



5116 Heather Drive
Anacortes, WA 98221
360.588.9956

Funding Reserve Analysis *for* Birch Bay Village Community - Marina Level 3a Study 2023

May 10, 2023



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5116 Heather Drive
Anacortes, WA 9822
360.588.9956

May 10, 2023

Mr. Rick Tanner
Birch Bay Village Community
8055 Cowichan Road
Blaine WA 98230

Dear Mr. Rick Tanner,

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.

Average deficit or surplus from a Fully Funded Balance for the association and per member in dollar amount and percentage (based on equal percentage ownership for all units). This amount is calculated by subtracting the association's reserve account balance as of the date of the study (*Budget Year Beginning Date*) from the Fully Funded Balance. Also included is the same calculated amounts as projected at the end of the each study year (*Budget Year Ending Date*).

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:

- 0-50% range are considered in **Poor** condition and at a high risk of special assessments or deferred maintenance.
- 60-80% range are considered in **Good** condition and should strive to gradually increase reserves.
- 90-130% range are considered in **Excellent** 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.

Birch Bay Village Community - Marina Level 3a Study 2023

Executive Summary

Name	Birch Bay Village Community - Marina Level 3a Study 2023
Location	Blaine, WA
Contributing Members	1128
Year Built	1966
Fiscal Year Ends	2023
Depth of Study	Level 3a Study (<i>Without Site Visit</i>)
Date of Study	May 10, 2023
Last On-Site Inspection Date	April 26, 2022
Inflation Rate for Projections	8% Years 2023-2024/5% 2025>

Reserve Account Summary

Reported Current Annual Reserve Contribution	\$39,204 per year
Estimated Fiscal Year Starting Balance	-\$57,481
Fiscal Year Beginning Balance If Fully Funded	\$3,435,938 (<i>ideal amount in reserves</i>)
Average Deficit/Surplus Per Member (<i>As of Budget Year Beginning Date</i>)	-\$3,097 Percent Funded -2%



5 - Year Summary - Current vs. Baseline vs. Fully Funded (*As of Budget Year Ending Date*)

	Current Funding Model <i>Contribution amount supplied by Client</i>		Baseline Funded Model <i>Reserve account above \$0 within study timeframe</i>		Fully Funded Model Recommended <i>Achieve 100% funded within the 30 year study timeframe</i>	
2023	\$2,595,912	67%	\$3,380,157	87%	\$3,212,176	83%
2024	-\$741,904	-109%	\$104,395	15%	\$539,720	80%
2025	-\$733,968	-88%	\$176,312	21%	\$697,780	84%
2026	-\$684,582	-65%	\$291,655	28%	\$909,517	87%
2027	-\$922,901	-94%	\$120,851	12%	\$846,348	86%
	<i>Contribution increases vary</i>		<i>Contribution set for minimum to maintain positive balance</i>		<i>Model goal is to achieve 100% funded by year 30</i>	

The percentage figures above represent the percentage each model is above or below fully funded for the noted time period

Project Description

Birch Bay Village is located along the northern shore of Birch Bay in Washington State. Originally developed in the mid 1960's, the Community assets include a 250 boat marina, fuel dock and assorted items to support the facility.

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.

The association reported several projects planned for the coming year. 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 all models will include an inflation factor of 8% through 2024 then decrease to 5%).

Reserve Fund Status and Funding Plan Recommendation - Based on our findings, including the 2023 Special Assessment (**SA**) and additional June Deposit (**JD**) 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 - \$39,204 (\$2,649,787 with **SA & JD**)

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 - \$822,854

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 - \$655,000

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 31st. 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 31st.

Initial Reserves

Initial reserves for this reserve study are estimated to be -\$57,481 as of December 31, 2022. 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 April 26, 2022.

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

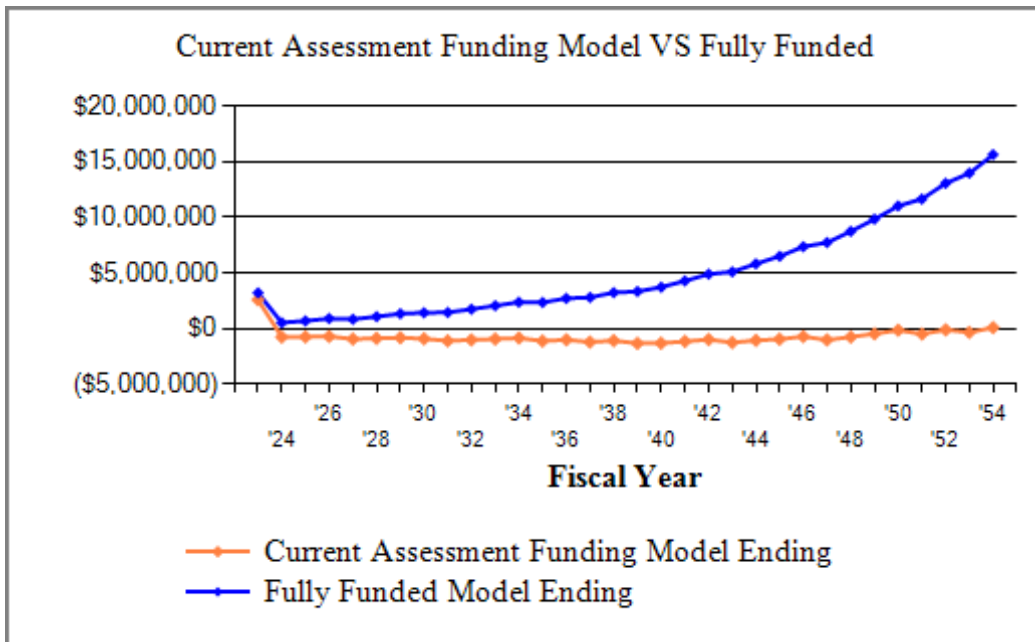
Birch Bay Village Community - Marina Level 3a Study 2023

Blaine, WA

Current Assessment Projection Summary

Report Date	May 10, 2023
Budget Year Beginning	January 1, 2023
Budget Year Ending	December 31, 2023
Total Units	1128

<i>Report Parameters</i>	
Interest Rate on Reserve Deposit	0.14%
Tax Rate Included in Interest Rate	
2023 Beginning Balance	-\$57,481



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.

Current Assessment Funding Model Summary of Calculations

Required Monthly Contribution	\$3,267.00
<i>Average \$2.90 per unit monthly</i>	
Average Net Monthly Interest Earned	\$300.53
Total Monthly Allocation to Reserves	\$3,567.53
<i>Average \$3.16 per unit monthly</i>	

**Birch Bay Village Community - Marina Level 3a Study 2023
Current Assessment Projection**

Beginning Balance: -\$57,481

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2023		2,332,200				
2023		278,383				
2023	39,204	3,606		2,595,912	3,865,798	67%
2024	42,340		3,380,157	-741,904	677,969	
2025	45,728		37,791	-733,968	834,252	
2026	49,386			-684,582	1,046,134	
2027	53,337		291,655	-922,901	981,817	
2028	57,604			-865,297	1,230,003	
2029	62,212			-803,085	1,500,554	
2030	67,189		168,813	-904,710	1,618,568	
2031	72,564		253,220	-1,085,366	1,664,869	
2032	78,369			-1,006,997	1,990,928	
2033	84,638			-922,359	2,345,431	
2034	91,410			-830,949	2,730,407	
2035	98,722		369,349	-1,101,576	2,760,201	
2036	106,620			-994,956	3,193,356	
2037	115,150		316,717	-1,196,522	3,331,380	
2038	124,362			-1,072,161	3,824,404	
2039	134,311		374,122	-1,311,972	3,965,574	
2040	145,056		130,943	-1,297,859	4,386,686	
2041	156,660			-1,141,199	4,984,360	
2042	169,193			-972,006	5,630,835	
2043	182,728		454,747	-1,244,025	5,852,012	
2044	197,346			-1,046,678	6,582,588	
2045	213,134		100,272	-933,816	7,266,307	
2046	230,185			-703,631	8,112,490	
2047	248,600		552,748	-1,007,779	8,444,741	
2048	268,488			-739,292	9,399,340	
2049	289,967			-449,325	10,428,287	
2050	313,164			-136,161	11,536,631	
2051	338,217		671,869	-469,813	12,024,276	
2052	365,274			-104,538	13,272,579	
2053	394,496		617,279	-327,321	13,967,509	
2054	426,056			98,735	15,379,300	1%

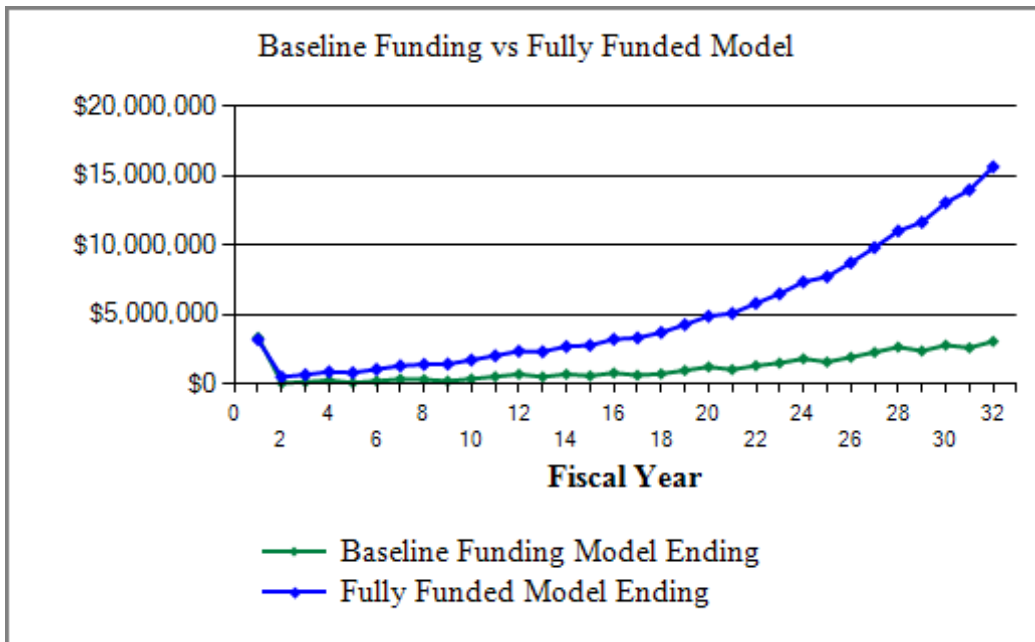
Birch Bay Village Community - Marina Level 3a Study 2023

Blaine, WA

Baseline Funding Model Summary

Report Date	May 10, 2023
Budget Year Beginning	January 1, 2023
Budget Year Ending	December 31, 2023
Total Units	1128

<i>Report Parameters</i>	
Annual Assessment Increase	5.00%
Interest Rate on Reserve Deposit	0.14%
Tax Rate Included in Interest Rate	
2023 Beginning Balance	-\$57,481



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

<i>Baseline Funding Model Summary of Calculations</i>	
Required Monthly Contribution	\$68,571.18
<i>Average \$60.79 per unit monthly</i>	
Average Net Monthly Interest Earned	\$350.08
Total Monthly Allocation to Reserves	\$68,921.25
<i>Average \$61.10 per unit monthly</i>	

**Birch Bay Village Community - Marina Level 3a Study 2023
Baseline Funding Model Projection**

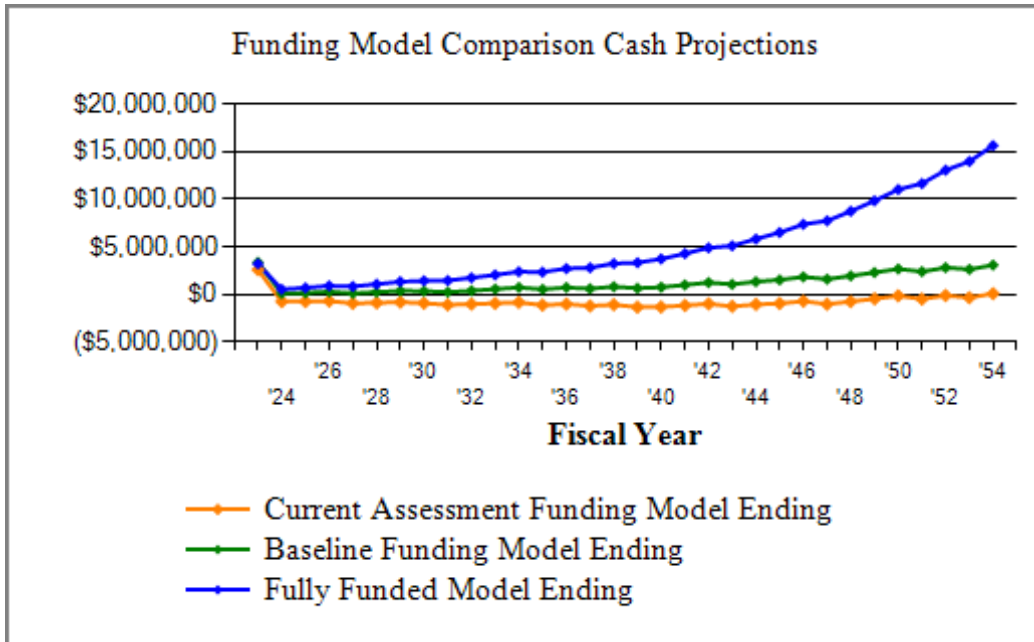
Beginning Balance: -\$57,481

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2023		2,332,200				
2023		278,383				
2023	822,854	4,201		3,380,157	3,865,798	87%
2024	104,316	79	3,380,157	104,395	677,969	15%
2025	109,532	176	37,791	176,312	834,252	21%
2026	115,008	334		291,655	1,046,134	28%
2027	120,759	92	291,655	120,851	981,817	12%
2028	126,797	265		247,913	1,230,003	20%
2029	133,137	448		381,498	1,500,554	25%
2030	139,794	404	168,813	352,882	1,618,568	22%
2031	146,783	251	253,220	246,696	1,664,869	15%
2032	154,122	463		401,281	1,990,928	20%
2033	161,828	685		563,794	2,345,431	24%
2034	169,920	919		734,633	2,730,407	27%
2035	178,416	647	369,349	544,347	2,760,201	20%
2036	187,337	905		732,589	3,193,356	23%
2037	196,704	732	316,717	613,307	3,331,380	18%
2038	206,539	1,016		820,862	3,824,404	21%
2039	216,866	790	374,122	664,396	3,965,574	17%
2040	227,709	920	130,943	762,083	4,386,686	17%
2041	239,094	1,249		1,002,426	4,984,360	20%
2042	251,049	1,595		1,255,070	5,630,835	22%
2043	263,602	1,321	454,747	1,065,246	5,852,012	18%
2044	276,782	1,702		1,343,730	6,582,588	20%
2045	290,621	1,962	100,272	1,536,041	7,266,307	21%
2046	305,152	2,383		1,843,576	8,112,490	23%
2047	320,409	2,051	552,748	1,613,289	8,444,741	19%
2048	336,430	2,515		1,952,234	9,399,340	21%
2049	353,251	3,003		2,308,488	10,428,287	22%
2050	370,914	3,515		2,682,918	11,536,631	23%
2051	389,460	3,113	671,869	2,403,621	12,024,276	20%
2052	408,933	3,677		2,816,231	13,272,579	21%
2053	429,379	3,406	617,279	2,631,738	13,967,509	19%
2054	450,848	4,029		3,086,615	15,379,300	20%

Birch Bay Village Community - Marina Level 3a Study 2023
 Blaine, WA
Fully Funded Model Summary

Report Date	May 10, 2023
Budget Year Beginning	January 1, 2023
Budget Year Ending	December 31, 2023
Total Units	1128

Report Parameters	
Interest Rate on Reserve Deposit	0.14%
Tax Rate Included in Interest Rate	
2023 Beginning Balance	-\$57,481



The **Component Funding 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.

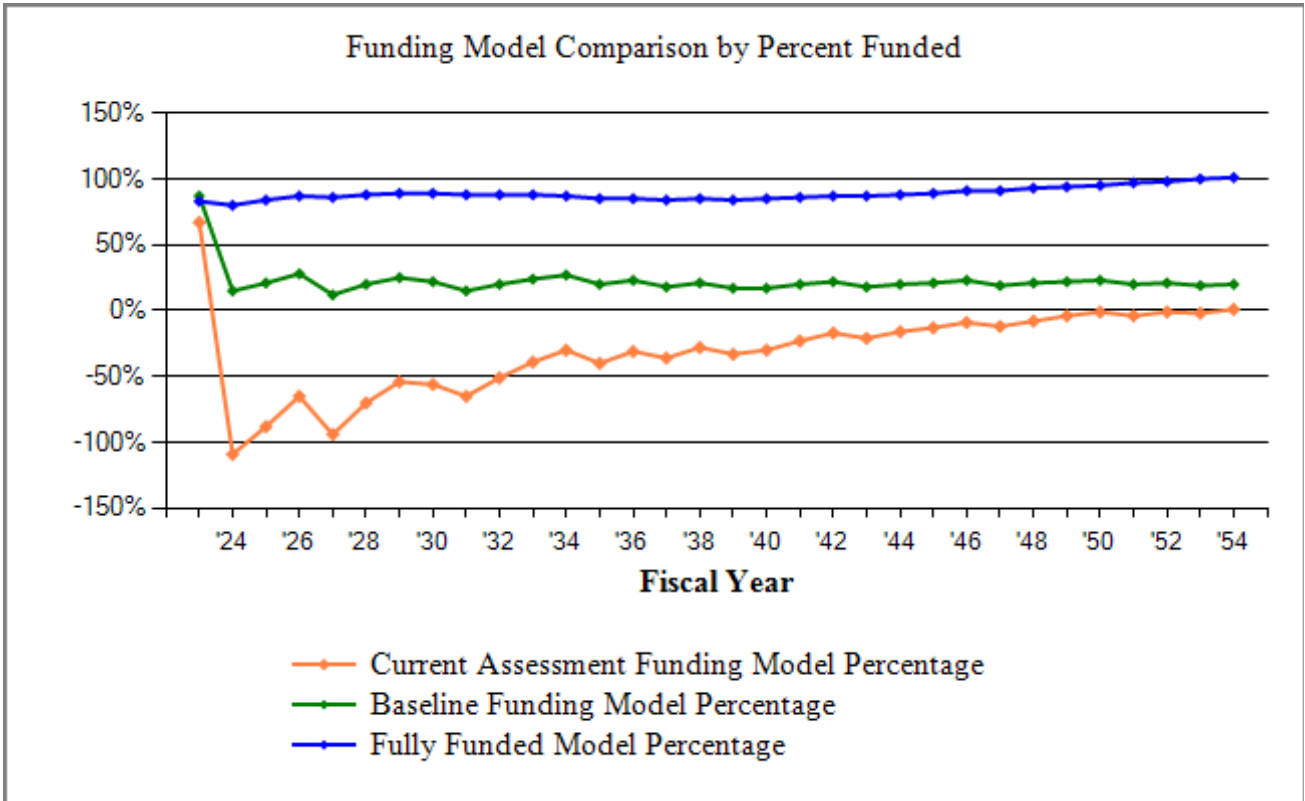
Fully Funded Model Summary of Calculations	
Required Monthly Contribution	\$54,583.33
<i>Average \$48.39 per unit monthly</i>	
Average Net Monthly Interest Earned	\$339.46
Total Monthly Allocation to Reserves	\$54,922.80
<i>Average \$48.69 per unit monthly</i>	

**Birch Bay Village Community - Marina Level 3a Study 2023
Fully Funded Model Projection**

Beginning Balance: -\$57,481

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2023		2,332,200				
2023		278,383				
2023	655,000	4,074		3,212,176	3,865,798	83%
2024	707,400	301	3,380,157	539,720	677,969	80%
2025	195,000	851	37,791	697,780	834,252	84%
2026	210,600	1,137		909,517	1,046,134	87%
2027	227,448	1,038	291,655	846,348	981,817	86%
2028	238,820	1,367		1,086,535	1,230,003	88%
2029	250,761	1,712		1,339,009	1,500,554	89%
2030	263,299	1,839	168,813	1,435,334	1,618,568	89%
2031	276,464	1,866	253,220	1,460,444	1,664,869	88%
2032	290,288	2,266		1,752,998	1,990,928	88%
2033	304,802	2,687		2,060,487	2,345,431	88%
2034	320,042	3,129		2,383,659	2,730,407	87%
2035	336,044	3,077	369,349	2,353,431	2,760,201	85%
2036	365,280	3,574		2,722,285	3,193,356	85%
2037	397,060	3,671	316,717	2,806,299	3,331,380	84%
2038	431,604	4,259		3,242,162	3,824,404	85%
2039	469,153	4,374	374,122	3,341,567	3,965,574	84%
2040	509,970	4,885	130,943	3,725,479	4,386,686	85%
2041	554,337	5,640		4,285,455	4,984,360	86%
2042	602,564	6,461		4,894,480	5,630,835	87%
2043	654,987	6,717	454,747	5,101,437	5,852,012	87%
2044	711,971	7,687		5,821,095	6,582,588	88%
2045	773,913	8,601	100,272	6,503,337	7,266,307	89%
2046	841,243	9,749		7,354,329	8,112,490	91%
2047	914,431	10,222	552,748	7,726,234	8,444,741	91%
2048	993,987	11,578		8,731,799	9,399,340	93%
2049	1,080,464	13,052		9,825,314	10,428,287	94%
2050	1,174,464	14,655		11,014,434	11,536,631	95%
2051	1,276,642	15,457	671,869	11,634,665	12,024,276	97%
2052	1,387,710	17,352		13,039,727	13,272,579	98%
2053	1,508,441	18,547	617,279	13,949,435	13,967,509	100%
2054	1,639,675	20,786		15,609,896	15,379,300	101%

**Birch Bay Village Community - Marina Level 3a Study 2023
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.

**Birch Bay Village Community - Marina Level 3a Study 2023
Annual Expenditure Detail**

Description	Expenditures
<i>No Replacement in 2023</i>	
Replacement Year 2024	
Dock Replacement - Complete by 2024	3,380,157
Total for 2024	<u>\$3,380,157</u>
Replacement Year 2025	
Miscellaneous Major Maintenance & Repair	37,791
Total for 2025	<u>\$37,791</u>
<i>No Replacement in 2026</i>	
Replacement Year 2027	
Dredging	208,325
Fuel Dock Underground Tank Replacement	83,330
Total for 2027	<u>\$291,655</u>
<i>No Replacement in 2028</i>	
<i>No Replacement in 2029</i>	
Replacement Year 2030	
Piling Replacement - Outside of Dock Replacement	168,813
Total for 2030	<u>\$168,813</u>
Replacement Year 2031	
Dredging	253,220
Total for 2031	<u>\$253,220</u>
<i>No Replacement in 2032</i>	
<i>No Replacement in 2033</i>	
<i>No Replacement in 2034</i>	
Replacement Year 2035	
Dredging	307,791
Miscellaneous Major Maintenance & Repair	61,558
Total for 2035	<u>\$369,349</u>

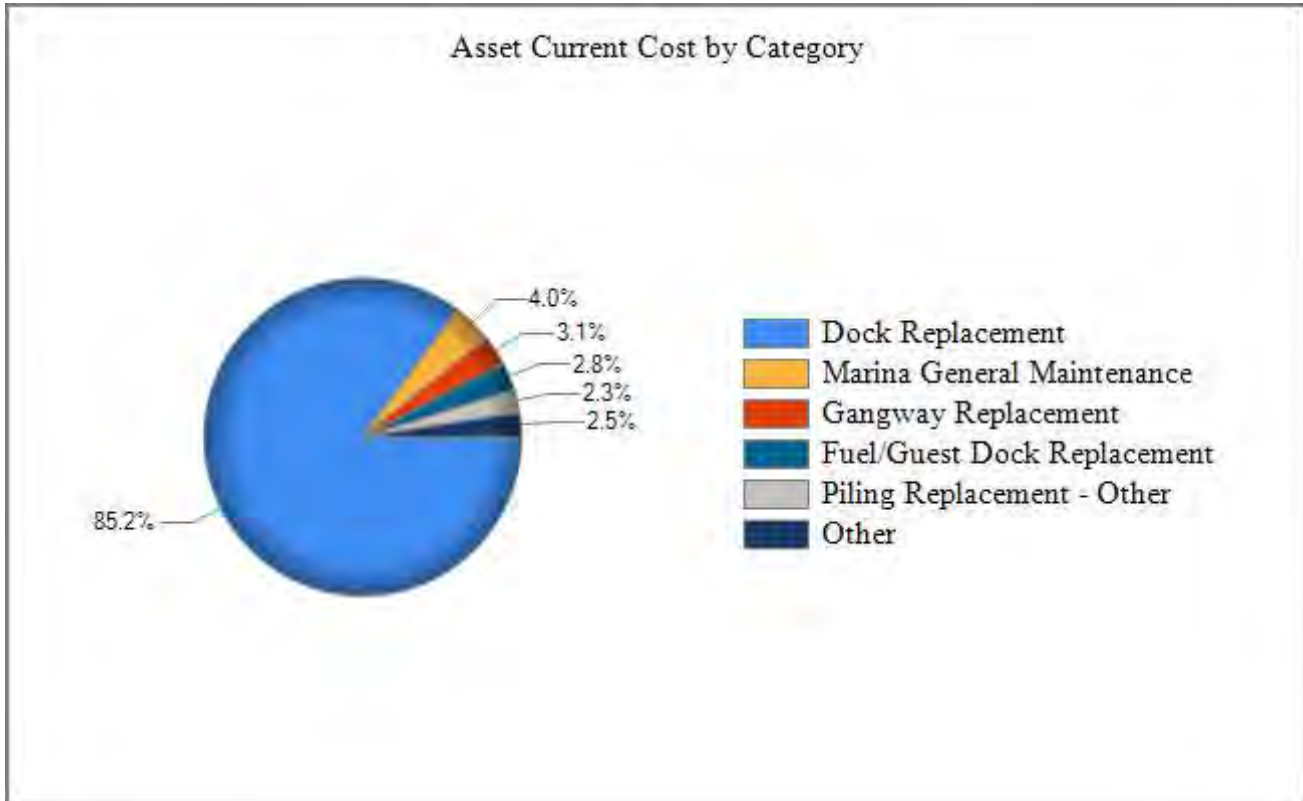
**Birch Bay Village Community - Marina Level 3a Study 2023
Annual Expenditure Detail**

Description	Expenditures
<i>No Replacement in 2036</i>	
Replacement Year 2037	
Gangway Replacement	316,717
Total for 2037	<u>\$316,717</u>
<i>No Replacement in 2038</i>	
Replacement Year 2039	
Dredging	374,122
Total for 2039	<u>\$374,122</u>
Replacement Year 2040	
Launch Ramp Dock Replacement	130,943
Total for 2040	<u>\$130,943</u>
<i>No Replacement in 2041</i>	
<i>No Replacement in 2042</i>	
Replacement Year 2043	
Dredging	454,747
Total for 2043	<u>\$454,747</u>
<i>No Replacement in 2044</i>	
Replacement Year 2045	
Miscellaneous Major Maintenance & Repair	100,272
Total for 2045	<u>\$100,272</u>
<i>No Replacement in 2046</i>	
Replacement Year 2047	
Dredging	552,748
Total for 2047	<u>\$552,748</u>
<i>No Replacement in 2048</i>	
<i>No Replacement in 2049</i>	

**Birch Bay Village Community - Marina Level 3a Study 2023
Annual Expenditure Detail**

Description	Expenditures
<i>No Replacement in 2050</i>	
Replacement Year 2051	
Dredging	671,869
Total for 2051	<u>\$671,869</u>
<i>No Replacement in 2052</i>	
Replacement Year 2053	
Guest/Fuel Dock Replacement	617,279
Total for 2053	<u>\$617,279</u>
<i>No Replacement in 2054</i>	

Birch Bay Village Community - Marina Level 3a Study 2023
Asset Current Cost by Category



The above chart illustrates the current cost breakdown percentage of the Component Categories in this reserve study (highest percentage components listed at top, items less than 2% are listed as "Other"). Special attention should be given to those component categories which take up a bulk of the % of the current cost as these may require significant planning to adequately budget for their replacement. Refer to the Cash Flow Projections and the Annual Expenditure Report for the projected timeline of expected expenditures.

Birch Bay Village Community - Marina Level 3a Study 2023 Detail Report by Category

Dredging Permits

Asset ID	1001	1 Allowance	
		Asset Actual Cost	
Category	Permits	Percent Replacement	100%
Placed in Service	January 2022	Future Cost	
No Useful Life			



Our understanding is all permitting, dredging, piling and dock replacement will be completed by the end of 2024.

Dredging - 2027

Asset ID	1002	1 Allowance @	\$162,000.00
		Asset Actual Cost	\$162,000.00
Category	Dredging	Percent Replacement	100%
Placed in Service	General Maintenance	Future Cost	\$208,324.87
Useful Life	June 2022		
Adjustment	4		
Replacement Year	1		
Remaining Life	2027		
	4		



No update for 2023

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Dredging continued...

Due to the lateral movement of the silt and sand along the beach area, the protrusion of the entrance jetties deposits the sand mixture across the marina entrance reducing the depth in this area. The amount of sand build up requires dredging of this area in three year cycles to maintain adequate depth. The plan depicted above was developed in 2005 and has been used for previous dredging projects.

Dock Replacement - Complete by 2024 - 2024

Asset ID	1003	1 Allowance @	\$3,129,775.00
Category	Dock Replacement	Asset Actual Cost	\$3,129,775.00
Placed in Service	June 1982	Percent Replacement	100%
Useful Life	50	Future Cost	\$3,380,157.00
Adjustment	-8		
Replacement Year	2024		
Remaining Life	1		



Our understanding is the phased dock replacement project will be completed in 2023 and 2024 with the final balance due in 2024 in the amount of \$3,129,775.

Dock Replacement - B - 2071

Asset ID	1004	1 Allowance @	\$983,595.00
Category	Dock Replacement	Asset Actual Cost	\$983,595.00
Placed in Service	June 2021	Percent Replacement	100%
Useful Life	50	Future Cost	\$10,823,596.17
Replacement Year	2071		
Remaining Life	48		

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Dock Replacement - B continued...



No update for 2023

Guest/Fuel Dock Replacement - 2053

Asset ID	1008	1 Allowance @	\$135,000.00
Category	Guest Dock Replacement	Asset Actual Cost	\$135,000.00
Placed in Service	June 2018	Percent Replacement	100%
Useful Life	35	Future Cost	\$617,279.21
Replacement Year	2053		
Remaining Life	30		



No update for 2023

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Fuel Dock Underground Tank Replacement - 2027

Asset ID	1010	1 Allowance @	\$64,800.00
Category	Fuel Tank/Pump	Asset Actual Cost	\$64,800.00
Placed in Service	June 1987	Percent Replacement	100%
Useful Life	40	Future Cost	\$83,329.95
Replacement Year	2027		
Remaining Life	4		



No update for 2023

The fuel tank is an underground double walled unit. Based on information provided we understand the tank has been tested per prescribed requirements and appears to be in serviceable condition with no concerns noted at this time.

Launch Ramp Dock Replacement - 2040

Asset ID	1012	1 Allowance @	\$54,000.00
Category	Docks	Asset Actual Cost	\$54,000.00
Placed in Service	June 2013	Percent Replacement	100%
Useful Life	25	Future Cost	\$130,942.54
Adjustment	2		
Replacement Year	2040		
Remaining Life	17		

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Launch Ramp Dock Replacement continued...



No update for 2023

Our understanding is the launch ramp float was rebuilt in 2013 and appears to be in good condition.

Gangway Replacement - 2037

Asset ID	1013	1 Allowance @	\$151,200.00
	(null)	Asset Actual Cost	\$151,200.00
Category	Gangway Replacement	Percent Replacement	100%
Placed in Service	June 2004	Future Cost	\$316,716.65
Useful Life	30		
Adjustment	3		
Replacement Year	2037		
Remaining Life	14		



No update for 2023

All of the gangways appear to be modern aluminum construction with no deterioration noted.

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Bridge to Gangway Replacement

Asset ID	1014	1 Allowance	
Category	Bridge Replacement	Asset Actual Cost	
Placed in Service	June 1966	Percent Replacement	100%
No Useful Life		Future Cost	



No update however assume this is part of the overall dock replacement.

It was reported the bridge structures that provide access to the gangways for docks B,C & D are wood structures and will be replaced this year.

Piling Replacement - Outside of Dock Replacement - 2030

Asset ID	1015	21 each	@ \$5,400.00
Category	Pilings	Asset Actual Cost	\$113,400.00
Placed in Service	June 1982	Percent Replacement	100%
Useful Life	40	Future Cost	\$168,813.46
Adjustment	8		
Replacement Year	2030		
Remaining Life	7		

No update for 2023

Funds are included for replacement of piling other than those associated with the various dock replacement scheduled.

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Marina Restroom Refurbish

Asset ID	1016	1 Allowance	
	(null)	Asset Actual Cost	
Category	Building Repair	Percent Replacement	100%
Placed in Service	June 2013	Future Cost	
Useful Life	15		
Replacement Year	2028		
Remaining Life	5		



No update for 2023

It was reported the marina restroom refurbish will be funded from General Assets.

Maintenance Boat

Asset ID	1017	1 Allowance	
	Maintenance Boat	Asset Actual Cost	
Category	General Maintenance	Percent Replacement	100%
Placed in Service	June 2013	Future Cost	
No Useful Life			



No update for 2023

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Maintenance Boat continued...

It was reported the maintenance boat will be funded from General Assets.

Maintenance Boat Motor Replacement

Asset ID	1018	1 Allowance	
	(null)	Asset Actual Cost	
Category	Maintenance Boat	Percent Replacement	100%
Placed in Service	June 2013	Future Cost	
No Useful Life			

No update for 2023

It was reported the maintenance boat motor will be funded from General Assets.

Miscellaneous Major Maintenance & Repair - 2025

Asset ID	1019	1 Allowance @ \$32,400.00	
		Asset Actual Cost	\$32,400.00
Category	General Maintenance	Percent Replacement	100%
Placed in Service	June 2012	Future Cost	\$37,791.36
Useful Life	10		
Adjustment	3		
Replacement Year	2025		
Remaining Life	2		

No update for 2023

The budget includes a miscellaneous maintenance and repair fund for other items within the marina facility.

Electric System Replacement

Asset ID	1020	1 Allowance	
		Asset Actual Cost	
Category	Marina Water & Utilities	Percent Replacement	100%
Placed in Service	June 2006	Future Cost	
No Useful Life			

No update however assume this is part of the overall dock replacement.

**Birch Bay Village Community - Marina Level 3a Study 2023
Detail Report by Category**

Electric System Replacement continued...

As noted previously all marine utilities will be replaced at time of dock replacement.

Water Line Repair/Replacement

Asset ID	1021	1 Allowance	
Category	Marina Water & Utilities	Asset Actual Cost	
Placed in Service	June 2010	Percent Replacement	100%
No Useful Life		Future Cost	

No update however assume this is part of the overall dock replacement.

As noted previously all marine utilities will be replaced at time of dock replacement.

**Birch Bay Village Community - Marina Level 3a Study 2023
Expenses by Item and by Calender Year**

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Bridge to Gangway Replacement	<i>Unfunded</i>									
Dock Replacement - B	<i>Unfunded</i>									
Dock Replacement - Complete by 2024		3,380,157								
Dredging					208,325				253,220	
Dredging Permits	<i>Unfunded</i>									
Electric System Replacement	<i>Unfunded</i>									
Fuel Dock Underground Tank Replacement					83,330					
Gangway Replacement	<i>Unfunded</i>									
Guest/Fuel Dock Replacement	<i>Unfunded</i>									
Launch Ramp Dock Replacement	<i>Unfunded</i>									
Maintenance Boat	<i>Unfunded</i>									
Maintenance Boat Motor Replacement	<i>Unfunded</i>									
Marina Restroom Refurbish	<i>Unfunded</i>									
Miscellaneous Major Maintenance & Repair			37,791							
Piling Replacement - Outside of Dock Replac..								168,813		
Water Line Repair/Replacement	<i>Unfunded</i>									
Year Total:		3,380,157	37,791		291,655			168,813	253,220	

Birch Bay Village Community - Marina Level 3a Study 2023
Expenses by Item and by Calender Year

Description	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Bridge to Gangway Replacement	<i>Unfunded</i>									
Dock Replacement - B										
Dock Replacement - Complete by 2024										
Dredging			307,791				374,122			
Dredging Permits	<i>Unfunded</i>									
Electric System Replacement	<i>Unfunded</i>									
Fuel Dock Underground Tank Replacement										
Gangway Replacement				316,717						
Guest/Fuel Dock Replacement										
Launch Ramp Dock Replacement								130,943		
Maintenance Boat	<i>Unfunded</i>									
Maintenance Boat Motor Replacement	<i>Unfunded</i>									
Marina Restroom Refurbish	<i>Unfunded</i>									
Miscellaneous Major Maintenance & Repair			61,558							
Piling Replacement - Outside of Dock Replac..										
Water Line Repair/Replacement	<i>Unfunded</i>									
Year Total:			369,349		316,717		374,122	130,943		

Birch Bay Village Community - Marina Level 3a Study 2023
Expenses by Item and by Calender Year

Description	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Bridge to Gangway Replacement	<i>Unfunded</i>									
Dock Replacement - B										
Dock Replacement - Complete by 2024										
Dredging	454,747				552,748				671,869	
Dredging Permits	<i>Unfunded</i>									
Electric System Replacement	<i>Unfunded</i>									
Fuel Dock Underground Tank Replacement										
Gangway Replacement										
Guest/Fuel Dock Replacement										
Launch Ramp Dock Replacement										
Maintenance Boat	<i>Unfunded</i>									
Maintenance Boat Motor Replacement	<i>Unfunded</i>									
Marina Restroom Refurbish	<i>Unfunded</i>									
Miscellaneous Major Maintenance & Repair			100,272							
Piling Replacement - Outside of Dock Replac..										
Water Line Repair/Replacement	<i>Unfunded</i>									
Year Total:	454,747		100,272		552,748				671,869	

**Birch Bay Village Community - Marina Level 3a Study 2023
Expenses by Item and by Calender Year**

Description	2053	2054
Bridge to Gangway Replacement	<i>Unfunded</i>	
Dock Replacement - B		
Dock Replacement - Complete by 2024		
Dredging		
Dredging Permits	<i>Unfunded</i>	
Electric System Replacement	<i>Unfunded</i>	
Fuel Dock Underground Tank Replacement		
Gangway Replacement		
Guest/Fuel Dock Replacement	617,279	
Launch Ramp Dock Replacement		
Maintenance Boat	<i>Unfunded</i>	
Maintenance Boat Motor Replacement	<i>Unfunded</i>	
Marina Restroom Refurbish	<i>Unfunded</i>	
Miscellaneous Major Maintenance & Repair		
Piling Replacement - Outside of Dock Replace..		
Water Line Repair/Replacement	<i>Unfunded</i>	
Year Total:	617,279	



Reserve Study Disclosure Form

In Compliance with RCW 64.34.308 and RCW 64.38.025 (2019)

Name of Association: Birch Bay Village Community - Marina

Current Year Reported Budget Contribution to Reserves: \$39,204

Recommended 2023 Contribution to Reserves, per study: \$655,000

Funding Plan Used for Recommendations: Full Funding

Projected Year End Reserve Balance at Current Funding Level: \$2,595,912
(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: \$3,865,798

5 Year Balances

Estimates Per Study:	2023	2024	2025	2026	2027
Projected Year End Reserve Balances at Current Contribution Level	\$2,595,912	-\$741,904	-\$733,968	-\$684,582	-\$922,901
<i>Average Deficit/Surplus Per Member: \$-\$3,097 Percent Funded -2%</i>					
Projected Year End Reserve Balances at Recommended Funding Contribution Level:	\$3,212,176	\$539,720	\$697,780	\$909,517	\$846,348
Projected Year End Fully Funded Reserves If Fully Funded:	\$3,865,798	\$677,969	\$834,252	\$1,046,134	\$981,817
Percent Reserve is Fully Funded at Current Funding Level:	67%	-109%	-88%	-65%	-94%

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 2023 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 _____

Birch Bay Village Community - Marina Level 3a Study 2023

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.

Birch Bay Village Community - Marina Level 3a Study 2023

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

Birch Bay Village Community - Marina Level 3a Study 2023 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:

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

$$CAI_FF = Basic_FF \\ + Basic_FF / (1 + interest)^{Remaining Life} \\ - Basic_FF / (1 + inflation)^{Remaining Life}$$