RESERVE ANALYSIS REPORT

RB WWTF Sample

Sample, Massachusetts

Version 1

September 23, 2024

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Preface

This preface is intended to provide an introduction to the enclosed reserve analysis as well as detailed information regarding the reserve analysis report format, reserve fund goals/objectives and calculation methods. The following sections are included in this preface:

♦ ♦ ♦ ♦ INTRODUCTION TO RESERVE BUDGETING ♦ ♦ ♦ ♦

The Board of Directors of an association has a legal and fiduciary duty to maintain the community in a good state of repair. Individual unit property values are significantly impacted by the level of maintenance and upkeep provided by the association as well as the amount of the regular assessment charged to each owner.

A prudent plan must be implemented to address the issues of long-range maintenance, repair and replacement of the common areas. Additionally, the plan should recognize that the value of each unit is affected by the amount of the regular assessment charged to each unit.

There is a fine line between “not enough,” “just right” and “too much.” Each member of an association should contribute to the reserve fund for their proportionate amount of “depreciation” (or “use”) of the reserve components. Through time, if each owner contributes a “fair share” into the reserve fund for the depreciation of the reserve components, then the possibility of large increases in regular assessments or special assessments will be minimized.

An accurate reserve analysis and a “healthy” reserve fund are essential to protect and maintain association common areas and property values of individual unit owners. A comprehensive reserve analysis is one of the most significant elements of any association's long-range plan and provides the critical link between sound business judgment and good fiscal planning. The reserve analysis provides a “financial blueprint” for the future of an association.

♦ ♦ ♦ ♦ UNDERSTANDING THE RESERVE ANALYSIS ♦ ♦ ♦ ♦

In order for the reserve analysis to be useful, it must be understandable by a variety of individuals. Board members (from seasoned, experienced Board members to new Board members), property managers, accountants, attorneys and homeowners may ultimately review the reserve analysis. The reserve analysis must be detailed enough to provide a comprehensive analysis, yet simple enough to enable less experienced individuals to understand the results.

There are four key bits of information that a comprehensive reserve analysis should provide: Budget, Percent Funded, Projections and Inventory. This information is described as follows:

Budget
Amount recommended to be transferred into the reserve account for the fiscal year for which the reserve analysis is prepared. In some cases, the reserve analysis may present two or more funding plans based on different goals/objectives. The Board should have a clear understanding of the differences among these funding goals/objectives prior to implementing one of them in the annual budget.

Percent Funded
Measure of the reserve fund "health" (expressed as a percentage) as of the beginning of the fiscal year for which the reserve analysis is prepared. This figure is the ratio of the actual reserve fund on hand to the fully funded balance. A reserve fund that is "100% funded" means the association has accumulated the proportionately correct amount of money, to date, for the reserve components it maintains.

Projections
Indicate "level of service" the association will provide the membership as well as a "road map" for the fiscal future of the association. Projections define the timetables for repairs and replacements, such as when buildings will be painted or when asphalt will be seal coated. Projections also show the financial plan for the association – when an underfunded association will "catch up" or how a properly funded association will remain fiscally "healthy."

Inventory
Complete listing of reserve components. Key bits of information are available for each reserve component, including placed-in-service date, useful life, remaining life, replacement year, quantity, current cost of replacement, future cost of replacement and analyst's comments.

♦ ♦ ♦ ♦ RESERVE FUNDING GOALS / OBJECTIVES ♦ ♦ ♦ ♦

There are four reserve funding goals/objectives which may be used to develop a reserve funding plan that corresponds with the risk tolerance of the association: Full Funding, Baseline Funding, Threshold Funding and Statutory Funding. These goals/objectives are described as follows:

Full Funding
Describes goal/objective to have reserves on hand equivalent to the value of the deterioration of each reserve component. The objective of this funding goal is to achieve and/or maintain a 100% percent funded reserve fund. Component calculation method or directed cash flow calculation method is typically used to develop a full funding plan.

Baseline Funding
Describes goal/objective to have sufficient reserves on hand to never completely run out of money. The objective of this funding goal is to simply pay for all reserve expenses as they come due without regard to the association's percent funded. Minimum cash flow calculation method or directed cash flow calculation method s typically used to develop a baseline funding plan.

Threshold Funding
Describes goal/objective other than the 100% level (full funding) or just staying cash-positive (baseline funding). This threshold goal/objective may be a specific percent funded target or a cash balance target. Threshold funding is often a value chosen between full funding and baseline funding. Minimum cash flow calculation method or directed cash flow calculation method is typically used to develop a threshold funding plan.

Statutory Funding
Describes goal/objective as described or required by local laws or codes. Component calculation method, minimum cash flow calculation method or directed cash flow calculation method may be used to develop a statutory funding plan, depending on the requirements.

Preface

♦ ♦ ♦ ♦ RESERVE FUNDING CALCULATION METHODS ♦ ♦ ♦ ♦

There are three funding methods which can be used to develop a reserve funding plan based on reserve funding goals/ objectives: Component Calculation Method, Minimum Cash Flow Calculation Method and Directed Cash Flow Calculation Method.

Directed cash flow calculation method offers flexibility for developing custom funding plans. Directed cash flow calculation method funding plans can accommodate use of various contribution increases and/or special assessments (or loans) through time. As the name suggests, the user "directs" the funding plan as needed to achieve reserve funding goals or objectives. Because of this flexibility, the vast majority of reserve analyses are developed using the directed cash flow calculation method. Whereas component calculation method funding plans and minimum cash flow calculation method funding plans are typically used as reference information; usually considered the "floor" (minimum cash flow calculation method) and "ceiling" (component calculation method) of a reasonable reserve funding plan.

The three calculation methods are described as follows:

Component Calculation Method

Component calculation method develops a funding plan for each individual reserve component. The sum of the funding plan for each component equals the total funding plan for the association. This method is often referred to as the "straight line" method. This method structures a funding plan that enables the association to pay all reserve expenditures as they come due, enables the association to achieve the fully funded reserves in time, and then enables the association to maintain fully funded reserves through time. The following is a detailed description of component calculation method:

Step 1: Calculation of fully funded balance for each component

Fully funded balance is calculated for each component based on its age, useful life and current cost. The actual formula is as follows:

$$\text{Fully Funded Balance} = \frac{\text{Age}}{\text{Useful Life}} \times \text{Current Cost}$$

Step 2: Distribution of current reserve funds

Association's current reserve funds are assigned to (or distributed amongst) reserve components based on each component's remaining life and fully funded balance as follows:

Pass 1: Components are organized in remaining life order, from least to greatest, and the current reserve funds are assigned to each component up to its fully funded balance, until reserve funds are exhausted.

Pass 2: If all components are assigned their fully funded balance and additional funds exist, they are assigned in a "second pass." Again, components are organized in remaining life order, from least to greatest, and remaining current reserve funds are assigned to each component up to its current cost, until reserve funds are exhausted.

Pass 3: If all components are assigned their current cost and additional funds exist, they are assigned in a "third pass." Components with a remaining life of zero years are assigned double their current cost, until reserve funds are exhausted. After pass 3, if additional reserve funds remain, there are excess reserves.

Distributing, or assigning, reserve funds in this manner is the most efficient use of the funds on hand – it defers the make-up period of any underfunded reserves over the lives of the components with the largest remaining lives.

Step 3: Developing a funding plan

After step 2, all components have a "starting" balance. A calculation is made to determine what funding would be required to get from the starting balance to the future cost over the number of years remaining until replacement. The funding plan incorporates the contribution increase parameter to develop a "stair stepped" contribution.

For example, if an association needs to accumulate $100,000 in ten years, $10,000 could be contributed each year. Alternatively, the association could contribute $8,723 in the first year and increase the contribution by 3% each year thereafter until the tenth year.

In most cases, the contribution increase parameter should match the inflation parameter. Matching the contribution increase parameter to the inflation parameter indicates, in theory, that member contributions should increase at the same rate as the cost of living (inflation parameter). Due to the "time value of money," this creates the most equitable distribution of member contributions through time.

Using a contribution increase parameter that is greater than the inflation parameter will reduce the burden to current members at the expense of future members. Using a contribution increase parameter that is less than the inflation parameter will increase the burden to the current members to the benefit of future members. The following chart shows a comparison:

	0% Increase	3% Increase	10% Increase
Year 1	$10,000.00	$8,723.05	$6,274.54
Year 2	$10,000.00	$8,984.74	$6,901.99
Year 3	$10,000.00	$9,254.28	$7,592.19
Year 4	$10,000.00	$9,531.91	$8,351.41
Year 5	$10,000.00	$9,817.87	$9,186.55
Year 6	$10,000.00	$10,112.41	$10,105.21
Year 7	$10,000.00	$10,415.78	$11,115.73
Year 8	$10,000.00	$10,728.25	$12,227.30
Year 9	$10,000.00	$11,050.10	$13,450.03
Year 10	$10,000.00	$11,381.60	$14,795.04
TOTAL	$100,000.00	$100,000.00	$100,000.00

One major benefit of using component calculation method is that for any single component (or group of components), reserve funding can be precisely calculated. For example, using this calculation method, the reserve analysis can indicate the exact amount of current reserve funds "in the bank" for the roofs and the amount of money being funded towards the roofs each month. This information is displayed on the Management Summary and Charts as well as elsewhere within the report.

Minimum Cash Flow Calculation Method

Minimum cash flow calculation method develops a funding plan based on current reserve funds and projected expenditures during a specific timeframe (typically 30 years). This funding method structures a funding plan that enables the association to pay for all reserve expenditures as they come due, but is not concerned with the ideal level of reserves or percent funded through time.

This calculation method tests reserve contributions against reserve expenditures through time to determine the minimum contribution necessary (baseline funding). This calculation method will determine the minimum reserve contribution to ensure that the beginning reserve balance is sufficient to pay for the scheduled expenditures in each year. By definition, this calculation method will create a funding plan where, at some point over the projection period, the beginning reserve fund balance will equal the expenditures for that year. Under some conditions, based on reserve expenditure profile, this calculation method produces a funding plan that will take the association into an overfunded status through time; in these cases, directed cash flow calculation method can be used to optimize results.

Minimum cash flow calculation method is not without downsides… Unlike component calculation method, the minimum cash flow calculation method cannot precisely calculate reserve funding for any single component (or group of components). In order to work-around this issue to provide this bookkeeping information, a formula has been applied to component calculation method results to calculate a reasonable breakdown. This information is displayed on the Management Summary and Charts as well as elsewhere within the report. Using minimum cash flow calculation method typical-

ly requires an annual reallocation of reserve funds (amongst reserve components) to ensure each component remains properly funded through time. Associations in states that require segregated reserve funds for certain components (i.e. roofs, painting, etc.), should pay special attention to this issue; it may be desirable to complete separate reserve analyses for segregated reserve components.

Directed Cash Flow Calculation Method

Directed cash flow calculation method develops a funding plan based on current reserve funds and projected expenditures during a specific timeframe (typically 30 years). This funding method structures a funding plan that enables the association to pay for all reserve expenditures as they come due and, if possible, determine the optimal funding plan to achieve 100% funding over the projection period.

Directed cash flow calculation method offers flexibility for developing custom funding plans. Directed cash flow funding plans can accommodate use of various contribution increases and/or special assessments (or loans) through time. As the name suggests, the user "directs" the funding plan as needed to achieve any reserve funding goals or objectives. Because of this flexibility, the vast majority of reserve analyses are developed using this calculation method.

Directed cash flow calculation method is not without downsides… Unlike component calculation method, the directed cash flow calculation method cannot precisely calculate reserve funding for any single component (or group of components). In order to work-around this issue to provide this bookkeeping information, a formula has been applied to component calculation method results to calculate a reasonable breakdown. This information is displayed on the Management Summary and Charts as well as elsewhere within the report. Using directed cash flow calculation method typically requires an annual reallocation of reserve funds (amongst reserve components) to ensure each component remains properly funded through time. Associations in states that require segregated reserve funds for certain components (i.e. roofs, painting, etc.), should pay special attention to this issue; it may be desirable to complete separate reserve analyses for segregated reserve components.

Preface

♦ ♦ ♦ ♦ READING THE RESERVE ANALYSIS ♦ ♦ ♦ ♦

In some cases, the reserve analysis may be a lengthy document of one hundred pages or more. A complete and thorough review of the reserve analysis is always a good idea. However, if time is limited, it is suggested that a thorough review of the summary pages be made. If a "red flag" is raised in this review, the reader should then check the detail information ("Component Detail"), of the component in question, for all relevant information. In this section, a description of most of the summary or report sections is provided along with comments regarding what to look for and how to use each section.

Executive Summary
Provides general information about project, global parameters used in the calculation of the reserve analysis as well as the core results of the reserve analysis.

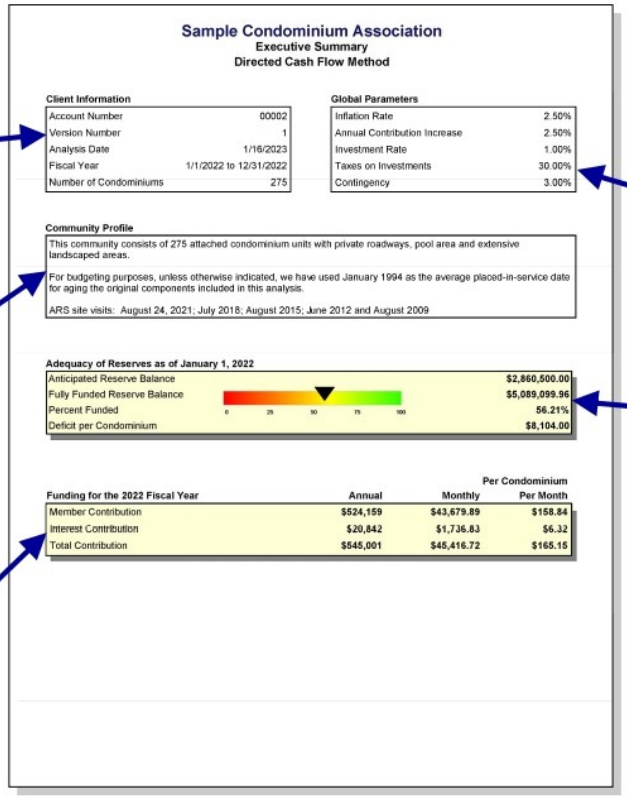
Client Information
Provides information including fiscal year for which reserve analysis is prepared, number of units, etc.

Global Parameters
Displays calculation parameters that were used to calculate reserve analysis including inflation, contribution increase, investment rate, tax rate and contingency.

Community Profile
Provides brief description of community as well as other "global" comments.

Budget
Provides recommended funding for fiscal year for which reserve analysis is prepared. Indicates reserve funding from membership, anticipated interest contribution and total contribution requirement.

Adequacy of Reserves
Displays results of calculations with regard to "health" of reserve fund as of beginning of fiscal year for which the reserve analysis is prepared. Provides anticipated reserve balance, fully funded reserve balance and percent funded.



Sample Condominium Association
Executive Summary
Directed Cash Flow Method

Client Information

Account Number	00002
Version Number	1
Analysis Date	1/16/2023
Fiscal Year	1/1/2022 to 12/31/2022
Number of Condominiums	275

Global Parameters

Inflation Rate	2.50%
Annual Contribution Increase	2.50%
Investment Rate	1.00%
Taxes on Investments	30.00%
Contingency	3.00%

Community Profile

This community consists of 275 attached condominium units with private roadways, pool area and extensive landscaped areas.

For budgeting purposes, unless otherwise indicated, we have used January 1994 as the average placed-in-service date for aging the original components included in this analysis.

ARS site visits: August 24, 2021; July 2018; August 2015; June 2012 and August 2009

Adequacy of Reserves as of January 1, 2022

Anticipated Reserve Balance	$2,860,500.00
Fully Funded Reserve Balance	$5,089,099.96
Percent Funded	56.21%
Deficit per Condominium	$8,104.00

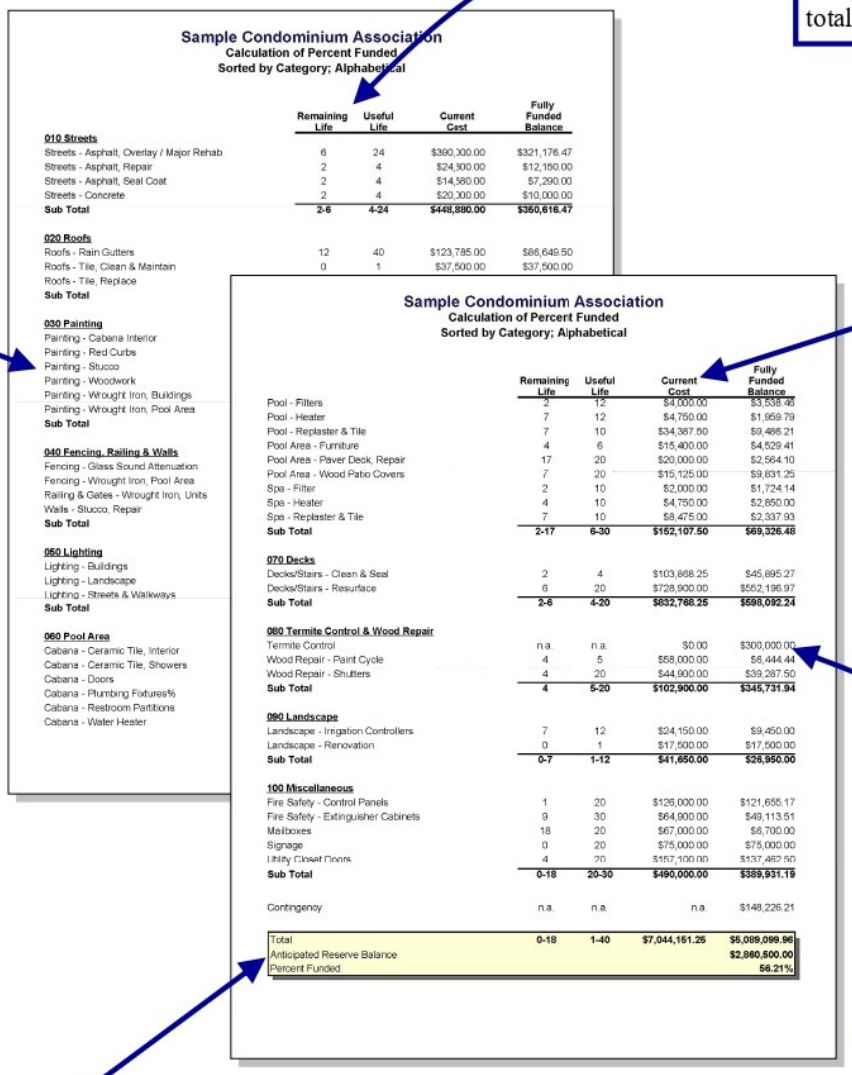
Funding for the 2022 Fiscal Year	Annual	Monthly	Per Condominium Per Month
Member Contribution	$524,159	$43,679.89	$158.84
Interest Contribution	$20,842	$1,736.83	$6.32
Total Contribution	$545,001	$45,416.72	$165.15

Calculation of Percent Funded

Summary displays all reserve components, shown here in "category" order. Provides remaining life, useful life, current cost and fully funded balance at beginning of fiscal year for which the reserve analysis is prepared.

Lifespans
Remaining life and useful life are displayed. And, these columns are conveniently sub totaled to show range.

Reserve Components
All components are displayed (shown here in "category" order).



Sample Condominium Association
Calculation of Percent Funded
Sorted by Category; Alphabetical

	Remaining Life	Useful Life	Current Cost	Fully Funded Balance
010 Streets				
Streets - Asphalt, Overlay / Major Rehab	6	24	$390,000.00	$321,176.47
Streets - Asphalt, Repair	2	4	$24,300.00	$12,150.00
Streets - Asphalt, Seal Coat	2	4	$14,580.00	$7,290.00
Streets - Concrete	2	4	$20,000.00	$10,000.00
Sub Total	**2-6**	**4-24**	**$448,880.00**	**$350,616.47**
020 Roofs				
Roofs - Rain Gutters	12	40	$123,785.00	$86,649.50
Roofs - Tile, Clean & Maintain	0	1	$37,500.00	$37,500.00
Roofs - Tile, Replace				
Sub Total				
030 Painting				
Painting - Cabana Interior				
Painting - Red Curbs				
Painting - Stucco				
Painting - Woodwork				
Painting - Wrought Iron, Buildings				
Painting - Wrought Iron, Pool Area				
Sub Total				
040 Fencing, Railing & Walls				
Fencing - Glass Sound Attenuation				
Fencing - Wrought Iron, Pool Area				
Railing & Gates - Wrought Iron, Units				
Walls - Stucco, Repair				
Sub Total				
050 Lighting				
Lighting - Buildings				
Lighting - Landscape				
Lighting - Streets & Walkways				
Sub Total				
060 Pool Area				
Cabana - Ceramic Tile, Interior				
Cabana - Ceramic Tile, Showers				
Cabana - Doors				
Cabana - Plumbing Fixtures%				
Cabana - Restroom Partitions				
Cabana - Water Heater				

Sample Condominium Association
Calculation of Percent Funded
Sorted by Category; Alphabetical

	Remaining Life	Useful Life	Current Cost	Fully Funded Balance
Pool - Filters	2	12	$4,000.00	$3,538.46
Pool - Heater	7	12	$4,750.00	$1,959.79
Pool - Replaster & Tile	7	10	$34,387.50	$9,486.21
Pool Area - Furniture	4	6	$15,400.00	$4,529.41
Pool Area - Paver Deck, Repair	17	20	$20,000.00	$2,564.10
Pool Area - Wood Patio Covers	7	20	$15,125.00	$9,631.25
Spa - Filter	2	10	$2,000.00	$1,724.14
Spa - Heater	4	10	$4,750.00	$2,850.00
Spa - Replaster & Tile	7	10	$8,475.00	$2,337.93
Sub Total	**2-17**	**6-30**	**$152,107.50**	**$69,326.48**
070 Decks				
Decks/Stairs - Clean & Seal	2	4	$103,868.25	$45,895.27
Decks/Stairs - Resurface	6	20	$728,900.00	$552,196.97
Sub Total	**2-6**	**4-20**	**$832,768.25**	**$598,092.24**
080 Termite Control & Wood Repair				
Termite Control	n.a.	n.a.	$0.00	$300,000.00
Wood Repair - Paint Cycle	4	5	$58,000.00	$8,444.44
Wood Repair - Shutters	4	20	$44,900.00	$39,287.50
Sub Total	**4**	**5-20**	**$102,900.00**	**$345,731.94**
090 Landscape				
Landscape - Irrigation Controllers	7	12	$24,150.00	$9,450.00
Landscape - Renovation	0	1	$17,500.00	$17,500.00
Sub Total	**0-7**	**1-12**	**$41,650.00**	**$26,950.00**
100 Miscellaneous				
Fire Safety - Control Panels	1	20	$126,000.00	$121,655.17
Fire Safety - Extinguisher Cabinets	9	30	$64,900.00	$49,113.51
Mailboxes	18	20	$67,000.00	$8,700.00
Signage	0	20	$75,000.00	$75,000.00
Utility Closet Doors	4	20	$157,100.00	$137,462.50
Sub Total	**0-18**	**20-30**	**$490,000.00**	**$389,931.19**
Contingency	n.a.	n.a.	n.a.	$148,226.21
Total	0-18	1-40	$7,044,161.25	$5,089,099.96
Anticipated Reserve Balance				$2,860,500.00
Percent Funded				56.21%

Current Cost
Displays current cost to replace or otherwise maintain each component. This column is conveniently sub totaled.

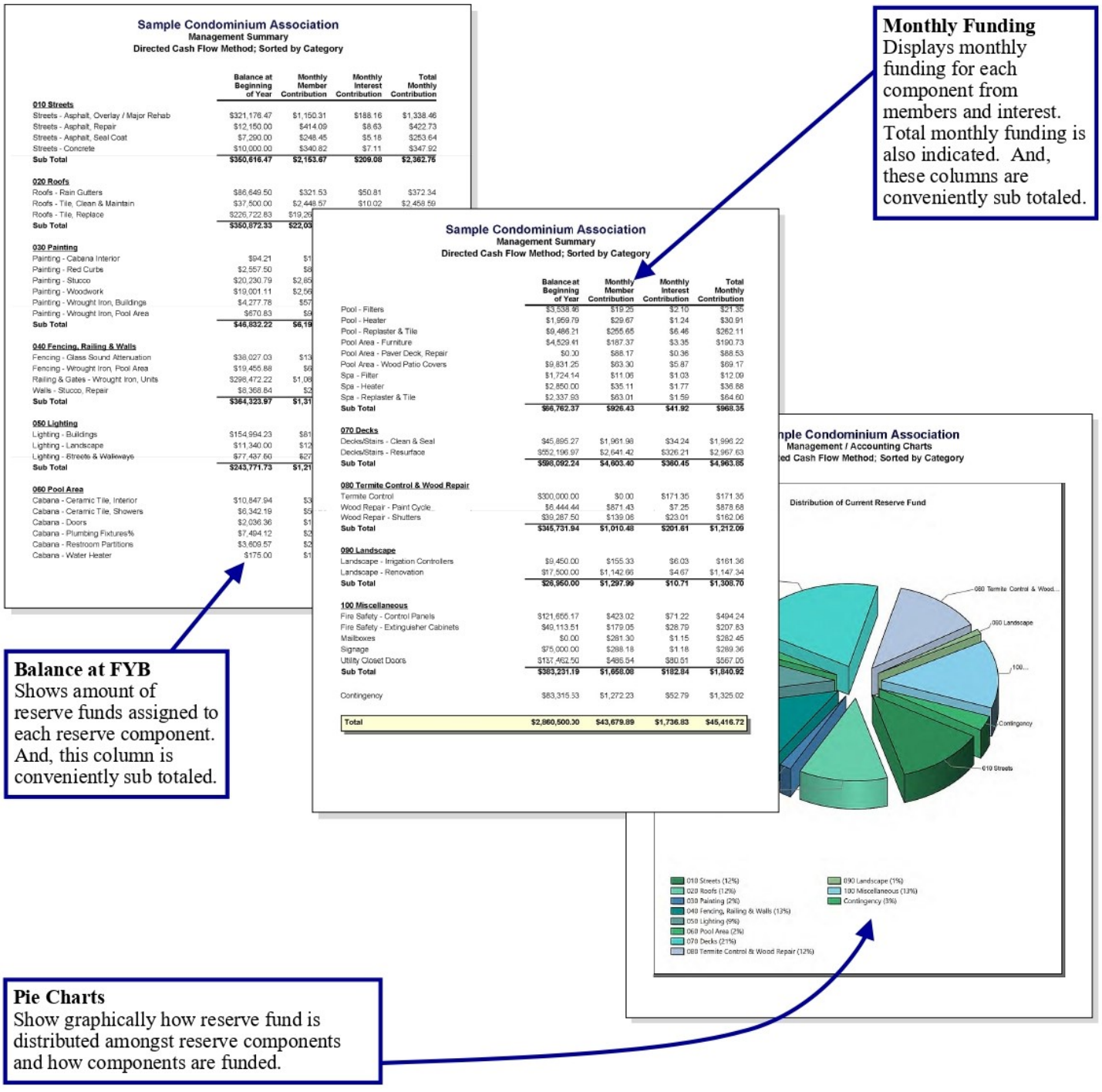
Fully Funded Balance
Displays fully funded balance for each component. This column is conveniently sub totaled.

Total current cost to replace or otherwise maintain all components, total fully funded balance, anticipated reserve balance and percent funded are provided at bottom of this summary. Also shown is range of reserve component remaining lives and useful lives.

Preface

Management Summary and Charts

Summary displays all reserve components, shown here in "category" order. Provides assigned reserve funds at beginning of fiscal year for which reserve analysis is prepared along with monthly member contribution, interest contribution and total contribution for each component and category. Pie charts show graphically how reserve fund is distributed amongst reserve component categories and how each category is funded on a monthly basis.



Sample Condominium Association
Management Summary
Directed Cash Flow Method; Sorted by Category

	Balance at Beginning of Year	Monthly Member Contribution	Monthly Interest Contribution	Total Monthly Contribution
010 Streets				
Streets - Asphalt, Overlay / Major Rehab	$321,176.47	$1,150.31	$188.16	$1,338.46
Streets - Asphalt, Repair	$12,150.00	$414.09	$8.63	$422.73
Streets - Asphalt, Seal Coat	$7,290.00	$248.45	$5.18	$253.64
Streets - Concrete	$10,000.00	$340.82	$7.11	$347.92
Sub Total	**$350,616.47**	**$2,153.67**	**$209.08**	**$2,362.75**
020 Roofs				
Roofs - Rain Gutters	$86,649.50	$321.53	$50.81	$372.34
Roofs - Tile, Clean & Maintain	$37,500.00	$2,448.57	$10.02	$2,458.59
Roofs - Tile, Replace	$226,722.83	$19,26		
Sub Total	**$350,872.33**	**$22,03**		
030 Painting				
Painting - Cabana Interior	$94.21	$1		
Painting - Red Curbs	$2,557.50	$8		
Painting - Stucco	$20,230.79	$2,85		
Painting - Woodwork	$19,001.11	$2,56		
Painting - Wrought Iron, Buildings	$4,277.78	$57		
Painting - Wrought Iron, Pool Area	$670.83	$9		
Sub Total	**$46,832.22**	**$6,19**		
040 Fencing, Railing & Walls				
Fencing - Glass Sound Attenuation	$38,027.03	$13		
Fencing - Wrought Iron, Pool Area	$19,455.88	$6		
Railing & Gates - Wrought Iron, Units	$298,472.22	$1,08		
Walls - Stucco, Repair	$8,368.84	$2		
Sub Total	**$364,323.97**	**$1,31**		
050 Lighting				
Lighting - Buildings	$154,994.23	$81		
Lighting - Landscape	$11,340.00	$12		
Lighting - Streets & Walkways	$77,437.50	$27		
Sub Total	**$243,771.73**	**$1,21**		
060 Pool Area				
Cabana - Ceramic Tile, Interior	$10,847.94	$3		
Cabana - Ceramic Tile, Showers	$6,342.19	$5		
Cabana - Doors	$2,036.36	$1		
Cabana - Plumbing Fixtures%	$7,494.12	$2		
Cabana - Restroom Partitions	$3,609.57	$2		
Cabana - Water Heater	$175.00	$1		

Sample Condominium Association
Management Summary
Directed Cash Flow Method; Sorted by Category

	Balance at Beginning of Year	Monthly Member Contribution	Monthly Interest Contribution	Total Monthly Contribution
Pool - Filters	$3,538.96	$19.25	$2.10	$21.35
Pool - Heater	$1,869.79	$29.67	$1.24	$30.91
Pool - Replaster & Tile	$9,486.21	$255.65	$6.46	$262.11
Pool Area - Furniture	$4,529.41	$187.37	$3.35	$190.73
Pool Area - Paver Deck, Repair	$0.00	$88.17	$0.36	$88.53
Pool Area - Wood Patio Covers	$9,831.25	$63.30	$5.87	$69.17
Spa - Filter	$1,724.14	$11.06	$1.03	$12.09
Spa - Heater	$2,850.00	$35.11	$1.77	$36.88
Spa - Replaster & Tile	$2,337.93	$63.01	$1.59	$64.60
Sub Total	**$56,762.37**	**$926.43**	**$41.92**	**$968.35**
070 Decks				
Decks/Stairs - Clean & Seal	$45,895.27	$1,961.98	$34.24	$1,996.22
Decks/Stairs - Resurface	$552,196.97	$2,641.42	$326.21	$2,967.63
Sub Total	**$598,092.24**	**$4,603.40**	**$360.45**	**$4,963.85**
080 Termite Control & Wood Repair				
Termite Control	$300,000.00	$0.00	$171.35	$171.35
Wood Repair - Paint Cycle	$6,444.44	$871.43	$7.25	$878.68
Wood Repair - Shutters	$39,287.50	$139.06	$23.01	$162.06
Sub Total	**$345,731.94**	**$1,010.48**	**$201.61**	**$1,212.09**
090 Landscape				
Landscape - Irrigation Controllers	$9,450.00	$155.33	$6.03	$161.36
Landscape - Renovation	$17,500.00	$1,142.66	$4.67	$1,147.34
Sub Total	**$26,950.00**	**$1,297.99**	**$10.71**	**$1,308.70**
100 Miscellaneous				
Fire Safety - Control Panels	$121,656.17	$423.02	$71.22	$494.24
Fire Safety - Extinguisher Cabinets	$49,113.51	$179.05	$28.79	$207.83
Mailboxes	$0.00	$281.30	$1.15	$282.45
Signage	$75,000.00	$288.18	$1.18	$289.36
Utility Closet Doors	$137,462.50	$486.54	$80.51	$567.05
Sub Total	**$383,231.19**	**$1,658.08**	**$182.84**	**$1,840.92**
Contingency	$83,315.53	$1,272.23	$52.79	$1,325.02
Total	**$2,860,500.30**	**$43,679.89**	**$1,736.83**	**$45,416.72**

nple Condominium Association
Management / Accounting Charts
ed Cash Flow Method; Sorted by Category

Distribution of Current Reserve Fund

Monthly Funding
Displays monthly funding for each component from members and interest. Total monthly funding is also indicated. And, these columns are conveniently sub totaled.

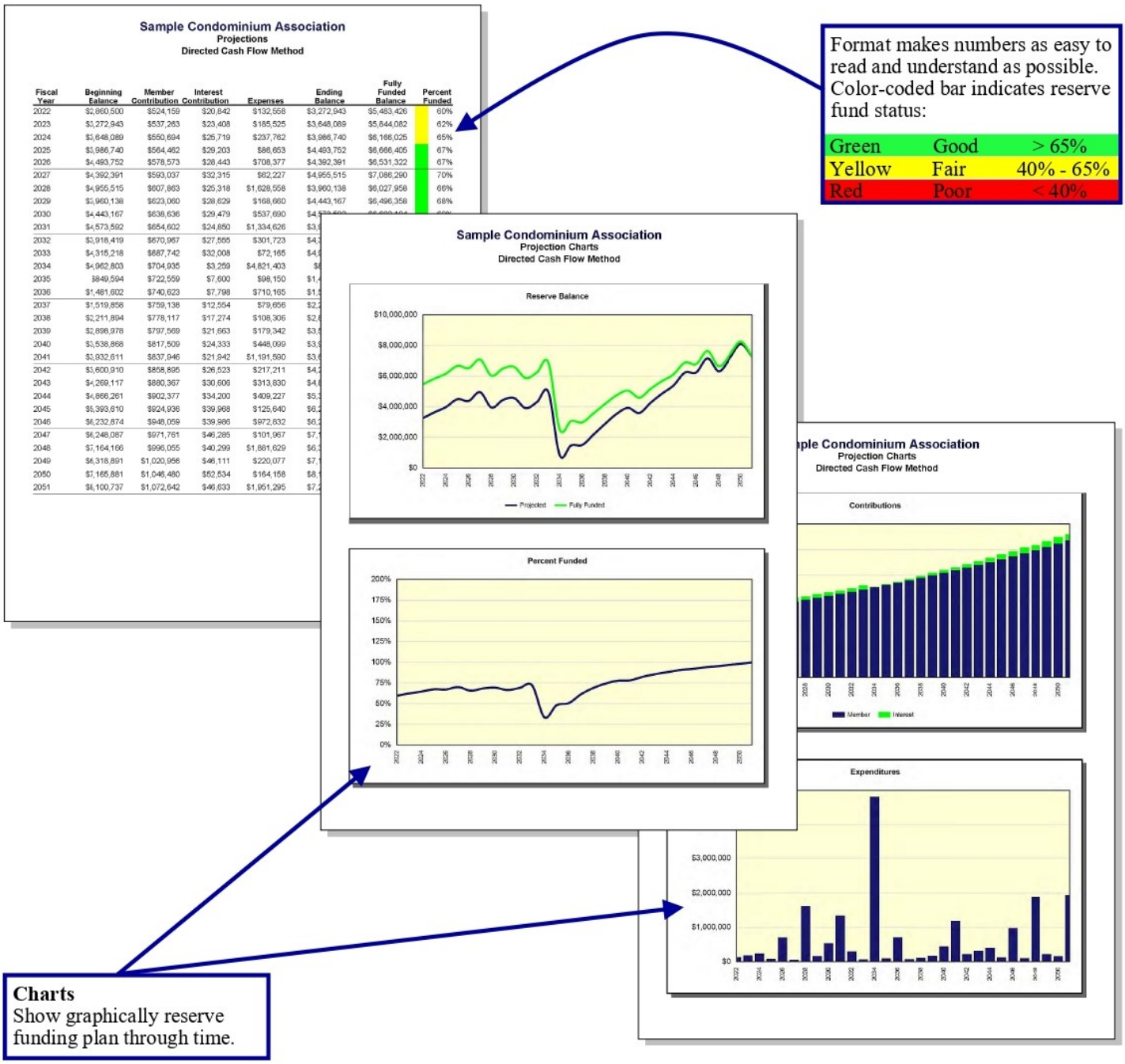
Balance at FYB
Shows amount of reserve funds assigned to each reserve component. And, this column is conveniently sub totaled.

Pie Charts
Show graphically how reserve fund is distributed amongst reserve components and how components are funded.

Preface

Projections and Charts

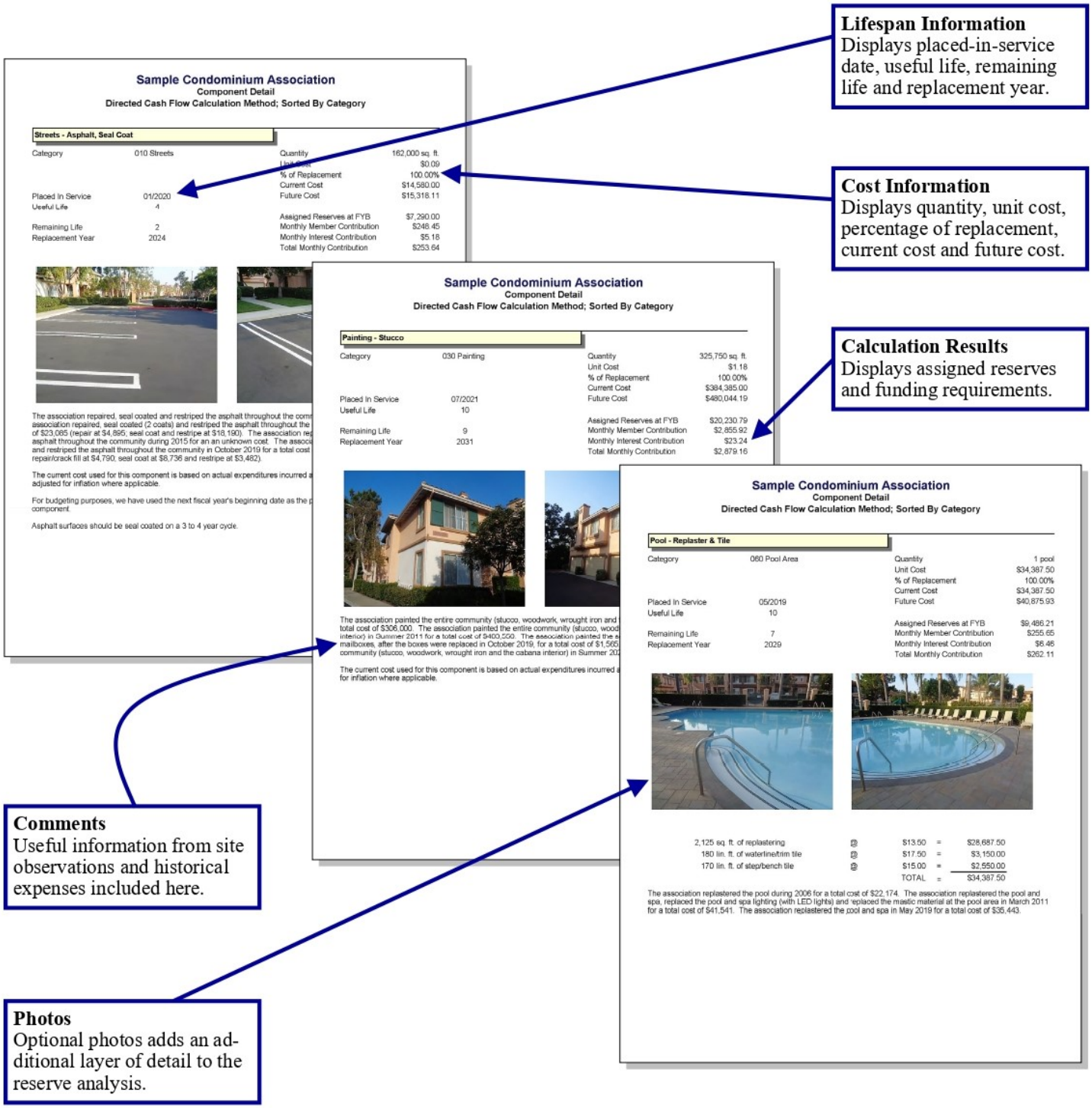
Summary displays projections of beginning reserve balance, member contribution, interest contribution, expenditures and ending reserve balance for each year of projection period (shown here for 30 years). Two columns on the right-hand side provide fully funded ending balance and percent funded for each year. Charts show the same information in an easy-to-understand graphic format.



Preface

Component Detail

Summary provides detailed information about each reserve component. These pages display all information about each reserve component as well as comments from site observations and historical information regarding replacement or other maintenance.



♦ ♦ ♦ ♦ GLOSSARY OF KEY TERMS ♦ ♦ ♦ ♦

Anticipated Reserve Balance (or Reserve Funds)
Amount of money, as of a certain point in time, held by association to be used for the repair or replacement of reserve components. This figure is "anticipated" because it is calculated based on the most current financial information available as of the analysis date, which is almost always prior to the fiscal year beginning date for which the reserve analysis is prepared.

Assigned Funds (and "Fixed" Assigned Funds)
Amount of money, as of fiscal year beginning date for which reserve analysis is prepared, that a reserve component has been assigned.

Assigned funds are considered "fixed" when the normal calculation process is bypassed and a specific amount of money is assigned to a reserve component. For example, if the normal calculation process assigns $10,000 to the roofs, but the association would like to show $20,000 assigned to roofs, "fixed" funds of $20,000 can be assigned.

Component Calculation Method
Reserve funding calculation method developed based on each individual reserve component. A more detailed description of the actual calculation process is included in the "reserve funding calculation methods" section of the preface.

Contingency Parameter
Rate used as a built-in buffer in the calculation of a reserve funding plan. This rate will assign a percentage of reserve funds, as of the fiscal year beginning, as contingency funds and will also determine the level of funding toward contingency each month.

Contribution Increase Parameter
Rate used in calculation of funding plan. This rate is used on an annual compounding basis. This rate represents, in theory, the rate the association expects to increase contributions each year.

In most cases, this rate should match the inflation parameter. Matching the contribution increase parameter to the inflation parameter indicates, in theory, that member contributions should increase at the same rate as the cost of living (inflation parameter). Due to the "time value of money," this creates the most equitable distribution of member contributions through time.

Current Replacement Cost
Amount of money, as of fiscal year beginning date for which reserve analysis is prepared, that a reserve component is expected to cost to replace.

Directed Cash Flow Calculation Method
Reserve funding calculation method developed based on total annual expenditures. A more detailed description of the actual calculation process is included in the "reserve funding calculation methods" section of the preface.

Fiscal Year
Budget year for association for which reserve analysis is prepared. Fiscal year beginning (FYB) is first day of budget year; fiscal year end (FYE) is last day of budget year.

Fully Funded Reserve Balance
Amount of money that should theoretically have accumulated in the reserve fund as of a certain point in time. Fully funded reserves are calculated for each reserve component based on the current replacement cost, age and useful life:

$$\text{Fully Funded Reserves} = \frac{\text{Age}}{\text{Useful Life}} \times \text{Current Replacement Cost}$$

Fully funded reserve balance is the sum of the fully funded reserves for each reserve component.
An association that has accumulated the fully funded reserve balance does not have all of the funds necessary to replace all of its reserve components immediately; it has the proportionately appropriate reserve funds for the reserve com-

ponents it maintains, based on each component's current replacement cost, age and useful life.

Future Replacement Cost
Amount of money, as of fiscal year during which replacement of a reserve component is scheduled, that a reserve component is expected to cost to replace. This cost is calculated using the current replacement cost compounded annually by the inflation parameter.

Global Parameters
Financial parameters used to calculate reserve analysis. See also "inflation parameter," "contribution increase parameter," "investment rate parameter" and "taxes on investments parameter."

Inflation Parameter
Rate used in calculation of future costs for reserve components. This rate is used on an annual compounding basis. This rate represents rate the association expects the cost of goods and services relating to their reserve components to increase each year.

Interest Contribution
Amount of money contributed to reserve fund by interest earned on reserve fund and member contributions.

Investment Rate Parameter
Gross rate used in calculation of interest contribution (interest earned) from reserve balance and member contributions. This rate (net of taxes on investments parameter) is used on a monthly compounding basis. This parameter represents the weighted average interest rate association expects to earn on their reserve fund investments.

Membership Contribution
Amount of money contributed to reserve fund by association's membership.

Minimum Cash Flow Calculation Method
Reserve funding calculation method developed based on total annual expenditures. A more detailed description of the actual calculation process is included in the "reserve funding calculation methods" section of the preface.

Monthly Contribution (and "Fixed" Monthly Contribution)
Amount of money, for fiscal year which reserve analysis is prepared, that a reserve component will be funded.

Monthly contribution is considered "fixed" when the normal calculation process is bypassed and a specific amount of money is funded to a reserve component. For example, if the normal calculation process funds $1,000 to the roofs each month, but the association would like to show $500 funded to roofs each month, a "fixed" contribution of $500 can be assigned.

Number of Units (or other assessment basis)
Number of units for which reserve analysis is prepared. In "phased" developments, this number represents the number of units, and corresponding common area components, that exist as of a certain point in time.

For some associations, assessments and reserve contributions are based on a unit of measure other than number of units. Examples include time-interval weeks for timeshare resorts or lot acreage (or square feet) for commercial/ industrial developments.

One-Time Replacement
Used for components that will be budgeted for only once.

Percent Funded
Measure of association's reserve fund "health," expressed as a percentage, as of a certain point in time. This number is the ratio of anticipated reserve fund balance to fully funded reserve balance:

$$\text{Percent Funded} = \frac{\text{Anticipated Reserve Fund Balance}}{\text{Fully Funded Reserve Balance}}$$

Preface

Reserve fund health:

Green	Good	> 65%
Yellow	Fair	40% to 65%
Red	Poor	< 40%

An association that is 100% funded does not have all reserve funds necessary to replace all of its reserve components immediately; it has the proportionately appropriate reserve funds for reserve components it maintains, based on each component's current replacement cost, age and useful life.

Percentage of Replacement
Percentage of reserve component that is expected to be replaced.

For most reserve components, this percentage is 100%. In some cases, this percentage may be more or less than 100%. For example, fencing which is shared with a neighboring community may be set at 50%. Another example would be a component where partial replacement is expected, such as interior doors.

Placed-In-Service Date
Date (month and year) that a reserve component was originally put into service or last replaced.

Remaining Life
Length of time, in years, until a reserve component is scheduled to be replaced.

Remaining Life Adjustment
Length of time, in years, that a reserve component is expected to last in excess (or deficiency) of its useful life for current cycle of replacement (only).

If current cycle of replacement for a reserve component is expected to be greater than or less than the "normal" life expectancy, the reserve component's life should be adjusted using a remaining life adjustment.

For example, if wood trim is painted normally on a 4 year cycle, useful life should be 4 years. However, when it comes time to paint the wood trim and it is determined that it can be deferred for an additional year, useful life should remain at 4 years and a remaining life adjustment of +1 year should be used.

Replacement Year
Fiscal year that a reserve component is scheduled to be replaced.

Reserve Components
Line items included in the reserve analysis.

Taxes on Investments Parameter
Rate used to offset investment rate parameter in the calculation of interest contribution. This parameter represents the marginal tax rate association expects to pay on interest earned by reserve funds and member contributions.

Total Contribution
Sum of membership contribution and interest contribution.

Useful Life
Length of time, in years, that a reserve component is expected to last each time it is replaced. See also "remaining life adjustment."

♦ ♦ ♦ ♦ LIMITATIONS OF RESERVE ANALYSIS ♦ ♦ ♦ ♦

This reserve analysis is intended as a tool for the association's Board of Directors to be used in evaluating the association's current physical and financial condition with regard to reserve components. The results of this reserve analysis represent the independent opinion of the preparer. There is no implied warranty or guarantee of this work product.

For the purposes of this reserve analysis, it has been assumed that all components have been installed properly, no construction defects exist and all components are operational. Additionally, it has been assumed that all components will be maintained properly in the future.

Representations set forth in this reserve analysis are based on the best information and estimates of the preparer as of the date of this analysis. These estimates are subject to change. This reserve analysis includes estimates of replacement costs and life expectancies as well as assumptions regarding future events. Some estimates are projections of future events based on information currently available and are not necessarily indicative of the actual future outcome. The longer the time period between the estimate and the estimated event, the more likely the possibility or error and/or discrepancy. For example, some assumptions inevitably will not materialize and unanticipated events and circumstances may occur subsequent to the preparation of this reserve analysis. Therefore, the actual replacement costs and remaining lives may vary from this reserve analysis and the variation may be significant. Additionally, inflation and other economic events may impact this reserve analysis, particularly over an extended period of time and those events could have a significant and negative impact on the accuracy of this reserve analysis and, further, the funds available to meet the association's obligation for repair, replacement or other maintenance of major components during their estimated useful life. Furthermore, the occurrence of vandalism, severe weather conditions, climate change, earthquakes, floods, acts of nature or other unforeseen events cannot be predicted and/or accounted for and are excluded when assessing life expectancy, repair and/or replacement costs of the reserve components.

RB WWTF Sample
Executive Summary
Directed Cash Flow Method

Client Information

Account Number	20064-2 Sample
Version Number	1
Analysis Date	9/23/2024
Fiscal Year	1/1/2025 to 12/31/2025
Number of Unit	1

Global Parameters

Inflation Rate	3.00%
Annual Contribution Increase	3.00%
Investment Rate	2.00%
Taxes on Investments	0.00%
Contingency	3.00%

Community Profile

RB Condominium consists of a master association and (4) sub-associations:
- Assisted living facility, which is owned and operated by Sample Senior Living
- Independent Living building, The Sample (garden style building of 24 condo units)
- Two townhouse style condo sub-associations
  - Town Homes (53 condo units)
  - Village Homes (31 condo units)

Assisted living facility is not part of this group of studies. Separate reserve studies cover the other three sub-associations.

Due to specific funding requirements from Massachusetts Department of Environmental Protection and for association accounting, this separate study was prepared for the waste water treatment facility (WWTF) under the master trust association. The master association is responsible for: WWTF, roads & walkways, most parking areas, site lighting, irrigation, fencing, most retaining walls, and storm water drainage system. Other master association responsibilities are covered in a separate study.

Community was constructed between 2003 and 2014.

ARS site visits: August 1, 2024, January 7, 2020 and November 21, 2019

Adequacy of Reserves as of January 1, 2025

Anticipated Reserve Balance	**$80,077.00**
Fully Funded Reserve Balance	**$573,161.54**
Percent Funded	**13.97%**

Funding for the 2025 Fiscal Year	**Annual**	**Monthly**	**Per Unit Per Month**
Member Contribution	**$81,376**	**$6,781.31**	**$6,781.31**
Interest Contribution	**$623**	**$51.90**	**$51.90**
Total Contribution	**$81,999**	**$6,833.21**	**$6,833.21**

RB WWTF Sample
Preparer's Disclosure Statement

Paul Huijing, P.E. completed this reserve study. Consultant certifies that:

1) Consultant has no other involvement with association which could result in actual or perceived conflicts of interest.

2) Consultant made site visits to this community on August 1, 2024, January 7, 2020 and November 21, 2019. Component inventories were developed by actual field inventory, representative sampling, or by making "take-offs" of scaled plans/maps from community's developer.

3) Component conditional assessments were developed by actual field observation and representative sampling.

4) Financial assumptions used in this analysis are listed on the Executive Summary and further explained in the Preface of this report.

5) This is a "Level 2" reserve study update with a site visit.

6) Some construction material and labor shortages are still occurring. Costs have increased significantly in past years. Pricing within reserve study anticipates that these shortages will be alleviated, but generally higher pricing will continue.

7) Study does not account for effects of climate change.

8) Actual current inflation rate is higher than assumed long-term inflation rate in the study. The duration of this higher inflation level is unknown. More frequent reserve study updates are recommended if actual inflation is not at the assumed long-term rate for a prolonged period of time.

9) There are no other material issues known to consultant at this time which would cause a distortion of the association's situation.

RB WWTF Sample
Association and General Comments

RB WWTF Comments:

Reserve fund balance on 1/1/25 approximately $80,077
Association also has $347,217 in FAM fund (see below), but this is for emergencies only.

Reserve contribution for 2024 $2965 monthly = $35,580 annually
Information per client email 7/30/2024
Per client, association has been paying taxes from operating budget.
2% investment interest rate is average anticipated over 30 years.

There is a separate reserve fund for the WWTF under the RB Trust (master) Association. A separate reserve account is important for fee assessment. Per governing documents, the WWTF is funded based upon yearly subgroup water usage, not by beneficial interest which is used for roads, etc. The separation of funds is important due to the mandated difference in accruement.

The DEP mandates a FAM (Financial Assistance Mechanism) account for the WWTF. This is determined by law to be 25% of the replacement value of the process plant and collection system (not leach field). Robbins Brook was allowed to seed the account with $106,000 (accrued previously per DEP permit requirements) and add $45,800 each year for the life of the current permit (5 yrs). This resulted in FAM account of ~$335,000 at the end of current permit, 2023. The $335,000 is 25% of the replacement value, (determined by W&S engineering study) of ~$1,324,000. This the low end of their estimate.

The FAM account is not very useful since it is in escrow with an independent account manager and DEP authorization is required to use the funds. In addition, the fund must be replenished within 90 days. DEP has no flexibility on this due to the legal constraints.

2020 notes:
FAM account balance was $205,116 on 1/1/2020. Account balance on 1/1/21 is anticipated to be 250,916. Amounts contributed above the DEP mandate will be deposited in a new reserve fund dedicated to the WWTF. This fund will be started with some funds remaining after closing fiscal 2019. About $13,160 is anticipated to be remaining in this fund on 1/1/21 per client. Therefore, starting balance will be $264,076 for the combined funds. Funds for repairs in 2020 will be provided by operating budget.

Funding calculated to maintain minimum balance of $335,000 in all years so FAM account will not need to be used except in emergencies.

Most information on cost and useful life obtained from Weston & Sampson RB Engineering Evaluation Report, October 25, 2017. Per W&S report, WWTF was substantially complete in 2001. An original placed-in-service date of 1/2002 will be used. See W&S report for additional description of facility.

Operational tank pumping schedule/expenses:
- Anoxic tank every 8 months: ~$10,000
- Lift tank every 4 months: ~3x$2200
- Lift Tank Vacuum/CSE yearly: $5700
- Collection system manhole jetting yearly: ~$2,000

WWTF unfunded major components:
- Train 2 pumps that are currently generally unused located in Clearwell 2: Amphidrome Plus backwash & feed pumps, backwash/reverse pumps, lift rails
- UV disinfection unit (currently unused, UV system has been decommissioned with DEP approval)
- Chemical feed systems (carbon feed and alkalinity feed) are not being used
- Full replacement of piping (up to 50 year life)
- Full replacement of concrete structures (up to 50 year life)

WWTF unfunded minor components:
- cost of Amphidrome sand media testing ($1000)
- lighting

- interior doors
- utility sink/cleanup station in office area of building
- eye wash station

Components for any of these items can be added if desired.

General unfunded components:
The following components are often repaired and/or replaced on an as-needed basis and not funded for a complete replacement at one time. There is no practical method to determine the remaining life of these components. Periodic allowances can be included if association has experienced past replacements of these components.

Concrete: Anticipated to last life of building. Typically, budgeting for concrete repairs as a reserve component is excluded as it is anticipated repairs required will be addressed immediately due to safety concerns. Minor repairs should be addressed using the client's operating and/or reserve contingency funds. Should the client desire, funding for this component can be included. Areas include but are not limited to: foundations, walls (exterior/interior), balconies, parking structure and decks

Wood & steel structural framing: Anticipated to last life of building. Repairs done on as-needed basis.

Plumbing pipes: Plumbing systems are built to last the legal life of a building/site. Complete replacement of the common area plumbing pipes (including main and lateral service pipes) is expensive and requires removal of walls, ceilings and floors. Repairs to this type of system are typically done on an as-needed basis for safety and/or building preservation. It is rare that a complete plumbing system is replaced. Most repairs and/or replacements are due to unforeseen issues, product defects, construction defects, improper installation, or from improper chemical treatments. Storm water piping system (if any) is also built to last legal life of association. Repairs to this type of system are also done on an as-needed basis.

Electrical services (lines/meters): Electrical service systems are built to last the legal life of a building/site. Complete replacement of the electrical service lines is expensive and requires removal of walls, ceilings and floors. Repairs required will typically be addressed immediately due to safety concerns. It is rare that a complete electrical system is replaced. Most repairs and/or replacements are due to unforeseen issues, product defects, construction defects, or improper installation.

RB WWTF Sample
Calculation of Percent Funded
Sorted by Category; Alphabetical

	Remaining Life	Useful Life	Current Cost	Fully Funded Balance
010 Administration				
Administration - DEP Major Permit Renewal	12	20	$29,000.00	$11,600.00
Administration - DEP Minor Permit Renewal	4	5	$10,525.00	$2,105.00
Administration - Piping Schematic	0	1	$15,000.00	$15,000.00
Sub Total	**0-12**	**1-20**	**$54,525.00**	**$28,705.00**
050 WWTF Building				
Building - Doors	7	25	$8,000.00	$6,133.33
Building - Painting	0	8	$1,870.00	$1,870.00
Building - Roof	5	25	$3,810.00	$3,129.64
Building - Siding, Periodic Repairs	0	8	$2,016.00	$2,016.00
Sub Total	**0-7**	**8-25**	**$15,696.00**	**$13,148.98**
060 WWTF Equipment				
Amphidrome Plus, Media Replacement	16	20	$9,000.00	$1,800.00
Blower - Odor Control	0	10	$4,000.00	$4,000.00
Blowers - Process Air	1	10	$14,250.00	$13,232.14
Blowers - Process Air, 2019	4	10	$4,750.00	$2,850.00
Disposal Field - North	17	35	$260,000.00	$133,714.29
Disposal Field - South	23	35	$490,000.00	$168,000.00
Equipment - General Upgrade	1	15	$28,000.00	$26,444.44
Fire Alarm Panel	1	20	$4,000.00	$3,833.33
Generator	6	25	$55,000.00	$44,000.00
Instrumentation - Flowmeters, North	19	20	$12,500.00	$625.00
Instrumentation - Flowmeters, South	0	20	$12,500.00	$12,500.00
Instrumentation - General	1	2	$3,000.00	$1,500.00
Instrumentation - Level Transducers	2	3	$3,500.00	$1,166.67
Instrumentation - Main Controller	0	15	$37,000.00	$37,000.00
Odor Control - Activated Carbon Media	2	5	$15,000.00	$9,000.00
Piping - Repair & Replacement Allowance	4	5	$7,000.00	$1,400.00
Pumps - Clearwell 1, Amphidrome Plus Backwash	5	12	$5,500.00	$3,208.33
Pumps - Clearwell 1, Amphidrome Plus Feed	11	12	$5,700.00	$475.00
Pumps - Clearwell 1, Backwash	1	6	$13,000.00	$10,833.33
Pumps - Clearwell 1, Lift Rails	3	3	$5,511.00	$0.00
Pumps - Clearwell 1, UV Dosing	3	6	$12,500.00	$6,250.00
Pumps - Final Effluent, North Disposal Field	5	6	$16,750.00	$2,791.67
Pumps - Final Effluent, South Disposal Field	3	6	$7,000.00	$3,500.00
Pumps - General, Rebuild	3	3	$5,000.00	$0.00
Pumps - Raw Lift Station	0	12	$14,000.00	$14,000.00
Pumps - Raw Lift Station, Lift Rails	2	15	$5,500.00	$5,060.00
Tank - Hatches	25	30	$29,000.00	$4,833.33
Tank - Repair & Replacement Allowance	4	5	$7,000.00	$1,400.00

RB WWTF Sample

Calculation of Percent Funded

Sorted by Category; Alphabetical

	Remaining Life	Useful Life	Current Cost	Fully Funded Balance
Unit Heater	2	25	$1,300.00	$1,196.00
Sub Total	**0-25**	**2-35**	**$1,087,261.00**	**$514,613.54**
Contingency	n.a.	n.a.	n.a.	$16,694.03
Total	**0-25**	**1-35**	**$1,157,482.00**	**$573,161.54**
Anticipated Reserve Balance				**$80,077.00**
Percent Funded				**13.97%**

RB WWTF Sample
Management Summary
Directed Cash Flow Method; Sorted by Category

	Balance at Beginning of Year	Monthly Member Contribution	Monthly Interest Contribution	Total Monthly Contribution
010 Administration				
Administration - DEP Major Permit Renewal	$0.00	$104.99	$0.78	$105.77
Administration - DEP Minor Permit Renewal	$0.00	$110.07	$0.82	$110.89
Administration - Piping Schematic	$15,000.00	$0.00	$0.00	$0.00
Sub Total	**$15,000.00**	**$215.06**	**$1.60**	**$216.66**
050 WWTF Building				
Building - Doors	$0.00	$48.49	$0.36	$48.85
Building - Painting	$1,870.00	$9.97	$0.07	$10.04
Building - Roof	$0.00	$32.03	$0.24	$32.27
Building - Siding, Periodic Repairs	$2,016.00	$10.74	$0.08	$10.82
Sub Total	**$3,886.00**	**$101.23**	**$0.75**	**$101.98**
060 WWTF Equipment				
Amphidrome Plus, Media Replacement	$0.00	$24.90	$0.18	$25.08
Blower - Odor Control	$4,000.00	$17.22	$0.13	$17.34
Blowers - Process Air	$0.00	$587.65	$4.36	$592.01
Blowers - Process Air, 2019	$0.00	$49.68	$0.37	$50.05
Disposal Field - North	$0.00	$680.17	$5.05	$685.22
Disposal Field - South	$0.00	$974.18	$7.24	$981.42
Equipment - General Upgrade	$0.00	$1,154.68	$8.58	$1,163.25
Fire Alarm Panel	$0.00	$164.95	$1.23	$166.18
Generator	$0.00	$387.13	$2.88	$390.00
Instrumentation - Flowmeters, North	$0.00	$29.53	$0.22	$29.75
Instrumentation - Flowmeters, South	$12,500.00	$28.19	$0.21	$28.39
Instrumentation - General	$0.00	$123.72	$0.92	$124.63
Instrumentation - Level Transducers	$0.00	$72.51	$0.54	$73.05
Instrumentation - Main Controller	$28,358.66	$108.68	$0.81	$109.49
Odor Control - Activated Carbon Media	$0.00	$310.77	$2.31	$313.08
Piping - Repair & Replacement Allowance	$0.00	$73.21	$0.54	$73.75
Pumps - Clearwell 1, Amphidrome Plus Backwash	$0.00	$46.24	$0.34	$46.58
Pumps - Clearwell 1, Amphidrome Plus Feed	$0.00	$22.41	$0.17	$22.57
Pumps - Clearwell 1, Backwash	$0.00	$536.10	$3.98	$540.08
Pumps - Clearwell 1, Lift Rails	$0.00	$76.48	$0.57	$77.05
Pumps - Clearwell 1, UV Dosing	$0.00	$173.47	$1.29	$174.76
Pumps - Final Effluent, North Disposal Field	$0.00	$140.81	$1.05	$141.85
Pumps - Final Effluent, South Disposal Field	$0.00	$97.15	$0.72	$97.87
Pumps - General, Rebuild	$0.00	$69.39	$0.52	$69.91
Pumps - Raw Lift Station	$14,000.00	$50.69	$0.38	$51.06
Pumps - Raw Lift Station, Lift Rails	$0.00	$113.95	$0.85	$114.80
Tank - Hatches	$0.00	$53.53	$0.40	$53.93
Tank - Repair & Replacement Allowance	$0.00	$73.21	$0.54	$73.75

RB WWTF Sample

Management Summary

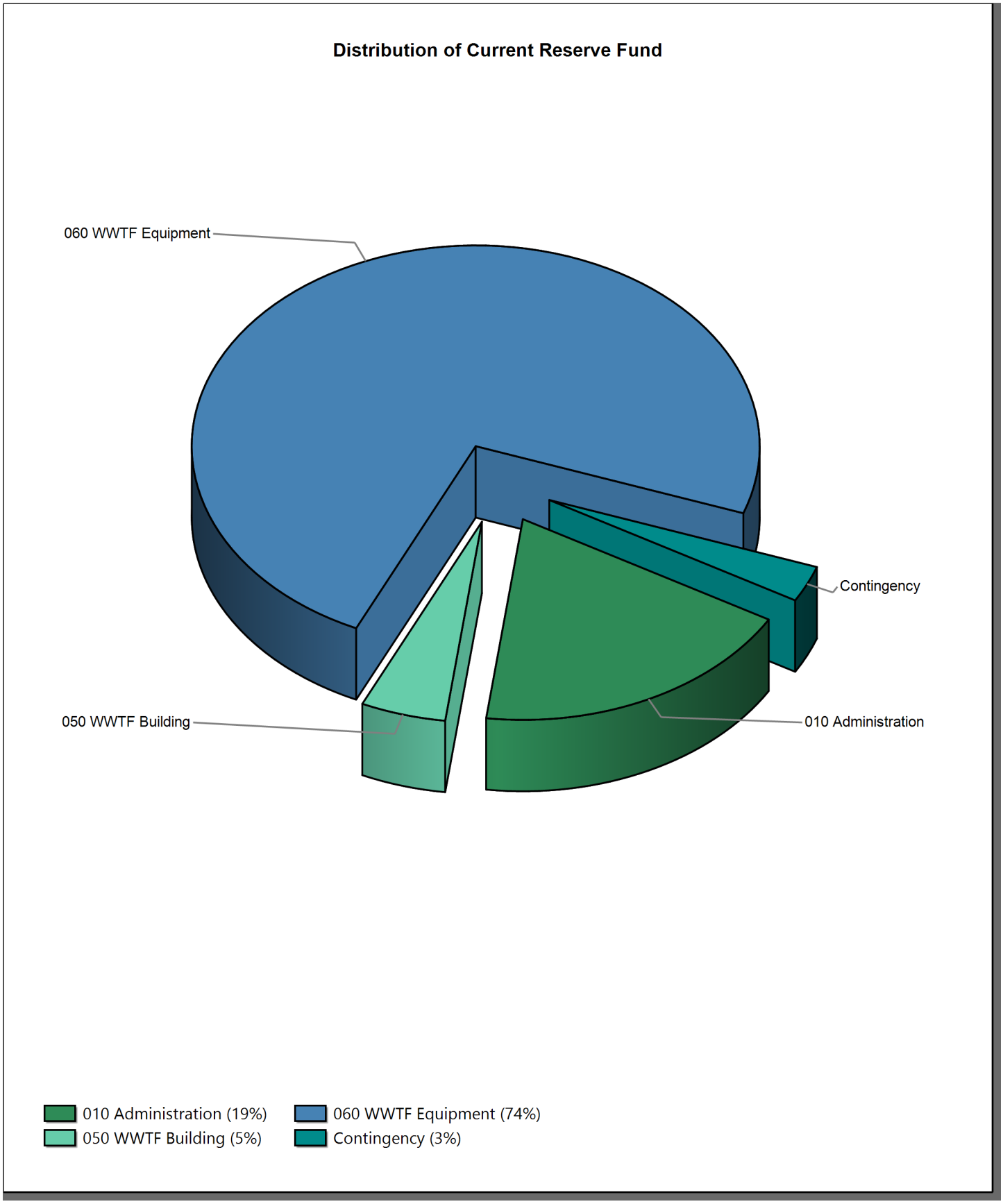
Directed Cash Flow Method; Sorted by Category

	Balance at Beginning of Year	Monthly Member Contribution	Monthly Interest Contribution	Total Monthly Contribution
Unit Heater	$0.00	$26.93	$0.20	$27.13
Sub Total	**$58,858.66**	**$6,267.50**	**$46.55**	**$6,314.05**
Contingency	$2,332.34	$197.51	$3.00	$200.51
Total	**$80,077.00**	**$6,781.31**	**$51.90**	**$6,833.21**

RB WWTF Sample

Management / Accounting Charts

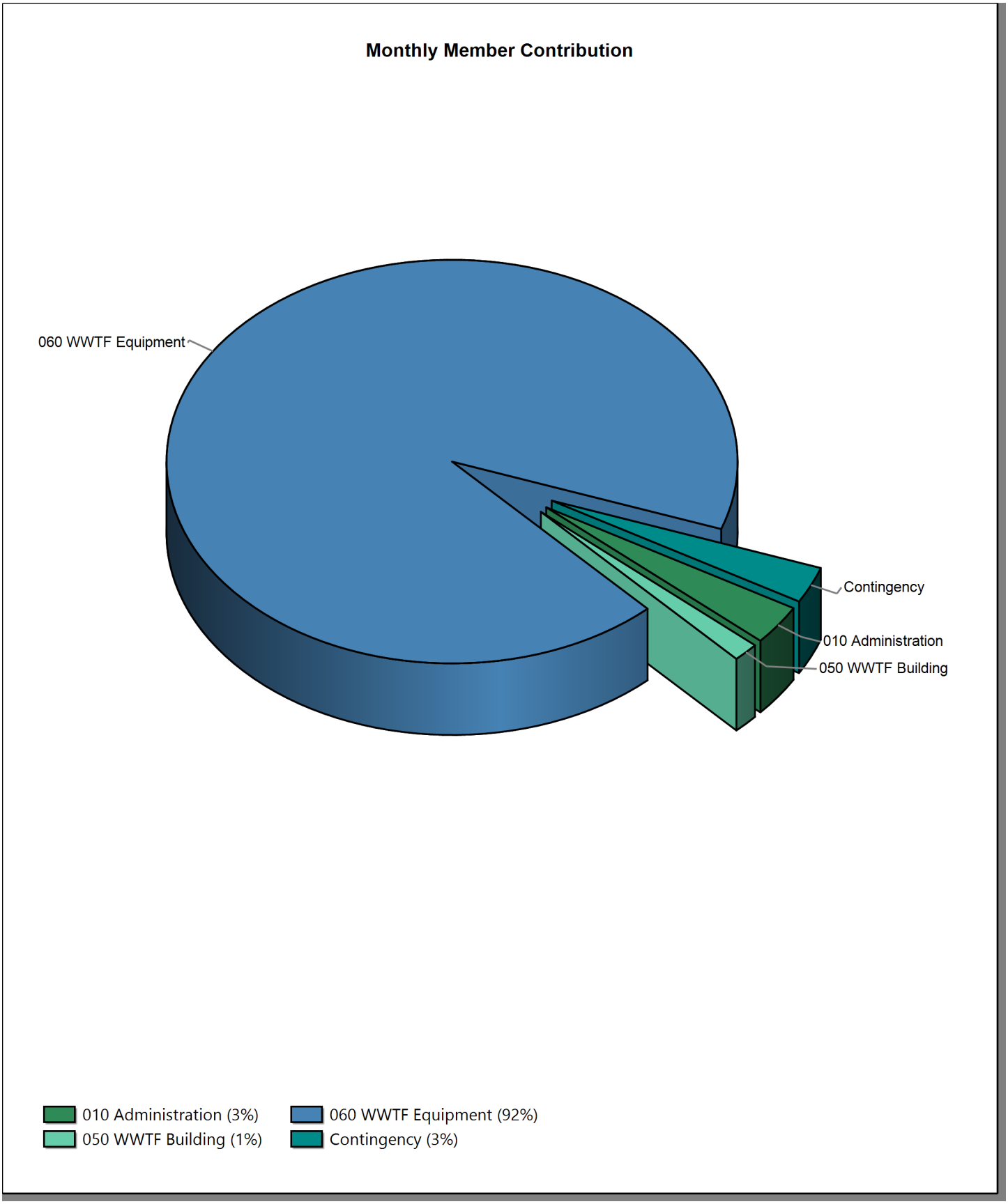
Directed Cash Flow Method; Sorted by Category



RB WWTF Sample

Management / Accounting Charts

Directed Cash Flow Method; Sorted by Category



RB WWTF Sample
Annual Expenditures
Sorted by Alphabetical

2025 Fiscal Year	
Administration - Piping Schematic	$15,000.00
Blower - Odor Control	$4,000.00
Building - Painting	$1,870.00
Building - Siding, Periodic Repairs	$2,016.00
Instrumentation - Flowmeters, South	$12,500.00
Instrumentation - Main Controller	$37,000.00
Pumps - Raw Lift Station	$14,000.00
Sub Total	**$86,386.00**
2026 Fiscal Year	
Blowers - Process Air	$14,677.50
Equipment - General Upgrade	$28,840.00
Fire Alarm Panel	$4,120.00
Instrumentation - General	$3,090.00
Pumps - Clearwell 1, Backwash	$13,390.00
Sub Total	**$64,117.50**
2027 Fiscal Year	
Instrumentation - Level Transducers	$3,713.15
Odor Control - Activated Carbon Media	$15,913.50
Pumps - Raw Lift Station, Lift Rails	$5,834.95
Unit Heater	$1,379.17
Sub Total	**$26,840.77**
2028 Fiscal Year	
Instrumentation - General	$3,278.18
Pumps - Clearwell 1, Lift Rails	$6,022.02
Pumps - Clearwell 1, UV Dosing	$13,659.09
Pumps - Final Effluent, South Disposal Field	$7,649.09
Pumps - General, Rebuild	$5,463.64
Sub Total	**$36,072.01**
2029 Fiscal Year	
Administration - DEP Minor Permit Renewal	$11,845.98
Blowers - Process Air, 2019	$5,346.17
Piping - Repair & Replacement Allowance	$7,878.56
Tank - Repair & Replacement Allowance	$7,878.56
Sub Total	**$32,949.27**
2030 Fiscal Year	
Building - Roof	$4,416.83
Instrumentation - General	$3,477.82

Instrumentation - Level Transducers	$4,057.46
Pumps - Clearwell 1, Amphidrome Plus Backwash	$6,376.01
Pumps - Final Effluent, North Disposal Field	$19,417.84
Sub Total	**$37,745.96**

2031 Fiscal Year

Generator	$65,672.88
Pumps - Clearwell 1, Lift Rails	$6,580.42
Pumps - General, Rebuild	$5,970.26
Sub Total	**$78,223.56**

2032 Fiscal Year

Building - Doors	$9,838.99
Instrumentation - General	$3,689.62
Odor Control - Activated Carbon Media	$18,448.11
Pumps - Clearwell 1, Backwash	$15,988.36
Sub Total	**$47,965.08**

2033 Fiscal Year

Building - Painting	$2,368.86
Building - Siding, Periodic Repairs	$2,553.81
Instrumentation - Level Transducers	$4,433.70
Sub Total	**$9,356.36**

2034 Fiscal Year

Administration - DEP Minor Permit Renewal	$13,732.74
Instrumentation - General	$3,914.32
Piping - Repair & Replacement Allowance	$9,133.41
Pumps - Clearwell 1, Lift Rails	$7,190.61
Pumps - Clearwell 1, UV Dosing	$16,309.66
Pumps - Final Effluent, South Disposal Field	$9,133.41
Pumps - General, Rebuild	$6,523.87
Tank - Repair & Replacement Allowance	$9,133.41
Sub Total	**$75,071.43**

2035 Fiscal Year

Blower - Odor Control	$5,375.67
Sub Total	**$5,375.67**

2036 Fiscal Year

Blowers - Process Air	$19,725.33
Instrumentation - General	$4,152.70
Instrumentation - Level Transducers	$4,844.82

Pumps - Clearwell 1, Amphidrome Plus Feed	$7,890.13
Pumps - Final Effluent, North Disposal Field	$23,185.92
Sub Total	**$59,798.90**

2037 Fiscal Year

Administration - DEP Major Permit Renewal	$41,347.07
Odor Control - Activated Carbon Media	$21,386.41
Pumps - Clearwell 1, Lift Rails	$7,857.37
Pumps - General, Rebuild	$7,128.80
Pumps - Raw Lift Station	$19,960.65
Sub Total	**$97,680.30**

2038 Fiscal Year

Instrumentation - General	$4,405.60
Pumps - Clearwell 1, Backwash	$19,090.94
Sub Total	**$23,496.54**

2039 Fiscal Year

Administration - DEP Minor Permit Renewal	$15,920.01
Blowers - Process Air, 2019	$7,184.80
Instrumentation - Level Transducers	$5,294.06
Piping - Repair & Replacement Allowance	$10,588.13
Tank - Repair & Replacement Allowance	$10,588.13
Sub Total	**$49,575.13**

2040 Fiscal Year

Instrumentation - General	$4,673.90
Instrumentation - Main Controller	$57,644.79
Pumps - Clearwell 1, Lift Rails	$8,585.96
Pumps - Clearwell 1, UV Dosing	$19,474.59
Pumps - Final Effluent, South Disposal Field	$10,905.77
Pumps - General, Rebuild	$7,789.84
Sub Total	**$109,074.86**

2041 Fiscal Year

Amphidrome Plus, Media Replacement	$14,442.36
Building - Painting	$3,000.80
Building - Siding, Periodic Repairs	$3,235.09
Equipment - General Upgrade	$44,931.78
Sub Total	**$65,610.03**

2042 Fiscal Year

Disposal Field - North	$429,740.38

Instrumentation - General	$4,958.54
Instrumentation - Level Transducers	$5,784.97
Odor Control - Activated Carbon Media	$24,792.71
Pumps - Clearwell 1, Amphidrome Plus Backwash	$9,090.66
Pumps - Final Effluent, North Disposal Field	$27,685.20
Pumps - Raw Lift Station, Lift Rails	$9,090.66
Sub Total	**$511,143.13**

2043 Fiscal Year

Pumps - Clearwell 1, Lift Rails	$9,382.11
Pumps - General, Rebuild	$8,512.17
Sub Total	**$17,894.27**

2044 Fiscal Year

Administration - DEP Minor Permit Renewal	$18,455.65
Instrumentation - Flowmeters, North	$21,918.83
Instrumentation - General	$5,260.52
Piping - Repair & Replacement Allowance	$12,274.54
Pumps - Clearwell 1, Backwash	$22,795.58
Tank - Repair & Replacement Allowance	$12,274.54
Sub Total	**$92,979.66**

2045 Fiscal Year

Blower - Odor Control	$7,224.44
Instrumentation - Flowmeters, South	$22,576.39
Instrumentation - Level Transducers	$6,321.39
Sub Total	**$36,122.22**

2046 Fiscal Year

Blowers - Process Air	$26,509.20
Fire Alarm Panel	$7,441.18
Instrumentation - General	$5,580.88
Pumps - Clearwell 1, Lift Rails	$10,252.08
Pumps - Clearwell 1, UV Dosing	$23,253.68
Pumps - Final Effluent, South Disposal Field	$13,022.06
Pumps - General, Rebuild	$9,301.47
Sub Total	**$95,360.56**

2047 Fiscal Year

Odor Control - Activated Carbon Media	$28,741.55
Sub Total	**$28,741.55**

2048 Fiscal Year

Disposal Field - South	$967,057.39
Instrumentation - General	$5,920.76
Instrumentation - Level Transducers	$6,907.55
Pumps - Clearwell 1, Amphidrome Plus Feed	$11,249.44
Pumps - Final Effluent, North Disposal Field	$33,057.57
Sub Total	**$1,024,192.72**

2049 Fiscal Year

Administration - DEP Minor Permit Renewal	$21,395.16
Blowers - Process Air, 2019	$9,655.77
Building - Painting	$3,801.33
Building - Siding, Periodic Repairs	$4,098.11
Piping - Repair & Replacement Allowance	$14,229.56
Pumps - Clearwell 1, Lift Rails	$11,202.73
Pumps - General, Rebuild	$10,163.97
Pumps - Raw Lift Station	$28,459.12
Tank - Repair & Replacement Allowance	$14,229.56
Sub Total	**$117,235.30**

2050 Fiscal Year

Instrumentation - General	$6,281.33
Pumps - Clearwell 1, Backwash	$27,219.11
Tank - Hatches	$60,719.56
Sub Total	**$94,220.01**

2051 Fiscal Year

Instrumentation - Level Transducers	$7,548.07
Sub Total	**$7,548.07**

2052 Fiscal Year

Instrumentation - General	$6,663.87
Odor Control - Activated Carbon Media	$33,319.34
Pumps - Clearwell 1, Lift Rails	$12,241.52
Pumps - Clearwell 1, UV Dosing	$27,766.11
Pumps - Final Effluent, South Disposal Field	$15,549.02
Pumps - General, Rebuild	$11,106.45
Unit Heater	$2,887.68
Sub Total	**$109,533.98**

2054 Fiscal Year

Administration - DEP Minor Permit Renewal	$24,802.85
Instrumentation - General	$7,069.70
Instrumentation - Level Transducers	$8,247.98

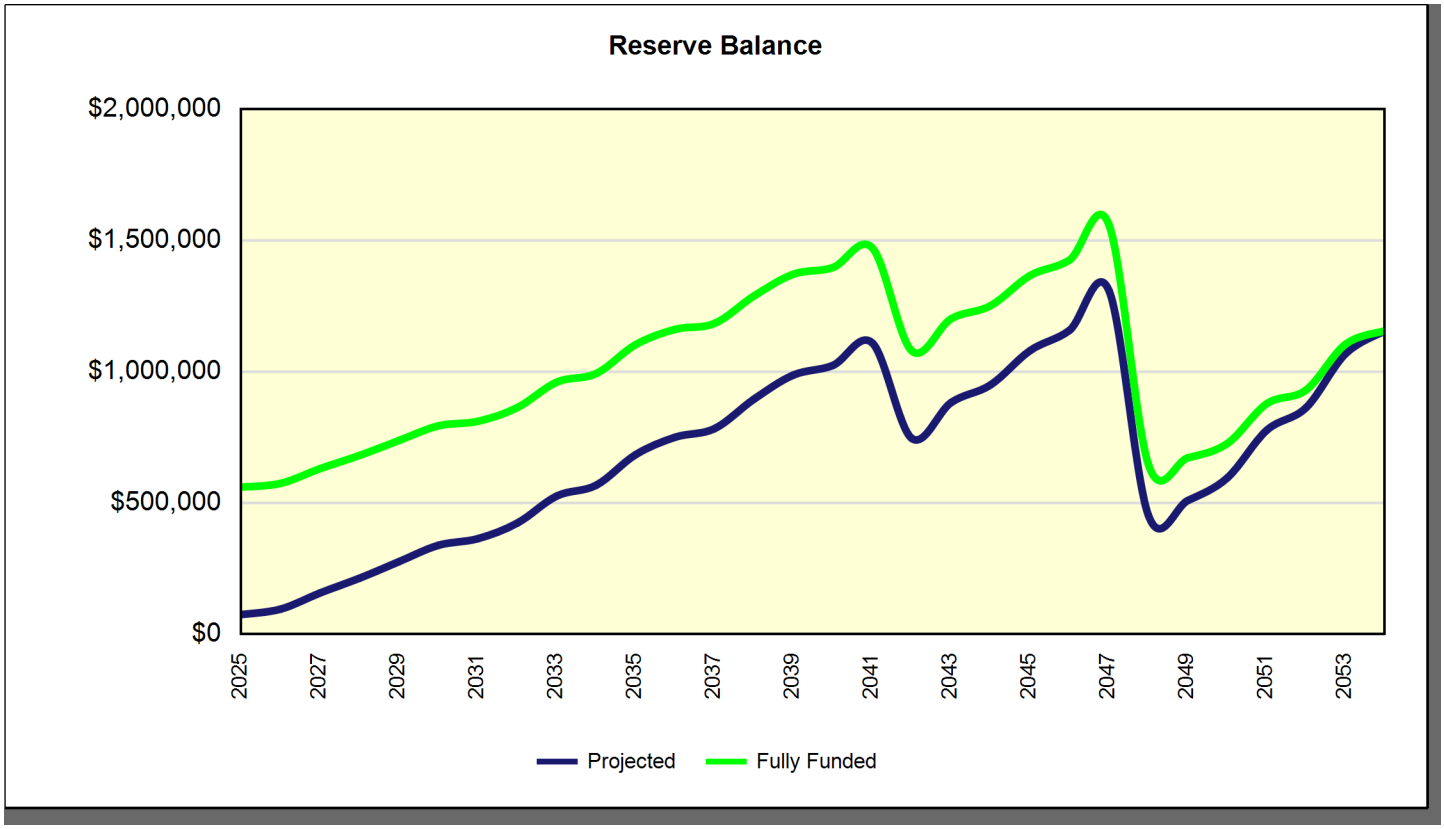
RB WWTF Sample
Annual Expenditures
Sorted by Alphabetical

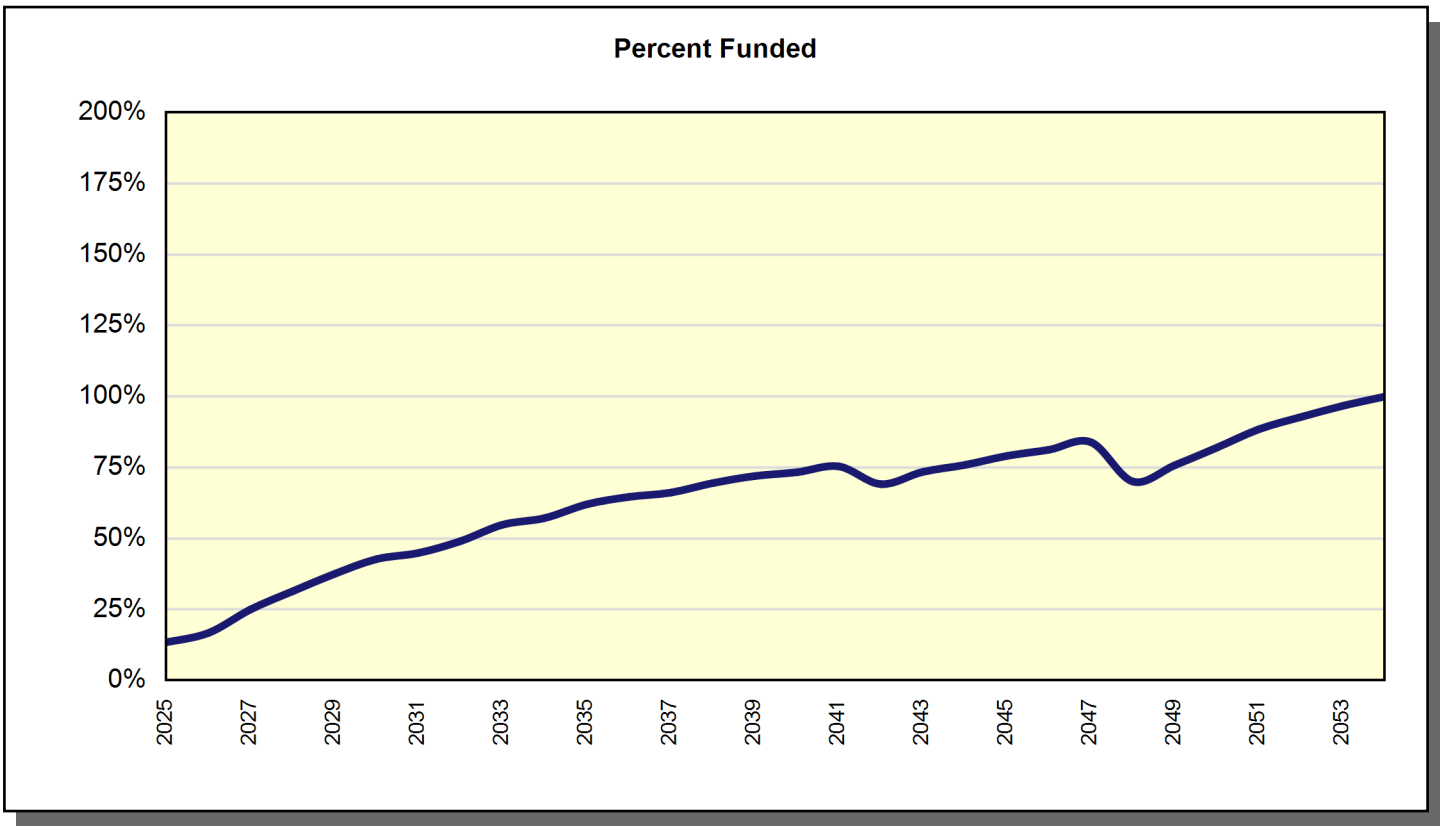
Piping - Repair & Replacement Allowance	$16,495.96
Pumps - Clearwell 1, Amphidrome Plus Backwash	$12,961.11
Pumps - Final Effluent, North Disposal Field	$39,472.47
Tank - Repair & Replacement Allowance	$16,495.96
Sub Total	**$125,546.03**

RB WWTF Sample
Projections
Directed Cash Flow Method

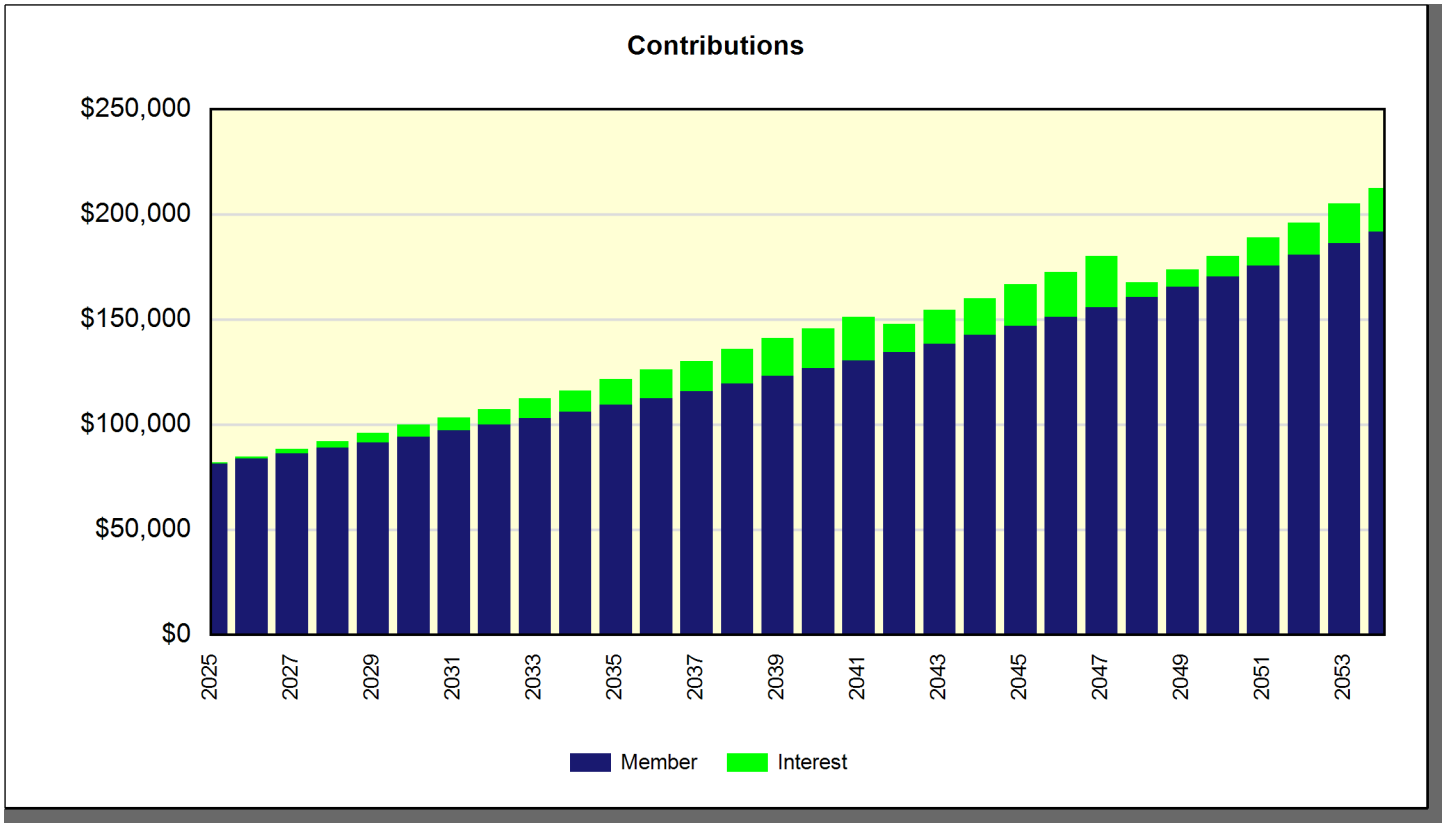
Fiscal Year	Beginning Balance	Member Contribution	Interest Contribution	Expenses	Ending Balance	Fully Funded Balance	Percent Funded
2025	$80,077	$81,376	$623	$86,386	$75,690	$561,307	13%
2026	$75,690	$83,817	$1,006	$64,118	$96,395	$575,421	17%
2027	$96,395	$86,332	$2,200	$26,841	$158,086	$631,630	25%
2028	$158,086	$88,921	$3,282	$36,072	$214,218	$681,753	31%
2029	$214,218	$91,589	$4,503	$32,949	$277,361	$738,777	38%
2030	$277,361	$94,337	$5,706	$37,746	$339,657	$794,589	43%
2031	$339,657	$97,167	$6,173	$78,224	$364,773	$811,807	45%
2032	$364,773	$100,082	$7,317	$47,965	$424,207	$864,004	49%
2033	$424,207	$103,084	$9,324	$9,356	$527,259	$961,089	55%
2034	$527,259	$106,177	$10,106	$75,071	$568,470	$993,801	57%
2035	$568,470	$109,362	$12,374	$5,376	$684,831	$1,103,941	62%
2036	$684,831	$112,643	$13,654	$59,799	$751,329	$1,162,229	65%
2037	$751,329	$116,022	$14,263	$97,680	$783,934	$1,184,735	66%
2038	$783,934	$119,503	$16,450	$23,497	$896,391	$1,289,356	70%
2039	$896,391	$123,088	$18,227	$49,575	$988,131	$1,372,269	72%
2040	$988,131	$126,781	$18,912	$109,075	$1,024,749	$1,397,450	73%
2041	$1,024,749	$130,584	$20,563	$65,610	$1,110,286	$1,472,491	75%
2042	$1,110,286	$134,502	$13,333	$511,143	$746,978	$1,080,199	69%
2043	$746,978	$138,537	$15,993	$17,894	$883,614	$1,202,600	73%
2044	$883,614	$142,693	$17,274	$92,980	$950,601	$1,252,285	76%
2045	$950,601	$146,974	$19,813	$36,122	$1,081,265	$1,367,147	79%
2046	$1,081,265	$151,383	$21,295	$95,361	$1,158,583	$1,426,078	81%
2047	$1,158,583	$155,924	$24,242	$28,742	$1,310,008	$1,561,025	84%
2048	$1,310,008	$160,602	$7,249	$1,024,193	$453,666	$647,626	70%
2049	$453,666	$165,420	$8,315	$117,235	$510,167	$672,807	76%
2050	$510,167	$170,383	$9,966	$94,220	$596,296	$727,064	82%
2051	$596,296	$175,494	$13,501	$7,548	$777,743	$878,919	88%
2052	$777,743	$180,759	$15,154	$109,534	$864,122	$931,275	93%
2053	$864,122	$186,182	$19,158	$0	$1,069,462	$1,105,672	97%
2054	$1,069,462	$191,767	$20,820	$125,546	$1,156,503	$1,156,503	100%

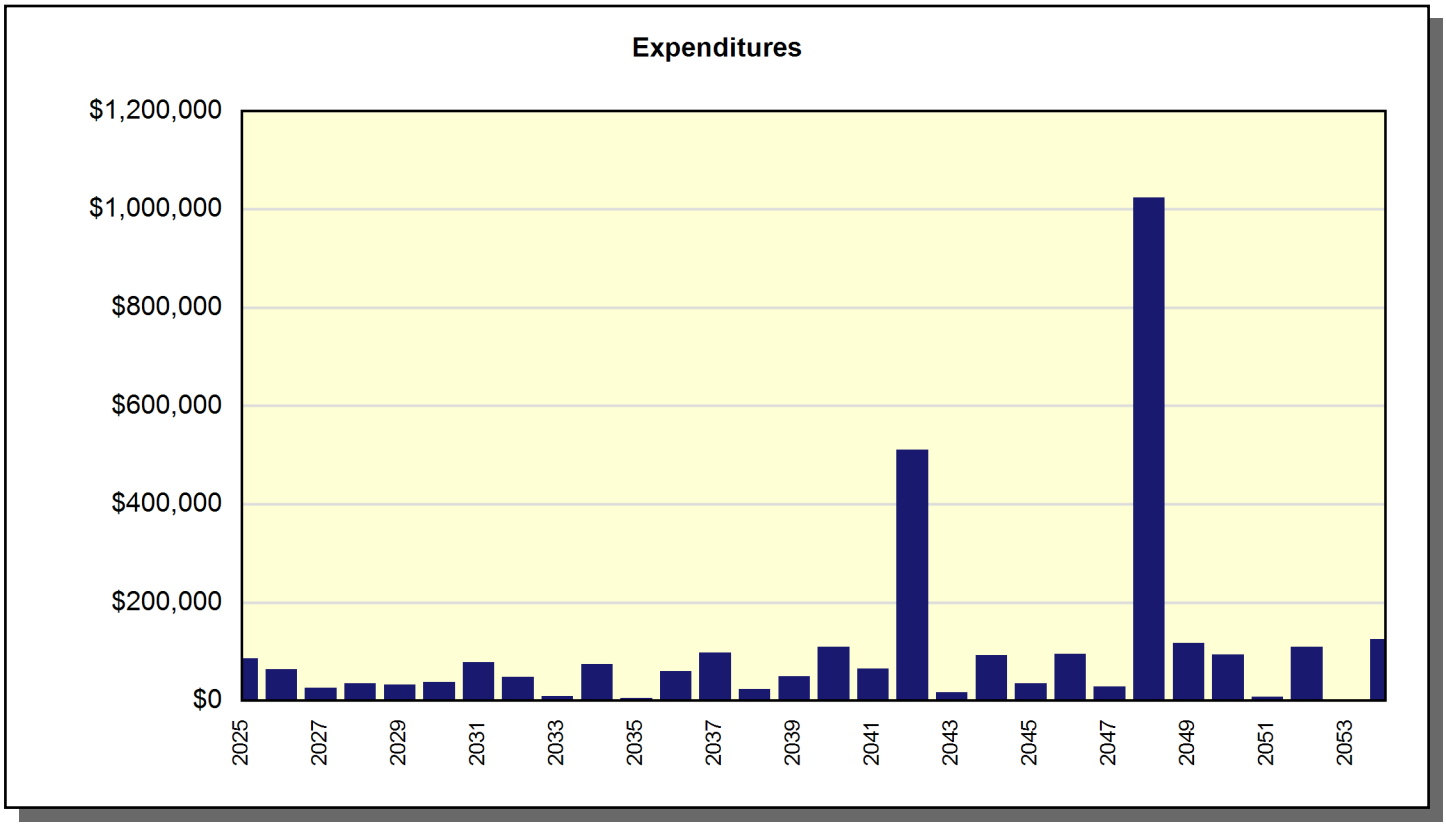
RB WWTF Sample
Projection Charts
Directed Cash Flow Method





RB WWTF Sample
Projection Charts
Directed Cash Flow Method





Administration - DEP Major Permit Renewal

Category	010 Administration	Quantity	1 renewal
		Unit Cost	$29,000.00
		% of Replacement	100.00%
		Current Cost	$29,000.00
Placed In Service	01/2017	Future Cost	$41,347.07
Useful Life	20		
		Assigned Reserves at FYB	$0.00
Remaining Life	12	Monthly Member Contribution	$104.99
Replacement Year	2037	Monthly Interest Contribution	$0.78
		Total Monthly Contribution	$105.77

Component budget covers major DEP permit renewal costs due in 2037 per client. Permit was last renewed in 2017. Cost per W&S study including 30% contingency/engineering with inflation added. Major renewals involve engineering evaluation of system and development of a new cost basis for financial planning and replacement.

RB WWTF Sample
Component Detail
Directed Cash Flow Calculation Method; Sorted By Category

Administration - DEP Minor Permit Renewal

Category	010 Administration	Quantity	1 renewal
		Unit Cost	$10,525.00
		% of Replacement	100.00%
		Current Cost	$10,525.00
Placed In Service	01/2024	Future Cost	$11,845.98
Useful Life	5		
		Assigned Reserves at FYB	$0.00
Remaining Life	4	Monthly Member Contribution	$110.07
Replacement Year	2029	Monthly Interest Contribution	$0.82
		Total Monthly Contribution	$110.89

Component budget covers minor DEP permit renewal costs due approximately every 5 years. Current permit expired in 2022, but DEP is behind due to pandemic. Permit renewal is expected November 2024. Repeating cost for engineering support and DEP fee was $6125 per client. Cost of required update of operations and maintenance manual was about $4500.

In 2024, extra monitoring wells were required due to an excess of nitrogen in ground water surrounding the disposal fields.

- Monitoring Wells, GHC, drilling, testing, meeting support: $44,724
- Graves MW surveying: $4,859

This is expected to be a one-time cost. Drilling additional monitoring wells is unfunded.

Administration - Piping Schematic

Category	010 Administration	Quantity	1 schematic
		Unit Cost	$15,000.00
		% of Replacement	100.00%
		Current Cost	$15,000.00
Placed In Service	01/2024	Future Cost	
Useful Life	1		
		Assigned Reserves at FYB	$15,000.00
Remaining Life	0	Monthly Member Contribution	$0.00
Replacement Year	2025	Monthly Interest Contribution	$0.00
	One-Time Replacement	Total Monthly Contribution	$0.00

Component budget covers one-time allowance for as-built piping schematic for WWTF. Estimated budget per client.

Building - Doors

Category	050 WWTF Building	Quantity	1 total
		Unit Cost	$8,000.00
		% of Replacement	100.00%
		Current Cost	$8,000.00
Placed In Service	01/2002	Future Cost	$9,838.99
Useful Life	25		
Adjustment	+5	Assigned Reserves at FYB	$0.00
Remaining Life	7	Monthly Member Contribution	$48.49
Replacement Year	2032	Monthly Interest Contribution	$0.36
		Total Monthly Contribution	$48.85

Component budget covers WWTF mechanicals shed exterior doors. Fiberglass doors were in fair condition at site visit. Wood access double door to odor control tank room was in fair/poor condition, but likely can be repaired. All doors & hinges were in need of painting. The remaining life of this component has been extended due to current satisfactory operation.

1	main access double door, fiberglass	@	$3,200.00	=	$3,200.00
1	office area door, fiberglass	@	$1,600.00	=	$1,600.00
1	odor control tank double door, wood	@	$3,200.00	=	$3,200.00
			TOTAL	=	$8,000.00

Building - Painting

Category	050 WWTF Building	Quantity	850 sq. ft.
		Unit Cost	$2.20
		% of Replacement	100.00%
		Current Cost	$1,870.00
Placed In Service	01/2013	Future Cost	$2,368.86
Useful Life	8		
Adjustment	+4	Assigned Reserves at FYB	$1,870.00
Remaining Life	0	Monthly Member Contribution	$9.97
Replacement Year	2025	Monthly Interest Contribution	$0.07
		Total Monthly Contribution	$10.04

Component budget covers painting of exterior of WWTF building. Paint was in fair condition at site visit. Repairs to wood trim (listed separately) should be coordinated with painting in near future. Cost assumes repairs are made before painting. Includes minor prep for painting and (1) coat of white on trim and clapboards.

RB WWTF Sample
Component Detail
Directed Cash Flow Calculation Method; Sorted By Category

Building - Roof

Category	050 WWTF Building	Quantity	635 sq. ft.
		Unit Cost	$6.00
		% of Replacement	100.00%
		Current Cost	$3,810.00
Placed In Service	01/2002	Future Cost	$4,416.83
Useful Life	25		
Adjustment	+3	Assigned Reserves at FYB	$0.00
Remaining Life	5	Monthly Member Contribution	$32.03
Replacement Year	2030	Monthly Interest Contribution	$0.24
		Total Monthly Contribution	$32.27

Component budget covers re-roofing WWTF building. Cost includes removal of old roofing. Current architectural roof shingles appear to be in good to fair condition and aging normally. Minor lichen growth noted on north roof plane. No leaking issues reported. The remaining life of this component has been extended due to its condition at our most recent site visit.

Building - Siding, Periodic Repairs

Category	050 WWTF Building	Quantity	840 sq. ft.
		Unit Cost	$16.00
		% of Replacement	15.00%
		Current Cost	$2,016.00
Placed In Service	01/2013	Future Cost	$2,553.81
Useful Life	8		
Adjustment	+4	Assigned Reserves at FYB	$2,016.00
Remaining Life	0	Monthly Member Contribution	$10.74
Replacement Year	2025	Monthly Interest Contribution	$0.08
		Total Monthly Contribution	$10.82

Component covers periodic repairs of clapboard siding and pine trim on WWTF building. Siding appears to be LP Smartside engineered wood. Overall original siding was in good condition and trim boards were in fair to poor condition at site visit. Replacement of pine trim with composite materials on an as-needed basis is recommended.

Component currently covers periodic replacement of percentage of siding and trim. Component allowance should be adjusted in future reserve study updates as association ages. Complete replacement of siding is currently unfunded and may never be needed if repairs are performed in a timely manner. Funding can be added if desired by client.

Amphidrome Plus, Media Replacement

Category	060 WWTF Equipment	Quantity	1 replacement
		Unit Cost	$9,000.00
		% of Replacement	100.00%
		Current Cost	$9,000.00
Placed In Service	01/2021	Future Cost	$14,442.36
Useful Life	20		
		Assigned Reserves at FYB	$0.00
Remaining Life	16	Monthly Member Contribution	$24.90
Replacement Year	2041	Monthly Interest Contribution	$0.18
		Total Monthly Contribution	$25.08

Component budget covers replacement of denitrification filter media/rebedding in Amphidrome Plus reactor. An overhaul of piping & rebedding of the denite/denitrification filter in 2021 cost $25,170 per client. This project involved excavation and pipe replacement from Amphidrome Plus reactor to the control building. For budgeting purposes, it is estimated that re-piping cost was approximately $16,170 and rebedding was $9000.

Blower - Odor Control

Category	060 WWTF Equipment	Quantity	1 blower
		Unit Cost	$4,000.00
		% of Replacement	100.00%
		Current Cost	$4,000.00
Placed In Service	01/2012	Future Cost	$5,375.67
Useful Life	10		
Adjustment	+3	Assigned Reserves at FYB	$4,000.00
Remaining Life	0	Monthly Member Contribution	$17.22
Replacement Year	2025	Monthly Interest Contribution	$0.13
		Total Monthly Contribution	$17.34

Component budget covers air blower and motor for odor control system. Blower is 3 HP, per motor label. Typical useful life for process blowers is about 10 years if kept cool. Cost for similar High Pressure Blower, 3 Motor HP, Three Phase, 12 -1/2 Wheel Dia. (In.), 230/460 Voltage in Grainger catalog. The remaining life of this component has been extended due to current satisfactory operation.

Placed-in-service date estimated based on 2002 startup date of WWTF.

1	3 hp blower	@	$2,000.00	=	$2,000.00
1	installation & misc.	@	$2,000.00	=	$2,000.00
			TOTAL	=	$4,000.00

Blowers - Process Air

Category	060 WWTF Equipment	Quantity	3 blowers
		Unit Cost	$4,750.00
		% of Replacement	100.00%
		Current Cost	$14,250.00
Placed In Service	01/2012	Future Cost	$14,677.50
Useful Life	10		
Adjustment	+4	Assigned Reserves at FYB	$0.00
Remaining Life	1	Monthly Member Contribution	$587.65
Replacement Year	2026	Monthly Interest Contribution	$4.36
		Total Monthly Contribution	$592.01

Component budget covers three process air blowers and motors. Blowers are 15 HP each, per Weston & Sampson study. Typical useful life for process blowers is about 10 years if kept cool. One blower was replaced in 2019, per client, at a cost of $3315 and is listed separately.

Placed-in-service date estimated based on 2002 startup date of WWTF and typical useful life of 10 years for original blower. The remaining life of this component has been extended due to current satisfactory operation.

Blowers - Process Air, 2019

Category	060 WWTF Equipment	Quantity	1 blower
		Unit Cost	$4,750.00
		% of Replacement	100.00%
		Current Cost	$4,750.00
Placed In Service	01/2019	Future Cost	$5,346.17
Useful Life	10		
		Assigned Reserves at FYB	$0.00
Remaining Life	4	Monthly Member Contribution	$49.68
Replacement Year	2029	Monthly Interest Contribution	$0.37
		Total Monthly Contribution	$50.05

Component covers process air blower replaced in 2019 at a cost of $3315. Blower is 15 hp, per Weston & Sampson study. Typical useful life for process blowers is about 10 years if kept cool. Inflation added for current cost.

Disposal Field - North

Category	060 WWTF Equipment	Quantity	1 system
		Unit Cost	$260,000.00
		% of Replacement	100.00%
		Current Cost	$260,000.00
Placed In Service	01/2007	Future Cost	$429,740.38
Useful Life	35		
		Assigned Reserves at FYB	$0.00
Remaining Life	17	Monthly Member Contribution	$680.17
Replacement Year	2042	Monthly Interest Contribution	$5.05
		Total Monthly Contribution	$685.22

Component budget covers north (secondary) leach field disposal beds installed in 2007 in conjunction with the completion of second phase of homes. Placed-in-service date approximated per Google Earth aerial photos. Design capacity for north field is 11,880 gallons per day, per W&S study. A ratio of design capacity of north and south fields was used to establish ballpark replacement cost for north field.

Useful life of 35 years based on:
- Current flow being about 1/3 to 1/2 of design flow
- Continued proper operation of batch Amphidrome system as established by experience and knowledgeable licensed operator
- Monthly, quarterly, and yearly testing for compliance with DEP requirements
- Operation maintenance including tank inspection and pumping frequency
- Contract requirement for leach field inspection

Disposal Field - South

Category	060 WWTF Equipment	Quantity	1 system
		Unit Cost	$490,000.00
		% of Replacement	100.00%
		Current Cost	$490,000.00
Placed In Service	01/2013	Future Cost	$967,057.39
Useful Life	35		
		Assigned Reserves at FYB	$0.00
Remaining Life	23	Monthly Member Contribution	$974.18
Replacement Year	2048	Monthly Interest Contribution	$7.24
		Total Monthly Contribution	$981.42

Component budget covers south (main) leach field. Disposal field was initially installed in 2001 but, per client, failed due to improper WWTF operation and was replaced in 2012. WWTF is currently operating well, per client. Cost for replacement in 2012 was approximately $300,000 including engineering cost, per client. Inflation added for current cost. Design capacity for south field is 22,420 gallons per day, per W&S study.

Useful life of 35 years based on:
- Current flow being about 1/3 to 1/2 of design flow
- Continued proper operation of batch Amphidrome system as established by experience and knowledgeable licensed operator
- Monthly, quarterly, and yearly testing for compliance with DEP requirements
- Operation maintenance including tank inspection and pumping frequency
- Contract requirement for leach field inspection

Equipment - General Upgrade

Category	060 WWTF Equipment	Quantity	1 upgrade
		Unit Cost	$28,000.00
		% of Replacement	100.00%
		Current Cost	$28,000.00
Placed In Service	01/2008	Future Cost	$28,840.00
Useful Life	15		
Adjustment	+3	Assigned Reserves at FYB	$0.00
Remaining Life	1	Monthly Member Contribution	$1,154.68
Replacement Year	2026	Monthly Interest Contribution	$8.58
		Total Monthly Contribution	$1,163.25

Component budget covers mechanical and electrical overhaul. Allowance per recommendation in W&S study with contingency and engineering included. Inflation added for current cost. Timing recommended between 2023 and 2027, per W&S study.

Fire Alarm Panel

Category	060 WWTF Equipment	Quantity	1 panel
		Unit Cost	$4,000.00
		% of Replacement	100.00%
		Current Cost	$4,000.00
Placed In Service	01/2002	Future Cost	$4,120.00
Useful Life	20		
Adjustment	+4	Assigned Reserves at FYB	$0.00
Remaining Life	1	Monthly Member Contribution	$164.95
Replacement Year	2026	Monthly Interest Contribution	$1.23
		Total Monthly Contribution	$166.18

Component budget covers replacement of fire alarm main panel located in WWTF mechanical room. No issues reported. Panel is at end of useful life and is candidate for replacement in near future. The remaining life of this component has been extended due to current satisfactory operation.

Peripheral devices (pull stations, sirens, boosters, batteries) are not included in budget and should be replaced on as-needed basis from operating budget. These items can be added if client desires.

Generator

Category	060 WWTF Equipment	Quantity	1 generator
		Unit Cost	$55,000.00
		% of Replacement	100.00%
		Current Cost	$55,000.00
Placed In Service	01/2001	Future Cost	$65,672.88
Useful Life	25		
Adjustment	+5	Assigned Reserves at FYB	$0.00
Remaining Life	6	Monthly Member Contribution	$387.13
Replacement Year	2031	Monthly Interest Contribution	$2.88
		Total Monthly Contribution	$390.00

Component budget covers 50 kW Olympian G50F3 natural gas-powered generator for WWTF installed adjacent to mechanical building. No issues reported other than minor part replacement. Service life will depend on maintenance, repairs needed, and usage. Ballpark cost per client email from W&S updated for inflation. Useful life per W&S recommendation. The remaining life of this component has been extended due to current satisfactory operation.

Instrumentation - Flowmeters, North

Category	060 WWTF Equipment	Quantity	1 meter
		Unit Cost	$12,500.00
		% of Replacement	100.00%
		Current Cost	$12,500.00
Placed In Service	01/2024	Future Cost	$21,918.83
Useful Life	20		
		Assigned Reserves at FYB	$0.00
Remaining Life	19	Monthly Member Contribution	$29.53
Replacement Year	2044	Monthly Interest Contribution	$0.22
		Total Monthly Contribution	$29.75

Component budget covers allowance for replacement of north flowmeter measuring effluent volume to north disposal field. In 2024, north disposal field flowmeter to be replaced by SCI at a cost of $28,200 ($32,000 with contingency) per client. This includes excavation and doghouse style tank installation for physical access. It is estimated that next replacement cost will be about $12,500.

Instrumentation - Flowmeters, South

Category	060 WWTF Equipment	Quantity	1 flowmeter
		Unit Cost	$12,500.00
		% of Replacement	100.00%
		Current Cost	$12,500.00
Placed In Service	01/2002	Future Cost	$22,576.39
Useful Life	20		
Adjustment	+3	Assigned Reserves at FYB	$12,500.00
Remaining Life	0	Monthly Member Contribution	$28.19
Replacement Year	2025	Monthly Interest Contribution	$0.21
		Total Monthly Contribution	$28.39

Component budget covers allowance for replacement of south flowmeter measuring effluent volume to south disposal field. South field flowmeter doesn't require excavation, it currently has physical access. Per client, estimated replacement cost is about $12,000 parts & labor. It is expected that south flow meter will be replaced in 2025.

Instrumentation - General

Category	060 WWTF Equipment	Quantity	1 allowance
		Unit Cost	$3,000.00
		% of Replacement	100.00%
		Current Cost	$3,000.00
Placed In Service	01/2024	Future Cost	$3,090.00
Useful Life	2		
		Assigned Reserves at FYB	$0.00
Remaining Life	1	Monthly Member Contribution	$123.72
Replacement Year	2026	Monthly Interest Contribution	$0.92
		Total Monthly Contribution	$124.63

Component budget covers allowance for replacement of instrumentation equipment to monitor treatment process. Allowance for replacement of instruments should be modified in future reserve study updates as association gains experience with replacements.

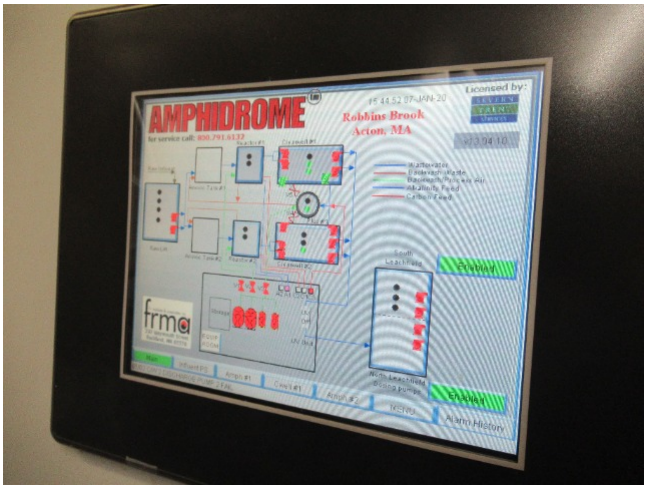
Instrumentation - Level Transducers

Category	060 WWTF Equipment	Quantity	1 allowance
		Unit Cost	$3,500.00
		% of Replacement	100.00%
		Current Cost	$3,500.00
Placed In Service	01/2024	Future Cost	$3,713.15
Useful Life	3		
		Assigned Reserves at FYB	$0.00
Remaining Life	2	Monthly Member Contribution	$72.51
Replacement Year	2027	Monthly Interest Contribution	$0.54
		Total Monthly Contribution	$73.05

Component budget covers periodic partial replacement of 4 level floats every 3 years as recommended by W&S study. Inflation added for current cost. Level transducers were upgraded in 2020 per client. Replacement component starts in 2027 based on upgrade.

Instrumentation - Main Controller

Category	060 WWTF Equipment	Quantity	1 upgrade
		Unit Cost	$37,000.00
		% of Replacement	100.00%
		Current Cost	$37,000.00
Placed In Service	01/2008	Future Cost	$57,644.79
Useful Life	15		
Adjustment	+2	Assigned Reserves at FYB	$28,358.66
Remaining Life	0	Monthly Member Contribution	$108.68
Replacement Year	2025	Monthly Interest Contribution	$0.81
		Total Monthly Contribution	$109.49



Component budget covers main system controller and electrical upgrade. Allowance per recommendation in W&S study with contingency and engineering included. Inflation added for current cost. Timing recommended between 2023 and 2027, per W&S study.

Odor Control - Activated Carbon Media

Category	060 WWTF Equipment	Quantity	1 carbon change
		Unit Cost	$15,000.00
		% of Replacement	100.00%
		Current Cost	$15,000.00
Placed In Service	01/2022	Future Cost	$15,913.50
Useful Life	5		
		Assigned Reserves at FYB	$0.00
Remaining Life	2	Monthly Member Contribution	$310.77
Replacement Year	2027	Monthly Interest Contribution	$2.31
		Total Monthly Contribution	$313.08

Component budget covers periodic replacement of activated carbon media (Activated Carbo, proprietary from Purafil) for odor control system. Typical recommended useful life is about 2 years. Association has been replacing about every 5 years. With throughput for WWTF about half of design value, this appears to be working. Cost of replacement in May 2018 was $9880, per client. Media was replaced in 2022 at a cost of $14,090.

Piping - Repair & Replacement Allowance

Category	060 WWTF Equipment	Quantity	1 allowance
		Unit Cost	$7,000.00
		% of Replacement	100.00%
		Current Cost	$7,000.00
Placed In Service	01/2024	Future Cost	$7,878.56
Useful Life	5		
		Assigned Reserves at FYB	$0.00
Remaining Life	4	Monthly Member Contribution	$73.21
Replacement Year	2029	Monthly Interest Contribution	$0.54
		Total Monthly Contribution	$73.75

Piping within WWTF is expected to last up to 50 years. However, some repairs and occasional replacement will be necessary. Component budget covers periodic allowance for piping repairs and replacements starting in 2029. Allowance should be revised based on association experience in future reserve study updates. No current piping issues reported.

Pumps - Clearwell 1, Amphidrome Plus Backwash

Category	060 WWTF Equipment	Quantity	1 pump
		Unit Cost	$5,500.00
		% of Replacement	100.00%
		Current Cost	$5,500.00
Placed In Service	01/2018	Future Cost	$6,376.01
Useful Life	12		
		Assigned Reserves at FYB	$0.00
Remaining Life	5	Monthly Member Contribution	$46.24
Replacement Year	2030	Monthly Interest Contribution	$0.34
		Total Monthly Contribution	$46.58

Component budget covers Amphidrome Plus 1.9 hp feed pump in Clearwell tank #1. Per client, pump was replaced in August 2018. Pump cost was about $3500 and installation labor about $600 when three pumps in the Clearwell were replaced at one time.

Train 2 is currently unused except for occasional pumping of Clearwell 2 due to clean water entering the sanitary sewer system (referred to as Inflow and Infiltration or I&I).

Pumps - Clearwell 1, Amphidrome Plus Feed

Category	060 WWTF Equipment	Quantity	1 pump
		Unit Cost	$5,700.00
		% of Replacement	100.00%
		Current Cost	$5,700.00
Placed In Service	01/2024	Future Cost	$7,890.13
Useful Life	12		
		Assigned Reserves at FYB	$0.00
Remaining Life	11	Monthly Member Contribution	$22.41
Replacement Year	2036	Monthly Interest Contribution	$0.17
		Total Monthly Contribution	$22.57

Component budget covers Amphidrome Plus 1.2 hp feed pump in Clearwell tank #1. Per client, pump was replaced in late 2023 at a cost of $5540. Expected useful life for pumps is 12 years.

Train 2 is currently unused except for occasional pumping of Clearwell 2 due to clean water entering the sanitary sewer system (referred to as Inflow and Infiltration or I&I).

Pumps - Clearwell 1, Backwash

Category	060 WWTF Equipment	Quantity	2 pumps
		Unit Cost	$13,000.00
		% of Replacement	50.00%
		Current Cost	$13,000.00
Placed In Service	01/2020	Future Cost	$13,390.00
Useful Life	6		
		Assigned Reserves at FYB	$0.00
Remaining Life	1	Monthly Member Contribution	$536.10
Replacement Year	2026	Monthly Interest Contribution	$3.98
		Total Monthly Contribution	$540.08

Component budget covers duplex backwash/reverse flow 2.4 hp pumps in Clearwell tank #1. Per client, one pump was replaced in 2020 at a cost of $9820. Expected useful life for pumps is 12 years. Component set to replace one pump every 6 years.

Train 2 is currently unused except for occasional pumping of Clearwell 2 due to clean water entering the sanitary sewer system (referred to as Inflow and Infiltration or I&I).

Pumps - Clearwell 1, Lift Rails

Category	060 WWTF Equipment	Quantity	6 rail systems
		Unit Cost	$5,500.00
		% of Replacement	16.70%
		Current Cost	$5,511.00
Placed In Service	01/2025	Future Cost	$6,022.02
Useful Life	3		
		Assigned Reserves at FYB	$0.00
Remaining Life	3	Monthly Member Contribution	$76.48
Replacement Year	2028	Monthly Interest Contribution	$0.57
		Total Monthly Contribution	$77.05

Component budget covers periodic partial replacement of Clearwater tank pump lift rails. Per client, one set of rails was replaced in 2018 at a cost of $3900. Cost updated for inflation. There are 6 sets of lift rails in this tank with a useful life of 15 years. Placed-in-service date specifies start of periodic partial replacement allowance cycle and does not indicate actual installation date for component. Allowance should be adjusted, based on association experience, in future reserve study updates.

Train 2 is currently unused except for occasional pumping of Clearwell 2 due to clean water entering the sanitary sewer system (referred to as Inflow and Infiltration or I&I).

Pumps - Clearwell 1, UV Dosing

Category	060 WWTF Equipment	Quantity	2 pumps
		Unit Cost	$12,500.00
		% of Replacement	50.00%
		Current Cost	$12,500.00
Placed In Service	01/2022	Future Cost	$13,659.09
Useful Life	6		
		Assigned Reserves at FYB	$0.00
Remaining Life	3	Monthly Member Contribution	$173.47
Replacement Year	2028	Monthly Interest Contribution	$1.29
		Total Monthly Contribution	$174.76

Component budget covers duplex UV dosing pumps in Clearwell tank #1. UV system is currently unused, but terminology for identifying these pumps is retained. UV dosing pumps discharge effluent through the UV system passively and then into the final effluent pump chamber.

Per client, one pump was replaced in late 2021 at a cost of $11,690. Expected useful life for pumps is 12 years. Component set to replace one pump every 6 years.

Train 2 is currently unused except for occasional pumping of Clearwell 2 due to clean water entering the sanitary sewer system (referred to as Inflow and Infiltration or I&I).

Pumps - Final Effluent, North Disposal Field

Category	060 WWTF Equipment	Quantity	2 pumps
		Unit Cost	$16,750.00
		% of Replacement	50.00%
		Current Cost	$16,750.00
Placed In Service	01/2024	Future Cost	$19,417.84
Useful Life	6		
		Assigned Reserves at FYB	$0.00
Remaining Life	5	Monthly Member Contribution	$140.81
Replacement Year	2030	Monthly Interest Contribution	$1.05
		Total Monthly Contribution	$141.85

Component budget covers duplex 10 hp pumps which pump effluent from WWTF to north disposal field. Pumps are located in 5000 gallon final effluent tank. Per client, one pump was replaced in late 2023 at a cost of $16,260. Expected useful life for pumps is 12 years. Component set to replace one pump every 6 years.

Pumps - Final Effluent, South Disposal Field

Category	060 WWTF Equipment	Quantity	2 pumps
		Unit Cost	$7,000.00
		% of Replacement	50.00%
		Current Cost	$7,000.00
Placed In Service	01/2022	Future Cost	$7,649.09
Useful Life	6		
		Assigned Reserves at FYB	$0.00
Remaining Life	3	Monthly Member Contribution	$97.15
Replacement Year	2028	Monthly Interest Contribution	$0.72
		Total Monthly Contribution	$97.87

Component budget covers duplex 3.1 hp pumps which pump effluent from WWTF to south disposal field. Pumps are located in 5000 gallon final effluent tank. Per client, one pump was replaced in late 2021 at a cost of $5800. Expected useful life for pumps is 12 years. Component set to replace one pump every 6 years.

Pumps - General, Rebuild

Category	060 WWTF Equipment	Quantity	1 allowance
		Unit Cost	$5,000.00
		% of Replacement	100.00%
		Current Cost	$5,000.00
Placed In Service	01/2025	Future Cost	$5,463.64
Useful Life	3		
		Assigned Reserves at FYB	$0.00
Remaining Life	3	Monthly Member Contribution	$69.39
Replacement Year	2028	Monthly Interest Contribution	$0.52
		Total Monthly Contribution	$69.91

Component budget covers general rebuild allowance for pumps that may not need full replacement. Allowance should be adjusted based on association experience in future reserve study updates.

Pumps - Raw Lift Station

Category	060 WWTF Equipment	Quantity	2 pumps
		Unit Cost	$7,000.00
		% of Replacement	100.00%
		Current Cost	$14,000.00
Placed In Service	01/2002	Future Cost	$19,960.65
Useful Life	12		
Adjustment	+11	Assigned Reserves at FYB	$14,000.00
Remaining Life	0	Monthly Member Contribution	$50.69
Replacement Year	2025	Monthly Interest Contribution	$0.38
		Total Monthly Contribution	$51.06

Component budget covers duplex raw sewage lift station influent 2 hp pumps and controls. Per Weston & Sampson study, pump station was in fair condition in 2017. Pumps may be original to construction. If so, these pumps are beyond typical service life. No replacement records available.

Pumps - Raw Lift Station, Lift Rails

Category	060 WWTF Equipment	Quantity	1 rail system
		Unit Cost	$5,500.00
		% of Replacement	100.00%
		Current Cost	$5,500.00
Placed In Service	01/2002	Future Cost	$5,834.95
Useful Life	15		
Adjustment	+10	Assigned Reserves at FYB	$0.00
Remaining Life	2	Monthly Member Contribution	$113.95
Replacement Year	2027	Monthly Interest Contribution	$0.85
		Total Monthly Contribution	$114.80

Component budget covers raw lift station pump rails. No information on replacements available. Remaining life extended due to current satisfactory operation.

Tank - Hatches

Category	060 WWTF Equipment	Quantity	1 hatch replacement
		Unit Cost	$29,000.00
		% of Replacement	100.00%
		Current Cost	$29,000.00
Placed In Service	01/2020	Future Cost	$60,719.56
Useful Life	30		
		Assigned Reserves at FYB	$0.00
Remaining Life	25	Monthly Member Contribution	$53.53
Replacement Year	2050	Monthly Interest Contribution	$0.40
		Total Monthly Contribution	$53.93

Component budget covers (6) tank hatches. All hatches were replaced in 2020 per client at a cost of $22,600 by W&S. Hatches have significant improvements over original hatches the lasted 18 years. Useful life set to 30 years based on improved design.

Tank - Repair & Replacement Allowance

Category	060 WWTF Equipment	Quantity	1 tank allowance
		Unit Cost	$7,000.00
		% of Replacement	100.00%
		Current Cost	$7,000.00
Placed In Service	01/2024	Future Cost	$7,878.56
Useful Life	5		
		Assigned Reserves at FYB	$0.00
Remaining Life	4	Monthly Member Contribution	$73.21
Replacement Year	2029	Monthly Interest Contribution	$0.54
		Total Monthly Contribution	$73.75

Concrete tanks within WWTF are expected to last up to 50 years. However, some repairs and occasional replacement many be necessary. Component budget covers periodic allowance for concrete tank repairs and replacements starting in 2029. Allowance should be revised based on association experience in future reserve study updates.

Unit Heater

Category	060 WWTF Equipment	Quantity	1 heater
		Unit Cost	$1,300.00
		% of Replacement	100.00%
		Current Cost	$1,300.00
Placed In Service	01/2002	Future Cost	$1,379.17
Useful Life	25		
		Assigned Reserves at FYB	$0.00
Remaining Life	2	Monthly Member Contribution	$26.93
Replacement Year	2027	Monthly Interest Contribution	$0.20
		Total Monthly Contribution	$27.13

Component budget covers electric Qmark unit heater inside treatment building. No issues reported. Remaining life extended due to lack of current issues.

RB WWTF Sample

Component Detail Index

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