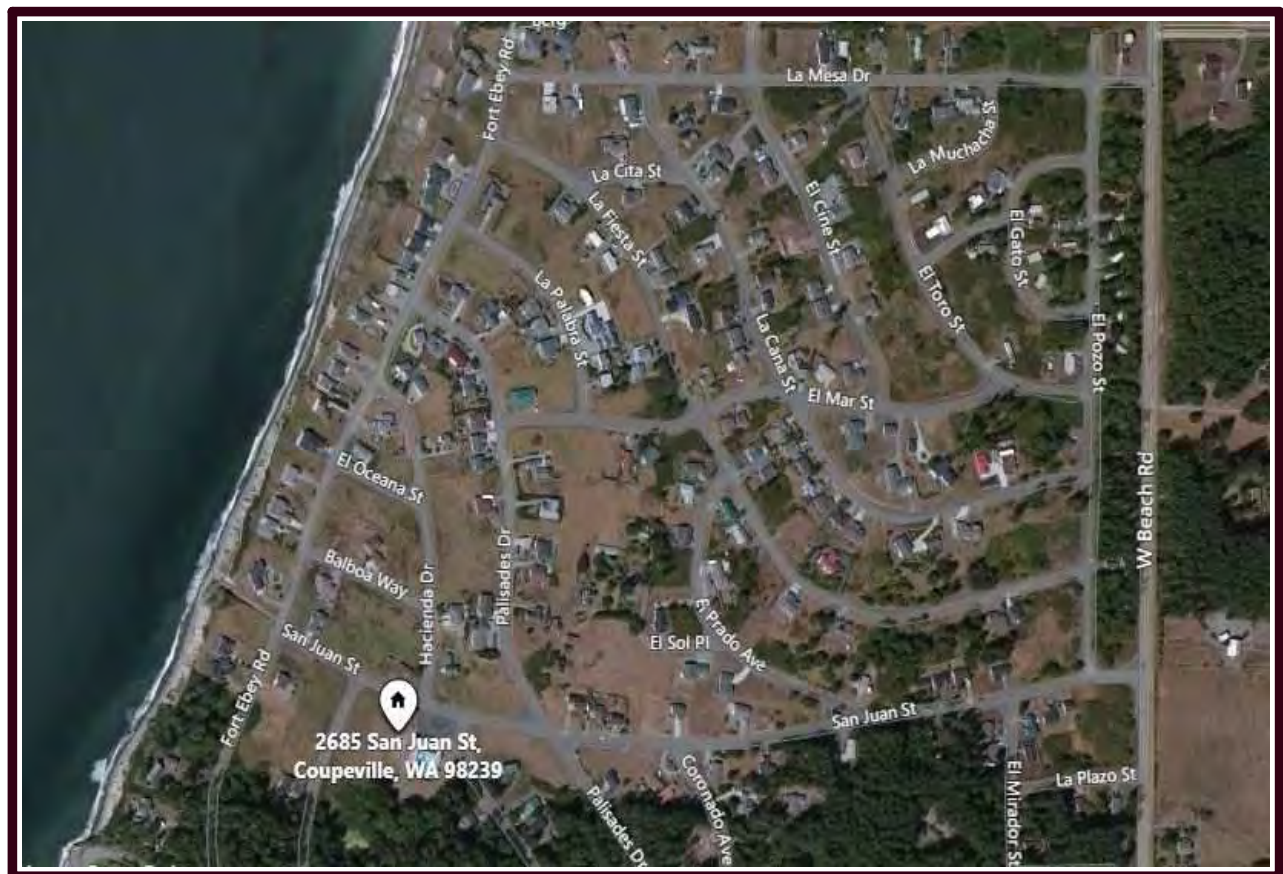




5116 Heather Drive  
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360.588.9956

# Funding Reserve Analysis *for* Sierra Country Club Piping System Level 3a Study 2022

August 18, 2021



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5116 Heather Drive  
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August 18, 2021

Board of Directors  
Sierra Country Club  
P.O. Box 561  
Coupeville WA 98239

Dear Board of Directors,

### **Introduction**

First, we would like to thank you for utilizing our services. Our approach is to provide the members, the board and management with understandable information to make informed decisions needed to best manage your reserve fund and annual contributions. We strive to understand the association's needs and design a funding strategy for meeting those needs based on a realistic approach to finances available and real-world workings of most associations. We live and work in the local area and work hard to keep up to date with costs in your association's neighborhood.

### **Included within the following pages you will find:**

Three funding models which detail how your association finances will look during the 30-year forecast window.

- Current Level of Contributions
- Baseline Funded
- Fully Funded (per the State of Washington RCW 64.34.380)

A list of the community components that the association is responsible for maintaining.

- Estimated current cost of replacement of each component.
- Timeline of estimated remaining life and estimated cost at replacement date per component.

Annual expenditure detail.

Expenses by item and by calendar year.

**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:

- 0-30% range are considered in **Poor** condition and at a high risk of special assessments or deferred maintenance.
- 30-70% range are considered in **Fair** condition and should strive to gradually increase reserves.
- 70-130% range are considered in **Good** condition and enjoy a low risk of special assessments or deferred maintenance.

The attached funding study is limited in scope to those expense items listed in the attached Expense Detail Report. Expense items which have an expected life of more than 30 Years are not included in this reserve study unless payment for these long-lived items overlaps the 30 Years reserve study envelope.

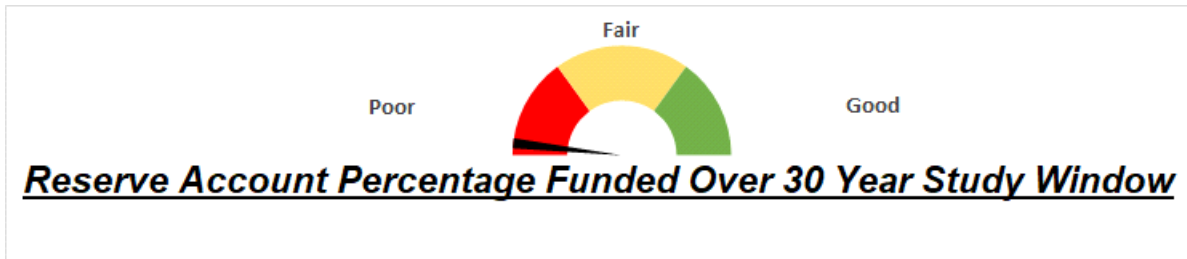
# Sierra Country Club Piping System Level 3a Study 2022

## Executive Summary

Name	Sierra Country Club Piping System Level 3a Study 2022
Location	Coupeville, WA
Contributing Members	596
Year Built	1968
Fiscal Year Ends	2022
Depth of Study	Level 3a Study ( <i>Without Site Visit</i> )
Date of Study	August 18, 2021
Last On-Site Inspection Date	June 17, 2020
Inflation Rate for Projections	5%

## Reserve Account Summary

Reported Current Annual Reserve Contribution	\$46,350 per year
Estimated Fiscal Year Starting Balance	\$213,288
Fiscal Year Beginning Balance If Fully Funded	\$1,875,306 ( <i>ideal amount in reserves</i> )
Average Deficit/Surplus Per Member	(-\$2,789)



## 5 - Year Summary - Current vs. Baseline vs. Fully Funded

	Current Funding Model		Baseline Funded Model		Fully Funded Model Recommended	
2022	\$260,092	13%	\$225,966	11%	\$246,135	12%
2023	\$335,628	16%	\$239,281	11%	\$567,037	26%
2024	\$384,968	17%	\$253,266	11%	\$881,303	38%
2025	\$465,603	19%	\$267,953	11%	\$1,192,433	49%
2026	\$517,608	20%	\$283,378	11%	\$1,503,264	57%
	<i>Contribution amount supplied by Client</i>		<i>Reserve account above \$0 within study timeframe</i>		<i>Achieve 100% funded within the study timeframe</i>	

## Project Description

The community water system includes thousands of feet of main water line, valves, meters, fire hydrants and various components.

This year's report is a Level 3 Reserve financial update only and does not include a site inspection or revision to the community's assets. For this report we have relied on current information provided by management, previous reserve studies and field notes from our last site visit. Please refer to the detailed report pages in the following sections of the report.

*(Report Note - material and labor costs appear to be continuing to increase in all construction categories. Many associations have reported dramatic cost differences in recent contractor bids on the same projects. We highly recommend associations request contractor bids on upcoming projects early in the process. Until such time as cost increases moderate an inflation factor of 5% will be used in all funding models.*

**Reserve Fund Status and Funding Plan Recommendation** - Based on our findings, the current level of funding of the reserve account ***is not adequate to fund projected expenses for the long term.*** We recommend the association gradually adopt a reserve funding plan based on the Fully Funding Model in order to ensure that adequate funding is available throughout the 30-year study period.

**Current Assessment Projection** - The initial reserve assessment is the association's reported current fiscal year funding level and projected out 30 years to illustrate the adequacy of the current funding over time.

Current Total Reported Annual Reserve Contribution - \$46,350

**Baseline Funded Model** - The goal of this funding method is to keep the reserve cash balance above zero. This means that while each individual component may not be fully funded, the reserve balance overall does not drop below zero during the projected period. A facility using this funding method must understand that even a minor reduction in a component's remaining useful life **or unplanned expenses** can result in a deficit in the reserve cash balance **and may require additional funding.**

Recommended Total Annual Reserve Contribution - \$12,283

**Fully Funded Model** - This is a straight-line funding model. It distributes the cash reserves to individual reserve components and then calculates what the reserve assessment and interest contribution (minus taxes) should be, again by each reserve component. The current annual assessment is then determined by summing all the individual component assessments. This is the most conservative funding model. It leads to or maintains a fully funded reserve position. (Please note that the Fully Funded Model incorporates funding parameters that seek to reach 100% funded at year 30 reserve study limit. The recommended contribution amount may be unusually high or low for the first few years depending on the current reserve account balance and upcoming expenses).

Recommended Total Annual Reserve Contribution - \$32,417

### **In this Reserve Study the following components are excluded:**

Power Lines – Generally utility companies.

Utility Main Lines – Generally utility companies or City.

### **Depth of Study**

We have completed a Level 3 Reserve Study for your association. A field inspection was not made to verify the current status of the various reserve study components, their physical condition, and to verify component quantities.

### **Understanding the Budget Year**

Your study is based on the standard calendar year January 1 through December 31<sup>st</sup>. January is the “*budget year beginning*”. This account balance is the starting point for determining the distribution of available funds for the year. Reserve contributions plus any addition income or deposits and interest for the 12-month period are calculated then projected expenses for the year are deducted. The result is the *budget year ending* balance estimated for December 31<sup>st</sup>.

### **Initial Reserves**

Initial reserves for this reserve study are estimated to be \$213,288 as of December 31, 2021. We have relied upon the client to provide the current (or projected) reserve balance, the estimated net-after-tax current rate of interest earnings, and to indicate if those earnings accrue to the reserve fund.

### **Keeping Your Reserve Study Current**

We recommend that your reserve analysis study be updated on an annual basis due to fluctuating interest rates, inflationary changes, and the unpredictable nature of the lives of many of the assets under consideration. All of the information collected during our inspection of the facilities site and computations made subsequently in preparing this reserve analysis study are retained in our computer files.

### **Conflict of Interest**

As the preparer of this reserve study, Pacific Crest Reserves certifies that we do not have any vested interests, financial interests, or other interests that would cause a conflict of interest in the preparation of this reserve study.

### **Date of Physical Inspection**

The property was physically inspected by Pacific Crest Reserves on June 17, 2020.

Pacific Crest Reserves would like to thank the members and management for the opportunity to be of service in the preparation of the attached funding study. Again, please feel free to contact us if you have any questions.

Prepared by:

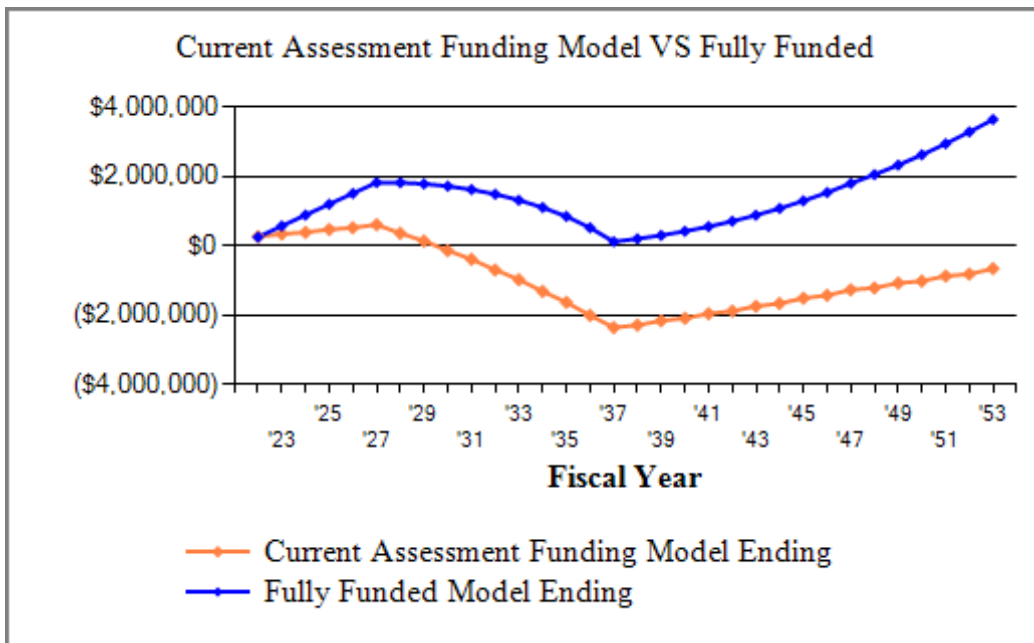
*Charlie Barefield*

Charlie Barefield  
Reserve Analyst Principal

**Sierra Country Club Piping System Level 3a Study 2022**  
 Coupeville, WA  
**Current Assessment Projection Summary**

Report Date	August 18, 2021
Budget Year Beginning	January 1, 2022
Budget Year Ending	December 31, 2022
Total Units	596

<b>Report Parameters</b>	
Inflation	5.00%
Interest Rate on Reserve Deposit	0.17%
Tax Rate Included in Interest Rate	
2022 Beginning Balance	\$213,288



**The Current Assessment Funding Model** is based on the current annual assessment, parameters, and reserve fund balance. Because it is calculated using the current annual assessment, it will give the accurate projection of how well the association is funded for the next 30 years of planned reserve expenditures.

<b>Current Assessment Funding Model Summary of Calculations</b>	
Required Annual Contribution	\$46,350.00
<i>\$77.77 per unit annually</i>	
Average Net Annual Interest Earned	\$454.37
Total Annual Allocation to Reserves	\$46,804.37
<i>\$78.53 per unit annually</i>	

**Sierra Country Club Piping System Level 3a Study 2022  
Current Assessment Projection**

Beginning Balance: \$213,288

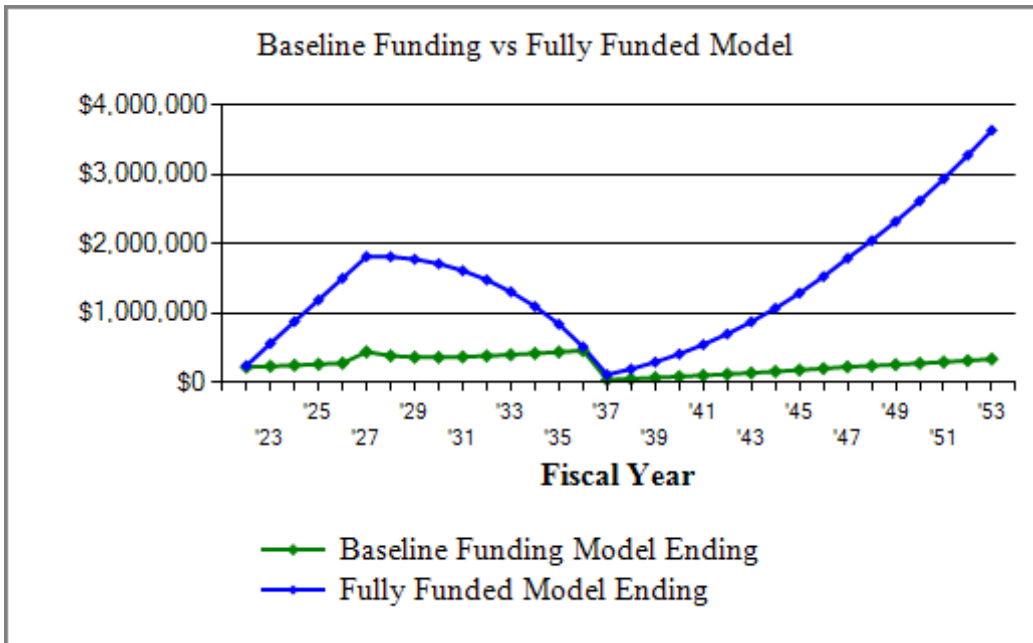
Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2022	46,350	454		260,092	2,005,536	13%
2023	74,949	586		335,628	2,144,100	16%
2024	48,668	673		384,968	2,291,507	17%
2025	79,821	813		465,603	2,448,294	19%
2026	51,101	904		517,608	2,615,031	20%
2027	85,009	1,055		603,671	2,792,321	22%
2028	53,656	626	299,578	358,375	2,666,149	13%
2029	90,535	235	314,557	134,588	2,520,367	5%
2030	56,339		330,285	-139,358	2,353,420	
2031	96,420		346,799	-389,738	2,163,655	
2032	59,165		364,139	-694,712	1,949,310	
2033	102,687		382,346	-974,371	1,708,512	
2034	62,113		401,464	-1,313,722	1,439,269	
2035	109,362		421,537	-1,625,897	1,139,466	
2036	65,219		442,614	-2,003,292	806,852	
2037	116,470		464,744	-2,351,566	439,037	
2038	68,480			-2,283,086	544,806	
2039	124,041			-2,159,045	660,053	
2040	71,904			-2,087,141	785,463	
2041	132,104			-1,955,037	921,764	
2042	75,499			-1,879,538	1,069,731	
2043	140,690			-1,738,848	1,230,191	
2044	79,274			-1,659,574	1,404,022	
2045	149,835			-1,509,739	1,592,161	
2046	83,238			-1,426,501	1,795,604	
2047	159,574			-1,266,927	2,015,411	
2048	87,400		31,379	-1,210,906	2,219,761	
2049	169,947		32,948	-1,073,907	2,439,509	
2050	91,770		34,595	-1,016,732	2,675,681	
2051	180,993		36,325	-872,064	2,929,372	
2052	96,358		38,141	-813,847	3,201,743	
2053	192,758		40,048	-661,137	3,494,027	



**Sierra Country Club Piping System Level 3a Study 2022**  
 Coupeville, WA  
**Baseline Funding Model Summary**

Report Date	August 18, 2021
Budget Year Beginning	January 1, 2022
Budget Year Ending	December 31, 2022
Total Units	596

<b>Report Parameters</b>	
Inflation	5.00%
Annual Assessment Increase	5.00%
Interest Rate on Reserve Deposit	0.17%
Tax Rate Included in Interest Rate	
2022 Beginning Balance	\$213,288



The **Baseline Funding Model** calculates the minimum reserve assessments, with the restriction that the reserve balance is not allowed to go below \$0 or other predetermined baseline, during the period of time examined. All funds for planned reserve expenditures will be available on the first day of each fiscal year. The **Baseline Funding Model** allows the client to choose the level of conservative funding they desire by choosing the baseline dollar amount.

<b>Baseline Funding Model Summary of Calculations</b>	
Required Annual Contribution	\$12,283.12
<i>\$20.61 per unit annually</i>	
Average Net Annual Interest Earned	\$394.75
Total Annual Allocation to Reserves	<u>\$12,677.87</u>
<i>\$21.27 per unit annually</i>	

**Sierra Country Club Piping System Level 3a Study 2022  
Baseline Funding Model Projection**

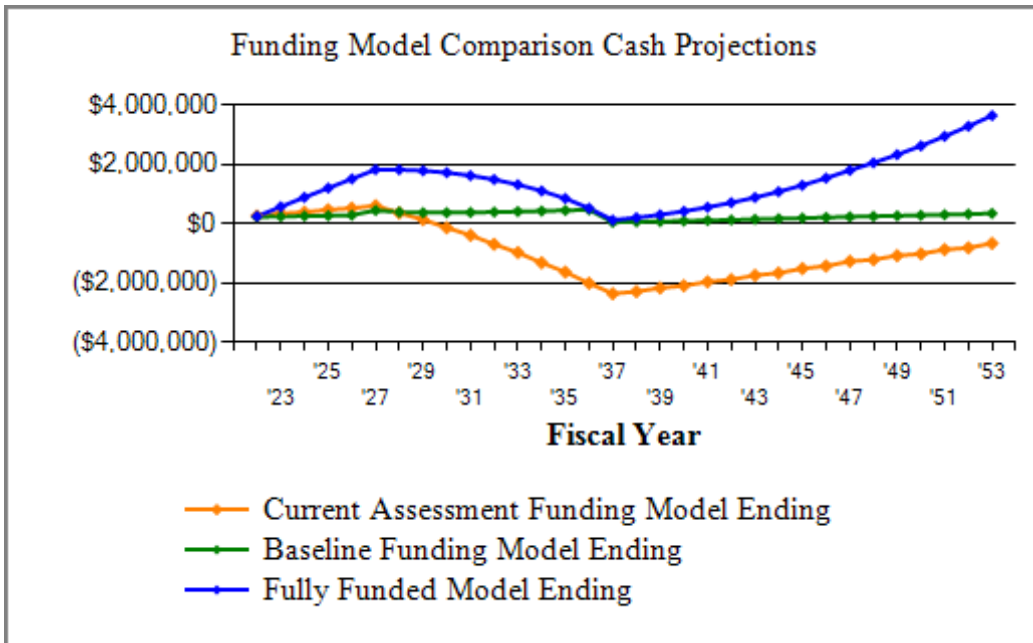
Beginning Balance: \$213,288

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2022	12,283	395		225,966	2,005,536	11%
2023	12,897	418		239,281	2,144,100	11%
2024	13,542	442		253,266	2,291,507	11%
2025	14,219	468		267,953	2,448,294	11%
2026	14,930	495		283,378	2,615,031	11%
2027	160,698	777		444,853	2,792,321	16%
2028	243,078	680	299,578	389,033	2,666,149	15%
2029	293,346	644	314,557	368,465	2,520,367	15%
2030	327,552	640	330,285	366,373	2,353,420	16%
2031	353,947	654	346,799	374,174	2,163,655	17%
2032	376,779	677	364,139	387,491	1,949,310	20%
2033	398,251	706	382,346	404,101	1,708,512	24%
2034	419,513	739	401,464	422,889	1,439,269	29%
2035	441,180	774	421,537	443,307	1,139,466	39%
2036	463,239	812	442,614	464,744	806,852	58%
2037	43,827	77	464,744	43,904	439,037	10%
2038	14,546	102		58,552	544,806	11%
2039	15,273	129		73,954	660,053	11%
2040	16,037	157		90,148	785,463	11%
2041	16,839	187		107,174	921,764	12%
2042	17,680	218		125,073	1,069,731	12%
2043	18,565	251		143,889	1,230,191	12%
2044	19,493	286		163,668	1,404,022	12%
2045	20,467	322		184,457	1,592,161	12%
2046	21,491	360		206,308	1,795,604	11%
2047	22,565	401		229,274	2,015,411	11%
2048	47,384	429	31,379	245,708	2,219,761	11%
2049	49,753	459	32,948	262,973	2,439,509	11%
2050	52,240	491	34,595	281,109	2,675,681	11%
2051	54,852	524	36,325	300,161	2,929,372	10%
2052	57,595	559	38,141	320,174	3,201,743	10%
2053	60,475	596	40,048	341,197	3,494,027	10%

**Sierra Country Club Piping System Level 3a Study 2022**  
 Coupeville, WA  
**Fully Funded Model Summary**

Report Date	August 18, 2021
Budget Year Beginning	January 1, 2022
Budget Year Ending	December 31, 2022
Total Units	596

<b>Report Parameters</b>	
Inflation	5.00%
Interest Rate on Reserve Deposit	0.17%
Tax Rate Included in Interest Rate	
2022 Beginning Balance	\$213,288



The **Fully Funded Model's** long-term objective is to provide a plan to a fully funded reserve position over the longest period of time practical. This is the most conservative funding model.

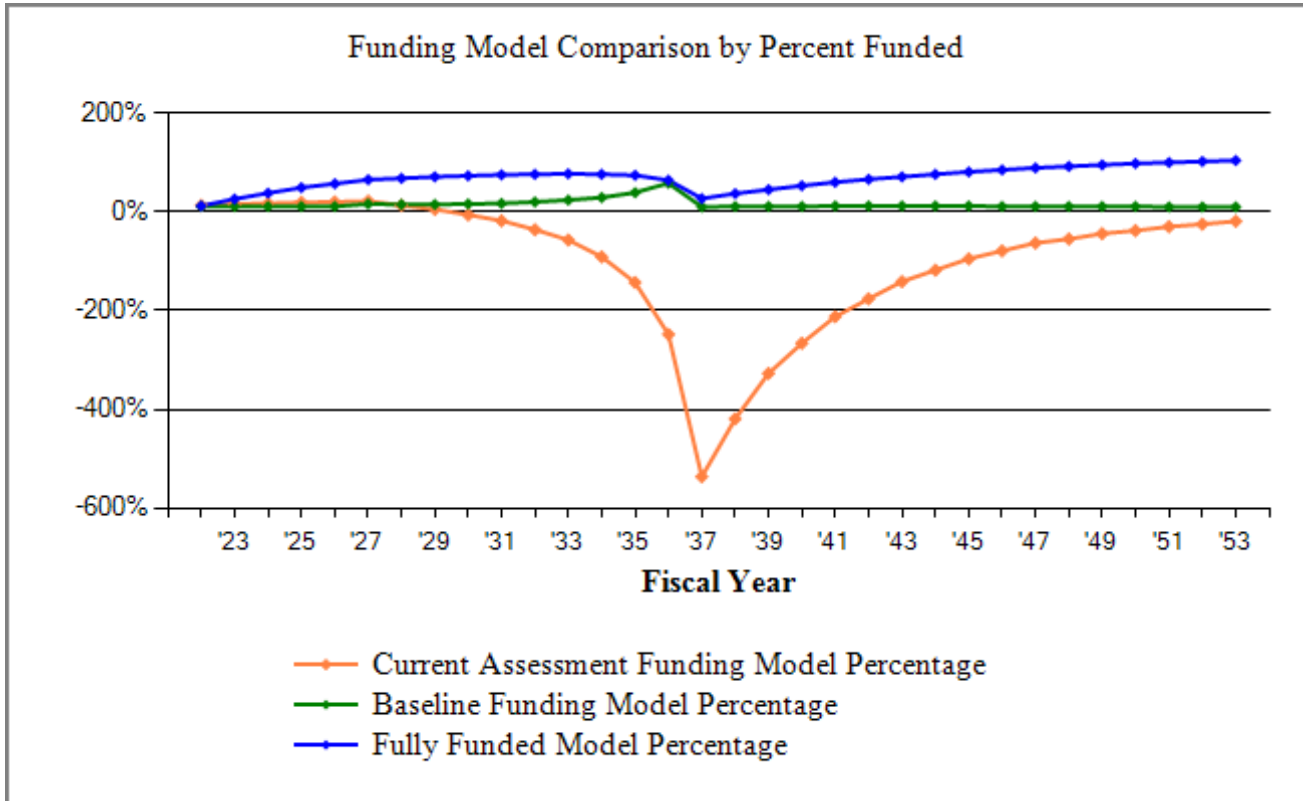
<b>Fully Funded Model Summary of Calculations</b>	
Required Annual Contribution	\$32,416.80
<i>\$54.39 per unit annually</i>	
Average Net Annual Interest Earned	\$429.98
Total Annual Allocation to Reserves	<u>\$32,846.79</u>
<i>\$55.11 per unit annually</i>	

**Sierra Country Club Piping System Level 3a Study 2022  
Fully Funded Model Projection**

Beginning Balance: \$213,288

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2022	32,417	430		246,135	2,005,536	12%
2023	319,912	991		567,037	2,144,100	26%
2024	312,726	1,540		881,303	2,291,507	38%
2025	309,047	2,083		1,192,433	2,448,294	49%
2026	308,205	2,626		1,503,264	2,615,031	57%
2027	309,507	3,172		1,815,943	2,792,321	65%
2028	292,891	3,166	299,578	1,812,422	2,666,149	68%
2029	276,212	3,105	314,557	1,777,181	2,520,367	71%
2030	261,995	2,991	330,285	1,711,882	2,353,420	73%
2031	244,715	2,817	346,799	1,612,614	2,163,655	75%
2032	229,573	2,587	364,139	1,480,635	1,949,310	76%
2033	207,977	2,286	382,346	1,308,551	1,708,512	77%
2034	189,537	1,919	401,464	1,098,544	1,439,269	76%
2035	164,855	1,473	421,537	843,336	1,139,466	74%
2036	114,780	902	442,614	516,404	806,852	64%
2037	65,196	204	464,744	117,061	439,037	27%
2038	81,692	348		199,101	544,806	37%
2039	98,380	521		298,001	660,053	45%
2040	115,765	724		414,490	785,463	53%
2041	133,879	960		549,329	921,764	60%
2042	152,756	1,229		703,313	1,069,731	66%
2043	172,437	1,533		877,283	1,230,191	71%
2044	192,951	1,873		1,072,106	1,404,022	76%
2045	214,327	2,251		1,288,685	1,592,161	81%
2046	236,598	2,669		1,527,952	1,795,604	85%
2047	259,826	3,129		1,790,907	2,015,411	89%
2048	280,969	3,571	31,379	2,044,068	2,219,761	92%
2049	302,928	4,050	32,948	2,318,098	2,439,509	95%
2050	325,727	4,566	34,595	2,613,796	2,675,681	98%
2051	349,401	5,122	36,325	2,931,994	2,929,372	100%
2052	371,730	5,715	38,141	3,271,298	3,201,743	102%
2053	391,598	6,340	40,048	3,629,188	3,494,027	104%

**Sierra Country Club Piping System Level 3a Study 2022  
Funding Model Comparison by Percent Funded**



The chart above compares the projected Reserve Percentage Funded of the three funding models (Current Assessment Funding Model, Baseline Funding Model and Fully Funded Model) over 30 years.

**Sierra Country Club Piping System Level 3a Study 2022  
Annual Expenditure Detail**

Description	Expenditures
<i>No Replacement in 2022</i>	
<i>No Replacement in 2023</i>	
<i>No Replacement in 2024</i>	
<i>No Replacement in 2025</i>	
<i>No Replacement in 2026</i>	
<i>No Replacement in 2027</i>	
<b>Replacement Year 2028</b>	
Main Line Piping Replacement - Concrete 4" - Phase 1	211,065
Main Line Piping Replacement - PVC 6" - Phase 1	73,169
Main Line Piping Replacement - Service Meters & Components - Phase 1	11,826
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 1	3,518
<b>Total for 2028</b>	<b>\$299,578</b>
<b>Replacement Year 2029</b>	
Main Line Piping Replacement - Concrete 4" - Phase 2	221,618
Main Line Piping Replacement - PVC 6" - Phase 2	76,828
Main Line Piping Replacement - Service Meters & Components - Phase 2	12,418
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 2	3,694
<b>Total for 2029</b>	<b>\$314,557</b>
<b>Replacement Year 2030</b>	
Main Line Piping Replacement - Concrete 4" - Phase 3	232,699
Main Line Piping Replacement - PVC 6" - Phase 3	80,669
Main Line Piping Replacement - Service Meters & Components - Phase 3	13,039
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 3	3,878
<b>Total for 2030</b>	<b>\$330,285</b>
<b>Replacement Year 2031</b>	
Main Line Piping Replacement - Concrete 4" - Phase 4	244,334
Main Line Piping Replacement - PVC 6" - Phase 4	84,703
Main Line Piping Replacement - Service Meters & Components - Phase 4	13,690
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 4	4,072
<b>Total for 2031</b>	<b>\$346,799</b>
<b>Replacement Year 2032</b>	
Main Line Piping Replacement - Concrete 4" - Phase 5	256,551
Main Line Piping Replacement - PVC 6" - Phase 5	88,938

**Sierra Country Club Piping System Level 3a Study 2022  
Annual Expenditure Detail**

Description	Expenditures
<b>Replacement Year 2032 continued...</b>	
Main Line Piping Replacement - Service Meters & Components - Phase 5	14,375
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 5	4,276
<b>Total for 2032</b>	<b>\$364,139</b>
 <b>Replacement Year 2033</b>	
Main Line Piping Replacement - Concrete 4" - Phase 6	269,378
Main Line Piping Replacement - PVC 6" - Phase 6	93,385
Main Line Piping Replacement - Service Meters & Components - Phase 6	15,094
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 6	4,490
<b>Total for 2033</b>	<b>\$382,346</b>
 <b>Replacement Year 2034</b>	
Main Line Piping Replacement - Concrete 4" - Phase 7	282,847
Main Line Piping Replacement - PVC 6" - Phase 7	98,054
Main Line Piping Replacement - Service Meters & Components - Phase 7	15,848
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 7	4,714
<b>Total for 2034</b>	<b>\$401,464</b>
 <b>Replacement Year 2035</b>	
Main Line Piping Replacement - Concrete 4" - Phase 8	296,990
Main Line Piping Replacement - PVC 6" - Phase 8	102,956
Main Line Piping Replacement - Service Meters & Components - Phase 8	16,641
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 8	4,950
<b>Total for 2035</b>	<b>\$421,537</b>
 <b>Replacement Year 2036</b>	
Main Line Piping Replacement - Concrete 4" - Phase 9	311,839
Main Line Piping Replacement - PVC 6" - Phase 9	108,104
Main Line Piping Replacement - Service Meters & Components - Phase 9	17,473
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 9	5,197
<b>Total for 2036</b>	<b>\$442,614</b>
 <b>Replacement Year 2037</b>	
Main Line Piping Replacement - Concrete 4" - Phase 10	327,431
Main Line Piping Replacement - PVC 6" - Phase 10	113,509
Main Line Piping Replacement - Service Meters & Components - Phase 10	18,347
Main Line Piping Replacement - Valves & Fire Hydrants - Phase 10	5,457
<b>Total for 2037</b>	<b>\$464,744</b>

**Sierra Country Club Piping System Level 3a Study 2022  
Annual Expenditure Detail**

Description	Expenditures
<i>No Replacement in 2038</i>	
<i>No Replacement in 2039</i>	
<i>No Replacement in 2040</i>	
<i>No Replacement in 2041</i>	
<i>No Replacement in 2042</i>	
<i>No Replacement in 2043</i>	
<i>No Replacement in 2044</i>	
<i>No Replacement in 2045</i>	
<i>No Replacement in 2046</i>	
<i>No Replacement in 2047</i>	
<b>Replacement Year 2048</b>	
Main Line Piping Replacement - Service Meters & Components - Phase 1	31,379
<b>Total for 2048</b>	<b><u>\$31,379</u></b>
<b>Replacement Year 2049</b>	
Main Line Piping Replacement - Service Meters & Components - Phase 2	32,948
<b>Total for 2049</b>	<b><u>\$32,948</u></b>
<b>Replacement Year 2050</b>	
Main Line Piping Replacement - Service Meters & Components - Phase 3	34,595
<b>Total for 2050</b>	<b><u>\$34,595</u></b>
<b>Replacement Year 2051</b>	
Main Line Piping Replacement - Service Meters & Components - Phase 4	36,325
<b>Total for 2051</b>	<b><u>\$36,325</u></b>
<b>Replacement Year 2052</b>	
Main Line Piping Replacement - Service Meters & Components - Phase 5	38,141
<b>Total for 2052</b>	<b><u>\$38,141</u></b>
<b>Replacement Year 2053</b>	
Main Line Piping Replacement - Service Meters & Components - Phase 6	40,048
<b>Total for 2053</b>	<b><u>\$40,048</u></b>



**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Cast Iron**

Asset ID	1001	1 Allowance	
		Asset Actual Cost	
		Percent Replacement	100%
		Future Cost	
Piping Infrastructure			
Placed in Service	January 2020		
No Useful Life			

*No update for 2022*

Our understanding is that the original portion of the main water line that was cast iron pipe is in the process of being replaced with modern C900 PVC pipe. This work is planned to be completed by the end of 2020. PVC pipe is assigned a 100-year service life based on 60 years of experience, extensive industry studies, dig-up field samples and historical data demonstrating low failure and water main break rates.

**Main Line Piping Replacement - Concrete 4" - Phase 1 - 2028**

Asset ID	1002	1 Allowance @	\$1,575,000.00
		Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
		Future Cost	\$211,065.06
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	10		
Replacement Year	2028		
Remaining Life	6		

*No update for 2022*

The original water mains in the system are 50 years old and mostly asbestos cement piping. The industry standard useful life for this material is 50 years, however field inspection when sections have been exposed indicate the piping is still in serviceable condition. Plans call for phased replacement over a ten year period beginning in 2028.

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Concrete 4" - Phase 2 - 2029**

Asset ID	1002	1 Allowance@	\$1,575,000.00
		Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
	Piping Infrastructure	Future Cost	\$221,618.32
Placed in Service	January 1968		
Useful Life	50		
Adjustment	11		
Replacement Year	2029		
Remaining Life	7		

**Main Line Piping Replacement - Concrete 4" - Phase 3 - 2030**

Asset ID	1002	1 Allowance@	\$1,575,000.00
		Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
	Piping Infrastructure	Future Cost	\$232,699.23
Placed in Service	January 1968		
Useful Life	50		
Adjustment	12		
Replacement Year	2030		
Remaining Life	8		

**Main Line Piping Replacement - Concrete 4" - Phase 4 - 2031**

Asset ID	1002	1 Allowance@	\$1,575,000.00
		Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
	Piping Infrastructure	Future Cost	\$244,334.19
Placed in Service	January 1968		
Useful Life	50		
Adjustment	13		
Replacement Year	2031		
Remaining Life	9		

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Concrete 4" - Phase 5 - 2032**

		1 Allowance@	\$1,575,000.00
Asset ID	1002	Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
	Piping Infrastructure	Future Cost	\$256,550.90
Placed in Service	January 1968		
Useful Life	50		
Adjustment	14		
Replacement Year	2032		
Remaining Life	10		

**Main Line Piping Replacement - Concrete 4" - Phase 6 - 2033**

		1 Allowance@	\$1,575,000.00
Asset ID	1002	Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
	Piping Infrastructure	Future Cost	\$269,378.45
Placed in Service	January 1968		
Useful Life	50		
Adjustment	15		
Replacement Year	2033		
Remaining Life	11		

**Main Line Piping Replacement - Concrete 4" - Phase 7 - 2034**

		1 Allowance@	\$1,575,000.00
Asset ID	1002	Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
	Piping Infrastructure	Future Cost	\$282,847.37
Placed in Service	January 1968		
Useful Life	50		
Adjustment	16		
Replacement Year	2034		
Remaining Life	12		

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Concrete 4" - Phase 8 - 2035**

Asset ID	1002	1 Allowance@	\$1,575,000.00
		Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
		Future Cost	\$296,989.74
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	17		
Replacement Year	2035		
Remaining Life	13		

**Main Line Piping Replacement - Concrete 4" - Phase 9 - 2036**

Asset ID	1002	1 Allowance@	\$1,575,000.00
		Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
		Future Cost	\$311,839.23
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	18		
Replacement Year	2036		
Remaining Life	14		

**Main Line Piping Replacement - Concrete 4" - Phase 10 - 2037**

Asset ID	1002	1 Allowance@	\$1,575,000.00
		Asset Actual Cost	\$157,500.00
		Percent Replacement	10%
		Future Cost	\$327,431.19
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	19		
Replacement Year	2037		
Remaining Life	15		

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - PVC 6" - Phase 1 - 2028**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$73,169.22
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	10		
Replacement Year	2028		
Remaining Life	6		

*No update for 2022*

A portion of the main line replacement will be 6" PVC piping material which will also be included in the planned phased installation.

**Main Line Piping Replacement - PVC 6" - Phase 2 - 2029**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$76,827.68
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	11		
Replacement Year	2029		
Remaining Life	7		

**Main Line Piping Replacement - PVC 6" - Phase 3 - 2030**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$80,669.07
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	12		
Replacement Year	2030		
Remaining Life	8		

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - PVC 6" - Phase 4 - 2031**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$84,702.52
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	13		
Replacement Year	2031		
Remaining Life	9		

**Main Line Piping Replacement - PVC 6" - Phase 5 - 2032**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$88,937.65
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	14		
Replacement Year	2032		
Remaining Life	10		

**Main Line Piping Replacement - PVC 6" - Phase 6 - 2033**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$93,384.53
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	15		
Replacement Year	2033		
Remaining Life	11		

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - PVC 6" - Phase 7 - 2034**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$98,053.75
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	16		
Replacement Year	2034		
Remaining Life	12		

**Main Line Piping Replacement - PVC 6" - Phase 8 - 2035**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$102,956.44
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	17		
Replacement Year	2035		
Remaining Life	13		

**Main Line Piping Replacement - PVC 6" - Phase 9 - 2036**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$108,104.26
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	18		
Replacement Year	2036		
Remaining Life	14		

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - PVC 6" - Phase 10 - 2037**

Asset ID	1003	1 Allowance @	\$546,000.00
		Asset Actual Cost	\$54,600.00
		Percent Replacement	10%
		Future Cost	\$113,509.48
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	50		
Adjustment	19		
Replacement Year	2037		
Remaining Life	15		

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 1 - 2028**

Asset ID	1004	1 Allowance @	\$26,250.00
		Asset Actual Cost	\$2,625.00
		Percent Replacement	10%
		Future Cost	\$3,517.75
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	40		
Adjustment	20		
Replacement Year	2028		
Remaining Life	6		

*No update for 2022*

The system includes several various sized valves and a number of fire hydrants which will be replaced as part of the phased main line replacement. Industry standard for this type of equipment is 35-40 years.

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 2 - 2029**

Asset ID	1004	1 Allowance @	\$26,250.00
		Asset Actual Cost	\$2,625.00
		Percent Replacement	10%
		Future Cost	\$3,693.64
Piping Infrastructure			
Placed in Service	January 1968		
Useful Life	40		
Adjustment	21		
Replacement Year	2029		
Remaining Life	7		



**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 3 - 2030**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$3,878.32
Placed in Service	January 1968	
Useful Life	40	
Adjustment	22	
Replacement Year	2030	
Remaining Life	8	

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 4 - 2031**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$4,072.24
Placed in Service	January 1968	
Useful Life	40	
Adjustment	23	
Replacement Year	2031	
Remaining Life	9	

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 5 - 2032**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$4,275.85
Placed in Service	January 1968	
Useful Life	40	
Adjustment	24	
Replacement Year	2032	
Remaining Life	10	

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 6 - 2033**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$4,489.64
Placed in Service	January 1968	
Useful Life	40	
Adjustment	25	
Replacement Year	2033	
Remaining Life	11	

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 7 - 2034**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$4,714.12
Placed in Service	January 1968	
Useful Life	40	
Adjustment	26	
Replacement Year	2034	
Remaining Life	12	

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 8 - 2035**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$4,949.83
Placed in Service	January 1968	
Useful Life	40	
Adjustment	27	
Replacement Year	2035	
Remaining Life	13	

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 9 - 2036**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$5,197.32
Placed in Service	January 1968	
Useful Life	40	
Adjustment	28	
Replacement Year	2036	
Remaining Life	14	

**Main Line Piping Replacement - Valves & Fire Hydrants - Phase 10 - 2037**

Asset ID	1004	1 Allowance @ \$26,250.00
		Asset Actual Cost \$2,625.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$5,457.19
Placed in Service	January 1968	
Useful Life	40	
Adjustment	29	
Replacement Year	2037	
Remaining Life	15	

**Main Line Piping Replacement - Service Meters & Components - Phase 1 - 2028**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$11,826.34
Placed in Service	January 1968	
Useful Life	20	
Adjustment	40	
Replacement Year	2028	
Remaining Life	6	

*No update for 2022*

All individual water meters will be replaced as part of the the main line replacement. Service life for this equipment is 15-20 years.

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Service Meters & Components - Phase 2 - 2029**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$12,417.66
Placed in Service	January 1968	
Useful Life	20	
Adjustment	41	
Replacement Year	2029	
Remaining Life	7	

**Main Line Piping Replacement - Service Meters & Components - Phase 3 - 2030**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$13,038.54
Placed in Service	January 1968	
Useful Life	20	
Adjustment	42	
Replacement Year	2030	
Remaining Life	8	

**Main Line Piping Replacement - Service Meters & Components - Phase 4 - 2031**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$13,690.47
Placed in Service	January 1968	
Useful Life	20	
Adjustment	43	
Replacement Year	2031	
Remaining Life	9	

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Service Meters & Components - Phase 5 - 2032**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$14,374.99
Placed in Service	January 1968	
Useful Life	20	
Adjustment	44	
Replacement Year	2032	
Remaining Life	10	

**Main Line Piping Replacement - Service Meters & Components - Phase 6 - 2033**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$15,093.74
Placed in Service	January 1968	
Useful Life	20	
Adjustment	45	
Replacement Year	2033	
Remaining Life	11	

**Main Line Piping Replacement - Service Meters & Components - Phase 7 - 2034**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$15,848.43
Placed in Service	January 1968	
Useful Life	20	
Adjustment	46	
Replacement Year	2034	
Remaining Life	12	

**Sierra Country Club Piping System Level 3a Study 2022  
Detail Report by Category**

**Main Line Piping Replacement - Service Meters & Components - Phase 8 - 2035**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$16,640.85
Placed in Service	January 1968	
Useful Life	20	
Adjustment	47	
Replacement Year	2035	
Remaining Life	13	

**Main Line Piping Replacement - Service Meters & Components - Phase 9 - 2036**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$17,472.90
Placed in Service	January 1968	
Useful Life	20	
Adjustment	48	
Replacement Year	2036	
Remaining Life	14	

**Main Line Piping Replacement - Service Meters & Components - Phase 10 - 2037**

Asset ID	1005	1 Allowance @ \$88,250.00
		Asset Actual Cost \$8,825.00
		Percent Replacement 10%
Piping Infrastructure		Future Cost \$18,346.54
Placed in Service	January 1968	
Useful Life	20	
Adjustment	49	
Replacement Year	2037	
Remaining Life	15	

**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Main Line Piping Replacement - Cast Iron	<i>Unfunded</i>									
Main Line Piping Replacement - Concrete ..							211,065			
Main Line Piping Replacement - Concrete ..								221,618		
Main Line Piping Replacement - Concrete ..									232,699	
Main Line Piping Replacement - Concrete ..										244,334
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - PVC 6" - ..							73,169			
Main Line Piping Replacement - PVC 6" - ..								76,828		
Main Line Piping Replacement - PVC 6" - ..									80,669	
Main Line Piping Replacement - PVC 6" - ..										84,703
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - Service M..							11,826			
Main Line Piping Replacement - Service M..								12,418		
Main Line Piping Replacement - Service M..									13,039	
Main Line Piping Replacement - Service M..										13,690
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Valves & ..							3,518			
Main Line Piping Replacement - Valves & ..								3,694		
Main Line Piping Replacement - Valves & ..									3,878	

**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

<b>Description</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>
Main Line Piping Replacement - Valves & ..										4,072
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
<b>Year Total:</b>							<b>299,578</b>	<b>314,557</b>	<b>330,285</b>	<b>346,799</b>



**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Main Line Piping Replacement - Cast Iron	<i>Unfunded</i>									
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..	256,551									
Main Line Piping Replacement - Concrete ..		269,378								
Main Line Piping Replacete ..			282,847							
Main Line Piping Replacement - Concrete ..				296,990						
Main Line Piping Replacement - Concrete ..					311,839					
Main Line Piping Replacement - Concrete ..						327,431				
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..	88,938									
Main Line Piping Replacement - PVC 6" - ..		93,385								
Main Line Piping Replacement - PVC 6" - ..			98,054							
Main Line Piping Replacement - PVC 6" - ..				102,956						
Main Line Piping Replacement - PVC 6" - ..					108,104					
Main Line Piping Replacement - PVC 6" - ..						113,509				
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..	14,375									
Main Line Piping Replacement - Service M..		15,094								
Main Line Piping Replacement - Service M..			15,848							
Main Line Piping Replacement - Service M..				16,641						
Main Line Piping Replacement - Service M..					17,473					
Main Line Piping Replacement - Service M..						18,347				
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										

**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

<b>Description</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..	4,276									
Main Line Piping Replacement - Valves & ..		4,490								
Main Line Piping Replacement - Valves & ..			4,714							
Main Line Piping Replacement - Valves & ..				4,950						
Main Line Piping Replacement - Valves & ..					5,197					
Main Line Piping Replacement - Valves & ..						5,457				
<b>Year Total:</b>	<b>364,139</b>	<b>382,346</b>	<b>401,464</b>	<b>421,537</b>	<b>442,614</b>	<b>464,744</b>				

**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

Description	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Main Line Piping Replacement - Cast Iron	<i>Unfunded</i>									
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - Concrete ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - PVC 6" - ..										
Main Line Piping Replacement - Service M..							31,379			
Main Line Piping Replacement - Service M..								32,948		
Main Line Piping Replacement - Service M..									34,595	
Main Line Piping Replacement - Service M..										36,325
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Service M..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										

**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

<b>Description</b>	<b>2042</b>	<b>2043</b>	<b>2044</b>	<b>2045</b>	<b>2046</b>	<b>2047</b>	<b>2048</b>	<b>2049</b>	<b>2050</b>	<b>2051</b>
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
Main Line Piping Replacement - Valves & ..										
<b>Year Total:</b>							<b>31,379</b>	<b>32,948</b>	<b>34,595</b>	<b>36,325</b>

**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

Description	2052	2053
Main Line Piping Replacement - Cast Iron	<i>Unfunded</i>	
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - Concrete ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - PVC 6" - ..		
Main Line Piping Replacement - Service M..		
Main Line Piping Replacement - Service M..		
Main Line Piping Replacement - Service M..		
Main Line Piping Replacement - Service M..	38,141	
Main Line Piping Replacement - Service M..		40,048
Main Line Piping Replacement - Service M..		
Main Line Piping Replacement - Service M..		
Main Line Piping Replacement - Service M..		
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		

**Sierra Country Club Piping System Level 3a Study 2022  
Expenses by Item and by Calender Year**

Description	2052	2053
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		
Main Line Piping Replacement - Valves & ..		
<b>Year Total:</b>	<b>38,141</b>	<b>40,048</b>



Reserve Study Disclosure Form

In Compliance with RCW 64.34.308 and RCW 64.38.025 (2019)

Name of Association: Sierra Country Club Piping Infrastructure

Current Year Reported Budget Contribution to Reserves: \$46,350

Recommended 2022 Contribution to Reserves, per study: \$32,417

Funding Plan Used for Recommendations: Full Funding

Projected Year End Reserve Balance at Current Funding Level: \$260,092
(Percentages below indicate the projected year end percentage level of the Reserve Fund vs Fully Funded at the Current Contribution Amount)

Projected Year End Balance If the account was Fully Funded: \$2,005,536

5 Year Balances

Table with 5 columns (2022-2026) and 5 rows (Estimates Per Study, Projected Year End Reserve Balances at Current Contribution Level\*, Projected Year End Reserve Balances at Recommended Funding Contribution Level, Projected Year End Fully Funded Reserves If Fully Funded, Percent Reserve is Fully Funded at Current Funding Level: \*)

Based upon the most recent reserve study, will the association have funds to meet obligations for the next 30 years at the current contribution rate? No

To be Completed by Management

Proposed 2022 Budget's Contribution to Reserves: \_\_\_\_\_

Is Additional Funding (Regular or Special Assessment) Planned? Yes/No

When is it due? (Month/Year) \_\_\_\_\_

What is the Purpose? Description of Project(s): \_\_\_\_\_

Duration of Assessment: Start Date \_\_\_\_\_ End Date \_\_\_\_\_

Assessment Amount per Unit on Average: Per Month \_\_\_\_\_ Per Year \_\_\_\_\_

Author Name \_\_\_\_\_

Source Key: Budget/Reserve Study

Date of Completion \_\_\_\_\_

\* Projection includes a 3% Increase Per Year

# Sierra Country Club Piping System Level 3a Study 2022

## Appendix - Disclosure, Definitions & Calculations

### Percent Funded

Many reserve studies use the concept of "Percent Funded" to measure the reserve account balance against a theoretically perfect value. Percent Funded is often used as a measure of the "Financial Health" of an association. The assumption is, the higher the percentage, the greater the "Financial Health". The question of substance is simply: How much is enough? To answer the question, some understanding of Percent Funded is required. Percent Funded is the ratio of current cash reserves divided by the Fully Funded value at any instant in time. Fully Funded is defined as the present value of the sum of all Reserve Items divided by the expected life of each item. In essence, Fully Funded is simply the total of the average net present value of the association improvements. Reserve Items with a remaining life greater than the study life are not included in the calculation. For example; building framing, foundations, water lines, and other long-lived items that fall outside the envelope of the reserve study are excluded from the calculation. Percent Funded is then, the current reserve balance divided by the Fully Funded value multiplied by 100 (to give a percentage). The concept of percent funded is useful when the reserve study is comprehensive, but misleading when the reserve study is superficial or constrained. As a result, we recommend that the statement "Percent Funded" be used with caution.

### Washington State Homeowners and Condominium Act Compliance with RCW 64.38 and RCW 64.34 (2019)

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 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. A reserve component list (as applicable), including roofing, painting, paving, decks, siding, plumbing, windows, and any other reserve component that would cost more than one percent of the annual budget for major maintenance, repair, or replacement. If one of these reserve components is not included in the reserve study, the study should provide commentary explaining the basis for its exclusion. The study must also include quantities and estimates for the useful life of each reserve component, remaining useful life of each reserve component, and current repair and replacement cost for each component.

### Disclosures Required by RCW 64.90.550.

This Reserve Study meets all requirements of the Washington Uniform Common Interest Ownership Act.

- a) This Reserve Study was prepared with the assistance of a reserve study professional and that professional was independent;
- b) This Reserve Study includes all information required by RCW 64.90.550 Reserve Study – Contents; and
- c) 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 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 the association to (1) defer major maintenance, repair, or replacement, (2) increase future reserve contributions, (3) borrow funds to pay for major maintenance, repair, or replacement, or (4) impose special assessments for the cost of major maintenance, repair, or replacement.

### Reserve Study Assumptions

The below listed assumptions are implicit in this reserve study:

- Cost estimates and financial information are accurate and current.
- No unforeseen circumstances will cause a significant reduction of reserves.
- Sufficient comprehensive property insurance exists to protect from insurable risks.
- The association plans to continue to maintain the existing common areas and amenities.
- Reserve payments occur at the end of every calendar month.
- Expenses occur at the end of the expense year.

### Inflation Estimate

Inflation for the last year has been reviewed and a best fit regression analysis of the last 12 months has been used to determine future expense estimates. Based on the current economic conditions, the inflation rate will need to be closely monitored as this is a critical factor in reserve planning for future fund needs.

### Impact of Component Life

The projected life expectancy of the major components and the reserve funding needs of the association are closely tied.



# Sierra Country Club Piping System Level 3a Study 2022

## Appendix - Disclosure, Definitions & Calculations

Performing the appropriate routine maintenance for each major component generally increases the components' useful life, effectively moving the component expense into the future which reduces the reserve funding payments of the association. Failure to perform such maintenance can shorten the remaining useful lives of the major components, bringing the replacement expense closer to the present which increases the reserve funding payments of the association.

### Study Method

This reserve analysis study and the parameters under which it has been completed are based upon information provided to us in part by representatives of the association, its contractors, assorted vendors, specialist and independent contractors, the Community Association Institute, and various construction pricing and scheduling manuals including, but not limited to: Marshall & Swift Valuation Service, RS Means Facilities Maintenance & Repair Cost Data, RS Means Repair & Remodeling Cost Data, National Construction Estimator, National Repair & Remodel Estimator, Dodge Cost Manual and McGraw-Hill Professional. Additionally, costs are obtained from numerous vendor catalogues, actual quotations or historical costs, and our own experience in the field of property management and reserve study preparation.

It has been assumed, unless otherwise noted in this report, that all assets have been designed and constructed properly and that each estimated useful life will approximate that of the norm per industry standards and/or manufacturer's specifications. In some cases, estimates may have been used on assets, which have an indeterminable but potential liability to the association. The decision for the inclusion of these as well as all assets considered is left to the client.

We recommend that your reserve analysis study be updated on an annual basis due to fluctuating interest rates, inflationary changes, and the unpredictable nature of the lives of many of the assets under consideration. All of the information collected during our inspection of the association and computations made subsequently in preparing this reserve analysis study are retained in our computer files. Therefore, annual updates may be completed quickly and inexpensively each year.

### Items Beyond the Scope of this Report

Building or land appraisals for any purpose.

State or local zoning ordinance violations.

Building code violations.

Soils conditions, soils contamination or geological stability of site.

Engineering analysis or structural stability of site.

Air quality, asbestos, electromagnetic radiation, formaldehyde, lead, mercury, radon, water quality or other environmental hazards.

Invasions by pests, termites and any or all other destroying organisms, insects, birds, bats or animals to buildings or site.

This study is not a pest inspection.

Adequacy or efficiency of any system or component on site.

### Specifically excluded reserve items:

Septic systems and septic tanks.

Buried or concealed portions of swimming pools, pool liners, Jacuzzis and spas or similar items.

Items concealed by signs.

Missing or omitted information supplied by the Client for the purposes of reserve study preparation.

Hidden improvements such as sewer lines, water lines, irrigation lines or other buried or concealed items.

### Definitions:

#### Purpose of Distribution

Distribution will have no real meaning for a cash flow model. But the nature of the Fully Funded Model requires it. Annuity payments are based on an accumulation of reserves for each component in the study. Because a study will rarely start with 'perfect' funding for each component, a starting point for each year must be established.

At the start of the study (The beginning fiscal date)

The beginning balance is used for distribution

Going through the components ordered by remaining life and starting with the least remaining life, the balance is assigned to the components by the value of fully funded for each component. Fully funded for components with no

## Sierra Country Club Piping System Level 3a Study 2022 Appendix - Disclosure, Definitions & Calculations

life left is the replacement value of the component.

If after the last component there is still a balance remaining, the list of components is iterated again and the moneys are assigned at the replacement cost of each component.

If after the second pass on there are remaining funds then just the components being replaced are iterated and distribution is set to twice the replacement value.

If there are still funds after the above, they are considered excess funds.

In each following year of the projection

Money is accumulated from contributions and interest on deposit. Expenditures for replacement/repair of components is subtracted. This becomes the ending balance of the year. This money is distributed in the same manner as described above.

### Calculations:

#### Fully Funded Methods

##### Basic Fully Funded

There are two published methods of calculating Fully Funded. The first only considers the present value of a component. Present value in each period will change according to the inflation applied.

$$FullyFunded = ( Age / Useful Life ) * Present Value$$

##### Community Association Press Fully Funded

To account for inflation and interest earned on deposit the writers of '**RESERVE FUNDS: How & Why community Associations Invest Assets**' came up with:

$$Basic\_FF = ( Age / Useful Life ) * Present Value$$

$$CAI\_FF = Basic\_FF \\ + Basic\_FF / (1 + interest)^{Remaining Life} \\ - Basic\_FF / (1 + inflation)^{Remaining Life}$$