



# PROFESSIONAL RESERVE STUDY

## LEVEL 3 UPDATE



### Lake Cushman Maintenance Company

#### - Water Supply System -

3740 North Lake Cushman Road, Hoodspport, WA 98548

For:

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## 1.0 EXECUTIVE SUMMARY

### 1.1 DISCLOSURES REQUIRED BY STATE OF WA RCW 64.90.550

The undersigned makes the following disclosures required by RCW 64.90.550 to establish that this Reserve Study meets all requirements of the Washington Uniform Common Interest Ownership Act, Chapter 64.90 RCW:

- a. This Reserve Study was prepared with the assistance of a reserve study professional and that professional was independent;
- b. This Reserve Study includes all information required by RCW 64.90.550 Reserve Study – Contents; and
- c. This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require the association to (1) defer major maintenance, repair, or replacement, (2) increase future reserve contributions, (3) borrow funds to pay for major maintenance, repair, or replacement, or (4) impose special assessments for the cost of major maintenance, repair, or replacement.

### 1.2 GENERAL DESCRIPTION OF PROPERTY

Lake Cushman Maintenance Company was developed around 1966 and currently includes approximately 3,144 lots around Lake Cushman. There is approximately 55 miles of privately owned and maintained roads, two private domestic water systems, several private parks and community water accesses, several community buildings, a 9-hole golf course, and many acres of greenbelt.

Like all properties, this property will require capital maintenance. We have itemized areas of capital maintenance that we anticipate over the next thirty (30) years along with estimated costs and estimated schedule of repair/replacement.

### 1.3 IMMEDIATE NECESSARY CAPITAL EXPENDITURES

Table 1.3 below shows the items that are in need of action immediately or within the near future. This is a summary; all tasks are explained in greater detail in Section 3.0 Physical Analysis.

**Table 1.3: Summary of Immediate Necessary Capital Expenditures**

Component	Cost	Urgency
<i>Numerous projects planned in 2022 and 2023 listed in Table 3.1A and Table 3.20</i>		

## 2.0 RESERVE STUDY BACKGROUND

### 2.1 PURPOSE OF THIS LEVEL 3 RESERVE STUDY

The primary purpose of this Level 3 Reserve Study is to provide the Association with a planning and budgeting tool to adequately maintain the property 30 years into the future without unexpected special assessments. This study is intended to provide the Association with an understanding of their property and to bring to light necessary immediate expenditures and reasonably anticipated future capital expenses that should be addressed.

Associations have a responsibility to their members to adequately maintain their properties and our Reserve Studies provide our clients with the tools to implement capital maintenance. When small issues and maintenance items are addressed prior to becoming larger problems, there is typically a significant overall savings for a property owner. Properly maintained properties maintain higher property values than those with an abundance of deferred maintenance.

An additional benefit of this Reserve Study is that it is one of the qualifications required for Associations to obtain FHA approval (which is very helpful in selling or refinancing individual units). Many other sources of funding are also beginning to require them as well.

### 2.2 WASHINGTON STATE RCW 64.90.550

As of July 1, 2018, WA State RCW 64.90.550 defined a Reserve Study in WA State as the following:

- (1) Any reserve study is supplemental to the association's operating and maintenance budget.
- (2) A reserve study must include:
  - (a) A reserve component list, including any reserve component, the replacement cost of which exceeds one percent of the annual budget of the association, excluding contributions to the reserves for that reserve component. If one of these reserve components is not included in the reserve study, the study must explain the basis for its exclusion. The study must also include quantities and estimates for the useful life of each reserve component, the remaining useful life of each reserve component, and current major replacement costs for each reserve component;
  - (b) The date of the study and a disclosure as to whether the study meets the requirements of this section;
  - (c) The following level of reserve study performed:
    - (i) Level I: Full reserve study funding analysis and plan;
    - (ii) Level II: Update with visual site inspection; or
    - (iii) Level III: Update with no visual site inspection;
  - (d) The association's reserve account balance;
  - (e) The percentage of the fully funded balance to which the reserve account is funded;
  - (f) Special assessments already implemented or planned;
  - (g) Interest and inflation assumptions;
  - (h) Current reserve account contribution rates for a full funding plan and a baseline funding plan;
  - (i) A recommended reserve account contribution rate for a full funding plan to achieve one hundred percent fully funded reserves by the end of the thirty-year study period, a recommended reserve account contribution rate for a baseline funding plan to maintain the reserve account balance above zero throughout the thirty-year study period without special assessments, and a reserve account contribution rate recommended by the reserve study professional;
  - (j) A projected reserve account balance for thirty years based on each funding plan presented in the reserve study;

This reserve study meets the qualifications of WA State RCW 64.90.550

(k) A disclosure on whether the reserve study was prepared with the assistance of a reserve study professional, and whether the reserve study professional was independent; and

(l) A statement of the amount of any current deficit or surplus in reserve funding expressed on a dollars per unit basis. The amount is calculated by subtracting the association's reserve account balance as of the date of the study from the fully funded balance, and then multiplying the result by the fraction or percentage of the common expenses of the association allocable to each unit; except that if the fraction or percentage of the common expenses of the association allocable vary by unit, the association must calculate any current deficit or surplus in a manner that reflects the variation.

(3) A reserve study must also include the following disclosure:

"This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require the association to (1) defer major maintenance, repair, or replacement, (2) increase future reserve contributions, (3) borrow funds to pay for major maintenance, repair, or replacement, or (4) impose special assessments for the cost of major maintenance, repair, or replacement."

## 2.3 SCOPE AND METHODOLOGY

Our initial Level 1 Reserve Study was finalized on October 9, 2022 at this property.

This report is an off-site update of that report based solely on the information provided to us by Karen Laverdiere on June 23, 2022.

**Financial Analysis:** We performed an analysis on the financial needs and current status at the property. The financial analysis provides the following:

- Forecasts the anticipated Capital Reserves necessary at the property over the next 30 years.
- Projects future Capital Reserve balances and determines the appropriate funding levels necessary.
- Reviews the Association's current funding plan and current financial position.
- Provides our recommended annual contribution to the Reserve Fund to maintain Full Funding.

## 2.4 SOURCES OF INFORMATION

The following people provided us information for this study:

- Karen Laverdiere, Finance Manager

## 2.5 DEFINITIONS

**Assumed Inflation** - Our assumed inflation rate is our best guess of the long term average of the inflation rate over the next thirty years; it is not based on the current Consumer Price Index (CPI). Our number is much closer to the historical average of the CPI over the previous 25 years.

**Capital Reserves Balance** - Actual or projected funds as of a particular point in time that the Association has identified for use to defray the future repair or replacement of those major components which the Association is obligated to maintain. Also known as reserves, reserve accounts, cash reserves.

**Component** - An individual line item in the Reserve Study developed or updated in the physical analysis. These elements form the building blocks of the Reserve Study. Components typically are: 1) Association responsibility, 2) with limited useful life expectancies, 3) predictable remaining useful life expectancies, 4) above a minimum threshold cost, and 5) as required by local codes.

**Component Inventory** - The task of selecting and quantifying reserve components. This task is accomplished through onsite visual observations, review of Association design and organizational documents, and a review of established Association precedents.

**Deficit** - An actual (or projected) reserve balance less than the fully funded balance. The opposite would be a surplus.

**Effective Age** - The difference between useful life and remaining useful life. Not always equivalent to chronological age, since some components age irregularly. Used primarily in computation.

**Financial Analysis** - The portion of a Reserve Study where current status of the reserves (measured as cash or percent funded) and a recommended reserve contribution rate (reserve funding plan) are derived. The financial analysis is one of the two parts of a Reserve Study.

**Fully Funded** - 100% funded. When the actual (or projected) reserve balance is equal to the fully funded balance.

**Fully Funded Balance (FFB)** - Total accrued depreciation. An indicator against which actual (or projected) reserve balance can be compared. In essence, it is the reserve balance that is proportional to the current Repair/replacement cost and the fraction of life “used up”. This number is calculated for each component, then summed together for an Association total.

**Percent Funded** - The ratio, at a particular point of time (typically the beginning of the fiscal year), of the actual (or projected) reserve balance to the fully funded balance, expressed as a percentage.

**Special Assessment** - An assessment levied on the members of an Association in addition to regular assessments. Special assessments are often regulated by governing documents or local statutes.

## 2.6 FREQUENTLY ASKED QUESTIONS ABOUT RESERVE STUDIES

### What is a reserve study?

Reserve studies are comprehensive reports that are used as budget planning tools that will assess the current financial health of the reserve fund as well as create a plan for future funding to offset anticipated major future common area expenditures.

According to *Community Association Institute's Best Practices, Reserve Studies/Management*: “There are two components of a reserve study—a physical analysis and a financial analysis. During the physical analysis, a reserve provider evaluates information regarding the physical status and repair/replacement cost of the association’s major common area components. To do so, the provider conducts a component inventory, a condition assessment, and life and valuation estimates. A financial analysis assesses only the association’s reserve balance or fund status (measured in cash or as percent funded) to determine a recommendation for an appropriate reserve contribution rate (funding plan).”

### What are the different types of reserve studies?

Reserve studies fit into one of three categories: Full; Update with Site Visit; and Update with No Site Visit. They are frequently called Level 1, Level 2, and Level 3 respectively (as defined by Washington State RCW 64.90.550).

**Level 1: A full reserve study** – the reserve provider conducts a component inventory, a condition assessment (based upon on-site visual observations), and life and valuation estimates to determine both a fund status and a funding plan. They typically extend 30-years. A full reserve study must be in place before a Level 2 or Level 3 can take place.

**Level 2: An update with site visit (on-site review)** -- the reserve study provider conducts a component inventory (verification only, not quantification), a condition assessment (based on on-site visual observations), and life and valuation estimates to determine both a fund status and a funding plan. A Level 2 update is performed every third year, with the first one scheduled 3 years after the Level 1 was completed.

**Level 3: An update with no site visit (off-site review)** -- the reserve study provider conducts life and valuation estimates to determine a fund status and a funding plan. A Level 3 update is performed annually, except in years when a Level 1 or Level 2 has been conducted.

## When should associations obtain reserve studies?

Most association experts would agree that an initial full 30-year reserve study should be conducted sooner rather than later if one is not already in place. They are typically updated annually after that to account for things such as inflation and any adjustments in funding levels, budgets, repairs or replacements.

If you follow Washington State RCW 64.90.555 (which we recommend), your reserve study schedule would look like this:

- Year 1: Level 1 full 30-year study
- Years 2, 3: Level 3 annual updates
- Year 4: Level 2 update with site visit
- Years 5, 6: Level 3 annual updates
- Year 7: Level 2 update with site visit

The cycle of Level 2 and Level 3 updates continues indefinitely. A Level 1 full study is not necessary after year 1.

## What are the benefits of a Reserve Study?

Benefits of reserve studies, in short, include improved property maintenance (and therefore value) as well as complying with the law. In more detail:

### **Complying with Washington State law**

View the rules regarding Reserve Studies and Reserve Accounts here:

<http://app.leg.wa.gov/RCW/default.aspx?cite=64.90> - Sections 535, 540, 545, 550, 555, and 560

### **Fulfilling lender requirements (such as FHA)**

Many lenders are requiring up-to-date reserve studies that indicate adequate financial health before they lend. Having a reserve study in place that shows a healthy funding plan before a homeowner finds a buyer could save significant time in the closing process.

### **Help maintain the property's value and appearance**

A reserve study helps maintain the property's value and the property owner's investment. By identifying and budgeting for future repairs or replacement (anticipated capital expenditures), the property's common elements continue to look attractive and well-kept, adding to the community's overall quality of life. Many features, when properly maintained, can also benefit from an extended lifespan resulting in overall cost savings to the owners. Well maintained properties almost always have higher resale values than those that have been neglected.

### **Establishing sound financial planning and budget direction**

A comprehensive reserve study lays out a schedule of anticipated major repairs or replacements to common property elements and applies cost estimates to them. It typically spans a 30-year period, and will serve as a financial planning tool for the association to use when determining homeowners dues and contributions to the reserve fund.

### **Reducing the need for special assessments**

An association that has properly implemented their reserve study will strategically collect fees over time from homeowners (via monthly dues) rather than need large sums of cash unexpectedly (special assessments). Therefore, the need for special assessments should be minimized because expenses have already been planned for and the funds exist when needed.

### **Fulfilling the board of directors' fiduciary responsibility**

Board members of community associations have a fiduciary responsibility to their members. Directors are legally bound to use sound business judgment in guiding the association and cannot ignore major capital expenditures or eliminate them from the budget.

### 3.0 PHYSICAL ANALYSIS

#### 3.1 COMPONENT ASSESSMENT AND VALUATION

The component assessment and valuation of the itemized capital expenses on this property was done by providing our opinion of Useful Life, Remaining Useful Life, and Repair or Replacement Costs for the Reserve components. Table 3.1A lists this component inventory, and is based on the information that we were provided and on onsite visual observations.

The remainder of “Section 3.0 Physical Analysis” details each of the items in Table 3.1A using narratives and photos. They are meant to be read together.

Table 3.1B is a summary of expenses, grouped according to their expense category. Chart 3.1B is a pie chart illustrating the same.

#### Table 3.1A Key:

**Quantity** - The total quantity of each component.

**Units** - SF = Square Feet                      SY = Square Yards                      LF = Lineal Feet  
EA = Each                      LS = Lump Sum                      SQ = Roofing Square (10 ft X 10 ft)

**Cost/Unit** - The cost of a component. The unit cost is multiplied by the component’s quantity to obtain the total estimated replacement cost for the component.

**Remaining Life** – An opinion of the probable remaining life, in years, that a reserve component can be expected to continue to serve its intended function. Replacements anticipated to occur in the initial or base year have “zero” Remaining Life.

**Useful Life** - Total Useful Life or Depreciable Life. An opinion of the total probable life, in years, that a reserve component can be expected to serve its intended function in its present condition.



**Table 3.1A: Component Assessment and Valuation**

Note: All numbers provided are the engineer's opinion of probable life and cost in 2022 dollars. Exact numbers may vary.

Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2 WATER SUPPLY SYSTEMS</b>						
<i>Immediate Planned General Water System Expenses</i>						
2004 meter purchase loan repayment / 5 years left	1	LS	\$115,000	1	1	\$115,000
Replace meter registers	1	LS	\$100,000	20	20	\$100,000
Water comprehensive plan update	1	LS	\$75,000	1	5	\$75,000
Water reservoir - cleaning/coating - phase 1	1	LS	\$35,000	10	10	\$35,000
Water reservoir - cleaning/coating - phase 2	1	LS	\$35,000	10	10	\$35,000
Water reservoir - cleaning/coating - phase 3	1	LS	\$35,000	10	10	\$35,000
Water reservoir - cleaning/coating - phase 4	1	LS	\$35,000	10	10	\$35,000
Well level transducer replacement allotment	1	LS	\$14,000	0	5	\$14,000
Perkins Portable Generator 30kw	1	EA	\$17,750	20	50	\$17,750
Feasibility study to install new well system 5	1	LS	\$40,000	1	N/A	\$40,000
<i>System 3 - Well #2</i>						
Well #2 (AHB683) - 8", 225' deep	1	EA	\$18,000	34	85	\$18,000
New source approval - well #2	1	EA	\$14,000	34	85	\$14,000
Well pump (30 hp) - well #2	1	EA	\$30,000	17	30	\$30,000
Variable speed drive - Yaskaw ay P7, 30 hp - well #2	1	EA	\$7,000	7	20	\$7,000
Source meter - well #2	1	EA	\$2,500	7	15	\$2,500
Pumphouse electronics - well #2	1	LS	\$10,000	17	30	\$10,000
Pumphouse structure - well #2	1	LS	\$8,000	9	60	\$8,000
Pumphouse roof - steel - well #2	1	LS	\$3,500	9	60	\$3,500
Install Cummins Diesel 50 kw Generator at Well #2	1	EA	\$65,000	0	50	\$65,000

Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2 WATER SUPPLY SYSTEMS - CONTINUED</b>						
<i>System 3 - Well #10</i>						
Well #10 - 8", 164' deep, AHB682	1	EA	\$13,200	53	85	\$13,200
New source approval - well #10	1	LS	\$14,000	53	85	\$14,000
Well pump (30 hp) - well #10	1	EA	\$30,000	17	30	\$30,000
Variable speed drive - Yaskaw ay P7, 30 hp - well#10	1	EA	\$7,000	7	20	\$7,000
Source meter - well #10	1	EA	\$2,500	7	15	\$2,500
Pumphouse electronics - well #10	1	LS	\$10,000	17	30	\$10,000
Pumphouse structure - well #10	1	LS	\$8,000	28	60	\$8,000
Pumphouse roof - shingles - well #10	1	LS	\$2,500	9	61	\$2,500
<i>System 3 General Expenditures</i>						
Distribution mains and service connections in System 3	26,100	LF	\$120	14	80	\$3,132,000
Isolation valves in System 3	80	EA	\$1,200	4	30	\$96,000
Blow offs in System 3	12	EA	\$2,000	4	30	\$24,000
Air / Vacuum release valve in System 3	4	EA	\$3,000	4	30	\$12,000
Fire hydrants in System 3	9	EA	\$6,000	17	30	\$54,000
Concrete reservoir - 26'X35', 138,900 gallons in System 3	1	EA	\$340,000	65	80	\$340,000
Systems 3 Radio Telemetry sites	3	EA	\$4,000	4	15	\$12,000
Water meter setters in System 3	396	EA	\$300	12	24	\$118,800
Service meters in System 3	396	EA	\$300	13	15	\$118,800

	Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2</b>	<b>WATER SUPPLY SYSTEMS - CONTINUED</b>						
	<i>System 5 - Well #9</i>						
	Well #9 (AHB680) - 8", 208' deep	1	EA	\$16,640	53	85	\$16,640
	New source approval - well #9	1	LS	\$14,000	53	85	\$14,000
	Well pump (50 hp) - well #9	1	EA	\$35,000	30	30	\$35,000
	Variable speed drive - Yaskaw a P7, 60 hp - well #9	1	EA	\$8,500	6	20	\$8,500
	Source meter - well #9	1	EA	\$2,500	7	15	\$2,500
	Pump electronics - well #9	1	LS	\$10,000	16	30	\$10,000
	Pumphouse structure - well #9	1	LS	\$8,000	28	60	\$8,000
	Pumphouse roof - shingles - well #9	1	LS	\$2,500	9	30	\$2,500
	Chlorination equipment - Walchem pump - well #9	1	LS	\$1,500	0	10	\$1,500
	CAT 3-Phase Diesel D100-4 Generator - well #9	1	EA	\$55,000	1	50	\$55,000
	<i>System 5 - Well #1</i>						
	Well #1 (AHB681) - 8", 118' deep	1	EA	\$9,440	41	85	\$9,440
	New source approval - well #1	1	LS	\$14,000	41	85	\$14,000
	Well pump (40 hp) - well #1	1	EA	\$28,000	16	30	\$28,000
	Variable speed drive - Yaskaw a P7, 40 hp - well #1	1	EA	\$7,000	6	20	\$7,000
	Source meter - well #1	1	EA	\$2,500	7	15	\$2,500
	Pump electronics - well #1	1	LS	\$10,000	16	30	\$10,000
	Pumphouse structure - well #1	1	LS	\$8,000	16	60	\$8,000
	Pumphouse roof - steel - well #1	1	LS	\$3,000	16	60	\$3,000
	Chlorination equipment - LMI pump - well #1	1	LS	\$1,500	9	10	\$1,500

	Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2</b>	<b>WATER SUPPLY SYSTEMS - CONTINUED</b>						
	<i>System 5 - Division 1 Booster Station</i>						
	Division 1 booster pump 1 - 15 hp	1	EA	\$12,000	0	30	\$12,000
	Division 1 pump controller - Yaskawa P1000, 15 hp	1	EA	\$7,000	18	20	\$7,000
	Division 1 Hach CL monitoring equipment	1	LS	\$6,000	10	10	\$6,000
	Division 1 booster pump 2 - 20 hp	1	EA	\$14,000	15	30	\$14,000
	Division 1 booster pump controller - Aquavar 20 hp	1	LS	\$7,000	18	20	\$7,000
	Pump electronics - Division 1 booster pump	1	LS	\$10,000	15	30	\$10,000
	Pumphouse structure - Division 1 booster pump	1	LS	\$8,000	21	60	\$8,000
	Pumphouse roof - steel - Division 1 booster pump	1	LS	\$3,000	21	60	\$3,000
	Backup generator - Cummins 60kw	1	EA	\$50,000	48	50	\$50,000
	<i>System 5 - Division 15 Booster Station</i>						
	Division 15 booster pump - 20 hp	1	EA	\$14,000	23	30	\$14,000
	Division 15 pump controller - Yaskawa P1000, 20 hp	1	EA	\$7,000	18	20	\$7,000
	Pump electronics - Division 15 booster pump	1	LS	\$10,000	7	30	\$10,000
	Pumphouse structure - Division 15 booster pump	1	LS	\$8,000	37	60	\$8,000
	Pumphouse roof - shingles - Division 15 booster pump	1	LS	\$2,500	26	30	\$2,500
	<i>System 5 - Anderson Booster Station</i>						
	Anderson booster pump 3.5 hp	1	EA	\$4,000	24	30	\$4,000
	Anderson pump controller - Aquavar 3.5 hp	1	EA	\$4,000	14	20	\$4,000
	Pump electronics - Anderson booster pump	1	LS	\$2,000	7	30	\$2,000
	Pumphouse structure - Anderson booster pump	1	LS	\$6,000	37	60	\$6,000
	Pumphouse roof - shingles - Anderson booster pump	1	LS	\$1,800	7	30	\$1,800

Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2 WATER SUPPLY SYSTEMS - CONTINUED</b>						
<i>System 5 - Bi-Directional Booster Station</i>						
Bi-directional station pump - 10 hp	1	EA	\$8,000	24	30	\$8,000
Bi-directional station pump controller - Aquavar 10 hp	1	EA	\$6,000	14	20	\$6,000
Bi-directional Valves - 4 Cla-Val Valves	4	EA	\$5,000	7	30	\$20,000
Pump electronics - BiDirectional booster pump	1	LS	\$10,000	7	30	\$10,000
Pumphouse structure - BiDirectional booster pump	1	LS	\$10,000	37	60	\$10,000
Pumphouse roof - shingles - Bi-Directional booster pump	1	LS	\$2,500	7	30	\$2,500
<i>System 5 - Well #8</i>						
Well #8 (AHB679) - 8", 115' deep	1	EA	\$9,200	52	85	\$9,200
New source approval - well #8	1	LS	\$14,000	52	85	\$14,000
Well #8 pump (15 hp)	1	EA	\$11,000	26	30	\$11,000
Well #8 Pump controller - 15 hp	1	EA	\$7,000	20	20	\$7,000
Source meter - well #8	1	EA	\$2,500	7	15	\$2,500
Pump electronics - well #8	1	LS	\$10,000	7	30	\$10,000
Pumphouse structure - well #8	1	LS	\$8,000	27	60	\$8,000
Pumphouse roof - shingles - well #8	1	LS	\$2,500	9	30	\$2,500
<i>System 5 - Well #5</i>						
Well #5 (AHB678) - 8", 159' deep	1	EA	\$12,720	35	85	\$12,720
New source approval - well #5	1	LS	\$14,000	35	85	\$14,000
Well #5 pump (15 hp)	1	EA	\$12,000	7	30	\$12,000
Well #5 Pump controller - 15 hp	1	EA	\$7,000	10	20	\$7,000
Source meter - well #5	1	EA	\$2,500	7	15	\$2,500
Pump electronics - well #5	1	LS	\$10,000	7	30	\$10,000
Pumphouse structure - well #5	1	LS	\$8,000	10	60	\$8,000
Pumphouse roof - shingles - well #5	1	LS	\$2,500	9	30	\$2,500

Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2 WATER SUPPLY SYSTEMS - CONTINUED</b>						
<i>System 5 - Well #7</i>						
Well #7 (AHB675) - 8", 63' deep	1	EA	\$7,000	52	85	\$7,000
New source approval - well #7	1	LS	\$14,000	52	85	\$14,000
Well #7 pump (5 hp)	1	EA	\$8,000	29	30	\$8,000
Well #7 Pump controller - 5 hp	1	EA	\$3,000	6	20	\$3,000
Source meter - well #7	1	EA	\$2,500	7	15	\$2,500
Pump electronics - well #7	1	LS	\$10,000	7	30	\$10,000
Pumphouse structure - well #7	1	LS	\$8,000	27	60	\$8,000
Pumphouse roof - shingles - well #7	1	LS	\$2,500	9	30	\$2,500
<i>System 5 - Well #3</i>						
Well #3 (AHB677) - 8", 51' deep	1	EA	\$6,500	32	85	\$6,500
New source approval - well #3	1	LS	\$14,000	32	85	\$14,000
Well #3 pump (5 hp)	1	EA	\$8,000	1	30	\$8,000
Well #3 Pump controller - 5 hp	1	EA	\$3,000	6	20	\$3,000
Source meter - well #3	1	EA	\$2,500	7	15	\$2,500
Pump electronics - well #3	1	LS	\$10,000	7	30	\$10,000
Pumphouse structure - well #3	1	LS	\$12,000	7	60	\$12,000
Pumphouse roof - steel - well #3	1	LS	\$5,000	7	60	\$5,000
<i>System 5 - Well #11</i>						
Well #11 (AHB676) - 8", 160' deep	1	EA	\$12,800	53	85	\$12,800
New source approval - well #11	1	LS	\$14,000	53	85	\$14,000
Well #11 pump (10 hp)	1	EA	\$10,000	0	30	\$10,000
Well #11 Pump controller - 10 hp	1	EA	\$5,000	6	20	\$5,000
Source meter - well #11	1	EA	\$2,500	7	15	\$2,500
Pump electronics - well #11	1	LS	\$10,000	7	30	\$10,000
Pumphouse structure - well #11	1	LS	\$8,000	28	60	\$8,000
Pumphouse roof - shingles - well #11	1	LS	\$2,500	9	30	\$2,500

Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2</b>	<b>WATER SUPPLY SYSTEMS - CONTINUED</b>					
<i>System 5 - Division 10 Booster Station</i>						
Division 10 booster pump 1 - 25 hp	1	EA	\$18,000	29	30	\$18,000
Division 10 pump 1 controller - Aquaver 25 hp	1	EA	\$7,000	19	20	\$7,000
Division 10 booster pump 2 - 25 hp	1	EA	\$18,000	29	30	\$18,000
Division 10 pump 2 controller - Aquaver 25 hp	1	EA	\$7,000	19	20	\$7,000
Division 10 pumphouse electronics	1	LS	\$10,000	16	30	\$10,000
Division 10 pumphouse structure	1	LS	\$20,000	10	60	\$20,000
Division 10 pumphouse roof - steel	1	LS	\$8,000	10	60	\$8,000
Backup generator - Kohler 80 kw for Division 10	1	EA	\$70,000	42	50	\$70,000
Propane tank for generator - 1,000 gallon	1	EA	\$2,500	32	40	\$2,500
Sound barrier / Insulation for generator	1	LS	\$2,000	0	50	\$2,000

Component	Quantity	Units	Cost/Unit	Remaining Life (Years)	Useful Life (Years)	Total Cost
<b>3.2 WATER SUPPLY SYSTEMS - CONTINUED</b>						
<i>System 5 General Expenditures</i>						
Distribution mains - Division 1	19,815	LF	\$120	10	80	\$2,377,800
Distribution mains - Divisions 10-13, 15-16	46,860	LF	\$120	20	80	\$5,623,200
Distribution mains - Middle zone	85,815	LF	\$120	26	80	\$10,297,800
Distribution mains - 2008 install	5,800	LF	\$120	57	80	\$696,000
Isolation valves in System 5	250	EA	\$1,200	4	30	\$300,000
Blow offs in System 5	50	EA	\$2,000	4	30	\$100,000
Air / Vacuum release valve in System 5	10	EA	\$3,000	4	30	\$30,000
PRV vaults in System 5	5	EA	\$3,000	4	30	\$15,000
Fire hydrants in System 5	40	EA	\$6,000	17	30	\$240,000
Division 1 Reservoir - 15'x26'; 59,600 gallons	1	EA	\$176,000	42	80	\$176,000
Division 15 Reservoir - 21.5'x20'; 50,500 gallons	1	EA	\$164,000	32	80	\$164,000
Eastside Reservoir 1 - 20.5'x26'; 79,500 gallons	1	EA	\$176,000	28	80	\$176,000
Eastside Reservoir 2 - 20.5'x26'; 79,500 gallons	1	EA	\$176,000	28	80	\$176,000
Eastside Reservoir 3 - 25'x30'; 132,100 gallons	1	EA	\$280,000	67	80	\$280,000
Division 10 Reservoir - 30'x30'; 158,600 gallons	1	EA	\$320,000	55	80	\$320,000
System 5 Reservoir overflow sensors	6	EA	\$1,000	10	10	\$6,000
System 5 radio telemetry sites	17	EA	\$4,000	4	15	\$68,000
System 5 well level transducers	7	EA	\$2,000	0	10	\$14,000
System 5 well meter setters	1,519	EA	\$300	10	24	\$455,700
System 5 service meters	1,519	EA	\$300	13	15	\$455,700

**3.20 SUMMARY OF ANNUAL ANTICIPATED EXPENSES**

Using the conclusions described throughout “Section 3.0 Physical Analysis”, the following Table 3.20 lists the annual anticipated capital expenses for each reserve item in the year that we believe is most probable. All of these anticipated expenses already have inflation factored into them at the assumed level that is listed in “Section 4.3 Assumptions for Future Interest Rate and Inflation”.



LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<b>3.2</b>	<b>WATER SUPPLY SYSTEMS</b>												
<i>Immediate Planned General Water System Expenses</i>													
	2004 meter purchase loan repayment / 5 years left	\$115,000	\$118,450	\$122,004	\$125,664	\$129,434							
	Replace meter registers												
	Water comprehensive plan update		\$77,250					\$89,554					\$103,818
	Water reservoir - cleaning/coating - phase 1											\$47,037	
	Water reservoir - cleaning/coating - phase 2											\$47,037	
	Water reservoir - cleaning/coating - phase 3											\$47,037	
	Water reservoir - cleaning/coating - phase 4											\$47,037	
	Well level transducer replacement allotment	\$14,000					\$16,230					\$18,815	
	Perkins Portable Generator 30kw												
	Feasibility study to install new well system 5		\$41,200										
<i>System 3 - Well #2</i>													
	Well #2 (AHB683) - 8", 225' deep												
	New source approval - well #2												
	Well pump (30 hp) - well #2												
	Variable speed drive - Yaskaway P7, 30 hp - well #2								\$8,609				
	Source meter - well #2								\$3,075				
	Pumphouse electronics - well #2												
	Pumphouse structure - well #2										\$10,438		
	Pumphouse roof - steel - well #2										\$4,567		
	Install Cummins Diesel 50 kw Generator at Well #2	\$65,000											
<i>System 3 - Well #10</i>													
	Well #10 - 8", 164' deep, AHB682												
	New source approval - well #10												
	Well pump (30 hp) - well #10												
	Variable speed drive - Yaskaway P7, 30 hp - well#10								\$8,609				
	Source meter - well #10								\$3,075				
	Pumphouse electronics - well #10												
	Pumphouse structure - well #10												
	Pumphouse roof - shingles - well #10										\$3,262		

LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>System 3 General Expenditures</i>												
Distribution mains and service connections in System 3												
Isolation valves in System 3					\$108,049							
Blowoffs in System 3					\$27,012							
Air / Vacuum release valve in System 3					\$13,506							
Fire hydrants in System 3												
Concrete reservoir - 26'X35', 138,900 gallons in System 3												
Systems 3 Radio Telemetry sites					\$13,506							
Water meter setters in System 3												
Service meters in System 3												
<i>System 5 - Well #9</i>												
Well #9 (AHB680) - 8", 208' deep												
New source approval - well #9												
Well pump (50 hp) - well #9												
Variable speed drive - Yaskawa P7, 60 hp - well #9							\$10,149					
Source meter - well #9								\$3,075				
Pump electronics - well #9												
Pumphouse structure - well #9												
Pumphouse roof - shingles - well #9										\$3,262		
Chlorination equipment - Walchem pump - well #9	\$1,500										\$2,016	
CAT 3-Phase Diesel D100-4 Generator - well #9		\$56,650										
<i>System 5 - Well #1</i>												
Well #1 (AHB681) - 8", 118' deep												
New source approval - well #1												
Well pump (40 hp) - well #1												
Variable speed drive - Yaskawa P7, 40 hp - well #1							\$8,358					
Source meter - well #1								\$3,075				
Pump electronics - well #1												
Pumphouse structure - well #1												
Pumphouse roof - steel - well #1												
Chlorination equipment - LMI pump - well #1										\$1,957		

LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>System 5 - Division 1 Booster Station</i>												
Division 1 booster pump 1 - 15 hp	\$12,000											
Division 1 pump controller - Yaskawa P1000, 15 hp												
Division 1 Hach CL monitoring equipment											\$8,063	
Division 1 booster pump 2 - 20 hp												
Division 1 booster pump controller - Aquavar 20 hp												
Pump electronics - Division 1 booster pump												
Pumphouse structure - Division 1 booster pump												
Pumphouse roof - steel - Division 1 booster pump												
Backup generator - Cummins 60kw												
<i>System 5 - Division 15 Booster Station</i>												
Division 15 booster pump - 20 hp												
Division 15 pump controller - Yaskawa P1000, 20 hp												
Pump electronics - Division 15 booster pump								\$12,299				
Pumphouse structure - Division 15 booster pump												
Pumphouse roof - shingles - Division 15 booster pump												
<i>System 5 - Anderson Booster Station</i>												
Anderson booster pump 3.5 hp												
Anderson pump controller - Aquavar 3.5 hp												
Pump electronics - Anderson booster pump								\$2,460				
Pumphouse structure - Anderson booster pump												
Pumphouse roof - shingles - Anderson booster pump								\$2,214				
<i>System 5 - Bi-Directional Booster Station</i>												
Bi-directional station pump - 10 hp												
Bi-directional station pump controller - Aquavar 10 hp												
Bi-directional Valves - 4 Cla-Val Valves								\$24,597				
Pump electronics - BiDirectional booster pump								\$12,299				
Pumphouse structure - BiDirectional booster pump												
Pumphouse roof - shingles - Bi-Directional booster pump								\$3,075				

LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>System 5 - Well #8</i>												
Well #8 (AHB679) - 8", 115' deep												
New source approval - well #8												
Well #8 pump (15 hp)												
Well #8 Pump controller - 15 hp												
Source meter - well #8								\$3,075				
Pump electronics - well #8								\$12,299				
Pumphouse structure - well #8												
Pumphouse roof - shingles - well #8										\$3,262		
<i>System 5 - Well #5</i>												
Well #5 (AHB678) - 8", 159' deep												
New source approval - well #5												
Well #5 pump (15 hp)								\$14,758				
Well #5 Pump controller - 15 hp											\$9,407	
Source meter - well #5								\$3,075				
Pump electronics - well #5								\$12,299				
Pumphouse structure - well #5											\$10,751	
Pumphouse roof - shingles - well #5										\$3,262		
<i>System 5 - Well #7</i>												
Well #7 (AHB675) - 8", 63' deep												
New source approval - well #7												
Well #7 pump (5 hp)												
Well #7 Pump controller - 5 hp							\$3,582					
Source meter - well #7								\$3,075				
Pump electronics - well #7								\$12,299				
Pumphouse structure - well #7												
Pumphouse roof - shingles - well #7										\$3,262		



LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>System 5 General Expenditures</i>												
Distribution mains - Division 1											\$3,195,564	
Distribution mains - Divisions 10-13, 15-16												
Distribution mains - Middle zone												
Distribution mains - 2008 install												
Isolation valves in System 5					\$337,653							
Blowoffs in System 5					\$112,551							
Air / Vacuum release valve in System 5					\$33,765							
PRV vaults in System 5					\$16,883							
Fire hydrants in System 5												
Division 1 Reservoir - 15'x26'; 59,600 gallons												
Division 15 Reservoir - 21.5'x20'; 50,500 gallons												
Eastside Reservoir 1 - 20.5'x26'; 79,500 gallons												
Eastside Reservoir 2 - 20.5'x26'; 79,500 gallons												
Eastside Reservoir 3 - 25'x30'; 132,100 gallons												
Division 10 Reservoir - 30'x30'; 158,600 gallons												
System 5 Reservoir overflow sensors											\$8,063	
System 5 radio telemetry sites					\$76,535							
System 5 well level transducers	\$14,000										\$18,815	
System 5 well meter setters											\$612,423	
System 5 service meters												
<b>ANNUAL EXPENSES BY YEAR</b>	<b>\$233,500</b>	<b>\$301,790</b>	<b>\$122,004</b>	<b>\$125,664</b>	<b>\$868,893</b>	<b>\$16,230</b>	<b>\$121,196</b>	<b>\$198,994</b>	<b>\$0</b>	<b>\$36,534</b>	<b>\$4,109,696</b>	<b>\$103,818</b>



LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
<i>System 3 General Expenditures</i>													
	Distribution mains and service connections in System 3			\$4,737,431									
	Isolation valves in System 3												
	Blowoffs in System 3												
	Air / Vacuum release valve in System 3												
	Fire hydrants in System 3						\$89,254						
	Concrete reservoir - 26'X35', 138,900 gallons in System 3												
	Systems 3 Radio Telemetry sites								\$21,042				
	Water meter setters in System 3	\$169,380											
	Service meters in System 3		\$174,462										
<i>System 5 - Well #9</i>													
	Well #9 (AHB680) - 8", 208' deep												
	New source approval - well #9												
	Well pump (50 hp) - well #9												
	Variable speed drive - Yaskawa P7, 60 hp - well #9												
	Source meter - well #9											\$4,790	
	Pump electronics - well #9					\$16,047							
	Pumphouse structure - well #9												
	Pumphouse roof - shingles - well #9												
	Chlorination equipment - Walchem pump - well #9									\$2,709			
	CAT 3-Phase Diesel D100-4 Generator - well #9												
<i>System 5 - Well #1</i>													
	Well #1 (AHB681) - 8", 118' deep												
	New source approval - well #1												
	Well pump (40 hp) - well #1					\$44,932							
	Variable speed drive - Yaskawa P7, 40 hp - well #1												
	Source meter - well #1											\$4,790	
	Pump electronics - well #1					\$16,047							
	Pumphouse structure - well #1					\$12,838							
	Pumphouse roof - steel - well #1					\$4,814							
	Chlorination equipment - LMI pump - well #1								\$2,630				









LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
System 5	General Expenditures												
	Distribution mains - Division 1												
	Distribution mains - Divisions 10-13, 15-16									\$10,156,125			
	Distribution mains - Middle zone												
	Distribution mains - 2008 install												
	Isolation valves in System 5												
	Blowoffs in System 5												
	Air / Vacuum release valve in System 5												
	PRV vaults in System 5												
	Fire hydrants in System 5						\$396,683						
	Division 1 Reservoir - 15'x26'; 59,600 gallons												
	Division 15 Reservoir - 21.5'x20'; 50,500 gallons												
	Eastside Reservoir 1 - 20.5'x26'; 79,500 gallons												
	Eastside Reservoir 2 - 20.5'x26'; 79,500 gallons												
	Eastside Reservoir 3 - 25'x30'; 132,100 gallons												
	Division 10 Reservoir - 30'x30'; 158,600 gallons												
	System 5 Reservoir overflow sensors									\$10,837			
	System 5 radio telemetry sites								\$119,238				
	System 5 well level transducers									\$25,286			
	System 5 well meter setters												
	System 5 service meters		\$669,211										
<b>ANNUAL EXPENSES BY YEAR</b>		<b>\$169,380</b>	<b>\$843,673</b>	<b>\$4,752,557</b>	<b>\$59,203</b>	<b>\$231,078</b>	<b>\$618,165</b>	<b>\$35,751</b>	<b>\$167,460</b>	<b>\$10,709,246</b>	<b>\$159,985</b>	<b>\$43,112</b>	<b>\$27,630</b>

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2046	2047	2048	2049	2050	2051	2052
<b>3.2</b>	<b>WATER SUPPLY SYSTEMS</b>							
<i>Immediate Planned General Water System Expenses</i>								
	2004 meter purchase loan repayment / 5 years left							
	Replace meter registers							
	Water comprehensive plan update			\$161,744				
	Water reservoir - cleaning/coating - phase 1							\$84,954
	Water reservoir - cleaning/coating - phase 2							\$84,954
	Water reservoir - cleaning/coating - phase 3							\$84,954
	Water reservoir - cleaning/coating - phase 4							\$84,954
	Well level transducer replacement allotment		\$29,313					\$33,982
	Perkins Portable Generator 30kw							
	Feasibility study to install new well system 5							
<i>System 3 - Well #2</i>								
	Well #2 (AHB683) - 8", 225' deep							
	New source approval - well #2							
	Well pump (30 hp) - well #2							
	Variable speed drive - Yaskaway P7, 30 hp - well #2				\$15,549			
	Source meter - well #2							
	Pumphouse electronics - well #2							
	Pumphouse structure - well #2							
	Pumphouse roof - steel - well #2							
	Install Cummins Diesel 50 kw Generator at Well #2							
<i>System 3 - Well #10</i>								
	Well #10 - 8", 164' deep, AHB682							
	New source approval - well #10							
	Well pump (30 hp) - well #10							
	Variable speed drive - Yaskaway P7, 30 hp - well#10				\$15,549			
	Source meter - well #10							
	Pumphouse electronics - well #10							
	Pumphouse structure - well #10					\$18,303		
	Pumphouse roof - shingles - well #10							

LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required	2046	2047	2048	2049	2050	2051	2052
<i>System 3 General Expenditures</i>							
Distribution mains and service connections in System 3							
Isolation valves in System 3							
Blowoffs in System 3							
Air / Vacuum release valve in System 3							
Fire hydrants in System 3							
Concrete reservoir - 26'X35', 138,900 gallons in System 3							
Systems 3 Radio Telemetry sites							
Water meter setters in System 3							
Service meters in System 3					\$271,806		
<i>System 5 - Well #9</i>							
Well #9 (AHB680) - 8", 208' deep							
New source approval - well #9							
Well pump (50 hp) - well #9							\$84,954
Variable speed drive - Yaskawa P7, 60 hp - well #9			\$18,331				
Source meter - well #9							
Pump electronics - well #9							
Pumphouse structure - well #9					\$18,303		
Pumphouse roof - shingles - well #9							
Chlorination equipment - Walchem pump - well #9							\$3,641
CAT 3-Phase Diesel D100-4 Generator - well #9							
<i>System 5 - Well #1</i>							
Well #1 (AHB681) - 8", 118' deep							
New source approval - well #1							
Well pump (40 hp) - well #1							
Variable speed drive - Yaskawa P7, 40 hp - well #1			\$15,096				
Source meter - well #1							
Pump electronics - well #1							
Pumphouse structure - well #1							
Pumphouse roof - steel - well #1							
Chlorination equipment - LMI pump - well #1						\$3,535	

LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2046	2047	2048	2049	2050	2051	2052
<i>System 5 - Division 1 Booster Station</i>								
	Division 1 booster pump 1 - 15 hp							\$29,127
	Division 1 pump controller - Yaskawa P1000, 15 hp							
	Division 1 Hach CL monitoring equipment							\$14,564
	Division 1 booster pump 2 - 20 hp							
	Division 1 booster pump controller - Aquavar 20 hp							
	Pump electronics - Division 1 booster pump							
	Pumphouse structure - Division 1 booster pump							
	Pumphouse roof - steel - Division 1 booster pump							
	Backup generator - Cummins 60kw							
<i>System 5 - Division 15 Booster Station</i>								
	Division 15 booster pump - 20 hp							
	Division 15 pump controller - Yaskawa P1000, 20 hp							
	Pump electronics - Division 15 booster pump							
	Pumphouse structure - Division 15 booster pump							
	Pumphouse roof - shingles - Division 15 booster pump			\$5,391				
<i>System 5 - Anderson Booster Station</i>								
	Anderson booster pump 3.5 hp	\$8,131						
	Anderson pump controller - Aquavar 3.5 hp							
	Pump electronics - Anderson booster pump							
	Pumphouse structure - Anderson booster pump							
	Pumphouse roof - shingles - Anderson booster pump							
<i>System 5 - Bi-Directional Booster Station</i>								
	Bi-directional station pump - 10 hp	\$16,262						
	Bi-directional station pump controller - Aquavar 10 hp							
	Bi-directional Valves - 4 Cla-Val Valves							
	Pump electronics - BiDirectional booster pump							
	Pumphouse structure - BiDirectional booster pump							
	Pumphouse roof - shingles - Bi-Directional booster pump							

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2046	2047	2048	2049	2050	2051	2052
System 5 - Well #8								
	Well #8 (AHB679) - 8", 115' deep							
	New source approval - well #8							
	Well #8 pump (15 hp)			\$23,723				
	Well #8 Pump controller - 15 hp							
	Source meter - well #8							
	Pump electronics - well #8							
	Pumphouse structure - well #8				\$17,770			
	Pumphouse roof - shingles - well #8							
System 5 - Well #5								
	Well #5 (AHB678) - 8", 159' deep							
	New source approval - well #5							
	Well #5 pump (15 hp)							
	Well #5 Pump controller - 15 hp							\$16,991
	Source meter - well #5							
	Pump electronics - well #5							
	Pumphouse structure - well #5							
	Pumphouse roof - shingles - well #5							
System 5 - Well #7								
	Well #7 (AHB675) - 8", 63' deep							
	New source approval - well #7							
	Well #7 pump (5 hp)						\$18,853	
	Well #7 Pump controller - 5 hp			\$6,470				
	Source meter - well #7							
	Pump electronics - well #7							
	Pumphouse structure - well #7				\$17,770			
	Pumphouse roof - shingles - well #7							



**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2046	2047	2048	2049	2050	2051	2052
<i>System 5 - Well #3</i>								
	Well #3 (AHB677) - 8", 51' deep							
	New source approval - well #3							
	Well #3 pump (5 hp)							
	Well #3 Pump controller - 5 hp			\$6,470				
	Source meter - well #3							
	Pump electronics - well #3							
	Pumphouse structure - well #3							
	Pumphouse roof - steel - well #3							
<i>System 5 - Well #11</i>								
	Well #11 (AHB676) - 8", 160' deep							
	New source approval - well #11							
	Well #11 pump (10 hp)							\$24,273
	Well #11 Pump controller - 10 hp			\$10,783				
	Source meter - well #11							
	Pump electronics - well #11							
	Pumphouse structure - well #11					\$18,303		
	Pumphouse roof - shingles - well #11							
<i>System 5 - Division 10 Booster Station</i>								
	Division 10 booster pump 1 - 25 hp						\$42,418	
	Division 10 pump 1 controller - Aquaver 25 hp							
	Division 10 booster pump 2 - 25 hp						\$42,418	
	Division 10 pump 2 controller - Aquaver 25 hp							
	Division 10 pumphouse electronics							
	Division 10 pumphouse structure							
	Division 10 pumphouse roof - steel							
	Backup generator - Kohler 80 kw for Division 10							
	Propane tank for generator - 1,000 gallon							
	Sound barrier / Insulation for generator							

LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

**TABLE 3.20: ANNUAL CAPITAL EXPENSES**

Action Required		2046	2047	2048	2049	2050	2051	2052
System 5	General Expenditures							
	Distribution mains - Division 1							
	Distribution mains - Divisions 10-13, 15-16							
	Distribution mains - Middle zone			\$22,208,146				
	Distribution mains - 2008 install							
	Isolation valves in System 5							
	Blowoffs in System 5							
	Air / Vacuum release valve in System 5							
	PRV vaults in System 5							
	Fire hydrants in System 5							
	Division 1 Reservoir - 15'x26'; 59,600 gallons							
	Division 15 Reservoir - 21.5'x20'; 50,500 gallons							
	Eastside Reservoir 1 - 20.5'x26'; 79,500 gallons					\$402,675		
	Eastside Reservoir 2 - 20.5'x26'; 79,500 gallons					\$402,675		
	Eastside Reservoir 3 - 25'x30'; 132,100 gallons							
	Division 10 Reservoir - 30'x30'; 158,600 gallons							
	System 5 Reservoir overflow sensors							\$14,564
	System 5 radio telemetry sites							
	System 5 well level transducers							\$33,982
	System 5 well meter setters							
	System 5 service meters					\$1,042,609		
<b>ANNUAL EXPENSES BY YEAR</b>		<b>\$24,394</b>	<b>\$29,313</b>	<b>\$22,456,154</b>	<b>\$66,639</b>	<b>\$2,174,675</b>	<b>\$107,224</b>	<b>\$595,893</b>

## 4.0 FINANCIAL ANALYSIS

The financial analysis in this Reserve Study is a proprietary system that was developed by Samdal & Associates. We have provided the funding method that we believe will most adequately fund the reserves of this Association.

### 4.1 CURRENT FINANCIAL INFORMATION AND CURRENT FUNDING PLAN

The Association’s Reserve Fund balance was \$519,400 as of May 31, 2021 (Balance provided by Karen Laverdiere). According to our calculations detailed in this report, the Reserve Fund balance required for “Full Funding” of this property at this time is \$18,480,826. Therefore, the property is 2.8% funded.

The current annual contribution to the reserve fund is \$554,400. For the purpose of comparison to our recommended funding plans, we have assumed that the Association will increase their current reserve fund contribution by 3% annually to account for inflation. This is shown in Table 4.5 “Reserve Fund Balance Sheet” (Section 4.5) and all subsequent figures.

This property is currently **2.8% funded.**

**This funding contribution is not adequate to obtain “Full Funding” of this property.**

### 4.2 RECOMMENDED RESERVE FUNDING PLAN

Full Funding is the ideal position for any property and represents a strong financial position. We recommend that all properties be Fully Funded, as Full Funding allows Associations to maintain their properties adequately and minimizes their risk of unplanned special assessments.

Ideally, the Association should be Fully Funded immediately; however, we recognize that financial realities can sometimes make this difficult. Therefore, we have provided three different plans to get the Association Fully Funded within three different time frames: Immediately, Within Five Years, and Within Ten Years. It is to the Association’s benefit to be Fully Funded as soon as possible.

Our funding recommendations are as follows:

#### Option One: Immediate Full Funding

If the Association desires to be Fully Funded immediately, then based on the anticipated expenditures the Association will need to immediately contribute a total of \$17,961,426 to the Reserve Fund. Following this initial contribution, the funding plan necessary to maintain a Fully Funded Capital Reserve Fund for the duration of this study will be a total property contribution of \$597,061 per year in the initial year. This annual contribution will need to be increased 3% each subsequent year to maintain Full Funding and to account for inflation.

For a detailed look at the annual funding contribution necessary per year, see Table 4.5 “Reserve Fund Balance Sheet” (Section 4.5).

-OR-

**Option One**  
 Immediate Contribution:  
**\$17,961,426**  
 Annual Contribution Thereafter:  
**2023 \$597,061**  
 (with 3% annual increase thereafter)

**Option Two: Full Funding Within Five Years**

There is currently a “full funding” deficiency of \$17,961,426. This option makes up this deficiency over the next five years. Starting in 2023 for five years through 2027, the Association will make up their Reserve Fund deficiency by contributing \$4,404,787 annually (which includes \$3,807,725 in make-up funds and \$597,061 in capital maintenance funds that will increase annually with inflation).

If this plan is followed, the Association will be Fully Funded by the start of 2028. From this point on, the funding plan will be identical to funding plan listed above in the “Immediate Full Funding” option to maintain Full Funding. This means that the Association will reduce their Reserve Fund contribution to \$692,158 in 2028. This 2028 annual contribution will need to be increased 3% each subsequent year (to account for inflation) for the duration of this 30-year study to maintain Full Funding and to account for inflation.

For a detailed look at the annual funding contribution necessary per year, see Table 4.5 “Reserve Fund Balance Sheet” (Section 4.5).

-OR-

**Option Three: Full Funding Within Ten Years**

There is currently a “full funding” deficiency of \$17,961,426. This option makes up this deficiency over the next ten years. Starting in 2023 for ten years through 2032, the Association will make up their Reserve Fund deficiency by contributing \$2,641,355 annually (which includes \$2,044,294 in make-up funds and \$597,061 in capital maintenance funds that will increase annually with inflation).

If this plan is followed, the Association will be Fully Funded by the start of 2033. From this point on, the funding plan will be identical to funding plan listed above in the “Immediate Full Funding” option to maintain Full Funding. This means that the Association will reduce their Reserve Fund contribution to \$802,400 in 2033. This 2033 annual contribution will need to be increased 3% each subsequent year for the duration of this 30-year study to maintain Full Funding and to account for inflation.

For a detailed look at the annual funding contribution necessary per year, see Table 4.5 “Reserve Fund Balance Sheet” (Section 4.5).

Other funding options are also possible. Section 4.6 details other common funding methods as well. It is up to the Association to decide which funding option is best for them.

<u>Option Two</u>	
Annual Contribution:	
2023	\$4,404,787
Increasing at 3% per year through:	
2027	\$4,479,723
At year end, full funding will be achieved. Then:	
2028	\$692,158
(with 3% annual increase thereafter)	

<u>Option Three</u>	
Annual Contribution:	
2023	\$2,641,355
Increasing at 3% per year through:	
2032	\$2,823,324
At year end, full funding will be achieved. Then:	
2033	\$802,400
(plus 3% annual increase thereafter)	

### 4.3 OTHER REQUIRED FUNDING PLAN OPTIONS

Per Washington State RCW 64.90.550, our Reserve Study is required to provide the following funding plans:

- **30-Year Make up** - Funding Plan necessary for the Association Reserve Fund to reach a Full Funding Level in 30 years.
- **Baseline Funding** - Minimum level of funding required in order to maintain the Reserve Fund above zero while paying for all components listed in Table 3.1 - Component Assessment and Valuation Table.

*Special Note: Because these are “bare minimum” funding options that increase an Association’s risk for special assessments (and financial instability), we do not recommend either of these funding options. We recommend that the Association obtain a level of Full Funding as soon as possible to ensure that the Association has the resources necessary to adequately maintain its collective property and minimize the burden of special assessments.*

These required options are as follows:

#### Option Four: Full Funding in 30 Years

There is currently a “full funding” deficiency of \$17,961,426. This option makes up this deficiency over the next thirty years. Starting in 2023 for thirty years through 2052, the Association will make up their Reserve Fund deficiency by contributing \$1,486,748 annually (which includes \$889,687 in make-up funds and \$597,061 in capital maintenance funds that will increase annually with inflation).

If this plan is followed, the Association will be Fully Funded by the start of 2053.

For a detailed look at the annual funding contribution necessary per year, see Table 4.5 “Reserve Fund Balance Sheet” (Section 4.5).

-OR-

#### Option Five: Baseline Funding – Keeping Reserve Balance above Zero

The funding plan necessary to maintain the Reserve Fund above zero for the duration of this study will be an annual contribution of \$995,150 per year in the initial year. This annual contribution will need to be increased 3% each subsequent year to maintain the Reserve Fund above zero and to account for inflation.

For a detailed look at the annual funding contribution necessary per year, see Table 4.5 “Reserve Fund Balance Sheet” (Section 4.5).

#### Option Four

Annual Contribution:

2023 \$1,486,748

Increasing at 3% per year through:

2052 \$2,296,701

#### Option Five

Annual Contribution:

\$995,150

(with 3% annual increase thereafter)

#### 4.4 ASSUMPTIONS FOR FUTURE INTEREST RATE AND INFLATION

For the purposes of this report, we have assumed that the inflation rate over the next 30 years will average 3%. This is based on historical averages over the last 25 years and our conservative best guess for the future. This percentage can vary greatly just as global economic conditions can vary, which is one reason why this Reserve Study should be updated annually per Washington RCW 64.90.550, which we provide complimentary over the next two years with this Reserve Study (see Appendix).

For the purpose of this study, we will assume that the Association manages their money in the Reserve Fund so that the average interest rate return on its money will be equal to that of inflation. This is a conservative estimate given that since 1965, the average yield between short term treasuries and inflation has been 1.04%, which means that these relatively conservative investments have been able to outpace inflation over the long term (according to Crestmont Research, [www.crestmontresearch.com](http://www.crestmontresearch.com)). Since we have assumed that the inflation rate over the duration of this study will average 3%, we have conservatively also assumed that the Reserve Fund average interest rate will equal 3%. Again, this does not reflect current averages but rather a best guess of the future assuming you have invested effectively.

A common strategy is to invest in multiple accounts. Funds that will be necessary in the shorter term must be kept in a relatively liquid account. Funds that are not allotted for near future planned expenditures can be deposited into longer term investments which frequently earn higher interest rates. Consult with a qualified financial advisor for the best solution for your Association.

#### 4.5 ANNUAL FUND BALANCES; ANNUAL FUNDING TABLE AND FIGURES

The table and figures shown in this section are intended to give the Association a clearer view of the likely future financial position that the Association will be in, provided that the reserve funding plan is followed.

- Table 4.5: “Reserve Fund Balance Sheet”. This table lists annual revenue, expenses, and year end reserve fund balances. All Section 4.5 Figures are based on this data.
- Figure 4.5A-1: “Comparison of Funding Plans -- Reserve Fund Balances Through 2052”. This line graph depicts the funding balances of the proposed funding options vs. the current. Note the current plan, in dotted red, falls below zero in several places. This represents insufficient funding for repairs needed in these years.
- Figure 4.5A-2: “Comparison of Funding Plans -- Reserve Fund Balances Through 2032”. This line graph focuses on the next ten years, comparing the proposed plans to get the Association to a Full Funding status.
- Figure 4.5B: “Comparison of Funding Plans -- Association Contributions to Reserve Fund by Year”
- Figure 4.5C: “Comparison of Funding Plans – Percentage of Full Funding by Year”



LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

TABLE 4.5: RESERVE FUND BALANCE SHEET

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>FULL FUNDING WITHIN 10 YEARS</b>											
Beginning Reserve Balance	519,400	620,886	3,014,172	5,679,920	8,440,651	10,549,114	13,606,150	16,668,819	19,765,480	23,178,728	26,679,651
Full Funding Annual Maintenance Funding	325,045	597,061	614,973	633,422	652,425	671,998	692,158	712,922	734,310	756,339	779,030
Planned Special Assessments / Make up Funds		2,044,294	2,044,294	2,044,294	2,044,294	2,044,294	2,044,294	2,044,294	2,044,294	2,044,294	2,044,294
Annual Total Property Contribution to The Reserve Fund	325,045	2,641,355	2,659,267	2,677,716	2,696,719	2,716,292	2,736,452	2,757,216	2,778,604	2,800,633	2,823,324
Average Monthly Contribution to the Reserve Fund per Unit		220,112.95	221,605.60	223,143.03	224,726.59	226,357.65	228,037.65	229,768.04	231,550.35	233,386.12	235,276.97
Annual Capital Expenses	233,500	301,790	122,004	125,664	868,893	16,230	121,196	198,994	-	36,534	4,109,696
Interest Income	9,941	53,720	128,484	208,678	280,637	356,974	447,413	538,438	634,643	736,823	781,094
<b>Ending Reserve Balance</b>	<b>620,886</b>	<b>3,014,172</b>	<b>5,679,920</b>	<b>8,440,651</b>	<b>10,549,114</b>	<b>13,606,150</b>	<b>16,668,819</b>	<b>19,765,480</b>	<b>23,178,728</b>	<b>26,679,651</b>	<b>26,174,372</b>
Percentage of Full Funding	3.4%	15.7%	28.1%	39.5%	48.4%	58.9%	68.4%	77.1%	85.4%	93.0%	100.0%
<i>Yellow Highlighted Cells Represent Make-Up Funds</i>											
<b>FULL FUNDING WITHIN 30 YEARS</b>											
Beginning Reserve Balance	519,400	620,886	1,842,246	3,300,909	4,818,344	5,646,212	7,384,235	9,088,320	10,785,639	12,757,565	14,773,927
Full Funding Annual Maintenance Funding	325,045	597,061	614,973	633,422	652,425	671,998	692,158	712,922	734,310	756,339	779,030
Planned Special Assessments / Make up Funds		889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687
Annual Total Property Contribution to The Reserve Fund	325,045	1,486,748	1,504,660	1,523,109	1,542,112	1,561,685	1,581,845	1,602,609	1,623,997	1,646,026	1,668,716
Average Monthly Contribution to the Reserve Fund per Unit		123,895.68	125,388.34	126,925.77	128,509.33	130,140.39	131,820.38	133,550.78	135,333.08	137,168.86	139,059.71
Annual Capital Expenses	233,500	301,790	122,004	125,664	868,893	16,230	121,196	198,994	-	36,534	4,109,696
Interest Income	9,941	36,401	76,007	119,989	154,649	192,568	243,437	293,704	347,929	406,869	406,603
<b>Ending Reserve Balance</b>	<b>620,886</b>	<b>1,842,246</b>	<b>3,300,909</b>	<b>4,818,344</b>	<b>5,646,212</b>	<b>7,384,235</b>	<b>9,088,320</b>	<b>10,785,639</b>	<b>12,757,565</b>	<b>14,773,927</b>	<b>12,739,551</b>
Percentage of Full Funding	3.4%	9.6%	16.3%	22.5%	25.9%	32.0%	37.3%	42.1%	47.0%	51.5%	48.7%
<i>Yellow Highlighted Cells Represent Make-Up Funds</i>											
<b>BASELINE FUNDING</b>											
Beginning Reserve Balance	519,400	620,886	1,343,273	2,300,118	3,313,163	3,634,371	4,863,780	6,057,635	7,243,471	8,703,042	10,206,588
Full Funding Annual Maintenance Funding	325,045	995,150	1,025,005	1,055,755	1,087,427	1,120,050	1,153,652	1,188,261	1,223,909	1,260,626	1,298,445
Planned Special Assessments / Make up Funds											
Annual Total Property Contribution to The Reserve Fund	325,045	995,150	1,025,005	1,055,755	1,087,427	1,120,050	1,153,652	1,188,261	1,223,909	1,260,626	1,298,445
Average Monthly Contribution to the Reserve Fund per Unit		82,929.17	85,417.04	87,979.55	90,618.94	93,337.51	96,137.63	99,021.76	101,992.41	105,052.19	108,203.75
Annual Capital Expenses	233,500	301,790	122,004	125,664	868,893	16,230	121,196	198,994	-	36,534	4,109,696
Interest Income	9,941	29,027	53,843	82,955	102,673	125,588	161,400	196,568	235,663	279,453	264,029
<b>Ending Reserve Balance</b>	<b>620,886</b>	<b>1,343,273</b>	<b>2,300,118</b>	<b>3,313,163</b>	<b>3,634,371</b>	<b>4,863,780</b>	<b>6,057,635</b>	<b>7,243,471</b>	<b>8,703,042</b>	<b>10,206,588</b>	<b>7,659,365</b>
Percentage of Full Funding	3.4%	7.0%	11.4%	15.5%	16.7%	21.0%	24.8%	28.3%	32.1%	35.6%	29.3%





LEVEL 3 RESERVE STUDY FOR LAKE CUSHMAN MAINTENANCE COMPANY - WATER SUPPLY SYSTEM

TABLE 4.5: RESERVE FUND BALANCE SHEET

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
<b>FULL FUNDING WITHIN 10 YEARS</b>											
Beginning Reserve Balance	26,174,372	27,668,665	29,165,673	30,048,351	27,015,913	28,682,956	30,253,055	31,505,689	33,416,227	35,280,446	26,531,629
Full Funding Annual Maintenance Funding	802,400	826,472	851,267	876,805	903,109	930,202	958,108	986,851	1,016,457	1,046,951	1,078,359
Planned Special Assessments / Make up Funds											
Annual Total Property Contribution to The Reserve Fund	802,400	826,472	851,267	876,805	903,109	930,202	958,108	986,851	1,016,457	1,046,951	1,078,359
Average Monthly Contribution to the Reserve Fund per Unit	66,866.71	68,872.71	70,938.89	73,067.06	75,259.07	77,516.84	79,842.34	82,237.62	84,704.74	87,245.89	89,863.26
Annual Capital Expenses	103,818	169,380	843,673	4,752,557	59,203	231,078	618,165	35,751	167,460	10,709,246	159,985
Interest Income	795,710	839,916	875,084	843,314	823,136	870,976	912,691	959,437	1,015,222	913,479	809,724
<b>Ending Reserve Balance</b>	<b>27,668,665</b>	<b>29,165,673</b>	<b>30,048,351</b>	<b>27,015,913</b>	<b>28,682,956</b>	<b>30,253,055</b>	<b>31,505,689</b>	<b>33,416,227</b>	<b>35,280,446</b>	<b>26,531,629</b>	<b>28,259,727</b>
Percentage of Full Funding	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<i>Yellow Highlighted Cells Represent Make-Up Funds</i>											
<b>FULL FUNDING WITHIN 30 YEARS</b>											
Beginning Reserve Balance	12,739,551	14,733,831	16,745,827	18,158,942	15,672,854	17,902,636	20,052,359	21,902,004	24,427,463	26,925,051	18,828,605
Full Funding Annual Maintenance Funding	802,400	826,472	851,267	876,805	903,109	930,202	958,108	986,851	1,016,457	1,046,951	1,078,359
Planned Special Assessments / Make up Funds	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687
Annual Total Property Contribution to The Reserve Fund	1,692,087	1,716,159	1,740,954	1,766,492	1,792,796	1,819,889	1,847,795	1,876,538	1,906,144	1,936,638	1,968,046
Average Monthly Contribution to the Reserve Fund per Unit	141,007.28	143,013.28	145,079.46	147,207.63	149,399.64	151,657.41	153,982.92	156,378.19	158,845.32	161,386.46	164,003.84
Annual Capital Expenses	103,818	169,380	843,673	4,752,557	59,203	231,078	618,165	35,751	167,460	10,709,246	159,985
Interest Income	406,011	465,217	515,834	499,977	496,190	560,911	620,015	684,672	758,904	676,162	591,979
<b>Ending Reserve Balance</b>	<b>14,733,831</b>	<b>16,745,827</b>	<b>18,158,942</b>	<b>15,672,854</b>	<b>17,902,636</b>	<b>20,052,359</b>	<b>21,902,004</b>	<b>24,427,463</b>	<b>26,925,051</b>	<b>18,828,605</b>	<b>21,228,645</b>
Percentage of Full Funding	53.3%	57.4%	60.4%	58.0%	62.4%	66.3%	69.5%	73.1%	76.3%	71.0%	75.1%
<i>Yellow Highlighted Cells Represent Make-Up Funds</i>											
<b>BASELINE FUNDING</b>											
Beginning Reserve Balance	7,659,365	9,141,231	10,641,730	11,544,783	8,550,613	10,274,873	11,922,243	13,273,350	15,304,767	17,313,527	8,734,225
Full Funding Annual Maintenance Funding	1,337,398	1,377,520	1,418,846	1,461,411	1,505,254	1,550,411	1,596,924	1,644,831	1,694,176	1,745,002	1,797,352
Planned Special Assessments / Make up Funds											
Annual Total Property Contribution to The Reserve Fund	1,337,398	1,377,520	1,418,846	1,461,411	1,505,254	1,550,411	1,596,924	1,644,831	1,694,176	1,745,002	1,797,352
Average Monthly Contribution to the Reserve Fund per Unit	111,449.87	114,793.36	118,237.16	121,784.28	125,437.81	129,200.94	133,076.97	137,069.28	141,181.36	145,416.80	149,779.30
Annual Capital Expenses	103,818	169,380	843,673	4,752,557	59,203	231,078	618,165	35,751	167,460	10,709,246	159,985
Interest Income	248,285	292,359	327,879	296,976	278,209	328,036	372,349	422,337	482,044	384,942	286,587
<b>Ending Reserve Balance</b>	<b>9,141,231</b>	<b>10,641,730</b>	<b>11,544,783</b>	<b>8,550,613</b>	<b>10,274,873</b>	<b>11,922,243</b>	<b>13,273,350</b>	<b>15,304,767</b>	<b>17,313,527</b>	<b>8,734,225</b>	<b>10,658,178</b>
Percentage of Full Funding	33.0%	36.5%	38.4%	31.7%	35.8%	39.4%	42.1%	45.8%	49.1%	32.9%	37.7%

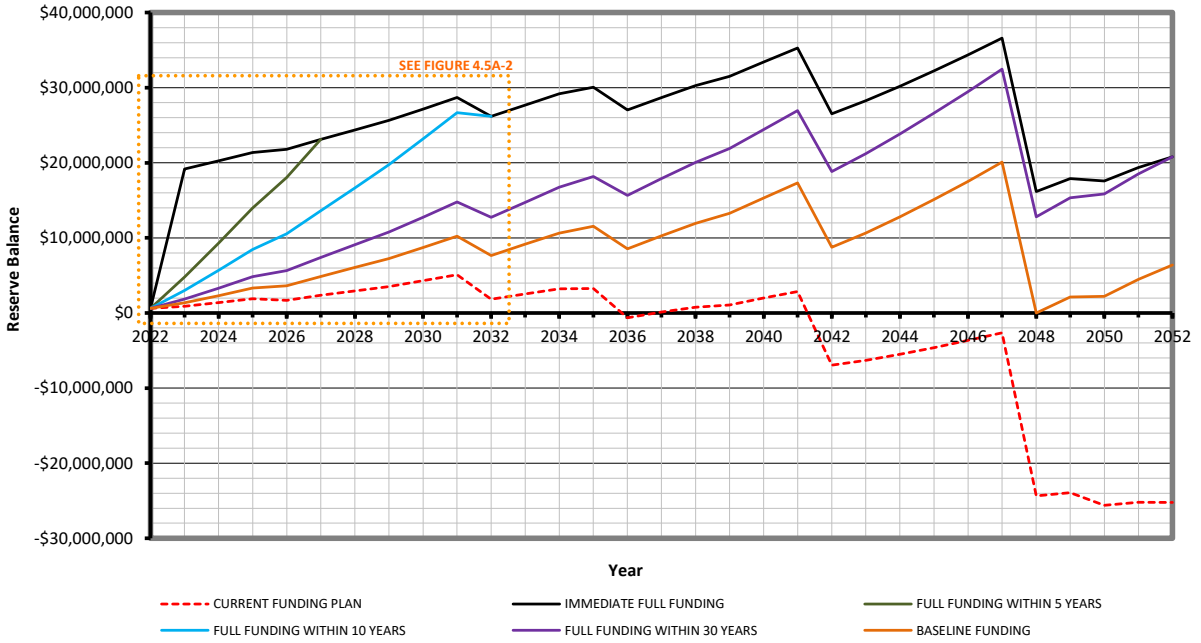


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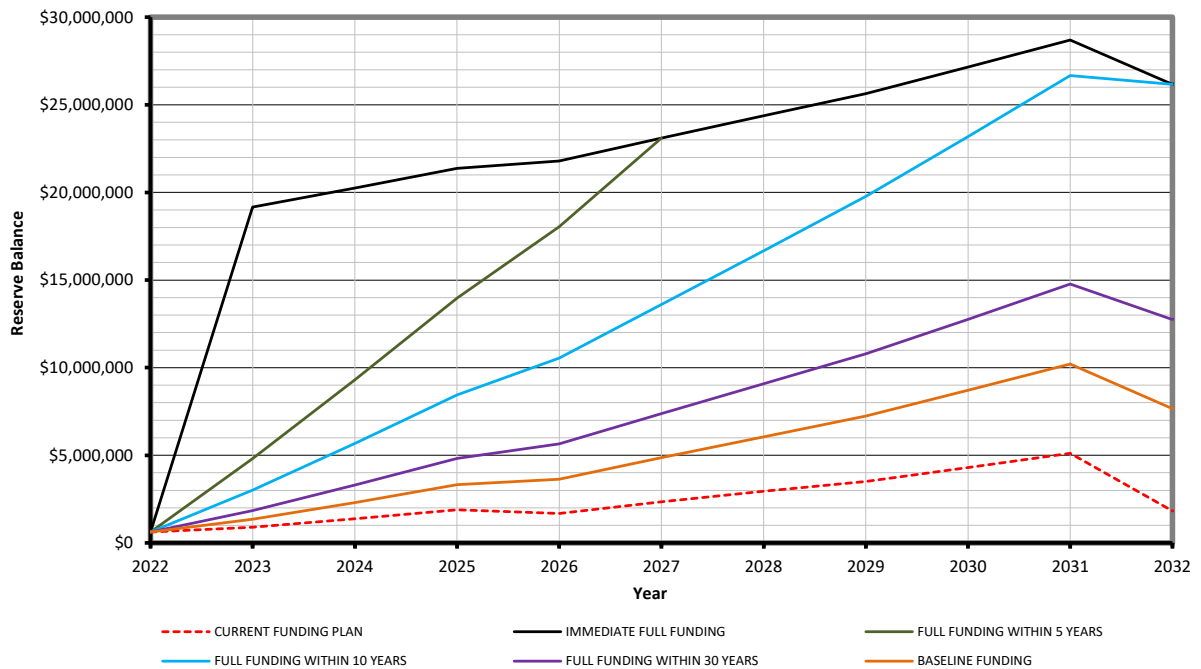
TABLE 4.5: RESERVE FUND BALANCE SHEET

	2044	2045	2046	2047	2048	2049	2050	2051	2052
<b>FULL FUNDING WITHIN 10 YEARS</b>									
Beginning Reserve Balance	28,259,727	30,191,131	32,230,012	34,368,180	36,601,381	16,175,292	17,899,844	17,575,683	19,380,645
Full Funding Annual Maintenance Funding	1,110,710	1,144,031	1,178,352	1,213,703	1,250,114	1,287,617	1,326,246	1,366,033	1,407,014
Planned Special Assessments / Make up Funds									
Annual Total Property Contribution to The Reserve Fund	1,110,710	1,144,031	1,178,352	1,213,703	1,250,114	1,287,617	1,326,246	1,366,033	1,407,014
Average Monthly Contribution to the Reserve Fund per Unit	92,559.16	95,335.94	98,196.01	101,141.89	104,176.15	107,301.43	110,520.48	113,836.09	117,251.18
Annual Capital Expenses	43,112	27,630	24,394	29,313	22,456,154	66,639	2,174,675	107,224	595,893
Interest Income	863,806	922,480	984,210	1,048,811	779,951	503,573	524,269	546,153	593,586
<b>Ending Reserve Balance</b>	<b>30,191,131</b>	<b>32,230,012</b>	<b>34,368,180</b>	<b>36,601,381</b>	<b>16,175,292</b>	<b>17,899,844</b>	<b>17,575,683</b>	<b>19,380,645</b>	<b>20,785,353</b>
Percentage of Full Funding	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<i>Yellow Highlighted Cells Represent Make-Up Funds</i>									
<b>FULL FUNDING WITHIN 30 YEARS</b>									
Beginning Reserve Balance	21,228,645	23,852,148	26,603,891	29,476,308	32,465,785	12,818,661	15,345,546	15,847,789	18,503,946
Full Funding Annual Maintenance Funding	1,110,710	1,144,031	1,178,352	1,213,703	1,250,114	1,287,617	1,326,246	1,366,033	1,407,014
Planned Special Assessments / Make up Funds	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687	889,687
Annual Total Property Contribution to The Reserve Fund	2,000,397	2,033,718	2,068,039	2,103,390	2,139,801	2,177,304	2,215,933	2,255,720	2,296,701
Average Monthly Contribution to the Reserve Fund per Unit	166,699.74	169,476.51	172,336.59	175,282.47	178,316.73	181,442.01	184,661.05	187,976.67	191,391.75
Annual Capital Expenses	43,112	27,630	24,394	29,313	22,456,154	66,639	2,174,675	107,224	595,893
Interest Income	666,219	745,656	828,771	915,400	669,228	416,220	460,985	507,661	580,631
<b>Ending Reserve Balance</b>	<b>23,852,148</b>	<b>26,603,891</b>	<b>29,476,308</b>	<b>32,465,785</b>	<b>12,818,661</b>	<b>15,345,546</b>	<b>15,847,789</b>	<b>18,503,946</b>	<b>20,785,385</b>
Percentage of Full Funding	79.0%	82.5%	85.8%	88.7%	79.2%	85.7%	90.2%	95.5%	100.0%
<i>Yellow Highlighted Cells Represent Make-Up Funds</i>									
<b>BASELINE FUNDING</b>									
Beginning Reserve Balance	10,658,178	12,813,206	15,104,970	17,526,834	20,076,166	333	2,111,028	2,210,737	4,479,211
Full Funding Annual Maintenance Funding	1,851,272	1,906,810	1,964,015	2,022,935	2,083,623	2,146,132	2,210,516	2,276,831	2,345,136
Planned Special Assessments / Make up Funds									
Annual Total Property Contribution to The Reserve Fund	1,851,272	1,906,810	1,964,015	2,022,935	2,083,623	2,146,132	2,210,516	2,276,831	2,345,136
Average Monthly Contribution to the Reserve Fund per Unit	154,272.68	158,900.86	163,667.88	168,577.92	173,635.26	178,844.32	184,209.65	189,735.94	195,428.01
Annual Capital Expenses	43,112	27,630	24,394	29,313	22,456,154	66,639	2,174,675	107,224	595,893
Interest Income	346,868	412,584	482,243	555,709	296,697	31,202	63,868	98,866	160,615
<b>Ending Reserve Balance</b>	<b>12,813,206</b>	<b>15,104,970</b>	<b>17,526,834</b>	<b>20,076,166</b>	<b>333</b>	<b>2,111,028</b>	<b>2,210,737</b>	<b>4,479,211</b>	<b>6,389,069</b>
Percentage of Full Funding	42.4%	46.9%	51.0%	54.9%	0.0%	11.8%	12.6%	23.1%	30.7%

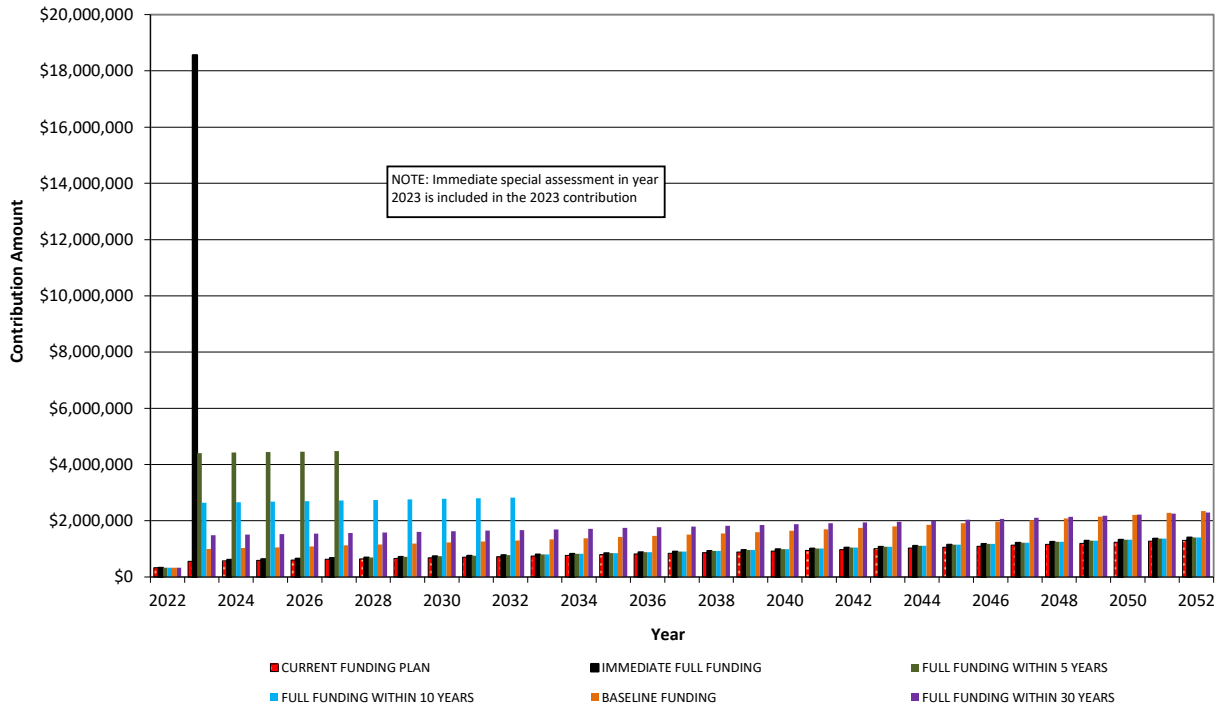
**Figure 4.5A-1 Comparison of Funding Plans – Reserve Fund Balances Through 2052**



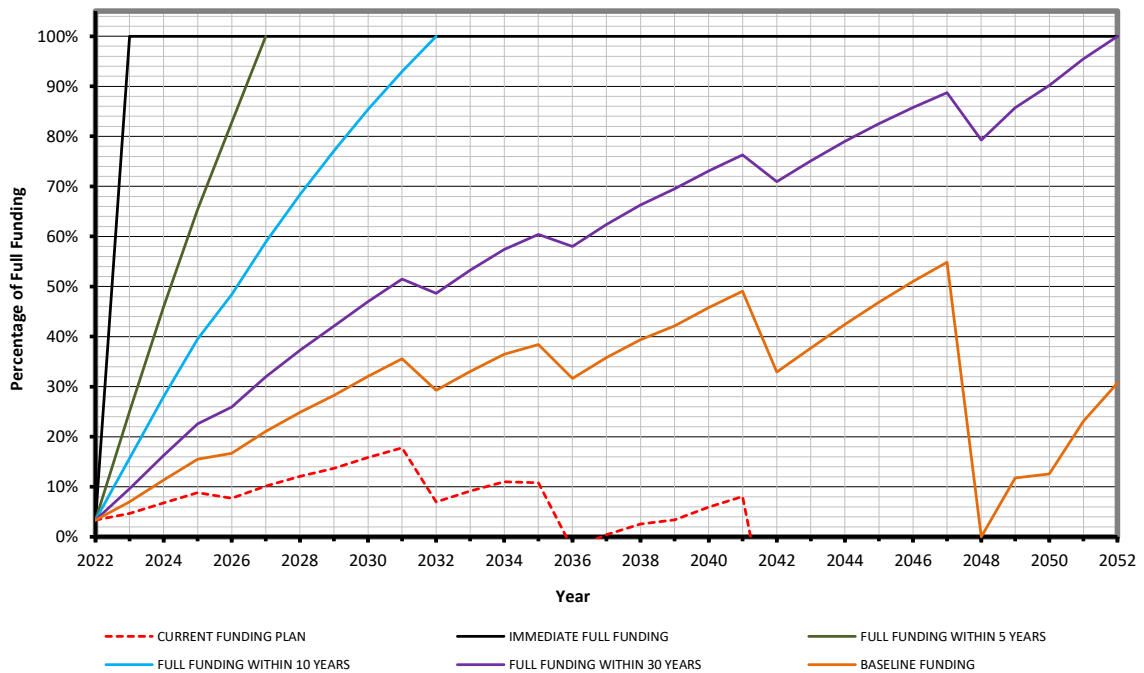
**Figure 4.5A-2 Comparison of Funding Plans – Reserve Fund Balances Through 2032**



**Figure 4.5B Comparison of Funding Plans -- Association Contributions to Reserve Fund by Year**



**Figure 4.5C Comparison of Funding Plans – Percentage of Full Funding by Year**



## 4.6 OTHER COMMON FUNDING METHODS

The following methods are methods that are sometimes implemented. We believe that many of these funding methods that keep the reserve fund at less than “Fully Funded” represent a weaker position for the Association. As the Fully Funded percentage decreases, the likelihood of unplanned special assessments increases.

### **Cash Flow Method**

A method of calculating Reserve contributions where contributions to the Reserve fund are designed to offset the variable annual expenditures from the Reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of Reserve expenses until the desired Funding Goal is achieved.

### **Component Method**

A method of calculating Reserve contributions where the total reserve contribution is based on the sum of contributions for individual components.

### **Baseline Funding**

Establishing a Reserve funding goal of keeping the Reserve cash balance above zero.

### **Full Funding**

Setting a Reserve funding goal of attaining and maintaining the Reserve Fund at or near 100% funded. *Recommended by Samdal & Associates*

### **Statutory Funding**

Establishing a Reserve funding goal of setting aside the specific minimum amount of Reserves required by local statutes.

### **Threshold Funding**

Establishing a Reserve funding goal of keeping the Reserve Balance above a specified dollar or Percent Funded amount. Depending on the threshold this may be more or less conservative than “Fully Funded.”

## 5.0 LIMITATIONS

This report has been prepared for the exclusive use of Lake Cushman Maintenance Company and their property management company. We do not intend for any other party to rely on this report for any reason without our expressed written consent. If another individual or party relies on this study, they shall indemnify and hold Samdal & Associates harmless for any damages, losses, or expenses they may incur as a result of its use.

The Level 3 Reserve Study is a reflection of the information provided to us. This report has been prepared for Lake Cushman Maintenance Company's use, not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records. Our inspection report is not an exhaustive technical inspection of the property; we merely comment on the items that we believe that our clients would benefit from knowing. During a typical inspection, no invasive inspection is performed, no furnishings are moved, and no finishes are removed.

This report is a snap shot in time of the condition of the property at the time of inspection. The remaining life values that we list are based on our opinion of the remaining useful life and are by no means a guarantee. Our opinions are based on what we believe one could reasonably expect and are not based on worst case scenarios. These opinions are based upon our experience with other buildings of similar age and construction type. Opinions will vary and you may encounter contractors and/or consultants with differing opinions from ours. Ratings of various building components are most often determined by comparison to other buildings of similar age and construction type. The quality of materials originally impacts our judgment of their current state.

The life expectancy estimates that we prepare are based on National Association of Home Builders (NAHB) averages, Building Owners and Managers (BOMA) averages, product defined expected life averages, and our own assessment of typical life expectancy based on our experience with similar components in our area.

This report will tell you a great deal about the overall condition of this property. However, this report does not constitute a warranty, an insurance policy, or a guarantee of any kind. Owning any property involves some risk and while we can give an excellent overview of the property, we cannot inspect what we cannot see.

Our inspection and report do not include building code compliance or municipal regulatory compliance. Nor do they include mold investigations, hazardous materials investigations, or indoor air quality analysis.

The purpose of this report is not intended to be a statement of insurability of this property as insurance companies have particular standards for insurability of certain building types and certain building materials.

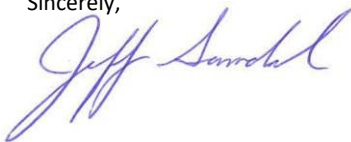
While we may comment that certain components have been recalled that we are aware of, we are not aware of all recalls. It is beyond the scope of this inspection to determine all systems or components that are currently or will be part of any recall in the future. You may wish to subscribe or contact the CPSC (Consumer Product Safety Commission) web site for recall information regarding any system or component. If a problem is encountered on your property, we cannot be responsible for any corrective action that you take, unless we have the opportunity to review the conditions, before repairs are made.

Please ensure that you have read and understand the entire proposal to perform this Level 3 Reserve Study that was signed prior to our inspection. If you have any questions regarding this document, please contact us.

We appreciate the opportunity to be of assistance and we hope that we have provided you a clear understanding of your financial situation and given you a better overall understanding of the property. This report supersedes any opinion or discussion that occurred during the inspection and should be considered our complete opinion of the condition of this property.

Please contact us if you have any questions regarding this report. We will be happy to be of assistance.

Sincerely,



Jeff Samdal, PE, RS, PRA



## **APPENDIX**

### Resume of Engineer Performing Study

# Jeff Samdal, P.E., Principal

## Professional Qualifications and Experience

### Areas of Expertise

Mr. Samdal is the owner of Samdal & Associates, Inc., a corporation that specializes in building inspections, engineering, project management, and related services. He is a double-licensed Professional Engineer (Mechanical and Civil) in Washington State. He is also an accredited Building Inspection Engineer (BIE) and Reserve Specialist (RS), and Professional Reserve Analyst (PRA). He has performed thousands of building inspections as well as numerous additional services such as building envelope investigations, construction management, and general consulting for property owners pertaining to building maintenance and long-term budgeting. Mr. Samdal consistently earns repeat and referral business because of his attention to detail, practical approach, knowledge of the industry, and genuine appreciation for clients' concerns for their real estate investments.

### Capabilities

Mr. Samdal is experienced at performing residential (single- and multi-family), commercial, and industrial inspections in Washington State and beyond. Mr. Samdal's experience includes the following:

- Property Condition Assessments (PCAs)
- Capital Needs Assessments (CNAs)
- Reserve Studies for Condominiums and Homeowner's Association
- Building Envelope Studies

### Relevant Work History

Mr. Samdal has been owner and operator of Samdal & Associates since 2005, performing or managing all aspects of this business. Additionally, Mr. Samdal has been the co-owner and president of True North Construction Management since 2017, which is informative in obtaining current construction costs and keeping up to date with modern construction methods and construction products.

Prior to concentrating on building inspections, Mr. Samdal worked for Washington Group International's (WGI) Hydropower and Water Resources Group. While working for WGI, Mr. Samdal was involved in rebuilding and rehabilitating hydro facilities. He served as the on-site powerhouse and switchyard inspector during construction. His duties included design, drawing and specification preparation, cost estimating, scheduling, and construction management. Prior to working for WGI, Mr. Samdal worked for Duke Energy in a similar role.

### Education

BS in Mechanical Engineering, University of Washington

### Licenses and Certifications

- *Licensed Professional Engineer (PE)*, Mechanical Engineering, State of Washington, #40985
- *Licensed Professional Engineer (PE)*, Civil Engineering, State of Washington, #40985
- *Reserve Specialist (RS)*, Community Associations Institute (CAI), #173
- *Professional Reserve Analyst (PRA)*, Association of Professional Reserve Analysts
- *Building Inspection Engineer (BIE)*, National Association of Building Inspection Engineers
- *Structural Pest Inspector*, State of Washington, #70763

### Professional Affiliation

American Society of Mechanical Engineers, 2002 – present

### Community Involvement

Mr. Samdal lives in Woodinville with his wife and 2 children and has been involved with many of their activities as a Little League coach, a scout leader, a personal fitness coach, among other activities.