

PROPOSED ORDINANCE

ORDINANCE NO. 2075-03

AN ORDINANCE OF THE CITY COUNCIL OF LAVERKIN, UTAH, APPROVING AND ADOPTING: (i) THE 2025 LAVERKIN CITY CULINARY WATER MASTER PLAN UPDATE, USER RATE ANALYSIS, IMPACT FEE ANALYSIS AND IMPACT FEE FACILITIES PLAN, (ii) AN INCREASE IN MUNICIPAL CULINARY WATER RATES, AND (iii) AN INCREASE IN WATER IMPACT FEES.

WHEREAS, the City of LaVerkin operates and maintains a municipal water system for the benefit of its residents and businesses; and

WHEREAS, the costs associated with providing safe and reliable water service, including maintenance, infrastructure improvements, and regulatory compliance, have increased; and

WHEREAS, the City Council has conducted a comprehensive review of the financial status of the municipal water system in conjunction with the 2025 LaVerkin City Culinary Water Master Plan Update, User Rate Analysis, Impact Fee Analysis and Impact Fee Facilities Plan; and

WHEREAS, the City Council has determined the need for an adjustment in monthly residential culinary water rates and water impact fees to ensure the continued operation, maintenance, and improvement of the system; and

WHEREAS, the City Council has, after notice, public hearing and receipt of public comment as required by Utah law, determined that an increase in municipal culinary water rates and water impact fees are necessary to sustain the financial health of the water system and to continue providing quality service to residents; and

WHEREAS, the City Council has reviewed the proposed municipal culinary water rate increase and proposed water impact fee set forth in the 2025 LaVerkin City Culinary Water Master Plan Update, User Rate Analysis, Impact Fee Analysis and Impact Fee Facilities Plan; and finds that such increases are in the best interests of the residents of the City of LaVerkin; and

WHEREAS, the City Council has authority pursuant to Utah Code Ann. §10-8-22(4)(c) to establish by ordinance reasonable rates for water services provided to the residents of the City of LaVerkin,

NOW, THEREFORE, BE IT HEREBY ORDAINED BY THE CITY COUNCIL OF LAVERKIN, UTAH, AS FOLLOWS:

1. Approval of 2025 Laverkin City Culinary Water Master Plan Update, User Rate Analysis, Impact Fee Analysis and Impact Fee Facilities Plan: The 2025 LaVerkin City

Culinary Water Master Plan Update, User Rate Analysis, Impact Fee Analysis and Impact Fee Facilities Plan, a copy of which is attached hereto and incorporated herein as Exhibit A, is hereby approved and adopted.

2. Water Rate Increase: The increase in municipal residential culinary water rates, as shown in Exhibit B attached hereto and incorporated herein as if fully set forth, is hereby approved and shall be incorporated into the LaVerkin City Code as may be necessary

3. Water Impact Fee Increase. The increase in water impact fees for new development within the City of LaVerkin, as shown in Exhibit C attached hereto and incorporated herein as if fully set forth, is hereby approved and shall be incorporated into §9-2-2 of the LaVerkin City Code.

4. Effective Date, Implementation and Notice: The City Administrator is directed to implement the new municipal culinary water rates which shall take effect as of June 1, 2025, and the new water impact fees which shall take effect as of as of July 19, 2025, and ensure that appropriate notice is given to all water customers through billing statements, public announcements, and the City's official website.

5. Severability: If any provision of this Ordinance is found to be invalid by a court of competent jurisdiction, such invalidity shall not affect the remaining provisions, which shall continue in full force and effect.

6. Conflict with Other Provisions. In the event of a conflict with any other term or provision of the LaVerkin City Ordinances, the provisions of this ordinance shall control.

7. Effective Date: This Ordinance shall take effect at the earliest date allowed by Utah after publication or posting.

PASSED AND ADOPTED this _____ day of _____ by the City Council of the City of LaVerkin, Utah.

CITY OF LAVERKIN, UTAH

By: _____
Kelly B. Wilson, Mayor

ATTEST:

Nancy Cline, City Recorder

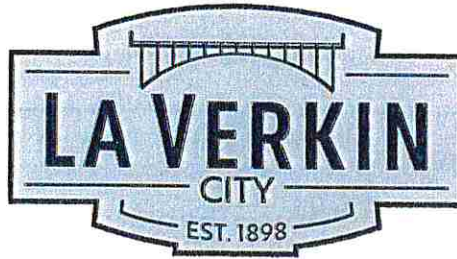
The foregoing Ordinance was presented at a regular meeting of the LaVerkin City Council held in the LaVerkin City Council Chambers, located at 111 South Main Street, LaVerkin, Utah, on the _____ day of _____, 2025, whereupon, a motion to adopt said Ordinance was

made by _____ and seconded by _____. A roll call vote was then taken with the following results:

NAME	VOTE
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Nancy Cline, Recorder

EXHIBIT A



**LAVERKIN CITY
CULINARY WATER MASTER PLAN UPDATE,
USER RATE ANALYSIS, IMPACT FEE
ANALYSIS, AND IMPACT FEE FACILITIES
PLAN 2025**

PREPARED BY:



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Table of Contents

I. EXECUTIVE SUMMARY	3
II. INTRODUCTION.....	4
III. SYSTEM USERS' ANALYSIS	5
A. LENGTH OF PLANNING PERIOD.....	5
B. PROJECTED GROWTH RATE	5
C. PROJECTED POPULATION & NUMBER OF CONNECTIONS.....	6
D. PROJECTED EQUIVALENT RESIDENTIAL UNITS (ERU).....	2
E. AVERAGE DAY DEMAND	4
F. PEAK DAY DEMAND	5
G. PEAK INSTANTANEOUS DEMAND CULINARY WATER USAGE.....	5
H. USAGE REDUCTION - CONSERVATION	5
IV. BUILDOUT ANALYSIS.....	2
A. BUILDOUT ANALYSIS	2
V. UPPER BENCH ANALYSIS	2
B. ESTIMATED GROWTH.....	2
C. ELEVATION CHALLENGES	3
VI. WATER RIGHTS ANALYSIS.....	4
A. WATER RIGHTS PORTFOLIO	4
B. EXISTING REQUIRED WATER RIGHT.....	4
C. PROJECTED REQUIRED WATER RIGHT.....	4
D. RECOMMENED WATER RIGHTS IMPROVEMENTS	5
VII. WATER SOURCE CAPACITY ANALYSIS	6
A. EXISTING WATER SOURCE	6
B. EXISTING REQUIRED WATER SOURCE CAPACITY	6
C. PROJECTED REQUIRED SOURCE CAPACITY	6
D. WCWCD COTTAM WELL AVAILABILITY AGREEMENT.....	7
E. SOURCE CAPACITY SUMMARY	8
F. RECOMMENDED WATER SOURCE CAPACITY IMPROVEMENTS	9
VIII. WATER STORAGE CAPACITY ANALYSIS.....	10
A. EXISTING REQUIRED WATER STORAGE CAPACITY	10
G. EXISTING REQUIRED WATER STORAGE CAPACITY	10
H. PROJECTED REQUIRED WATER STORAGE CAPACITY.....	10
I. RECOMMENDED WATER STORAGE CAPACITY IMPROVEMENTS	11
J. STORAGE CAPACITY SUMMARY	11
IX. WATER TREATMENT REQUIREMENTS.....	13
A. GENERAL REQUIREMENTS	13
B. EXISTING TREATMENT FACILITIES	13

C.	RECOMMENED WATER TREATMENT FACILITY IMPROVEMENTS	13
X.	WATER DISTRIBUTION SYSTEM ANALYSIS	14
A.	EXISTING DISTRIBUTION SYSTEM ANALYSIS.....	14
K.	PROJECTED DISTRIBUTION SYSTEM ANALYSIS	15
L.	FIRE HYDRANT ANALYSIS.....	15
M.	RECOMMENDED DISTRIBUTION SYSTEM IMPROVEMENTS	15
XI.	SUMMARY OF RECOMMENDED IMPROVEMENTS.....	17
A.	RECOMMENDED SYSTEM IMPROVEMENTS.....	17
B.	ENGINEER'S OPINION OF PROBABLE COST	17
C.	PROPOSED FINANCING PLAN	18
XII.	FINANCIAL ANALYSIS.....	20
A.	EXISTING USER RATE	20
B.	AVERAGE RATE DETERMINATION.....	20
C.	BASE AND OVERAGE RATE DETERMINATION	23
XIII.	IMPACT FEES	3
A.	EXISTING IMPACT FEES	3
B.	PROPOSED IMPACT FEES.....	3
C.	IMPACT FEE RELATED ITEMS.....	5

Appendices

Appendix A – Growth Analysis

Appendix B – Water Use Analysis

Appendix C – Engineers Opinion of Probable Cost

Appendix D – System Maps

Appendix E – Cash Flow

Appendix F – Impact Fee Certification

I. EXECUTIVE SUMMARY

Sunrise Engineering, Inc. has completed a Culinary Water System Master Plan for LaVerkin City in Washington County, Utah. This plan uses a 20-year planning period to project approximate city growth and water usage trends and provide recommended improvements to address existing and projected needs of the City's culinary water system.

Usage data, census data, residential water connection data, and water population data were used to analyze population growth and usage trends. This plan uses a projected 3.0% population growth rate per year for the first five years and a 2.5% growth rate for the rest of the planning window.

A Five Point Analysis was used to analyze the existing water infrastructure. This analysis includes reviewing and analyzing the system's water rights, water sources, water storage facilities, water treatment, and distribution system to understand the system's existing and projected capacity and to determine the current level of service. This analysis shows that the system has sufficient water rights, source, treatment, storage, and distribution facilities to provide the existing water usage demand. The analysis also shows that the system is projected to have insufficient water rights or source capacity for the projected usage demand. It is understood that the City will purchase water from Washington County Water Conservancy District to mitigate the additional required water right and source.

This plan identifies the following 7 recommended improvement projects:

- Stowells improvements
- Storage tank solenoid valves
- SR-17 12" line replacement
- 500 W Improvements
- West water improvements
- SR17 and 500 N improvements
- East water improvements

These projects were identified primarily to aid City staff in the operation and maintenance of the system and to help with the longevity of the system. Further details for each project can be found in section XI "Summary of Recommended improvements", with their corresponding estimated cost breakdowns in Appendix C.

This plan also includes a financial analysis for the water fund and water impact fee fund. The results of this analysis provide a recommended average monthly user rate and a max allowable impact fee.

- Average monthly user rate: \$67.17
- Max allowable impact fee: \$1684.22 per ERU

II. INTRODUCTION

A. Preface

The City of LaVerkin has entered into an agreement with Sunrise Engineering, LLC. To prepare this Culinary Water Master Plan, Impact Facilities Plan, and Impact Fee Analysis. The plan will provide community leaders with the information they need to make important decision relating to the water infrastructure as the City continues to grow and develop over the next 20 years. The plan will provide information regarding the existing culinary water infrastructure, analyze these facilities for adequacy, and make recommendations in order to meet projected demands.

B. Introduction

LaVerkin City is located in Washington County about 20 miles northeast of St. George. The City sits up on the LaVerkin bench and overlooks the valley below where the Virgin River, Ash Creek, and LaVerkin Creek converge. The City functions as the gateway leading to Zion National Park as it sits at the intersection of Utah SR-9 and SR-17.

The City has seen considerable growth and increases in tourism visitation and economic development over the last several decades. This growth is anticipated to continue in the future. This plan is intended to help the City evaluate their ability to meet the increasing demands placed on the system by development and to identify and correct existing deficiencies in the culinary water system.

The water system has been analyzed according to the Utah Division of Drinking Water regulations and the Utah Administrative Code. This includes a review of the systems' water rights, source capacity, water storage capacity, water treatment, and water distribution.

This plan includes recommendations for improvements to the culinary water system and has developed a possible financing plan as a potential means to fund the recommended improvements.

This plan also analyzed the existing water rates and impact fees as a possible means of supporting the recommended system improvements. The recommended water rates and impact fees are fair and reasonable and will allow the City of LaVerkin to maintain the level of service that is required of a public water system for the present time and over the planning period.

This plan serves as the City's Impact Facilities Plan and includes an Impact Fee Analysis.

III. SYSTEM USERS' ANALYSIS

C. LENGTH OF PLANNING PERIOD

It is typical for a Master Plan to use a 10 or 20-year planning period. For example, the first year of a 10-year planning period would be the year 2025 with the 10th and final year being 2034. This plan will use fiscal years and will assume a 20-year (2025-2044) planning period for recommended improvements. This period will allow an adequate evaluation of the system for potential infrastructure improvements or other needs. Revenue sources should be carefully evaluated each year as budgets are set by the city council.

D. PROJECTED GROWTH RATE

An important element in the development of the water system and capacity analysis is the projection of the City's population growth rate on an annual basis. This projection gives the planner an idea of the potential future demands on the culinary water system for the length of the planning period. All planning for the future should be based on the expected population growth.

Projecting the number of future culinary water connections can be a subjective process. The most effective method of estimating the number of future connections is by analyzing available historical population records and using them to find trends. This study considered census data, water connection data, and water population data. Figure III-1 and Figure III-2 below show the historic population and growth rate considering all three of the stated factors.

Figure III-1

POPULATION ESTIMATE - PAST				
YEAR	CENSUS DATA	RESIDENTIAL WATER	WATER POPULATION	AVERAGE
2016	4182	4,170	4,800	4384
2017	4225	4,256	4,870	4450
2018	4268	4,327	4,700	4432
2019	4329	4,420	4,485	4411
2020	4383	4,485	4,520	4463
2021	4286	4,587	4,575	4483
2022	4360	4,284	4,605	4416
2023	4400	4,453	4,650	4501

Figure III-2

PERCENT GROWTH				
YEAR	CENSUS DATA	RESIDENTIAL WATER	WATER POPULATION	AVERAGE
2016	0.63%	1.27%	0.00%	0.63%
2017	1.03%	2.53%	2.05%	1.87%
2018	1.02%	2.07%	1.66%	1.58%
2019	1.43%	3.17%	2.16%	2.25%
2020	1.25%	1.13%	1.47%	1.28%
2021	-0.99%	3.12%	2.26%	1.46%
2022	1.73%	0.32%	-6.60%	-1.52%
2023	0.92%	1.72%	3.94%	2.19%
AVERAGE	1.61%			

In recent years, the community has grown steadily. At the time of the previous culinary water master plan, the city anticipated growth between 2.5% and 2.75% between the years of 2016 and 2023. The previous prediction has been reasonably accurate and it is fair to assume that LaVerkin will continue to experience a similar growth rate.

In working with City staff to review past growth rates and upcoming developments, it was determined that a higher growth rate is expected over the next several years. This plan will use two growth rates; one for the first five years and a second for the remaining planning period. Figure III-3 below shows the growth rates used in this plan.

Figure III-3

Predicted Growth Rate
3.00% 5 Year Growth Rate (2025-2029)
2.50% Extended Growth Rate (2030-2044)

E. PROJECTED POPULATION & NUMBER OF CONNECTIONS

Based on the forecasted growth rates referenced above, the number of connections the City will need to plan for can be calculated with the compound interest formula shown below:

Equation 1

$$F = P(1 + i)^N$$

Where

F = Future Population

P = Present Population

i = Projected Growth Rate

N = Years

Equation 1 was used to project the community population and number of connections for each year in the planning period.

It is important to understand that projected growth rates are not the cornerstone of this plan. If the maximum number of system connections projected is reached earlier or later than anticipated, future improvements to support growth may come either earlier or later.

F. PROJECTED EQUIVALENT RESIDENTIAL UNITS (ERU)

The water system is made up of multiple connection types. LaVerkin City reports their different connections as Residential, Commercial, Institutional, and Construction/Other. Figure III-4 shows a summary of the number of connections by type. It is noteworthy that vacation homes have been reclassified from residential to commercial, resulting in the spike of commercial connections in 2022.

Figure III-4

Year	Number of Connections				Total
	Residential	Commercial	Institutional	Construction / Other	
2016	1,390	36	9	10	1,445
2017	1,419	47	5	11	1,482
2018	1,442	53	6	11	1,512
2019	1,473	58	11	18	1,560
2020	1,495	68	11	4	1,578
2021	1,529	79	11	8	1,627
2022	1,428	185	11	8	1,632
2023	1,484	160	9	8	1,660

Each connection type uses different amounts of water at different rates. In order to properly analyze the system usage, the number of connections are converted to equivalent residential units (ERU). This is done by taking the average usage per connection of each connection type and dividing by the usage per connection of residential connections. Figure III-5 shows the equivalent ERUs per average connection type and Figure III-6 shows the total number of ERUs of that connection type per year. This plan will use the number of ERUs instead of the number of connections to evaluate existing and future needs.

Figure III-5

Calendar Year	Residential	Commercial	Institutional	Construction/Other
2023	1.0	2.6	5.8	1.7

Figure III-6

Calendar Year	ERUS				Total
	Residential	Commercial	Institutional	Construction/Other	
2016	1392	101	52	8	1553
2017	1422	129	29	8	1588
2018	1445	144	35	17	1641
2019	1476	149	64	20	1709
2020	1563	160	65	6	1794
2021	1608	165	64	13	1850
2022	1428	478	64	13	1983
2023	1484	412	50	13	1958

Using the growth rates from Figure III-3 the future ERUs were projected for each year of the planning period. The projected ERUs are shown in Figure III-7.

Figure III-7

Year	Est. Residential Growth Rate	Estimated Residential ERU's	Estimated Commercial ERU's	Institutional / Construction / Other ERU's	Total Estimated ERU's
2023	3.0%	1,484	412	63	1,958
2024	3.0%	1,529	424	64	2,017
2025	3.0%	1,575	437	66	2,078
2026	3.0%	1,622	450	68	2,140
2027	3.0%	1,671	463	70	2,204
2028	3.0%	1,721	477	73	2,271
2029	3.0%	1,772	491	75	2,338
2030	2.5%	1,817	506	77	2,400
2031	2.5%	1,862	521	79	2,462
2032	2.5%	1,909	537	82	2,528
2033	2.5%	1,956	553	84	2,593
2034	2.5%	2,005	570	87	2,662
2035	2.5%	2,055	587	89	2,731
2036	2.5%	2,107	604	92	2,803
2037	2.5%	2,159	623	95	2,877
2038	2.5%	2,213	641	98	2,952
2039	2.5%	2,269	660	100	3,029
2040	2.5%	2,326	680	103	3,109
2041	2.5%	2,384	701	107	3,192
2042	2.5%	2,443	722	110	3,275
2043	2.5%	2,504	743	113	3,360
2044	2.5%	2,567	762	116	3,445

G. AVERAGE DAY DEMAND

The State of Utah Public Drinking Water regulations require public water systems to meet requirements based upon usage. These requirements are found in Rule R309 of the State Administrative Code and provide a minimum standard usage based upon the types of connections serviced in a system. The minimum average day usage is 400 gallons per day (gpd) per ERU for indoor use and an additional 13.6 gpd per irrigated acre in the system area. However, if available, systems can use actual usage data to calculate and project usage demands. This study looked at both the state's minimum flow standard and the historical usage to determine the appropriate usage for this study.

The historical usage from the city was based on meter data over the past 5 years (2019 – 2023). The average usage per ERU was calculated from the historical usage. The total average usage over the past 5 years was divided by the average number of ERUs and then converted to gpd/ERU as shown in the calculations below.

$$\begin{aligned} 194,647,000 / 1,842 \text{ ERU} &= 105,693 \text{ gallon/ERU/year} \\ 105,693 \text{ gallon/ERU/year} / 365 \text{ days/year} &= 290 \text{ gpd/ERU} \end{aligned}$$

Figure III-8 shows a summary of the average usage and historical data gathered by the City through water metering.

Figure III-8

Calendar Year	Total Usage (Thousand Gallons)	Number of ERUs	Usage per ERU (gpd/ERU)
2019	199,191	1,716	318
2020	197,224	1,741	310
2021	201,045	1,810	304
2022	188,389	1,983	260
2023	187,388	1,958	262
4-year average	194,647	1,842	290

The 290 gpd/ERU average usage calculated from the City's historical usage does not include the majority of the City's outdoor watering. The demand is lower than the states indoor ADD. This plan will determine usage demand from historical usage instead of the numbers from the State Code. This method will result in a more realistic analysis.

The calculations in this report will be based on the historical average usage of 290 gpd/ERU. It is recommended that future improvements be sized based on this average usage.

H. PEAK DAY DEMAND

Peak day Demand (PDD) is defined by the Utah Administrative Code as the "anticipated water demand on the day of the highest water consumption". The state code uses 800 gpd/ERU for a peak day demand of a standard residential unit which is twice the average day demand. Therefore, it can be assumed that the PDD is double the average day demand. Doubling the average usage of 290gpd/ERU results in a PDD of 580 gpd/ERU. All further calculations with PDD will use this number.

I. PEAK INSTANTANEOUS DEMAND CULINARY WATER USAGE

Peak Instantaneous Demand (PID) can be described as the highest demand at any one instance. This can be determined based on peak instantaneous water flow data if such data is available. Where water flow data does not exist, the State Code uses the following method to calculate the PID for Indoor Usage:

Equation 2

$$Q_{peak} = 10.8(N)^{0.64}$$

Where

N = number of connections

Q = flow (gallons per minute)

Instantaneous flow data is not currently available. Using the equation above from the State Code results in a PID of 1,328 gpm, using 1,842 ERUs. All further calculations with PID will use this number.

J. USAGE REDUCTION - CONSERVATION

This plan assumes a conservation rate of 0.25% per year over the planning period (5% by the end of the planning window). This conservation factor is used to represent conservation efforts from the City, existing customers, and new connections. The assumed conservation result in the following demands at the end of the planning window.

- ADD (2044) = 277gpd/ERU
- PDD (2044) = 552 gpd/ERU

The conservation factor is not used for the PID. As mentioned above, the PID is the highest demand on the system at any given moment. Conservation efforts do not have a major impact on the amount of water that could be used at any given moment.

IV. BUILDOUT ANALYSIS

A. Buildout Analysis

In addition to the 20-year planning window this plan projected the water use in the scenario in which all currently existing zoning in the lower bench is filled. This scenario is referred to as "buildout" and represents the maximum extents for which the LaVerkin Culinary Water System could potentially be expected to provide in the lower bench based on existing zoning.

An analysis was performed to determine the maximum number of ERUs that could be built based on the existing City zoning. The analysis used GIS data and the existing zoning layout to determine the maximum number of ERUs. The analysis looked at residential ERUs and other ERUs (zones COMM, COMM-R, COMM-T, and PFZ). The analysis determined that the total build out ERUs for the lower bench based on existing zoning is 5419. Using the same growth rate as Section III.D the system would hit 5419 ERUs in 2075. Figure IV-1 shows a summary of the analysis

Figure IV-1

Lower Bench Build Out Analysis	
Residential ERU	4,222
Other ERU	1,197
Total ERU	5,419
Projected Build Out Year	2075

V. UPPER BENCH ANALYSIS

There is currently significant interest by developers to begin to develop the upper bench section of the City. The Upper Bench area consists of around 870 acres on the east side of LaVerkin. The area is zoned as a planned community development and therefore varies widely on the possibilities of how the area is developed.

B. Estimated Growth

The uncertain nature of upper bench community planning results in difficulty in forecasting water use in the area. Several years ago a planned community was proposed in this area that never got constructed. In order to have a basis to estimate growth this plan uses the same density as that proposed plan. That planned community had a mix of residential densities and parks/open space. Using the same density results in a total build out ERU of 2616.

It is recommended that water use in the upper bench be evaluated further once more is known about the actual planned land use and zoning.

C. Elevation Challenges

The Upper Bench, as the name implies, sits several hundred feet above State Street and most of the area sits a hundred feet above the existing upper tank. In order for the upper bench to be developed a new tank will need to be constructed to serve the area. Figure V-1 shows the approximate elevation of the existing tanks compared to the upper bench system and upper bench tank elevations.

Figure V-1

System Elevations	
Lower Tank	3240'
Upper Tank	3560'
Upper Bench	3790'
Upper Bench Tank (as Planned)	3990'

Developing the upper bench will require improvements to the existing water system and detailed pressure zone management. This plan does not provide details for the needed improvements. However, it is anticipated that 16" trunk line will be required to distribute water from the Upper Bench tank to the rest of the development.

VI. WATER RIGHTS ANALYSIS

A. Water Rights Portfolio

The City has multiple water rights from springs located north of the City. The City's water rights are identified in Figure VI-1. Error! Reference source not found.

Figure VI-1

La Verkin City Culinary Water Rights		Flow		Duty
W.R. #	Source	gpm	cfs	ac-ft
81-1073	Upper Ash Creek Springs	134.6	0.300	72.0
81-2287	Toquerville Springs	149.5	0.333	241.1
81-687	Upper Ash Creek Springs	220.4	0.491	71.4
81-1602	Ash Creek Spring & Upper Ash Creek Spring	448.8	1.000	330.0
Total La Verkin City Water Rights		953.3	2.124	714.5

B. Existing Required Water Right

The existing water right demand was calculated by multiplying the ADD of 290 gpd/ERU by the total number of ERUs in the system. The results of the analysis are presented in acre-feet annually and gallons per minute. When compared with the City's total available water rights, the city maintains a small surplus in water rights. The results of the calculations are shown in Figure VI-2.

Figure VI-2

Existing Required Water Rights		
Total Required Water Right	655	Ac-Ft
Total Existing Water Rights	714	Ac-Ft
Surplus	59	Ac-Ft
Surplus Capacity can Serve	182	ERUs

C. Projected Required Water Right

Projecting growth to the 10- and 20-year planning periods and using the same method of calculating water right demand reveals that the City will have a deficit in water rights beginning within 10 years, and that deficit will grow into the 20 year horizon. The projected water right demand for the 10-year and 20-year planning periods are shown in Figure VI-3 and Figure VI-4.

Figure VI-3

Project 10 Year Required Water Right		
Total Required Water Right	843	Ac-Ft
Total Existing Water Right	714	Ac-Ft
Deficit	(129)	Ac-Ft
Service Deficit	(397)	ERUs

Figure VI-4

Project 20 Year Required Water Right		
Total Required Water Right	1,064	Ac-Ft
Total Existing Water Right	714	Ac-Ft
Deficit	(350)	Ac-Ft
Service Deficit	(1,077)	ERUs

D. RECOMMENDED WATER RIGHTS IMPROVEMENTS

The projections in this analysis show that LaVerkin City currently has sufficient water rights to meet the needs of customers for a few years but that eventually other water rights will need to be accessed. It is understood that there is an agreement in place with the Washington County Water Conservancy District (WCWCD) to provide additional water to the City. The amount promised in this agreement is sufficient for the 20-year planning window. Due to this agreement this plan does not provide any recommended water right improvements.

VII. WATER SOURCE CAPACITY ANALYSIS

A. EXISTING WATER SOURCE

To analyze source capacity, all owned and otherwise available culinary water sources must first be identified. These sources are listed in Figure VII-1. The flow capacity numbers were acquired from City staff and verified through the Utah division of water rights.

Figure VII-1

La Verkin City Culinary Sources		Total Flow
Source	cfs	gpm
Upper Ash Creek Springs	0.301	135
Toquerville Springs	0.332	149
Ash Creek Springs Area	0.490	220
Ash Creek Springs & Upper Ash Creek Springs	1.000	449
Source Total =	2.123	953

B. EXISTING REQUIRED WATER SOURCE CAPACITY

State of Utah Public Drinking Water Regulations R309-510-7 states that a water system's source needs to meet "the anticipated water demands on the day of the highest water consumption, which is the peak day demand." The PDD was determined in section II-F to be 580 gpd/ERU. The source capacity demand for the water system was calculated by multiplying the PDD from Section II-F by the total number of existing ERUs in the system. The results of the analysis are presented in gallons per minute and are shown on Figure VII-2.

Figure VII-2

Current	
Total Required Source Capacity	812 gpm
Total Existing Source Capacity (With Cottam Well)	1753 gpm
Existing Culinary System Capacity Surplus	941 gpm
Surplus Capacity can Serve	2107 ERUs

C. PROJECTED REQUIRED SOURCE CAPACITY

Projected required source capacity for the 10-year and 20-year planning periods uses the same calculations as above. These calculations reveal that the water system will have a deficit of source

capacity. The projected required source capacity for the 10-year and 20-year planning periods are shown in Figure VII-3 and Figure VII-4.

Figure VII-3

10 Year	
Total Required Source Capacity	1072 gpm
Total Existing Source Capacity	953 gpm
Existing Culinary System Capacity deficit	-119 gpm

Figure VII-4

20 Year	
Total Required Source Capacity	1322 gpm
Total Existing Source Capacity	953 gpm
Existing Culinary System Capacity deficit	-369 gpm

D. WCWCD COTTAM WELL AVAILABILITY AGREEMENT

Based on an agreement with WCWD, LaVerkin is able to purchase water produced by the Cottam Well. The potential flow provided by the Cottam Well is shown in Figure VII-5. The total combined source including LaVerkin's available sources and Cottam Well is shown in Figure VII-6

Figure VII-5

WCWCD Culinary Water Available per Agreement		Total Flow	
Source		cfs	gpm
Cottam Well		1.783	800
Source Total =		1.783	800

Figure VII-6

Total Combined Source
1,753

Taking the Cottam Well into consideration, LaVerkin has access to sufficient source capacity through the planning window. Figure VII-7 shows the surplus available currently as well as over the 10 and 20 year planning periods.

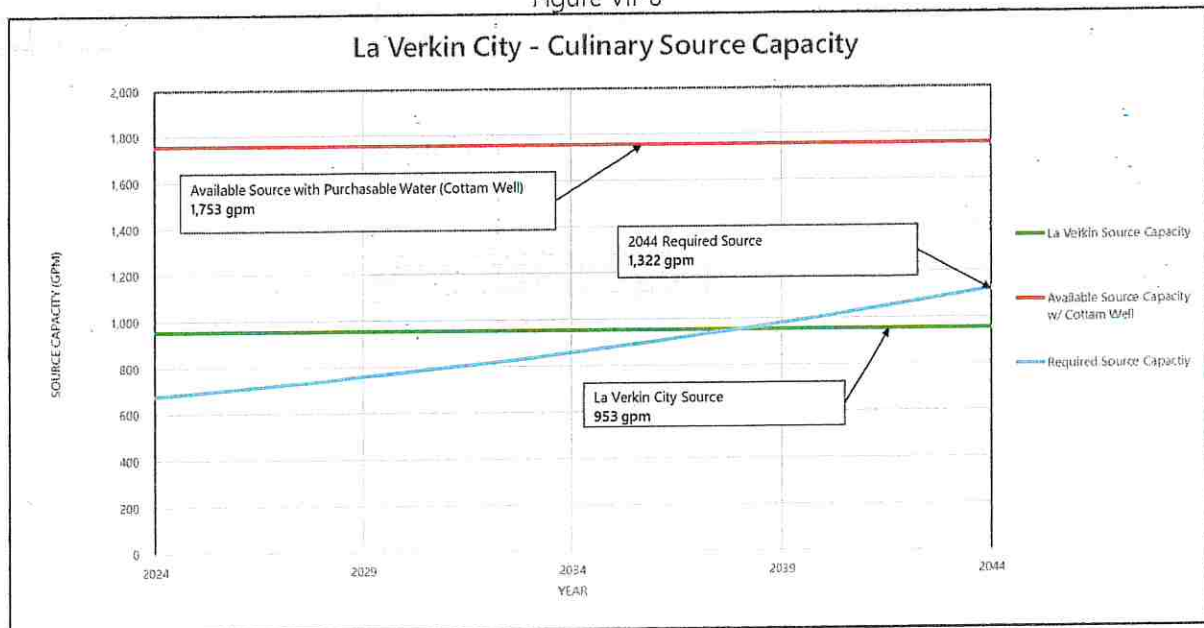
Figure VII-7

Current	
Total Required Source Capacity	812 gpm
Total Existing Source Capacity (With Cottam Well)	1753 gpm
Existing Culinary System Capacity Surplus	941 gpm
Surplus Capacity can Serve	2107 ERUs
10 Year	
Total Required Source Capacity	1070 gpm
Total Existing Source Capacity (With Cottam Well)	1753 gpm
Existing Culinary System Capacity Surplus	683 gpm
20 Year	
Total Required Source Capacity	1320 gpm
Total Existing Source Capacity (With Cottam Well)	1753 gpm
Existing Culinary System Capacity Surplus	433 gpm

E. SOURCE CAPACITY SUMMARY

Figure VII-8 shows the comparison between the available source capacity and the projected required source capacity.

Figure VII-8



F. RECOMMENDED WATER SOURCE CAPACITY IMPROVEMENTS

The source capacity analysis shows that the existing available source is sufficient to accommodate an existing peak day demand for the next several years but will become insufficient during the planning window. However utilizing the Cottam Well from WCWCD the City has access to sufficient source through the planning window. This plan does not include any recommended source improvements.

VIII. WATER STORAGE CAPACITY ANALYSIS

Water storage capacity requirements are found in the State of Utah Public Drinking Water Regulations, R309-510. These regulations require storage for the community's culinary water system to meet:

- A. A full day's average use requirement for all connections
- B. fire flows, for a minimum of two hours
- C. Emergency storage as deemed necessary.

A. EXISTING REQUIRED WATER STORAGE CAPACITY

The City currently has two water storage tanks. These tanks are identified in Figure VIII-1 below:

Figure VIII-1

Existing Storage Capacity:	
Lower Tank	1,500,000 gallons
Upper Tank	1,000,000 Gallons
Total	2,500,000 gallons

G. EXISTING REQUIRED WATER STORAGE CAPACITY

As shown in Section III.G, average water usage per ERU, also known as the Average Day Demand (ADD), in the water system is 290 gpd/ERU. In general, fire flow requirements are set by the local Fire Authority or are based on building size and type of construction. The statewide minimum fire flow is 1,000 gpm for 60 minutes. This plan also uses 1,000 gpm, the same minimum fire flow as the previous plans.

The required storage capacity was calculated by multiplying the ADD by the total number of ERUs currently existing in the system. When compared with the system's total storage capacity summarized above, the calculation shows that the City has a surplus of total storage capacity under current conditions. The results of this analysis are shown in Figure VIII-2.

Figure VIII-2

Current		
Total Required Storage Capacity	791,163	gal
Total Existing Storage Capacity	2,500,000	gal
Existing Culinary System Storage Capacity Surplus	1,708,838	gal
Surplus Capacity can Serve	5,893	ERUs

H. PROJECTED REQUIRED WATER STORAGE CAPACITY

The projected culinary water storage capacity required at the end of the planning period is determined from the same factors explained in Section B above, but the projected number of ERUs are inserted in the calculations instead of the number of existing ERUs. The results of the analysis are shown below in Figure VIII-3.

Figure VIII-3

10-year		
Total Required Storage Capacity	1,023,101	gal
Total Existing Storage Capacity	2,500,000	gal
Existing Culinary System Storage Capacity Surplus	1,476,899	gal
20-year		
Total Required Storage Capacity	1,247,833	gal
Total Existing Storage Capacity	2,500,000	gal
Existing Culinary System Storage Capacity Surplus	1,252,167	gal

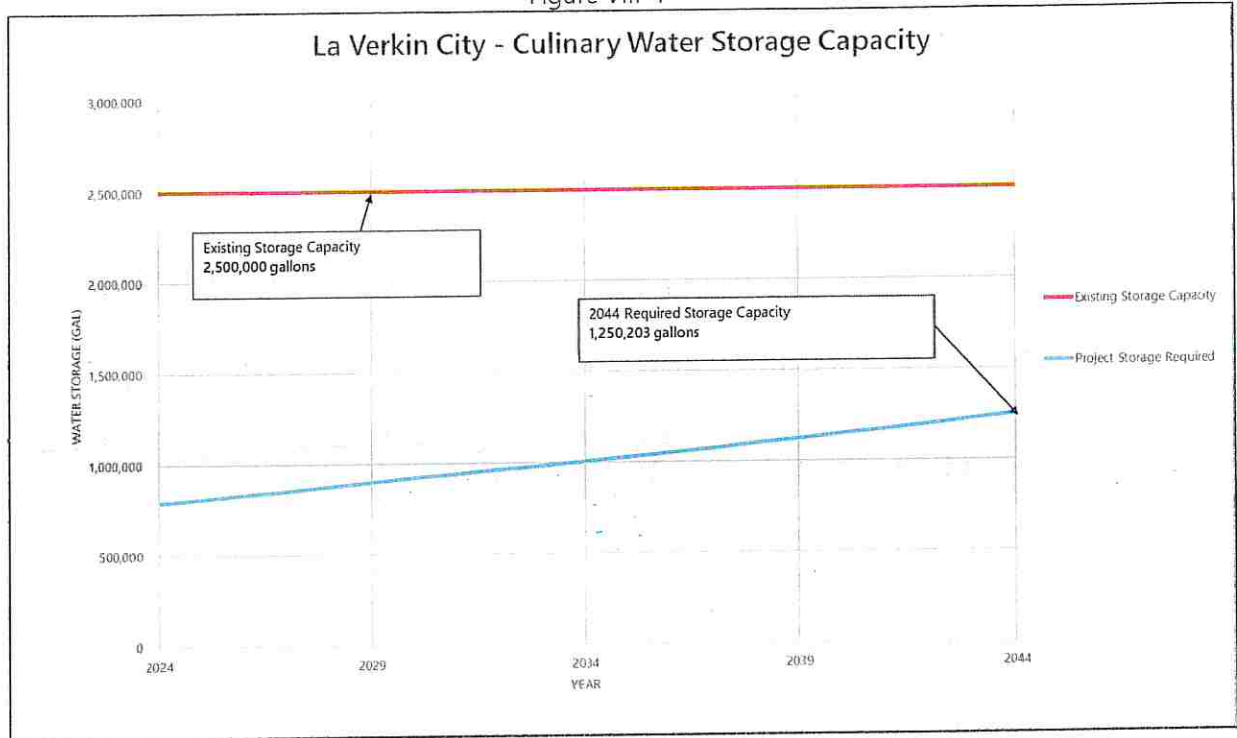
I. RECOMMENDED WATER STORAGE CAPACITY IMPROVEMENTS

Due to difficulty with existing control systems, It is recommended that the valves on each of the existing storage tanks be replaced with solenoid control valves to improve maintenance and operations of the tanks. It is also recommended that both tanks are inspected, on a routine basis to verify that the coatings are performing as intended and to reduce the likelihood of costly repairs.

J. STORAGE CAPACITY SUMMARY

Figure VIII-4 shows the comparison between available storage capacity and the projected required storage capacity.

Figure VIII-4



IX. WATER TREATMENT REQUIREMENTS

A. GENERAL REQUIREMENTS

The State of Utah Public Drinking Water Regulations (R309), in accordance with the National Safe Drinking Water Act, have adopted "Primary" regulations for the protection of public health and "secondary" regulations related to taste and aesthetics. Applicable "primary" standards and treatment techniques must be met by all public drinking water systems. "Secondary" standards are optional and are meant to help water suppliers avoid consumer complaints.

The LaVerkin City sources have been considered high quality groundwater, indicating that no treatment would be required. However, the State regulations recommend that all culinary water sources have provisions for continuous disinfection.

Water provided by WCWCD meets the required standards upon delivery and is placed directly into the LaVerkin Distribution system.

B. Existing Treatment Facilities.

LaVerkin and Hurricane currently share a treatment facility used to treat water from Toquerville Springs. Since the springs have been considered a high-quality groundwater source, the treatment system consists only of a gas chlorine metering and injection system. There is also a second gas chlorine treatment system (located in Toquerville) used to treat water from Ash Creek Springs.

The existing treatment facilities are adequate to provide for the existing customers serviced by the City owned sources. As LaVerkin continues to grow, it is planned that new connections will be supplied water through the agreement with the WCWCD, and that this type of wholesale water does not need treatment.

C. RECOMMENDED WATER TREATMENT FACILITY IMPROVEMENTS

Existing treatment facilities are sufficient through the planning window. This plan does not provide any recommended water treatment facility improvements.

X. WATER DISTRIBUTION SYSTEM ANALYSIS

The State of Utah Public Drinking Water Regulations, R309-105-9, states three minimum pressure conditions which must be met at the point of connection to demonstrate adequate service capacity of a system. These conditions are:

- A. At least 20 psi must be retained as residual pressure in the distribution system under Peak Day Demand (PDD) plus fire flow conditions.
- B. At least 30 psi must be retained as residual pressure in the distribution system under Peak Instantaneous Demand (PID)
- C. At Least 40 psi must be retained as residual pressure in the distribution system under a PDD.

As a general guideline, It is recommended that the system be able to provide a minimum static pressure of 50 psi at every point in the distribution system.

The existing City culinary water distribution system has been modeled using the computer program Water Gem by Bently. The distribution system was modeled in a static scenario to analyze the ADD, PDD, PID scenarios.

A. EXISTING DISTRIBUTION SYSTEM ANALYSIS

The existing Average Day Demand, Peak Day Demand, and Peak Instantaneous Demand were calculated in Section II. These flows were converted to a gpm for the full system and are shown on Figure X-1 below:

Figure X-1

Average Day Demand	
gpd/ERU	gpm/system
290	406
Peak Day Demand	
gpd/ERU	gpm/system
580	812
Peak Instantaneous Indoor Demand	
gpm/system	
1,407	

As mentioned in Section VIII, this report uses a fire flow of 1,000 gpm.

The existing model scenarios for PDD, PID, and PDD with fire flow, show that the existing system is adequate to meet these demands.

K. PROJECTED DISTRIBUTION SYSTEM ANALYSIS

The projected system analysis is performed using the same assumptions in the existing system analysis, except that the projected number of ERUS are inserted into the ADD, PDD, and PID Calculations. This results in the following projected demands:

- PDD – 1,320 gpm
- PID – 1,983 gpm
- Fire flow of 1,000 gpm

These projected demands were modeled in the distribution system. The new demands on the system are not anticipated to have enough of an impact on the existing distribution system to cause areas to fall below the State's minimum pressure requirements or for pipe velocities to be above 5 feet per second.

L. FIRE HYDRANT ANALYSIS

As part of this plan an analysis of the existing fire hydrants was conducted. This analysis included checking the fire hydrant spacing throughout the system. Hydrants should be placed such that no structures are located more than 250 feet from a hydrant which results in the general rule of thumb that hydrants should be placed every 500 feet. This analysis identified areas that lack adequate hydrant spacing. A map of the hydrant spacing is in Appendix D.

M. RECOMMENDED DISTRIBUTION SYSTEM IMPROVEMENTS

The projected distribution analysis indicated that the existing system has adequate capacity through the planning window. However, the distribution is aged and is prone to leaks and breaks. It is recommended that the City look into replacing the older pipes in the system and create a renewal & replacement plan.

Below is a list of recommended system improvement projects. These recommended improvements include projects to help with operation and maintenance of the system and include renewal and replacement projects. The list includes descriptions of the recommended distribution improvements.

- Stowells Improvements - Replace the existing 4" water line running behind houses between 330 North and 380 North (just to the west of State Street, in the Stowells area) with 8" water lines running in front of the houses.
- SR-17 12" Line Replacement - Replace 2,500 ft of 12" Waterline between 630 North State Street and the Hwy 17 Bridge over LaVerkin Creek. The City has experienced several breaks along this section of the line, which have resulted in significant costs for the City to repair due to the excessive depth of the line. It is anticipated that replacing this section of waterline will prevent future expenses.

- 500 W Improvements - Replace existing 6" line in 500 West with new 8" line. This improvement should be completed in conjunction with developer improvements connecting the line along the 500 West extension.
- West Water Improvements – This project is a renewal and replacement project to replace existing 6" waterlines found running along 300W and adjacent streets with new 8" waterline. This project also includes replacing valves and fire hydrants. This is a larger project that could be constructed in phases.
- SR 17 and 500 N Improvements - Replace the existing 6" water line running from the intersection of Main Street and 500 North going west to State Street, then turning north and connecting into the line located in the cemetery access road, with an 8" water line.
- East Water Improvements - This project is a renewal and replacement project to replace existing 6" waterlines found running along Main St. and adjacent streets with new 8" waterline. This project also includes replacing valves and fire hydrants. This is a larger project that could be constructed in phases.

XI. SUMMARY OF RECOMMENDED IMPROVEMENTS

A. RECOMMENDED SYSTEM IMPROVEMENTS

Figure XI-1 Below shows a summary of each recommended improvement, along with its expected year of construction, estimated cost (In today's dollars), and inflated costs.

Figure XI-1

Project	Cost Estimate Current	Est. Year of Installation	Inflated Costs
0 to 5 Year Improvements			
Stowells Improvements	\$ 1,369,300.00	2026	\$ 1,410,400.00
Storage Tank Solenoid Valves	\$ 80,000.00	2026	\$ 82,400.00
SR-17 12" Line Replacement	\$ 1,597,837.50	2027	\$ 1,695,100.00
Subtotal	\$ 3,047,137.50		\$ 3,187,900.00
6 to 10 Year Improvements			
Impact Fee Analysis Update (2029)	\$ 65,000.00	2029	\$ 73,200.00
500 W Improvements	\$ 357,350.00	2031	\$ 426,700.00
West Water Improvements	\$ 3,236,200.00	2033	\$ 4,099,500.00
Subtotal	\$ 3,658,550.00		\$ 4,599,400.00
11 to 20 Year Improvements			
Impact Fee Analysis Update (2034)	\$ 65,000.00	2034	\$ 84,800.00
SR 17 and 500 N Improvements	\$ 1,357,060.00	2036	\$ 1,878,500.00
East Water Improvements	\$ 3,254,400.00	2043	\$ 5,540,400.00
Subtotal	\$ 4,676,460.00		\$ 7,503,700.00
Total	\$ 11,382,147.50		\$ 15,291,000.00

B. Engineer's Opinion of Probable Cost

An Engineer's Opinion of Probable Cost (EOPC) for each recommended improvement has been included in the appendix. Opinions of probable cost of each of the recommended improvements are based on experience with similar projects, bid tabulations from past projects, and from information provided by the City through prior experience.

It is important to note that cost estimates from this master plan are significantly higher than the previous master plan. It is common for project costs to increase over time with inflation. Typically, it is expected to see an annual increase of approximately 3%. Due to the material and construction market changes that have happened from 2020 to now the market has experienced project cost increases between 50 to 100% from 2019 costs. This increase in project costs is reflected in the opinions of cost for the recommended projects. These increases in costs are also a factor in the increases in fees in later sections.

The opinions of probable project costs included in this report are planning-level cost only. As the City seeks to undertake specific projects, more detailed and updated costs should be prepared to guide project development through the preliminary engineering and budgeting acquisition phases.

C. POSSIBLE FINANCING PLAN

Figure XI-2 shows a possible financing plan to predict estimated bond amounts for the two most prioritized recommended projects, The Stowells Improvements and the SR-17 12" Line Replacement. The plan details percentages to be paid for via self-participation, grants, and loans. This plan uses a 3% interest rate and a 30-year term for both projects.

Figure XI-2

POSSIBLE FINANCING PLAN 2025				
Stowells Improvements				
Total Project Cost				\$ 1,410,400.00
Proposed Funding	Percentage Rate	Term in Years	Principal	
Self Participation	10%		\$	141,040.00
Grant	50%		\$	705,200.00
Loan	40%	3.0% 30	\$	564,160.00
Total Bond			\$	863,490.76
Total Cost			\$	1,709,730.76
Annual Payment				\$28,783.03
SR-17 12" Line Replacement				
Total Project Cost				\$ 1,695,100.00
Proposed Funding	Percentage Rate	Term in Years	Principal	
Self Participation	10%		\$	169,510.00
Grant	10%		\$	169,510.00
Loan	80%	3.0% 30	\$	1,356,080.00
Total Bond			\$	2,075,585.92
Total Cost			\$	2,414,605.92
Annual Payment			\$	69,186.20



For culinary water project typical sources of funding include Utah's Division of Drinking Water (DDW), the Utah Community Impact Board (CIB), or the open market. This plan assumes that some grant money will be available for the Stowells project as part of the Lead Line Replacement Program. To be conservative that plans assumes that minimal grant funds will be available for the SR-17 12" Line Replacement project. The annual payments for each project will be used for the financial analyses in later sections.

XII. FINANCIAL ANALYSIS

A. EXISTING USER RATE

Water rates are a combination of base rates and overage rates. The base rate is charged to all connections in the system regardless of water usage and is designed to cover all fixed costs of the system. Overage rates are often set to encourage water conservation and should cover all variable costs of the system. Figure XII-1 shows LaVerkin City's existing culinary user rate structure.

Figure XII-1

La Verkin - Culinary Water Rates - Current			
Meter Size	Base rate	Tiered Increase above Base per 1,000 gallons	Gallon Range for Increase
5/8"	\$39.00	\$1.38	0 - 20,000 gallons
		\$1.67	21,000 - 35,000 gallons
		\$1.96	36,000 gallons & Over
3/4"	\$55.60	\$1.38	0 - 20,000 gallons
		\$1.67	21,000 - 35,000 gallons
		\$1.96	36,000 gallons & Over
1"	\$97.84	\$1.38	0 - 26,000 gallons
		\$1.67	27,000 - 52,000 gallons
		\$1.96	53,000 gallons & Over
1 1/2"	\$218.56	\$1.38	0 - 58,000 gallons
		\$1.67	59,000 - 116,000 gallons
		\$1.96	117,000 gallons & Over
2"	\$387.57	\$1.38	0 - 102,000 gallons
		\$1.67	103,000 - 204,000 gallons
		\$1.96	205,000 gallons & Over
3"	\$870.45	\$1.38	0 - 230,000 gallons
		\$1.67	231,000 - 460,000 gallons
		\$1.96	461,000 gallons & Over

Increases in the base rate are correlated to connection size. The base rates are proportional to the surface area of the respective meter.

B. AVERAGE RATE DETERMINATION

This plan provides an average rate analysis to determine the average water rate per ERU needed to cover the expenses of the water system. The analysis uses recent fiscal year expenses and annual budgets to project the following year's expenses, and also uses new expenses associated with proposed improvements such as new debt services. This analysis considers projected

expenses and income sources to determine the amount of revenue needed to be generated by user rates.

The target revenue needed from user rates is divided by the estimated number of ERUs serviced by the system and converted to an average monthly rate. This gives the average user rate needed per ERU to cover the expenses of the water system. The analysis results in an average user rate per ERU of \$67.09 per month. Figure XII-2 shows the user rate analysis.

Figure XII-2

USER RATE ANALYSIS					
FY 2025	%	Fixed	%	Variable	Total
O&M EXPENSES					
TOTAL O&M EXPENSES		\$ 600,467.45		\$ 602,850.05	\$ 1,203,317.50
TRANSFERS					
LOAN PAYMENT TRANSFER	100%	\$ 35,000.00	0%	\$ -	\$ 35,000.00
EXISTING DEBT SERVICE					
2010 Water Revenue	100%	\$ 48,409.00	0%	\$ -	\$ 48,409.00
2014 Silver Acres	100%	\$ 15,995.00	0%	\$ -	\$ 15,995.00
2022 Water Revenue	100%	\$ 42,678.20	0%	\$ -	\$ 42,678.20
SUBTOTAL EXISTING DEBT SERVICE		\$ 107,082.20		\$ -	\$ 107,082.20
NEW DEBT SERVICE					
Stowells Improvements	100%	\$ 28,783.03	0%	\$ -	\$ 28,783.03
SR-17 12" Line Replacement	100%	\$ 69,186.20	0%	\$ -	\$ 69,186.20
SUBTOTAL NEW DEBT SERVICE		\$ 97,969.22		\$ -	\$ 97,969.22
TOTAL DEBT SERVICE/FINANCIAL EXPENSE		\$ 240,051.42		\$ -	\$ 240,051.42
CAPITAL IMPROVEMENT PROJECTS					
West Water Improvements	100%	\$ 409,950.00	0%	\$ -	\$ 409,950.00
SUBTOTAL SYSTEM REPLACEMENT		\$ 409,950.00			\$ 409,950.00
TOTAL EXPENSES		\$ 1,250,468.87		\$ 602,850.05	\$ 1,853,318.92
OTHER INCOME (BESIDES WATER SALES)					
Impact Fees	100%	\$ 106,209.96	0%	\$ -	\$ 106,209.96
Connection Fees	0%	\$ -	100%	\$ 31,930.00	\$ 31,930.00
Penalties and Fines	0%	\$ -	100%	\$ 25,750.00	\$ 25,750.00
DCWCD Excess water use surcharge	0%	\$ -	100%	\$ 16,480.00	\$ 16,480.00
TOTAL OTHER INCOME		\$ 106,209.96		\$ 74,160.00	\$ 180,369.96
EXPENSES - INCOME		\$ 1,144,258.91		\$ 528,690.05	\$ 1,672,948.96
MONTHLY COSTS PER ERU					
ERUS (FY 2025)					2078
Monthly Cost/ERUS in FY2025		\$ 45.89		\$ 21.20	\$ 67.09
BASE AND OVERAGE RATE DETERMINATION					
Base Cost (0 Gallons)		\$ 45.89			
Variable Cost (Avg Usage)				\$ 21.20	
Average Use/Billed ERU (Gal)				8,808	
Cost/1000 Gallons				\$ 2.41	
TOTAL AVERAGE MONTHLY USER RATE					\$ 67.09

C. BASE AND OVERAGE RATE DETERMINATION

All expenses and other income are separated into fixed and variable costs to calculate the base and overage rates. This splits the total average rate into an average base rate and an average overage rate. The following shows what the average base rate and overage rate would be for an average residential connection.

- Base rate - \$45.89
- Overage rate - \$21.20

The calculated average rates are higher than what the City is currently collecting from users. This indicates that the City will not be able to cover the required projected and ongoing expenses with the current user rate structure. It is recommended that the City establish a new rate structure so that the water system is collecting enough revenue to cover expenses.

This plan provides a possible user rate structure that would provide the user rates calculated in the user rate analysis. Sunrise worked with City staff and elected officials to create the user rate structure. The user rate structure expands the existing tier structure to five total tiers, with an 8,000-gallon window for each tier.

Data was collected to differentiate average users from high water consumers, and a formula was proposed to determine water rate increases for each tier. The cost increase between each tier was calculated as follows:

$$Y = \frac{X^2}{30}$$

Where:

Y = Cost Increase percentage

X = Tier Level

This formula was selected to help keep usage rates lower for average monthly usage, while discouraging heavy use.

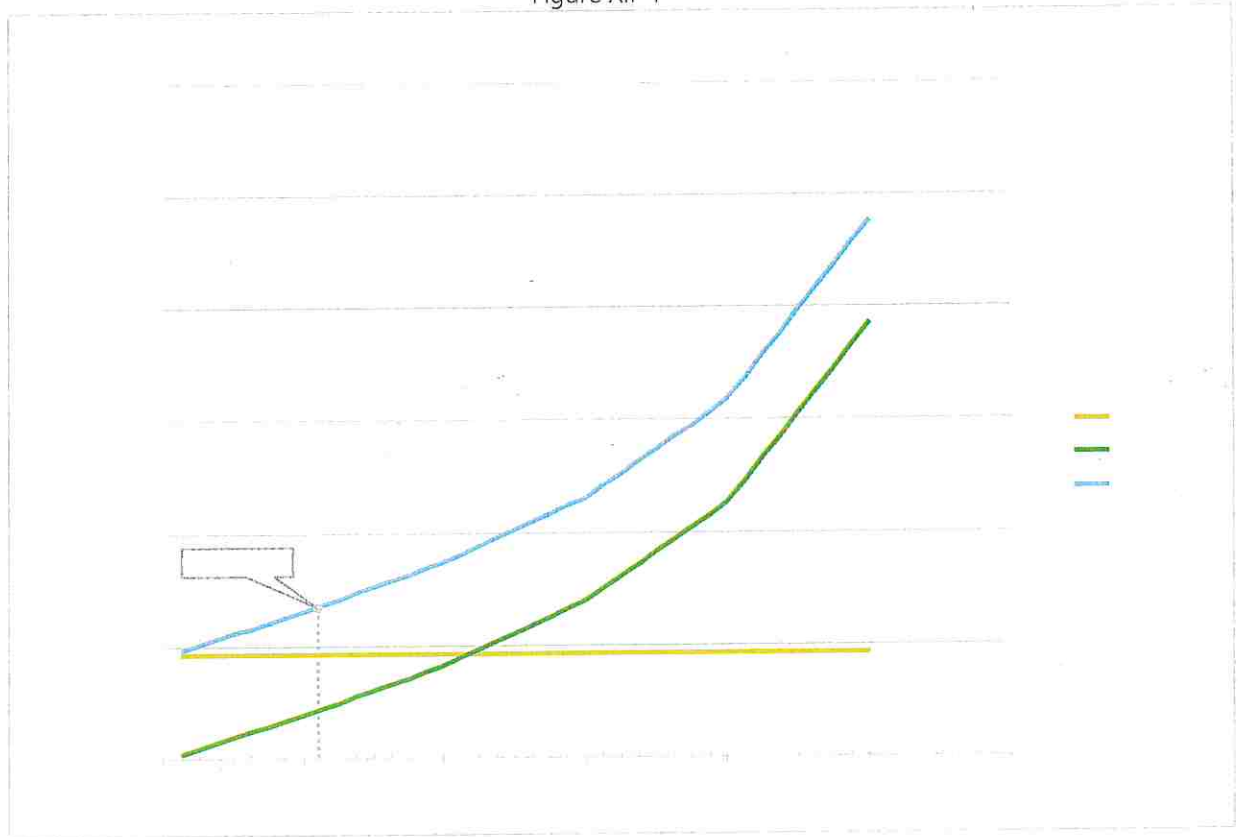
Each tier level along with its rate per 1,000 gallons and its range is shown in Figure XII-3. Note that this tier is for a 5/8" meter. Base rates and tier ranges will increase proportionally with larger meter sizes.

Figure XII-3

La Verkin - Proposed Culinary Water Rates - Based on Usage Patterns					
Meter Size	Base rate		Tiered Increase above Base per	Gallon Range for Increase	
				Begin	End
5/8"	\$ 45.89	1	\$2.41	0	8,000
		2	\$2.73	8,001	16,000
		3	\$3.55	16,001	24,000
		4	\$5.44	24,001	32,000
		5	\$9.97	32,001	-

Figure XII-4 illustrates a user's water bill based on their monthly water usage. This illustration is only for 5/8" meters.

Figure XII-4



XIII. IMPACT FEES

This report constitutes a Capital Facilities plan to determine the public facilities requirement to serve development resulting from a new developmental activity. A community may charge an impact fee to provide funding for projects required by this growth. The total cost that is eligible for the impact fee assessment is equal to the portion of any planned improvements projects that will be constructed in the planning window. The combined costs for these projects are divided by the projected number of new ERUs that will be added to the system to determine the impact fee.

A. EXISTING IMPACT FEES

Figure XIII-1Error! Reference source not found. Below shows the existing impact fees charged by the City. The existing impact fees are associated with meter size and ERU's per meter size.

Figure XIII-1

Existing Impact Fee		
Meter Size	ERUs	Impact Fee
5/8" & 3/4"	1	\$1,572.00
1"	1.78	\$2,794.67
1 1/2"	4.00	\$6,288.00
2"	7.11	\$11,178.67
3"	16.00	\$25,152.00
4"	28.44	\$44,714.67
6"	64.00	\$100,608.00

B. PROPOSED IMPACT FEES

This plan includes and Impact Fee Analysis to determine the updated fee that the City can assess for its culinary water impact fee. As stated above an impact fee covers the cost for a project falling within the planning window, which for this analysis is 10 years. The impact fee can also cover debt services for past projects that can be attributed to growth.

According to state impact fee laws, impact fees must be used within six (6) years of their receipt. This plan accounts for incoming fees to be used for eligible projects and debts in the continuous six-year window.

The max allowable impact fee is calculated to be \$1,713.06 per ERU. This is a \$141.06 difference from the previous impact fee. Figure XIII-2 Shows the results of the impact fee analysis.

Figure XIII-2

IMPACT FEE ANALYSIS						
Existing Debt Service	Debt to be paid 2025-2034				% Impact Fee Eligible	Eligible Costs
2010 Water Revenue	\$ 240,575.00				0%	\$ -
2014 Silver Acres	\$ 143,170.00				0%	\$ -
2022 Water Revenue	\$ 430,114.70				38%	\$ 163,492.30
Subtotal						\$ 163,492.30
Project	Total Current Estimated Cost	Year of Improvement	Inflated Costs	Financed Costs	% Impact Fee Eligible	Eligible Costs
Stowells Improvements	\$ 1,369,300.00	2026	\$ 1,410,400.00	\$ 1,709,730.76	15.32%	\$ 261,916.20
Storage Tank Solenoid Valves	\$ 80,000.00	2026	\$ 82,400.00	\$ 82,400.00	0.00%	\$ -
SR-17 12" Line Replacement	\$ 1,597,837.50	2027	\$ 1,695,100.00	\$ 2,414,605.92	0.00%	\$ -
West Water Improvements	\$ 3,236,200.00	2033	\$ 4,099,500.00	\$ 6,274,603.61	4.23%	\$ 265,352.49
Impact Fee Analysis Update (2029)	\$ 65,000.00	2029	\$ 73,200.00	\$ 112,038.29	100.00%	\$ 112,038.29
500 W Improvements	\$ 357,350.00	2031	\$ 426,700.00	\$ 653,097.54	30.26%	\$ 197,630.04
Subtotal						\$ 836,937.03
Total Impact Fee Eligible						\$ 1,000,429.32
Current ERUS (2025)						2,078
Projected ERUS (2034)						2,662
Number of New ERUs						584
Maximum Impact Fee (Total Eligible Cost / New ERU's)						\$ 1,713.06

Figure XIII-3 shows the potential impact fee per meter size.

Figure XIII-3

Proposed Impact Fee		
Meter Size	ERUs	Impact Fee
5/8" & 3/4"	1	\$1,713.06
1"	1.78	\$3,045.00
1 1/2"	4.00	\$6,852.00
2"	7.11	\$12,181.00
3"	16.00	\$27,409.00
4"	28.44	\$48,727.00
6"	64.00	\$109,636.00

Part of the Impact Fee Analysis is to determine what percentage each project of the capital facilities plan is impact fee eligible. The impact fee eligible percentage of the existing debt service was determined in a previous master plan and should be carried over for the life of the debts. The Majority of these projects involve increase the mainline pipe size. Increasing the size of pipe builds extra capacity in the line to be available for growth. The impact fee eligibility for these projects was determined by taking the percent increase in pipe capacity and multiplying by the percent of the area being served by the pipe that could be developed. Projects not driven by growth are intended to address existing problems and therefore are not considered impact fee eligible.

It is important to note these impact fees are for the improvements shown in the 0 to 10-year planning window and do not provide for the City to design and build anything beyond the

proposed projects. All new additions to the system will need to be considered in the impact fee calculations. Otherwise, developers should be required to make the improvements.

C. IMPACT FEE RELATED ITEMS

In general, it is beneficial to update this impact fee facilities plan analysis at least every five years, or more frequently if drastic growth or changes affect the assumptions and data in this plan. It is assumed that this plan will be updated as recommended.

City staff should be made aware that, in conformance with Utah Code 11-36a-602, impact fees can generally only be expended for a system improvement that is defined in the Impact Fee Facilities Plan and that it is for the specific public facility type for which the fee was collected (i.e., the transportation impact fees can not be used for water or sewer projects). Also, impact fees in Utah must be expended or encumbered for a permissible use within six years of their receipt unless 11-36a-602(2)(b) applies. Additionally, impact fees must have proper accounting (track each fee in and out) in accordance with Utah Code 11-63a-601.

In accordance with Utah Code 11-36a-306 a certification of impact fee analysis is located in Appendix E.

D. CONNECTION FEE

Currently the City charges \$375 connection fee for any new service that is connect to the system. According to Utah State Law, connection fees are not to be more than the actual cost of establishing the connection including a water meter and labor to connect the meter to the water main line. Figure XIII-4 shows the proposed connection fees based on meter size. This includes the costs of the meter, and associated materials, and 2 hours of labor and equipment expense. These fees should be looked at periodically and adjusted as prices for materials and labor increases.

Figure XIII-4

Proposed Connection Fees	
Meter Size	Connection fee
5/8" & 3/4"	\$ 380.00
1"	\$ 480.00
1 1/2"	\$ 772.00
2"	\$ 974.00
3"	\$ 1,562.00
4"	\$ 1,987.00

E. CASH FLOW

A 20-year cash flow analysis was prepared for this update. This cash flow shows several years of past revenues and expenses, along with twenty years of projected revenues and expenses for the water system. These projections are based on assumptions of inflation, growth, average rates, proposed projects, etc. Calculations for average rates and impact fees have been carried over to the cash flow analysis. The cash flow analysis is shown in Appendix E.

Water rates and fees should be reviewed by the City periodically to ensure that they keep up with inflation rates and increase costs in system maintenance. LaVerkin City does not have to adopt the amounts shown in the rate analysis. However, the rates suggested are calculated to cover expenses and ensure that the water fund remains viable.

APPENDIX A

Growth Rate Analysis

Estimated Residential Growth Rate						
Year	Est. Residential Growth Rate	Estimated Residential ERU's	Estimated Commercial ERU's	Institutional / Construction / Other ERU's	Total Estimated ERU's	Estimated Population
2023	3.0%	1,484	412	63	1,958	4,501
2024	3.0%	1,529	424	64	2,017	4,636
2025	3.0%	1,575	437	66	2,078	4,775
2026	3.0%	1,622	450	68	2,140	4,918
2027	3.0%	1,671	463	70	2,204	5,066
2028	3.0%	1,721	477	73	2,271	5,218
2029	3.0%	1,772	491	75	2,338	5,374
2030	2.5%	1,817	506	77	2,400	5,509
2031	2.5%	1,862	521	79	2,462	5,647
2032	2.5%	1,909	537	82	2,528	5,788
2033	2.5%	1,956	553	84	2,593	5,932
2034	2.5%	2,005	570	87	2,662	6,081
2035	2.5%	2,055	587	89	2,731	6,233
2036	2.5%	2,107	604	92	2,803	6,389
2037	2.5%	2,159	623	95	2,877	6,548
2038	2.5%	2,213	641	98	2,952	6,712
2039	2.5%	2,269	660	100	3,029	6,880
2040	2.5%	2,326	680	103	3,109	7,052
2041	2.5%	2,384	701	107	3,192	7,228
2042	2.5%	2,443	722	110	3,275	7,409
2043	2.5%	2,504	743	113	3,360	7,594
2044	2.5%	2,567	762	116	3,445	7,784
2045	2.5%	2,631	781	119	3,531	7,978



APPENDIX B

Water Use Analysis

Historical Usage

Calendar Year	Total Usage (Thousand Gallons)	Number of ERUs	Usage per ERU (gpd/ERU)
2019	199,191	1,716	318
2020	197,224	1,741	310
2021	201,045	1,810	304
2022	188,389	1,983	260
2023	187,388	1,958	262
4-year average	194,647	1,842	290

$$\text{Required Source Capacity} = \#ERU \times \frac{\text{gpd}}{\#ERU} \times \frac{1 \text{ Day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}}$$

$$\text{Required Storage Capacity} = \#ERU \times \frac{\text{gpd}}{\#ERU} + \text{Fire Flow (1,500 gpm)} \times \frac{60 \text{ min}}{1 \text{ hr}} \times 2 \text{ hr}$$

Current & Projected Required Source Capacity						
Calendar Year	# of ERU	% Reduction in Usage Per ERU	Peak Day Usage (gpm/ERU)	Source Capacity Required (gpm)	Existing Source Available (gpm)	Source Capacity Surplus/Deficit (gpm)
2022	16,389	0.5%	901.14	10,256	17,442	7,186
2023	17,520	0.5%	896.64	10,909	17,442	6,533
2024	18,729	0.5%	892.15	11,603	17,442	5,839
2025	20,021	0.5%	887.69	12,342	17,442	5,100
2026	21,122	0.5%	883.25	12,956	17,442	4,486
2027	22,284	0.5%	878.84	13,600	17,442	3,842
2028	23,509	0.5%	874.44	14,276	17,442	3,166
2029	24,450	0.5%	870.07	14,773	17,442	2,669
2030	25,428	0.5%	865.72	15,287	17,442	2,155
2031	26,445	0.5%	861.39	15,819	17,442	1,623
2032	27,503	0.5%	857.09	16,370	17,442	1,072
2033	28,465	0.5%	852.80	16,858	17,442	584
2034	29,462	0.5%	848.54	17,361	17,442	81
2035	30,493	0.5%	844.29	17,878	17,442	(436)
2036	31,560	0.5%	840.07	18,412	17,442	(970)
2037	32,665	0.5%	835.87	18,961	17,442	(1,519)
2038	33,808	0.5%	831.69	19,526	17,442	(2,084)
2039	34,991	0.5%	827.53	20,109	17,442	(2,667)
2040	36,216	0.5%	823.40	20,708	17,442	(3,266)
2041	37,483	0.5%	819.28	21,326	17,442	(3,884)
2042	38,795	0.5%	815.18	21,962	17,442	(4,520)

Storage Capacity Analysis							
Calendar Year	# of ERU	% Reduction in Usage Per ERU	Average Day Usage (gpd/ERU)	Required Storage Capacity (gal)	Existing Storage Capacity (gal)	Storage Capacity Surplus/Deficit (gal)	Projected Storage Capacity Surplus/Deficit (gal)
2022	16,389	0.5%	478.9	8,029,456	9,810,000	1,780,544	1,780,544
2023	17,520	0.5%	476.6	8,529,114	9,810,000	1,280,886	3,780,886
2024	18,729	0.5%	474.2	9,060,576	9,810,000	749,424	5,749,424
2025	20,021	0.5%	471.8	9,625,869	9,810,000	184,131	7,684,131
2026	21,122	0.5%	469.4	10,095,565	9,810,000	(285,565)	7,214,435
2027	22,284	0.5%	467.1	10,588,617	9,810,000	(778,617)	6,721,383
2028	23,509	0.5%	464.8	11,106,185	9,810,000	(1,296,185)	6,203,815
2029	24,450	0.5%	462.4	11,486,417	9,810,000	(1,676,417)	5,823,583
2030	25,428	0.5%	460.1	11,879,880	9,810,000	(2,069,880)	5,430,120
2031	26,445	0.5%	457.8	12,287,036	9,810,000	(2,477,036)	5,022,964
2032	27,503	0.5%	455.5	12,708,360	9,810,000	(2,898,360)	4,604,604
2033	28,465	0.5%	453.3	13,082,019	9,810,000	(3,272,019)	4,172,581
2034	29,462	0.5%	451.0	13,466,822	9,810,000	(3,656,822)	3,725,759
2035	30,493	0.5%	448.7	13,863,101	9,810,000	(4,053,101)	3,262,658
2036	31,560	0.5%	446.5	14,271,199	9,810,000	(4,461,199)	2,781,459
2037	32,665	0.5%	444.3	14,691,470	9,810,000	(4,881,470)	2,270,000
2038	33,808	0.5%	442.0	15,124,274	9,810,000	(5,314,274)	1,728,726
2039	34,991	0.5%	439.8	15,569,987	9,810,000	(5,759,987)	1,168,743
2040	36,216	0.5%	437.6	16,028,993	9,810,000	(6,218,993)	61,740
2041	37,483	0.5%	435.4	16,501,690	9,810,000	(6,691,690)	6,808,310
2042	38,795	0.5%	433.3	16,988,484	9,810,000	(7,178,484)	6,321,516

APPENDIX C

Engineers Opinion of Probable Cost

Engineer's Opinion of Probable Cost

Stowells Improvements
LaVerkin City

30-Oct-24
RRH/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	\$ 45,200.00	\$ 45,200.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	SWPPP Compliance and Erosion Control	1	LS	\$ 5,000.00	\$ 5,000.00
4	Dust Control and Watering	1	LS	\$ 5,000.00	\$ 5,000.00
5	Subsurface Investigation	10	HR	\$ 300.00	\$ 3,000.00
6	Construction Staking	1	LS	\$ 5,000.00	\$ 5,000.00
7	Clearing, Grubbing, Excavation, and Demolition	1	LS	\$ 10,000.00	\$ 10,000.00
8	8" PVC Line & Fittings	2,820	LF	\$ 200.00	\$ 564,000.00
9	8" Gate Valve Assembly	12	EA	\$ 5,500.00	\$ 66,000.00
10	Reconnect Existing Fire Hydrant	1	EA	\$ 2,100.00	\$ 2,100.00
11	3/4" Meter Service Connection (Meter, Barrel, Setter, Etc)	61	EA	\$ 1,500.00	\$ 91,500.00
12	Service Lateral Pipe	1,720	LF	\$ 25.00	\$ 43,000.00
13	Fire Hydrant Assembly	4	EA	\$ 10,000.00	\$ 40,000.00
14	Surface Restoration	1	LS	\$ 50,000.00	\$ 50,000.00
15	Misc. Connections & Tie-ins	1	LS	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 949,800.00
CONTINGENCY				20%	\$ 190,000.00
CONSTRUCTION TOTAL					\$ 1,139,800.00
INCIDENTALS					
1	Engineering Design	5.6%	LS	\$ 76,500.00	\$ 76,500.00
2	Bidding & Negotiating	0.7%	HR	\$ 10,000.00	\$ 10,000.00
3	Engineering Construction Services	5.6%	HR	\$ 76,000.00	\$ 76,000.00
4	Regulatory Compliance	0.4%	HR	\$ 5,000.00	\$ 5,000.00
5	Topographic & Property Survey	0.9%	EST	\$ 12,000.00	\$ 12,000.00
6	Materials Sampling and Testing	0.4%	EST	\$ 5,000.00	\$ 5,000.00
7	Funding and Administrative Services	0.7%	EST	\$ 10,000.00	\$ 10,000.00
8	Loan Origination Fee	0.7%	EST	\$ 10,000.00	\$ 10,000.00
9	Bond Attorney	0.7%	EST	\$ 10,000.00	\$ 10,000.00
10	GIS Mapping	0.4%	EST	\$ 5,000.00	\$ 5,000.00
11	Miscellaneous Professional Services	0.7%	EST	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 229,500.00
TOTAL PROJECT COST					\$ 1,369,300.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

SR-17 12" Line Replacement
LaVerkin City

30-Oct-24
RRH/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	\$ 52,900.00	\$ 52,900.00
2	Traffic Control	1	LS	\$ 50,000.00	\$ 50,000.00
3	SWPPP Compliance and Erosion Control	1	LS	\$ 7,500.00	\$ 7,500.00
4	Dust Control and Watering	1	LS	\$ 10,000.00	\$ 10,000.00
5	Subsurface Investigation	10	HR	\$ 300.00	\$ 3,000.00
6	Construction Staking	1	LS	\$ 10,000.00	\$ 10,000.00
7	Clearing, Grubbing, Excavation, and Demolition	1	LS	\$ 20,000.00	\$ 20,000.00
8	12" DIP	2,200	LF	\$ 250.00	\$ 550,000.00
9	12" Gate Valve Assembly	6	EA	\$ 8,000.00	\$ 48,000.00
10	10" Gate Valve Assembly	1	EA	\$ 7,500.00	\$ 7,500.00
11	8" Gate Valve Assembly	2	EA	\$ 5,500.00	\$ 11,000.00
12	6" Gate Valve Assembly	1	EA	\$ 5,000.00	\$ 5,000.00
13	Misc. Connections & Tie-ins	1	LS	\$ 7,000.00	\$ 7,000.00
14	Fire Hydrant Assembly	4	EA	\$ 10,000.00	\$ 40,000.00
15	Check Valve	1	EA	\$ 15,000.00	\$ 15,000.00
16	Concrete Removal	5,398	SF	\$ 5.00	\$ 26,987.50
17	Concrete Sidewalk	4,725	SF	\$ 25.00	\$ 118,125.00
24	Curb and Gutter	945	LF	\$ 23.00	\$ 21,735.00
19	Pedestrian Ramps	2	EA	\$ 7,500.00	\$ 15,000.00
20	Signs	3	EA	\$ 350.00	\$ 1,050.00
21	Block Wall/ Fill	75	LF	\$ 200.00	\$ 15,000.00
23	Brick Wall	120	LF	\$ 150.00	\$ 18,000.00
25	Asphalt Patch	420	SF	\$ 7.00	\$ 2,940.00
22	Surface Restoration	1	LS	\$ 25,000.00	\$ 25,000.00
18	Landscape Restoration	1	LS	\$ 6,000.00	\$ 6,000.00
22	Tree	15	EA	\$ 600.00	\$ 9,000.00
SUBTOTAL					\$ 1,110,737.50
CONTINGENCY				20%	\$ 222,100.00
CONSTRUCTION TOTAL					\$ 1,332,837.50
INCIDENTALS					
1	Engineering Design	6.1%	LS	\$ 97,100.00	\$ 97,100.00
2	Bidding & Negotiating	0.6%	HR	\$ 10,000.00	\$ 10,000.00
3	Engineering Construction Services	5.6%	HR	\$ 88,900.00	\$ 88,900.00
4	Regulatory Compliance	0.3%	HR	\$ 5,000.00	\$ 5,000.00
5	Topographic & Property Survey	0.9%	EST	\$ 14,000.00	\$ 14,000.00
6	Materials Sampling and Testing	0.3%	EST	\$ 5,000.00	\$ 5,000.00
7	Funding and Administrative Services	0.6%	EST	\$ 10,000.00	\$ 10,000.00
8	Loan Origination Fee	0.6%	EST	\$ 10,000.00	\$ 10,000.00
9	Bond Attorney	0.6%	EST	\$ 10,000.00	\$ 10,000.00
10	GIS Mapping	0.3%	EST	\$ 5,000.00	\$ 5,000.00
11	Miscellaneous Professional Services	0.6%	EST	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 265,000.00
TOTAL PROJECT COST					\$ 1,597,837.50

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Engineer's Opinion of Probable Cost

500 W Improvements
LaVerkin City

30-Oct-24
RRH/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	\$ 10,400.00	\$ 10,400.00
2	Traffic Control	1	LS	\$ 1,500.00	\$ 1,500.00
3	SWPPP Compliance and Erosion Control	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control and Watering	1	LS	\$ 1,500.00	\$ 1,500.00
5	Subsurface Investigation	4	HR	\$ 300.00	\$ 1,200.00
6	Construction Staking	1	LS	\$ 1,500.00	\$ 1,500.00
7	Clearing, Grubbing, Excavation, and Demolition	1	LS	\$ 5,000.00	\$ 5,000.00
8	8" PVC Iline & Fittings	720	LF	\$ 200.00	\$ 144,000.00
9	8" Gate Valve Assembly	4	EA	\$ 5,500.00	\$ 22,000.00
10	Surface Restoration	1	LS	\$ 7,500.00	\$ 7,500.00
11	Misc. Connections & Tie-ins	1	LS	\$ 3,000.00	\$ 3,000.00
12	Fire Hydrant Assembly	2	EA	\$ 10,000.00	\$ 20,000.00
SUBTOTAL					\$ 219,100.00
CONTINGENCY				20%	\$ 43,800.00
CONSTRUCTION TOTAL					\$ 262,900.00
INCIDENTALS					
1	Engineering Design	7.2%	LS	\$ 25,700.00	\$ 25,700.00
2	Bidding & Negotiating	2.8%	HR	\$ 10,000.00	\$ 10,000.00
3	Engineering Construction Services	4.9%	HR	\$ 17,500.00	\$ 17,500.00
4	Regulatory Compliance	1.4%	HR	\$ 5,000.00	\$ 5,000.00
5	Topographic & Property Survey	1.1%	EST	\$ 4,000.00	\$ 4,000.00
6	Materials Sampling and Testing	1.1%	EST	\$ 4,000.00	\$ 4,000.00
7	Funding and Administrative Services	1.4%	EST	\$ 5,000.00	\$ 5,000.00
8	Loan Origination Fee	2.8%	EST	\$ 10,000.00	\$ 10,000.00
9	Bond Attorney	2.8%	EST	\$ 10,000.00	\$ 10,000.00
10	GIS Mapping	0.3%	EST	\$ 1,250.00	\$ 1,250.00
11	Miscellaneous Professional Services	0.6%	EST	\$ 2,000.00	\$ 2,000.00
SUBTOTAL					\$ 94,450.00
TOTAL PROJECT COST					\$ 357,350.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

West Water Improvements
LaVerkin City

30-Oct-24
RRH/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	\$ 110,800.00	\$ 110,800.00
2	Traffic Control	1	LS	\$ 50,000.00	\$ 50,000.00
3	SWPPP Compliance and Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Dust Control and Watering	1	LS	\$ 10,000.00	\$ 10,000.00
5	Subsurface Investigation	24	HR	\$ 300.00	\$ 7,200.00
6	Construction Staking	1	LS	\$ 12,500.00	\$ 12,500.00
7	Clearing, Grubbing, Excavation, and Demolition	1	LS	\$ 15,000.00	\$ 15,000.00
8	8" PVC line & Fittings	7500	LF	\$ 200.00	\$ 1,500,000.00
9	8" Gate Valve Assembly	24	EA	\$ 5,500.00	\$ 132,000.00
10	Asphalt Patch	45,000	SF	\$ 5.00	\$ 225,000.00
11	Misc. Connections & Tie-ins	1	LS	\$ 20,000.00	\$ 20,000.00
12	Fire Hydrant Assembly	13	EA	\$ 10,000.00	\$ 130,000.00
13	Water Service Lateral	105	EA	\$ 1,000.00	\$ 105,000.00
SUBTOTAL					\$ 2,327,500.00
				CONTINGENCY 20%	\$ 465,500.00
CONSTRUCTION TOTAL					\$ 2,793,000.00
INCIDENTALS					
1	Engineering Design	5.7%	LS	\$ 185,500.00	\$ 185,500.00
2	Bidding & Negotiating	0.3%	HR	\$ 10,000.00	\$ 10,000.00
3	Engineering Construction Services	5.8%	HR	\$ 186,200.00	\$ 186,200.00
4	Regulatory Compliance	0.2%	HR	\$ 5,000.00	\$ 5,000.00
5	Topographic & Property Survey	0.3%	EST	\$ 10,000.00	\$ 10,000.00
6	Materials Sampling and Testing	0.2%	EST	\$ 5,000.00	\$ 5,000.00
7	Funding and Administrative Services	0.3%	EST	\$ 10,000.00	\$ 10,000.00
8	Loan Origination Fee	0.3%	EST	\$ 10,000.00	\$ 10,000.00
9	Bond Attorney	0.3%	EST	\$ 10,000.00	\$ 10,000.00
10	GIS Mapping	0.0%	EST	\$ 1,500.00	\$ 1,500.00
11	Miscellaneous Professional Services	0.3%	EST	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 443,200.00
TOTAL PROJECT COST					\$ 3,236,200.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

SR 17 and 500 N Improvements
LaVerkin City

30-Oct-24
RRH/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	\$ 44,500.00	\$ 44,500.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	SWPPP Compliance and Erosion Control	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control and Watering	1	LS	\$ 10,000.00	\$ 10,000.00
5	Subsurface Investigation	6	HR	\$ 300.00	\$ 1,800.00
6	Construction Staking	1	LS	\$ 10,000.00	\$ 10,000.00
7	Clearing, Grubbing, Excavation, and Demolition	1	LS	\$ 8,000.00	\$ 8,000.00
8	8" PVC Iline & Fittings	1,440	LF	\$ 200.00	\$ 288,000.00
9	10" Gate Valve Assembly	3	EA	\$ 7,500.00	\$ 22,500.00
10	8" Gate Valve Assembly	3	EA	\$ 5,500.00	\$ 16,500.00
11	6" Gate Valve Assembly	2	EA	\$ 5,000.00	\$ 10,000.00
12	Fire Hydrant Assembly	4	EA	\$ 10,000.00	\$ 40,000.00
13	8" PRV Unit	2	EA	\$ 38,000.00	\$ 76,000.00
14	Surface Restoration	1	LS	\$ 25,000.00	\$ 25,000.00
15	Misc. Connections & Tie-ins	1	LS	\$ 3,000.00	\$ 3,000.00
16	Replace Cemetery Fence and Pillars	1	LS	\$ 60,000.00	\$ 60,000.00
17	Remove Concrete	9,770	SF	\$ 5.00	\$

EXHIBIT B

La Verkin - Culinary Water Rates - Proposed					
Meter Size	Base rate	Tiered Increase above Base per		Gallon Range for Increase	
				Begin	End
5/8"	\$46.07	1	\$2.45	0	8,000
		2	\$2.78	8,001	16,000
		3	\$3.61	16,001	24,000
		4	\$5.54	24,001	32,000
		5	\$10.16	32,001	-
3/4"	\$66.34	1	\$2.45	0	12,000
		2	\$2.78	11,501	23,000
		3	\$3.61	23,001	35,000
		4	\$5.54	34,601	46,000
		5	\$10.16	46,101	-
1"	\$117.94	1	\$2.45	0	21,000
		2	\$2.78	20,401	41,000
		3	\$3.61	40,901	62,000
		4	\$5.54	61,501	82,000
		5	\$10.16	82,001	-
1 1/2"	\$265.36	1	\$2.45	0	47,000
		2	\$2.78	45,901	92,000
		3	\$3.61	92,001	140,000
		4	\$5.54	138,401	185,000
		5	\$10.16	184,501	-
2"	\$471.76	1	\$2.45	0	84,000
		2	\$2.78	81,601	164,000
		3	\$3.61	163,601	249,000
		4	\$5.54	246,001	329,000
		5	\$10.16	328,001	-
3"	\$1,061.45	1	\$2.45	0	189,000
		2	\$2.78	183,601	369,000
		3	\$3.61	368,101	560,000
		4	\$5.54	553,501	740,000
		5	\$10.16	738,001	-
4"	\$1,887.03	1	\$2.45	0	336,000
		2	\$2.78	326,401	656,000
		3	\$3.61	654,401	996,000
		4	\$5.54	984,001	1,316,000
		5	\$10.16	1,312,001	-
		1	\$2.45	0	756,000

6"	\$4,245.81	2	\$2.78	734,401	1,476,000
		3	\$3.61	1,472,401	2,241,000
		4	\$5.54	2,214,001	2,961,000
		5	\$10.16	2,952,001	-

EXHIBIT C

Figure XIII-3

Proposed Impact Fee		
Meter Size	ERUs	Impact Fee
5/8" & 3/4"	1	\$1,713.06
1"	1.78	\$3,045.00
1 1/2"	4.00	\$6,852.00
2"	7.11	\$12,181.00
3"	16.00	\$27,409.00
4"	28.44	\$48,727.00
6"	64.00	\$109,636.00

