# **Ponderosa Pines Water Company**

Disclosure Information	4 of 45
MAINTENANCE PLAN	
Maintenance Plan	8 of 45
RESERVE STUDY	
Property Description	13 of 45
Cash Flow Method - Threshold Funding Model Summary	14 of 45
Cash Flow Method - Threshold Funding Model Projection	15 of 45
Component Summary By Category	17 of 45
Component Summary By Group	19 of 45
Annual Expenditure Detail	20 of 45
Detail Report by Category	25 of 45
Additional Disclosures	42 of 45

## Ponderosa Pines Water Company Maintenance Plan Update Reserve Study Update– Offsite Disclosure Information 2015

We have conducted an offsite reserve study update and maintenance plan update for Ponderosa Pines Water Company for the year beginning January 1, 2015, in accordance with guidelines established by Community Associations Institute and the American Institute of Certified Public Accountants.

We have no other involvement with the water company other than providing the reserve study and maintenance plan.

Assumptions used for inflation, interest, and other factors are detailed in page 14. Income tax factors were not considered due to the uncertainty of factors affecting net taxable income and the election of tax form to be filed.

David T. Schwindt, the representative in charge of this report, is a designated Reserve Study Specialist, Professional Reserve Analyst, and Certified Public Accountant licensed in the states of Oregon, Washington, California, and Arizona.

A site visit was performed in 2013. All information regarding the useful life and cost of reserve components was derived from the water company, local venders, similar companies and/or from various construction pricing and scheduling manuals.

The Ponderosa Pines Water Company is responsible for the repair, maintenance, and replacement of the water piping system. In 2001 they engaged Century West Engineering to perform a Water Master Plan. According to the Master Plan the water system was installed in phases beginning in 1979 and the PVC pipes has a useful life of 30 years, however due to several factors, including low demand and low pressure, the pipes may last up 40-50 years. In 2014 the master plan was updated and the useful life of the pipes was revised to 80 years.

The current funding scenario currently includes a negative balance. If the Association decides to follow this funding scenario, a special assessment will be needed.

The terms RS Means, National Construction Estimator, and Fannie Mae Expected Useful Life Tables and Forms refer to construction industry estimating databases that are used throughout the industry to establish cost estimates and useful life estimates for common building components and products. We suggest that the water company obtain firm bids for these services

According to the Bylaws, Article IX, Section 1: "Members shall have the right to receive water services from Corporation at rates substantially equal to Corporation's cost for such service. Corporation will accumulate or retain funds only to the extent necessary to meet its current losses and operating expenses and other reasonable needs such as, but not limited to, retiring indebtedness, maintaining, improving and expanding its water distribution system, or maintaining reserves for necessary purposes."

We are not aware of any material issues which, if not disclosed, would cause a material distortion of this report.

Certain information, such as the beginning balance of reserve funds and other information as detailed on the component detail reports, was provided by the water company representatives and is deemed to be reliable by us. This reserve study is a reflection of the information provided to us and cannot be used for the purpose of performing an audit, a quality/forensic analysis, or background checks of historical records.

Site visits should not be considered a project audit or quality inspection of the water company's property. This site visit does not evaluate the condition of the property to determine the useful life or needed repairs.

Certain costs outlined in the reserve study are subjective and, as a result, are for planning purposes only. The water company should obtain firm bids at the time of work. Actual costs will depend upon the scope of work as defined at the time the repair, replacement, or restoration is performed. All estimates relating to future work are good faith estimates and projections are based on the estimated inflation rate, which may or may not prove accurate. All future costs and life expectancies should be reviewed and adjusted annually.

This reserve study, unless specifically stated in the report, assumes no fungi, mold, asbestos, lead paint, urea-formaldehyde foam insulation, termite control substances, other chemicals, toxic wastes, radon gas, electro-magnetic radiation or other potentially hazardous materials (on the surface or sub-surface), or termites on the property. The existence of any of these substances may adversely affect the accuracy of this reserve study. Schwindt & Company assumes no responsibility regarding such conditions, as we are not qualified to detect substances, determine the impact, or develop remediation plans/costs.

Since destructive testing was not performed, this reserve study does not attempt to address latent and/or patent defects. Neither does it address useful life expectancies that are abnormally short due either to improper design, installation, nor to subsequent improper maintenance. This reserve study assumes all components will be reasonably maintained for the remainder of their life expectancy.

### Physical Analysis:

New projects generally include information provided by developers and/or refer to drawings.

Full onsite reserve studies generally include field measurements and do not include destructive testing. Drawings are usually not available for existing projects.

Onsite updates generally include observations of physical characteristics, but do not include field measurements.

The client is considered to have deemed previously developed component quantities as accurate and reliable. The current work is reliant on the validity of prior reserve studies.

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 circumstances, require homeowners to pay on demand (as a special assessment) their share of common expenses for the cost of major maintenance, repair, or replacement of a reserve component.

# PONDEROSA PINES WATER COMPANY MAINTENANCE PLAN UPDATE 2015

### Ponderosa Pines Water Company Executive Summary of Maintenance Plan

Regular maintenance of common elements is necessary to insure the maximum useful life and optimum performance of components. Of particular concern are items that may present a safety hazard to residents or guests if they are not maintained in a timely manner.

This maintenance plan is a cyclical plan that calls for maintenance at regular intervals. The frequency of the maintenance activity and the cost of the activity at the first instance follow a short descriptive narrative. This maintenance plan should be reviewed on an annual basis when preparing the annual operating budget for the water company.

Checklists, developed by Reed Construction Data, Inc., can be photocopied or accessed from the RS Means website:

# http://www.rsmeans.com/supplement/67346.asp

They can be used to assess and document the existing condition of a company's common elements and to track the carrying out of planned maintenance activities.

Ponderosa Pines Water Company Maintenance Plan 2015

The maintenance procedures are as follows:

We understand on-site personnel conduct ongoing maintenance of the water system. We recommend the water company document ongoing procedures performed and include detailed maintenance procedures in the maintenance plan during the next reserve study update"

procedures in the maintenance plan during the next reserve study update

The Board of Directors should refer to this maintenance plan each year when preparing the annual operating budget for the water company to ensure that annual maintenance costs are included in the budget for the years that they are scheduled.

**Property Inspection** 

Schwindt & Company recommends that a provision for the annual inspection of common area components be included in the maintenance plan for all companies. This valuable management tool will help to ensure that all components achieve a maximum useful life expectancy and that they function as intended throughout their lifespan.

The inspection should be performed by a qualified professional and should include a written summary of conclusions with specific recommendations for any needed repairs or maintenance.

We suggest that the water company obtain firm bids for this service.

This expense should be included in the annual operating budget for the water company.

Frequency: Annually

**Roof Inspection** 

The frequency of this inspection will vary based on the age, condition, complexity, and remaining useful life of the roof system. As the roof components become older, the water company is well advised to consider increasing the frequency of this critical procedure.

The inspection should be performed by a qualified roofing professional and should include a written summary of conclusions with specific recommendations for any needed repairs or maintenance. Recommended maintenance should be performed promptly by a licensed roofing contractor.

We suggest that the water company obtain firm bids for this service.

This expense should be included in the annual operating budget for the water company.

Frequency: Refer to roof warranty for frequency

**Lighting: Exterior & Common Area Interior – Inspection/Maintenance** 

### Note: Replacement of flickering or burned-out bulbs or lamps should be immediate.

Lighting is a crucial element in the provision of safety and security. All lighting systems should be inspected frequently and care must be taken to identify and correct deficiencies.

Various fixture and lamp types may be used according to area needs. Lighting systems should be designed to provide maximum, appropriate illumination at minimal energy expenditures. Lighting maintenance processes should include a general awareness of factors that cause malfunctions in lighting systems, such as dirt accumulation and lumen depreciation. It is important to fully wash, rather than drywipe, exterior surfaces to reclaim light and prevent further deterioration.

Deficiencies, required maintenance, and required repairs after completion of the review should be noted by the maintenance contractor and/or water company representatives.

Repairs and inspections should be completed by a qualified professional.

This expense should be included in the annual operating budget for the water company as general property maintenance expense.

Frequency: Bi-Weekly

This maintenance plan is designed to preserve and extend the useful life of assets and is dependent upon proper inspection and follow up procedures.

# PONDEROSA PINES WATER COMPANY RESERVE STUDY UPATE LEVEL III: UPDATE WITH NO VISUAL SITE INSPECTION 2015

# Ponderosa Pines Water Company Category Detail Index

Asset I	DDescription	Replacement	Page
Roofin			
1004	Well 2 Building Roofing - Replacement	2029	25 of 45
Siding 1003	Wall 2 Dwilding Danging	2022	26 of 45
1003	Well 2 Building - Repairs	2022	20 01 43
Paintin 1002	well 2 Building - Painting	2015	27 of 45
	ç c	2013	27 01 43
	ng Components	• • • • • • • • • • • • • • • • • • • •	20 247
1016	Well 1 Building - Repairs	2020	28 of 45
1021	Well 1 Space Heaters - Replacement	2020	28 of 45
Fencin	g/Security		
1014	Well 2 Chain Link Fence - Replacement	2020	29 of 45
Equipr	nent		
1015	Well 1 Pump - Replacement	2020	30 of 45
1010	Well 2 Back-up Generator - Replacement	2030	30 of 45
1007	Well 2 Booster Pump 1 - Replacement	2015	30 of 45
1008	Well 2 Booster Pump 2 - Replacement	2015	31 of 45
1009	Well 2 Booster Pump 3 - Replacement	2025	31 of 45
1013	Well 2 Electrical System	2020	32 of 45
1011	Well 2 Space Heaters - Replacement	2020	32 of 45
1006	Well 2 Water Pump 1 - Replacement	2020	33 of 45
1005	Well 2 Water Tank - Replacement	2057	33 of 45
Groun	ds Components		
1027	Fire Hydrant - Addition	2015	34 of 45
1018	New Well - Drilling & Installation	2015	34 of 45
1028	Sampling Station - Addition	2015	34 of 45
1023	Water Piping System: 1st Addition - Replacement	2050	35 of 45
1024	Water Piping System: 2nd Addition - Replacement	2053	36 of 45
1025	Water Piping System: 3rd Addition - Replacement	2057	37 of 45
1026	Water Piping System: 4th Addition - Replacement	2058	38 of 45
1001	Water Piping System: Original Development - Repl	2050	39 of 45

# Ponderosa Pines Water Company Category Detail Index

Asset IDDescription		Replacement	Page
Inspect	ions Water Testing	2019	40 of 45
Conting	gency		
1019	Insurance - Deductible	2015	41 of 45
1020	Master Plan - Update	2025	41 of 45
	Total Funded Assets	26	
	Total Unfunded Assets	_0	
	Total Assets	26	

### Ponderosa Pines Water Company Property Description

Ponderosa Pines Water Company consists of 2 outbuildings, one holding the water master's office, and pumps and related equipment; and the other housing pumps and related equipment, and is located near La Pine, Oregon. One building is wood with a metal roof; the other is a metal building. The water company shall maintain the buildings, equipment and piping of the water system.

This study uses information supplied by the water company, and various construction pricing and scheduling manuals to determine useful lives and replacement costs.

A site visit was performed by Schwindt & Company in 2013. Schwindt & Co did not investigate components for defects, materials, design or workmanship. This would ordinarily be considered in a complete building envelope inspection. Our condition assessment considers if the component is wearing as intended. All components are considered to be in fair condition and appear to be wearing as intended unless noted otherwise in the component detail.

Funds are being accumulated in the replacement fund based on estimates of future need for repairs and replacement of common property components. Actual expenditures, investment income, and provisions for income taxes however, may vary from estimated amounts, and variations may be material. Therefore, amounts accumulated in the replacement fund may not be adequate to meet future funding needs.

If additional funds are needed, the water company has the right, subject to Board approval, to increase regular assessments, levy special assessments, otherwise the water company may delay repairs or replacements until funds are available.

### **Ponderosa Pines Water Company**

La Pine, Oregon

### Cash Flow Method - Threshold Funding Model Summary

Report Date	March 24, 2015
Account Number	2ppwat
<b>Budget Year Beginning</b>	January 01, 2015
<b>Budget Year Ending</b>	<b>December 31, 2015</b>
<b>Total Units</b>	490

Report Parameters						
Inflation	2.50%					
<b>Interest Rate on Reserve Deposit</b>	0.10%					
2015 Beginning Balance	\$237,365.00					

# Threshold Funding Fully Reserved Model Summary

- This study utilizes the cash flow method and the threshold funding model, which establishes a reserve funding goal that keeps the reserve balance above a specified dollar or percent funded amount. The threshold method assumes that the threshold method is funded with a positive threshold balance, therefore, "fully reserved".
- The following items were not included in the analysis because they have useful lives greater than 30 years: grading/drainage; foundation/footings; storm drains; telephone, cable, and internet lines.
- This funding scenario begins with a contribution of \$61,250 in 2015, \$53,900 in 2016 to 2024, and \$36,750 each year for the remaining years of the study. A minimum balance of -\$12,452,886 is maintained.
- The reserve study cash flow model includes negative balance. If this funding scenario is chosen a special assessment will be needed.
- The purpose of this study is to insure that adequate replacement funds are available when components reach the end of their useful life. Components will be replaced as required, not necessarily in their expected replacement year. This analysis should be updated annually.

### Cash Flow Method - Threshold Funding Model Summary of Calculations

**Required Month Contribution** \$10.42 per unit monthly **Average Net Month Interest Earned Total Month Allocation to Reserves** \$10.43 per unit monthly

\$5,104.17

\$4.14

\$5,108.31

# Ponderosa Pines Water Company Cash Flow Method - Threshold Funding Model Projection

Beginning Balance: \$237,365

· ·	ŕ			Projected
	Annual	Annual	Annual	Ending
Year	Contribution	Interest	Expenditure	s Reserves
2015	61,250	50	220,892	77,772
2016	53,900	107		131,779
2017	53,900	161		185,840
2018	53,900	215		239,955
2019	53,900	264	5,091	289,028
2020	53,900	184	134,175	208,937
2021	53,900	238		263,076
2022	53,900	275	16,985	300,267
2023	53,900	330		354,496
2024	53,900	378	5,760	403,014
2025	36,750	397	26,242	413,919
2026	36,750	434		451,103
2027	36,750	471		488,324
2028	36,750	508		525,583
2029	36,750	511	34,300	528,544
2030	36,750	430	118,760	446,964
2031	36,750	467		484,181
2032	36,750	504		521,435
2033	36,750	542		558,727
2034	36,750	572	7,374	588,674
2035	36,750	556	52,559	573,422
2036	36,750	570	23,999	586,743
2037	36,750	607		624,100
2038	36,750	644		661,494
2039	36,750	673	8,343	690,575
2040	36,750	549	162,220	565,653
2041	36,750	586		602,989
2042	36,750	623		640,362
2043	36,750	657	3,479	674,290
2044	36,750	685	9,439	702,286
2045	36,750	670	52,964	686,742
2046	36,750	707		724,199
2047	36,750	744		761,694
2048	36,750	782		799,226
2049	36,750	809	10,679	826,105
2050	36,750		4,216,055	-3,353,200
2051	36,750			-3,316,450

# Ponderosa Pines Water Company Cash Flow Method - Threshold Funding Model Projection

Beginning Balance: \$237,365

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves
2052	36,750		<b>-</b> ,	3,279,700
2053	36,750		2,508,965 -:	5,751,914
2054	36,750		12,083 -:	5,727,247
2055	36,750		247,697 -:	5,938,194
2056	36,750		-;	5,901,444
2057	36,750		2,333,901 -	8,198,595
2058	36,750		4,070,624 -12	2,232,469
2059	36,750		13,671 -12	2,209,390
2060	36,750		280,247 -12	2,452,886
2061	36,750		-12	2,416,136
2062	36,750		-12	2,379,386
2063	36,750		-12	2,342,636
2064	36,750		63,380 -12	2,369,267

# Ponderosa Pines Water Company Component Summary By Category

		4	dent.		en'i	·1000		
Description	00 80 rd	ş ç	ين پهني کې	rai kiji	A Support			CHE COST
Roofing Well 2 Building Roofing - Replacement Roofing - Total	1979	2029	50	0	14	3,500 SF	5.12	17,920 \$17,920
Siding Well 2 Building - Repairs Siding - Total	1993	2022	14	15	7	2,040 SF	6.15	12,546 \$12,546
Painting Well 2 Building - Painting Painting - Total	2015	2015	7	0	0	1 Total	1,742.50	1,742 \$1,742
Building Components Well 1 Building - Repairs Well 1 Space Heaters - Replacement Building Components - Total	1970 2005	2020 2020	50 15	0	5 5	1 Total 1 Total	5,125.00 1,025.00	5,125 1,025 \$6,150
Fencing/Security Well 2 Chain Link Fence - Replacement Fencing/Security - Total	1970	2020	50	0	5	540 LF	26.65	14,391 \$14,391
Equipment  Well 2 Booster Pump 1 - Replacement Well 2 Booster Pump 2 - Replacement Well 1 Pump - Replacement Well 2 Electrical System Well 2 Space Heaters - Replacement Well 2 Water Pump 1 - Replacement Well 2 Booster Pump 3 - Replacement Well 2 Back-up Generator - Replacement Well 2 Water Tank - Replacement Equipment - Total	1994 1994 2005 2000 2005 2005 2010 2005 1997	2015 2015 2020 2020 2020 2020 2025 2030 2057	15 15 15 20 15 15 15 25 60	0 0 0 0 0 0 0 0	0 0 5 5 5 5 10 15 42	1 Total 1 Total 1 Total 1 Total 2 Each 1 Total 1 Total 1 Total 1 Total 1 Total	5,125.00 5,125.00 7,000.00 82,000.00 1,025.00 7,000.00 5,500.00 71,750.00 194,750.00	5,125 5,125 7,000 82,000 2,050 7,000 5,500 71,750 194,750 \$380,300
Grounds Components  Fire Hydrant - Addition New Well - Drilling & Installation Sampling Station - Addition Water Piping System: 1st Addition - Repla Water Piping System: Original Developme Water Piping System: 2nd Addition - Repla Water Piping System: 3rd Addition - Repla Water Piping System: 4th Addition - Repla Grounds Components - Total	2015 2015 2015 1970 1970 1973 1977 1978	2015 2015 2015 2050 2050 2053 2057 2058	1 1 80 80 80 80 80	0 0 0 0 0 0 0	0 0 0 35 35 38 42 43	3 Each 1 Total 4 Each 1 Total 1 Total 1 Total 1 Total 1 Total 1 Total	3,500.00 170,000.00 850.00 705,840.00 1,039,320.00 981,720.00 630,840.00 1,407,780.00	10,500 170,000 3,400 705,840 1,039,320 981,720 630,840 1,407,780 \$4,949,400

# Ponderosa Pines Water Company Component Summary By Category

	_	a. d	degr		nent inc	0		<b>x</b> .
Description	4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	is dela	in Je	ji di	Stack airing	Jääs	عَقَ رَفِّ اللَّهِ مِنْ اللَّهِ	Carcar
Inspections								
Water Testing Inspections - Total	2013	2019	5	1	4	1 Total	4,612.50	4,612 \$4,612
Contingency								
Insurance - Deductible	2014	2015	1	0	0	1 Total	25,000.00	25,000
Master Plan - Update Contingency - Total	2014	2025	10	1	10	1 Total	15,000.00	$\frac{15,000}{\$40,000}$
Total Asset Summary								\$5,427,062

# Ponderosa Pines Water Company Component Summary By Group

			agail.		egit.	20		
Description	00 SELL 18 . 15		9 18 58	id ki	A Sugar	Jijis 1	ŢĬĬŢĢŠ	CHI COST
Capital								
Fire Hydrant - Addition	2015	2015	1	0	0	3 Each	3,500.00	10,500
New Well - Drilling & Installation	2015	2015	1	0	0	1 Total	170,000.00	170,000
Sampling Station - Addition	2015	2015	1	0	0	4 Each	850.00	3,400
Water Piping System: 1st Addition - Repla	1970	2050	80	0	35	1 Total	705,840.00	705,840
Water Piping System: 2nd Addition - Repl	1973	2053	80	0	38	1 Total	981,720.00	981,720
Water Piping System: 3rd Addition - Repla	1977	2057	80	0	42	1 Total	630,840.00	630,840
Water Piping System: 4th Addition - Repla	1978	2058	80	0	43	1 Total	1,407,780.00	1,407,780
Water Piping System: Original Developme	1970	2050	80	0	35	1 Total	1,039,320.00	1,039,320
Well 1 Pump - Replacement	2005	2020	15	0	5	1 Total	7,000.00	7,000
Well 2 Back-up Generator - Replacement	2005	2030	25	0	15	1 Total	71,750.00	71,750
Well 2 Booster Pump 1 - Replacement	1994	2015	15	0	0	1 Total	5,125.00	5,125
Well 2 Booster Pump 2 - Replacement	1994	2015	15	0	0	1 Total	5,125.00	5,125
Well 2 Booster Pump 3 - Replacement	2010	2025	15	0	10	1 Total	5,500.00	5,500
Well 2 Building Roofing - Replacement	1979	2029	50	0	14	3,500 SF	5.12	17,920
Well 2 Chain Link Fence - Replacement	1970	2020	50	0	5	540 LF	26.65	14,391
Well 2 Electrical System	2000	2020	20	0	5	1 Total	82,000.00	82,000
Well 2 Space Heaters - Replacement	2005	2020	15	0	5	2 Each	1,025.00	2,050
Well 2 Water Pump 1 - Replacement	2005	2020	15	0	5	1 Total	7,000.00	7,000
Well 2 Water Tank - Replacement	1997	2057	60	0	42	1 Total	194,750.00	194,750
Capital - Total								\$5,362,011
Non-Capital								
Insurance - Deductible	2014	2015	1	0	0	1 Total	25,000.00	25,000
Master Plan - Update	2014	2025	10	1	10	1 Total	15,000.00	15,000
Water Testing	2013	2019	5	1	4	1 Total	4,612.50	4,612
Well 1 Building - Repairs	1970	2020	50	0	5	1 Total	5,125.00	5,125
Well 1 Space Heaters - Replacement	2005	2020	15	0	5	1 Total	1,025.00	1,025
Well 2 Building - Painting	2015	2015	7	0	0	1 Total	1,742.50	1,742
Well 2 Building - Repairs	1993	2022	14	15	7	2,040 SF	6.15	12,546
Non-Capital - Total	1,,,,			10	,	_,0.0.01	0.10	\$65,051
1								
Total Asset Summary								\$5,427,062

Description	Expenditures
Replacement Year 2015	
Fire Hydrant - Addition - 1 of 1X	10,500
Insurance - Deductible - 1 of 1X	25,000
New Well - Drilling & Installation - 1 of 1X	170,000
Sampling Station - Addition - 1 of 1X	3,400
Well 2 Booster Pump 1 - Replacement	5,125
Well 2 Booster Pump 2 - Replacement	5,125
Well 2 Building - Painting	1,742
Total for 2015	\$220,892
No Replacement in 2016	
No Replacement in 2017	
No Replacement in 2018	
Replacement Year 2019	
Water Testing	5,091
C .	
Total for 2019	\$5,091
Replacement Year 2020	
Well 1 Building - Repairs	5,798
Well 1 Pump - Replacement	7,920
Well 1 Space Heaters - Replacement	1,160
Well 2 Chain Link Fence - Replacement	16,282
Well 2 Electrical System	92,775
Well 2 Space Heaters - Replacement	2,319
Well 2 Water Pump 1 - Replacement	7,920
Total for 2020	<del>\$134,175</del>
10tai 101 2020	Ф134,173
No Replacement in 2021	
Replacement Year 2022	
Well 2 Building - Painting	2,071
Well 2 Building - Repairs	14,913
Total for 2022	\$16,985
No Replacement in 2023	
Replacement Year 2024	
Water Testing	5,760

Description	Expenditures
Replacement Year 2025	
Master Plan - Update	19,201
Well 2 Booster Pump 3 - Replacement	7,040
Total for 2025	<b>\$26,242</b>
No Replacement in 2026	
No Replacement in 2027	
No Replacement in 2028	
Replacement Year 2029	
Water Testing	6,517
Well 2 Building - Painting	2,462
Well 2 Building Roofing - Replacement	25,320
Total for 2029	<b>\$34,300</b>
Replacement Year 2030	
Well 2 Back-up Generator - Replacement	103,915
Well 2 Booster Pump 1 - Replacement	7,423
Well 2 Booster Pump 2 - Replacement	7,423
Total for 2030	<b>\$118,760</b>
No Replacement in 2031	
No Replacement in 2032	
No Replacement in 2033	
Replacement Year 2034	
Water Testing	7,374
Total for 2034	<del>\$7,374</del>
Replacement Year 2035	
Master Plan - Update	24,579
Well 1 Pump - Replacement	11,470
Well 1 Space Heaters - Replacement	1,680
Well 2 Space Heaters - Replacement	3,359
Well 2 Water Pump 1 - Replacement	11,470
Total for 2035	<b>\$52,559</b>

Description	Expenditures
Replacement Year 2036 Well 2 Building - Painting Well 2 Building - Repairs  Total for 2036	2,927 21,072 <b>\$23,999</b>
No Replacement in 2037 No Replacement in 2038	
Replacement Year 2039 Water Testing Total for 2039	8,343 <b>\$8,343</b>
Replacement Year 2040 Well 2 Booster Pump 3 - Replacement Well 2 Electrical System Total for 2040	$   \begin{array}{r}     10,197 \\     \hline     152,023 \\     \hline     $162,220   \end{array} $
No Replacement in 2041 No Replacement in 2042	
Replacement Year 2043 Well 2 Building - Painting Total for 2043	3,479 <b>\$3,479</b>
Replacement Year 2044 Water Testing Total for 2044	9,439 <b>\$9,439</b>
Replacement Year 2045  Master Plan - Update  Well 2 Booster Pump 1 - Replacement  Well 2 Booster Pump 2 - Replacement  Total for 2045	31,464 10,750 10,750 <b>\$52,964</b>
No Replacement in 2046 No Replacement in 2047	

Description	Expenditures
No Replacement in 2048	
Replacement Year 2049	
Water Testing	10,679
Total for 2049	\$10,679
Replacement Year 2050	
Water Piping System: 1st Addition - Replacement	1,675,103
Water Piping System: Original Development - Replacement	2,466,520
Well 1 Pump - Replacement	16,612
Well 1 Space Heaters - Replacement	2,433
Well 2 Building - Painting	4,135
Well 2 Building - Repairs	29,774
Well 2 Space Heaters - Replacement	4,865
Well 2 Water Pump 1 - Replacement	16,612
Total for 2050	\$4,216,055
No Replacement in 2051	
No Replacement in 2052	
Replacement Year 2053	
Water Piping System: 2nd Addition - Replacement	2,508,965
Total for 2053	\$2,508,965
Replacement Year 2054	
Water Testing	12,083
Total for 2054	<b>\$12,083</b>
Replacement Year 2055	
Master Plan - Update	40,276
Well 2 Back-up Generator - Replacement	192,653
Well 2 Booster Pump 3 - Replacement	14,768
Total for 2055	\$247,697
AUMA AUA MUUU	Ψ <b>=</b> 11,9071
No Replacement in 2056	
Replacement Year 2057	
Water Piping System: 3rd Addition - Replacement	1,779,597

Description	Expenditures
Replacement Year 2057 continued	
Well 2 Building - Painting	4,916
Well 2 Water Tank - Replacement	549,389
Total for 2057	\$2,333,901
Replacement Year 2058	
Water Piping System: 4th Addition - Replacement	4,070,624
Total for 2058	\$4,070,624
Replacement Year 2059	
Water Testing	13,671
Total for 2059	<del>\$13,671</del>
Replacement Year 2060	
Well 2 Booster Pump 1 - Replacement	15,569
Well 2 Booster Pump 2 - Replacement	15,569
Well 2 Electrical System	249,108
Total for 2060	\$280,247
No Replacement in 2061	
No Replacement in 2062	
No Replacement in 2063	
Replacement Year 2064	
Water Testing	15,467
Well 2 Building - Painting	5,843
Well 2 Building - Repairs	42,070
Total for 2064	\$63,380

Well 2 Building Roofing	g - Replacement	3,500 SF	@ \$5.12
Asset ID	1004	Asset Cost	\$17,920.00
	Capital	Percent Replacement	100%
	Roofing	Future Cost	\$25,320.49
Placed in Service	January 1979		
Useful Life	50		
Replacement Year	2029		
Remaining Life	14		

This component funds for the replacement of the metal roof on the Well 2 building.

Schwindt and Company estimated 3,500 square feet of roofing.

The cost and useful life assumptions are based on accepted industry estimates as established by RS Means and/or The National Construction Estimator.

The water company should obtain a bid to confirm this cost.

**Roofing - Total Current Cost** 

\$17,920

Well 2 Building - Repair	rs	2,040 SF	@ \$6.15
Asset ID	1003	Asset Cost	\$12,546.00
	Non-Capital	Percent Replacement	100%
	Siding	Future Cost	\$14,913.25
Placed in Service	January 1993		
Useful Life	14		
Adjustment	15		
Replacement Year	2022		
Remaining Life	7		

This component funds for repairs to the Well 2 building.

Schwindt and Company estimated 2,040 square feet of siding.

The cost and useful life assumptions are based on accepted industry estimates as established by RS Means and/or The National Construction Estimator.

The water company should obtain a bid to confirm this cost.

Siding - Total Current Cost \$12,546

Well 2 Building - Paintin	g	1 Total	@ \$1,742.50
Asset ID	1002	Asset Cost	\$1,742.50
	Non-Capital	Percent Replacement	100%
	Painting	Future Cost	\$1,742.50
Placed in Service	January 2015		
Useful Life	7		
Replacement Year	2015		
Remaining Life	0		

This component funds for painting the Well 2 building.

Schwindt and Company estimated 2,040 square feet of siding.

The cost and useful life assumptions are based on accepted industry estimates as established by RS Means and/or The National Construction Estimator.

The water company should obtain a bid to confirm this cost.

Painting - Total Current Cost \$1,742

Well 1 Building - Ro	epairs	1 Total	@ \$5,125.00
Asset ID	1016	Asset Cost	\$5,125.00
	Non-Capital	Percent Replacement	100%
	<b>Building Components</b>	Future Cost	\$5,798.47
Placed in Service	January 1970		
Useful Life	50		
Replacement Year	2020		
Remaining Life	5		

This component funds for repairs to the metal shed at Well 1.

The cost and useful life assumptions are based on accepted industry estimates as established by RS Means and/or The National Construction Estimator.

This component is an estimate. If the actual cost of this component is determined to be different from this estimate, the reserve study should be updated to reflect the actual cost.

Well 1 Space Heater	rs - Replacement	1 Total	@ \$1,025.00
Asset ID	1021	Asset Cost	\$1,025.00
	Non-Capital	Percent Replacement	100%
	<b>Building Components</b>	Future Cost	\$1,159.69
Placed in Service	January 2005		
Useful Life	15		
Replacement Year	2020		
Remaining Life	5		

This component funds for replacement of the space heaters at Well 1.

The cost and useful life assumptions are based on accepted industry estimates as established by RS Means and/or The National Construction Estimator.

This component is an estimate. If the actual cost of this component is determined to be different from this estimate, the reserve study should be updated to reflect the actual cost.

Building Components - Total Current Cost \$6,150

Well 2 Chain Link Fer	ce - Replacement	540 LF	@ \$26.65
Asset ID	1014	Asset Cost	\$14,391.00
	Capital	Percent Replacement	100%
	Fencing/Security	Future Cost	\$16,282.10
Placed in Service	January 1970		
Useful Life	50		
Replacement Year	2020		
Remaining Life	5		

This component funds for the replacement of the chain link fence at Well 2.

Schwindt and Company estimated 540 linear feet of fencing.

The cost and useful life assumptions are based on accepted industry estimates as established by RS Means and/or The National Construction Estimator.

Note: This is a provision for an anticipated expense. Should the water company find that the cost of this item is greater than or less than the amount provided for herein, this study should be updated to reflect the actual component cost.

Fencing/Security - Total Current Cost \$14,391

Well 1 Pump - Replace	ement	1 Total	@ \$7,000.00
Asset ID	1015	Asset Cost	\$7,000.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$7,919.86
Placed in Service	January 2005		
Useful Life	15		
Replacement Year	2020		
Remaining Life	5		

This component funds for the replacement of the pump at Well 1.

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

# Well 2 Back-up Generator - Replacement

		l Total	(a) \$71,750.00
Asset ID	1010	Asset Cost	\$71,750.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$103,915.39
Placed in Service	January 2005		
Useful Life	25		
Replacement Year	2030		
Remaining Life	15		

This component funds for the replacement of the back-up generator at Well 2.

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

Well 2 Booster Pump 1	- Replacement	1 Total	@ \$5,125.00
Asset ID	1007	Asset Cost	\$5,125.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$5,125.00
Placed in Service	January 1994		
Useful Life	15		
Replacement Year	2015		
Remaining Life	0		

This component funds for the replacement of well 2 (15 hp) pump 1.

Well 2 Booster Pump 1 - Replacement continued...

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

Well 2 Booster Pump 2	- Replacement	1 Total	@ \$5,125.00
Asset ID	1008	Asset Cost	\$5,125.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$5,125.00
Placed in Service	January 1994		
Useful Life	15		
Replacement Year	2015		
Remaining Life	0		

This component funds for the replacement of well 2 (15 hp) pump 2.

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

Well 2 Booster Pump 3	- Replacement	1 Total	@ \$5,500.00
Asset ID	1009	Asset Cost	\$5,500.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$7,040.46
Placed in Service	January 2010		
Useful Life	15		
Replacement Year	2025		
Remaining Life	10		

This component funds for the replacement of booster pump 3 at Well 2.

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

	1 Total	@ \$82,000.00
1013	Asset Cost	\$82,000.00
Capital	Percent Replacement	100%
Equipment	Future Cost	\$92,775.47
January 2000		
20		
2020		
5		
	Capital Equipment January 2000 20	1013 Asset Cost Capital Percent Replacement Equipment January 2000 20

This component funds for the replacement of the electrical system at Well 2.

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

Note: This is a provision for an anticipated expense. Should the water company find that the cost of this item is greater than or less than the amount provided for herein, this study should be updated to reflect the actual component cost.

Well 2 Space Heaters - 1	Replacement	2 Each	@ \$1,025.00
Asset ID	1011	Asset Cost	\$2,050.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$2,319.39
Placed in Service	January 2005		
Useful Life	15		
Replacement Year	2020		
Remaining Life	5		

This component funds for the replacement of the space heaters in the Well 2 building.

Schwindt and Company estimated two space heaters.

The cost and useful life assumptions are based on accepted industry estimates as established by RS Means and/or The National Construction Estimator.

The water company should obtain a bid to confirm this cost.

Well 2 Water Pump 1	- Replacement	1 Total	@ \$7,000.00
Asset ID	1006	Asset Cost	\$7,000.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$7,919.86
Placed in Service	January 2005		
Useful Life	15		
Replacement Year	2020		
Remaining Life	5		

This component funds for the replacement of water pump 1 at Well 2.

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

Well 2 Water Tank - R	eplacement	1 Total	@ \$194,750.00
Asset ID	1005	Asset Cost	\$194,750.00
	Capital	Percent Replacement	100%
	Equipment	Future Cost	\$549,388.81
Placed in Service	January 1997		
Useful Life	60		
Replacement Year	2057		
Remaining Life	42		

This component funds for the replacement of the water tank for Well 2.

The cost and useful life assumptions are based on a similar water company.

The water company should obtain a bid to confirm this cost.

Note: This is a provision for an anticipated expense. Should the water company find that the cost of this item is greater than or less than the amount provided for herein, this study should be updated to reflect the actual component cost.

Equipment - Total Current Cost \$380,300

Fire Hydrant - Addit	tion	2 Each	@ \$2 500 00
1 11 0 11 ) 01 01110 1 1 1 0 011		3 Each	@ \$3,500.00
Asset ID	1027	Asset Cost	\$10,500.00
	Capital	Percent Replacement	100%
	<b>Grounds Components</b>	Future Cost	\$10,500.00
Placed in Service	January 2015		
Useful Life	1		
Replacement Year	2015		
Remaining Life	0		

This provision funds for the addition of 8 fire hydrants each year for 3 years as recommended by the 2014 Master Plan completed by Century West Engineering.

The cost and useful life are based on information from Century West Engineering.

New Well - Drilling	& Installation	1 Total	@ \$170,000.00
Asset ID	1018	Asset Cost	\$170,000.00
	Capital	Percent Replacement	100%
	<b>Grounds Components</b>	Future Cost	\$170,000.00
Placed in Service	January 2015		
Useful Life	1		
Replacement Year	2015		
Remaining Life	0		

This component funds for drilling a new well and installing the necessary equipment.

The cost and useful life estimates are per the Master Plan by Century West Engineering.

Sampling Station - A	Addition	4 Each	@ \$850.00
Asset ID	1028	Asset Cost	\$3,400.00
	Capital	Percent Replacement	100%
	Grounds Components	Future Cost	\$3,400.00
Placed in Service	January 2015		
Useful Life	1		
Replacement Year	2015		
Remaining Life	0		

This provision funds for the addition of 4 testing station as recommended by the 2014 Master Plan completed by Century West Engineering.

The cost and useful life are based on information from Century West Engineering.

Water Piping System: 1st Addition - Replacement

		l Total	(a) \$705,840.00
Asset ID	1023	Asset Cost	\$705,840.00
	Capital	Percent Replacement	100%
	<b>Grounds Components</b>	Future Cost	\$1,675,103.15
Placed in Service	January 1970		
Useful Life	80		
Replacement Year	2050		
Remaining Life	35		

This component funds for phased replacement of the water piping system.

There is an estimated 20 miles of water piping according to Century West Engineering.

Based on the updated Master Plan completed in 2014, the estimated useful life of the PVC pipes is 80 years.

Bill Beckett did mention several items to check which could indicate leaks.

At night when demand for water is low, check to see if you are still pumping out a lot of water.

Also walk the property and check to see if there is water coming up from the ground.

The water company may want to consider laying the water pipes off the road so future work will not damage the road systems. This may also allow piping to be installed with minimal disruption of water service to units.

The cost and useful life estimates are per the Master Plan by Century West Engineering.

The water company should obtain a bid to confirm this cost.

# Water Piping System: 2nd Addition - Replacement

		1 Total	@ \$981,720.00
Asset ID	1024	Asset Cost	\$981,720.00
	Capital	Percent Replacement	100%
	<b>Grounds Components</b>	Future Cost	\$2,508,964.54
Placed in Service	January 1973		
Useful Life	80		
Replacement Year	2053		
Remaining Life	38		

This component funds for phased replacement of the water piping system.

There is an estimated 20 miles of water piping according to Century West Engineering.

Based on the updated Master Plan completed in 2014, the estimated useful life of the PVC pipes is 80 years.

Bill Beckett did mention several items to check which could indicate leaks.

At night when demand for water is low, check to see if you are still pumping out a lot of water.

Also walk the property and check to see if there is water coming up from the ground.

The water company may want to consider laying the water pipes off the road so future work will not damage the road systems. This may also allow piping to be installed with minimal disruption of water service to units.

The cost and useful life estimates are per the Master Plan by Century West Engineering.

The water company should obtain a bid to confirm this cost.

# Water Piping System: 3rd Addition - Replacement

	1 Total	@ \$630,840.00
1025	Asset Cost	\$630,840.00
Capital	Percent Replacement	100%
<b>Grounds Components</b>	Future Cost	\$1,779,596.61
January 1977		
80		
2057		
42		
	Capital Grounds Components January 1977 80 2057	1025 Asset Cost Capital Percent Replacement Grounds Components January 1977 80 2057

This component funds for phased replacement of the water piping system.

There is an estimated 20 miles of water piping according to Century West Engineering.

Based on the updated Master Plan completed in 2014, the estimated useful life of the PVC pipes is 80 years.

Bill Beckett did mention several items to check which could indicate leaks.

At night when demand for water is low, check to see if you are still pumping out a lot of water.

Also walk the property and check to see if there is water coming up from the ground.

The water company may want to consider laying the water pipes off the road so future work will not damage the road systems. This may also allow piping to be installed with minimal disruption of water service to units.

The cost and useful life estimates are per the Master Plan by Century West Engineering.

The water company should obtain a bid to confirm this cost.

# Water Piping System: 4th Addition - Replacement

		1 Total @	\$1,407,780.00
Asset ID	1026	Asset Cost	\$1,407,780.00
	Capital	Percent Replacement	100%
	<b>Grounds Components</b>	Future Cost	\$4,070,624.13
Placed in Service	January 1978		
Useful Life	80		
Replacement Year	2058		
Remaining Life	43		

This component funds for phased replacement of the water piping system.

There is an estimated 20 miles of water piping according to Century West Engineering.

Based on the updated Master Plan completed in 2014, the estimated useful life of the PVC pipes is 80 years.

Bill Beckett did mention several items to check which could indicate leaks.

At night when demand for water is low, check to see if you are still pumping out a lot of water.

Also walk the property and check to see if there is water coming up from the ground.

The water company may want to consider laying the water pipes off the road so future work will not damage the road systems. This may also allow piping to be installed with minimal disruption of water service to units.

The cost and useful life estimates are per the Master Plan by Century West Engineering.

The water company should obtain a bid to confirm this cost.

# Water Piping System: Original Development - Replacement

		1 Total (	@ \$1,039,320.00
Asset ID	1001	Asset Cost	\$1,039,320.00
	Capital	Percent Replacement	100%
	<b>Grounds Components</b>	Future Cost	\$2,466,519.61
Placed in Service	January 1970		
Useful Life	80		
Replacement Year	2050		
Remaining Life	35		

This component funds for phased replacement of the water piping system.

There is an estimated 20 miles of water piping according to Century West Engineering.

Based on the updated Master Plan completed in 2014, the estimated useful life of the PVC pipes is 80 years.

Bill Beckett did mention several items to check which could indicate leaks.

At night when demand for water is low, check to see if you are still pumping out a lot of water.

Also walk the property and check to see if there is water coming up from the ground.

The water company may want to consider laying the water pipes off the road so future work will not damage the road systems. This may also allow piping to be installed with minimal disruption of water service to units.

The cost and useful life estimates are per the Master Plan by Century West Engineering.

The water company should obtain a bid to confirm this cost.

Note: This is a provision for an anticipated expense. Should the water company find that the cost of this item is greater than or less than the amount provided for herein, this study should be updated to reflect the actual component cost.

Grounds Components - Total Current Cost \$4,949,400

Water Testing		1 Total	@ \$4,612.50
Asset ID	1022	Asset Cost	\$4,612.50
	Non-Capital	Percent Replacement	100%
	Inspections	Future Cost	\$5,091.34
Placed in Service	January 2013		
Useful Life	5		
Adjustment	1		
Replacement Year	2019		
Remaining Life	4		

This provision is for the water testing that is required every 5 years.

The cost and useful life are based on information from the water company.

**Inspections - Total Current Cost** 

\$4,612

1	[ L			
Į	Insurance - Deductible		1 Total	@ \$25,000.00
	Asset ID	1019	Asset Cost	\$25,000.00
		Non-Capital	Percent Replacement	100%
		Contingency	Future Cost	\$25,000.00
	Placed in Service	January 2014		
	Useful Life	1		
	Replacement Year	2015		
	Remaining Life	0		

This component is for the insurance deductible in the event a claim is made.

The cost is per the water company.

Master Plan - Update		1 Total	@ \$15,000.00
Asset ID	1020	Asset Cost	\$15,000.00
	Non-Capital	Percent Replacement	100%
	Contingency	Future Cost	\$19,201.27
Placed in Service	January 2014		
Useful Life	10		
Adjustment	1		
Replacement Year	2025		
Remaining Life	10		

This component funds for the updating of the Water Master Plan.

The cost and useful life are based on an estimate by Century West Engineering.

Contingency - Total Current Cost \$40,000

# Additional Disclosures

# Levels of Service

The following three categories describe the various types of Reserve Studies from exhaustive to minimal.

- **I. Full:** A Reserve Study in which the following five Reserve Study tasks are performed:
  - Component Inventory
  - Condition Assessment (based upon on-site visual observations)
  - Life and Valuation Estimates
  - Fund Status
  - Funding Plan
- **II. Update, With Site Visit/On-Site Review:** A Reserve Study update in which the following five Reserve Study tasks are performed:
  - Component Inventory (verification only, not quantification)
  - Condition Assessment (based on on-site visual observations)
  - Life and Valuation Estimates
  - Fund Status
  - Funding Plan
- **III. Update, No Site Visit/Off Site Review:** A Reserve Study update with no on-site visual observations in which the following three Reserve Study tasks are performed:
  - Life and Valuation Estimates
  - Fund Status
  - Funding Plan

### Terms and Definitions

CASH FLOW METHOD: A method of developing a reserve *Funding Plan* where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve *Funding Plans* are tested against the anticipated schedule of reserve expenses until the desired *Funding Goal* is achieved.

COMPONENT: The individual line items in the *Reserve Study* developed or updated in the *Physical Analysis*. These elements form the building blocks for the *Reserve Study*. *Components* typically are: 1) water company responsibility; 2) with limited *Useful Life* expectancies; 3) predictable *Remaining Useful Life* expectancies; 4) above a minimum threshold cost; and 5) as required by local codes.

COMPONENT INVENTORY: The task of selecting and quantifying reserve *Components*. This task can be accomplished through on-site visual observations, review of water company design and organizational documents, a review of established water company precedents, and discussion with appropriate water company representative(s) of the Water company or cooperative.

COMPONENT METHOD: A method of developing a reserve *Funding Plan* where the total contribution is based on the sum of contributions for individual *Components*. See *Cash Flow Method*.

CONDITION ASSESSMENT: The task of evaluating the current condition of the *Component* based on observed or reported characteristics.

CURRENT REPLACEMENT COST: See Replacement Cost.

DEFICIT: An actual or projected *Reserve Balance* that is less than the *Fully Funded Balance*. The opposite would be a *Surplus*.

EFFECTIVE AGE: The difference between *Useful Life* and *Remaining Useful Life*. Not always equivalent to chronological age since some *Components* age irregularly. Used primarily in computations.

FINANCIAL ANALYSIS: The portion of a *Reserve Study* where current status of the reserves (measured as cash or *Percent Funded*) and a recommended reserve contribution rate (reserve *Funding Plan*) are derived, and the projected reserve income and expense over time is presented. The *Financial Analysis* is one of the two parts of a *Reserve Study*.

FULLY FUNDED: 100% Funded. When the actual or projected *Reserve Balance* is equal to the *Fully Funded Balance*.

FULLY FUNDED BALANCE (FFB): Total accrued depreciation, an indicator against which actual or projected *Reserve Balance* can be compared. The *Reserve Balance* that is in direct proportion to the fraction of life "used up" of the current repair or *Replacement Cost*. This number is calculated for each *Component*, then added together for an water company total. Two formulas can be utilized, depending on the provider's sensitivity to interest and inflation effects. Note: Both yield identical results when interest and inflation are equivalent.

```
FFB = Current Cost X Effective Age / Useful Life

or

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

Useful Life) / (1 + Interest Rate) ^ Remaining Life] - [(Current Cost X Effective Age / Useful Life)
/ (1 + Inflation Rate) ^ Remaining Life]
```

FUND STATUS: The status of the reserve fund as compared to an established benchmark such as percent funding. The Water company appears to be adequately funded as the threshold method.

FUNDING GOALS: Independent of methodology utilized, the following represent the basic categories of *Funding Plan* goals:

- Baseline Funding: Establishing a reserve funding goal of keeping the reserve cash balance above zero.
- Full Funding: Setting a reserve funding goal of attaining and maintaining reserves at or near 100% funded.
- Statutory Funding: Establishing a reserve funding goal of setting aside the specific minimum amount of reserves required by local statues.

■ Threshold Funding: Establishing a reserve funding goal of keeping the *Reserve Balance* above a specified dollar or *Percent Funded* amount. Depending on the threshold, this may be more or less conservative than fully funding.

FUNDING PLAN: An water company's plan to provide income to a reserve fund to offset anticipated expenditures from that fund.

### **FUNDING PRINCIPLES:**

- Sufficient Funds When Required
- Stable Contribution Rate over the Years
- Evenly Distributed Contributions over the Years
- Fiscally Responsible

LIFE AND VALUATION ESTIMATES: The task of estimating *Useful Life*, *Remaining Useful Life*, and repair or *Replacement Costs* for the reserve *Components*.

PERCENT FUNDED: The ratio at a particular point of time (typically the beginning of the Fiscal Year) of the actual or projected *Reserve Balance* to the *Fully Funded Balance*, expressed as a percentage.

PHYSICAL ANALYSIS: The portion of the *Reserve Study* where the *Component Inventory*, *Condition Assessment*, and *Life and Valuation Estimate* tasks are performed. This represents one of the two parts of the *Reserve Study*.

REMAINING USEFUL LIFE (RUL): Also referred to as "Remaining Life" (RL). The estimated time, in years, that a reserve *Component* can be expected to continue to serve its intended function. Projects anticipated to occur in the initial year have "zero" *Remaining Useful Life*.

REPLACEMENT COST: The cost of replacing, repairing, or restoring a reserve *Component* to its original functional condition. The *Current Replacement Cost* would be the cost to replace, repair, or restore the *Component* during that particular year.

RESERVE BALANCE: Actual or projected funds as of a particular point in time that the Water company has identified for use to defray the future repair or replacement of those major *Components* which the Water company is obligated to maintain. Also known as reserves, reserve accounts, or cash reserves. Based upon information provided and not audited.

RESERVE PROVIDER: An individual that prepares Reserve Studies.

RESERVE STUDY: A budget planning tool which identifies the current status of the reserve fund and a stable and equitable *Funding Plan* to offset the anticipated future major common area expenditures. The *Reserve Study* consists of two parts: the *Physical Analysis* and the *Financial Analysis*.

RESPONSIBLE CHARGE: A reserve specialist in *Responsible Charge* of a *Reserve Study* shall render regular and effective supervision to those individuals performing services which directly and materially affect the quality and competence rendered by the reserve specialist. A reserve specialist shall maintain such records as are

reasonably necessary to establish that the reserve specialist exercised regular and effective supervision of a *Reserve Study* of which he was in *Responsible Charge*. A reserve specialist engaged in any of the following acts or practices shall be deemed not to have rendered the regular and effective supervision required herein:

- The regular and continuous absence from principal office premises from which professional services are rendered, except for performance of field work or presence in a field office maintained exclusively for a specific project;
- The failure to personally inspect or review the work of subordinates where necessary and appropriate;
- The rendering of a limited, cursory, or perfunctory review of plans or projects in lieu of an appropriate detailed review;
- The failure to personally be available on a reasonable basis or with adequate advance notice for consultation and inspection where circumstances require personal availability.

SPECIAL ASSESSMENT: An assessment levied on the members of an water company in addition to regular assessments. *Special Assessments* are often regulated by governing documents or local statutes.

SURPLUS: An actual or projected *Reserve Balance* greater than the *Fully Funded Balance*. The opposite would be a *Deficit*.

USEFUL LIFE (UL): Total *Useful Life* or depreciable life. The estimated time, in years, that a *Reserve Component* can be expected to serve its intended function if properly constructed in its present application or installation.