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## “Full” Reserve Study



## Newport Yacht Basin Bellevue, WA

**Report #: 26994-0**  
**For Period Beginning: January 1, 2015**  
**Expires: December 31, 2015**

**Date Prepared: July 21, 2014**



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**Hello, and welcome to your Reserve Study!**

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

- 1) **The Reserve Component List** (the “Scope and Schedule” of your Reserve projects) – telling you what your association is Reserving for, what condition they are in now, and what they'll cost to replace.
- 2) **An Evaluation of your current Reserve Fund Size and Strength** (Percent Funded). This tells you your financial starting point, revealing your risk of deferred maintenance and special assessments.
- 3) **A Recommended Multi-Year Reserve Funding Plan**, answering the question... “What do we do now?”

**More Questions?**

Visit our website at [www.ReserveStudy.com](http://www.ReserveStudy.com) or call us at:

253/661-5437

Relax, it's from



# Table of Contents

<b>3- Minute Executive Summary.....</b>	<b>i</b>
Reserve Study Summary .....	i
Reserve Component List – Table 1.....	ii
<b>Introduction, Objectives, and Methodology.....</b>	<b>1</b>
Which Physical Assets are Funded by Reserves? .....	2
How do we establish Useful Life and Remaining Useful Life estimates? .....	2
How do we establish Current Repair/Replacement Cost Estimates?.....	2
How much Reserves are enough? .....	3
How much should we contribute?.....	4
What is our Recommended Funding Goal?.....	4
<b>Projected Expenses.....</b>	<b>6</b>
Expense Graph – Figure 1.....	6
<b>Reserve Fund Status &amp; Recommended Funding Plan.....</b>	<b>7</b>
Funding Plan Graph – Figure 2.....	7
Cash Flow Graph – Figure 3.....	8
% Funded Graph – Figure 4.....	8
<b>Table Descriptions.....</b>	<b>9</b>
Reserve Component List Detail – Table 2.....	10
Contribution & Fund Breakdown – Table 3.....	11
Component Significance – Table 4.....	12
30 Year Reserve Plan Summary – Table 5.....	13
30 Year Reserve Plan Year by Year Detail – Table 6.....	14
<b>Accuracy, Limitations, and Disclosures.....</b>	<b>20</b>
<b>Terms and Definitions.....</b>	<b>21</b>
<b>Component Details.....</b>	<b>Appendix</b>

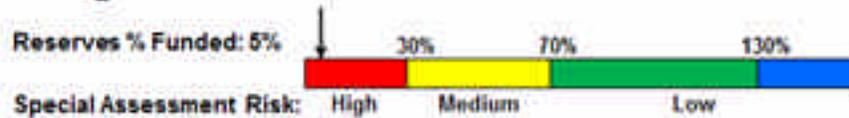
# 3- Minute Executive Summary

**Association:** Newport Yacht Basin **#:** 26994-0  
**Location:** Bellevue, WA **# of Units:** 411  
**Report Period:** January 1, 2015 through December 31, 2015

**Findings/Recommendations as-of 1/1/2015:**

Projected Starting Reserve Balance:.....	\$100,000
Current Fully Funded Reserve Balance: .....	\$2,182,760
Average Reserve Deficit (Surplus) Per Unit:.....	\$5,068
100% 2015 Annual “Full Funding” Contributions: .....	\$269,000
Baseline contributions (min to keep Reserves above \$0):.....	\$259,800
Recommended 2015 Special Assessment for Reserves:.....	\$0

Most Recent Budgeted Reserve Contribution Rate:..... \$



**Economic Assumptions:**

**Net Annual “After Tax” Interest Earnings Accruing to Reserves.....**1.00%  
**Annual Inflation Rate .....**3.00%

- This is a “Full” Reserve Study, based on our site inspection on April 22, 2014. This study was prepared by a credentialed Reserve Specialist (RS™).
- Your Reserve Fund is currently 5% Funded. This means the association’s special assessment & deferred maintenance risk is currently high. The objective of your multi-year Funding Plan is to fund your Reserves to a level where you will enjoy a low risk of such Reserve cash flow problems.
- Based on this starting point and your anticipated future expenses, our recommendation is to budget reserve contributions of \$269,000 for fiscal year 2015 with annual increases thereafter – see Table 5 herein. The 100% “Full” contribution rate is designed to achieve the funding objective *by the end of* our 30-year report scope. See photo appendix for component details; the basis of our assumptions.

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Cost Estimate
105	Bulkhead A & B - Replace	50	39	\$165,000
106	Bulkhead D North - Replace	50	49	\$85,000
107	Bulkhead D East - Replace	50	0	\$42,500
108	Bulkhead E North - Replace	50	1	\$37,500
109	Wave Attenuator	50	5	\$65,000
111	Marina - Dredge	25	10	\$55,000
120	Piling, Caps, Docks - Inspect	5	0	\$7,500
121	Piling, Caps - Replace	1	0	\$90,000
130	Docks A, Open - Replace	25	14	\$152,750
131	Docks B, Open - Replace	25	19	\$143,000
132	Docks C, Open - Replace	25	0	\$125,450
133	Docks D, Open - Replace	25	10	\$14,300
135	Docks F & G, Open - Replace	30	0	\$50,000
137	Docks A, Covered - Replace	50	14	\$92,500
138	Docks B, Covered - Replace	50	15	\$110,500
139	Docks C, Covered - Replace	50	16	\$415,000
140	Docks D, Covered - Replace	50	17	\$295,000
141	Docks E, Covered - Replace	50	18	\$205,000
142	Docks F, Covered - Replace	50	19	\$425,000
143	Docks G, Covered - Replace	50	20	\$887,500
144	Common Social Dock - Replace	25	14	\$97,500
300	Parking Lot - Resurface	30	30	\$84,000
22	<b>Total Funded Components</b>			

**Note 1:** Yellow highlighted line items are expected to require attention in the initial year, green highlighted items are expected to occur within the first five years.

Cross reference component numbers with photographic inventory appendix.

## Introduction



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

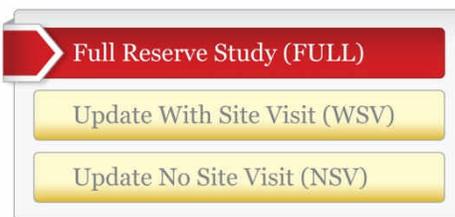
The foundation of this and every Reserve Study is your Reserve Component List (what you are reserving for). This is because the Reserve Component List defines the *scope and schedule* of all your anticipated upcoming Reserve projects. Based on that List and your starting balance, we calculate the association’s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



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

## Methodology

LEVELS OF SERVICE



For this [Full Reserve Study](#), we started with a review of your Governing Documents, recent Reserve expenditures, an evaluation of how expenditures are handled (ongoing maintenance vs Reserves), and research into any well-established association precedents.

We performed an on-site inspection to quantify and evaluate your common areas, creating your Reserve Component List *from scratch*.

### *Which Physical Assets are Funded by Reserves?*

There is a national-standard four-part test to determine which expenses should appear in your Reserve Component List. First, it must be a common area maintenance responsibility. Second, the component must have a limited life. Third, the remaining life must be predictable (or it by definition is a *surprise* which cannot be accurately anticipated). Fourth, the component must be above a minimum threshold cost (often between .5% and 1% of an association's total budget). This limits Reserve Components to major, predictable expenses. Within this framework, it is inappropriate to include *lifetime* components, unpredictable expenses (such as damage due to fire, flood, or earthquake), and expenses more appropriately handled from the Operational Budget or as an insured loss.



RESERVE COMPONENT "FOUR-PART TEST"

### *How do we establish Useful Life and Remaining Useful Life estimates?*

- 1) Visual Inspection (observed wear and age)
- 2) Association Reserves database of experience
- 3) Client History (install dates & previous life cycle information)
- 4) Vendor Evaluation and Recommendation

### *How do we establish Current Repair/Replacement Cost Estimates?*

In this order...

- 1) Actual client cost history, or current proposals
- 2) Comparison to Association Reserves database of work done at similar associations
- 3) Vendor Recommendations
- 4) Reliable National Industry cost estimating guidebooks

### *How much Reserves are enough?*

Reserve adequacy is not measured in cash terms. Reserve adequacy is found when the *amount* of current Reserve cash is compared to Reserve component deterioration (the *needs of the association*). Having *enough* means the association can execute its projects in a timely manner with existing Reserve funds. Not having *enough* typically creates deferred maintenance or special assessments.

Adequacy is measured in a two-step process:

- 1) Calculate the *value of deterioration* at the association (called Fully Funded Balance, or FFB).
- 2) Compare that to the Reserve Fund Balance, and express as a percentage.



Each year, the *value of deterioration* at the association changes. When there is more deterioration (as components approach the time they need to be replaced), there should be more cash to offset that deterioration and prepare for the expenditure. Conversely, the *value of deterioration* shrinks after projects are accomplished. The *value of deterioration* (the FFB) changes each year, and is a moving but predictable target.

There is a high risk of special assessments and deferred maintenance when the Percent Funded is *weak*, below 30%. Approximately 30% of all associations are in this high risk range. While the 100% point is Ideal (indicating Reserve cash is equal to the *value of deterioration*), a Reserve Fund in the 70% -130% range is considered strong (low risk of special assessment).

Measuring your Reserves by Percent Funded tells how well prepared your association is for upcoming Reserve expenses. New buyers should be very aware of this important disclosure!

*How much should we contribute?*



**RESERVE FUNDING PRINCIPLES**

According to National Reserve Study Standards, there are four Funding Principles to balance in developing your Reserve Funding Plan. Our first objective is to design a plan that provides you with sufficient cash to perform your Reserve projects on time. Second, a stable contribution is desirable because it keeps these naturally irregular expenses from unsettling the budget.

Reserve contributions that are evenly distributed over current and future owners enable each owner to pay their fair share of the association’s Reserve expenses over the years. And finally, we develop a plan that is fiscally responsible and safe for Boardmembers to recommend to their association. Remember, it is the Board’s job to provide for the ongoing care of the common areas. Boardmembers invite liability exposure when Reserve contributions are inadequate to offset ongoing common area deterioration.

*What is our Recommended Funding Goal?*

Maintaining the Reserve Fund at a level equal to the *value* of deterioration is called “Full Funding” (100% Funded). As each asset ages and becomes “used up”, the Reserve Fund grows proportionally. **This is simple, responsible, and our recommendation.** Evidence shows that associations in the 70-130% range *enjoy a low risk of special assessments or deferred maintenance.*



**FUNDING OBJECTIVES**

Allowing the Reserves to fall close to zero, but not below zero, is called Baseline Funding. Doing so allows the Reserve Fund to drop into the 0-30% range, where there is a high risk of special assessments & deferred maintenance. Since Baseline Funding still provides for the timely execution of all Reserve projects, and only the “margin of safety” is different, Baseline Funding contributions average only 10% - 15% less than Full Funding contributions. Threshold Funding is the title of all other Cash or Percent Funded objectives *between* Baseline Funding and Full Funding.

## **Site Inspection Notes**

During our site visit on April 22, 2014, we started with a brief meeting with the onsite manager and a representative of the board of directors. We then started the site inspection beginning with the A dock and working our way through the common areas of the marina. We visually inspected all visible common areas while compiling a photographic inventory, noting: current condition, make & model information where appropriate, apparent levels of care and maintenance, exposure to weather elements and other factors that may affect the components useful life. No underwater inspection, destructive testing or similar was conducted in conjunction with our budget model formulation.

Project history information provided was minimal over the last several years. A detailed record system with good accounting memo notes should be employed to better understand life cycles and expense patterns.

Further we recommend a systematic regular comprehensive inspection of the marina including underwater to more closely assess the components below the water line. Mapping of all piling locations and sizes can be performed in conjunction.

### Projected Expenses

While this Reserve Study looks forward 30 years, we have no expectation that all these expenses will all take place as anticipated. This Reserve Study needs to be updated annually because we expect the timing of these expenses to shift and the size of these expenses to change. We do feel more certain of the timing and cost of near-term expenses than expenses many years away. Your *first five years* of projected Reserve expenses total \$741,897. Adding the next five years, your *first ten years* of projected Reserve expenses are \$1,379,872. Please be aware of your near-term expenses, which we are able to project more accurately than the more distant projections.

The figure below summarizes the projected future expenses at your association as defined by your Reserve Component List. A summary of these expenses are shown in Table 5, while details of the projects that make up these expenses are shown in Table 6.

### Annual Reserve Expenses

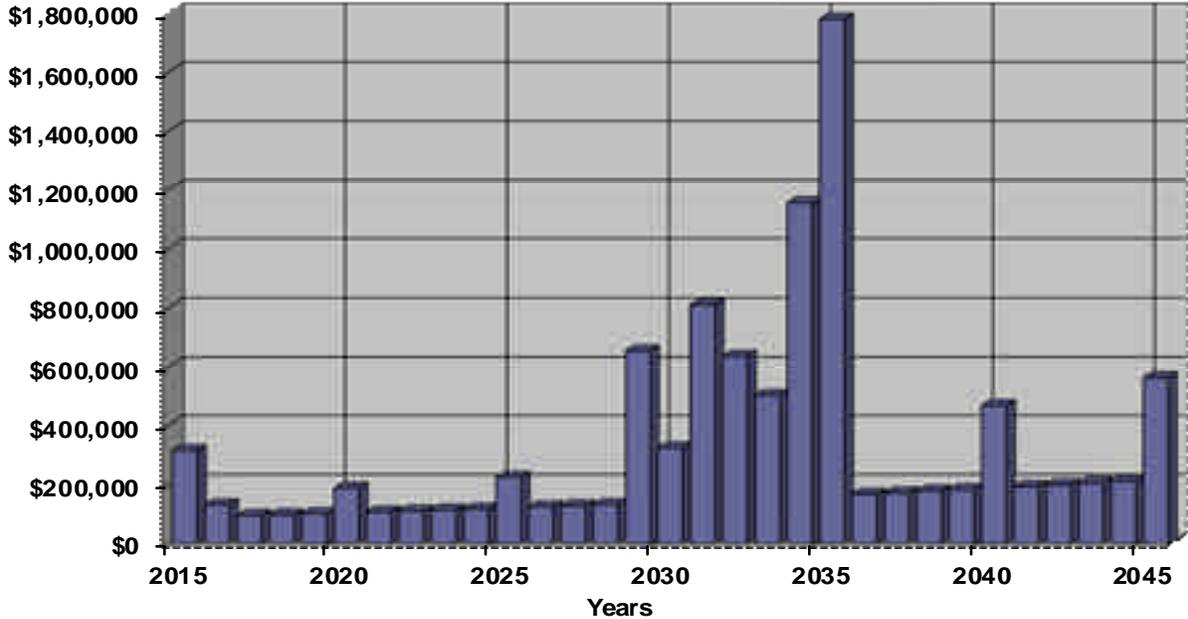


Figure 1

### Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be \$100,000 as-of the start of your Fiscal Year on January 1, 2015. As of January 1, 2015, your Fully Funded Balance is computed to be \$2,182,760 (see Table 3). This figure represents the deteriorated value of your common area components. Comparing your Reserve Balance to your Fully Funded Balance indicates your Reserves are 5% Funded. Across the country, approx 58% of associations in this range experience special assessments or deferred maintenance.

### Recommended Funding Plan

Based on your current Percent Funded and your near-term and long-term Reserve needs, we are recommending budgeted contributions of \$269,000/month this Fiscal Year XXX along with a special assessment of \$XXX. The overall 30-yr plan, in perspective, is shown below. This same information is shown numerically in both Table 5 and Table 6.

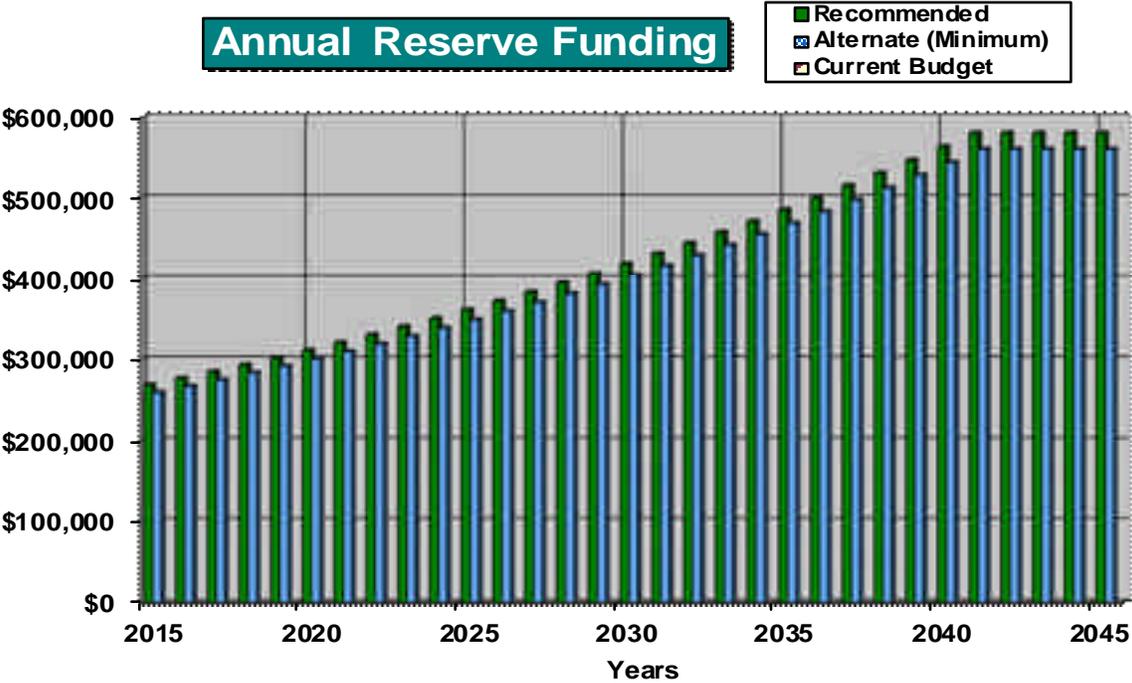


Figure 2

The following chart shows your Reserve balance under our recommended Full Funding Plan, an alternate Baseline Funding Plan, and at your current budgeted contribution rate, compared to your always-changing Fully Funded Balance target.

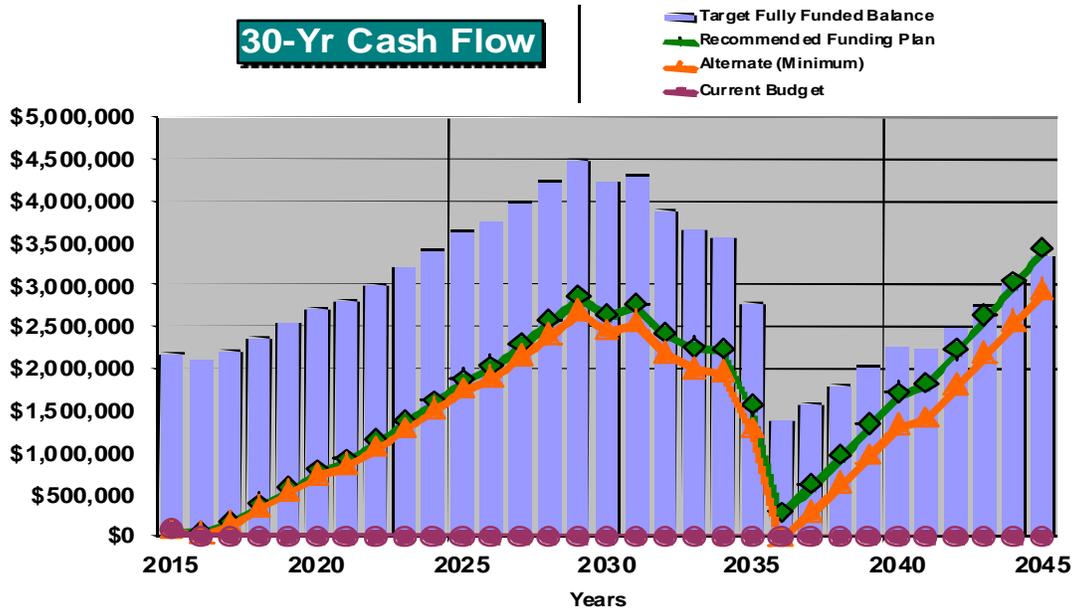


Figure 3

This figure shows this same information, plotted on a [Percent Funded](#) scale.

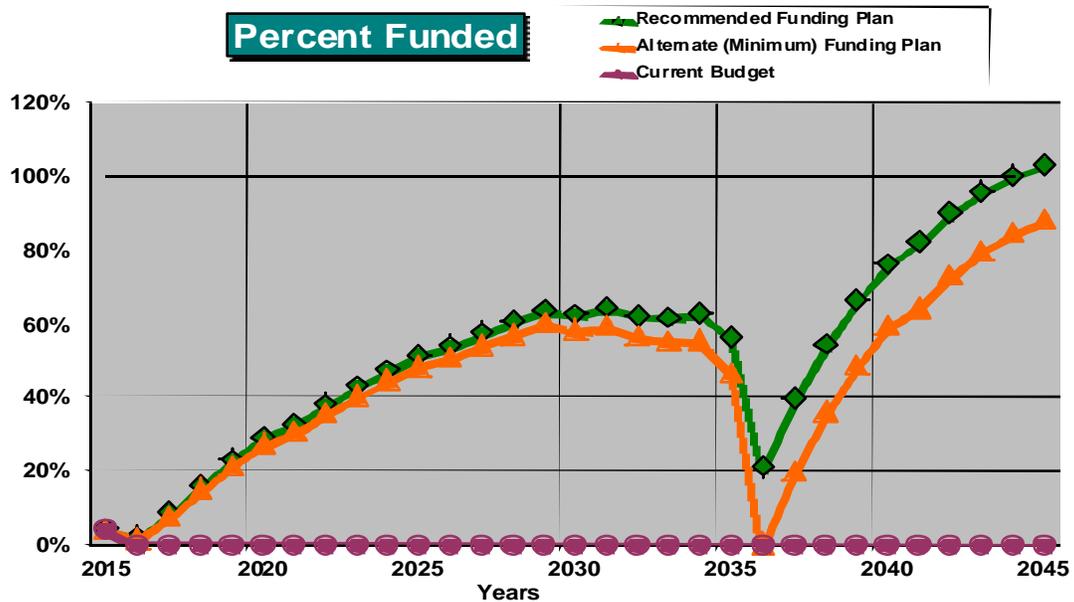


Figure 4

## **Table Descriptions**

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

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

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

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

Table 4 shows the significance of each component to Reserve needs of the association, helping you see which components have more (or less) influence than others on your total Reserve contribution rate. The deterioration cost/yr of each component is calculated by dividing Current Replacement Cost by Useful Life, then that component's percentage of the total is displayed.

Table 5: This table provides a one-page 30-year summary of the cash flowing into and out of the Reserve Fund, with a display of the Fully Funded Balance, Percent Funded, and special assessment risk for each year.

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

**Table 2: Reserve Component List Detail**

**26994-0**

#	Component	Quantity	Useful Life	Rem. Useful Life	[ --- Current Cost Estimate --- ]	
					Best Case	Worst Case
105	Bulkhead A & B - Replace	~ 310 LF	50	39	\$155,000	\$175,000
106	Bulkhead D North - Replace	~160 LF	50	49	\$80,000	\$90,000
107	Bulkhead D East - Replace	~80 LF	50	0	\$40,000	\$45,000
108	Bulkhead E North - Replace	~70 LF	50	1	\$35,000	\$40,000
109	Wave Attenuator	~ 200 LF	50	5	\$60,000	\$70,000
111	Marina - Dredge	Unknown cubic yards	25	10	\$50,000	\$60,000
120	Piling, Caps, Docks - Inspect	Thorough inspection	5	0	\$5,000	\$10,000
121	Piling, Caps - Replace	~1,550 piles*	1	0	\$78,750	\$101,250
130	Docks A, Open - Replace	~4,700 sq ft	25	14	\$141,000	\$164,500
131	Docks B, Open - Replace	~4,400 sq ft	25	19	\$132,000	\$154,000
132	Docks C, Open - Replace	~3,860 sq ft	25	0	\$115,800	\$135,100
133	Docks D, Open - Replace	~440 sq ft	25	10	\$13,200	\$15,400
135	Docks F & G, Open - Replace	~710 sq ft	30	0	\$45,000	\$55,000
137	Docks A, Covered - Replace	~1,440 sf / 6,500 roof	50	14	\$87,000	\$98,000
138	Docks B, Covered - Replace	~1,250 sf / 10,000 roof	50	15	\$106,000	\$115,000
139	Docks C, Covered - Replace	~4,820 sf / 37,680 roof	50	16	\$400,000	\$430,000
140	Docks D, Covered - Replace	~4,040 sf / 23,500 roof	50	17	\$285,000	\$305,000
141	Docks E, Covered - Replace	~2,110 sf / 18,690 roof	50	18	\$195,000	\$215,000
142	Docks F, Covered - Replace	~3,130 sf / 13,800 roof	50	19	\$410,000	\$440,000
143	Docks G, Covered - Replace	~6,750 sf / 25,600 roof	50	20	\$855,000	\$920,000
144	Common Social Dock - Replace	~ 3,000 Sq Ft	25	14	\$90,000	\$105,000
300	Parking Lot - Resurface	~ 42,000 Sq Ft	30	30	\$75,600	\$92,400
22	Total Funded Components					

**Table 3: Fully Funded Balance****26994-0**

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
105	Bulkhead A & B - Replace	\$165,000	X	11	/	50	=	\$36,300
106	Bulkhead D North - Replace	\$85,000	X	1	/	50	=	\$1,700
107	Bulkhead D East - Replace	\$42,500	X	50	/	50	=	\$42,500
108	Bulkhead E North - Replace	\$37,500	X	49	/	50	=	\$36,750
109	Wave Attenuator	\$65,000	X	45	/	50	=	\$58,500
111	Marina - Dredge	\$55,000	X	15	/	25	=	\$33,000
120	Piling, Caps, Docks - Inspect	\$7,500	X	5	/	5	=	\$7,500
121	Piling, Caps - Replace	\$90,000	X	1	/	1	=	\$90,000
130	Docks A, Open - Replace	\$152,750	X	11	/	25	=	\$67,210
131	Docks B, Open - Replace	\$143,000	X	6	/	25	=	\$34,320
132	Docks C, Open - Replace	\$125,450	X	25	/	25	=	\$125,450
133	Docks D, Open - Replace	\$14,300	X	15	/	25	=	\$8,580
135	Docks F & G, Open - Replace	\$50,000	X	30	/	30	=	\$50,000
137	Docks A, Covered - Replace	\$92,500	X	36	/	50	=	\$66,600
138	Docks B, Covered - Replace	\$110,500	X	35	/	50	=	\$77,350
139	Docks C, Covered - Replace	\$415,000	X	34	/	50	=	\$282,200
140	Docks D, Covered - Replace	\$295,000	X	33	/	50	=	\$194,700
141	Docks E, Covered - Replace	\$205,000	X	32	/	50	=	\$131,200
142	Docks F, Covered - Replace	\$425,000	X	31	/	50	=	\$263,500
143	Docks G, Covered - Replace	\$887,500	X	30	/	50	=	\$532,500
144	Common Social Dock - Replace	\$97,500	X	11	/	25	=	\$42,900
300	Parking Lot - Resurface	\$84,000	X	0	/	30	=	\$0
								\$2,182,760

**Table 4: Component Significance****26994-0**

#	Component	Useful Life	Current Cost Estimate	Deterioration Cost/yr	Deterioration Significance
105	Bulkhead A & B - Replace	50	\$165,000	\$3,300	1.9%
106	Bulkhead D North - Replace	50	\$85,000	\$1,700	1.0%
107	Bulkhead D East - Replace	50	\$42,500	\$850	0.5%
108	Bulkhead E North - Replace	50	\$37,500	\$750	0.4%
109	Wave Attenuator	50	\$65,000	\$1,300	0.7%
111	Marina - Dredge	25	\$55,000	\$2,200	1.3%
120	Piling, Caps, Docks - Inspect	5	\$7,500	\$1,500	0.9%
121	Piling, Caps - Replace	1	\$90,000	\$90,000	51.1%
130	Docks A, Open - Replace	25	\$152,750	\$6,110	3.5%
131	Docks B, Open - Replace	25	\$143,000	\$5,720	3.3%
132	Docks C, Open - Replace	25	\$125,450	\$5,018	2.9%
133	Docks D, Open - Replace	25	\$14,300	\$572	0.3%
135	Docks F & G, Open - Replace	30	\$50,000	\$1,667	0.9%
137	Docks A, Covered - Replace	50	\$92,500	\$1,850	1.1%
138	Docks B, Covered - Replace	50	\$110,500	\$2,210	1.3%
139	Docks C, Covered - Replace	50	\$415,000	\$8,300	4.7%
140	Docks D, Covered - Replace	50	\$295,000	\$5,900	3.4%
141	Docks E, Covered - Replace	50	\$205,000	\$4,100	2.3%
142	Docks F, Covered - Replace	50	\$425,000	\$8,500	4.8%
143	Docks G, Covered - Replace	50	\$887,500	\$17,750	10.1%
144	Common Social Dock - Replace	25	\$97,500	\$3,900	2.2%
300	Parking Lot - Resurface	30	\$84,000	\$2,800	1.6%
22	Total Funded Components			\$175,997	100.0%

**Table 5: 30-Year Reserve Plan Summary**

**26994-0**

**Fiscal Year Start: 01/01/15**

**Interest: 1.0%**

**Inflation: 3.0%**

**Reserve Fund Strength Calculations**  
(All values as of Fiscal Year Start Date)

**Projected Reserve Balance Changes**

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Special Assmt Risk	Reserve Contribs.	Loansor Special Assmts	Interest Income	Reserve Expenses
2015	\$100,000	\$2,182,760	4.6%	High	\$269,000	\$0	\$771	\$315,450
2016	\$54,321	\$2,104,606	2.6%	High	\$277,070	\$0	\$1,278	\$131,325
2017	\$201,344	\$2,219,194	9.1%	High	\$285,382	\$0	\$2,977	\$95,481
2018	\$394,222	\$2,379,741	16.6%	High	\$293,944	\$0	\$4,943	\$98,345
2019	\$594,763	\$2,547,923	23.3%	High	\$302,762	\$0	\$6,987	\$101,296
2020	\$803,216	\$2,724,054	29.5%	High	\$311,845	\$0	\$8,689	\$188,382
2021	\$935,368	\$2,821,892	33.1%	Med	\$321,200	\$0	\$10,470	\$107,465
2022	\$1,159,573	\$3,012,314	38.5%	Med	\$330,836	\$0	\$12,755	\$110,689
2023	\$1,392,475	\$3,211,621	43.4%	Med	\$340,761	\$0	\$15,128	\$114,009
2024	\$1,634,355	\$3,420,176	47.8%	Med	\$350,984	\$0	\$17,592	\$117,430
2025	\$1,885,501	\$3,638,353	51.8%	Med	\$361,514	\$0	\$19,632	\$224,165
2026	\$2,042,481	\$3,760,234	54.3%	Med	\$372,359	\$0	\$21,763	\$124,581
2027	\$2,312,022	\$3,995,652	57.9%	Med	\$383,530	\$0	\$24,508	\$128,318
2028	\$2,591,742	\$4,241,811	61.1%	Med	\$395,036	\$0	\$27,357	\$132,168
2029	\$2,881,966	\$4,499,143	64.1%	Med	\$406,887	\$0	\$27,708	\$654,573
2030	\$2,661,988	\$4,234,104	62.9%	Med	\$419,093	\$0	\$27,220	\$324,057
2031	\$2,784,243	\$4,309,771	64.6%	Med	\$431,666	\$0	\$26,068	\$810,377
2032	\$2,431,601	\$3,895,272	62.4%	Med	\$444,616	\$0	\$23,465	\$636,346
2033	\$2,263,335	\$3,656,315	61.9%	Med	\$457,954	\$0	\$22,515	\$502,218
2034	\$2,241,587	\$3,557,332	63.0%	Med	\$471,693	\$0	\$19,093	\$1,153,807
2035	\$1,578,566	\$2,793,500	56.5%	Med	\$485,844	\$0	\$9,363	\$1,779,020
2036	\$294,753	\$1,372,321	21.5%	High	\$500,419	\$0	\$4,634	\$167,427
2037	\$632,379	\$1,578,269	40.1%	Med	\$515,432	\$0	\$8,076	\$172,449
2038	\$983,437	\$1,795,339	54.8%	Med	\$530,895	\$0	\$11,654	\$177,623
2039	\$1,348,363	\$2,024,012	66.6%	Med	\$546,822	\$0	\$15,373	\$182,951
2040	\$1,727,607	\$2,264,791	76.3%	Low	\$563,226	\$0	\$17,840	\$466,808
2041	\$1,841,865	\$2,231,475	82.5%	Low	\$580,123	\$0	\$20,442	\$194,093
2042	\$2,248,337	\$2,489,443	90.3%	Low	\$580,123	\$0	\$24,496	\$199,916
2043	\$2,653,041	\$2,760,880	96.1%	Low	\$580,123	\$0	\$28,532	\$205,913
2044	\$3,055,782	\$3,046,364	100.3%	Low	\$580,123	\$0	\$32,547	\$212,091

**Table 6: 30-Year Income/Expense Detail (yrs 0 through 4)****26994-0**

Fiscal Year	2015	2016	2017	2018	2019
Starting Reserve Balance	\$100,000	\$54,321	\$201,344	\$394,222	\$594,763
Annual Reserve Contribution	\$269,000	\$277,070	\$285,382	\$293,944	\$302,762
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$771	\$1,278	\$2,977	\$4,943	\$6,987
<b>Total Income</b>	<b>\$369,771</b>	<b>\$332,669</b>	<b>\$489,703</b>	<b>\$693,108</b>	<b>\$904,511</b>
# Component					
105 Bulkhead A & B - Replace	\$0	\$0	\$0	\$0	\$0
106 Bulkhead D North - Replace	\$0	\$0	\$0	\$0	\$0
107 Bulkhead D East - Replace	\$42,500	\$0	\$0	\$0	\$0
108 Bulkhead E North - Replace	\$0	\$38,625	\$0	\$0	\$0
109 Wave Attenuator	\$0	\$0	\$0	\$0	\$0
111 Marina - Dredge	\$0	\$0	\$0	\$0	\$0
120 Piling, Caps, Docks - Inspect	\$7,500	\$0	\$0	\$0	\$0
121 Piling, Caps - Replace	\$90,000	\$92,700	\$95,481	\$98,345	\$101,296
130 Docks A, Open - Replace	\$0	\$0	\$0	\$0	\$0
131 Docks B, Open - Replace	\$0	\$0	\$0	\$0	\$0
132 Docks C, Open - Replace	\$125,450	\$0	\$0	\$0	\$0
133 Docks D, Open - Replace	\$0	\$0	\$0	\$0	\$0
135 Docks F & G, Open - Replace	\$50,000	\$0	\$0	\$0	\$0
137 Docks A, Covered - Replace	\$0	\$0	\$0	\$0	\$0
138 Docks B, Covered - Replace	\$0	\$0	\$0	\$0	\$0
139 Docks C, Covered - Replace	\$0	\$0	\$0	\$0	\$0
140 Docks D, Covered - Replace	\$0	\$0	\$0	\$0	\$0
141 Docks E, Covered - Replace	\$0	\$0	\$0	\$0	\$0
142 Docks F, Covered - Replace	\$0	\$0	\$0	\$0	\$0
143 Docks G, Covered - Replace	\$0	\$0	\$0	\$0	\$0
144 Common Social Dock - Replace	\$0	\$0	\$0	\$0	\$0
300 Parking Lot - Resurface	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$315,450</b>	<b>\$131,325</b>	<b>\$95,481</b>	<b>\$98,345</b>	<b>\$101,296</b>
Ending Reserve Balance:	\$54,321	\$201,344	\$394,222	\$594,763	\$803,216

**Table 6: 30-Year Income/Expense Detail (yrs 5 through 9)****26994-0**

Fiscal Year	2020	2021	2022	2023	2024
Starting Reserve Balance	\$803,216	\$935,368	\$1,159,573	\$1,392,475	\$1,634,355
Annual Reserve Contribution	\$311,845	\$321,200	\$330,836	\$340,761	\$350,984
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$8,689	\$10,470	\$12,755	\$15,128	\$17,592
<b>Total Income</b>	<b>\$1,123,750</b>	<b>\$1,267,038</b>	<b>\$1,503,164</b>	<b>\$1,748,364</b>	<b>\$2,002,931</b>
# Component					
105 Bulkhead A & B - Replace	\$0	\$0	\$0	\$0	\$0
106 Bulkhead D North - Replace	\$0	\$0	\$0	\$0	\$0
107 Bulkhead D East - Replace	\$0	\$0	\$0	\$0	\$0
108 Bulkhead E North - Replace	\$0	\$0	\$0	\$0	\$0
109 Wave Attenuator	\$75,353	\$0	\$0	\$0	\$0
111 Marina - Dredge	\$0	\$0	\$0	\$0	\$0
120 Piling, Caps, Docks - Inspect	\$8,695	\$0	\$0	\$0	\$0
121 Piling, Caps - Replace	\$104,335	\$107,465	\$110,689	\$114,009	\$117,430
130 Docks A, Open - Replace	\$0	\$0	\$0	\$0	\$0
131 Docks B, Open - Replace	\$0	\$0	\$0	\$0	\$0
132 Docks C, Open - Replace	\$0	\$0	\$0	\$0	\$0
133 Docks D, Open - Replace	\$0	\$0	\$0	\$0	\$0
135 Docks F & G, Open - Replace	\$0	\$0	\$0	\$0	\$0
137 Docks A, Covered - Replace	\$0	\$0	\$0	\$0	\$0
138 Docks B, Covered - Replace	\$0	\$0	\$0	\$0	\$0
139 Docks C, Covered - Replace	\$0	\$0	\$0	\$0	\$0
140 Docks D, Covered - Replace	\$0	\$0	\$0	\$0	\$0
141 Docks E, Covered - Replace	\$0	\$0	\$0	\$0	\$0
142 Docks F, Covered - Replace	\$0	\$0	\$0	\$0	\$0
143 Docks G, Covered - Replace	\$0	\$0	\$0	\$0	\$0
144 Common Social Dock - Replace	\$0	\$0	\$0	\$0	\$0
300 Parking Lot - Resurface	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$188,382</b>	<b>\$107,465</b>	<b>\$110,689</b>	<b>\$114,009</b>	<b>\$117,430</b>
Ending Reserve Balance:	\$935,368	\$1,159,573	\$1,392,475	\$1,634,355	\$1,885,501

**Table 6: 30-Year Income/Expense Detail (yrs 10 through 14)****26994-0**

Fiscal Year	2025	2026	2027	2028	2029
Starting Reserve Balance	\$1,885,501	\$2,042,481	\$2,312,022	\$2,591,742	\$2,881,966
Annual Reserve Contribution	\$361,514	\$372,359	\$383,530	\$395,036	\$406,887
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$19,632	\$21,763	\$24,508	\$27,357	\$27,708
<b>Total Income</b>	<b>\$2,266,646</b>	<b>\$2,436,603</b>	<b>\$2,720,060</b>	<b>\$3,014,134</b>	<b>\$3,316,561</b>
# Component					
105 Bulkhead A & B - Replace	\$0	\$0	\$0	\$0	\$0
106 Bulkhead D North - Replace	\$0	\$0	\$0	\$0	\$0
107 Bulkhead D East - Replace	\$0	\$0	\$0	\$0	\$0
108 Bulkhead E North - Replace	\$0	\$0	\$0	\$0	\$0
109 Wave Attenuator	\$0	\$0	\$0	\$0	\$0
111 Marina - Dredge	\$73,915	\$0	\$0	\$0	\$0
120 Piling, Caps, Docks - Inspect	\$10,079	\$0	\$0	\$0	\$0
121 Piling, Caps - Replace	\$120,952	\$124,581	\$128,318	\$132,168	\$136,133
130 Docks A, Open - Replace	\$0	\$0	\$0	\$0	\$231,048
131 Docks B, Open - Replace	\$0	\$0	\$0	\$0	\$0
132 Docks C, Open - Replace	\$0	\$0	\$0	\$0	\$0
133 Docks D, Open - Replace	\$19,218	\$0	\$0	\$0	\$0
135 Docks F & G, Open - Replace	\$0	\$0	\$0	\$0	\$0
137 Docks A, Covered - Replace	\$0	\$0	\$0	\$0	\$139,915
138 Docks B, Covered - Replace	\$0	\$0	\$0	\$0	\$0
139 Docks C, Covered - Replace	\$0	\$0	\$0	\$0	\$0
140 Docks D, Covered - Replace	\$0	\$0	\$0	\$0	\$0
141 Docks E, Covered - Replace	\$0	\$0	\$0	\$0	\$0
142 Docks F, Covered - Replace	\$0	\$0	\$0	\$0	\$0
143 Docks G, Covered - Replace	\$0	\$0	\$0	\$0	\$0
144 Common Social Dock - Replace	\$0	\$0	\$0	\$0	\$147,477
300 Parking Lot - Resurface	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$224,165</b>	<b>\$124,581</b>	<b>\$128,318</b>	<b>\$132,168</b>	<b>\$654,573</b>
Ending Reserve Balance:	\$2,042,481	\$2,312,022	\$2,591,742	\$2,881,966	\$2,661,988

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

**26994-0**

Fiscal Year	2030	2031	2032	2033	2034
Starting Reserve Balance	\$2,661,988	\$2,784,243	\$2,431,601	\$2,263,335	\$2,241,587
Annual Reserve Contribution	\$419,093	\$431,666	\$444,616	\$457,954	\$471,693
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$27,220	\$26,068	\$23,465	\$22,515	\$19,093
<b>Total Income</b>	<b>\$3,108,300</b>	<b>\$3,241,977</b>	<b>\$2,899,681</b>	<b>\$2,743,805</b>	<b>\$2,732,373</b>
# Component					
105 Bulkhead A & B - Replace	\$0	\$0	\$0	\$0	\$0
106 Bulkhead D North - Replace	\$0	\$0	\$0	\$0	\$0
107 Bulkhead D East - Replace	\$0	\$0	\$0	\$0	\$0
108 Bulkhead E North - Replace	\$0	\$0	\$0	\$0	\$0
109 Wave Attenuator	\$0	\$0	\$0	\$0	\$0
111 Marina - Dredge	\$0	\$0	\$0	\$0	\$0
120 Piling, Caps, Docks - Inspect	\$11,685	\$0	\$0	\$0	\$0
121 Piling, Caps - Replace	\$140,217	\$144,424	\$148,756	\$153,219	\$157,816
130 Docks A, Open - Replace	\$0	\$0	\$0	\$0	\$0
131 Docks B, Open - Replace	\$0	\$0	\$0	\$0	\$250,751
132 Docks C, Open - Replace	\$0	\$0	\$0	\$0	\$0
133 Docks D, Open - Replace	\$0	\$0	\$0	\$0	\$0
135 Docks F & G, Open - Replace	\$0	\$0	\$0	\$0	\$0
137 Docks A, Covered - Replace	\$0	\$0	\$0	\$0	\$0
138 Docks B, Covered - Replace	\$172,155	\$0	\$0	\$0	\$0
139 Docks C, Covered - Replace	\$0	\$665,953	\$0	\$0	\$0
140 Docks D, Covered - Replace	\$0	\$0	\$487,590	\$0	\$0
141 Docks E, Covered - Replace	\$0	\$0	\$0	\$348,999	\$0
142 Docks F, Covered - Replace	\$0	\$0	\$0	\$0	\$745,240
143 Docks G, Covered - Replace	\$0	\$0	\$0	\$0	\$0
144 Common Social Dock - Replace	\$0	\$0	\$0	\$0	\$0
300 Parking Lot - Resurface	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$324,057</b>	<b>\$810,377</b>	<b>\$636,346</b>	<b>\$502,218</b>	<b>\$1,153,807</b>
Ending Reserve Balance:	\$2,784,243	\$2,431,601	\$2,263,335	\$2,241,587	\$1,578,566

**Table 6: 30-Year Income/Expense Detail (yrs 20 through 24)****26994-0**

Fiscal Year	2035	2036	2037	2038	2039
Starting Reserve Balance	\$1,578,566	\$294,753	\$632,379	\$983,437	\$1,348,363
Annual Reserve Contribution	\$485,844	\$500,419	\$515,432	\$530,895	\$546,822
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$9,363	\$4,634	\$8,076	\$11,654	\$15,373
<b>Total Income</b>	<b>\$2,073,772</b>	<b>\$799,806</b>	<b>\$1,155,887</b>	<b>\$1,525,986</b>	<b>\$1,910,558</b>
# Component					
105 Bulkhead A & B - Replace	\$0	\$0	\$0	\$0	\$0
106 Bulkhead D North - Replace	\$0	\$0	\$0	\$0	\$0
107 Bulkhead D East - Replace	\$0	\$0	\$0	\$0	\$0
108 Bulkhead E North - Replace	\$0	\$0	\$0	\$0	\$0
109 Wave Attenuator	\$0	\$0	\$0	\$0	\$0
111 Marina - Dredge	\$0	\$0	\$0	\$0	\$0
120 Piling, Caps, Docks - Inspect	\$13,546	\$0	\$0	\$0	\$0
121 Piling, Caps - Replace	\$162,550	\$167,427	\$172,449	\$177,623	\$182,951
130 Docks A, Open - Replace	\$0	\$0	\$0	\$0	\$0
131 Docks B, Open - Replace	\$0	\$0	\$0	\$0	\$0
132 Docks C, Open - Replace	\$0	\$0	\$0	\$0	\$0
133 Docks D, Open - Replace	\$0	\$0	\$0	\$0	\$0
135 Docks F & G, Open - Replace	\$0	\$0	\$0	\$0	\$0
137 Docks A, Covered - Replace	\$0	\$0	\$0	\$0	\$0
138 Docks B, Covered - Replace	\$0	\$0	\$0	\$0	\$0
139 Docks C, Covered - Replace	\$0	\$0	\$0	\$0	\$0
140 Docks D, Covered - Replace	\$0	\$0	\$0	\$0	\$0
141 Docks E, Covered - Replace	\$0	\$0	\$0	\$0	\$0
142 Docks F, Covered - Replace	\$0	\$0	\$0	\$0	\$0
143 Docks G, Covered - Replace	\$1,602,924	\$0	\$0	\$0	\$0
144 Common Social Dock - Replace	\$0	\$0	\$0	\$0	\$0
300 Parking Lot - Resurface	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$1,779,020</b>	<b>\$167,427</b>	<b>\$172,449</b>	<b>\$177,623</b>	<b>\$182,951</b>
Ending Reserve Balance:	\$294,753	\$632,379	\$983,437	\$1,348,363	\$1,727,607

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

**26994-0**

Fiscal Year	2040	2041	2042	2043	2044
Starting Reserve Balance	\$1,727,607	\$1,841,865	\$2,248,337	\$2,653,041	\$3,055,782
Annual Reserve Contribution	\$563,226	\$580,123	\$580,123	\$580,123	\$580,123
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$17,840	\$20,442	\$24,496	\$28,532	\$32,547
<b>Total Income</b>	<b>\$2,308,673</b>	<b>\$2,442,430</b>	<b>\$2,852,957</b>	<b>\$3,261,696</b>	<b>\$3,668,452</b>
# Component					
105 Bulkhead A & B - Replace	\$0	\$0	\$0	\$0	\$0
106 Bulkhead D North - Replace	\$0	\$0	\$0	\$0	\$0
107 Bulkhead D East - Replace	\$0	\$0	\$0	\$0	\$0
108 Bulkhead E North - Replace	\$0	\$0	\$0	\$0	\$0
109 Wave Attenuator	\$0	\$0	\$0	\$0	\$0
111 Marina - Dredge	\$0	\$0	\$0	\$0	\$0
120 Piling, Caps, Docks - Inspect	\$15,703	\$0	\$0	\$0	\$0
121 Piling, Caps - Replace	\$188,440	\$194,093	\$199,916	\$205,913	\$212,091
130 Docks A, Open - Replace	\$0	\$0	\$0	\$0	\$0
131 Docks B, Open - Replace	\$0	\$0	\$0	\$0	\$0
132 Docks C, Open - Replace	\$262,664	\$0	\$0	\$0	\$0
133 Docks D, Open - Replace	\$0	\$0	\$0	\$0	\$0
135 Docks F & G, Open - Replace	\$0	\$0	\$0	\$0	\$0
137 Docks A, Covered - Replace	\$0	\$0	\$0	\$0	\$0
138 Docks B, Covered - Replace	\$0	\$0	\$0	\$0	\$0
139 Docks C, Covered - Replace	\$0	\$0	\$0	\$0	\$0
140 Docks D, Covered - Replace	\$0	\$0	\$0	\$0	\$0
141 Docks E, Covered - Replace	\$0	\$0	\$0	\$0	\$0
142 Docks F, Covered - Replace	\$0	\$0	\$0	\$0	\$0
143 Docks G, Covered - Replace	\$0	\$0	\$0	\$0	\$0
144 Common Social Dock - Replace	\$0	\$0	\$0	\$0	\$0
300 Parking Lot - Resurface	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$466,808</b>	<b>\$194,093</b>	<b>\$199,916</b>	<b>\$205,913</b>	<b>\$212,091</b>
Ending Reserve Balance:	\$1,841,865	\$2,248,337	\$2,653,041	\$3,055,782	\$3,456,361

## Accuracy, Limitations, and Disclosures

The reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair or replacement of a reserve component.

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

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

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

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

Association Reserves' liability in any matter involving this Reserve Study is limited to our Fee for services rendered.

## Terms and Definitions

<b>BTU</b>	British Thermal Unit (a standard unit of energy)
<b>DIA</b>	Diameter
<b>GSF</b>	Gross Square Feet (area). Equivalent to Square Feet
<b>GSY</b>	Gross Square Yards (area). Equivalent to Square Yards
<b>HP</b>	Horsepower
<b>LF</b>	Linear Feet (length)

**Effective Age:** The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.

**Fully Funded Balance (FFB):** The value of the deterioration of the Reserve Components. This is the fraction of life “used up” of each component multiplied by its estimated Current Replacement. While calculated for each component, it is summed together for an association total.

$$\text{FFB} = (\text{Current Cost} \times \text{Effective Age}) / \text{Useful Life}$$

**Inflation:** Cost factors are adjusted for inflation at the rate defined in the Executive Summary and compounded annually. These increasing costs can be seen as you follow the recurring cycles of a component on Table 6.

**Interest:** Interest earnings on Reserve Funds are calculated using the average balance for the year (taking into account income and expenses through the year) and compounded monthly using the rate defined in the Executive Summary. Annual interest earning assumption appears in the Executive Summary.

**Percent Funded:** The ratio, at a particular point in time (the first day of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.

**Remaining Useful Life (RUL):** The estimated time, in years, that a common area component can be expected to continue to serve its intended function.

**Useful Life (UL):** The estimated time, in years, that a common area component can be expected to serve its intended function.

## Component Details

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

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

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

Client: 26994A Newport Yacht Basin

**Comp # : 99**      **Permitting, Design, Fees, etc...**      Quantity: Misc. fees

Location : Fees associated with design, permitting, disposal, legal, etc...

Funded? : No Best handled in operational budget

History :

Evaluation : Layers of fees associated with marina projects over time - may include, but not limited to: design / engineering / construction drawings, legal, permitting, disposal of materials (some may be deemed hazardous and need to be transported to approved locations), oversight during construction process. Cost for ongoing maintenance permitting is fairly static; others difficult to predict at this time. Therefore, no basis for cyclical reserve component - include these types of expenses within operating budget, various repair / replacement projects over time.

Useful Life

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp # : 105**      **Bulkhead A & B - Replace**      Quantity: ~ 310 LF

Location : Partial perimeter of marina: west facing, by A & B docks

Funded? : Yes

History : Replaced last about 2004

Evaluation : No apparent deficiencies from limited visual inspection of exposed bulkhead. No issues reported to us. 50-year life expectancy factored. Periodic inspections by engineer, diver should be conducted (operating / maintenance expense) to assess condition and performance.

Useful Life

50 years

Remaining Life:

39 years



Best Case: \$155,000

Worst Case: \$175,000

Lower allowance to replace

Higher allowance

Cost Source: Extrapolated from current bid for work near office

Client: 26994A Newport Yacht Basin

**Comp # : 106      Bulkhead B North - Replace      Quantity: ~160 LF**

Location : Partial perimeter of marina: north facing, by office to shop near B dock

Funded? : Yes

History : Will reportedly be replaced in 2014

Evaluation : Replacement of this section of bulkhead reported to occur in 2014 after our April inspection. We assume will be installed / expensed as indicated.

50-year life expectancy factored. Periodic inspections (factored separately herein) by engineer, diver should be conducted in future to assess condition and performance.

Useful Life  
50 years

Remaining Life:  
49 years

Photo Not Available

Best Case: \$80,000

Worst Case: \$90,000

Lower allowance to replace (incl tax)

Higher allowance

Cost Source: Estimate Provided by Client

**Comp # : 107      Bulkhead D East - Replace      Quantity: ~80 LF**

Location : Partial perimeter of marina: east facing, by D dock

Funded? : Yes

History :

Evaluation : Preliminarily scheduled for 2015 - work with contractor to finalize timing, scope / spec and cost.

Useful Life  
50 years

Remaining Life:  
0 years



Best Case: \$40,000

Worst Case: \$45,000

Lower allowance to replace

Higher allowance

Cost Source: Extrapolated from current bid for work near office

Client: 26994A Newport Yacht Basin

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**Comp # : 108      Bulkhead E North - Replace      Quantity: ~70 LF**

Location : Partial perimeter of marina: north facing by E Dock

Funded? : Yes

History :

Evaluation : Preliminarily scheduled for 2016 - work with contractor to finalize timing, scope / spec and cost.

Useful Life  
50 years

Remaining Life:  
1 years



Best Case: \$35,000

Lower allowance to replace

Worst Case: \$40,000

Higher allowance

Cost Source: Extrapolated from current bid for work near office

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**Comp # : 109      Wave Attenuator      Quantity: ~ 200 LF**

Location : Partial western / northern perimeter of marina

Funded? : Yes

History :

Evaluation : Wave attenuator / breakwater previously in place (can be seen in aerial images from 2005). Reportedly the association may place into service again.

Useful Life  
50 years

Remaining Life:  
5 years



Best Case: \$60,000

Lower budget allowance

Worst Case: \$70,000

Higher budget allowance

Cost Source: Online research

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Client: 26994A Newport Yacht Basin

**Comp # : 111 Marina - Dredge**  
Location : SW & NW corners of marina  
Funded? : Yes

Quantity: Unknown cubic yards

History : Reported last dredge 15 to 18 years ago

Evaluation : Silting reportedly greatly reduced after Coal Creek mitigation. Anecdotal reports however of areas not providing sufficient depth. Marina does not reportedly monitor depth - measurements should be taken regularly and recorded to document changes in depth. For planning purposes at this time we have used 25 year cycle, basis of 200 cubic yards removed at \$275/yd.

Useful Life  
25 years

Remaining Life:  
10 years



Best Case: \$50,000

Worst Case: \$60,000

Lower allowance for permitting and dredge (50 yards x \$250/yd)

Higher allowance (50 yards x \$300/yd)

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp # : 115 Milfoil, Weed Treatment**  
Location : Throughout marina  
Funded? : No Annual costs, best handled in operational budget

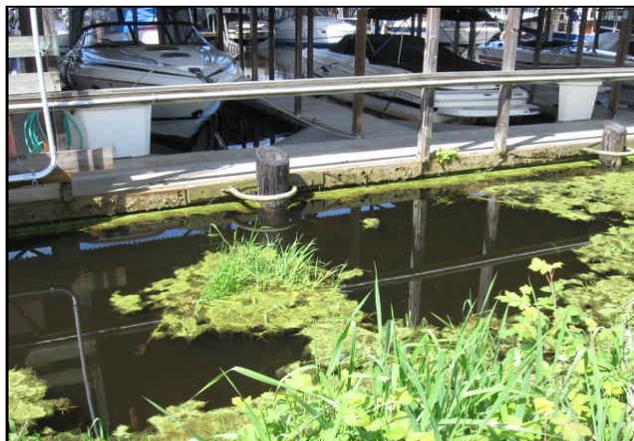
Quantity: Aquatic vegetation

History : Ongoing treatment

Evaluation : Rather than cyclical capital reserve designation, budget for vegetation control within annual operating budget.

Useful Life

Remaining Life:



Best Case:

Worst Case:

Cost Source:

Client: 26994A Newport Yacht Basin

Comp # : 120 Piling, Caps, Docks - Inspect

Quantity: Thorough inspection

Location : Throughout dock system, including diver

Funded? : Yes

History :

Evaluation : No known comprehensive map or other documentation of: piling locations, diameters, repair / replacement history. The service life variability of marina components suggests best practice is to conduct periodic comprehensive piling inspection (including dive), mapping of the marina. Expect inspector to grade piling to be used as basis for 5-year plan in between inspection cycle.

Useful Life  
5 years

Remaining Life:  
0 years



Best Case: \$5,000

Worst Case: \$10,000

Lower allowance to inspect & report

Higher allowance

Cost Source: Estimate Provided by Stillwater

Client: 26994A Newport Yacht Basin

Comp # : 121 Piling, Caps - Replace

Quantity: ~1,550 piles\*

Location : Throughout dock system

Funded? : Yes

History : Sporadic replacement history 2008 - 2013

Evaluation : \*Quantity estimated by ECCO Design - no known comprehensive map of : piling locations, diameters, repair / replacement history. Stillwater marine (Kevin) estimates that 13" or lesser diameter piling can last up to 50 years, perhaps as much as 50% more than that for large diameter pile. Kevin further estimated that ~200 piles have been replaced to date. The service life variability suggests best practice is to conduct periodic comprehensive piling inspection (including dive - see previous component), mapping of the marina. Expect inspector to grade piling to be used as basis for 5-year plan in between inspection cycle. Bid provided a couple of years ago (~\$11,000 for structural work around fuel dock - not executed.

As a beginning point for capital reserve planning, prior to comprehensive piling evaluation, we have factored replacement of the entire remaining inventory of piling spread over each year of our 30-year planning window. Regular updates to the reserve plan and detailed record keeping by the association are key to effective management of the marina's assets.

Useful Life  
1 years

Remaining Life:  
0 years



Best Case: \$78,750

\$1,750/ea, Lower allowance to replace (~45 piles or lesser # of piles plus some caps, stringers)

Worst Case: \$101,250

\$2,250/ea, Higher allowance (includes some larger diameter, larger scope)

Cost Source: Estimate Provided by Stillwater Marine (Kevin)

Client: 26994A Newport Yacht Basin

Comp # : 130      Docks A, Open - Replace      Quantity: ~4,700 sq ft

Location : Main dock and finger pier area, exposed to weather

Funded? : Yes

History : Reportedly replaced last about 2004

Evaluation : Docks are in fair / serviceable condition at this time. Evidence of recent local repair at some fingers, need for local current repair as well. Docks reportedly require replacement in future with grating for light transmission (~40%).

As routine maintenance, inspect regularly and factor some local repair needs each year within operating budget.

Useful Life  
25 years

Remaining Life:  
14 years



Best Case: \$141,000

\$30/Sq Ft, Lower allowance to replace (incl labor & material by staff, and tax)

Worst Case: \$164,500

\$35/Sq Ft, Higher allowance

Cost Source: Estimate by Stillwater + Staff Labor

Client: 26994A Newport Yacht Basin

Comp # : 131      Docks B, Open - Replace      Quantity: ~4,400 sq ft

Location : Main dock and finger pier area of B, and large open area near office

Funded? : Yes

History : Reportedly replaced last about 2009

Evaluation : Docks are in fair / serviceable condition at this time. Docks reportedly require replacement in future with grating for light transmission (~40%).

As routine maintenance, inspect regularly and factor some local repair needs each year within operating budget.

Useful Life  
25 years

Remaining Life:  
19 years



Best Case: \$132,000

\$30/Sq Ft, Lower allowance to replace (incl labor & material by staff, and tax)

Worst Case: \$154,000

\$35/Sq Ft, Higher allowance

Cost Source: Estimate by Stillwater + Staff Labor

Client: 26994A Newport Yacht Basin

Comp # : 132      Docks C, Open - Replace      Quantity: ~3,860 sq ft

Location : Main dock and finger pier area of C, exposed to weather

Funded? : Yes

History : No reports of significant replacement

Evaluation : Docks are in generally poor condition at this time. Docks reportedly require replacement in future with grating for light transmission (~40%).

As routine maintenance, inspect regularly and factor some local repair needs each year within operating budget.

Useful Life  
25 years

Remaining Life:  
0 years



Best Case: \$115,800

\$30/Sq Ft, Lower allowance to replace (incl labor & material by staff, and tax)

Worst Case: \$135,100

\$35/Sq Ft, Higher allowance

Cost Source: Estimate by Stillwater + Staff Labor

Client: 26994A Newport Yacht Basin

**Comp # : 133      Docks D, Open - Replace      Quantity: ~440 sq ft**

Location : Main dock and finger pier area, exposed to weather

Funded? : Yes

History :

Evaluation : Docks are in fair / serviceable condition at this time. Evidence of prior local repair.

As routine maintenance, inspect regularly and factor some local repair needs each year within operating budget.

Useful Life  
25 years

Remaining Life:  
10 years



Best Case: \$13,200

\$30/Sq Ft, Lower allowance to replace (incl labor & material by staff, and tax)

Worst Case: \$15,400

\$35/Sq Ft, Higher allowance

Cost Source: Estimate by Stillwater + Staff Labor

**Comp # : 135      Docks F & G, Open - Replace      Quantity: ~710 sq ft**

Location : Main dock and finger pier area open between F & G

Funded? : Yes

History :

Evaluation : Concrete float exhibits advanced spalling, deterioration. As of the writing of this report, replacement estimate not firm - Stillwater suggests the budget ROM costs below.

Useful Life  
30 years

Remaining Life:  
0 years



Best Case: \$45,000

Lower allowance to replace (incl tax, L & M, etc...)

Worst Case: \$55,000

Higher allowance

Cost Source: Estimate Provided by Client

Client: 26994A Newport Yacht Basin

**Comp # : 137      Docks A, Covered - Replace      Quantity: ~1,440 sf / 6,500 roof**

Location : Dock system below covered portion of A dock, incl. roof

Funded? : Yes

History : No large scale repair / replace of docks, partial roof repair 1997

Evaluation : Phased replacement of covered portion of docks, including roofing, factored below at 50-year mark of life; dock boards protected from direct weather. Piling, caps addressed separately herein. Note: part of roof repaired during 1997 storm damage - full roof replacement at time frame below.

Useful Life  
50 years

Remaining Life:  
14 years



Best Case: \$87,000

Worst Case: \$98,000

Lower allowance to replace dock and roof (incl tax. L & M , etc...)

Higher allowance

Cost Source: ARI Cost Database / Budget by Stillwater, Staff

**Comp # : 138      Docks B, Covered - Replace      Quantity: ~1,250 sf / 10,000 roof**

Location : Dock system below covered portion of B dock, incl. roof

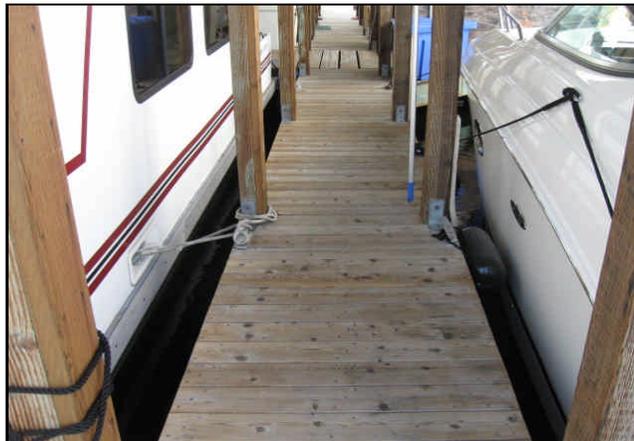
Funded? : Yes

History :

Evaluation : Phased replacement of covered portion of docks, including roofing, factored below at ~50-year mark of life; dock boards protected from direct weather. Piling, caps addressed separately herein. Note: part of roof repaired during 1997 storm damage - full roof replacement at time frame below.

Useful Life  
50 years

Remaining Life:  
15 years



Best Case: \$106,000

Worst Case: \$115,000

Lower allowance to replace dock and roof (incl tax. L & M , etc...)

Higher allowance

Cost Source: ARI Cost Database / Budget by Stillwater, Staff

Client: 26994A Newport Yacht Basin

**Comp # : 139      Docks C, Covered - Replace      Quantity: ~4,820 sf / 37,680 roof**

Location : Dock system below covered portion of C dock, incl. roof

Funded? : Yes

History : No large scale repair / replace of docks, partial roof repair 1997

Evaluation : Phased replacement of covered portion of docks, including roofing, factored below at ~50-year mark of life; dock boards protected from direct weather. Piling, caps addressed separately herein. Note: part of roof repaired during 1997 storm damage - full roof replacement at time frame below.

Useful Life  
50 years

Remaining Life:  
16 years



Best Case: \$400,000

Worst Case: \$430,000

Lower allowance to replace dock and roof (incl tax. L & M , etc...)

Higher allowance

Cost Source: ARI Cost Database / Budget by Stillwater, Staff

**Comp # : 140      Docks D, Covered - Replace      Quantity: ~4,040 sf 23,500 roof**

Location : Dock system below covered portion of D dock

Funded? : Yes

History : No large scale repair / replace of docks

Evaluation : Phased replacement of covered portion of docks, including roofing, factored below at ~50-year mark of life; dock boards protected from direct weather. Piling, caps addressed separately herein.

Useful Life  
50 years

Remaining Life:  
17 years



Best Case: \$285,000

Worst Case: \$305,000

Lower allowance to replace dock and roof (incl tax. L & M , etc...)

Higher allowance

Cost Source: ARI Cost Database / Budget by Stillwater, Staff

Client: 26994A Newport Yacht Basin

**Comp # : 141      Docks E, Covered - Replace      Quantity: ~2,110 sf / 18,690 roof**

Location : Dock system below covered portion of E dock, incl. roof

Funded? : Yes

History : No large scale repair / replace of docks

Evaluation : Phased replacement of covered portion of docks, including roofing, factored below at ~50-year mark of life; dock boards protected from direct weather. Piling, caps addressed separately herein.

Useful Life  
50 years

Remaining Life:  
18 years



Best Case: \$195,000

Worst Case: \$215,000

Lower allowance to replace dock and roof (incl tax. L & M , etc...)

Higher allowance

Cost Source: ARI Cost Database / Budget by Stillwater, Staff

**Comp # : 142      Docks F, Covered - Replace      Quantity: ~3,130 sf / 13,800 roof**

Location : Dock system below covered portion of F dock, incl. roof

Funded? : Yes

History : No large scale repair / replace of docks

Evaluation : Phased replacement of covered portion of dock floats, including roofing, factored below at ~50-year mark of life. Piling, caps addressed separately herein.

Useful Life  
50 years

Remaining Life:  
19 years



Best Case: \$410,000

Worst Case: \$440,000

Lower allowance to replace dock and roof (incl tax. L & M , etc...)

Higher allowance

Cost Source: ARI Cost Database / Budget by Stillwater, Staff

Client: 26994A Newport Yacht Basin

**Comp # : 143      Docks G, Covered - Replace      Quantity: ~6,750 sf / 25,600 roof**

Location : Dock system below covered portion of G dock, incl. roof

Funded? : Yes

History : No large scale repair / replace of docks

Evaluation : Phased replacement of covered portion of dock floats, including roofing, factored below at ~50-year mark of life. Piling, caps addressed separately herein.

Useful Life  
50 years

Remaining Life:  
20 years



Best Case: \$855,000

Worst Case: \$920,000

Lower allowance to replace dock and roof (incl tax. L & M , etc...)

Higher allowance

Cost Source: ARI Cost Database / Budget by Stillwater, Staff

**Comp # : 144      Common Social Dock - Replace      Quantity: ~ 3,000 Sq Ft**

Location : Adjacent to office, between B & C docks

Funded? : Yes

History : ~2004 large scale reframe and decking per ECCO

Evaluation : Generally fair to good, stable condition at the time of our 2014 site visit. Pilings and caps addressed separately herein.

Useful Life  
25 years

Remaining Life:  
14 years



Best Case: \$90,000

Worst Case: \$105,000

\$30/Sq Ft, Lower allowance to repair / replace

\$35/Sq Ft, Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 26994A Newport Yacht Basin

**Comp # : 145 Dock Electrical, Water, Fire**

Quantity: Extensive linear feet

Location : Throughout dock system

Funded? : No

History :

Evaluation : Reportedly electrical supply is sufficient for majority at this time, but trend is typically to more power demand, consumption. Some discussion also about adding a pumpout station. No firm plans in place at this time.

There is insufficient information at this time to substantiate funding assumption. We suggest NYB work with their marine contractor and appropriate consultant(s) to formulate long term plan with association specifications and costs. When, if known, include within a reserve study update.

Useful Life

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp # : 160 Dock Misc. Hardware**

Quantity: Cleats, rings, boxes, etc

Location : Throughout dock system

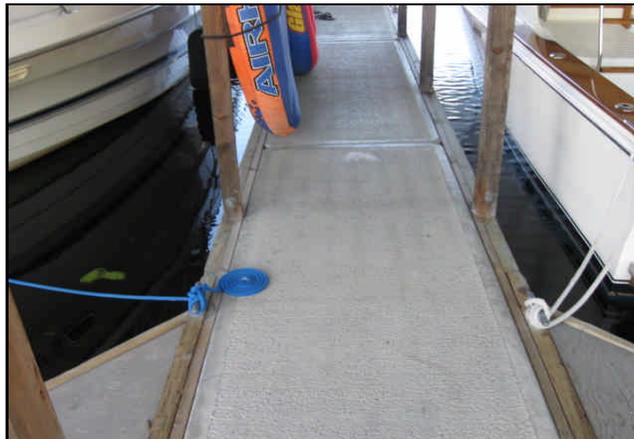
Funded? : No

History :

Evaluation : Assume ongoing local replacement as needed through the annual operating / maintenance budget or included with large scale repair / replace projects herein.

Useful Life

Remaining Life:



Best Case:

Worst Case:

Cost Source:

Client: 26994A Newport Yacht Basin

**Comp # : 300      Parking Lot - Resurface      Quantity: ~ 42,000 Sq Ft**  
 Location : NYB portions of parking lot  
 Funded? : Yes

History :

Evaluation : At the time of our site inspection in 2014, most roadway had reached the end of it's service life with alligator cracking and loss of binder prevalent. Our understanding is that in conjunction with SBC improvements all asphalt will be resurfaced at no expense to NYB. This component addresses typical life cycle between asphalt resurface needs (new asphalt overlay, prep as required). Assume ongoing regular maintenance (cleaning, local repair, any seal coating) to be factored in operating budget. Shared agreement with SBC should ensure consistent good condition to allow for proper drainage, safety, appearance, etc...

Useful Life  
 30 years

Remaining Life:  
 30 years



Best Case: \$75,600  
 \$1.80/Sq Ft, Lower allowance to resurface

Worst Case: \$92,400  
 \$2.20/Sq Ft, Higher allowance; larger scope, more prep

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 26994A Newport Yacht Basin

**Comp # : 320      Perimeter Fence, Gates - Replace      Quantity: ~820 LF, 5 gates**

Location : Partial perimeter of marina, entry points

Funded? : No    Useful life not predictable

History :

Evaluation : Varying condition - some sections of fence and gates appear to be newer; standard galvanized link. Some areas showing rust and wear. We suggest treating repair / replacement as general maintenance expense when needed rather than as predictable, cyclical reserve component. Logical timing of sections is in conjunction with adjacent large scale dock repair / replace projects at covered areas.

Useful Life

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp # : 330      Office Building - Improve      Quantity: (2) masonry buildings**

Location : Central parking lot locations

Funded? : No

History :

Evaluation : Several improvements made over time both to interior and exterior components. Condition is currently good - generally sturdy, long-lived materials. We suggest that any needs be handled through operating budget, rather than as cyclical capital reserve project(s) at this time.

Useful Life

Remaining Life:



Best Case:

Worst Case:

Cost Source: