LAVERKIN CITY & WCWCD

SECONDARY WATER FEASIBILITY STUDY, USER RATE ANALYSIS, IMPACT FEE ANALYSIS & IMPACT FEE FACILITIES PLAN 2025

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APPENDICES

I. EXECUTIVE SUMMARY

This Secondary Water Feasibility Study evaluates LaVerkin City's existing secondary water system and provides a comprehensive plan for meeting projected demands through 2044. In coordination with the Washington County Water Conservancy District (WCWCD), the Study also explores opportunities for shared storage and the beneficial use of reuse water generated at the Confluence Park Water Reclamation Facility (CPWRF).

LaVerkin City (LaVerkin, the City) currently operates a pressurized irrigation system without any storage capacity. To improve water quality, pressure reliability, and system redundancy, a new shared-use pond is recommended. This facility would serve both LaVerkin City and WCWCD, with a recommended storage volume of 7.84 million gallons (23.5 acre-feet). This Study identified three alternative sites where a pond might feasibly be located. The preferred location is near Cottonwood Hollow Phase 5, as this site offers the largest storage volume and construction feasibility.

To integrate the new pond and improve operational serviceability, the following improvements are recommended to WCWCD:

i) LaVerkin Pond & Pipeline Project

Which consists of the following components:

- Extend WCWCD's 15-inch HDPE fill line north of 500 North to the pond; transitioning to 18-inch diameter north of 500 N.
- Construct a new 24-inch outlet transmission line from the pond to 500 North, and tie-in to the City's 15-inch trunkline along 100 East.
- Construct a booster pump station to raise system pressure by ~80 feet (35 psi) where gravity pressure is insufficient, with capacity up to 3,590 gpm.

ii) LaVerkin Transmission Line Improvements

Which consists of the following components:

- Repurpose an existing, unused 10-inch culinary line crossing under State Street for the secondary system.
- Replace an existing 6-inch pipe with a 10-inch trunkline from the cemetery crossing to 500 N.
- Extend the 10-inch trunkline along 500 N to 360 West and south along 300 West to 200 North.
- Install a new 8-inch looping line to connect 360 West to 600 North.

Other needed improvements to LaVerkin's secondary water distribution system were also identified and recommended to LaVerkin City. These include:

iii) LaVerkin City In-Town Replacements

Which consists of:

- Relocate irrigation lines in back lots to City street rights-of-way.

iv) 100 E Transmission Line Improvement

Consisting of:

- Replacement of a 15-inch aging plastic irrigation pipe trunkline along the length of 100 E.

The Study includes a detailed financial analysis to determine the user rates required to fund ongoing operation and maintenance of the system, including the future booster pump station. Based on projected 2026 expenses and system growth, the average secondary water user rate must increase by approximately 88% to ensure full cost recovery and maintain system viability.

Revenue projections, expense breakdowns, and deficit analyses are detailed in Section XIV of this Study.

This Study also serves as LaVerkin City's official Impact Fee Facilities Plan and includes an Impact Fee Analysis in accordance with Utah Code. Although WCWCD is expected to fund construction of the major capital improvements outlined in this Study, LaVerkin City may assess an impact fee to fund eligible planning costs and future capital needs. Based on the current growth model and project scope, the maximum allowable impact fee is $241.62 per new 1-inch secondary water connection.

A 20-year cash flow analysis is included in Appendix I.

II. INTRODUCTION

A) PREFACE

LaVerkin and WCWCD have partnered to contract Sunrise Engineering, LLC to prepare this feasibility study, master plan, impact fee facilities plan and impact fee analysis (Study).

For LaVerkin, this Study evaluates the position of the City's irrigation system relative to managing irrigation water rights, irrigation source and storage capacity, and the capability of the irrigation distribution system to meet the existing and projected demands to the system. This Study recommends management strategies and capital system improvements that make the system more efficient, facilitate maintenance and distribute cleaner irrigation water to the end user at delivery pressures that are as good or better than the existing conditions. The Study evaluates the financial requirements to implement the recommended improvements. This Study also serves as the City's Impact Facilities Plan and includes an Impact Fee Analysis.

For WCWCD, this Study presented a valuable early opportunity to utilize the reuse water generated by the CPWRF treatment facility which is nearing completion. The Study outlines a practical method to benefit from the reuse water close to the treatment facility—namely, enabling LaVerkin City's irrigation system to be supplied in part by the reuse water. In exchange, LaVerkin will allow a like-kind amount of its Virgin River water right to continue downstream to Quail Creek Reservoir for other beneficial use. The Study also identifies potential storage sites to serve as both a storage pond and forebay for LaVerkin's irrigation system, and simultaneously as a forebay for WCWCD to pump reuse water into the broader interconnected reuse system. Additionally, the Study presents a comparative assessment of the selected sites from both engineering and cost perspectives.

A joint advantage of the Study is the capture of significant water lost through slippage in LaVerkin's irrigation network.

B) LAVERKIN IRRIGATION SYSTEM DESCRIPTION

In 2007, LaVerkin City acquired the LaVerkin Bench Canal Company, which previously provided irrigation water to the service area, which is described as "those lands bounded on the south by the Virgin River, on the north and west by LaVerkin Creek, and on the east by the Hurricane cliffs."

The acquisition included the existing irrigation distribution network of, at the time, approximately 76,000 linear feet of irrigation pipe, the Company's water rights and financial assets. At present, a portion of LaVerkin's irrigation customers consist of former stockholders in the LaVerkin Bench Canal Company, whose stock has been exchanged for a water delivery contract, which entitles contract holders to receive their equivalent share of water available to the Company.

Today, LaVerkin City owns the irrigation distribution system, which consists of approximately 150,000 linear feet of main line irrigation pipes. The City of LaVerkin receives irrigation water from an onstream diversion of the Virgin River via a connection to the Quail Creek Pipeline, which is owned and maintained/operated by WCWCD. The onstream diversion is located upstream of the Pah Tempe Hot Springs, at a diversion structure owned and operated by WCWCD.

The diverted irrigation water passes through the Chance Hardy filter station before entering LaVerkin's distribution system. The filter station is located at the south end of the City. A map of LaVerkin's secondary water system is provided in Appendix A. The filter station houses three Amiad EBS 10,000 automatic filters that are equipped with 500-micron weave-wire screens. The filters reduce the quantity of suspended solids in the Virgin River water by capturing particles larger than 500 microns in size. However, during runoff events, the total suspended solids in the Virgin River is high enough that the system needs to be taken offline.

Historically, the secondary water distribution system is operational 9 months out of the year, from March to November. From time to time, LaVerkin has purchased water delivery contracts and, during the irrigation season, leases the use of this water to residents who are not in possession of a delivery contract. Many water users in LaVerkin elect not to use irrigation water at all, or to use culinary water instead of irrigation water, preferring the better-quality culinary water.

Users of irrigation water in LaVerkin can be divided into those with ownership of a delivery contract, hereafter called contract holders, and those that lease water from the City, hereafter called lease users. There is a third, but smaller, category called Standby users that have an irrigation water connection but do not actively use irrigation water.

C) CONTRACT HOLDERS

Contract holders are those irrigation users which formerly held stock in the LaVerkin Bench Canal Company. At the time that LaVerkin City purchased the Canal Company, there were 600 shares of stock with each individual share representing approximately 4.40 acre-feet annually (afa). Under the terms of the acquisition, LaVerkin City became obligated to deliver to contract holders the quantity of available water to which a former stockholder was entitled with the Canal Company, or their "share equivalent". Former stockholders that surrendered their stock in the Canal Company in exchange for a water delivery contract became "contract holders".

At the time of the acquisition the City gained a share of delivery contracts for its own use. Since then, the City has increased its delivery contract position by purchasing individual delivery contracts from time to time. As of July 2024, there are 290 unique delivery contract holders, excluding LaVerkin City.

The City's billing statements record the number of contract holders and the number of share equivalents for which they are billed on a semi-annual basis. The distribution of share equivalents

held by contract holders and the average contract holder statistics are summarized from these records in Table II.C-1 and Table II.C-2. As Table II.C-1 demonstrates, most of the delivery contract holders maintain ownership of between 0 and 1 share equivalents. However, as Table II.C-2 illustrates, the average number of share equivalents per contract holder is 1.51.

Table II.C-1: Contract Holder summary

Contract Holder Summary			
No. Share Equivalents Held	No. of Contract Holders	% Representation	Acre Feet Represented
0-1	223	77%	521.9
1 to 2	25	9%	178.5
2 to 5	26	9%	388.3
5 to 10	10	3%	343.6
10 to 20	5	2%	277.6
>20	1	0%	262.9
Total	290	100%	1972.8

Table II.C-2: Delivery Contract Holder statistics

Average Contract Holder Statistics	
Total Contract Holders Excluding LaVerkin City	290
Total Contract Holder Share Equivalents	441.86
Total Contract Holder Obligation (AFA)	1944.18
	Average
Share Equivalents per Contract Holder	1.51
Irrigatable Acreage per Contract Holder (acre)	1.11
Obligation per Contract Holder (AFA)	6.66

Each year, if all contract holders were to exercise their full contractual entitlement to water, LaVerkin City's obligation to fulfill these contracts would amount to approximately 1944.2 acre-feet.

D) LEASE & STANDBY USERS

LaVerkin City does not have a complete recordation of the delivery contracts which it claims. This Study assumes that the City owns the remainder of the water not obligated by the delivery contracts described in Section II.C.

The City leases its available irrigation water to users within its service area. The city tracks lessees according to the size of the user's parcel. There are also users that have an irrigation connection,

but that do not actively use irrigation water on a monthly basis. These are tracked and billed separately from leases. Based on the available data from past billing records, the City has 808 lease users and 292 standby connections as shown in Table II.D-1.

Table II.D-1: Lease & Standby user statistics

Lease & Standby User Statistics	
Lease Users	
Total Lease Users	808
Lots < 1/2 Acre	780
Lots 1/2 Acre to < 1 Acre	18
Lots > 1 Acre	10
Standby Connections	
Total Standby Connections	292

III. SYSTEM USERS ANALYSIS

A. HISTORICAL SECONDARY WATER USAGE

Secondary water usage data was provided by the City and is shown in Table III.A-1. This data comes from a master meter located at the Chance Hardy Filter Station and includes the total secondary water usage by month for years 2016 through 2024. The water usage reports include usage for the irrigation water year, which begins in March and ends in November.

Table III.A-1: Secondary water usage measured at the Chance Hardy Filter Station

Monthly Secondary Water Usage (Acre-Feet)										
Month	2016	2017	2018	2019	2020	2021	2022	2023	2024	Average
MAR	123	104	121	49	155	87	119	14	78	94
APR	109	135	186	138	142	218	267	96	182	164
MAY	184	213	234	409	271	300	307	226	238	265
JUN	290	303	353	285	324	298	385	250	319	312
JUL	328	288	242	361	352	222	314	359	360	314
AUG	163	272	222	312	353	244	157	182	205	234
SEP	195	213	270	296	298	272	233	162	225	240
OCT	189	208	91	210	262	133	200	253	244	199
NOV	103	121	0	109	66	109	25	85	84	78
Total Annual Usage	1,683	1,857	1,719	2,169	2,223	1,883	2,007	1,627	1,935	1,900
Surplus	957	783	921	471	417	757	633	1,013	705	740

Table III.A-1 compares the annual secondary water usage against the City's available water right duty of 2640 afa. The difference between these is surplus secondary water. Between 2016 and 2024 the volume of surplus secondary water has fluctuated between 417 acre-feet and 1,013 acre-feet, with an average of 740 afa during that time period.

Monthly consumption data for 2022 to 2024 is shown in Table III.A-2. The monthly average of secondary water consumption during this period has been 206 acre-feet. Figure III.A-1 depicts the 3-year monthly average usage as a percentage of the total use over the 9-month irrigation season.

Table III.A-2: Secondary water usage by month

Month & Year	Monthly Water Usage Data (Acre-Feet)			
	2022	2023	2024	Average
MAR	119	14	78	70
APR	267	96	182	182
MAY	307	226	238	257
JUN	385	250	319	318
JUL	314	359	360	344
AUG	157	182	205	181
SEP	233	162	225	207
OCT	200	253	244	232
NOV	25	85	84	65
DEC	0	0	0	0
Average	**223**	**181**	**215**	**206**

Monthly % of Usage		
Month	% of Annual	% of Average
MAR	3.8%	34.1%
APR	9.8%	88.1%
MAY	13.8%	124.6%
JUN	17.1%	154.2%
JUL	18.5%	166.9%
AUG	9.8%	87.9%
SEP	11.1%	100.2%
OCT	12.5%	112.6%
NOV	3.5%	31.4%
DEC	0.0%	0.0%

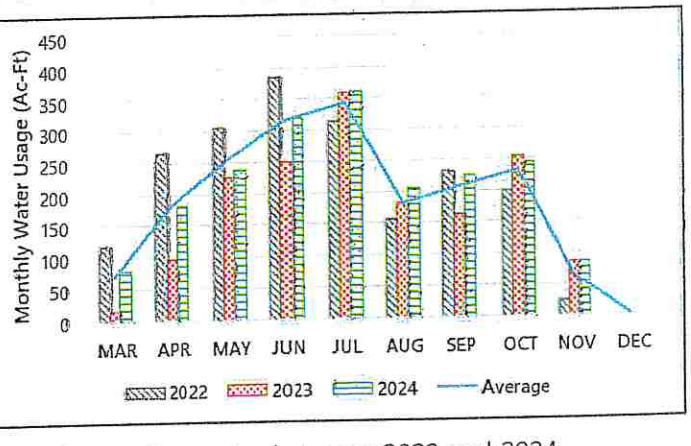


Figure III.A-1: Seasonal distribution of secondary water between 2022 and 2024

B. USAGE BY CONNECTION TYPE

Information regarding the number of secondary water connections was provided by LaVerkin City. As of the most recent 2024 data, there were 1,087 total secondary water connections, including 1,013 residential, 1 commercial, 1 industrial, 11 institutional and 61 agricultural connections. The number of connections between 2022 and 2024 is summarized below in Table III.B-1.

Table III.B-1: LaVerkin City secondary water connections 2022-2024

Secondary Water Connection Data						
Year	Residential Connections	Commercial Connections	Industrial Connections	Institutional Connections	Agricultural Connections	Total Connections
2022	1,003	3	1	7	61	1,075
2023	1,003	1	1	7	61	1,073
2024	1,013	1	1	11	61	1,087

The City's secondary water system is unmetered and does not have reliable methods to monitor the consumption of each end user. Based on estimates provided by the City, secondary water usage is approximately distributed among the different connection types as shown in Table III.B-2. The Equivalent Residential Unit (ERU) ratio is also shown in Table III.B-2. The ERU ratio is simply the average usage for a given connection type divided by the average usage of a residential connection. Computing the average usage value per ERU allows for the comparison between a residential connection and any other type of connection. For example, Table III.B-2 shows that the average agricultural connection used 5.8 times more water than the average residential connection in 2022.

Table III.B-2: Share of usage by connection type and ERU ratio by connection type

Year	Total Monthly Average Water Use (gal)					Equivalent Residential Unit Ratio			
	Residential	Commercial	Industrial	Institutional	Agricultural	Commercial	Industrial	Institutional	Agricultural
2022	47,232,008	726,646	726,646	7,266,463	16,712,864	5.1	15.4	22.0	5.8
2023	38,289,226	589,065	589,065	5,890,650	13,548,495	15.4	15.4	22.0	5.8
2024	46,238,164	700,578	700,578	7,706,361	14,712,143	15.3	15.3	15.3	5.3
				Average ERU Ratio		12.0	15.4	19.8	5.6

The total number of ERUs in the system can then be determined by multiplying the number of connections of each type by their respective ERU ratios. The total number of ERUs for each connection type are shown in Table III.B-3. The distribution of ERUs by connection type is given in Table III.B-4.

Table III.B-3: Total ERUs by connection type

Year	Equivalent Residential Units					
	Residential ERUs	Commercial ERUs	Industrial ERUs	Institutional ERUs	Agricultural ERUs	Total ERUs
2022	1,075.0	15.4	15.4	154.3	354.9	1,615.1
2023	1,073.0	15.4	15.4	154.3	354.9	1,613.1
2024	1,087.0	15.3	15.3	168.8	322.3	1,608.8

Table III.B-4: Estimated distribution of secondary water usage by connection type according to City staff

Connection Type	Average % Usage
Residential	66.9%
Commercial	1.0%
Industrial	1.0%
Institutional	9.9%
Agricultural	21.3%

The estimated average usage per ERU is given in Table III.B-4. The three-year average is 1,028 gpd per ERU.

Table III.B-4: Average usage per ERU

Year	Average Total Usage Per ERU		
	Yearly (gal)	Monthly (gal)	Daily (gal)
2022	404,923	33,744	1,109
2023	328,663	27,389	900
2024	391,908	32,659	1,074
3 Yr Ave	375,165	31,264	1,028

C. USAGE BY BILLING TYPE

Under the City's existing billing structure irrigation water users are billed either as contract holders or lease users. This Study assumes that most contract holders have agricultural type connections, and that some contract holders use less, and some more, than the amount allotted to them. This Study also assumes that all commercial, industrial, and institutional connection types lease water, and that a majority of users who lease water do so for lawns and gardens.

Where no meters are in place to measure the usage of each user, the procedure used to estimate the average daily usage of lease users and contract holders is explained in this section.

This Study used the guidelines for determining outdoor use given in Section R309-510-3 of the State of Utah Administrative Rules to determine lessee usage. This guideline suggests that in LaVerkin the average annual usage should be approximately 3.26 acre-feet is used per year per acre of irrigated acre. City staff provided data on the average lot size and open space representing residential irrigation users. Based on the data provided, an average of 0.14 irrigable acres per lease user was estimated.

The average 0.14 irrigable acres per lease user was multiplied by the assumed usage of 3.26 afa per irrigated acre to determine the estimated average usage per lease user. The resulting estimated average lessee usage is presented in Table III.C-1.

As mentioned in this section all users of irrigation water can be categorized as either lease users or contract holders. Therefore, the total contract holder usage is equal to the total system usage less the lessee usage. This amount was distributed evenly across the 292 total contract holders to obtain the average contract holder usage values given in Table III.C-1. As the table shows, the estimated average usage per contract holder is approximately 5.1 afa. This does not seem unreasonable since each contract holder owns an average of 1.51 share equivalents, and each share equivalent allows for delivery of up to 4.4 afa. This means that on average, each contract holder has the right to delivery of up to 6.64 afa.

The numbers presented in Table III.C-1 will be used as the average lessee and contract holder usages throughout the rest of this Study.

Table III.C-1: Estimated average usage between lessee and contract holders

Estimated Average Usage by Billing Type				
Billing Type	AFA	gal/year	gal/month	gal/day
Average Lease User	0.459	149,549	16,617	554
Average Contract Holder	5.087	1,657,711	184,190	6,140

D. AVERAGE DAY DEMAND

The Average Day Demand (ADD) for both lease users and delivery contract holders was determined as described in Section III.C and reported in Table III.C-1. The average usage for lessees and contract holders is estimated to be:

- Lease Users: 554 gpd
- Contract Holders: 6,140 gpd

E. PEAK DAY DEMAND

Peak Day Demand (PDD) is defined by the Utah Administrative Code as the water system's demand on the day of highest water consumption. Several approaches were used to estimate the expected peak day demand of the system.

The first approach assumes that peak day demand in LaVerkin City would follow the guidelines for irrigation use given in Utah Administrative Code R309-510-7. This section of the code directs design for culinary water systems but provides general guidelines for water systems that provide culinary water for irrigation. According to Table 510-3, LaVerkin' secondary water system should be capable of providing at least 4.90 gpm per irrigated acre. Based on the average land use assumptions stated in Section II.C and Section III.C, the total irrigated acreage by the City's billing records is shown in Table III.E-1. By this approach the irrigation system should be capable of providing 2,179 gpm.

Table III.E-1: Estimated average irrigable area and minimum required source capacity

Connection Type	Average Irrigable Area per Connection (acres)	Total Connections	Total Irrigable Area (acres)
Delivery Contract	1.133	292	330.9
Lease User	0.141	808	113.8
Total		1,100	444.7
State Required Source Capacity (gpm/irrigable acre)		**Total Required Source Capacity (gpm)**	
4.90		2,179	

The PDD was also estimated by reviewing historical use data from prior irrigation seasons. As shown in Table III.A-1, July is the month with the highest average usage. A ratio was computed to compare the secondary water usage from a typical month to the usage of the average peak month (July) and the maximum historical month usage recorded since 2016. These ratios, called peaking ratios, and the PDD associated with each are reported in Table III.E-2.

Table III.E-2: Peaking factors used to determine the system PDD

System Peak Day Demand Determination			
Demand	Method of Determination	Required Source Capacity (gpm/system)	Peaking Factor
Average Day Demand	Historical Usage	1,556	1
Peak Day Demand - Approach 1	R309-510 Table 510-3	2,179	1.40
Peak Day Demand - Approach 2	Average Peak Month (July)	2,368	1.52
Peak Day Demand - Approach 3	Historical Peak Month (May '19)	3,085	1.98

Based on the spread of the historical peaking ratios, this Study concludes that the PDD is between 2,179 gpm and 3,085 gpm. Whereas the peaking factor in the average peak month is 1.52, and the maximum peaking factor recorded since 2016 was 1.98, this Study estimates the PDD using a peaking factor of two times the historical average system demand, or 3,111 gpm, as reported in Table III.E-3. The usage values for lessee and delivery contract holder associated with the PDD are also given in Table III.E-3.

Table III.E-3: PDD for the system, lease users and contract holders

Peak Day Demand		
Design Peak Day Demand	3,111	gpm/system
Design Peak Day Demand Lessee Usage	1,108	gpd/Conn.
Design Delivery Contract Peak Day Demand Usage	12,278	gpd/Conn.

F. PEAK INSTANTANEOUS DEMAND

Peak Instantaneous Demand (PID) for outdoor irrigation is defined as the highest demand on the system at any one instance. This can be determined based on peak instantaneous water flow data if such data is available.

Based on master meter data available at the Chance Hardy Filter Station, the City has recorded peak instantaneous demands as high as 8 cfs, or approximately 3590 gpm.

G. USAGE REDUCTION - CONSERVATION

This Study assumes that future development within LaVerkin will comply with WCWCD's long-term water efficiency and conservation goals, as written in the *Regional Water Master Plan* (WCWCD, update 2023). Specifically, the plan reports an average annual metered water use per ERC and targets a 23.19% water use reduction goal for future use. The plan also estimates that approximately 57% of water usage for new development will come from outdoor use.

Based on these projections, this Study estimates outdoor usage for new development of approximately 0.20 afa, or 238 gallons per day, as shown in Table III.G-1.

Table III.G-1: Estimated outdoor usage of future development in LaVerkin City based on figures from the *Regional Water Master Plan (WCWCD, 2023)*

Future Development (Hi-Efficient Water Use)		
Average annual metered water use per ERC	198,568.00	gal/year
2030 conservation target	23.19%	
Average daily metered use per ERC	544.0	gal/day
Estimated annual use with conservation target	152,520.08	gal/year
Estimated daily use with conservation target	417.9	gal/day
Estimated outdoor use fraction	57%	
Estimated daily outdoor use	238.2	gal/day
Estimated monthly outdoor use	7,145	gal/month
Estimated yearly outdoor use	64,309	gal/year
Estimated yearly outdoor use	0.20	afa

H. BUILD-OUT ANALYSIS

In addition to the 20-year planning window this Study considers outdoor water use for the scenario in which all existing zoning within the Lower Bench is filled. This scenario is referred to as the "build-out" condition.

The Study incorporates findings from the *LaVerkin City Culinary Water Master Plan (CWMP) Update (2025)* and adopts its buildout estimates while recognizing differing growth trajectories

between the culinary and secondary water systems. For example, secondary water demand on the lower bench is anticipated to be less at the buildout condition than in the proximate future. This is due to the aforementioned conservation targets, as well as the reduction in irrigation demand as agriculturally zoned properties are exchanged for other types of development.

The CWMP presented a build-out projection on the lower bench. As can be seen in Table III.H-1, the CWMP projects 4,222 residential culinary water ERUs and 5,419 total culinary water ERUs at the build-out condition.

Table III.H-1: LaVerkin City lower bench culinary water build-out as reported in the *LaVerkin City CWMP Update (Sunrise, 2025)*

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

This Study adapts the build-out projection from the CWMP to the City's secondary water system. This Study assumes that at the build-out condition, all culinary water connections will also have a secondary water connection. The projected number of commercial, institutional and industrial connections shown in Table III.H-2 were calculated by dividing the ERUs of each connection type by the respective equivalent ERU ratios per connection provided in the CWMP.

This Study also assumes that not all delivery contracts will be held by the City at the build-out condition. This Study assumes that there will be a residual of approximately 10% of the now 290 delivery contract holders, and that there is an average of 1.11 irrigable acres per contract holder.

Based on these assumptions, a projection of the number and type of irrigation connections comprising LaVerkin's secondary water system at the build out condition is presented in Table III.H-2.

Table III.H-2: LaVerkin City lower bench secondary water system at build-out

Lower Bench Secondary Water System Build-Out Summary	
Delivery Contract Holders	30
Lessees	4,542
Residential Connections	4,222
Commercial Connections	310
Institutional Connections	30
Industrical Connections	10
Total Connections	4572

IV. SYSTEM GROWTH ANALYSIS

A. LENGTH OF PLANNING PERIOD

It is typical for a master plan to use a 10- or 20-year planning period. For example, if the first year of a 10-year planning period were 2025, the 10th and final year would be 2034. This Study will use calendar years and will assume a 20-year planning period when considering recommended improvements, beginning in the year 2025 and concluding in the year 2044. This planning period will allow an adequate evaluation of the system for the potential infrastructure improvements or other needs. Revenue sources should be carefully evaluated each year as budgets are set by the city council.

B. PROJECTED GROWTH RATE

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

Sunrise has recently performed a master plan study for LaVerkin's culinary water system. The Culinary Water Master Plan (CWMP) was written for the planning period between 2025 and 2044, and analyzed historical population records, census data, water connection data and water population data to determine a growth rate for the planning period. This Study uses the growth figures presented in the CWMP and considers differences to these growth projections that are specific to the City's secondary water system.

Historic population growth and population growth rates are presented in Table IV.B-1 and Table IV.B-2.

Table IV.B-1: LaVerkin City historic population data

	POPULATION ESTIMATE - PAST			
YEAR	CENSUS DATA	RESIDENTIAL WATER CONNECTION DATA	WATER POPULATION DATA	AVERAGE
2016	4,182	4,170	4,800	4,384
2017	4,225	4,256	4,870	4,450
2018	4,268	4,327	4,700	4,432
2019	4,329	4,420	4,485	4,411
2020	4,383	4,485	4,520	4,463
2021	4,286	4,587	4,575	4,483
2022	4,360	4,284	4,605	4,416
2023	4,400	4,453	4,650	4,501

Table IV.B-2: LaVerkin City historic growth rate

YEAR	PERCENT GROWTH			AVERAGE
	CENSUS DATA	RESIDENTIAL WATER CONNECTION DATA	WATER POPULATION DATA	
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%
		2016-2023 AVERAGE		1.61%

The City's anticipated growth rate between 2016 and 2023 was 2.5% to 2.75%, which is higher than the observed growth rates reported in Table IV.B-2. 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 Study will use two growth rates: one for the first five years and a second for the remainder of the planning period. The growth rates used in this Study are presented in Table IV.B-3.

Table IV.B-3: Growth rates for the planning period

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

C. 20-YEAR PROJECTED GROWTH

The forecasted growth of secondary water connections in LaVerkin is dependent on several factors. Firstly, growth in the secondary water system is constrained by the limits of the City's service area. This area was defined in Section II.B and is known as the "lower bench". At the time of writing of this Study the City has no intention to deliver secondary water to future development on the upper bench. This Study assumes that the secondary water system will not be expanded to the upper bench.

This Study assumes that all future development on the lower bench will be provided with a secondary water connection. New secondary water connections are assumed to grow at the growth rates given in Table IV.B-3. The projected growth of secondary water connections through 2045 is presented in Table IV.C-1.

Table IV.C-1: 20-year projected growth of secondary water connections

Year	Estimated Growth Rate	Total Contract Holders	Lessees Connected	Prospective Lessees not Connected	Prospective Lessees Converted	Added Development (Lower Bench)	Total New Development (Lower Bench)	Total Lessee Connections	Total Irrigation Connections
2024	3.0%	292	808	560	40	0	0	808	1,100
2025	3.0%	288	848	520	40	24	24	872	1,160
2026	3.0%	283	888	480	40	26	50	938	1,222
2027	3.0%	279	928	440	40	28	79	1,007	1,286
2028	3.0%	275	968	400	40	30	109	1,077	1,352
2029	2.5%	271	1,008	360	40	27	136	1,144	1,414
2030	2.5%	267	1,048	320	40	29	164	1,212	1,479
2031	2.5%	263	1,088	280	40	30	195	1,283	1,545
2032	2.5%	259	1,128	240	40	32	227	1,355	1,613
2033	2.5%	255	1,168	200	40	34	261	1,429	1,683
2034	2.5%	251	1,208	160	40	36	296	1,504	1,755
2035	2.5%	247	1,248	120	40	38	334	1,582	1,829
2036	2.5%	244	1,288	80	40	40	373	1,661	1,905
2037	2.5%	240	1,328	40	40	42	415	1,743	1,983
2038	2.5%	236	1,368	0	0	44	458	1,826	2,063
2039	2.5%	233	1,368	0	0	46	504	1,872	2,105
2040	2.5%	229	1,368	0	0	47	551	1,919	2,148
2041	2.5%	226	1,368	0	0	48	599	1,967	2,193
2042	2.5%	222	1,368	0	0	49	648	2,016	2,239
2043	2.5%	219	1,368	0	0	50	698	2,066	2,286
2044	2.5%	216	1,368	0	0	52	750	2,118	2,334
2045	2.5%	213	1,368	0	0	53	803	2,171	2,384

As part of the City's conservation measures, they are working to make secondary water available to all connections. The number of prospective secondary water users is shown in Table IV.C-2 and these were estimated by subtracting the number contract holders, active lessees and standby connections from the number of existing culinary water connections. This Study assumes that the City will connect all 268 of these users to secondary water, and that standby connections will begin using secondary water at a rate of approximately 40 connections per year between 2025 and 2038, as shown in Table IV.C-1.

Table IV.C-2: Unconnected Secondary Water Users in 2024

Unconnected Secondary Water Users	
Total Culinary Water Connections	1,660
Contract Holders	292
Active Lessee	808
Standby Connections	292
Unconnected Secondary Water Users	268

As build-out occurs this Study anticipates that contract holders will sell their delivery contracts to LaVerkin City at a rate of -1.50% per year for the planning period. Delivery contracts will decrease as properties with agricultural connections are sold and developed into properties with residential type secondary water connections.

V. WATER RIGHTS ANALYSIS

A. EXISTING WATER RIGHTS PORTFOLIO

LaVerkin's existing secondary water rights were acquired from the LaVerkin Bench Canal Company and are identified in Table V.A-1 below. The water rights are listed according to number, source, and flow.

Table V.A-1: LaVerkin City total secondary water rights

Secondary Water Rights			Flow		Duty
W.R. #	Type	Source	gpm	cfs	ac-ft
81-2481	Industrial	Virgin River	13.3	0.0297	20.0
81-2477			2,230.5	4.970	1,630.0
a13530	Irrigation	Virgin River	1,346.4	3.000	990.0
81-4334	Irrigation	Virgin River			
		Total Other Water Rights	3,590.20	8.00	2,640.00

B. EXISTING REQUIRED WATER RIGHT

The City's required water right is determined from the ADD on the system. The ADD for lease users and contract holders was determined in Section III.D. These estimates of individual usage can be converted to an average system-wide demand of 1,882 afa.

Table IV.B-1 subdivides the average system-wide demand between contract holders and lease users. This is done firstly to account for the different projected growth patterns between lessees and contract holders, and secondly, to ensure that the lessee usage does not exceed the delivery contracts owned by the City.

Based on the total number of delivery contract holders plus lease users, and the estimated average usage for each, the City has access to enough water rights to supply its existing water right demand, with a surplus of 758 acre-feet, as shown in Table V.B-1.

Table V.B-1: LaVerkin total secondary water right surplus

Existing Average Demand (Total Use)								
292	Delivery	X	6,140 gpd X	1 day X	1 hr	=	1,245	gpm
	Contract Holder		DC	24 hr	60 min.			
292	Delivery	X	6,140 gpd X	274 day X	1 ac-ft.	=	1,506	ac-ft
	Contract Holder		DC	1 yr	325,829 gal			
808	Lessee	X	554 gpd X	1 day X	1 hr	=	311	gpm
	Connections		LC	24 hr	60 min.			
808	Lessee	X	554 gpd X	274 day X	1 ac-ft.	=	376	ac-ft
	Connections		LC	1 yr	325,829 gal			
					Total Required Water Right		1,882	ac-ft
					Existing Secondary System Water Right Surplus		758	ac-ft

C. PROJECTED REQUIRED WATER RIGHT

Using the same method of calculating water right demand, projections for the 10-, 20-, and 40-year planning horizons indicate that the City will maintain a surplus of water rights through the entire 40-year period, as shown in Table V.C-1. In the near-term, due to the relatively rapid addition of the unconnected secondary water users and additional growth, combined with the relatively slow attrition of high-usage delivery contracts, this Study estimates that a peak demand year, or worst-case demand year, will occur by the year 2038.

Table V.C-1: Projected growth of lease users, contract holders, unconnected users, irrigation demand, and water right surplus through 2065

Year	Total Lease Users	Total Contract Holders	Total Unconnected	Projected Irrigation Demand (afa)	Projected Total Water Right Surplus/Deficit (afa)
2025	872	288	520	1,857	976
2030	1212	267	320	1,870	963
2035	1582	247	120	1,897	936
2038	1826	236	0	1,920	912
2040	1919	229	0	1,903	930
2045	2171	213	0	1,868	965
2050	2456	197	0	1,845	987
2055	2779	183	0	1,836	997
2060	3144	169	0	1,841	992
2065	3558	157	0	1,825	1007

Figure V.C-1 shows the forecasted growth conditions described in this section. The forecasted number of total connections is shown by the black line in the figure. The number of total connections (represented by the black line) grows as the delivery contract connections are converted to lease connections. As the City purchases the delivery contracts the obligation to delivery contract holders (light blue line) decreases. The total irrigation demand remains relatively constant as higher consumption delivery contracts convert to more efficient lease connections.

The green line in Figure V.C-1. represents the City's priority Virgin River water right. LaVerkin's surplus water (dark blue line) is the difference between the City's water right and the total secondary water demand (red line). The dashed surplus line represents the available surplus after repairs to the system to reduce slippage in the system. The values corresponding to the dashed line are those reported in Table V.C-1. For a discussion on these repairs see Section IX.C.

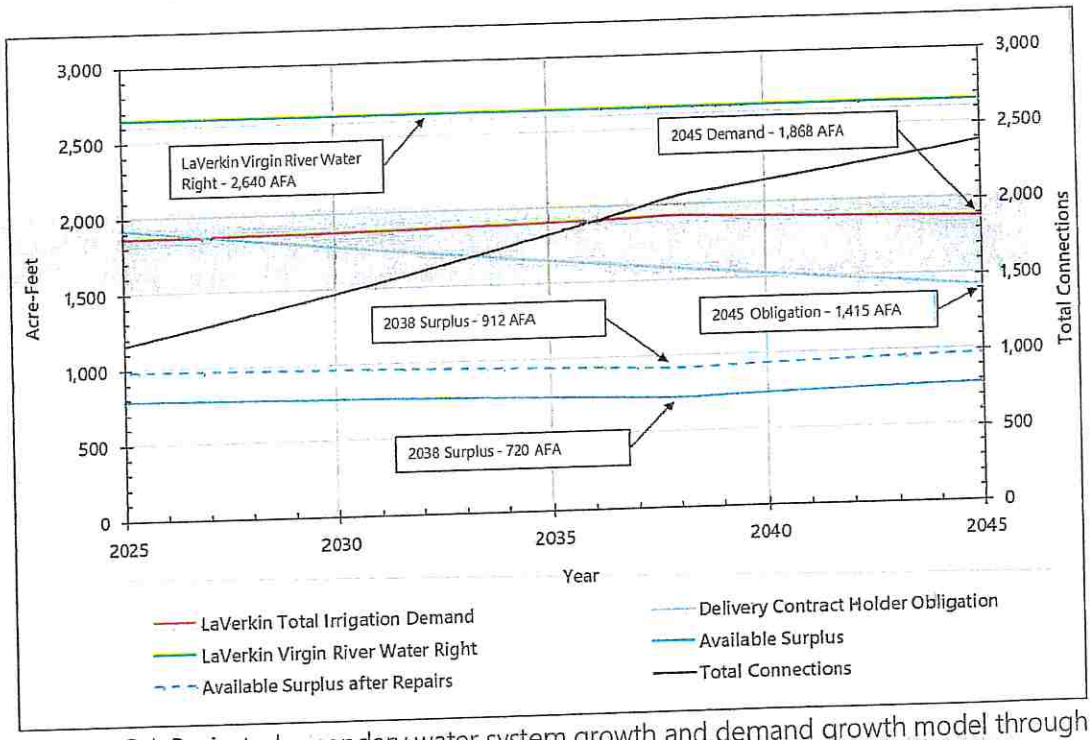


Figure V.C-1: Projected secondary water system growth and demand growth model through 2045

D. RECOMMENDED WATER RIGHTS IMPROVEMENTS

The projections in this analysis show that the City has sufficient water rights to meet the secondary water demands through the year 2065. Due to this sufficient capacity, this Study does not provide any recommended water rights improvements.

In 2026, Ash Creek Special Services District (ACSSD) will complete construction of a new water reclamation facility within the LaVerkin City boundary. The facility will receive wastewater from the surrounding region and produce Type I effluent. In conjunction with this treatment facility, WCWCD is currently developing a regional reuse program which could make additional water rights available to the City for irrigation.

VI. WATER SOURCE ANALYSIS

A. EXISTING WATER SOURCE CAPACITY

The City's sole secondary water source comes from a piped connection to the Quail Creek Diversion structure. Sufficient data is not available to determine a total source capacity. The capacity of the pipeline exceeds the City's water rights in the Virgin River and the measured historical usage. The City's source capacity used in this Study will be the 8.0 cfs (3590 gpm) flow rate limit established by the water rights given in Table V.A-1.

B. EXISTING REQUIRED WATER SOURCE CAPACITY

The source capacity calculation uses the PDD, which was determined in Section III.E to be:

- 1,108 gpd for lease users and
- 12,278 gpd for contract holders.

Based on the existing number of delivery contract holders plus lease users, and the estimated PDD for each, the City's secondary water system source demand is 3,111 gpm as shown in Table VI.B-1. The table shows that there is an existing source capacity surplus of 479 gpm.

Table VI.B-1: LaVerkin City water source capacity versus existing demand

Existing Required Source Capacity						
808 Lessee Conn X	1,108 gpd X / ERU	1 day X / 24 hr	1 hr / 60 min.	=	622	gpm
292 Delivery Contr X	12,278 gpd X / ERU	1 day X / 24 hr	1 hr / 60 min	=	2,490	gpm
Total Required Source Capacity					**3,111**	**gpm**
Source Capacity Surplus/Deficit					**479**	**gpm**

C. PROJECTED REQUIRED WATER SOURCE CAPACITY

Applying the same PDD to the projected growth of the irrigation system, outlined in Section IV, this Study anticipates that the City will have sufficient source capacity to exceed the secondary water demands throughout the planning period. Table VI.C-1 illustrates the surplus of available source relative to the projected demand from lease users.

As described in Section V.C, this Study anticipates that the irrigation system will experience a year of peak demand by the year 2038. In that year, this Study estimates excess source capacity of 371 gpm as shown in Table VI.C-1.

Table VI.C-1: LaVerkin City water source capacity versus projected demand

Year	Total Lease Users	Total Contract Holders	Total Unconnected	Required Source Capacity (gpm)	Projected Source Capacity Surplus/Deficit (gpm)
2025	872	288	520	3,113	477
2030	1212	267	320	3,134	456
2035	1582	247	120	3,179	411
2038	1826	236	0	3,219	371
2040	1919	229	0	3,190	401
2045	2171	213	0	3,131	459
2050	2456	197	0	3,093	497
2055	2779	183	0	3,078	513
2060	3144	169	0	3,085	505
2065	3558	157	0	3,117	474

This Study also evaluated how many additional lease users could be supplied without any attrition of delivery contract usage. If the existing usage patterns persist, and there is no attrition of contract holders, the source capacity of the system can support an additional 645 lease users, as demonstrated in Table VI.C-2.

Table VI.C-2: Maximum additional connections supportable by existing source capacity

Maximum Allowable Connections at Peak Day Demand						
1,453 Lessee Conn X	1,108 gpd X / ERU	1 day X / 24 hr	1 hr / 60 min.	=	1,117	gpm
290 Delivery Contr X	12,278 gpd X / ERU	1 day X / 24 hr	1 hr / 60 min	=	2,473	gpm
Total Required Source Capacity					**3,590**	**gpm**
Source Capacity Surplus/Deficit					**0**	**gpm**
Total Allowable New Lessee Connections					**645**	

D. RECOMMENDED WATER SOURCE CAPACITY IMPROVEMENTS

The source capacity analysis shows that the existing available source is sufficient to accommodate an existing peak day demand through the planning period, though at the peak projected use in the year 2038, the surplus source capacity is only 371 gpm. The system growth model anticipates that the system's excess source capacity will increase beyond 2038 as the demand from contract holders decreases and is replaced by development with lesser irrigation demand.

VII. WATER STORAGE CAPACITY ANALYSIS

A. EXISTING WATER STORAGE CAPACITY

LaVerkin City currently has no storage for secondary water.

B. EXISTING REQUIRED WATER STORAGE CAPACITY

The State does not require secondary water systems to provide storage. However, for culinary water systems that provide secondary water, guidelines for secondary water storage are found in the State of Utah Public Drinking Water Regulations, R309-510. For LaVerkin the guideline would be to use the maximum of either 4,964 gallons per irrigated acre, or the ADD, plus emergency storage. Whereas LaVerkin uses culinary water only for fire suppression, no additional secondary water storage is necessary for fire suppression.

The ADD was determined to govern, and the minimum required storage was determined to be approximately 2.24 million gallons (MG) as shown in Table VII.B-1.

Table VII.B-1: Recommended secondary water capacity to satisfy existing ADD

Existing Required Storage Capacity					
LaVerkin City Historic Average Day Consumption					
	554 gpd Conn.	X	808 Lessee Conn.	=	447,538 gpd
	6139 gpd	X	292 Delivery Contract Holders	=	1,792,635 gpd
			Total Existing Required Storage		2,240,174 gal.
			Total Existing Capacity		0 gal.
			Existing Capacity Deficit		(2,240,174) gal.

C. PROJECTED REQUIRED WATER STORAGE CAPACITY

Based on the projected growth model outlined in Section IV, and the peak anticipated demand in the year 2038 explained in Section V.C, this Study anticipates that the required storage capacity based on one average day demand will be as shown in Table VII.C-1. According to these projections, this Study anticipates that in 2038 a storage capacity of approximately 2.32 MG will be needed to supply one ADD.

Table VII.C-1: LaVerkin City projected required secondary water storage capacity

Year	Total Lease Users	Daily Lessee Usage (gal)	Total Contract Holders	Daily Contract Holder Usage (gal)	Total 1 Day Required Storage (gal)
2025	872	475,467	288	1,765,746	2,241,213
2030	1,212	619,596	267	1,637,229	2,256,824
2035	1,582	770,757	247	1,518,066	2,288,823
2038	1,826	866,913	236	1,450,772	2,317,685
2040	1,919	888,937	229	1,407,575	2,296,512
2045	2,171	948,998	213	1,305,127	2,254,125
2050	2,456	1,016,951	197	1,210,135	2,227,087
2055	2,779	1,093,835	183	1,122,058	2,215,892
2060	3,144	1,180,821	169	1,040,390	2,221,211
2065	3,558	1,279,238	157	964,667	2,243,905

D. RECOMMENDED WATER STORAGE CAPACITY IMPROVEMENTS

While the existing source currently provides a reliable and consistent supply sufficient to meet the City's secondary water demands without the need for storage, the addition of a storage facility could offer several operational benefits. Storage would help buffer peak demands on the source and support pressure regulation throughout the distribution network. Additionally, a properly designed storage facility could facilitate sediment removal prior to water entering the distribution system, thereby improving overall water quality.

VIII. SECONDARY WATER FILTERING STATION ANALYSIS

A. EXISTING FILTER STATION

LaVerkin City currently filters its secondary water following diversion from the Virgin River, which is known for carrying significant amounts of sediment and other debris. During storm events, when the river experiences elevated turbidity and flow, the City typically shuts down the secondary irrigation system to prevent sediment-related clogging and damage.

The existing filtration system, constructed in 2010, consists of three Amiad filters in parallel, each equipped with electronic backwash capabilities. These filters utilize screens rated to capture particles down to 500 microns (0.5 mm) in diameter, primarily targeting coarse sand and larger debris. While the installation represented a substantial improvement at the time, the system still allows fine sediment and silt to pass through.

A) RECOMMENDED WATER FILTERING IMPROVEMENTS

Should the City pursue a secondary water storage facility, as recommended in Section VII, the facility could act as a sedimentation basin and remove the need for filtration.

IX. SECONDARY WATER DISTRIBUTION SYSTEM ANALYSIS

LaVerkin City's existing distribution system is fed and pressurized directly from the Virgin River through the Chance Hardy filter station. From the filter station the water is conveyed to the system through three separate pipelines.

The pressurized pipe network distributes water to the end users throughout the City. This Study used the computer modeling software, AquaTwin, by Aquanuity©, to analyze the performance of the existing distribution network under PDD and PID conditions. The system performance was evaluated based on the pressure and flow available to end users. Operating pressures between 40 and 80 psi, and flow velocities of less than 5 feet/second were deemed acceptable for this Study.

The evaluation identified potential areas of improvement throughout the system. A map of the existing irrigation system model is presented as Appendix B of this report. The labels on the map indicate the corresponding number of each node in the irrigation system model.

A. EXISTING DISTRIBUTION SYSTEM ANALYSIS

The existing Average Day Demand, Peak Day Demand and Peak Instantaneous Demand were calculated in Section III. These flows were converted from gallons per day per end user to gallons per minute for the distribution system and are shown in Table IX.A-1 below.

Table IX.A-1: LaVerkin City existing secondary water demand

Average Day Demand		
Lease User (gpd)	Contract Holder (gpd)	System (gpm)
554	6,139	1,556
Peak Day Demand		
Lease User (gpd)	Contract Holder (gpd)	System (gpm)
1,108	12,278	3,111
Peak Instantaneous Demand		
System (gpm)		
3,590		

The existing model scenarios for PDD, PID and PDD demonstrate that the existing system is adequate to meet these demands. The resulting pressure at each node of the irrigation system under the three demand scenarios is presented in tabular form in Appendix B of this report. In general, under ADD conditions, the irrigation system provides adequate performance, as described above, throughout the City.

Under PDD and PID conditions, the area where irrigation service pressure is less than 40 psi extends into the east side of Zion View Estates.

B. PROJECTED DISTRIBUTION SYSTEM ANALYSIS

The projected system analysis is performed using the same assumptions in the existing system analysis, except that the projected demands from the worst-case irrigation demand year (2038), as defined in Section V.C, are used. The projected future demands are as follows:

- ADD – 1,628 gpm
- PDD – 3,257 gpm
- PID – 3,758 gpm

The existing distribution system was modeled considering the projected system demands. Based on these projected demands, the model identifies a slight increase in the total area where service pressures are less than 40 psi. However, this area remains confined to the Zion View Estates, Sunset View Estates, and Cottonwood Hollow subdivisions.

Maps and tables of the model output results for the projected secondary water demand are given in Appendix B of this report.

C. RECOMMENDED DISTRIBUTION SYSTEM IMPROVEMENTS

The projected distribution analysis indicates that the existing system has the capacity to maintain the described levels of service through the planning window. However, the system experiences several significant challenges which require attention. The following paragraphs list recommended system improvement projects to help with operation and maintenance of the system.

First, the 15-inch distribution line in 100 E is made of plastic irrigation pipe (PIP), which is old and brittle, and requires regular repair. This Study recommends replacing the full length of 15-inch trunkline from 500 N to 400 S. If a pressure regulating irrigation pond is constructed (as recommended in the PER section of this study), the 15-inch PIP line may be replaced with a 16-inch PVC line that can taper to a 12- and then 8-inch pipe to the south, as shown in Appendix C.

Second, many of the irrigation lines run along the backs and sides of private lots, outside of the right-of-way of City streets. This creates significant maintenance challenges when City staff need to access the lines for repairs. Relocating lines to City streets has been on the City's project priority list since the *LaVerkin City Secondary Water Master Plan* was published in 2010. Some of the lines requiring relocation which were identified in that report have been relocated as a result of other projects. A current map of the lines located outside of the City's right-of-way is presented as Appendix C of this report. The area of this project encompasses the entirety of LaVerkin City.

D. SYSTEM SLIPPAGE

LaVerkin City has reported that they anticipate as much as 0.4 cubic feet per second (cfs) of secondary water is lost due to slippage, or leakage, in the existing irrigation distribution network. It is estimated that this slippage value is constant when the system is in use. This equates to approximately 180 gpm, or 214 acre-feet during the typical 9-month irrigation season.

The City anticipates that the recommended improvements would help reduce the amount of observed slippage in the system. However, the exact location where the slippage occurs is unknown. The implementation of the recommended projects represents significant replacement of the existing irrigation system, approximately 25% of the system by pipe length.

LaVerkin City anticipates that most of the estimated slippage occurs within the area of the proposed improvement projects. By implementing these projects, it is anticipated that 90% of the observed slippage will be recaptured, representing nearly 8 percent of the City's annually available water.

X. SECONDARY WATER & REUSE FEASIBILITY STUDY INTRODUCTION

This Study includes an evaluation of the potential for mutual benefits of coordinated water resource planning between LaVerkin City and WCWCD. The concept of developing a new storage pond further developed from the need to identify practical uses and storage options for the reuse water produced by the Confluence Park Water Reclamation Facility (CPWRF) as part of the WCWCD Regional Reuse Purification System.

Early discussions considered alternatives such as sending the water directly to the Toquerville Secondary Water System (TSWS) and potentially back feeding into LaVerkin. One of the key purposes of a storage pond was to provide an intermediate storage location that could be filled without relying on high-pressure pumping—allowing water to be lifted once from Confluence Park to LaVerkin, and then a second time from LaVerkin to TSWS with more moderate pumping requirements. Furthermore, the reuse water could be used immediately in LaVerkin. Through these discussions, the idea of a LaVerkin-based storage pond emerged, and this report evaluates the feasibility of such a facility, identifies potential locations, and recommends a preferred site.

LaVerkin City has previously considered constructing a secondary water storage facility to support its system. This Study builds upon that earlier groundwork. The facility would be designed to store both reuse water and Virgin River water that the City uses for its secondary water system.

The following sections of the report establish the objectives and evaluation criteria for a potential pond site. A suitable location would need to meet the moderate head requirements associated with pumping from Confluence Park while also tying conveniently into LaVerkin's existing irrigation distribution system. Ideally, the pond would be situated at an elevation high enough to provide direct pressurization of the secondary irrigation network. In addition, the site must be large enough to store a practical volume of water, while remaining constructible and cost-effective to develop.

A. TARGET OBJECTIVES

For WCWCD, the strategic objectives relate to the regional reuse water program. Primary objectives include:

- Develop a storage facility to accommodate reuse water generated at the CPWRF.
- Strategically locate the storage facility to gain the operational flexibility to deliver reuse water to other interconnected facilities within its broader reuse network.

LaVerkin City's objectives in this joint study are focused on improving the reliability, efficiency, and sustainability of its secondary water system. These can be summarized as follows:

- Establish a storage facility that can regulate water quality and provide backup supply when river conditions are unsuitable for direct diversion.
- Improve the quality of water delivered to end users, which can be degraded by elevated total suspended solids (TSS) and silt—especially during or after flooding events on the Virgin River.

B. STORAGE FACILITY SELECTION CRITERIA

One component of this Study is to identify a potential site for a shared storage facility. The following criteria used to identify an appropriate location for a storage facility:

- target hydraulic grade line,
- target storage volume,
- operational efficiency, and
- the availability of suitable land.

These practical and technical considerations formed the basis of the site selection process used to identify and evaluate potential storage pond locations.

i) Target Hydraulic Grade Line

The elevation of the proposed storage pond is a critical factor in site selection, as it directly influences both the ability to fill the facility from the Virgin River and the potential to supply LaVerkin's secondary system under gravity pressure. An ideal location would strike a balance—low enough to be filled by gravity using existing infrastructure, yet high enough to preserve hydraulic energy and provide useful pressure to the distribution network without the need for additional pumping.

The context of the current operations provides the following hydraulic constraints. First, the existing hydraulic grade line at the Chance Hardy filter station under terminal head loss is shown in Table X.B-1. At the terminal head loss condition, the HGL is approximately 3382 feet at the filter station.

Table X.B-1: Hydraulic grade line at Chance Hardy filter station

HGL at Chance Hardy Filter Station		
Parameter	Clean Filters	Terminal Head Loss
Elevation (ft)	3151	3151
System Pressures (psi)	105	100
Total Head (ft)	3393	3382

WCWCD operates an existing 15-inch HDPE transmission line that runs north from the Chance Hardy Filter Station along Main Street. A target achievable hydraulic grade line was identified

after accounting for head loss along the line between the filter station and prospective pond sites. As the topography of LaVerkin slopes gradually upward to the north, and because more available parcels for siting a pond are also located on the north end of town, the longest potential fill line was assumed to extend to near the Interstate Rock pit, approximately 14,500 feet from the filter station.

The head loss at that distance was calculated based on the Hazen-Williams friction head loss formula shown in Equation 1.

Equation 1

$$h_f = \frac{3.022 v^{1.85} L}{C^{1.85} D^{1.17}}$$

Where h_f is the friction head loss in the pipe, v is the flow velocity in the pipe in ft/sec, L is the length of the pipe, C is a roughness coefficient dependent on the type of pipe material, and D is the pipe diameter in feet. Based on the calculated head loss, the approximate elevation range to which the Virgin River water can be delivered near the north end of the City is shown in Table X.B-2. A design fill rate of 2,500 gpm was used since this is slightly higher than the average demand in the peak month of July and would be required to keep the pond full at that demand. To provide a conservative buffer against variability in system performance and hydraulic conditions, a 10-foot safety factor was applied, establishing a target high-water elevation of between 3,320 and 3,330 feet for the proposed storage pond.

Table X.B-2: Target pond elevation range

Pond Elevation Range		
Design Flow Rate	2,500	gpm
Pipe Diameter, D	15	in
Flow Velocity, v	4.5	ft/sec
Pipe Length, L	14,500	ft
Roughness Coefficient, C	140	
Head Loss, h_f	51.9	ft
Maximum Pond Elevation at		
Terminal Head Loss	3330	ft
Clean Filters	3341	ft

To provide adequate pressure throughout LaVerkin's secondary system—where operating pressures typically range between 30 and 80 psi—the pond surface would need to be situated at least 70 to 185 feet above typical service elevations. Zion View Estates, at a typical elevation of 3290 feet, represents the highest point in LaVerkin's existing distribution system that receives typical irrigation pressures. Pressures are generally reduced in the higher Sunset View Estates. Without a booster pump, a pond elevation of approximately 3360 feet would be required to provide 30 psi pressure at Zion View Estates under peak instantaneous demand conditions.

Whereas this is higher than elevation to which the Virgin River water can be delivered, it was determined that a booster station would likely be required to raise the HGL of the pond.

Considerations were given to lifting water to a storage tank on the "Upper Bench". Through a cost-benefit analysis it was found that pumping water to the "Upper Bench" would be cost prohibitive. Feasible sites were therefore limited to the bench and hillside areas east of town.

ii) Target Storage Volume

The target storage volume for the proposed pond was determined based on LaVerkin City's projected irrigation demands in the highest demand year, projected by this Study in the year 2038. The goal was to provide storage capacity equal to at least two full days of demand in the average July month.

To estimate peak day demand, a peaking factor was applied to the average daily usage of lessees and contract holders. This peaking factor—calculated as the ratio of the average instantaneous demand in July to the average instantaneous demand—was found to be 1.52. The adjusted daily usage was then projected forward to the highest demand forecast year, 2038, to account for system growth. Under this worst-case scenario, the estimated peak day demand was calculated to be approximately 3.91 MGD, as shown in Table X.B-3.

Table X.B-3: Required storage capacity in projected peak demand year

Required Storage Capacity at Worst Case (2038) LaVerkin City Historic Peak Day Summer Month Consumption						
9345 gpd / ERU	X	254	ERU	=	2,370,665	gpd
843 gpd / ERU	X	1,826	ERU	=	1,539,989	gpd
1 Day Required Storage					3,910,654	gal.
2 Day Required Storage					7,821,308	gal.
Average Depth					10	ft
Required Pond Footprint					104,563	ft^2
Required Pond Footprint					2.40	acres

To meet the target of two days of storage, the required total storage volume was set at 7.82 million gallons, or approximately 24 acre-feet. For planning purposes, the pond was assumed to have an average depth of 10 feet. Based on that depth, the required surface area of the pond would be approximately 2.40 acres. This footprint informed the site selection process, ensuring each potential location could accommodate both the storage volume and pond grading.

iii) Operational Efficiency

The new storage facility would need to be integrated with LaVerkin City's existing distribution system. As such, the preferred location would utilize as much of the existing distribution system as possible to avoid costly improvements. Furthermore, costs of everyday operation such as pumping and maintenance or operation of the storage facility should be kept to a minimum.

iv) Site Suitability

In addition to hydraulic and operational criteria, the search for suitable sites required the availability of open land within the city boundaries capable of accommodating the proposed facility footprint. Each site requires consideration of how to resolve its own unique construction challenges.

Just as importantly, the land had to be owned by a party willing to sell to WCWCD.

XI. CONSIDERED POND SITE ALTERNATIVES

Given the selection criteria described, three candidate pond sites were identified, all on the north end of the City. Consideration was also given to siting a storage facility on the "Upper Bench." However, cost–benefit analysis showed that the pumping requirements for this option would be prohibitive. As a result, feasible locations were limited to bench and hillside areas east of town.

The location of the three potential pond sites, and the target contour line are shown in Appendix D of this report. An assessment of the three candidate sites is given in the following sections.

A. ALTERNATIVE 1 – PARCEL LV-154-A

i) Description

The first pond site is located on the foothills along the east side of LaVerkin City, near the north end of town. The property lies within the platted Cottonwood Hollow Phase 5 subdivision and is currently owned by Interstate Rock Products. The site is positioned on a hillside that contains elevations within the target range for storage. However, the area is characterized by relatively steep slopes, and portions of the site may be constrained by local hillside protection ordinances, which could limit the buildable area.

ii) Hydraulic Grade Line

The site is situated approximately 11,900 feet from the Chance Hardy Filter Station. At the design flow rate of 2,500 gpm, the calculated head loss along the 15-inch HDPE fill line is approximately 48.4 feet. Under these conditions, the Virgin River water could be delivered to a maximum elevation of roughly 3,330 to 3,340 feet, excluding the 10-foot factor of safety applied in previous evaluations.

The target elevation contour crosses the east side of this site. Substantial raising of the west side of the site would be required to attain a high-water elevation of 3320.

iii) Storage Volume

The challenging topography of the site would necessitate construction of an earthen embankment dam to provide adequate storage. Specifically, the west side of the site would require fill ranging from 20 to 40 feet in height to achieve the target pond elevation. Preliminary grading models assuming 2:1 interior side slopes and a maximum depth of 20 feet, indicate that, with a high-water elevation of 3,320 feet, the site could provide a total storage volume of approximately 7.3 million gallons (MG).

iv) Operational Efficiency

The site has several operational efficiencies. Firstly, the existing 15-inch HDPE line along Main Street could continue to be used as the pond fill line without requiring major realignment. Secondly, this site is approximately 6,000 feet from the CPWRF, meaning the generated reuse water could be delivered to the pond via a short and direct pipeline.

The pond would tie into LaVerkin's irrigation system from the north end with a new outlet line. To maintain existing service pressures, a booster pump station would be required. This station would house a high-flow, low-head pump designed to raise the HGL from the 3,320 foot pond elevation to approximately 3,375 feet.

v) Site Suitability

Several challenges affect the suitability of this site. The most significant physical constraint is the topography: the pond would be located on a hillside, requiring substantial grading. To achieve a target high-water elevation of 3,320 feet, the west embankment would need to be raised by importing fill material. Alternatively, if the pond elevation were lowered to reduce the amount of fill, the system would rely more heavily on booster pumps to meet required pressures, increasing ongoing operational costs.

Geotechnical considerations also introduce concerns. According to USGS Quaternary fault mapping, the Hurricane Fault is mapped as crossing the east side of this site. While a site-specific fault study conducted by Rosenberg Associates for the Cottonwood Hollow Phase 5 Subdivision did not identify any direct trace of the fault, its proximity and known seismic activity increase the risk of structural damage to a reservoir in the event of a significant earthquake. This geologic risk represents a notable disadvantage when evaluating the long-term reliability and safety of this location.

The site is owned by Interstate Rock Products, a landowner with an established and positive working relationship with WCWCD. Furthermore, due to the steep topography and hillside protection ordinances, portions of the property may be unsuitable for residential development.

B. ALTERNATIVE 2 – PARCEL T-3-1-13-40001

i) Description

The second alternative pond site is located in the Land at Mesa Views, within the Trail View Estates subdivision. The site lies just north of the access road running east–west north of the Interstate Rock pit. The proposed location is situated on a knoll, the top of which coincides with the target contour elevation of 3,320 feet. The knoll is a prominent landform and includes a portion of the popular Nephi's Twist trail, which would need to be considered in project planning.

ii) Hydraulic Grade Line

The site is approximately 14,500 feet from the filter station. Hydraulic modeling indicates that, accounting for head losses in the existing 15-inch HDPE line at the design flow of 2,500 gpm, water from the Virgin River could be delivered to the site at the target elevation of 3,320 feet while maintaining the 10-foot factor of safety. This makes the site hydraulically feasible within the established design parameters.

iii) Storage Volume

Preliminary grading analyses, assuming 2:1 interior side slopes and a maximum excavation depth of 20 feet, estimate a storage capacity of approximately 6.09 million gallons. The footprint of the knoll limits the achievable storage volume compared to other alternatives, though it still provides a usable capacity.

iv) Operational Efficiency

From an operational perspective, the existing 15-inch HDPE fill line could continue to serve as the pond fill line with only an extension required. However, the new outlet line connecting the pond to the distribution system would be longer than in other alternatives, leading to higher construction costs and a minor reduction in hydraulic efficiency.

Similar to the first alternative, a booster pump station would be required to raise the hydraulic grade from the pond elevation of 3,320 feet to approximately 3,375 feet to maintain the desired level of service across LaVerkin's irrigation system.

v) Site Suitability

Construction of a reservoir at this location would involve excavating into the knoll, resulting in a substantial net export of material. Given the proximity to Interstate Rock's active pit, the cost of material removal and export may be relatively low.

The site is located directly on a section of the Hurricane Fault that is mapped as concealed. A detailed fault hazard study would therefore be required prior to development. Geologic mapping indicates the knoll consists primarily of alluvial fan deposits. Nearby geologic formations may also provide suitable materials for use as pond liner construction, potentially reducing import costs for lining materials.

C. ALTERNATIVE 3 – PRIVATE PARCEL IN TRAIL RIDGE ESTATES

i) Description

The third alternative pond site is located within Trail Ridge Estates, just east of the second alternative along the same access road. The site occupies a natural drainage basin, the rim of which lies near the target contour elevation of 3,320 feet. The property is privately owned. Because of its natural basin configuration, the site was considered as a potential reservoir location with the idea that a dam across the west side of the basin could provide storage with minimal earthwork compared to hillside excavation alternatives.

ii) Hydraulic Grade Line

The rim of the basin lies at the target elevation contour of 3,320 feet. The site is located approximately 14,500 feet from the filter station. Hydraulic analysis indicates that water from the Virgin River could be delivered to the site at the design fill rate of 2,500 gpm while maintaining the 10 foot safety factor, making the site hydraulically feasible.

iii) Storage Volume

Although the basin appears favorable in aerial imagery, field reconnaissance and grading models show that it is relatively narrow and deep, with a limited surface area. Assuming 2:1 interior side slopes from the 3,320-foot contour, the pond would have a depth of approximately 40 feet and result in a total storage capacity of only 4.5 million gallons. This represents the smallest storage volume of the three alternatives, limiting the site's ability to meet seasonal irrigation demands.

iv) Operational Efficiency

Operationally, this site would function similarly to the second alternative. The existing 15-inch HDPE fill line could continue to serve as the pond fill line with an extension, while a new outlet line would need to be constructed to connect to the distribution system. A booster pump station would also be required to raise the hydraulic grade from 3,320 feet to approximately 3,375 feet to maintain current service levels.

v) Site Suitability

The limited storage volume and challenging geometry make this site less desirable than the other alternatives. A deep dam embankment would be required across the drainage basin, introducing both construction challenges and long-term stability risks.

In addition, because the site is an active drainage basin, a streamflow alteration permit would be required, and the reservoir would need to accommodate inflow from the basin's design flood.

The limited surface area and steep basin walls leave little additional storage capacity to safely route storm inflows, increasing the complexity and risk of development.

D. COMPARISON OF POND SITE ALTERNATIVES

The three pond sites present advantages and challenges that influence their overall suitability.

The first site (Cottonwood Hollow Phase 5) offers the greatest storage capacity at approximately 7.3 MG, with room to expand. However, it requires significant embankment construction on steep hillsides. Additionally, its proximity to the Hurricane Fault introduces long-term seismic risk, making it less favorable from a geotechnical standpoint.

The second site (Mesa Views / Trail View Estates knoll) provides moderate storage at approximately 6.1 MG and is situated on a knoll at the target elevation, minimizing the need for high embankment fills. However, it would require substantial excavation with a large net export of material. While the proximity to Interstate Rock's pit may mitigate costs, the site sits directly on a mapped concealed trace of the Hurricane Fault, requiring additional fault studies. The site would also require longer outlet connections, slightly reducing operational efficiency compared to the first site.

The third site (Trail Ridge Estates drainage basin) presents the lowest storage volume at only 4.5 MG, which significantly limits its ability to meet irrigation demands. While it appears attractive as a natural basin with a rim at the correct elevation, detailed evaluation shows that it would require a tall embankment dam, creating both construction and long-term stability concerns. Further complications include the need for a streamflow alteration permit and limited space to route storm inflows, reducing both safety and reliability.

A comparison of the three alternatives is given in Table XI.D-1.

Table XI.D-1: Comparison of alternative pond sites

Alternative Pond Site Comparison			
	Alternative 1	Alternative 2	Alternative 3
Location (Parcel ID)	LV-154-A	T-3-1-13-40001	NA
Parcel ID	Cottonwood Hollow Ph 5	Land in Mesa Views at Trail Ridge Est.	Trail Ridge Estates
Hydraulic Grade Line	Interstate Rock Products	Sanpete Investors, LLC - Lloyd Baker	Privately Owned
Storage Volume (gal)	7,325,695.08	6,090,305.76	4,536,221.54
Surface Area (ft2)	71,330.84	60,567.67	39,266.18
Depth	20.00	20.00	40.00
Average Depth	13.78	13.45	24.75
High Water El.	3,320	3,320	3,320
Pros	•Most storage capacity •Possibility to expand •Landowner is favorable to project	•Simplified construction methods •Safer site •Proximity to Interstate Rock pit	•Existing basin and site access •Proximity to Interstate Rock pit
Cons	•Substantial import material required •Likely high hazard rating •Proximity to Hurricane Fault	•Substantial export material required •Inability to expand •Outside of LaVerkin City limits	•Substantial inflow design flood •Deep fill dam required •Outside of LaVerkin City limits

XII. SELECTED ALTERNATIVE

Alternative 3 was quickly eliminated from consideration. While the natural basin initially appeared attractive, the steep and confined topography limited usable storage volume to only 4.5 million gallons. Achieving this volume would require a tall embankment dam, introducing construction challenges and long-term stability concerns. In addition, development of this site would trigger streamflow alteration permitting due to the large contributing drainage basin, further complicating its feasibility.

Between Alternative 1 and Alternative 2, both sites were determined capable of meeting system demands with near equal efficiency. Each would require similar integration projects—including extension of the existing 15-inch HDPE fill line, construction of a booster pump station, and new outlet connections to the irrigation system. At a high level, construction at Site 2 appeared somewhat more straightforward, as the pond would be excavated into a knoll rather than constructed with a large embankment. However, both sites presented geotechnical risks associated with the Hurricane Fault and would require detailed fault investigations prior to construction.

Ultimately, Alternative 1 was selected as the preferred option due to its larger storage capacity, and the positive working relationship between WCWCD and the landowner, Interstate Rock Products. Preliminary discussions with the landowner regarding use of the property for a reservoir were favorable, providing additional assurance of project feasibility. Site 2 remains identified as a potential backup location should issues arise during more detailed investigations at Site 1.

This section discusses the requirements to construct and integrate the pond in greater detail.

A. REQUIRED SYSTEM IMPROVEMENTS

The preferred alternative pond site was evaluated using network hydraulic modeling to assess system performance following its integration into the irrigation network. The evaluation was guided by the following performance criteria:

- Provide irrigation water of equal or better quality than that currently delivered,
- At pressures equal to or greater than those currently delivered, even under projected future demands.

Hydraulic modeling evaluated combinations of pipeline sizes, lengths, and configurations to identify the minimum set of projects necessary to satisfy these performance criteria. Through this iterative process, a system of improvements was developed that satisfies the performance requirements.

For the ease of construction phasing, the required system improvements are divided into two projects. The first project consists of those improvements needed to construct and fill the pond, and connect the pond to the existing irrigation system, known as the LaVerkin Pond & Pipeline improvements. The second project consists of the pipeline improvements required to maintain the existing levels of service, known as the LaVerkin Transmission Line improvements.

i) LaVerkin Pond & Pipeline Improvements

1. Construction of a pond to store approximately 8 million gallons of irrigation water.
2. Extension of the existing 15-inch HDPE fill line from 500 North to the pond. From 500 North, the fill line transitions from 15-inch to 18-inch diameter.
3. Construction of a new 24-inch transmission line from the pond site to 500 North, where it will be bored under 500 North and tied into the existing 15-inch trunkline along 100 East.
4. Construction of a booster pump station to raise the hydraulic grade by approximately 80 feet (~35 psi), ensuring the pond can pressurize the distribution system and maintain existing levels of service.

ii) LaVerkin Transmission Line Improvements

1. Repurposing of an existing, unused 10-inch culinary water crossing beneath State Street as part of the secondary irrigation system. Downstream of this crossing, an existing 6-inch line will be replaced with a new 10-inch trunkline extending to 500 North and westward to 360 West. The 10-inch trunkline will also extend along 300 West between 500 North and 200 North.
2. Installation of a new 8-inch looping line to connect 360 West with 600 North.

The proposed booster pump station will be somewhat unique in that the required pump head is essentially constant at about 80 feet (~35 psi), while the flow range will vary from near zero up to the maximum projected demand of 3,590 gpm. To reliably meet this demand, this Study anticipates installation of a multi-stage vertical centrifugal pump capable of operating efficiently across this flow range and delivering the necessary pressure increase to the irrigation distribution system.

Hydraulic modeling of the improved network indicates that the proposed configuration maintains, and in most areas improves, levels of service across LaVerkin City. Modeled results show an average increase of approximately 6 psi in system pressure.

The scope of these projects is illustrated in Appendix E of this report.

B. BOOSTER STATION EVALUATION

A high-level evaluation was performed to estimate the expected capital, operation, and maintenance (O&M) costs of the proposed booster station facility at the preferred alternative. The analysis was intended to establish a realistic expectation of long-term ownership costs and provide a basis for comparing alternatives.

For the purposes of this Study, it was assumed that booster station would serve only the lower bench demand. Electricity rates were based on Rocky Mountain Power's 2024 commercial service schedule. Assumptions on other pumping characteristics are given in Table XII.B-1.

Table XII.B-1: Assumed pumping characteristics

Parameter	Summer	Spring/Fall
Peak Demand (gpm)	3,590.4	2,715.2
Average Demand (gpm)	2,715.2	1,795.2
Pump Head Required (ft)	80.0	80.0
Pump Head Required (psi)	34.7	34.7
Daily Peak Pumping Time (hours)	4.0	2.0
Daily Average Pumping Time (hours)	12.0	8.0

Using the given assumptions, the required pump performance characteristics, and the monthly electricity costs for both the summer and spring/fall seasons were determined. These are presented in Table XII.B-2.

Table XII.B-2: Required pump performance characteristics

Parameter	Summer	Spring/Fall
Average Brake hP Required (hP)	78.5	51.9
Peak Brake hP Required (hP)	103.7	78.5
Average Demand Input Power (hP)	104.6	69.2
Peak Demand Input Power (hP)	138.3	104.6
Daily kWH	1,347.4	568.1
Electrical Base Charge	$320.00	$320.00
Monthly Electricity Cost	$3,011.21	$1,454.63
Monthly Pump Hours (hours)	480.0	300.0

Additional pumping and storage alternatives were also evaluated to assess the feasibility of extending irrigation service to LaVerkin's upper bench. The evaluation found that these options would result in significantly initial construction costs and higher operating costs, with estimated

pumping expenses on the order of three to four times greater than those for the lower bench booster station.

Based on this cost analysis, it was ultimately determined that extending irrigation water service to the upper bench was not financially viable.

C. POND CONSTRUCTION

The proposed irrigation pond at the selected site was evaluated for constructability to establish a basis for the cost estimates included in this Study. Due to the proximity of the site to residential areas and schools, and at an elevation above surrounding development, the pond was assumed to be constructed as a synthetically double-lined system to provide reliable water retention and minimize seepage risk.

The embankment was modeled as a homogenous rolled earth embankment with typical 3:1 interior side slopes and 2:1 exterior side slopes. The preliminary grading models of the site indicate the approximate earthwork necessary to construct the pond. Based on the preliminary site grading, approximately 1500 cubic yards of net import is required as shown in Table XII.C-1.

Table XII.C-1: Estimated earthwork volumes from preliminary site grading

Approximate Earthwork Volumes	
Cut (yd^3)	9,621.09
Fill (yd^3)	11,067.17
Net (yd^3)	1,446.08

In addition to the lined embankment, it was assumed that a separate settling basin or transfer structure would be constructed upstream of the pond. This facility would allow sediment to settle out of the Virgin River water prior to entering the pond, thereby extending the useful life of the liner system and reducing long-term maintenance.

The proposed pond, booster pump facility, and pipe network improvements will hereafter be called collectively the LaVerkin Pond & Pipeline Project. An opinion of probable cost for the LaVerkin Pond & Pipeline project is provided in Appendix F of this report.

XIII. SUMMARY OF RECOMMENDED IMPROVEMENTS

Recommended system improvements have been given in Section IX.C and X.G of this Study.

A. RECOMMENDED SYSTEM IMPROVEMENTS

Table XIII.A.1 below shows a summary of each recommended improvement, along with its expected year of construction, estimated cost, and inflated costs. Inflation costs for this Study assume a 3% increase per year.

Table XIII.A-1: Cost summary of recommended system improvements

Project	Current Cost Estimate	Est. Year of Installation	Estimated Inflated Costs
LaVerkin Pond & Pipeline Project	$ 7,376,300.00	2026	$ 7,597,600.00
LaVerkin Transmission Line Improvements	$ 1,152,100.00	2026	$ 1,186,700.00
LaVerkin City In-Town Replacements	$ 10,111,800.00	2026	$ 10,415,200.00
100 E Transmission Line Improvement	$ 2,487,200.00	2026	$ 2,561,800.00
Capital Facilities Plan and IFFP & IFA Update (2030)	$ 64,600.00	2030	$ 74,900.00
Capital Facilities Plan and IFFP & IFA Update (2035)	$ 64,600.00	2035	$ 86,800.00
Total	**$ 21,256,600.00**		**$ 21,923,000.00**

B. ENGINEER'S OPINION OF PROBABLE COST

An Engineer's Opinion of Probable Cost (EOPC) for each recommended improvement has been included in Appendix F. 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.

The opinions of probable project costs included in this report are planning-level costs 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 phases of the project.

C. POSSIBLE FINANCING PLAN

The City is in discussion with WCWCD to provide funding for the capital improvement projects listed in Table XIII.A.1. The Capital Facilities Plans are anticipated to be paid for with impact fee money. Therefore, this Study did not investigate funding agency options or provide a possible financing plan.

The calculations in the subsequent sections of this report assume that the costs of the recommended improvements will be paid for by WCWCD. If funding is not available through WCWCD, it is recommended that the City reevaluate the financial analysis provided in the subsequent section.

XIV. FINANCIAL ANALYSIS

LaVerkin City has different secondary water user rate structures for delivery contract holders and for lease users.

A. EXISTING DELIVERY CONTRACT RATE

The current fee schedule for delivery contract holders is shown in Table XIV.A-1. Each contract holder is assessed a one-time annual fee of $50.89 and $25.45 for the first share equivalent or partial share equivalent of secondary water. For each additional share equivalent, delivery contract holders pay a twice annual fee of $12.72.

Based on the existing billing records, the average delivery contract holder owns a delivery contract worth an average of 1.51 share equivalents. The average annual fee paid by a delivery contract holder is therefore equal to the one-time assessment fee plus an additional $38.51 for additional share equivalents. The total annual fee is equal to $89.40, or $9.93 per month on a 9-month irrigation schedule.

Table XII.A-1: LaVerkin City existing delivery contract holder fee schedule

Delivery Contract Holder Fee Schedule		
Annual Assessment Fee	$	50.89
Usage Fee - 1 Share or Less	$	25.45
Usage Fee - Additional Contracts	$	12.72
Average Number of Share Equivalents Held		1.51
Average Contract Holder Usage Fee	$	38.51
Average Annual Contract Holder Fee	**$**	**89.40**
Average Monthly Contract Holder Fee	**$**	**9.93**
Annual Contract Holder Fees Collected	**$**	**26,103.72**

B. EXISTING LEASE USER RATE

The fee schedule for lease users of secondary water is presented in Table XIV.B-1 and is dependent upon the lot size of the end user. The monthly fee assessed for lots one acre and larger is $25.42, for lots smaller than one-half acre-$12.72, and for lots between one-half acre and one acre-$19.08.

The monthly cost for a typical lease user, based on a weighted average, is $13.02.

Table XII.B-1: LaVerkin City existing lease user fee schedule

Existing Lease User Cost		
Lot Size	**Existing Users (2025)**	**Billing Schedule**
Lots < 1/2 Acre	780	$ 12.72
Lots 1/2 Acre to <1 Acre	18	$ 19.08
Lots > 1 Acre	10	$ 25.45
Total Users (2025)	808	
Monthly Leasee Fees Collected	$	**10,519.54**
Average Leasee User Monthly Cost	$	**13.02**
Annual Lease User Fees Collected	$	**94,675.86**

C. REQUIRED AVERAGE RATE DETERMINATION

This Study provides an average rate analysis to determine the average rate required by each connection in order to cover the expenses of the secondary water system. The analysis uses recent fiscal year expenses and annual budgets to project the expenses in fiscal year 2026. New expenses associated with the implementation of the new booster pump station to support the recommended pond alternative are also considered. 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 connections serviced by the system and converted to an average monthly user rate. This gives an average user rate needed per connection to cover the expenses of the secondary water system. The analysis results in an average user rate per connection of $21.99/mo., based on a 9-month irrigation schedule. The user rate analysis is presented in Table XIV.C-1.

Table XII.C-1: LaVerkin City average user rate analysis

LAVERKIN CITY AVERAGE USER RATE DETERMINATION FY 2026		
Irrigation Fund O&M Expenses (FY 2026)		**Total**
Salaries, Benefits, & Pension	$	133,404.00
New Water Mains, Water Main Repair & Contractual Services	$	21,557.12
Phone, Office, Material & Equipment Supplies	$	11,250.66
Depreciation / Rewnewal & Replacement Expense	$	18,811.40
Insurance	$	7,832.68
Booster Pump O&M	$	47,750.00
Total Water Fund O&M Expenses	**$**	**240,605.86**
EXISTING DEBT SERVICE		
2010 Irrigation Water Revenue Bond	$	11,000.00
Subtotal Existing Debt Service	**$**	**11,000.00**
Total Debt Service/Financial Expense	**$**	**11,000.00**
Other Income (Besides Water Sales)		
Impact Fees	$	2,174.56
Interest Earned	$	1,600.00
Connection Fees	$	4,538.80
Assessment Fees	$	-
Other (Penalties & Miscellaneous)	$	1,592.20
Total Other Income	**$**	**9,905.56**
Expenses Less Income	**$**	**241,700.30**
Required Costs Per Connection		
Connections (FY 2026)		1,222
Average Monthly Use/Billed Connection (Gal)		62,323
Monthly Cost/Connection in FY 2026	**$**	**21.99**
Annual Cost/Connection in FY 2026	**$**	**197.84**
Cost/1000 Gallons	**$**	**0.35**

D. FEE SCHEDULE DETERMINATION

Based on the anticipated revenue deficits under the existing user rate structure, the analysis shows that the City will not be able to cover the projected capital, operation, and ongoing maintenance expenses of the secondary water system if rates remain unchanged.

To ensure the system remains financially sustainable, it is recommended that the City establish a revised rate structure that generates sufficient revenue to meet these expenses. The financial analysis indicates that an average user rate of $21.99 is needed to balance revenues and costs. There are multiple approaches available to achieve this target.

This Study provides a possible rate structure that is an adaptation of the existing rate structure, which will provide enough revenue to cover the anticipated system costs. Sunrise worked with City staff and elected officials to adapt the existing user rate structure to meet the projected expenses. The proposed rate structure is given in Table XIV.D-1.

Table XII.D-2: Proposed adjusted secondary water fee schedule

Proposed Lease User Fees			
Lot Size	**Number of Users**	**Monthly Billing Schedule**	**% Increase From Existing**
Lots < 1/2 Acre	780	$ 23.97	88%
Lots 1/2 Acre to <1 Acre	18	$ 35.95	88%
Lots > 1 Acre	10	$ 47.94	88%
Proposed Contract Holder Fees			
Annual Contract Holder Assessment Fee		$ 140.00	175%
Annual Usage Fee - 1 Share or Less		$ 47.94	88%
Bi-Annual Usage Fee - Additional Contracts		$ 23.97	88%

XV. IMPACT FEES

This report constitutes a Capital Facilities Plan, which determines the public facilities required to serve new development. 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 improvement projects that will be constructed in the planning window. The combined costs for these projects are divided by the projected number of new connections that will be added to the secondary water system to determine the impact fee allowable.

A. EXISTING IMPACT FEES

The existing impact fees charged by the City for secondary water connections is shown in Table XV.A-1. The existing impact fees are associated with residential zoning.

Table XV.A-1: LaVerkin City existing secondary water impact fee schedule

LaVerkin City Secondary Water Impact Fee Schedule	
Zoning	Impact Fee
R-A-1	$ 6,644.00
R-1-14	$ 1,545.00
R-1-10	$ 850.00
R-1-8	$ 618.00
R-3-6	$ 386.00

B. PROPOSED IMPACT FEES

This Study includes an Impact Fee Analysis to determine the maximum allowable impact fee that the City can assess as its secondary water impact fee. As stated above, an impact fee covers the cost of projects 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 years of their receipt. This Study accounts for incoming fees to be used for eligible projects and debts in the continuous six-year window.

As stated in Section XI.C, this Study assumes that the recommended improvements will be funded by WCWCD. Where these projects are being funding by WCWCD and anticipated to be constructed in the near future they are not considered impact fee eligible. This Study does include a recommendation for future updates to this Study every 5 years. According to the impact fee law these updates are considered 100% impact fee eligible.

Based on these assumptions, the maximum allowable impact fee for a new 1-inch secondary water connection is calculated to be $241.62. See Table XIII.B-1 for the impact fee analysis.

Table XV.B-1: LaVerkin City allowable impact fee determination

LaVerkin City Impact Fee Analysis						
Existing Debt Service	**Debt to be paid 2025-2034**				**IF Eligibility (%)**	**IF Eligibility ($)**
2010 Irrigation Water Revenue Bond	$ 117,000.00				0%	$0.00
Subtotal	$ 117,000.00				0%	$0.00
Secondary Water Improvements Project	**Total Estimated Project Costs**	**Year of Improvement**	**Inflated Costs ($)**	**Financed Cost ($)**	**IF Eligibility (%)**	**IF Eligibility ($)**
LaVerkin City In-Town Replacements	$ -	2026	$ -	$0.00	0.0%	$0.00
100 E Transmission Line Improvement	$ -	2026	$ -	$0.00	0.0%	$0.00
Subtotal	$ -		$ -	$0.00	0.0%	$0.00
Future Planning Projects	**Current Cost**	**Year of Improvement**	**Inflated Costs ($)**	**Financed Cost ($)**	**IF Eligibility (%)**	**IF Eligibility ($)**
Capital Facilities Plan and IFFP & IFA Update	$ 64,600.00	2030	$ 74,900.00		100%	$ 74,900.00
Capital Facilities Plan and IFFP & IFA Update	$ 64,600.00	2035	$ 86,800.00		100%	$ 86,800.00
Subtotal	$ 129,200.00		$ 161,700.00			$ 161,700.00
Total Impact Fee Eligible						$161,700.00
Number of New Irrigation Connections by 2035						669
Maximum Allowable Impact Fee per Connection						$241.62

Whereas larger meter connections are considered to consume larger amounts of secondary water, these are therefore required to pay a higher impact fee based on the meter size. The maximum allowable impact fee for each meter size is shown in the table below.

Table XV.B-2: LaVerkin City proposed secondary water impact fee schedule

LaVerkin City Secondary Water Proposed Impact Fee Schedule	
Meter Size	Impact Fee
1"	$ 241.62
2"	$ 569.30
3"	$ 948.83
4"	$ 1,328.37
6"	$ 3,795.33

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 Study. It is assumed that this Study will be updated as recommended.

City staff should be 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 is for the specific public facility type for which the fee was collected (i.e., the transportation impact fees cannot 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 provided in Appendix G.

D. CONNECTION FEE

Currently the City charges a $100 connection fee for any new service that is connected 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.

These fees should be looked at periodically and adjusted as prices for materials and labor increases.

E. CASH FLOW

A 20-year cash flow analysis was prepared as part of this Study. This cash flow shows several years of past revenues and expenses, along with twenty years of projected revenues and expenses for the secondary 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 presented in Appendix I.

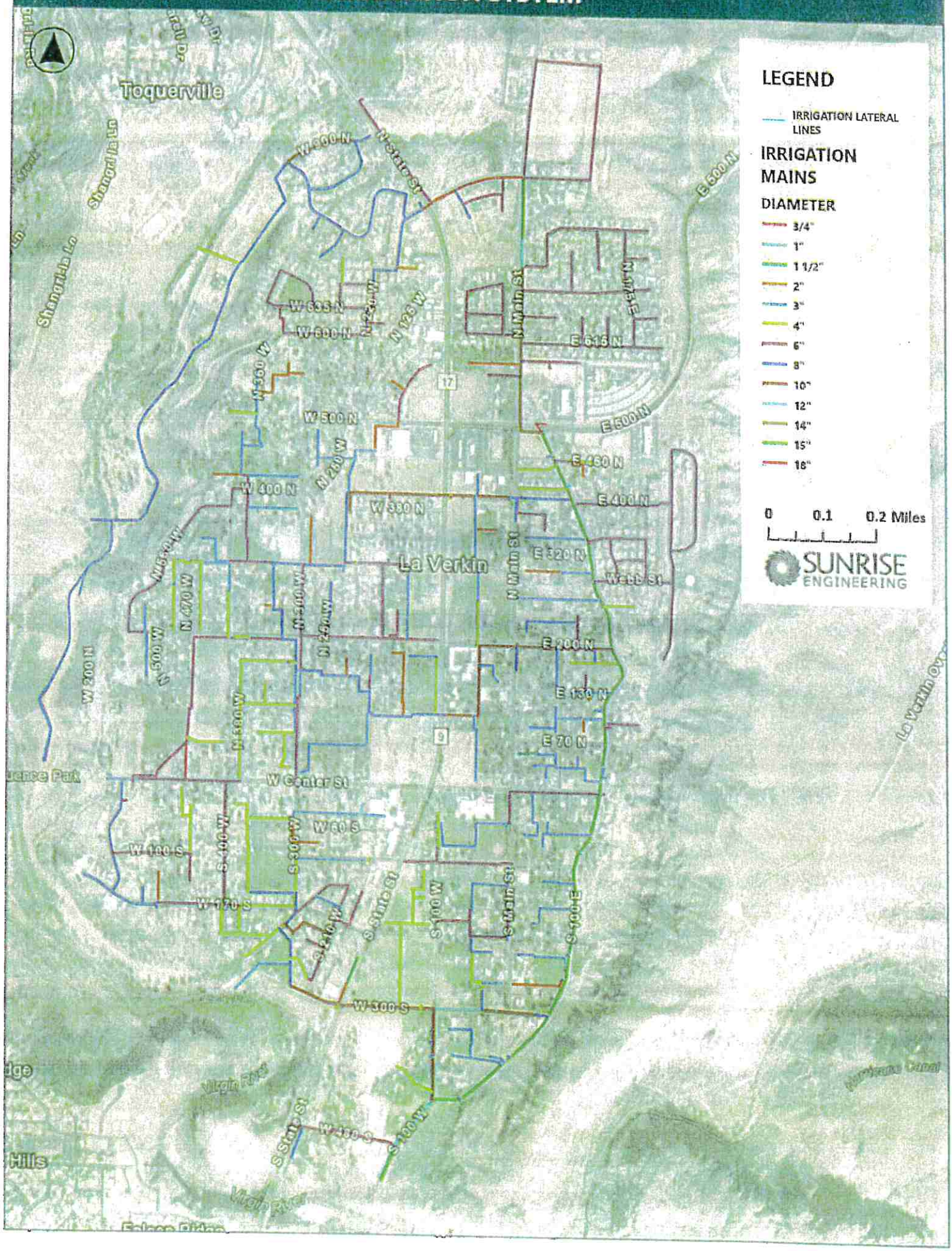
Secondary water user rates and fees should be reviewed by the City periodically to ensure that they keep up with inflation and increased costs in system maintenance. LaVerkin City does not have to adopt the amounts shown in the rate analysis. However, the rates suggested are calculated to cover the anticipated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

APPENDIX A

LaVerkin City

Secondary Water System Map

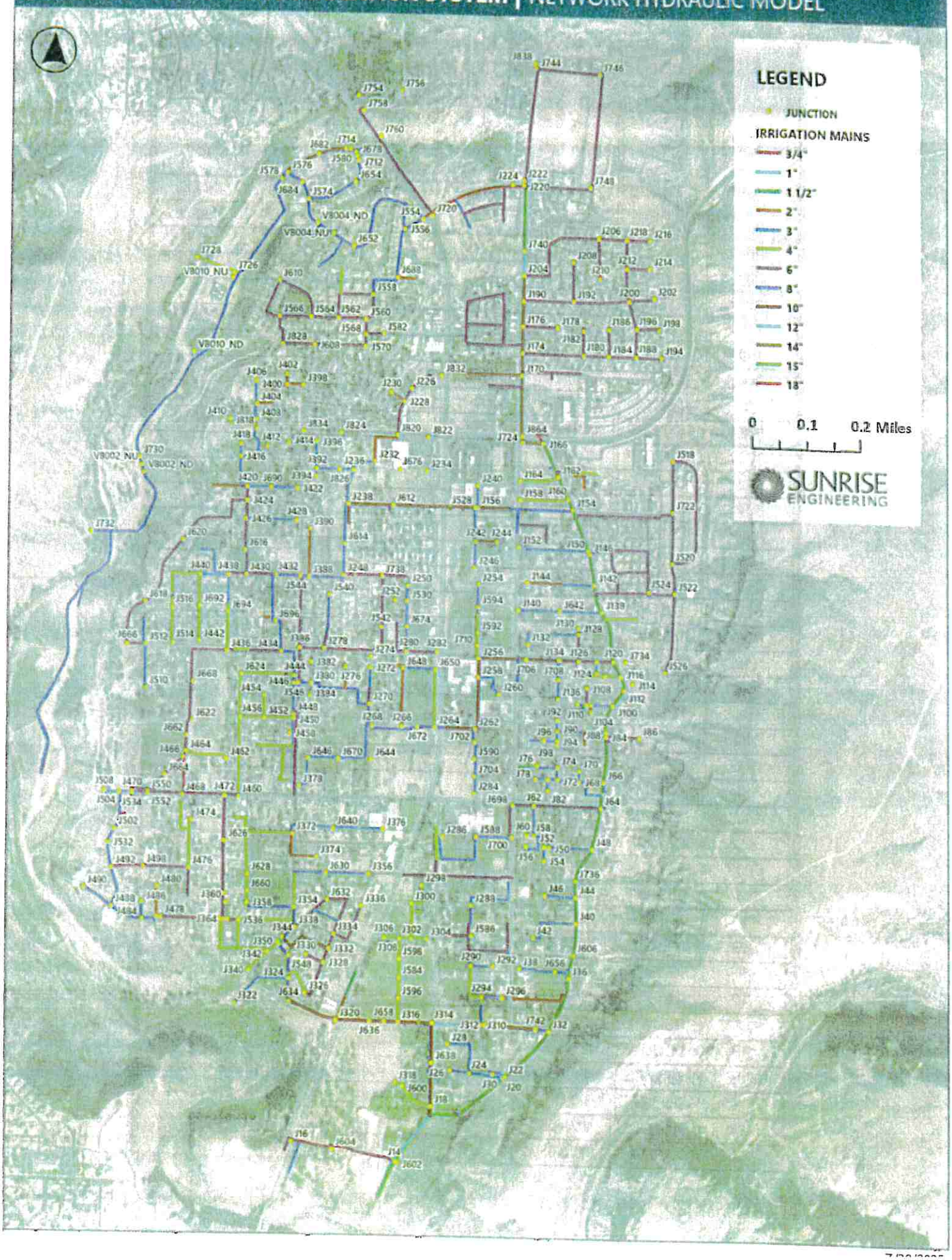
LAVERKIN CITY EXISTING IRRIGATION SYSTEM



APPENDIX B

Network Hydraulic Model & Output
AquaTwin by Aquanuity

LAVERKIN CITY EXISTING IRRIGATION SYSTEM | NETWORK HYDRAULIC MODEL



Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999.3	10043006	3254	4.24	3384.96	56.75
J102	1125788.6	10043009	3236	4.24	3384.59	64.38
J104	1125787.1	10042941	3240	4.24	3384.58	62.65
J106	1125744.9	10043014	3234	4.24	3384.56	65.24
J108	1125746.4	10043169	3238	4.24	3384.56	63.5
J110	1125653.1	10043014	3227	4.24	3384.55	68.27
J112	1126111	10043156	3255	4.24	3384.92	56.3
J114	1126189.2	10043213	3260	4.24	3384.83	54.09
J116	1126077.9	10043285	3250	4.24	3384.89	58.45
J118	1125925.8	10043283	3244	4.24	3384.89	61.05
J120	1126005.6	10043423	3248	4.24	3384.86	59.3
J122	1125841.3	10043421	3242	4.24	3384.74	61.85
J124	1125842.9	10043313	3239	4.24	3384.73	63.15
J126	1125666.8	10043422	3228	4.24	3384.63	67.87
J128	1125668.3	10043677	3232	4.24	3384.46	66.06
J130	1125668.3	10043732	3233	4.24	3384.45	65.62
J132	1125164.1	10043574	3220	4.24	3384.4	71.24
J134	1125471.1	10043427	3218	4.24	3384.51	72.15
J136	1125463.6	10043063	3215	4.24	3384.44	73.42
J138	1125894	10043888	3247	4.24	3384.85	59.73
J14	1123884.3	10038702	3170	4.24	3386.87	93.97
J140	1125067.4	10043894	3220	4.24	3384.68	71.36
J142	1125820	10044147	3253	4.24	3384.85	57.13
J144	1125157.7	10044156	3229	4.24	3384.79	67.5
J146	1125772	10044440	3249	4.24	3384.84	58.86
J150	1125760.2	10044468	3249	4.24	3384.84	58.86
J152	1125070.4	10044495	3230	4.24	3384.78	67.07
J154	1125604.7	10044857	3250	4.24	3384.84	58.43
J156	1124669.9	10044862	3224	4.24	3384.41	69.51
J158	1125083.8	10044940	3234	4.24	3384.84	65.36
J16	1122873.1	10038869	3220	4.24	3386.87	72.3
J160	1125559.4	10044955	3250	4.24	3384.85	58.43
J162	1125461.5	10045164	3250	4.24	3384.86	58.43
J164	1125082.3	10045119	3237	4.24	3384.85	64.06
J166	1125311.2	10045480	3248	4.24	3384.87	59.31
J170	1125095.7	10046118	3253	4.24	3384.82	57.12
J174	1125098.7	10046332	3255	4.24	3384.8	56.24
J176	1125100.3	10046582	3252	4.24	3384.78	57.53

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446.5	10046575	3264	4.24	3384.78	52.33
J18	1124240	10039216	3210	4.24	3386.65	76.54
J180	1125708.8	10046321	3268	4.24	3384.72	50.58
J182	1125708.8	10046551	3274	4.24	3384.72	47.98
J184	1125954.1	10046316	3277	4.24	3384.7	46.67
J186	1125958.6	10046567	3282	4.24	3384.7	44.5
J188	1126222	10046313	3287	4.24	3384.7	42.33
J190	1125106.7	10046822	3249	4.24	3384.76	58.82
J192	1125604.9	10046828	3267	4.24	3384.72	51.01
J194	1126476.6	10046310	3290	4.24	3384.69	41.03
J196	1126225.2	10046578	3288	4.24	3384.69	41.9
J198	1126452.5	10046572	3290	4.24	3384.69	41.03
J20	1124935.7	10039498	3260	4.24	3386.3	54.72
J200	1126153	10046838	3286	4.24	3384.69	42.76
J202	1126401.3	10046870	3290	4.24	3384.69	41.03
J204	1125109.7	10047063	3250	4.24	3384.74	58.38
J206	1125853.2	10047423	3272	4.24	3384.7	48.83
J208	1125600.4	10047197	3268	4.24	3384.72	50.57
J210	1125865.3	10047045	3275	4.24	3384.69	47.53
J212	1126130.5	10047146	3284	4.24	3384.69	43.63
J214	1126359.2	10047149	3290	4.24	3384.69	41.03
J216	1126359.2	10047412	3285	4.24	3384.69	43.2
J218	1126130.5	10047418	3278	4.24	3384.69	46.23
J22	1124947.8	10039509	3260	4.24	3386.28	54.72
J220	1125104.9	10047917	3205	4.24	3384.7	77.86
J222	1125104.9	10047957	3205	4.24	3384.7	77.86
J224	1124995	10047917	3197	4.24	3384.7	81.33
J226	1124010.1	10045975	3250	4.24	3379.12	55.95
J228	1123938.1	10045852	3250	4.24	3379.21	55.99
J230	1123803.7	10045935	3245	4.24	3379.11	58.11
J232	1123645.1	10045276	3242	4.24	3383.17	61.17
J234	1124171.6	10045197	3230	4.24	3383.05	66.32
J236	1123445.4	10045194	3248	4.24	3383.86	58.87
J238	1123390.9	10044874	3240	4.24	3383.93	62.36
J24	1124612.1	10039537	3227	4.24	3386.07	68.93
J240	1124671	10045070	3230	4.24	3384.4	66.9
J242	1124652.8	10044538	3220	4.24	3384.18	71.14
J244	1124858.6	10044541	3218	4.24	3384.16	72

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124643.7	10044290	3218	4.24	3384.16	72
J248	1123356.6	10044196	3234	4.24	3383.46	64.76
J250	1123989.9	10044107	3214	4.24	3382.67	73.08
J252	1123858.9	10043966	3210	4.24	3382.6	74.79
J254	1124682.6	10044130	3212	4.24	3383.69	74.39
J256	1124684	10043432	3205	4.24	3384.12	77.61
J258	1124684	10043249	3203	4.24	3384.04	78.45
J26	1124424	10039560	3211	4.24	3386.06	75.85
J260	1124881.9	10043093	3198	4.24	3384.02	80.6
J262	1124653.5	10042762	3194	4.24	3383.87	82.27
J264	1124261.5	10042774	3190	4.24	3383.76	83.96
J266	1123934.2	10042774	3190	4.24	3383.56	83.87
J268	1123637.4	10042774	3190	4.24	3383.42	83.81
J270	1123610.7	10042979	3200	4.24	3383.34	79.44
J272	1123619.5	10043324	3207	4.24	3383.34	76.41
J274	1123621.4	10043427	3212	4.24	3383.28	74.21
J276	1123381.7	10043327	3221	4.24	3383.19	70.28
J278	1123166.1	10043500	3225	4.24	3383.12	68.51
J28	1124399.9	10039807	3203	4.24	3386.03	79.31
J280	1123977.2	10043483	3198	4.24	3383.12	80.21
J282	1124278.7	10043485	3198	4.24	3383.12	80.21
J284	1124647.5	10042156	3188	4.24	3383.55	84.73
J286	1124341.1	10041745	3188	4.24	3384.95	85.34
J288	1124622.2	10041108	3188	4.24	3385.64	85.64
J290	1124622.2	10040543	3195	4.24	3385.76	82.66
J292	1124828	10040539	3198	4.24	3385.74	81.35
J294	1124725.1	10040253	3195	4.24	3385.87	82.71
J296	1124918.3	10040249	3203	4.24	3385.86	79.23
J298	1124145.4	10041286	3188	4.24	3385	85.36
J30	1124834.9	10039531	3244	4.24	3386.27	61.64
J300	1124042.5	10041114	3188	4.24	3385	85.36
J302	1124040.4	10040785	3189	4.24	3385.03	84.94
J304	1124195.8	10040785	3188	4.24	3385.03	85.37
J306	1123769.5	10040791	3189	4.24	3385.06	84.95
J308	1123922.8	10040785	3189	4.24	3385.06	84.95
J310	1124727.2	10039992	3198	4.24	3386.03	81.47
J312	1124756.6	10039992	3198	4.24	3386.03	81.47
J314	1124252.5	10039999	3195	4.24	3386.03	82.77

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914.4	10040005	3193	4.24	3385.81	83.55
J318	1123886.8	10039438	3210	4.24	3386.62	76.53
J32	1125375.6	10039941	3260	4.24	3386.03	54.61
J320	1123306.8	10040009	3190	4.24	3385.52	84.72
J322	1122289.5	10040159	3030	4.24	3385.15	153.89
J324	1122839.8	10040396	3184	4.24	3385.21	87.18
J326	1122999.4	10040261	3186	4.24	3385.07	86.26
J328	1123180.1	10040549	3182	4.24	3385.07	87.99
J330	1123007.8	10040618	3178	4.24	3385.09	89.73
J332	1123230.5	10040679	3182	4.24	3385.06	87.98
J334	1123283	10040818	3179	4.24	3385.05	89.28
J336	1123545.5	10041082	3185	4.24	3384.73	86.54
J338	1122894.4	10040872	3178	4.24	3385.02	89.7
J340	1122440.4	10040465	3169	4.24	3384.61	93.43
J342	1122623.3	10040641	3178	4.24	3384.62	89.53
J344	1122772.2	10040780	3178	4.24	3385.07	89.72
J346	1122741.5	10040713	3178	4.24	3385.08	89.73
J350	1122729.7	10040740	3178	4.24	3385.07	89.72
J352	1122722.3	10040733	3178	4.24	3385.08	89.73
J354	1122884.2	10041060	3183	4.24	3384.96	87.51
J356	1123612	10041383	3188	4.24	3384.9	85.32
J358	1122415.4	10041101	3192	4.24	3384.95	83.6
J36	1125567.1	10040443	3255	4.24	3385.82	56.69
J360	1122205.7	10041099	3192	4.24	3384.95	83.6
J364	1122181.1	10040941	3189	4.24	3382.95	84.04
J366	1122148.2	10040941	3189	4.24	3382.94	84.04
J368	1122218.1	10040941	3188	4.24	3383	84.49
J370	1122183.1	10041179	3194	4.24	3382.86	81.83
J372	1122865.7	10041749	3195	4.24	3384.57	82.14
J374	1123108.3	10041533	3188	4.24	3384.28	85.05
J376	1123749.9	10041802	3188	4.24	3384.53	85.16
J378	1122925.9	10042198	3198	4.24	3382.72	80.04
J38	1125085.4	10040522	3214	4.24	3385.73	74.41
J380	1123041.2	10043167	3222	4.24	3383.14	69.82
J382	1123039.2	10043368	3226	4.24	3383.14	68.09
J384	1123030.9	10043048	3222	4.24	3383.06	69.79
J386	1122922.2	10043502	3228	4.24	3383.13	67.22
J388	1123012.2	10044175	3237	4.24	3383.21	63.35

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018.4	10044630	3245	4.24	3382.92	59.76
J392	1123078	10045202	3250	4.24	3383.61	57.89
J394	1123075.9	10045132	3248	4.24	3383.6	58.76
J396	1123078	10045461	3252	4.24	3383.59	57.02
J398	1122933.5	10045990	3220	4.24	3376.23	67.7
J40	1125639.4	10040959	3255	4.24	3385.62	56.6
J400	1122775.2	10045992	3220	4.24	3376.34	67.74
J402	1122775.2	10046090	3205	4.24	3376.27	74.21
J404	1122470.9	10045807	3208	4.24	3378.72	73.97
J406	1122464.8	10046021	3204	4.24	3378.7	75.7
J408	1122468.9	10045657	3214	4.24	3378.98	71.49
J410	1122207.8	10045663	3212	4.24	3378.98	72.35
J412	1122586.1	10045406	3233	4.24	3379.94	63.67
J414	1122795.8	10045445	3245	4.24	3375.98	56.75
J416	1122322.9	10045307	3222	4.24	3381.84	69.26
J418	1122320.8	10045427	3220	4.24	3381.82	70.12
J42	1125221	10040818	3221	4.24	3385.57	71.31
J420	1122388.7	10045020	3209	4.24	3381.93	74.93
J422	1122884.2	10045014	3238	4.24	3381.83	62.32
J424	1122388.6	10044892	3209	4.24	3381.98	74.95
J426	1122376.3	10044717	3215	4.24	3382.13	72.42
J428	1122880	10044707	3242	4.24	3382.09	60.7
J430	1122384.4	10044188	3240	4.24	3382.66	61.82
J432	1122684.6	10044186	3240	4.24	3383.06	61.99
J434	1122742.1	10043462	3232	4.24	3383.06	65.45
J436	1122197.2	10043462	3228	4.24	3382.89	67.11
J438	1122207.5	10044182	3236	4.24	3382.65	63.54
J44	1125638	10041202	3255	4.24	3385.53	56.56
J440	1121938.2	10044182	3240	4.24	3382.53	61.76
J442	1121938.2	10043551	3234	4.24	3382.5	64.34
J444	1122875.7	10043237	3224	4.24	3383.09	68.93
J446	1122869.5	10043168	3223	4.24	3383.1	69.37
J448	1122869.5	10042870	3222	4.24	3382.94	69.74
J450	1122869.5	10042833	3222	4.24	3382.93	69.73
J452	1122577.6	10042833	3220	4.24	3382.89	70.58
J454	1122577.6	10043042	3224	4.24	3382.89	68.85
J456	1122332.9	10042839	3220	4.24	3382.89	70.58
J458	1122832.5	10042692	3221	4.24	3382.91	70.16

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125333.9	10041215	3220	4.24	3385.5	71.71
J460	1122321.2	10042093	3208	4.24	3382.81	75.75
J462	1122197.2	10042443	3216	4.24	3382.78	72.27
J464	1121806.6	10042513	3224	4.24	3382.79	68.8
J466	1121781.6	10042455	3224	4.24	3382.79	68.8
J468	1121773.3	10042102	3218	4.24	3382.79	71.4
J470	1121275.8	10042124	3222	4.24	3382.78	69.67
J472	1122184.8	10042099	3208	4.24	3382.81	75.74
J474	1121872.3	10041867	3209	4.24	3382.83	75.32
J476	1121843.5	10041417	3202	4.24	3382.84	78.36
J478	1121573.4	10040954	3197	4.24	3382.85	80.53
J48	1125796.1	10041657	3255	4.24	3385.35	56.48
J480	1121534.4	10041237	3208	4.24	3382.84	75.76
J482	1121530.2	10040954	3195	4.24	3382.84	81.39
J484	1121380.2	10040935	3195	4.24	3382.83	81.39
J486	1121376	10041089	3205	4.24	3382.83	77.05
J488	1121080	10041046	3195	4.24	3382.82	81.38
J490	1120796.2	10041219	3195	4.24	3382.82	81.38
J492	1121080	10041410	3215	4.24	3382.81	72.71
J498	1121390.4	10041422	3216	4.24	3382.83	72.29
J50	1125374.5	10041666	3215	4.24	3384.98	73.65
J502	1121106.7	10041773	3220	4.24	3382.79	70.54
J504	1121151.6	10042114	3220	4.24	3382.78	70.53
J508	1120997.8	10042132	3200	4.24	3382.76	79.19
J510	1121404.9	10043101	3215	4.24	3381.85	72.3
J512	1121400.8	10043516	3225	4.24	3381.89	67.98
J514	1121674.3	10043531	3228	4.24	3382.48	66.93
J516	1121668.1	10043862	3234	4.24	3382.48	64.34
J518	1126598.3	10045335	3307	4.24	3384.84	33.73
J52	1125329.4	10041667	3213	4.24	3384.95	74.51
J520	1126585.9	10044363	3315	4.24	3384.84	30.26
J522	1126614.9	10044079	3320	4.24	3384.84	28.1
J524	1126475.1	10044087	3300	4.24	3384.85	36.76
J526	1126512	10043330	3310	4.24	3384.84	32.43
J528	1124645.6	10044860	3224	4.24	3384.4	69.5
J530	1123982.9	10043964	3210	4.24	3382.68	74.82
J532	1121044.8	10041644	3220	4.24	3382.8	70.54
J534	1121275.6	10042112	3222	4.24	3382.78	69.67

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328.1	10040934	3188	4.24	3383.14	84.56
J54	1125327.9	10041538	3216	4.24	3384.94	73.2
J540	1123216.8	10044007	3230	4.24	3383.12	66.35
J542	1123717.6	10043709	3210	4.24	3383.46	75.16
J544	1122921.4	10044178	3238	4.24	3383.15	62.89
J546	1122910.7	10043167	3223	4.24	3383.11	69.38
J548	1122836.4	10040607	3178	4.24	3385.12	89.74
J550	1121429.3	10042126	3224	4.24	3382.78	68.8
J552	1121429.7	10042109	3224	4.24	3382.78	68.8
J554	1124113.5	10047573	3180	4.24	3384.62	88.66
J556	1123927.3	10047480	3182	4.24	3384.5	87.74
J558	1123608.1	10046856	3178	4.24	3384.44	89.45
J56	1125148.8	10041667	3203	4.24	3384.94	78.83
J560	1123546	10046621	3188	4.24	3384.42	85.11
J562	1123275.6	10046630	3188	4.24	3384.41	85.11
J564	1123000.7	10046638	3194	4.24	3384.41	82.5
J566	1122690.4	10046638	3194	4.24	3384.4	82.5
J568	1123546	10046479	3195	4.24	3384.41	82.07
J570	1123541.6	10046364	3198	4.24	3384.41	80.77
J572	1123541.6	10046093	3218	4.24	3384.4	72.1
J574	1122965.3	10047746	3090	4.24	3235.34	62.98
J576	1122756.9	10047990	3078	4.24	3235.32	68.17
J578	1122699.2	10047932	3082	4.24	3235.32	66.43
J58	1125227	10041771	3200	4.24	3384.99	80.16
J580	1123430.8	10048198	3110	4.24	3235.32	54.3
J582	1123719	10046486	3205	4.24	3384.41	77.74
J584	1123918.9	10040419	3193	4.24	3385.32	83.33
J586	1124622.2	10040824	3190	4.24	3385.67	84.78
J588	1124667	10041753	3190	4.24	3385.01	84.5
J590	1124650.8	10042484	3190	4.24	3383.62	83.89
J592	1124676.5	10043672	3208	4.24	3383.9	76.22
J594	1124679.8	10043917	3210	4.24	3383.77	75.29
J596	1123916.8	10040224	3192	4.24	3385.53	83.86
J598	1123920.7	10040593	3190	4.24	3385.18	84.57
J60	1125153.3	10041773	3200	4.24	3384.99	80.15
J600	1123960.9	10039405	3210	4.24	3386.62	76.53
J602	1123915.7	10038691	3170	4.24	3386.87	93.97
J604	1123276.7	10038802	3200	4.24	3386.87	80.97

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J606	1125613.8	10040660	3255	4.24	3385.74	56.65
J608	1123041.2	10046372	3196	4.24	3384.4	81.63
J610	1122685.5	10046975	3192	4.24	3384.4	83.37
J612	1123831	10044869	3240	4.24	3384.09	62.43
J614	1123362.1	10044494	3236	4.24	3383.65	63.98
J616	1122374.6	10044421	3225	4.24	3382.41	68.21
J618	1121393.2	10043917	3230	4.24	3381.9	65.82
J62	1125227	10042052	3195	4.24	3385.14	82.39
J620	1121762.7	10044511	3220	4.24	3381.93	70.16
J622	1121867.2	10042802	3220	4.24	3382.8	70.54
J624	1122343.9	10043246	3222	4.24	3382.95	69.74
J626	1122184	10041675	3200	4.24	3382.83	79.22
J628	1122418.5	10041365	3193	4.24	3384.81	83.11
J630	1123200.4	10041386	3187	4.24	3384.91	85.76
J632	1123215.5	10041139	3184	4.24	3385.03	87.11
J634	1122840.7	10040181	3187	4.24	3385.3	85.92
J636	1123632.3	10040007	3192	4.24	3385.67	83.92
J638	1124246.6	10039627	3205	4.24	3386.32	78.57
J64	1125882	10042044	3255	4.24	3385.22	56.42
J640	1123271.9	10041808	3192	4.24	3384.54	83.43
J642	1125480.4	10043891	3222	4.24	3384.72	70.51
J644	1123629.7	10042456	3193	4.24	3383.06	82.35
J646	1123015	10042460	3196	4.24	3382.75	80.92
J648	1123944.2	10043324	3200	4.24	3383.38	79.46
J650	1124266.5	10043316	3194	4.24	3383.36	82.05
J652	1123418.2	10047310	3135	4.24	3384.26	108.01
J654	1123431.2	10047915	3100	4.24	3235.33	58.64
J656	1125435.9	10040502	3230	4.24	3385.76	67.49
J658	1123772.5	10040006	3192	4.24	3385.74	83.95
J66	1125912	10042285	3254	4.24	3385.15	56.83
J660	1122416.7	10041207	3193	4.24	3384.88	83.14
J662	1121815.8	10042660	3222	4.24	3382.79	69.67
J664	1121600.9	10042286	3224	4.24	3382.78	68.8
J666	1121217.4	10043511	3223	4.24	3381.89	68.85
J668	1121875.6	10043169	3224	4.24	3382.83	68.82
J670	1123316.2	10042458	3193	4.24	3382.84	82.26
J672	1124092	10042774	3190	4.24	3383.66	83.91
J674	1123980	10043719	3204	4.24	3382.85	77.49

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J676	1123903.4	10045204	3235	4.24	3383.07	64.16
J678	1123442.7	10048158	3110	4.24	3235.32	54.3
J68	1125672.7	10042286	3228	4.24	3384.14	67.66
J680	1123380.6	10048225	3110	4.24	3235.32	54.3
J682	1123063.1	10048169	3100	4.24	3235.32	58.63
J684	1122895.5	10047898	3086	4.24	3235.33	64.7
J688	1123855.6	10047023	3180	4.24	3384.46	88.59
J690	1122626.7	10045017	3218	4.24	3381.85	71
J692	1121938.2	10043885	3238	4.24	3382.51	62.61
J694	1122202.5	10043832	3238	4.24	3382.74	62.71
J696	1122682.3	10043746	3238	4.24	3383.06	62.85
J698	1125018.8	10042054	3193	4.24	3385.13	83.25
J70	1125672.7	10042387	3228	4.24	3384.13	67.65
J700	1125011	10041754	3192	4.24	3385.13	83.68
J702	1124652.3	10042638	3192	4.24	3383.72	83.07
J704	1124649.1	10042317	3189	4.24	3383.56	84.3
J706	1125145.1	10043429	3210	4.24	3384.34	75.54
J708	1125467.3	10043244	3216	4.24	3384.45	72.99
J710	1124674.9	10043553	3206	4.24	3383.99	77.12
J712	1123455.6	10048115	3110	4.24	3235.32	54.3
J714	1123332.5	10048225	3110	4.24	3235.32	54.3
J72	1125457.5	10042300	3214	4.24	3383.58	73.48
J720	1124205.5	10047608	3180	4.24	3384.68	88.69
J722	1126592.1	10044849	3307	4.24	3384.84	33.73
J724	1125103.4	10045484	3250	4.24	3384.89	58.45
J726	1122233.4	10047038	3065	4.24	3235.28	73.78
J728	1121872.3	10047177	3060	4.24	3235.28	75.95
J730	1121326.8	10045288	3045	4.24	3235.26	82.44
J732	1120850	10044576	3015	4.24	3235.26	95.44
J734	1126122	10043420	3248	4.24	3384.86	59.3
J736	1125636.5	10041358	3257	4.24	3385.47	55.67
J738	1123723	10044190	3224	4.24	3383.46	69.09
J74	1125457.5	10042413	3214	4.24	3383.55	73.46
J740	1125109.4	10047292	3249	4.24	3384.73	58.81
J742	1125247.9	10039961	3260	4.24	3386.03	54.61
J744	1125220.9	10049016	3197	4.24	3384.7	81.33
J746	1125859.8	10048968	3223	4.24	3384.7	70.06
J748	1125769.5	10047902	3247	4.24	3384.7	59.67

Existing System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J750	1124992.9	10050432	3220	4.24	3384.7	71.37
J752	1124948.6	10050389	3218	4.24	3384.7	72.23
J754	1123449.9	10048728	3085	4.24	3384.67	129.85
J756	1123880.9	10048778	3111	4.24	3384.66	118.58
J758	1123501.1	10048585	3113	4.24	3384.67	117.71
J76	1125255.8	10042431	3205	4.24	3383.53	77.36
J760	1123667.7	10048341	3130	4.24	3384.67	110.35
J762	1123896.5	10038697	3170	4.24	3386.87	93.97
J78	1125242.3	10042303	3205	4.24	3383.5	77.35
J80	1125361.2	10042301	3209	4.24	3383.52	75.62
J82	1125361.2	10042198	3210	4.24	3383.51	75.18
J84	1125934.7	10042714	3255	4.24	3385.04	56.35
J86	1126252.3	10042705	3287	4.24	3385.04	42.48
J88	1125934.6	10042756	3255	4.24	3385.02	56.34
J90	1125457.4	10042761	3225	4.24	3384.19	68.98
J92	1125457.4	10042860	3218	4.24	3384.18	72.01
J94	1125454.4	10042665	3221	4.24	3384.12	70.68
J96	1125323.5	10042668	3209	4.24	3384.11	75.88
J98	1125452.9	10042630	3217	4.24	3384.12	72.41
V8002_NU	1121346.3	10045216	3043	4.24	3235.26	83.31
V8002_ND	1121366.9	10045146	3043	4.24	3235.26	83.31
V8004_NU	1123221.5	10047426	3120	4.24	3384.18	114.47
V8004_ND	1123060.2	10047523	3120	4.24	3235.39	50
V8010_NU	1122217.1	10046991	3065	4.24	3235.28	73.78
V8010_ND	1121854.4	10046291	3065	4.24	3235.28	73.78

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999.3	10043006	3254	8.48	3379.61	54.43
J102	1125788.6	10043009	3236	8.48	3378.27	61.65
J104	1125787.1	10042941	3240	8.48	3378.25	59.9
J106	1125744.9	10043014	3234	8.48	3378.15	62.46
J108	1125746.4	10043169	3238	8.48	3378.15	60.73
J110	1125653.1	10043014	3227	8.48	3378.12	65.48
J112	1126111	10043156	3255	8.48	3379.47	53.93
J114	1126189.2	10043213	3260	8.48	3379.15	51.63
J116	1126077.9	10043285	3250	8.48	3379.36	56.05
J118	1125925.8	10043283	3244	8.48	3379.35	58.65
J120	1126005.6	10043423	3248	8.48	3379.24	56.87
J122	1125841.3	10043421	3242	8.48	3378.82	59.28
J124	1125842.9	10043313	3239	8.48	3378.78	60.57
J126	1125666.8	10043422	3228	8.48	3378.4	65.17
J128	1125668.3	10043677	3232	8.48	3377.77	63.16
J130	1125668.3	10043732	3233	8.48	3377.75	62.72
J132	1125164.1	10043574	3220	8.48	3377.58	68.28
J134	1125471.1	10043427	3218	8.48	3377.98	69.32
J136	1125463.6	10043063	3215	8.48	3377.71	70.5
J138	1125894	10043888	3247	8.48	3379.21	57.29
J14	1123884.3	10038702	3170	8.48	3386.54	93.83
J140	1125067.4	10043894	3220	8.48	3378.6	68.72
J142	1125820	10044147	3253	8.48	3379.2	54.68
J144	1125157.7	10044156	3229	8.48	3378.99	64.99
J146	1125772	10044440	3249	8.48	3379.19	56.41
J150	1125760.2	10044468	3249	8.48	3379.19	56.41
J152	1125070.4	10044495	3230	8.48	3378.96	64.54
J154	1125604.7	10044857	3250	8.48	3379.18	55.97
J156	1124669.9	10044862	3224	8.48	3377.63	66.57
J158	1125083.8	10044940	3234	8.48	3379.16	62.9
J16	1122873.1	10038869	3220	8.48	3386.51	72.15
J160	1125559.4	10044955	3250	8.48	3379.2	55.98
J162	1125461.5	10045164	3250	8.48	3379.23	56
J164	1125082.3	10045119	3237	8.48	3379.2	61.62
J166	1125311.2	10045480	3248	8.48	3379.3	56.89
J170	1125095.7	10046118	3253	8.48	3379.11	54.64
J174	1125098.7	10046332	3255	8.48	3379.03	53.74
J176	1125100.3	10046582	3252	8.48	3378.95	55.01

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446.5	10046575	3264	8.48	3378.95	49.81
J18	1124240	10039216	3210	8.48	3385.73	76.14
J180	1125708.8	10046321	3268	8.48	3378.74	47.99
J182	1125708.8	10046551	3274	8.48	3378.74	45.38
J184	1125954.1	10046316	3277	8.48	3378.68	44.06
J186	1125958.6	10046567	3282	8.48	3378.68	41.89
J188	1126222	10046313	3287	8.48	3378.65	39.71
J190	1125106.7	10046822	3249	8.48	3378.88	56.28
J192	1125604.9	10046828	3267	8.48	3378.72	48.41
J194	1126476.6	10046310	3290	8.48	3378.64	38.41
J196	1126225.2	10046578	3288	8.48	3378.64	39.27
J198	1126452.5	10046572	3290	8.48	3378.64	38.41
J20	1124935.7	10039498	3260	8.48	3384.45	53.93
J200	1126153	10046838	3286	8.48	3378.64	40.14
J202	1126401.3	10046870	3290	8.48	3378.64	38.41
J204	1125109.7	10047063	3250	8.48	3378.82	55.82
J206	1125853.2	10047423	3272	8.48	3378.65	46.21
J208	1125600.4	10047197	3268	8.48	3378.72	47.97
J210	1125865.3	10047045	3275	8.48	3378.64	44.91
J212	1126130.5	10047146	3284	8.48	3378.63	41
J214	1126359.2	10047149	3290	8.48	3378.63	38.4
J216	1126359.2	10047412	3285	8.48	3378.63	40.57
J218	1126130.5	10047418	3278	8.48	3378.63	43.6
J22	1124947.8	10039509	3260	8.48	3384.39	53.9
J220	1125104.9	10047917	3205	8.48	3378.67	75.25
J222	1125104.9	10047957	3205	8.48	3378.67	75.25
J224	1124995	10047917	3197	8.48	3378.66	78.71
J226	1124010.1	10045975	3250	8.48	3358.49	47.01
J228	1123938.1	10045852	3250	8.48	3358.82	47.15
J230	1123803.7	10045935	3245	8.48	3358.45	49.16
J232	1123645.1	10045276	3242	8.48	3373.14	56.82
J234	1124171.6	10045197	3230	8.48	3372.68	61.82
J236	1123445.4	10045194	3248	8.48	3375.61	55.29
J238	1123390.9	10044874	3240	8.48	3375.87	58.87
J24	1124612.1	10039537	3227	8.48	3383.66	67.88
J240	1124671	10045070	3230	8.48	3377.56	63.94
J242	1124652.8	10044538	3220	8.48	3376.77	67.93
J244	1124858.6	10044541	3218	8.48	3376.71	68.77

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124643.7	10044290	3218	8.48	3376.69	68.76
J248	1123356.6	10044196	3234	8.48	3374.16	60.73
J250	1123989.9	10044107	3214	8.48	3371.3	68.16
J252	1123858.9	10043966	3210	8.48	3371.06	69.79
J254	1124682.6	10044130	3212	8.48	3374.98	70.62
J256	1124684	10043432	3205	8.48	3376.54	74.33
J258	1124684	10043249	3203	8.48	3376.28	75.08
J26	1124424	10039560	3211	8.48	3383.59	74.79
J260	1124881.9	10043093	3198	8.48	3376.18	77.2
J262	1124653.5	10042762	3194	8.48	3375.64	78.71
J264	1124261.5	10042774	3190	8.48	3375.24	80.27
J266	1123934.2	10042774	3190	8.48	3374.54	79.96
J268	1123637.4	10042774	3190	8.48	3374.03	79.74
J270	1123610.7	10042979	3200	8.48	3373.74	75.28
J272	1123619.5	10043324	3207	8.48	3373.74	72.25
J274	1123621.4	10043427	3212	8.48	3373.5	69.98
J276	1123381.7	10043327	3221	8.48	3373.19	65.94
J278	1123166.1	10043500	3225	8.48	3372.94	64.1
J28	1124399.9	10039807	3203	8.48	3383.49	78.21
J280	1123977.2	10043483	3198	8.48	3372.94	75.8
J282	1124278.7	10043485	3198	8.48	3372.94	75.8
J284	1124647.5	10042156	3188	8.48	3374.48	80.8
J286	1124341.1	10041745	3188	8.48	3379.57	83.01
J288	1124622.2	10041108	3188	8.48	3382.09	84.1
J290	1124622.2	10040543	3195	8.48	3382.51	81.25
J292	1124828	10040539	3198	8.48	3382.44	79.92
J294	1124725.1	10040253	3195	8.48	3382.92	81.43
J296	1124918.3	10040249	3203	8.48	3382.86	77.93
J298	1124145.4	10041286	3188	8.48	3379.75	83.09
J30	1124834.9	10039531	3244	8.48	3384.35	60.81
J300	1124042.5	10041114	3188	8.48	3379.77	83.09
J302	1124040.4	10040785	3189	8.48	3379.87	82.7
J304	1124195.8	10040785	3188	8.48	3379.85	83.13
J306	1123769.5	10040791	3189	8.48	3379.98	82.75
J308	1123922.8	10040785	3189	8.48	3379.99	82.76
J310	1124727.2	10039992	3198	8.48	3383.5	80.38
J312	1124756.6	10039992	3198	8.48	3383.5	80.38
J314	1124252.5	10039999	3195	8.48	3383.5	81.68

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914.4	10040005	3193	8.48	3382.7	82.2
J318	1123886.8	10039438	3210	8.48	3385.62	76.1
J32	1125375.6	10039941	3260	8.48	3383.5	53.51
J320	1123306.8	10040009	3190	8.48	3381.63	83.03
J322	1122289.5	10040159	3030	8.48	3380.29	151.78
J324	1122839.8	10040396	3184	8.48	3380.5	85.14
J326	1122999.4	10040261	3186	8.48	3379.99	84.05
J328	1123180.1	10040549	3182	8.48	3379.99	85.79
J330	1123007.8	10040618	3178	8.48	3380.08	87.56
J332	1123230.5	10040679	3182	8.48	3379.95	85.77
J334	1123283	10040818	3179	8.48	3379.91	87.06
J336	1123545.5	10041082	3185	8.48	3378.78	83.97
J338	1122894.4	10040872	3178	8.48	3379.82	87.45
J340	1122440.4	10040465	3169	8.48	3378.34	90.71
J342	1122623.3	10040641	3178	8.48	3378.36	86.82
J344	1122772.2	10040780	3178	8.48	3380	87.53
J346	1122741.5	10040713	3178	8.48	3380.03	87.54
J350	1122729.7	10040740	3178	8.48	3380.01	87.53
J352	1122722.3	10040733	3178	8.48	3380.02	87.53
J354	1122884.2	10041060	3183	8.48	3379.61	85.19
J356	1123612	10041383	3188	8.48	3379.4	82.93
J358	1122415.4	10041101	3192	8.48	3379.55	81.26
J36	1125567.1	10040443	3255	8.48	3382.75	55.35
J360	1122205.7	10041099	3192	8.48	3379.55	81.26
J364	1122181.1	10040941	3189	8.48	3372.32	79.43
J366	1122148.2	10040941	3189	8.48	3372.29	79.42
J368	1122218.1	10040941	3188	8.48	3372.51	79.95
J370	1122183.1	10041179	3194	8.48	3371.98	77.12
J372	1122865.7	10041749	3195	8.48	3378.2	79.38
J374	1123108.3	10041533	3188	8.48	3377.16	81.96
J376	1123749.9	10041802	3188	8.48	3378.03	82.34
J378	1122925.9	10042198	3198	8.48	3371.48	75.17
J38	1125085.4	10040522	3214	8.48	3382.41	72.97
J380	1123041.2	10043167	3222	8.48	3373.01	65.43
J382	1123039.2	10043368	3226	8.48	3372.99	63.69
J384	1123030.9	10043048	3222	8.48	3372.73	65.31
J386	1122922.2	10043502	3228	8.48	3372.95	62.81
J388	1123012.2	10044175	3237	8.48	3373.26	59.04

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018.4	10044630	3245	8.48	3372.22	55.12
J392	1123078	10045202	3250	8.48	3374.71	54.04
J394	1123075.9	10045132	3248	8.48	3374.69	54.89
J396	1123078	10045461	3252	8.48	3374.63	53.14
J398	1122933.5	10045990	3220	8.48	3348.03	55.48
J40	1125639.4	10040959	3255	8.48	3382.01	55.03
J400	1122775.2	10045992	3220	8.48	3348.4	55.64
J402	1122775.2	10046090	3205	8.48	3348.17	62.03
J404	1122470.9	10045807	3208	8.48	3357.01	64.56
J406	1122464.8	10046021	3204	8.48	3356.94	66.27
J408	1122468.9	10045657	3214	8.48	3357.97	62.38
J410	1122207.8	10045663	3212	8.48	3357.95	63.24
J412	1122586.1	10045406	3233	8.48	3361.43	55.65
J414	1122795.8	10045445	3245	8.48	3347.11	44.24
J416	1122322.9	10045307	3222	8.48	3368.28	63.38
J418	1122320.8	10045427	3220	8.48	3368.24	64.23
J42	1125221	10040818	3221	8.48	3381.84	69.69
J420	1122388.7	10045020	3209	8.48	3368.61	69.16
J422	1122884.2	10045014	3238	8.48	3368.25	56.44
J424	1122388.6	10044892	3209	8.48	3368.81	69.25
J426	1122376.3	10044717	3215	8.48	3369.35	66.88
J428	1122880	10044707	3242	8.48	3369.19	55.11
J430	1122384.4	10044188	3240	8.48	3371.28	56.88
J432	1122684.6	10044186	3240	8.48	3372.7	57.5
J434	1122742.1	10043462	3232	8.48	3372.7	60.96
J436	1122197.2	10043462	3228	8.48	3372.08	62.43
J438	1122207.5	10044182	3236	8.48	3371.22	58.59
J44	1125638	10041202	3255	8.48	3381.68	54.89
J440	1121938.2	10044182	3240	8.48	3370.8	56.67
J442	1121938.2	10043551	3234	8.48	3370.68	59.23
J444	1122875.7	10043237	3224	8.48	3372.8	64.48
J446	1122869.5	10043168	3223	8.48	3372.85	64.93
J448	1122869.5	10042870	3222	8.48	3372.29	65.12
J450	1122869.5	10042833	3222	8.48	3372.23	65.09
J452	1122577.6	10042833	3220	8.48	3372.1	65.9
J454	1122577.6	10043042	3224	8.48	3372.08	64.16
J456	1122332.9	10042839	3220	8.48	3372.09	65.9
J458	1122832.5	10042692	3221	8.48	3372.18	65.51

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125333.9	10041215	3220	8.48	3381.58	70.01
J460	1122321.2	10042093	3208	8.48	3371.81	70.98
J462	1122197.2	10042443	3216	8.48	3371.71	67.47
J464	1121806.6	10042513	3224	8.48	3371.74	64.02
J466	1121781.6	10042455	3224	8.48	3371.74	64.01
J468	1121773.3	10042102	3218	8.48	3371.74	66.62
J470	1121275.8	10042124	3222	8.48	3371.71	64.87
J472	1122184.8	10042099	3208	8.48	3371.81	70.98
J474	1121872.3	10041867	3209	8.48	3371.88	70.58
J476	1121843.5	10041417	3202	8.48	3371.92	73.63
J478	1121573.4	10040954	3197	8.48	3371.95	75.81
J48	1125796.1	10041657	3255	8.48	3381.02	54.6
J480	1121534.4	10041237	3208	8.48	3371.92	71.03
J482	1121530.2	10040954	3195	8.48	3371.92	76.66
J484	1121380.2	10040935	3195	8.48	3371.88	76.64
J486	1121376	10041089	3205	8.48	3371.88	72.31
J488	1121080	10041046	3195	8.48	3371.84	76.62
J490	1120796.2	10041219	3195	8.48	3371.84	76.62
J492	1121080	10041410	3215	8.48	3371.83	67.95
J498	1121390.4	10041422	3216	8.48	3371.89	67.55
J50	1125374.5	10041666	3215	8.48	3379.7	71.36
J502	1121106.7	10041773	3220	8.48	3371.75	65.75
J504	1121151.6	10042114	3220	8.48	3371.71	65.74
J508	1120997.8	10042132	3200	8.48	3371.62	74.36
J510	1121404.9	10043101	3215	8.48	3368.34	66.44
J512	1121400.8	10043516	3225	8.48	3368.47	62.16
J514	1121674.3	10043531	3228	8.48	3370.6	61.79
J516	1121668.1	10043862	3234	8.48	3370.62	59.2
J518	1126598.3	10045335	3307	8.48	3379.16	31.27
J52	1125329.4	10041667	3213	8.48	3379.58	72.18
J520	1126585.9	10044363	3315	8.48	3379.16	27.8
J522	1126614.9	10044079	3320	8.48	3379.17	25.64
J524	1126475.1	10044087	3300	8.48	3379.19	34.31
J526	1126512	10043330	3310	8.48	3379.16	29.97
J528	1124645.6	10044860	3224	8.48	3377.56	66.54
J530	1123982.9	10043964	3210	8.48	3371.35	69.91
J532	1121044.8	10041644	3220	8.48	3371.77	65.76
J534	1121275.6	10042112	3222	8.48	3371.71	64.87

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328.1	10040934	3188	8.48	3373.03	80.17
J54	1125327.9	10041538	3216	8.48	3379.54	70.86
J540	1123216.8	10044007	3230	8.48	3372.94	61.94
J542	1123717.6	10043709	3210	8.48	3374.16	71.13
J544	1122921.4	10044178	3238	8.48	3373.03	58.51
J546	1122910.7	10043167	3223	8.48	3372.9	64.95
J548	1122836.4	10040607	3178	8.48	3380.18	87.6
J550	1121429.3	10042126	3224	8.48	3371.71	64
J552	1121429.7	10042109	3224	8.48	3371.71	64
J554	1124113.5	10047573	3180	8.48	3378.36	85.95
J556	1123927.3	10047480	3182	8.48	3377.93	84.9
J558	1123608.1	10046856	3178	8.48	3377.71	86.53
J56	1125148.8	10041667	3203	8.48	3379.52	76.49
J560	1123546	10046621	3188	8.48	3377.63	82.17
J562	1123275.6	10046630	3188	8.48	3377.63	82.17
J564	1123000.7	10046638	3194	8.48	3377.6	79.55
J566	1122690.4	10046638	3194	8.48	3377.59	79.55
J568	1123546	10046479	3195	8.48	3377.6	79.12
J570	1123541.6	10046364	3198	8.48	3377.59	77.82
J572	1123541.6	10046093	3218	8.48	3377.59	69.15
J574	1122965.3	10047746	3090	8.48	3235.2	62.92
J576	1122756.9	10047990	3078	8.48	3235.13	68.08
J578	1122699.2	10047932	3082	8.48	3235.11	66.34
J58	1125227	10041771	3200	8.48	3379.73	77.88
J580	1123430.8	10048198	3110	8.48	3235.13	54.22
J582	1123719	10046486	3205	8.48	3377.6	74.79
J584	1123918.9	10040419	3193	8.48	3380.93	81.43
J586	1124622.2	10040824	3190	8.48	3382.18	83.27
J588	1124667	10041753	3190	8.48	3379.81	82.24
J590	1124650.8	10042484	3190	8.48	3374.73	80.04
J592	1124676.5	10043672	3208	8.48	3375.76	72.69
J594	1124679.8	10043917	3210	8.48	3375.28	71.61
J596	1123916.8	10040224	3192	8.48	3381.67	82.18
J598	1123920.7	10040593	3190	8.48	3380.42	82.51
J60	1125153.3	10041773	3200	8.48	3379.7	77.86
J600	1123960.9	10039405	3210	8.48	3385.63	76.1
J602	1123915.7	10038691	3170	8.48	3386.53	93.82
J604	1123276.7	10038802	3200	8.48	3386.52	80.82

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J606	1125613.8	10040660	3255	8.48	3382.43	55.21
J608	1123041.2	10046372	3196	8.48	3377.58	78.68
J610	1122685.5	10046975	3192	8.48	3377.59	80.42
J612	1123831	10044869	3240	8.48	3376.46	59.13
J614	1123362.1	10044494	3236	8.48	3374.87	60.17
J616	1122374.6	10044421	3225	8.48	3370.36	62.98
J618	1121393.2	10043917	3230	8.48	3368.52	60.02
J62	1125227	10042052	3195	8.48	3380.24	80.27
J620	1121762.7	10044511	3220	8.48	3368.62	64.4
J622	1121867.2	10042802	3220	8.48	3371.79	65.77
J624	1122343.9	10043246	3222	8.48	3372.31	65.13
J626	1122184	10041675	3200	8.48	3371.87	74.47
J628	1122418.5	10041365	3193	8.48	3379.06	80.62
J630	1123200.4	10041386	3187	8.48	3379.43	83.38
J632	1123215.5	10041139	3184	8.48	3379.85	84.86
J634	1122840.7	10040181	3187	8.48	3380.84	83.99
J636	1123632.3	10040007	3192	8.48	3382.17	82.4
J638	1124246.6	10039627	3205	8.48	3384.55	77.8
J64	1125882	10042044	3255	8.48	3380.55	54.4
J640	1123271.9	10041808	3192	8.48	3378.07	80.62
J642	1125480.4	10043891	3222	8.48	3378.73	67.91
J644	1123629.7	10042456	3193	8.48	3372.7	77.86
J646	1123015	10042460	3196	8.48	3371.58	76.08
J648	1123944.2	10043324	3200	8.48	3373.86	75.33
J650	1124266.5	10043316	3194	8.48	3373.82	77.92
J652	1123418.2	10047310	3135	8.48	3377.09	104.9
J654	1123431.2	10047915	3100	8.48	3235.15	58.56
J656	1125435.9	10040502	3230	8.48	3382.53	66.09
J658	1123772.5	10040006	3192	8.48	3382.43	82.51
J66	1125912	10042285	3254	8.48	3380.28	54.72
J660	1122416.7	10041207	3193	8.48	3379.31	80.73
J662	1121815.8	10042660	3222	8.48	3371.76	64.89
J664	1121600.9	10042286	3224	8.48	3371.7	64
J666	1121217.4	10043511	3223	8.48	3368.48	63.03
J668	1121875.6	10043169	3224	8.48	3371.88	64.08
J670	1123316.2	10042458	3193	8.48	3371.93	77.53
J672	1124092	10042774	3190	8.48	3374.87	80.1
J674	1123980	10043719	3204	8.48	3371.95	72.77

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J676	1123903.4	10045204	3235	8.48	3372.76	59.69
J678	1123442.7	10048158	3110	8.48	3235.13	54.22
J68	1125672.7	10042286	3228	8.48	3376.65	64.41
J680	1123380.6	10048225	3110	8.48	3235.13	54.22
J682	1123063.1	10048169	3100	8.48	3235.13	58.55
J684	1122895.5	10047898	3086	8.48	3235.16	64.63
J688	1123855.6	10047023	3180	8.48	3377.81	85.71
J690	1122626.7	10045017	3218	8.48	3368.34	65.14
J692	1121938.2	10043885	3238	8.48	3370.71	57.5
J694	1122202.5	10043832	3238	8.48	3371.55	57.87
J696	1122682.3	10043746	3238	8.48	3372.7	58.36
J698	1125018.8	10042054	3193	8.48	3380.21	81.12
J70	1125672.7	10042387	3228	8.48	3376.62	64.4
J700	1125011	10041754	3192	8.48	3380.21	81.55
J702	1124652.3	10042638	3192	8.48	3375.11	79.34
J704	1124649.1	10042317	3189	8.48	3374.54	80.39
J706	1125145.1	10043429	3210	8.48	3377.37	72.52
J708	1125467.3	10043244	3216	8.48	3377.77	70.09
J710	1124674.9	10043553	3206	8.48	3376.08	73.7
J712	1123455.6	10048115	3110	8.48	3235.13	54.22
J714	1123332.5	10048225	3110	8.48	3235.13	54.22
J72	1125457.5	10042300	3214	8.48	3374.63	69.6
J720	1124205.5	10047608	3180	8.48	3378.59	86.05
J722	1126592.1	10044849	3307	8.48	3379.16	31.27
J724	1125103.4	10045484	3250	8.48	3379.35	56.05
J726	1122233.4	10047038	3065	8.48	3234.99	73.65
J728	1121872.3	10047177	3060	8.48	3234.99	75.82
J730	1121326.8	10045288	3045	8.48	3234.91	82.29
J732	1120850	10044576	3015	8.48	3234.91	95.29
J734	1126122	10043420	3248	8.48	3379.24	56.87
J736	1125636.5	10041358	3257	8.48	3381.46	53.93
J738	1123723	10044190	3224	8.48	3374.17	65.07
J74	1125457.5	10042413	3214	8.48	3374.49	69.54
J740	1125109.4	10047292	3249	8.48	3378.78	56.23
J742	1125247.9	10039961	3260	8.48	3383.5	53.51
J744	1125220.9	10049016	3197	8.48	3378.66	78.71
J746	1125859.8	10048968	3223	8.48	3378.66	67.45
J748	1125769.5	10047902	3247	8.48	3378.67	57.05

Existing System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J750	1124992.9	10050432	3220	8.48	3378.67	68.75
J752	1124948.6	10050389	3218	8.48	3378.67	69.62
J754	1123449.9	10048728	3085	8.48	3378.54	127.19
J756	1123880.9	10048778	3111	8.48	3378.52	115.92
J758	1123501.1	10048585	3113	8.48	3378.55	115.06
J76	1125255.8	10042431	3205	8.48	3374.43	73.41
J760	1123667.7	10048341	3130	8.48	3378.56	107.7
J762	1123896.5	10038697	3170	8.48	3386.54	93.83
J78	1125242.3	10042303	3205	8.48	3374.34	73.38
J80	1125361.2	10042301	3209	8.48	3374.38	71.66
J82	1125361.2	10042198	3210	8.48	3374.35	71.21
J84	1125934.7	10042714	3255	8.48	3379.89	54.12
J86	1126252.3	10042705	3287	8.48	3379.89	40.25
J88	1125934.6	10042756	3255	8.48	3379.83	54.09
J90	1125457.4	10042761	3225	8.48	3376.83	65.79
J92	1125457.4	10042860	3218	8.48	3376.8	68.81
J94	1125454.4	10042665	3221	8.48	3376.59	67.42
J96	1125323.5	10042668	3209	8.48	3376.54	72.6
J98	1125452.9	10042630	3217	8.48	3376.57	69.14
V8002_NU	1121346.3	10045216	3043	8.48	3234.91	83.16
V8002_ND	1121366.9	10045146	3043	8.48	3234.91	83.16
V8004_NU	1123221.5	10047426	3120	8.48	3376.79	111.27
V8004_ND	1123060.2	10047523	3120	8.48	3235.39	50
V8010_NU	1122217.1	10046991	3065	8.48	3234.98	73.65
V8010_ND	1121854.4	10046291	3065	8.48	3234.98	73.65

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999.3	10043006	3254	9.78	3376.55	53.1
J102	1125788.6	10043009	3236	9.78	3374.65	60.08
J104	1125787.1	10042941	3240	9.78	3374.62	58.33
J106	1125744.9	10043014	3234	9.78	3374.49	60.87
J108	1125746.4	10043169	3238	9.78	3374.49	59.14
J110	1125653.1	10043014	3227	9.78	3374.44	63.89
J112	1126111	10043156	3255	9.78	3376.34	52.58
J114	1126189.2	10043213	3260	9.78	3375.9	50.22
J116	1126077.9	10043285	3250	9.78	3376.19	54.68
J118	1125925.8	10043283	3244	9.78	3376.17	57.27
J120	1126005.6	10043423	3248	9.78	3376.02	55.47
J122	1125841.3	10043421	3242	9.78	3375.43	57.81
J124	1125842.9	10043313	3239	9.78	3375.38	59.09
J126	1125666.8	10043422	3228	9.78	3374.83	63.62
J128	1125668.3	10043677	3232	9.78	3373.94	61.5
J130	1125668.3	10043732	3233	9.78	3373.92	61.06
J132	1125164.1	10043574	3220	9.78	3373.67	66.59
J134	1125471.1	10043427	3218	9.78	3374.24	67.7
J136	1125463.6	10043063	3215	9.78	3373.85	68.83
J138	1125894	10043888	3247	9.78	3375.98	55.89
J14	1123884.3	10038702	3170	9.78	3386.36	93.75
J140	1125067.4	10043894	3220	9.78	3375.12	67.21
J142	1125820	10044147	3253	9.78	3375.96	53.28
J144	1125157.7	10044156	3229	9.78	3375.66	63.55
J146	1125772	10044440	3249	9.78	3375.95	55.01
J150	1125760.2	10044468	3249	9.78	3375.95	55.01
J152	1125070.4	10044495	3230	9.78	3375.63	63.1
J154	1125604.7	10044857	3250	9.78	3375.93	54.57
J156	1124669.9	10044862	3224	9.78	3373.74	64.88
J158	1125083.8	10044940	3234	9.78	3375.91	61.49
J16	1122873.1	10038869	3220	9.78	3386.31	72.06
J160	1125559.4	10044955	3250	9.78	3375.96	54.58
J162	1125461.5	10045164	3250	9.78	3376.02	54.6
J164	1125082.3	10045119	3237	9.78	3375.97	60.22
J166	1125311.2	10045480	3248	9.78	3376.1	55.51
J170	1125095.7	10046118	3253	9.78	3375.84	53.23
J174	1125098.7	10046332	3255	9.78	3375.72	52.31
J176	1125100.3	10046582	3252	9.78	3375.61	53.56

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446.5	10046575	3264	9.78	3375.61	48.36
J18	1124240	10039216	3210	9.78	3385.2	75.91
J180	1125708.8	10046321	3268	9.78	3375.32	46.5
J182	1125708.8	10046551	3274	9.78	3375.32	43.9
J184	1125954.1	10046316	3277	9.78	3375.23	42.56
J186	1125958.6	10046567	3282	9.78	3375.23	40.39
J188	1126222	10046313	3287	9.78	3375.18	38.21
J190	1125106.7	10046822	3249	9.78	3375.51	54.82
J192	1125604.9	10046828	3267	9.78	3375.29	46.92
J194	1126476.6	10046310	3290	9.78	3375.18	36.91
J196	1126225.2	10046578	3288	9.78	3375.18	37.77
J198	1126452.5	10046572	3290	9.78	3375.17	36.9
J20	1124935.7	10039498	3260	9.78	3383.4	53.47
J200	1126153	10046838	3286	9.78	3375.18	38.64
J202	1126401.3	10046870	3290	9.78	3375.17	36.91
J204	1125109.7	10047063	3250	9.78	3375.43	54.35
J206	1125853.2	10047423	3272	9.78	3375.19	44.71
J208	1125600.4	10047197	3268	9.78	3375.29	46.49
J210	1125865.3	10047045	3275	9.78	3375.18	43.41
J212	1126130.5	10047146	3284	9.78	3375.16	39.5
J214	1126359.2	10047149	3290	9.78	3375.16	36.9
J216	1126359.2	10047412	3285	9.78	3375.16	39.07
J218	1126130.5	10047418	3278	9.78	3375.16	42.1
J22	1124947.8	10039509	3260	9.78	3383.31	53.43
J220	1125104.9	10047917	3205	9.78	3375.21	73.75
J222	1125104.9	10047957	3205	9.78	3375.21	73.75
J224	1124995	10047917	3197	9.78	3375.2	77.22
J226	1124010.1	10045975	3250	9.78	3346.69	41.9
J228	1123938.1	10045852	3250	9.78	3347.16	42.1
J230	1123803.7	10045935	3245	9.78	3346.64	44.04
J232	1123645.1	10045276	3242	9.78	3367.4	54.34
J234	1124171.6	10045197	3230	9.78	3366.74	59.25
J236	1123445.4	10045194	3248	9.78	3370.89	53.25
J238	1123390.9	10044874	3240	9.78	3371.26	56.87
J24	1124612.1	10039537	3227	9.78	3382.27	67.28
J240	1124671	10045070	3230	9.78	3373.65	62.24
J242	1124652.8	10044538	3220	9.78	3372.54	66.09
J244	1124858.6	10044541	3218	9.78	3372.44	66.92

Existing System Performance - (PD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124643.7	10044290	3218	9.78	3372.42	66.91
J248	1123356.6	10044196	3234	9.78	3368.83	58.42
J250	1123989.9	10044107	3214	9.78	3364.79	65.34
J252	1123858.9	10043966	3210	9.78	3364.45	66.92
J254	1124682.6	10044130	3212	9.78	3370	68.46
J256	1124684	10043432	3205	9.78	3372.2	72.45
J258	1124684	10043249	3203	9.78	3371.83	73.16
J26	1124424	10039560	3211	9.78	3382.19	74.18
J260	1124881.9	10043093	3198	9.78	3371.68	75.26
J262	1124653.5	10042762	3194	9.78	3370.93	76.67
J264	1124261.5	10042774	3190	9.78	3370.37	78.15
J266	1123934.2	10042774	3190	9.78	3369.37	77.72
J268	1123637.4	10042774	3190	9.78	3368.65	77.41
J270	1123610.7	10042979	3200	9.78	3368.24	72.9
J272	1123619.5	10043324	3207	9.78	3368.24	69.86
J274	1123621.4	10043427	3212	9.78	3367.9	67.55
J276	1123381.7	10043327	3221	9.78	3367.46	63.46
J278	1123166.1	10043500	3225	9.78	3367.11	61.58
J28	1124399.9	10039807	3203	9.78	3382.05	77.58
J280	1123977.2	10043483	3198	9.78	3367.11	73.28
J282	1124278.7	10043485	3198	9.78	3367.1	73.27
J284	1124647.5	10042156	3188	9.78	3369.29	78.55
J286	1124341.1	10041745	3188	9.78	3376.49	81.67
J288	1124622.2	10041108	3188	9.78	3380.06	83.22
J290	1124622.2	10040543	3195	9.78	3380.65	80.44
J292	1124828	10040539	3198	9.78	3380.55	79.1
J294	1124725.1	10040253	3195	9.78	3381.23	80.69
J296	1124918.3	10040249	3203	9.78	3381.14	77.19
J298	1124145.4	10041286	3188	9.78	3376.75	81.78
J30	1124834.9	10039531	3244	9.78	3383.25	60.34
J300	1124042.5	10041114	3188	9.78	3376.78	81.8
J302	1124040.4	10040785	3189	9.78	3376.91	81.42
J304	1124195.8	10040785	3188	9.78	3376.89	81.85
J306	1123769.5	10040791	3189	9.78	3377.07	81.49
J308	1123922.8	10040785	3189	9.78	3377.09	81.5
J310	1124727.2	10039992	3198	9.78	3382.04	79.75
J312	1124756.6	10039992	3198	9.78	3382.04	79.75
J314	1124252.5	10039999	3195	9.78	3382.05	81.05

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914.4	10040005	3193	9.78	3380.92	81.42
J318	1123886.8	10039438	3210	9.78	3385.05	75.85
J32	1125375.6	10039941	3260	9.78	3382.05	52.89
J320	1123306.8	10040009	3190	9.78	3379.41	82.07
J322	1122289.5	10040159	3030	9.78	3377.51	150.58
J324	1122839.8	10040396	3184	9.78	3377.8	83.97
J326	1122999.4	10040261	3186	9.78	3377.08	82.79
J328	1123180.1	10040549	3182	9.78	3377.08	84.53
J330	1123007.8	10040618	3178	9.78	3377.21	86.32
J332	1123230.5	10040679	3182	9.78	3377.03	84.51
J334	1123283	10040818	3179	9.78	3376.97	85.78
J336	1123545.5	10041082	3185	9.78	3375.38	82.49
J338	1122894.4	10040872	3178	9.78	3376.85	86.16
J340	1122440.4	10040465	3169	9.78	3374.75	89.15
J342	1122623.3	10040641	3178	9.78	3374.78	85.26
J344	1122772.2	10040780	3178	9.78	3377.1	86.27
J346	1122741.5	10040713	3178	9.78	3377.14	86.29
J350	1122729.7	10040740	3178	9.78	3377.11	86.27
J352	1122722.3	10040733	3178	9.78	3377.12	86.28
J354	1122884.2	10041060	3183	9.78	3376.55	83.86
J356	1123612	10041383	3188	9.78	3376.25	81.57
J358	1122415.4	10041101	3192	9.78	3376.46	79.92
J36	1125567.1	10040443	3255	9.78	3380.99	54.59
J360	1122205.7	10041099	3192	9.78	3376.46	79.92
J364	1122181.1	10040941	3189	9.78	3366.24	76.8
J366	1122148.2	10040941	3189	9.78	3366.2	76.78
J368	1122218.1	10040941	3188	9.78	3366.51	77.35
J370	1122183.1	10041179	3194	9.78	3365.76	74.42
J372	1122865.7	10041749	3195	9.78	3374.56	77.8
J374	1123108.3	10041533	3188	9.78	3373.08	80.19
J376	1123749.9	10041802	3188	9.78	3374.32	80.73
J378	1122925.9	10042198	3198	9.78	3365.04	72.38
J38	1125085.4	10040522	3214	9.78	3380.51	72.15
J380	1123041.2	10043167	3222	9.78	3367.21	62.92
J382	1123039.2	10043368	3226	9.78	3367.19	61.18
J384	1123030.9	10043048	3222	9.78	3366.82	62.75
J386	1122922.2	10043502	3228	9.78	3367.13	60.28
J388	1123012.2	10044175	3237	9.78	3367.56	56.57

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018.4	10044630	3245	9.78	3366.09	52.47
J392	1123078	10045202	3250	9.78	3369.62	51.83
J394	1123075.9	10045132	3248	9.78	3369.59	52.68
J396	1123078	10045461	3252	9.78	3369.5	50.91
J398	1122933.5	10045990	3220	9.78	3331.9	48.49
J40	1125639.4	10040959	3255	9.78	3379.95	54.14
J400	1122775.2	10045992	3220	9.78	3332.42	48.71
J402	1122775.2	10046090	3205	9.78	3332.09	55.07
J404	1122470.9	10045807	3208	9.78	3344.58	59.18
J406	1122464.8	10046021	3204	9.78	3344.49	60.87
J408	1122468.9	10045657	3214	9.78	3345.95	57.17
J410	1122207.8	10045663	3212	9.78	3345.92	58.03
J412	1122586.1	10045406	3233	9.78	3350.83	51.06
J414	1122795.8	10045445	3245	9.78	3330.6	37.09
J416	1122322.9	10045307	3222	9.78	3360.52	60.02
J418	1122320.8	10045427	3220	9.78	3360.46	60.86
J42	1125221	10040818	3221	9.78	3379.7	68.76
J420	1122388.7	10045020	3209	9.78	3360.99	65.86
J422	1122884.2	10045014	3238	9.78	3360.48	53.07
J424	1122388.6	10044892	3209	9.78	3361.27	65.98
J426	1122376.3	10044717	3215	9.78	3362.03	63.71
J428	1122880	10044707	3242	9.78	3361.8	51.91
J430	1122384.4	10044188	3240	9.78	3364.76	54.06
J432	1122684.6	10044186	3240	9.78	3366.77	54.93
J434	1122742.1	10043462	3232	9.78	3366.77	58.39
J436	1122197.2	10043462	3228	9.78	3365.9	59.75
J438	1122207.5	10044182	3236	9.78	3364.67	55.75
J44	1125638	10041202	3255	9.78	3379.48	53.94
J440	1121938.2	10044182	3240	9.78	3364.08	53.76
J442	1121938.2	10043551	3234	9.78	3363.92	56.29
J444	1122875.7	10043237	3224	9.78	3366.92	61.93
J446	1122869.5	10043168	3223	9.78	3366.98	62.39
J448	1122869.5	10042870	3222	9.78	3366.18	62.47
J450	1122869.5	10042833	3222	9.78	3366.11	62.44
J452	1122577.6	10042833	3220	9.78	3365.92	63.23
J454	1122577.6	10043042	3224	9.78	3365.9	61.48
J456	1122332.9	10042839	3220	9.78	3365.91	63.22
J458	1122832.5	10042692	3221	9.78	3366.04	62.84

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125333.9	10041215	3220	9.78	3379.34	69.04
J460	1122321.2	10042093	3208	9.78	3365.52	68.25
J462	1122197.2	10042443	3216	9.78	3365.37	64.72
J464	1121806.6	10042513	3224	9.78	3365.41	61.27
J466	1121781.6	10042455	3224	9.78	3365.41	61.27
J468	1121773.3	10042102	3218	9.78	3365.41	63.87
J470	1121275.8	10042124	3222	9.78	3365.37	62.12
J472	1122184.8	10042099	3208	9.78	3365.51	68.25
J474	1121872.3	10041867	3209	9.78	3365.61	67.86
J476	1121843.5	10041417	3202	9.78	3365.66	70.92
J478	1121573.4	10040954	3197	9.78	3365.71	73.1
J48	1125796.1	10041657	3255	9.78	3378.54	53.53
J480	1121534.4	10041237	3208	9.78	3365.67	68.32
J482	1121530.2	10040954	3195	9.78	3365.68	73.95
J484	1121380.2	10040935	3195	9.78	3365.61	73.93
J486	1121376	10041089	3205	9.78	3365.61	69.59
J488	1121080	10041046	3195	9.78	3365.55	73.9
J490	1120796.2	10041219	3195	9.78	3365.55	73.9
J492	1121080	10041410	3215	9.78	3365.54	65.23
J498	1121390.4	10041422	3216	9.78	3365.62	64.83
J50	1125374.5	10041666	3215	9.78	3376.67	70.05
J502	1121106.7	10041773	3220	9.78	3365.43	63.01
J504	1121151.6	10042114	3220	9.78	3365.38	62.99
J508	1120997.8	10042132	3200	9.78	3365.24	71.6
J510	1121404.9	10043101	3215	9.78	3360.6	63.09
J512	1121400.8	10043516	3225	9.78	3360.79	58.84
J514	1121674.3	10043531	3228	9.78	3363.8	58.84
J516	1121668.1	10043862	3234	9.78	3363.83	56.26
J518	1126598.3	10045335	3307	9.78	3375.9	29.86
J52	1125329.4	10041667	3213	9.78	3376.5	70.85
J520	1126585.9	10044363	3315	9.78	3375.91	26.39
J522	1126614.9	10044079	3320	9.78	3375.92	24.23
J524	1126475.1	10044087	3300	9.78	3375.95	32.91
J526	1126512	10043330	3310	9.78	3375.91	28.56
J528	1124645.6	10044860	3224	9.78	3373.65	64.84
J530	1123982.9	10043964	3210	9.78	3364.86	67.1
J532	1121044.8	10041644	3220	9.78	3365.46	63.03
J534	1121275.6	10042112	3222	9.78	3365.37	62.12

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328.1	10040934	3188	9.78	3367.24	77.67
J54	1125327.9	10041538	3216	9.78	3376.44	69.52
J540	1123216.8	10044007	3230	9.78	3367.11	59.41
J542	1123717.6	10043709	3210	9.78	3368.84	68.82
J544	1122921.4	10044178	3238	9.78	3367.24	56
J546	1122910.7	10043167	3223	9.78	3367.06	62.42
J548	1122836.4	10040607	3178	9.78	3377.35	86.38
J550	1121429.3	10042126	3224	9.78	3365.37	61.25
J552	1121429.7	10042109	3224	9.78	3365.37	61.26
J554	1124113.5	10047573	3180	9.78	3374.78	84.4
J556	1123927.3	10047480	3182	9.78	3374.18	83.27
J558	1123608.1	10046856	3178	9.78	3373.86	84.86
J56	1125148.8	10041667	3203	9.78	3376.42	75.14
J560	1123546	10046621	3188	9.78	3373.74	80.48
J562	1123275.6	10046630	3188	9.78	3373.74	80.48
J564	1123000.7	10046638	3194	9.78	3373.7	77.86
J566	1122690.4	10046638	3194	9.78	3373.69	77.86
J568	1123546	10046479	3195	9.78	3373.7	77.43
J570	1123541.6	10046364	3198	9.78	3373.69	76.13
J572	1123541.6	10046093	3218	9.78	3373.69	67.46
J574	1122965.3	10047746	3090	9.78	3235.12	62.88
J576	1122756.9	10047990	3078	9.78	3235.02	68.03
J578	1122699.2	10047932	3082	9.78	3235	66.29
J58	1125227	10041771	3200	9.78	3376.71	76.57
J580	1123430.8	10048198	3110	9.78	3235.02	54.17
J582	1123719	10046486	3205	9.78	3373.7	73.1
J584	1123918.9	10040419	3193	9.78	3378.42	80.34
J586	1124622.2	10040824	3190	9.78	3380.19	82.41
J588	1124667	10041753	3190	9.78	3376.83	80.95
J590	1124650.8	10042484	3190	9.78	3369.64	77.84
J592	1124676.5	10043672	3208	9.78	3371.09	70.67
J594	1124679.8	10043917	3210	9.78	3370.41	69.51
J596	1123916.8	10040224	3192	9.78	3379.46	81.23
J598	1123920.7	10040593	3190	9.78	3377.69	81.33
J60	1125153.3	10041773	3200	9.78	3376.68	76.55
J600	1123960.9	10039405	3210	9.78	3385.06	75.85
J602	1123915.7	10038691	3170	9.78	3386.34	93.74
J604	1123276.7	10038802	3200	9.78	3386.32	80.73

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J606	1125613.8	10040660	3255	9.78	3380.53	54.39
J608	1123041.2	10046372	3196	9.78	3373.67	76.99
J610	1122685.5	10046975	3192	9.78	3373.69	78.73
J612	1123831	10044869	3240	9.78	3372.09	57.23
J614	1123362.1	10044494	3236	9.78	3369.84	57.99
J616	1122374.6	10044421	3225	9.78	3363.46	60
J618	1121393.2	10043917	3230	9.78	3360.85	56.7
J62	1125227	10042052	3195	9.78	3377.45	79.05
J620	1121762.7	10044511	3220	9.78	3361	61.1
J622	1121867.2	10042802	3220	9.78	3365.48	63.04
J624	1122343.9	10043246	3222	9.78	3366.22	62.49
J626	1122184	10041675	3200	9.78	3365.6	71.75
J628	1122418.5	10041365	3193	9.78	3375.76	79.19
J630	1123200.4	10041386	3187	9.78	3376.29	82.02
J632	1123215.5	10041139	3184	9.78	3376.88	83.58
J634	1122840.7	10040181	3187	9.78	3378.29	82.88
J636	1123632.3	10040007	3192	9.78	3380.17	81.53
J638	1124246.6	10039627	3205	9.78	3383.53	77.36
J64	1125882	10042044	3255	9.78	3377.88	53.24
J640	1123271.9	10041808	3192	9.78	3374.37	79.02
J642	1125480.4	10043891	3222	9.78	3375.31	66.43
J644	1123629.7	10042456	3193	9.78	3366.77	75.3
J646	1123015	10042460	3196	9.78	3365.19	73.31
J648	1123944.2	10043324	3200	9.78	3368.41	72.97
J650	1124266.5	10043316	3194	9.78	3368.35	75.55
J652	1123418.2	10047310	3135	9.78	3372.98	103.11
J654	1123431.2	10047915	3100	9.78	3235.05	58.52
J656	1125435.9	10040502	3230	9.78	3380.68	65.29
J658	1123772.5	10040006	3192	9.78	3380.54	81.69
J66	1125912	10042285	3254	9.78	3377.5	53.51
J660	1122416.7	10041207	3193	9.78	3376.12	79.34
J662	1121815.8	10042660	3222	9.78	3365.44	62.15
J664	1121600.9	10042286	3224	9.78	3365.36	61.25
J666	1121217.4	10043511	3223	9.78	3360.8	59.71
J668	1121875.6	10043169	3224	9.78	3365.61	61.36
J670	1123316.2	10042458	3193	9.78	3365.69	74.82
J672	1124092	10042774	3190	9.78	3369.84	77.92
J674	1123980	10043719	3204	9.78	3365.71	70.07

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J676	1123903.4	10045204	3235	9.78	3366.87	57.14
J678	1123442.7	10048158	3110	9.78	3235.02	54.17
J68	1125672.7	10042286	3228	9.78	3372.36	62.55
J680	1123380.6	10048225	3110	9.78	3235.02	54.17
J682	1123063.1	10048169	3100	9.78	3235.02	58.5
J684	1122895.5	10047898	3086	9.78	3235.06	64.59
J688	1123855.6	10047023	3180	9.78	3373.99	84.06
J690	1122626.7	10045017	3218	9.78	3360.6	61.79
J692	1121938.2	10043885	3238	9.78	3363.96	54.58
J694	1122202.5	10043832	3238	9.78	3365.14	55.09
J696	1122682.3	10043746	3238	9.78	3366.77	55.79
J698	1125018.8	10042054	3193	9.78	3377.4	79.9
J70	1125672.7	10042387	3228	9.78	3372.32	62.53
J700	1125011	10041754	3192	9.78	3377.39	80.33
J702	1124652.3	10042638	3192	9.78	3370.18	77.21
J704	1124649.1	10042317	3189	9.78	3369.37	78.15
J706	1125145.1	10043429	3210	9.78	3373.37	70.79
J708	1125467.3	10043244	3216	9.78	3373.94	68.43
J710	1124674.9	10043553	3206	9.78	3371.55	71.73
J712	1123455.6	10048115	3110	9.78	3235.03	54.17
J714	1123332.5	10048225	3110	9.78	3235.02	54.17
J72	1125457.5	10042300	3214	9.78	3369.5	67.38
J720	1124205.5	10047608	3180	9.78	3375.11	84.54
J722	1126592.1	10044849	3307	9.78	3375.91	29.86
J724	1125103.4	10045484	3250	9.78	3376.18	54.67
J726	1122233.4	10047038	3065	9.78	3234.82	73.58
J728	1121872.3	10047177	3060	9.78	3234.82	75.75
J730	1121326.8	10045288	3045	9.78	3234.72	82.2
J732	1120850	10044576	3015	9.78	3234.71	95.2
J734	1126122	10043420	3248	9.78	3376.02	55.47
J736	1125636.5	10041358	3257	9.78	3379.16	52.93
J738	1123723	10044190	3224	9.78	3368.85	62.76
J74	1125457.5	10042413	3214	9.78	3369.31	67.3
J740	1125109.4	10047292	3249	9.78	3375.37	54.76
J742	1125247.9	10039961	3260	9.78	3382.05	52.88
J744	1125220.9	10049016	3197	9.78	3375.2	77.21
J746	1125859.8	10048968	3223	9.78	3375.2	65.95
J748	1125769.5	10047902	3247	9.78	3375.21	55.56

Existing System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J750	1124992.9	10050432	3220	9.78	3375.21	67.25
J752	1124948.6	10050389	3218	9.78	3375.21	68.12
J754	1123449.9	10048728	3085	9.78	3375.04	125.67
J756	1123880.9	10048778	3111	9.78	3375	114.39
J758	1123501.1	10048585	3113	9.78	3375.05	113.55
J76	1125255.8	10042431	3205	9.78	3369.22	71.16
J760	1123667.7	10048341	3130	9.78	3375.06	106.19
J762	1123896.5	10038697	3170	9.78	3386.36	93.75
J78	1125242.3	10042303	3205	9.78	3369.1	71.11
J80	1125361.2	10042301	3209	9.78	3369.16	69.4
J82	1125361.2	10042198	3210	9.78	3369.11	68.94
J84	1125934.7	10042714	3255	9.78	3376.94	52.84
J86	1126252.3	10042705	3287	9.78	3376.94	38.97
J88	1125934.6	10042756	3255	9.78	3376.86	52.8
J90	1125457.4	10042761	3225	9.78	3372.62	63.96
J92	1125457.4	10042860	3218	9.78	3372.57	66.98
J94	1125454.4	10042665	3221	9.78	3372.27	65.55
J96	1125323.5	10042668	3209	9.78	3372.21	70.72
J98	1125452.9	10042630	3217	9.78	3372.26	67.27
V8002_NU	1121346.3	10045216	3043	9.78	3234.71	83.07
V8002_ND	1121366.9	10045146	3043	9.78	3234.71	83.07
V8004_NU	1123221.5	10047426	3120	9.78	3372.56	109.43
V8004_ND	1123060.2	10047523	3120	9.78	3235.39	50
V8010_NU	1122217.1	10046991	3065	9.78	3234.81	73.58
V8010_ND	1121854.4	10046291	3065	9.78	3234.81	73.58

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999	10043006	3254	4.24	3384.96	56.75
J102	1125789	10043009	3236	4.24	3384.59	64.38
J104	1125787	10042941	3240	4.24	3384.58	62.65
J106	1125745	10043014	3234	4.24	3384.56	65.24
J108	1125746	10043169	3238	4.24	3384.56	63.5
J110	1125653	10043014	3227	4.24	3384.55	68.27
J112	1126111	10043156	3255	4.24	3384.92	56.3
J114	1126189	10043213	3260	4.24	3384.83	54.09
J116	1126078	10043285	3250	4.24	3384.89	58.45
J118	1125926	10043283	3244	4.24	3384.89	61.05
J120	1126006	10043423	3248	4.24	3384.86	59.3
J122	1125841	10043421	3242	4.24	3384.74	61.85
J124	1125843	10043313	3239	4.24	3384.73	63.15
J126	1125667	10043422	3228	4.24	3384.63	67.87
J128	1125668	10043677	3232	4.24	3384.46	66.06
J130	1125668	10043732	3233	4.24	3384.45	65.62
J132	1125164	10043574	3220	4.24	3384.4	71.24
J134	1125471	10043427	3218	4.24	3384.51	72.15
J136	1125464	10043063	3215	4.24	3384.44	73.42
J138	1125894	10043888	3247	4.24	3384.85	59.73
J14	1123884	10038702	3170	4.24	3386.87	93.97
J140	1125067	10043894	3220	4.24	3384.68	71.36
J142	1125820	10044147	3253	4.24	3384.85	57.13
J144	1125158	10044156	3229	4.24	3384.79	67.5
J146	1125772	10044440	3249	4.24	3384.84	58.86
J150	1125760	10044468	3249	4.24	3384.84	58.86
J152	1125070	10044495	3230	4.24	3384.78	67.07
J154	1125605	10044857	3250	4.24	3384.84	58.43
J156	1124670	10044862	3224	4.24	3384.41	69.51
J158	1125084	10044940	3234	4.24	3384.84	65.36
J16	1122873	10038869	3220	4.24	3386.87	72.3
J160	1125559	10044955	3250	4.24	3384.85	58.43
J162	1125462	10045164	3250	4.24	3384.86	58.43
J164	1125082	10045119	3237	4.24	3384.85	64.06
J166	1125311	10045480	3248	4.24	3384.87	59.31
J170	1125096	10046118	3253	4.24	3384.82	57.12
J174	1125099	10046332	3255	4.24	3384.8	56.24
J176	1125100	10046582	3252	4.24	3384.78	57.53

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446	10046575	3264	4.24	3384.78	52.33
J18	1124240	10039216	3210	4.24	3386.65	76.54
J180	1125709	10046321	3268	4.24	3384.72	50.58
J182	1125709	10046551	3274	4.24	3384.72	47.98
J184	1125954	10046316	3277	4.24	3384.7	46.67
J186	1125959	10046567	3282	4.24	3384.7	44.5
J188	1126222	10046313	3287	4.24	3384.7	42.33
J190	1125107	10046822	3249	4.24	3384.76	58.82
J192	1125605	10046828	3267	4.24	3384.72	51.01
J194	1126477	10046310	3290	4.24	3384.69	41.03
J196	1126225	10046578	3288	4.24	3384.69	41.9
J198	1126452	10046572	3290	4.24	3384.69	41.03
J20	1124936	10039498	3260	4.24	3386.3	54.72
J200	1126153	10046838	3286	4.24	3384.69	42.76
J202	1126401	10046870	3290	4.24	3384.69	41.03
J204	1125110	10047063	3250	4.24	3384.74	58.38
J206	1125853	10047423	3272	4.24	3384.7	48.83
J208	1125600	10047197	3268	4.24	3384.72	50.57
J210	1125865	10047045	3275	4.24	3384.69	47.53
J212	1126130	10047146	3284	4.24	3384.69	43.63
J214	1126359	10047149	3290	4.24	3384.69	41.03
J216	1126359	10047412	3285	4.24	3384.69	43.2
J218	1126130	10047418	3278	4.24	3384.69	46.23
J22	1124948	10039509	3260	4.24	3386.28	54.72
J220	1125105	10047917	3205	4.24	3384.7	77.86
J222	1125105	10047957	3205	4.24	3384.7	77.86
J224	1124995	10047917	3197	4.24	3384.7	81.33
J226	1124010	10045975	3250	4.24	3379.12	55.95
J228	1123938	10045852	3250	4.24	3379.21	55.99
J230	1123804	10045935	3245	4.24	3379.11	58.11
J232	1123645	10045276	3242	4.24	3383.17	61.17
J234	1124172	10045197	3230	4.24	3383.05	66.32
J236	1123445	10045194	3248	4.24	3383.86	58.87
J238	1123391	10044874	3240	4.24	3383.93	62.36
J24	1124612	10039537	3227	4.24	3386.07	68.93
J240	1124671	10045070	3230	4.24	3384.4	66.9
J242	1124653	10044538	3220	4.24	3384.18	71.14
J244	1124859	10044541	3218	4.24	3384.16	72

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124644	10044290	3218	4.24	3384.16	72
J248	1123357	10044196	3234	4.24	3383.46	64.76
J250	1123990	10044107	3214	4.24	3382.67	73.08
J252	1123859	10043966	3210	4.24	3382.6	74.79
J254	1124683	10044130	3212	4.24	3383.69	74.39
J256	1124684	10043432	3205	4.24	3384.12	77.61
J258	1124684	10043249	3203	4.24	3384.04	78.45
J26	1124424	10039560	3211	4.24	3386.06	75.85
J260	1124882	10043093	3198	4.24	3384.02	80.6
J262	1124654	10042762	3194	4.24	3383.87	82.27
J264	1124262	10042774	3190	4.24	3383.76	83.96
J266	1123934	10042774	3190	4.24	3383.56	83.87
J268	1123637	10042774	3190	4.24	3383.42	83.81
J270	1123611	10042979	3200	4.24	3383.34	79.44
J272	1123620	10043324	3207	4.24	3383.34	76.41
J274	1123621	10043427	3212	4.24	3383.28	74.21
J276	1123382	10043327	3221	4.24	3383.19	70.28
J278	1123166	10043500	3225	4.24	3383.12	68.51
J28	1124400	10039807	3203	4.24	3386.03	79.31
J280	1123977	10043483	3198	4.24	3383.12	80.21
J282	1124279	10043485	3198	4.24	3383.12	80.21
J284	1124647	10042156	3188	4.24	3383.55	84.73
J286	1124341	10041745	3188	4.24	3384.95	85.34
J288	1124622	10041108	3188	4.24	3385.64	85.64
J290	1124622	10040543	3195	4.24	3385.76	82.66
J292	1124828	10040539	3198	4.24	3385.74	81.35
J294	1124725	10040253	3195	4.24	3385.87	82.71
J296	1124918	10040249	3203	4.24	3385.86	79.23
J298	1124145	10041286	3188	4.24	3385	85.36
J30	1124835	10039531	3244	4.24	3386.27	61.64
J300	1124043	10041114	3188	4.24	3385	85.36
J302	1124040	10040785	3189	4.24	3385.03	84.94
J304	1124196	10040785	3188	4.24	3385.03	85.37
J306	1123769	10040791	3189	4.24	3385.06	84.95
J308	1123923	10040785	3189	4.24	3385.06	84.95
J310	1124727	10039992	3198	4.24	3386.03	81.47
J312	1124757	10039992	3198	4.24	3386.03	81.47
J314	1124253	10039999	3195	4.24	3386.03	82.77

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914	10040005	3193	4.24	3385.81	83.55
J318	1123887	10039438	3210	4.24	3386.62	76.53
J32	1125376	10039941	3260	4.24	3386.03	54.61
J320	1123307	10040009	3190	4.24	3385.52	84.72
J322	1122290	10040159	3030	4.24	3385.15	153.89
J324	1122840	10040396	3184	4.24	3385.21	87.18
J326	1122999	10040261	3186	4.24	3385.07	86.26
J328	1123180	10040549	3182	4.24	3385.07	87.99
J330	1123008	10040618	3178	4.24	3385.09	89.73
J332	1123230	10040679	3182	4.24	3385.06	87.98
J334	1123283	10040818	3179	4.24	3385.05	89.28
J336	1123546	10041082	3185	4.24	3384.73	86.54
J338	1122894	10040872	3178	4.24	3385.02	89.7
J340	1122440	10040465	3169	4.24	3384.61	93.43
J342	1122623	10040641	3178	4.24	3384.62	89.53
J344	1122772	10040780	3178	4.24	3385.07	89.72
J346	1122742	10040713	3178	4.24	3385.08	89.73
J350	1122730	10040740	3178	4.24	3385.07	89.72
J352	1122722	10040733	3178	4.24	3385.08	89.73
J354	1122884	10041060	3183	4.24	3384.96	87.51
J356	1123612	10041383	3188	4.24	3384.9	85.32
J358	1122415	10041101	3192	4.24	3384.95	83.6
J36	1125567	10040443	3255	4.24	3385.82	56.69
J360	1122206	10041099	3192	4.24	3384.95	83.6
J364	1122181	10040941	3189	4.24	3382.95	84.04
J366	1122148	10040941	3189	4.24	3382.94	84.04
J368	1122218	10040941	3188	4.24	3383	84.49
J370	1122183	10041179	3194	4.24	3382.86	81.83
J372	1122866	10041749	3195	4.24	3384.57	82.14
J374	1123108	10041533	3188	4.24	3384.28	85.05
J376	1123750	10041802	3188	4.24	3384.53	85.16
J378	1122926	10042198	3198	4.24	3382.72	80.04
J38	1125085	10040522	3214	4.24	3385.73	74.41
J380	1123041	10043167	3222	4.24	3383.14	69.82
J382	1123039	10043368	3226	4.24	3383.14	68.09
J384	1123031	10043048	3222	4.24	3383.06	69.79
J386	1122922	10043502	3228	4.24	3383.13	67.22
J388	1123012	10044175	3237	4.24	3383.21	63.35

Leveikin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018	10044630	3245	4.24	3382.92	59.76
J392	1123078	10045202	3250	4.24	3383.61	57.89
J394	1123076	10045132	3248	4.24	3383.6	58.76
J396	1123078	10045461	3252	4.24	3383.59	57.02
J398	1122934	10045990	3220	4.24	3376.23	67.7
J40	1125639	10040959	3255	4.24	3385.62	56.6
J400	1122775	10045992	3220	4.24	3376.34	67.74
J402	1122775	10046090	3205	4.24	3376.27	74.21
J404	1122471	10045807	3208	4.24	3378.72	73.97
J406	1122465	10046021	3204	4.24	3378.7	75.7
J408	1122469	10045657	3214	4.24	3378.98	71.49
J410	1122208	10045663	3212	4.24	3378.98	72.35
J412	1122586	10045406	3233	4.24	3379.94	63.67
J414	1122796	10045445	3245	4.24	3375.98	56.75
J416	1122323	10045307	3222	4.24	3381.84	69.26
J418	1122321	10045427	3220	4.24	3381.82	70.12
J42	1125221	10040818	3221	4.24	3385.57	71.31
J420	1122389	10045020	3209	4.24	3381.93	74.93
J422	1122884	10045014	3238	4.24	3381.83	62.32
J424	1122389	10044892	3209	4.24	3381.98	74.95
J426	1122376	10044717	3215	4.24	3382.13	72.42
J428	1122880	10044707	3242	4.24	3382.09	60.7
J430	1122384	10044188	3240	4.24	3382.66	61.82
J432	1122685	10044186	3240	4.24	3383.06	61.99
J434	1122742	10043462	3232	4.24	3383.06	65.45
J436	1122197	10043462	3228	4.24	3382.89	67.11
J438	1122208	10044182	3236	4.24	3382.65	63.54
J44	1125638	10041202	3255	4.24	3385.53	56.56
J440	1121938	10044182	3240	4.24	3382.53	61.76
J442	1121938	10043551	3234	4.24	3382.5	64.34
J444	1122876	10043237	3224	4.24	3383.09	68.93
J446	1122870	10043168	3223	4.24	3383.1	69.37
J448	1122870	10042870	3222	4.24	3382.94	69.74
J450	1122870	10042833	3222	4.24	3382.93	69.73
J452	1122578	10042833	3220	4.24	3382.89	70.58
J454	1122578	10043042	3224	4.24	3382.89	68.85
J456	1122333	10042839	3220	4.24	3382.89	70.58
J458	1122833	10042692	3221	4.24	3382.91	70.16

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125334	10041215	3220	4.24	3385.5	71.71
J460	1122321	10042093	3208	4.24	3382.81	75.75
J462	1122197	10042443	3216	4.24	3382.78	72.27
J464	1121807	10042513	3224	4.24	3382.79	68.8
J466	1121782	10042455	3224	4.24	3382.79	68.8
J468	1121773	10042102	3218	4.24	3382.79	71.4
J470	1121276	10042124	3222	4.24	3382.78	69.67
J472	1122185	10042099	3208	4.24	3382.81	75.74
J474	1121872	10041867	3209	4.24	3382.83	75.32
J476	1121843	10041417	3202	4.24	3382.84	78.36
J478	1121573	10040954	3197	4.24	3382.85	80.53
J48	1125796	10041657	3255	4.24	3385.35	56.48
J480	1121534	10041237	3208	4.24	3382.84	75.76
J482	1121530	10040954	3195	4.24	3382.84	81.39
J484	1121380	10040935	3195	4.24	3382.83	81.39
J486	1121376	10041089	3205	4.24	3382.83	77.05
J488	1121080	10041046	3195	4.24	3382.82	81.38
J490	1120796	10041219	3195	4.24	3382.82	81.38
J492	1121080	10041410	3215	4.24	3382.81	72.71
J498	1121390	10041422	3216	4.24	3382.83	72.29
J50	1125375	10041666	3215	4.24	3384.98	73.65
J502	1121107	10041773	3220	4.24	3382.79	70.54
J504	1121152	10042114	3220	4.24	3382.78	70.53
J508	1120998	10042132	3200	4.24	3382.76	79.19
J510	1121405	10043101	3215	4.24	3381.85	72.3
J512	1121401	10043516	3225	4.24	3381.89	67.98
J514	1121674	10043531	3228	4.24	3382.48	66.93
J516	1121668	10043862	3234	4.24	3382.48	64.34
J518	1126598	10045335	3307	4.24	3384.84	33.73
J52	1125329	10041667	3213	4.24	3384.95	74.51
J520	1126586	10044363	3315	4.24	3384.84	30.26
J522	1126615	10044079	3320	4.24	3384.84	28.1
J524	1126475	10044087	3300	4.24	3384.85	36.76
J526	1126512	10043330	3310	4.24	3384.84	32.43
J528	1124646	10044860	3224	4.24	3384.4	69.5
J530	1123983	10043964	3210	4.24	3382.68	74.82
J532	1121045	10041644	3220	4.24	3382.8	70.54
J534	1121276	10042112	3222	4.24	3382.78	69.67

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328	10040934	3188	4.24	3383.14	84.56
J54	1125328	10041538	3216	4.24	3384.94	73.2
J540	1123217	10044007	3230	4.24	3383.12	66.35
J542	1123718	10043709	3210	4.24	3383.46	75.16
J544	1122921	10044178	3238	4.24	3383.15	62.89
J546	1122911	10043167	3223	4.24	3383.11	69.38
J548	1122836	10040607	3178	4.24	3385.12	89.74
J550	1121429	10042126	3224	4.24	3382.78	68.8
J552	1121430	10042109	3224	4.24	3382.78	68.8
J554	1124114	10047573	3180	4.24	3384.62	88.66
J556	1123927	10047480	3182	4.24	3384.5	87.74
J558	1123608	10046856	3178	4.24	3384.44	89.45
J56	1125149	10041667	3203	4.24	3384.94	78.83
J560	1123546	10046621	3188	4.24	3384.42	85.11
J562	1123276	10046630	3188	4.24	3384.41	85.11
J564	1123001	10046638	3194	4.24	3384.41	82.5
J566	1122690	10046638	3194	4.24	3384.4	82.5
J568	1123546	10046479	3195	4.24	3384.41	82.07
J570	1123542	10046364	3198	4.24	3384.41	80.77
J572	1123542	10046093	3218	4.24	3384.4	72.1
J574	1122965	10047746	3090	4.24	3235.34	62.98
J576	1122757	10047990	3078	4.24	3235.32	68.17
J578	1122699	10047932	3082	4.24	3235.32	66.43
J58	1125227	10041771	3200	4.24	3384.99	80.16
J580	1123431	10048198	3110	4.24	3235.32	54.3
J582	1123719	10046486	3205	4.24	3384.41	77.74
J584	1123919	10040419	3193	4.24	3385.32	83.33
J586	1124622	10040824	3190	4.24	3385.67	84.78
J588	1124667	10041753	3190	4.24	3385.01	84.5
J590	1124651	10042484	3190	4.24	3383.62	83.89
J592	1124676	10043672	3208	4.24	3383.9	76.22
J594	1124680	10043917	3210	4.24	3383.77	75.29
J596	1123917	10040224	3192	4.24	3385.53	83.86
J598	1123921	10040593	3190	4.24	3385.18	84.57
J60	1125153	10041773	3200	4.24	3384.99	80.15
J600	1123961	10039405	3210	4.24	3386.62	76.53
J602	1123916	10038691	3170	4.24	3386.87	93.97
J604	1123277	10038802	3200	4.24	3386.87	80.97

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J606	1125614	10040660	3255	4.24	3385.74	56.65
J608	1123041	10046372	3196	4.24	3384.4	81.63
J610	1122686	10046975	3192	4.24	3384.4	83.37
J612	1123831	10044869	3240	4.24	3384.09	62.43
J614	1123362	10044494	3236	4.24	3383.65	63.98
J616	1122375	10044421	3225	4.24	3382.41	68.21
J618	1121393	10043917	3230	4.24	3381.9	65.82
J62	1125227	10042052	3195	4.24	3385.14	82.39
J620	1121763	10044511	3220	4.24	3381.93	70.16
J622	1121867	10042802	3220	4.24	3382.8	70.54
J624	1122344	10043246	3222	4.24	3382.95	69.74
J626	1122184	10041675	3200	4.24	3382.83	79.22
J628	1122419	10041365	3193	4.24	3384.81	83.11
J630	1123200	10041386	3187	4.24	3384.91	85.76
J632	1123216	10041139	3184	4.24	3385.03	87.11
J634	1122841	10040181	3187	4.24	3385.3	85.92
J636	1123632	10040007	3192	4.24	3385.67	83.92
J638	1124247	10039627	3205	4.24	3386.32	78.57
J64	1125882	10042044	3255	4.24	3385.22	56.42
J640	1123272	10041808	3192	4.24	3384.54	83.43
J642	1125480	10043891	3222	4.24	3384.72	70.51
J644	1123630	10042456	3193	4.24	3383.06	82.35
J646	1123015	10042460	3196	4.24	3382.75	80.92
J648	1123944	10043324	3200	4.24	3383.38	79.46
J650	1124266	10043316	3194	4.24	3383.36	82.05
J652	1123418	10047310	3135	4.24	3384.26	108.01
J654	1123431	10047915	3100	4.24	3235.33	58.64
J656	1125436	10040502	3230	4.24	3385.76	67.49
J658	1123772	10040006	3192	4.24	3385.74	83.95
J66	1125912	10042285	3254	4.24	3385.15	56.83
J660	1122417	10041207	3193	4.24	3384.88	83.14
J662	1121816	10042660	3222	4.24	3382.79	69.67
J664	1121601	10042286	3224	4.24	3382.78	68.8
J666	1121217	10043511	3223	4.24	3381.89	68.85
J668	1121876	10043169	3224	4.24	3382.83	68.82
J670	1123316	10042458	3193	4.24	3382.84	82.26
J672	1124092	10042774	3190	4.24	3383.66	83.91
J674	1123980	10043719	3204	4.24	3382.85	77.49

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J676	1123903	10045204	3235	4.24	3383.07	64.16
J678	1123443	10048158	3110	4.24	3235.32	54.3
J68	1125673	10042286	3228	4.24	3384.14	67.66
J680	1123381	10048225	3110	4.24	3235.32	54.3
J682	1123063	10048169	3100	4.24	3235.32	58.63
J684	1122895	10047898	3086	4.24	3235.33	64.7
J688	1123856	10047023	3180	4.24	3384.46	88.59
J690	1122627	10045017	3218	4.24	3381.85	71
J692	1121938	10043885	3238	4.24	3382.51	62.61
J694	1122203	10043832	3238	4.24	3382.74	62.71
J696	1122682	10043746	3238	4.24	3383.06	62.85
J698	1125019	10042054	3193	4.24	3385.13	83.25
J70	1125673	10042387	3228	4.24	3384.13	67.65
J700	1125011	10041754	3192	4.24	3385.13	83.68
J702	1124652	10042638	3192	4.24	3383.72	83.07
J704	1124649	10042317	3189	4.24	3383.56	84.3
J706	1125145	10043429	3210	4.24	3384.34	75.54
J708	1125467	10043244	3216	4.24	3384.45	72.99
J710	1124675	10043553	3206	4.24	3383.99	77.12
J712	1123456	10048115	3110	4.24	3235.32	54.3
J714	1123332	10048225	3110	4.24	3235.32	54.3
J72	1125458	10042300	3214	4.24	3383.58	73.48
J720	1124206	10047608	3180	4.24	3384.68	88.69
J722	1126592	10044849	3307	4.24	3384.84	33.73
J724	1125103	10045484	3250	4.24	3384.89	58.45
J726	1122233	10047038	3065	4.24	3235.28	73.78
J728	1121872	10047177	3060	4.24	3235.28	75.95
J730	1121327	10045288	3045	4.24	3235.26	82.44
J732	1120850	10044576	3015	4.24	3235.26	95.44
J734	1126122	10043420	3248	4.24	3384.86	59.3
J736	1125637	10041358	3257	4.24	3385.47	55.67
J738	1123723	10044190	3224	4.24	3383.46	69.09
J74	1125458	10042413	3214	4.24	3383.55	73.46
J740	1125109	10047292	3249	4.24	3384.73	58.81
J742	1125248	10039961	3260	4.24	3386.03	54.61
J744	1125221	10049016	3197	4.24	3384.7	81.33
J746	1125860	10048968	3223	4.24	3384.7	70.06
J748	1125770	10047902	3247	4.24	3384.7	59.67

LaVerkin Pond HGL @ 3400 System Performance - (ADD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J750	1124993	10050432	3220	4.24	3384.7	71.37
J752	1124949	10050389	3218	4.24	3384.7	72.23
J754	1123450	10048728	3085	4.24	3384.67	129.85
J756	1123881	10048778	3111	4.24	3384.66	118.58
J758	1123501	10048585	3113	4.24	3384.67	117.71
J76	1125256	10042431	3205	4.24	3383.53	77.36
J760	1123668	10048341	3130	4.24	3384.67	110.35
J762	1123897	10038697	3170	4.24	3386.87	93.97
J78	1125242	10042303	3205	4.24	3383.5	77.35
J80	1125361	10042301	3209	4.24	3383.52	75.62
J82	1125361	10042198	3210	4.24	3383.51	75.18
J84	1125935	10042714	3255	4.24	3385.04	56.35
J86	1126252	10042705	3287	4.24	3385.04	42.48
J88	1125935	10042756	3255	4.24	3385.02	56.34
J90	1125457	10042761	3225	4.24	3384.19	68.98
J92	1125457	10042860	3218	4.24	3384.18	72.01
J94	1125454	10042665	3221	4.24	3384.12	70.68
J96	1125323	10042668	3209	4.24	3384.11	75.88
J98	1125453	10042630	3217	4.24	3384.12	72.41
V8002_NU	1121346	10045216	3043	4.24	3235.26	83.31
V8002_ND	1121367	10045146	3043	4.24	3235.26	83.31
V8004_NU	1123222	10047426	3120	4.24	3384.18	114.47
V8004_ND	1123060	10047523	3120	4.24	3235.39	50
V8010_NU	1122217	10046991	3065	4.24	3235.28	73.78
V8010_ND	1121854	10046291	3065	4.24	3235.28	73.78

Laverkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999	10043006.15	3254	8.48	3379.61	54.43
J102	1125789	10043009.16	3236	8.48	3378.27	61.65
J104	1125787	10042941.46	3240	8.48	3378.25	59.9
J106	1125745	10043013.67	3234	8.48	3378.15	62.46
J108	1125746	10043168.62	3238	8.48	3378.15	60.73
J110	1125653	10043013.67	3227	8.48	3378.12	65.48
J112	1126111	10043155.56	3255	8.48	3379.47	53.93
J114	1126189	10043212.73	3260	8.48	3379.15	51.63
J116	1126078	10043284.94	3250	8.48	3379.36	56.05
J118	1125926	10043283.43	3244	8.48	3379.35	58.65
J120	1126006	10043423.33	3248	8.48	3379.24	56.87
J122	1125841	10043420.85	3242	8.48	3378.82	59.28
J124	1125843	10043312.54	3239	8.48	3378.78	60.57
J126	1125667	10043422.36	3228	8.48	3378.4	65.17
J128	1125668	10043676.58	3232	8.48	3377.77	63.16
J130	1125668	10043732.24	3233	8.48	3377.75	62.72
J132	1125164	10043574.29	3220	8.48	3377.58	68.28
J134	1125471	10043426.87	3218	8.48	3377.98	69.32
J136	1125464	10043062.82	3215	8.48	3377.71	70.5
J138	1125894	10043887.76	3247	8.48	3379.21	57.29
J14	1123884	10038701.67	3170	8.48	3386.54	93.83
J140	1125067	10043893.79	3220	8.48	3378.6	68.72
J142	1125820	10044146.52	3253	8.48	3379.2	54.68
J144	1125158	10044155.54	3229	8.48	3378.99	64.99
J146	1125772	10044440.44	3249	8.48	3379.19	56.41
J150	1125760	10044467.68	3249	8.48	3379.19	56.41
J152	1125070	10044494.85	3230	8.48	3378.96	64.54
J154	1125605	10044857.39	3250	8.48	3379.18	55.97
J156	1124670	10044862.08	3224	8.48	3377.63	66.57
J158	1125084	10044940.31	3234	8.48	3379.16	62.9
J16	1122873	10038868.78	3220	8.48	3386.51	72.15
J160	1125559	10044955.35	3250	8.48	3379.2	55.98
J162	1125462	10045164.45	3250	8.48	3379.23	56
J164	1125082	10045119.32	3237	8.48	3379.2	61.62
J166	1125311	10045479.58	3248	8.48	3379.3	56.89
J170	1125096	10046118.46	3253	8.48	3379.11	54.64
J174	1125099	10046332.07	3255	8.48	3379.03	53.74
J176	1125100	10046582.25	3252	8.48	3378.95	55.01

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446	10046574.73	3264	8.48	3378.95	49.81
J18	1124240	10039216.28	3210	8.48	3385.73	76.14
J180	1125709	10046320.76	3268	8.48	3378.74	47.99
J182	1125709	10046550.92	3274	8.48	3378.74	45.38
J184	1125954	10046316.24	3277	8.48	3378.68	44.06
J186	1125959	10046567.46	3282	8.48	3378.68	41.89
J188	1126222	10046313.23	3287	8.48	3378.65	39.71
J190	1125107	10046821.69	3249	8.48	3378.88	56.28
J192	1125605	10046827.71	3267	8.48	3378.72	48.41
J194	1126477	10046310.38	3290	8.48	3378.64	38.41
J196	1126225	10046578.15	3288	8.48	3378.64	39.27
J198	1126452	10046572.14	3290	8.48	3378.64	38.41
J20	1124936	10039498.35	3260	8.48	3384.45	53.93
J200	1126153	10046838.4	3286	8.48	3378.64	40.14
J202	1126401	10046869.99	3290	8.48	3378.64	38.41
J204	1125110	10047063.06	3250	8.48	3378.82	55.82
J206	1125853	10047422.59	3272	8.48	3378.65	46.21
J208	1125600	10047196.94	3268	8.48	3378.72	47.97
J210	1125865	10047045.01	3275	8.48	3378.64	44.91
J212	1126130	10047146.03	3284	8.48	3378.63	41
J214	1126359	10047149.04	3290	8.48	3378.63	38.4
J216	1126359	10047412.29	3285	8.48	3378.63	40.57
J218	1126130	10047418.31	3278	8.48	3378.63	43.6
J22	1124948	10039508.88	3260	8.48	3384.39	53.9
J220	1125105	10047916.83	3205	8.48	3378.67	75.25
J222	1125105	10047957.44	3205	8.48	3378.67	75.25
J224	1124995	10047916.83	3197	8.48	3378.66	78.71
J226	1124010	10045974.98	3250	8.48	3358.49	47.01
J228	1123938	10045852.01	3250	8.48	3358.82	47.15
J230	1123804	10045935.25	3245	8.48	3358.45	49.16
J232	1123645	10045276.06	3242	8.48	3373.14	56.82
J234	1124172	10045197.42	3230	8.48	3372.68	61.82
J236	1123445	10045194.39	3248	8.48	3375.61	55.29
J238	1123391	10044873.79	3240	8.48	3375.87	58.87
J24	1124612	10039537.47	3227	8.48	3383.66	67.88
J240	1124671	10045070.39	3230	8.48	3377.56	63.94
J242	1124653	10044538.06	3220	8.48	3376.77	67.93
J244	1124859	10044541.09	3218	8.48	3376.71	68.77

LaVerkin Pond HGL @ 5400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124644	10044290.05	3218	8.48	3376.69	68.76
J248	1123357	10044196.31	3234	8.48	3374.16	60.73
J250	1123990	10044106.6	3214	8.48	3371.3	68.16
J252	1123859	10043966.22	3210	8.48	3371.06	69.79
J254	1124683	10044130.4	3212	8.48	3374.98	70.62
J256	1124684	10043431.87	3205	8.48	3376.54	74.33
J258	1124684	10043249.28	3203	8.48	3376.28	75.08
J26	1124424	10039560.03	3211	8.48	3383.59	74.79
J260	1124882	10043093.32	3198	8.48	3376.18	77.2
J262	1124654	10042762.38	3194	8.48	3375.64	78.71
J264	1124262	10042773.79	3190	8.48	3375.24	80.27
J266	1123934	10042773.79	3190	8.48	3374.54	79.96
J268	1123637	10042773.79	3190	8.48	3374.03	79.74
J270	1123611	10042979.2	3200	8.48	3373.74	75.28
J272	1123620	10043323.58	3207	8.48	3373.74	72.25
J274	1123621	10043426.53	3212	8.48	3373.5	69.98
J276	1123382	10043327.32	3221	8.48	3373.19	65.94
J278	1123166	10043499.53	3225	8.48	3372.94	64.1
J28	1124400	10039806.74	3203	8.48	3383.49	78.21
J280	1123977	10043482.69	3198	8.48	3372.94	75.8
J282	1124279	10043484.56	3198	8.48	3372.94	75.8
J284	1124647	10042155.56	3188	8.48	3374.48	80.8
J286	1124341	10041745.28	3188	8.48	3379.57	83.01
J288	1124622	10041107.8	3188	8.48	3382.09	84.1
J290	1124622	10040543.11	3195	8.48	3382.51	81.25
J292	1124828	10040538.91	3198	8.48	3382.44	79.92
J294	1124725	10040253.41	3195	8.48	3382.92	81.43
J296	1124918	10040249.22	3203	8.48	3382.86	77.93
J298	1124145	10041286.23	3188	8.48	3379.75	83.09
J30	1124835	10039531.45	3244	8.48	3384.35	60.81
J300	1124043	10041114.1	3188	8.48	3379.77	83.09
J302	1124040	10040784.52	3189	8.48	3379.87	82.7
J304	1124196	10040784.52	3188	8.48	3379.85	83.13
J306	1123769	10040790.82	3189	8.48	3379.98	82.75
J308	1123923	10040784.52	3189	8.48	3379.99	82.76
J310	1124727	10039992.28	3198	8.48	3383.5	80.38
J312	1124757	10039992.28	3198	8.48	3383.5	80.38
J314	1124253	10039998.58	3195	8.48	3383.5	81.68

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914	10040004.87	3193	8.48	3382.7	82.2
J318	1123887	10039437.56	3210	8.48	3385.62	76.1
J32	1125376	10039940.89	3260	8.48	3383.5	53.51
J320	1123307	10040008.87	3190	8.48	3381.63	83.03
J322	1122290	10040158.62	3030	8.48	3380.29	151.78
J324	1122840	10040395.83	3184	8.48	3380.5	85.14
J326	1122999	10040261.48	3186	8.48	3379.99	84.05
J328	1123180	10040549.08	3182	8.48	3379.99	85.79
J330	1123008	10040618.35	3178	8.48	3380.08	87.56
J332	1123230	10040679.23	3182	8.48	3379.95	85.77
J334	1123283	10040817.78	3179	8.48	3379.91	87.06
J336	1123546	10041082.28	3185	8.48	3378.78	83.97
J338	1122894	10040872.36	3178	8.48	3379.82	87.45
J340	1122440	10040465.36	3169	8.48	3378.34	90.71
J342	1122623	10040640.98	3178	8.48	3378.36	86.82
J344	1122772	10040780.43	3178	8.48	3380	87.53
J346	1122742	10040713.3	3178	8.48	3380.03	87.54
J350	1122730	10040740.04	3178	8.48	3380.01	87.53
J352	1122722	10040733.27	3178	8.48	3380.02	87.53
J354	1122884	10041060.03	3183	8.48	3379.61	85.19
J356	1123612	10041382.77	3188	8.48	3379.4	82.93
J358	1122415	10041101.24	3192	8.48	3379.55	81.26
J36	1125567	10040442.66	3255	8.48	3382.75	55.35
J360	1122206	10041099.19	3192	8.48	3379.55	81.26
J364	1122181	10040940.96	3189	8.48	3372.32	79.43
J366	1122148	10040940.96	3189	8.48	3372.29	79.42
J368	1122218	10040940.96	3188	8.48	3372.51	79.95
J370	1122183	10041179.33	3194	8.48	3371.98	77.12
J372	1122866	10041748.55	3195	8.48	3378.2	79.38
J374	1123108	10041532.78	3188	8.48	3377.16	81.96
J376	1123750	10041802.49	3188	8.48	3378.03	82.34
J378	1122926	10042197.86	3198	8.48	3371.48	75.17
J38	1125085	10040522.38	3214	8.48	3382.41	72.97
J380	1123041	10043166.82	3222	8.48	3373.01	65.43
J382	1123039	10043368.2	3226	8.48	3372.99	63.69
J384	1123031	10043047.63	3222	8.48	3372.73	65.31
J386	1122922	10043501.52	3228	8.48	3372.95	62.81
J388	1123012	10044175.36	3237	8.48	3373.26	59.04

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018	10044629.5	3245	8.48	3372.22	55.12
J392	1123078	10045201.71	3250	8.48	3374.71	54.04
J394	1123076	10045131.84	3248	8.48	3374.69	54.89
J396	1123078	10045460.63	3252	8.48	3374.63	53.14
J398	1122934	10045989.69	3220	8.48	3348.03	55.48
J40	1125639	10040959.04	3255	8.48	3382.01	55.03
J400	1122775	10045991.74	3220	8.48	3348.4	55.64
J402	1122775	10046090.38	3205	8.48	3348.17	62.03
J404	1122471	10045806.8	3208	8.48	3357.01	64.56
J406	1122465	10046020.51	3204	8.48	3356.94	66.27
J408	1122469	10045656.79	3214	8.48	3357.97	62.38
J410	1122208	10045662.95	3212	8.48	3357.95	63.24
J412	1122586	10045406.08	3233	8.48	3361.43	55.65
J414	1122796	10045445.13	3245	8.48	3347.11	44.24
J416	1122323	10045307.44	3222	8.48	3368.28	63.38
J418	1122321	10045426.63	3220	8.48	3368.24	64.23
J42	1125221	10040817.64	3221	8.48	3381.84	69.69
J420	1122389	10045019.75	3209	8.48	3368.61	69.16
J422	1122884	10045013.59	3238	8.48	3368.25	56.44
J424	1122389	10044891.58	3209	8.48	3368.81	69.25
J426	1122376	10044716.9	3215	8.48	3369.35	66.88
J428	1122880	10044706.63	3242	8.48	3369.19	55.11
J430	1122384	10044188.21	3240	8.48	3371.28	56.88
J432	1122685	10044186.15	3240	8.48	3372.7	57.5
J434	1122742	10043462.38	3232	8.48	3372.7	60.96
J436	1122197	10043462.38	3228	8.48	3372.08	62.43
J438	1122208	10044181.61	3236	8.48	3371.22	58.59
J44	1125638	10041201.73	3255	8.48	3381.68	54.89
J440	1121938	10044181.61	3240	8.48	3370.8	56.67
J442	1121938	10043550.74	3234	8.48	3370.68	59.23
J444	1122876	10043237.38	3224	8.48	3372.8	64.48
J446	1122870	10043167.51	3223	8.48	3372.85	64.93
J448	1122870	10042869.54	3222	8.48	3372.29	65.12
J450	1122870	10042832.55	3222	8.48	3372.23	65.09
J452	1122578	10042832.55	3220	8.48	3372.1	65.9
J454	1122578	10043042.16	3224	8.48	3372.08	64.16
J456	1122333	10042838.71	3220	8.48	3372.09	65.9
J458	1122833	10042691.99	3221	8.48	3372.18	65.51

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125334	10041215.27	3220	8.48	3381.58	70.01
J460	1122321	10042092.86	3208	8.48	3371.81	70.98
J462	1122197	10042443.34	3216	8.48	3371.71	67.47
J464	1121807	10042513.21	3224	8.48	3371.74	64.02
J466	1121782	10042455.06	3224	8.48	3371.74	64.01
J468	1121773	10042101.51	3218	8.48	3371.74	66.62
J470	1121276	10042124.21	3222	8.48	3371.71	64.87
J472	1122185	10042098.85	3208	8.48	3371.81	70.98
J474	1121872	10041866.64	3209	8.48	3371.88	70.58
J476	1121843	10041416.6	3202	8.48	3371.92	73.63
J478	1121573	10040953.58	3197	8.48	3371.95	75.81
J48	1125796	10041656.67	3255	8.48	3381.02	54.6
J480	1121534	10041237.16	3208	8.48	3371.92	71.03
J482	1121530	10040953.58	3195	8.48	3371.92	76.66
J484	1121380	10040935.08	3195	8.48	3371.88	76.64
J486	1121376	10041089.2	3205	8.48	3371.88	72.31
J488	1121080	10041046.05	3195	8.48	3371.84	76.62
J490	1120796	10041218.67	3195	8.48	3371.84	76.62
J492	1121080	10041409.78	3215	8.48	3371.83	67.95
J498	1121390	10041422.11	3216	8.48	3371.89	67.55
J50	1125375	10041665.7	3215	8.48	3379.7	71.36
J502	1121107	10041773	3220	8.48	3371.75	65.75
J504	1121152	10042114.49	3220	8.48	3371.71	65.74
J508	1120998	10042132.01	3200	8.48	3371.62	74.36
J510	1121405	10043101.18	3215	8.48	3368.34	66.44
J512	1121401	10043516.28	3225	8.48	3368.47	62.16
J514	1121674	10043531.31	3228	8.48	3370.6	61.79
J516	1121668	10043862.16	3234	8.48	3370.62	59.2
J518	1126598	10045335.4	3307	8.48	3379.16	31.27
J52	1125329	10041667.2	3213	8.48	3379.58	72.18
J520	1126586	10044363.41	3315	8.48	3379.16	27.8
J522	1126615	10044078.7	3320	8.48	3379.17	25.64
J524	1126475	10044086.92	3300	8.48	3379.19	34.31
J526	1126512	10043329.84	3310	8.48	3379.16	29.97
J528	1124646	10044859.56	3224	8.48	3377.56	66.54
J530	1123983	10043963.76	3210	8.48	3371.35	69.91
J532	1121045	10041643.81	3220	8.48	3371.77	65.76
J534	1121276	10042111.69	3222	8.48	3371.71	64.87

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328	10040934.14	3188	8.48	3373.03	80.17
J54	1125328	10041537.83	3216	8.48	3379.54	70.86
J540	1123217	10044006.96	3230	8.48	3372.94	61.94
J542	1123718	10043708.89	3210	8.48	3374.16	71.13
J544	1122921	10044178.35	3238	8.48	3373.03	58.51
J546	1122911	10043167.34	3223	8.48	3372.9	64.95
J548	1122836	10040607.49	3178	8.48	3380.18	87.6
J550	1121429	10042126	3224	8.48	3371.71	64
J552	1121430	10042108.54	3224	8.48	3371.71	64
J554	1124114	10047573.47	3180	8.48	3378.36	85.95
J556	1123927	10047480.41	3182	8.48	3377.93	84.9
J558	1123608	10046855.61	3178	8.48	3377.71	86.53
J56	1125149	10041667.2	3203	8.48	3379.52	76.49
J560	1123546	10046620.76	3188	8.48	3377.63	82.17
J562	1123276	10046629.62	3188	8.48	3377.63	82.17
J564	1123001	10046638.48	3194	8.48	3377.6	79.55
J566	1122690	10046638.48	3194	8.48	3377.59	79.55
J568	1123546	10046478.96	3195	8.48	3377.6	79.12
J570	1123542	10046363.75	3198	8.48	3377.59	77.82
J572	1123542	10046093.45	3218	8.48	3377.59	69.15
J574	1122965	10047746.28	3090	8.48	3235.2	62.92
J576	1122757	10047990	3078	8.48	3235.13	68.08
J578	1122699	10047932.39	3082	8.48	3235.11	66.34
J58	1125227	10041771	3200	8.48	3379.73	77.88
J580	1123431	10048198.26	3110	8.48	3235.13	54.22
J582	1123719	10046485.61	3205	8.48	3377.6	74.79
J584	1123919	10040419.38	3193	8.48	3380.93	81.43
J586	1124622	10040823.62	3190	8.48	3382.18	83.27
J588	1124667	10041752.7	3190	8.48	3379.81	82.24
J590	1124651	10042483.64	3190	8.48	3374.73	80.04
J592	1124676	10043672.36	3208	8.48	3375.76	72.69
J594	1124680	10043916.86	3210	8.48	3375.28	71.61
J596	1123917	10040224.41	3192	8.48	3381.67	82.18
J598	1123921	10040593.44	3190	8.48	3380.42	82.51
J60	1125153	10041772.51	3200	8.48	3379.7	77.86
J600	1123961	10039404.97	3210	8.48	3385.63	76.1
J602	1123916	10038690.63	3170	8.48	3386.53	93.82
J604	1123277	10038802.09	3200	8.48	3386.52	80.82

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J606	1125614	10040659.62	3255	8.48	3382.43	55.21
J608	1123041	10046371.78	3196	8.48	3377.58	78.68
J610	1122686	10046974.97	3192	8.48	3377.59	80.42
J612	1123831	10044868.8	3240	8.48	3376.46	59.13
J614	1123362	10044493.56	3236	8.48	3374.87	60.17
J616	1122375	10044420.94	3225	8.48	3370.36	62.98
J618	1121393	10043917.14	3230	8.48	3368.52	60.02
J62	1125227	10042052.31	3195	8.48	3380.24	80.27
J620	1121763	10044510.85	3220	8.48	3368.62	64.4
J622	1121867	10042801.6	3220	8.48	3371.79	65.77
J624	1122344	10043245.51	3222	8.48	3372.31	65.13
J626	1122184	10041674.73	3200	8.48	3371.87	74.47
J628	1122419	10041364.82	3193	8.48	3379.06	80.62
J630	1123200	10041386.25	3187	8.48	3379.43	83.38
J632	1123216	10041138.59	3184	8.48	3379.85	84.86
J634	1122841	10040180.52	3187	8.48	3380.84	83.99
J636	1123632	10040006.73	3192	8.48	3382.17	82.4
J638	1124247	10039627.33	3205	8.48	3384.55	77.8
J64	1125882	10042043.75	3255	8.48	3380.55	54.4
J640	1123272	10041808.29	3192	8.48	3378.07	80.62
J642	1125480	10043890.78	3222	8.48	3378.73	67.91
J644	1123630	10042455.51	3193	8.48	3372.7	77.86
J646	1123015	10042459.81	3196	8.48	3371.58	76.08
J648	1123944	10043323.67	3200	8.48	3373.86	75.33
J650	1124266	10043316.47	3194	8.48	3373.82	77.92
J652	1123418	10047309.59	3135	8.48	3377.09	104.9
J654	1123431	10047915.46	3100	8.48	3235.15	58.56
J656	1125436	10040501.92	3230	8.48	3382.53	66.09
J658	1123772	10040005.81	3192	8.48	3382.43	82.51
J66	1125912	10042284.87	3254	8.48	3380.28	54.72
J660	1122417	10041206.64	3193	8.48	3379.31	80.73
J662	1121816	10042659.51	3222	8.48	3371.76	64.89
J664	1121601	10042286.19	3224	8.48	3371.7	64
J666	1121217	10043510.76	3223	8.48	3368.48	63.03
J668	1121876	10043168.63	3224	8.48	3371.88	64.08
J670	1123316	10042457.7	3193	8.48	3371.93	77.53
J672	1124092	10042773.79	3190	8.48	3374.87	80.1
J674	1123980	10043718.54	3204	8.48	3371.95	72.77

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J676	1123903	10045203.74	3235	8.48	3372.76	59.69
J678	1123443	10048158.37	3110	8.48	3235.13	54.22
J68	1125673	10042286.37	3228	8.48	3376.65	64.41
J680	1123381	10048224.98	3110	8.48	3235.13	54.22
J682	1123063	10048169.28	3100	8.48	3235.13	58.55
J684	1122895	10047897.93	3086	8.48	3235.16	64.63
J688	1123856	10047023.27	3180	8.48	3377.81	85.71
J690	1122627	10045016.79	3218	8.48	3368.34	65.14
J692	1121938	10043885.16	3238	8.48	3370.71	57.5
J694	1122203	10043832.47	3238	8.48	3371.55	57.87
J696	1122682	10043745.94	3238	8.48	3372.7	58.36
J698	1125019	10042053.89	3193	8.48	3380.21	81.12
J70	1125673	10042387.16	3228	8.48	3376.62	64.4
J700	1125011	10041753.69	3192	8.48	3380.21	81.55
J702	1124652	10042638.28	3192	8.48	3375.11	79.34
J704	1124649	10042317.38	3189	8.48	3374.54	80.39
J706	1125145	10043428.94	3210	8.48	3377.37	72.52
J708	1125467	10043244.32	3216	8.48	3377.77	70.09
J710	1124675	10043553.39	3206	8.48	3376.08	73.7
J712	1123456	10048115.41	3110	8.48	3235.13	54.22
J714	1123332	10048224.98	3110	8.48	3235.13	54.22
J72	1125458	10042299.91	3214	8.48	3374.63	69.6
J720	1124206	10047607.9	3180	8.48	3378.59	86.05
J722	1126592	10044849.4	3307	8.48	3379.16	31.27
J724	1125103	10045483.78	3250	8.48	3379.35	56.05
J726	1122233	10047037.76	3065	8.48	3234.99	73.65
J728	1121872	10047176.64	3060	8.48	3234.99	75.82
J730	1121327	10045288.28	3045	8.48	3234.91	82.29
J732	1120850	10044576.25	3015	8.48	3234.91	95.29
J734	1126122	10043419.85	3248	8.48	3379.24	56.87
J736	1125637	10041358.03	3257	8.48	3381.46	53.93
J738	1123723	10044190.25	3224	8.48	3374.17	65.07
J74	1125458	10042412.74	3214	8.48	3374.49	69.54
J740	1125109	10047291.81	3249	8.48	3378.78	56.23
J742	1125248	10039960.93	3260	8.48	3383.5	53.51
J744	1125221	10049016.34	3197	8.48	3378.66	78.71
J746	1125860	10048967.73	3223	8.48	3378.66	67.45
J748	1125770	10047901.75	3247	8.48	3378.67	57.05

LaVerkin Pond HGL @ 3400 System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J750	1124993	10050431.92	3220	8.48	3378.67	68.75
J752	1124949	10050388.73	3218	8.48	3378.67	69.62
J754	1123450	10048727.78	3085	8.48	3378.54	127.19
J756	1123881	10048778.13	3111	8.48	3378.52	115.92
J758	1123501	10048584.99	3113	8.48	3378.55	115.06
J76	1125256	10042430.79	3205	8.48	3374.43	73.41
J760	1123668	10048341.5	3130	8.48	3378.56	107.7
J762	1123897	10038697	3170	8.48	3386.54	93.83
J78	1125242	10042302.92	3205	8.48	3374.34	73.38
J80	1125361	10042301.42	3209	8.48	3374.38	71.66
J82	1125361	10042197.62	3210	8.48	3374.35	71.21
J84	1125935	10042714.17	3255	8.48	3379.89	54.12
J86	1126252	10042705.15	3287	8.48	3379.89	40.25
J88	1125935	10042756.43	3255	8.48	3379.83	54.09
J90	1125457	10042760.95	3225	8.48	3376.83	65.79
J92	1125457	10042860.23	3218	8.48	3376.8	68.81
J94	1125454	10042664.67	3221	8.48	3376.59	67.42
J96	1125323	10042667.68	3209	8.48	3376.54	72.6
J98	1125453	10042630.07	3217	8.48	3376.57	69.14
V8002_NU	1121346	10045216.01	3043	8.48	3234.91	83.16
V8002_ND	1121367	10045145.96	3043	8.48	3234.91	83.16
V8004_NU	1123222	10047426.2	3120	8.48	3376.79	111.27
V8004_ND	1123060	10047523.21	3120	8.48	3235.39	50
V8010_NU	1122217	10046990.55	3065	8.48	3234.98	73.65
V8010_ND	1121854	10046290.76	3065	8.48	3234.98	73.65

LaVerkin Pond HGL @ 3400 System Performance - (FH2)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999	10043006.15	3254	11.87	3384.39	56.5
J102	1125789	10043009.16	3236	11.87	3381.89	63.21
J104	1125787	10042941.46	3240	11.87	3381.85	61.46
J106	1125745	10043013.67	3234	11.87	3381.67	63.99
J108	1125746	10043168.62	3238	11.87	3381.67	62.25
J110	1125653	10043013.67	3227	11.87	3381.61	66.99
J112	1126111	10043155.56	3255	11.87	3384.76	56.22
J114	1126189	10043212.73	3260	11.87	3384.17	53.8
J116	1126078	10043284.94	3250	11.87	3385.05	58.52
J118	1125926	10043283.43	3244	11.87	3385.02	61.11
J120	1126006	10043423.33	3248	11.87	3385.38	59.53
J122	1125841	10043420.85	3242	11.87	3385.13	62.02
J124	1125843	10043312.54	3239	11.87	3385.06	63.29
J126	1125667	10043422.36	3228	11.87	3384.88	67.98
J128	1125668	10043676.58	3232	11.87	3383.72	65.74
J130	1125668	10043732.24	3233	11.87	3383.68	65.29
J132	1125164	10043574.29	3220	11.87	3383.36	70.78
J134	1125471	10043426.87	3218	11.87	3384.67	72.22
J136	1125464	10043062.82	3215	11.87	3384.16	73.3
J138	1125894	10043887.76	3247	11.87	3386.92	60.63
J14	1123884	10038701.67	3170	11.87	3380.48	91.2
J140	1125067	10043893.79	3220	11.87	3385.78	71.83
J142	1125820	10044146.52	3253	11.87	3387.85	58.43
J144	1125158	10044155.54	3229	11.87	3387.46	68.66
J146	1125772	10044440.44	3249	11.87	3388.85	60.6
J150	1125760	10044467.68	3249	11.87	3389.04	60.68
J152	1125070	10044494.85	3230	11.87	3388.62	68.73
J154	1125605	10044857.39	3250	11.87	3390.45	60.86
J156	1124670	10044862.08	3224	11.87	3387.91	71.02
J158	1125084	10044940.31	3234	11.87	3391.04	68.04
J16	1122873	10038868.78	3220	11.87	3380.42	69.51
J160	1125559	10044955.35	3250	11.87	3391.11	61.14
J162	1125462	10045164.45	3250	11.87	3392.35	61.68
J164	1125082	10045119.32	3237	11.87	3392.3	67.29
J166	1125311	10045479.58	3248	11.87	3394.19	63.34
J170	1125096	10046118.46	3253	11.87	3396.18	62.04
J174	1125099	10046332.07	3255	11.87	3396.4	61.27
J176	1125100	10046582.25	3252	11.87	3396.65	62.68

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446	10046574.73	3264	11.87	3396.65	57.48
J18	1124240	10039216.28	3210	11.87	3380.24	73.76
J180	1125709	10046320.76	3268	11.87	3396.22	55.56
J182	1125709	10046550.92	3274	11.87	3396.22	52.96
J184	1125954	10046316.24	3277	11.87	3396.2	51.65
J186	1125959	10046567.46	3282	11.87	3396.2	49.48
J188	1126222	10046313.23	3287	11.87	3396.2	47.32
J190	1125107	10046821.69	3249	11.87	3396.9	64.09
J192	1125605	10046827.71	3267	11.87	3396.52	56.12
J194	1126477	10046310.38	3290	11.87	3396.2	46.02
J196	1126225	10046578.15	3288	11.87	3396.22	46.89
J198	1126452	10046572.14	3290	11.87	3396.22	46.02
J20	1124936	10039498.35	3260	11.87	3380.8	52.34
J200	1126153	10046838.4	3286	11.87	3396.29	47.79
J202	1126401	10046869.99	3290	11.87	3396.28	46.05
J204	1125110	10047063.06	3250	11.87	3397.17	63.77
J206	1125853	10047422.59	3272	11.87	3396.43	53.92
J208	1125600	10047196.94	3268	11.87	3396.51	55.68
J210	1125865	10047045.01	3275	11.87	3396.42	52.61
J212	1126130	10047146.03	3284	11.87	3396.29	48.66
J214	1126359	10047149.04	3290	11.87	3396.29	46.05
J216	1126359	10047412.29	3285	11.87	3396.32	48.24
J218	1126130	10047418.31	3278	11.87	3396.33	51.27
J22	1124948	10039508.88	3260	11.87	3380.81	52.35
J220	1125105	10047916.83	3205	11.87	3398.08	83.66
J222	1125105	10047957.44	3205	11.87	3398.08	83.66
J224	1124995	10047916.83	3197	11.87	3398.05	87.12
J226	1124010	10045974.98	3250	11.87	3392.89	61.91
J228	1123938	10045852.01	3250	11.87	3392.29	61.65
J230	1123804	10045935.25	3245	11.87	3391.61	63.53
J232	1123645	10045276.06	3242	11.87	3386.81	62.75
J234	1124172	10045197.42	3230	11.87	3385.95	67.57
J236	1123445	10045194.39	3248	11.87	3387.18	60.31
J238	1123391	10044873.79	3240	11.87	3387.13	63.75
J24	1124612	10039537.47	3227	11.87	3379.31	66
J240	1124671	10045070.39	3230	11.87	3387.78	68.37
J242	1124653	10044538.06	3220	11.87	3386.4	72.1
J244	1124859	10044541.09	3218	11.87	3386.28	72.92

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124644	10044290.05	3218	11.87	3386.26	72.91
J248	1123357	10044196.31	3234	11.87	3385.79	65.77
J250	1123990	10044106.6	3214	11.87	3380.56	72.17
J252	1123859	10043966.22	3210	11.87	3380.11	73.71
J254	1124683	10044130.4	3212	11.87	3383.44	74.28
J256	1124684	10043431.87	3205	11.87	3384	77.56
J258	1124684	10043249.28	3203	11.87	3383.89	78.38
J26	1124424	10039560.03	3211	11.87	3379.2	72.88
J260	1124882	10043093.32	3198	11.87	3383.69	80.46
J262	1124654	10042762.38	3194	11.87	3383.64	82.17
J264	1124262	10042773.79	3190	11.87	3383.53	83.86
J266	1123934	10042773.79	3190	11.87	3383.28	83.75
J268	1123637	10042773.79	3190	11.87	3383.12	83.68
J270	1123611	10042979.2	3200	11.87	3383.08	79.33
J272	1123620	10043323.58	3207	11.87	3383.06	76.29
J274	1123621	10043426.53	3212	11.87	3382.61	73.93
J276	1123382	10043327.32	3221	11.87	3382.04	69.78
J278	1123166	10043499.53	3225	11.87	3384.26	69.01
J28	1124400	10039806.74	3203	11.87	3379.01	76.27
J280	1123977	10043482.69	3198	11.87	3383.62	80.43
J282	1124279	10043484.56	3198	11.87	3383.62	80.43
J284	1124647	10042155.56	3188	11.87	3381.48	83.83
J286	1124341	10041745.28	3188	11.87	3381.01	83.63
J288	1124622	10041107.8	3188	11.87	3377.21	81.98
J290	1124622	10040543.11	3195	11.87	3377.98	79.29
J292	1124828	10040538.91	3198	11.87	3377.86	77.93
J294	1124725	10040253.41	3195	11.87	3378.75	79.62
J296	1124918	10040249.22	3203	11.87	3378.64	76.1
J298	1124145	10041286.23	3188	11.87	3373.34	80.31
J30	1124835	10039531.45	3244	11.87	3380.74	59.25
J300	1124043	10041114.1	3188	11.87	3373.38	80.33
J302	1124040	10040784.52	3189	11.87	3373.56	79.97
J304	1124196	10040784.52	3188	11.87	3373.54	80.39
J306	1123769	10040790.82	3189	11.87	3373.77	80.06
J308	1123923	10040784.52	3189	11.87	3373.79	80.07
J310	1124727	10039992.28	3198	11.87	3379.83	78.79
J312	1124757	10039992.28	3198	11.87	3379.85	78.8
J314	1124253	10039998.58	3195	11.87	3379.69	80.02

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914	10040004.87	3193	11.87	3378.85	80.53
J318	1123887	10039437.56	3210	11.87	3380.04	73.68
J32	1125376	10039940.89	3260	11.87	3380.95	52.41
J320	1123307	10040008.87	3190	11.87	3377.88	81.41
J322	1122290	10040158.62	3030	11.87	3375.93	149.89
J324	1122840	10040395.83	3184	11.87	3376.31	83.33
J326	1122999	10040261.48	3186	11.87	3374.49	81.67
J328	1123180	10040549.08	3182	11.87	3374.5	83.41
J330	1123008	10040618.35	3178	11.87	3374.5	85.14
J332	1123230	10040679.23	3182	11.87	3374.52	83.42
J334	1123283	10040817.78	3179	11.87	3374.53	84.72
J336	1123546	10041082.28	3185	11.87	3372.42	81.21
J338	1122894	10040872.36	3178	11.87	3374.78	85.26
J340	1122440	10040465.36	3169	11.87	3374.47	89.03
J342	1122623	10040640.98	3178	11.87	3374.5	85.14
J344	1122772	10040780.43	3178	11.87	3375.03	85.37
J346	1122742	10040713.3	3178	11.87	3375.09	85.4
J350	1122730	10040740.04	3178	11.87	3375.04	85.38
J352	1122722	10040733.27	3178	11.87	3375.08	85.39
J354	1122884	10041060.03	3183	11.87	3374.62	83.03
J356	1123612	10041382.77	3188	11.87	3374.22	80.69
J358	1122415	10041101.24	3192	11.87	3374.5	79.08
J36	1125567	10040442.66	3255	11.87	3381.35	54.75
J360	1122206	10041099.19	3192	11.87	3374.49	79.08
J364	1122181	10040940.96	3189	11.87	3373.24	79.83
J366	1122148	10040940.96	3189	11.87	3373.22	79.82
J368	1122218	10040940.96	3188	11.87	3373.26	80.28
J370	1122183	10041179.33	3194	11.87	3373.24	77.66
J372	1122866	10041748.55	3195	11.87	3371.99	76.69
J374	1123108	10041532.78	3188	11.87	3370.04	78.88
J376	1123750	10041802.49	3188	11.87	3371.67	79.58
J378	1122926	10042197.86	3198	11.87	3378.36	78.15
J38	1125085	10040522.38	3214	11.87	3380.73	72.24
J380	1123041	10043166.82	3222	11.87	3383.05	69.78
J382	1123039	10043368.2	3226	11.87	3383.02	68.04
J384	1123031	10043047.63	3222	11.87	3382.53	69.56
J386	1122922	10043501.52	3228	11.87	3384.57	67.84
J388	1123012	10044175.36	3237	11.87	3385.27	64.24

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018	10044629.5	3245	11.87	3383.33	59.94
J392	1123078	10045201.71	3250	11.87	3388.11	59.84
J394	1123076	10045131.84	3248	11.87	3388.07	60.69
J396	1123078	10045460.63	3252	11.87	3387.95	58.91
J398	1122934	10045989.69	3220	11.87	3371.95	65.84
J40	1125639	10040959.04	3255	11.87	3381.8	54.94
J400	1122775	10045991.74	3220	11.87	3372.63	66.14
J402	1122775	10046090.38	3205	11.87	3372.2	72.45
J404	1122471	10045806.8	3208	11.87	3388.69	78.29
J406	1122465	10046020.51	3204	11.87	3388.91	80.12
J408	1122469	10045656.79	3214	11.87	3388.59	75.65
J410	1122208	10045662.95	3212	11.87	3388.55	76.5
J412	1122586	10045406.08	3233	11.87	3384.86	65.8
J414	1122796	10045445.13	3245	11.87	3358.16	49.03
J416	1122323	10045307.44	3222	11.87	3381.66	69.18
J418	1122321	10045426.63	3220	11.87	3381.58	70.01
J42	1125221	10040817.64	3221	11.87	3381.47	69.53
J420	1122389	10045019.75	3209	11.87	3381.62	74.8
J422	1122884	10045013.59	3238	11.87	3380.95	61.94
J424	1122389	10044891.58	3209	11.87	3381.62	74.8
J426	1122376	10044716.9	3215	11.87	3381.76	72.26
J428	1122880	10044706.63	3242	11.87	3381.46	60.43
J430	1122384	10044188.21	3240	11.87	3382.44	61.72
J432	1122685	10044186.15	3240	11.87	3383.97	62.38
J434	1122742	10043462.38	3232	11.87	3382.98	65.42
J436	1122197	10043462.38	3228	11.87	3380.52	66.09
J438	1122208	10044181.61	3236	11.87	3380.98	62.82
J44	1125638	10041201.73	3255	11.87	3382.02	55.04
J440	1121938	10044181.61	3240	11.87	3380.2	60.75
J442	1121938	10043550.74	3234	11.87	3379.99	63.26
J444	1122876	10043237.38	3224	11.87	3382.98	68.88
J446	1122870	10043167.51	3223	11.87	3383	69.33
J448	1122870	10042869.54	3222	11.87	3380.68	68.76
J450	1122870	10042832.55	3222	11.87	3380.42	68.64
J452	1122578	10042832.55	3220	11.87	3379.42	69.07
J454	1122578	10043042.16	3224	11.87	3379.38	67.33
J456	1122333	10042838.71	3220	11.87	3379.05	68.92
J458	1122833	10042691.99	3221	11.87	3380.33	69.04

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125334	10041215.27	3220	11.87	3381.84	70.13
J460	1122321	10042092.86	3208	11.87	3373.94	71.9
J462	1122197	10042443.34	3216	11.87	3374.58	68.71
J464	1121807	10042513.21	3224	11.87	3374.64	65.27
J466	1121782	10042455.06	3224	11.87	3374.43	65.18
J468	1121773	10042101.51	3218	11.87	3373.84	67.53
J470	1121276	10042124.21	3222	11.87	3373.33	65.57
J472	1122185	10042098.85	3208	11.87	3373.84	71.86
J474	1121872	10041866.64	3209	11.87	3373.11	71.11
J476	1121843	10041416.6	3202	11.87	3373.18	74.17
J478	1121573	10040953.58	3197	11.87	3373.08	76.29
J48	1125796	10041656.67	3255	11.87	3382.51	55.25
J480	1121534	10041237.16	3208	11.87	3373.06	71.52
J482	1121530	10040953.58	3195	11.87	3373.07	77.16
J484	1121380	10040935.08	3195	11.87	3373.07	77.16
J486	1121376	10041089.2	3205	11.87	3373.06	72.82
J488	1121080	10041046.05	3195	11.87	3373.07	77.16
J490	1120796	10041218.67	3195	11.87	3373.07	77.16
J492	1121080	10041409.78	3215	11.87	3373.14	68.52
J498	1121390	10041422.11	3216	11.87	3373.16	68.1
J50	1125375	10041665.7	3215	11.87	3380.71	71.8
J502	1121107	10041773	3220	11.87	3373.18	66.37
J504	1121152	10042114.49	3220	11.87	3373.28	66.42
J508	1120998	10042132.01	3200	11.87	3373.17	75.03
J510	1121405	10043101.18	3215	11.87	3380.74	71.82
J512	1121401	10043516.28	3225	11.87	3380.99	67.59
J514	1121674	10043531.31	3228	11.87	3379.83	65.79
J516	1121668	10043862.16	3234	11.87	3379.88	63.21
J518	1126598	10045335.4	3307	11.87	3388.26	35.21
J52	1125329	10041667.2	3213	11.87	3380.49	72.57
J520	1126586	10044363.41	3315	11.87	3388.14	31.69
J522	1126615	10044078.7	3320	11.87	3387.95	29.44
J524	1126352	10044090.03	3300	11.87	3387.86	38.07
J526	1126512	10043329.84	3310	11.87	3387.93	33.77
J528	1124646	10044859.56	3224	11.87	3387.87	71.01
J530	1123983	10043963.76	3210	11.87	3380.65	73.94
J532	1121045	10041643.81	3220	11.87	3373.16	66.36
J534	1121276	10042111.69	3222	11.87	3373.33	65.57

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328	10040934.14	3188	11.87	3373.35	80.31
J54	1125328	10041537.83	3216	11.87	3380.41	71.24
J540	1123217	10044006.96	3230	11.87	3384.26	66.84
J542	1123718	10043708.89	3210	11.87	3385.75	76.15
J544	1122921	10044178.35	3238	11.87	3385.15	63.76
J546	1122911	10043167.34	3223	11.87	3383.05	69.35
J548	1122836	10040607.49	3178	11.87	3375.59	85.62
J550	1121429	10042126	3224	11.87	3373.45	64.76
J552	1121430	10042108.54	3224	11.87	3373.45	64.76
J554	1124114	10047573.47	3180	11.87	3396.96	94.01
J556	1123927	10047480.41	3182	11.87	3395.19	92.38
J558	1123608	10046855.61	3178	11.87	3392.71	93.03
J56	1125149	10041667.2	3203	11.87	3380.38	76.86
J560	1123546	10046620.76	3188	11.87	3392.37	88.55
J562	1123276	10046629.62	3188	11.87	3392.01	88.4
J564	1123001	10046638.48	3194	11.87	3390.84	85.29
J566	1122690	10046638.48	3194	11.87	3390.34	85.07
J568	1123546	10046478.96	3195	11.87	3392.32	85.5
J570	1123542	10046363.75	3198	11.87	3392.3	84.19
J574	1122965	10047746.28	3090	11.87	3235.04	62.84
J576	1122757	10047990	3078	11.87	3234.89	67.98
J578	1122699	10047932.39	3082	11.87	3234.87	66.24
J58	1125227	10041771	3200	11.87	3380.89	78.38
J580	1123431	10048198.26	3110	11.87	3234.9	54.12
J582	1123719	10046485.61	3205	11.87	3392.32	81.16
J584	1123919	10040419.38	3193	11.87	3375.55	79.1
J586	1124622	10040823.62	3190	11.87	3377.38	81.19
J588	1124667	10041752.7	3190	11.87	3381.45	82.96
J590	1124651	10042483.64	3190	11.87	3381.94	83.17
J592	1124676	10043672.36	3208	11.87	3383.6	76.09
J594	1124680	10043916.86	3210	11.87	3383.47	75.16
J596	1123917	10040224.41	3192	11.87	3376.93	80.13
J598	1123921	10040593.44	3190	11.87	3374.58	79.98
J60	1125153	10041772.51	3200	11.87	3380.85	78.36
J600	1123961	10039404.97	3210	11.87	3380.05	73.68
J602	1123916	10038690.63	3170	11.87	3380.58	91.24
J604	1123277	10038802.09	3200	11.87	3380.43	78.18
J606	1125614	10040659.62	3255	11.87	3381.55	54.83

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J608	1123041	10046371.78	3196	11.87	3390.33	84.2
J610	1122686	10046974.97	3192	11.87	3390.54	86.03
J612	1123831	10044868.8	3240	11.87	3387.38	63.86
J614	1123362	10044493.56	3236	11.87	3386.34	65.14
J616	1122375	10044420.94	3225	11.87	3382.1	68.07
J618	1121393	10043917.14	3230	11.87	3381.08	65.46
J62	1125227	10042052.31	3195	11.87	3382.27	81.14
J620	1121763	10044510.85	3220	11.87	3381.27	69.88
J622	1121867	10042801.6	3220	11.87	3375.95	67.57
J624	1122344	10043245.51	3222	11.87	3380.46	68.66
J626	1122184	10041674.73	3200	11.87	3373.52	75.18
J628	1122419	10041364.82	3193	11.87	3373.58	78.24
J630	1123200	10041386.25	3187	11.87	3374.28	81.15
J632	1123216	10041138.59	3184	11.87	3374.64	82.6
J634	1122841	10040180.52	3187	11.87	3377.18	82.41
J636	1123632	10040006.73	3192	11.87	3378.36	80.75
J638	1124247	10039627.33	3205	11.87	3379.94	75.8
J64	1125882	10042043.75	3255	11.87	3382.91	55.42
J640	1123272	10041808.29	3192	11.87	3371.74	77.88
J642	1125480	10043890.78	3222	11.87	3386.03	71.07
J644	1123630	10042455.51	3193	11.87	3380.64	81.3
J646	1123015	10042459.81	3196	11.87	3378.55	79.1
J648	1123944	10043323.67	3200	11.87	3383.05	79.32
J650	1124266	10043316.47	3194	11.87	3383.53	82.12
J652	1123418	10047309.59	3135	11.87	3393.61	112.05
J654	1123431	10047915.46	3100	11.87	3234.94	58.47
J656	1125436	10040501.92	3230	11.87	3380.95	65.4
J658	1123772	10040005.81	3192	11.87	3378.6	80.85
J66	1125912	10042284.87	3254	11.87	3383.22	55.99
J660	1122417	10041206.64	3193	11.87	3374.05	78.45
J662	1121816	10042659.51	3222	11.87	3375.18	66.37
J664	1121601	10042286.19	3224	11.87	3373.7	64.87
J666	1121217	10043510.76	3223	11.87	3381	68.46
J668	1121876	10043168.63	3224	11.87	3377.57	66.54
J670	1123316	10042457.7	3193	11.87	3379.2	80.68
J672	1124092	10042773.79	3190	11.87	3383.39	83.8
J674	1123980	10043718.54	3204	11.87	3381.78	77.03
J676	1123903	10045203.74	3235	11.87	3386.11	65.48

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J678	1123443	10048158.37	3110	11.87	3234.9	54.12
J68	1125673	10042286.37	3228	11.87	3376.44	64.32
J680	1123381	10048224.98	3110	11.87	3234.9	54.12
J682	1123063	10048169.28	3100	11.87	3234.89	58.45
J684	1122895	10047897.93	3086	11.87	3234.96	64.54
J688	1123856	10047023.27	3180	11.87	3393.84	92.66
J690	1122627	10045016.79	3218	11.87	3381.11	70.67
J692	1121938	10043885.16	3238	11.87	3380.04	61.54
J694	1122203	10043832.47	3238	11.87	3380.66	61.82
J696	1122682	10043745.94	3238	11.87	3383.39	63
J698	1125019	10042053.89	3193	11.87	3382.21	81.98
J70	1125673	10042387.16	3228	11.87	3376.38	64.29
J700	1125011	10041753.69	3192	11.87	3382.2	82.41
J702	1124652	10042638.28	3192	11.87	3382.65	82.61
J704	1124649	10042317.38	3189	11.87	3381.57	83.44
J706	1125145	10043428.94	3210	11.87	3384.38	75.56
J708	1125467	10043244.32	3216	11.87	3384.27	72.91
J710	1124675	10043553.39	3206	11.87	3383.74	77.01
J712	1123456	10048115.41	3110	11.87	3234.91	54.12
J714	1123332	10048224.98	3110	11.87	3234.9	54.12
J72	1125458	10042299.91	3214	11.87	3372.67	68.75
J720	1124206	10047607.9	3180	11.87	3397.89	94.41
J722	1126592	10044849.4	3307	11.87	3388.35	35.25
J724	1125103	10045483.78	3250	11.87	3395.82	63.18
J726	1122233	10047037.76	3065	11.87	3234.63	73.5
J728	1121872	10047176.64	3060	11.87	3234.63	75.67
J730	1121327	10045288.28	3045	11.87	3234.5	82.11
J732	1120850	10044576.25	3015	11.87	3234.49	95.1
J734	1126122	10043419.85	3248	11.87	3385.38	59.53
J736	1125637	10041358.03	3257	11.87	3382.18	54.24
J738	1123723	10044190.25	3224	11.87	3385.76	70.09
J74	1125458	10042412.74	3214	11.87	3372.42	68.64
J740	1125109	10047291.81	3249	11.87	3397.44	64.32
J742	1125248	10039960.93	3260	11.87	3380.43	52.18
J744	1125221	10049016.34	3197	11.87	3398.29	87.22
J746	1125860	10048967.73	3223	11.87	3398.48	76.04
J748	1125770	10047901.75	3247	11.87	3398.97	65.85
J750	1124993	10050431.92	3220	11.87	3398.08	77.16

LaVerkin Pond HGL @ 3400 System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J752	1124949	10050388.73	3218	11.87	3398.08	78.03
J754	1123450	10048727.78	3085	11.87	3397.8	135.54
J756	1123881	10048778.13	3111	11.87	3397.76	124.25
J758	1123501	10048584.99	3113	11.87	3397.82	123.41
J76	1125256	10042430.79	3205	11.87	3372.29	72.49
J760	1123668	10048341.5	3130	11.87	3397.83	116.05
J762	1123897	10038697	3170	11.87	3380.52	91.22
J78	1125242	10042302.92	3205	11.87	3372.14	72.42
J80	1125361	10042301.42	3209	11.87	3372.21	70.72
J82	1125361	10042197.62	3210	11.87	3372.15	70.26
J84	1125935	10042714.17	3255	11.87	3383.84	55.83
J86	1126252	10042705.15	3287	11.87	3383.83	41.96
J88	1125935	10042756.43	3255	11.87	3383.94	55.87
J90	1125457	10042760.95	3225	11.87	3378.34	66.44
J92	1125457	10042860.23	3218	11.87	3378.28	69.45
J94	1125454	10042664.67	3221	11.87	3377.89	67.98
J96	1125323	10042667.68	3209	11.87	3377.81	73.14
J98	1125453	10042630.07	3217	11.87	3377.86	69.7
V8002_NU	1121346	10045216.01	3043	11.87	3234.49	82.97
V8002_ND	1121367	10045145.96	3043	11.87	3234.49	82.97
V8004_NU	1123222	10047426.2	3120	11.87	3393.06	118.32
V8004_ND	1123060	10047523.21	3120	11.87	3235.39	50
V8010_NU	1122217	10046990.55	3065	11.87	3234.62	73.5
V8010_ND	1121854	10046290.76	3065	11.87	3234.62	73.5
J828	1122724	10046377.25	3195.06	11.87	3389.44	84.22
J818	1122474	10045568.73	3227.64		3388.54	69.72
J820	1123869	10045533.78	3245.99		3391.06	62.86
J822	1124182	10045517.4	3242		3391.06	64.59
J824	1123316	10045546.89	3252		3389.33	59.51
J826	1123305	10045198.34	3249.3		3389.15	60.6
J832	1124304	10046105.17	3250.91		3394.11	62.05
J838	1125215	10049058.1	3211.79		3398.08	80.72
J834	1122944	10045557.14	3241.24		3388.53	63.82

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999.3	10043006	3254	9.17	3390.34	59.08
J102	1125788.6	10043009	3236	9.17	3388.79	66.2
J104	1125787.1	10042941	3240	9.17	3388.76	64.46
J106	1125744.9	10043014	3234	9.17	3388.66	67.01
J108	1125746.4	10043169	3238	9.17	3388.66	65.28
J110	1125653.1	10043014	3227	9.17	3388.62	70.03
J112	1126111	10043156	3255	9.17	3390.57	58.74
J114	1126189.2	10043213	3260	9.17	3390.2	56.42
J116	1126077.9	10043285	3250	9.17	3390.75	60.99
J118	1125925.8	10043283	3244	9.17	3390.73	63.58
J120	1126005.6	10043423	3248	9.17	3390.95	61.94
J122	1125841.3	10043421	3242	9.17	3390.79	64.47
J124	1125842.9	10043313	3239	9.17	3390.75	65.75
J126	1125666.8	10043422	3228	9.17	3390.64	70.47
J128	1125668.3	10043677	3232	9.17	3389.92	68.43
J130	1125668.3	10043732	3233	9.17	3389.9	67.98
J132	1125164.1	10043574	3220	9.17	3389.7	73.53
J134	1125471.1	10043427	3218	9.17	3390.51	74.75
J136	1125463.6	10043063	3215	9.17	3390.19	75.91
J138	1125894	10043888	3247	9.17	3391.9	62.79
J14	1123884.3	10038702	3170	9.17	3387.92	94.43
J140	1125067.4	10043894	3220	9.17	3391.2	74.18
J142	1125820	10044147	3253	9.17	3392.48	60.44
J144	1125157.7	10044156	3229	9.17	3392.24	70.73
J146	1125772	10044440	3249	9.17	3393.1	62.44
J150	1125760.2	10044468	3249	9.17	3393.21	62.49
J152	1125070.4	10044495	3230	9.17	3392.95	70.61
J154	1125604.7	10044857	3250	9.17	3394.09	62.43
J156	1124669.9	10044862	3224	9.17	3392.51	73.02
J158	1125083.8	10044940	3234	9.17	3394.45	69.52
J16	1122873.1	10038869	3220	9.17	3387.89	72.75
J160	1125559.4	10044955	3250	9.17	3394.49	62.61
J162	1125461.5	10045164	3250	9.17	3395.26	62.94
J164	1125082.3	10045119	3237	9.17	3395.22	68.56
J166	1125311.2	10045480	3248	9.17	3396.4	64.3
J170	1125095.7	10046118	3253	9.17	3397.62	62.67
J174	1125098.7	10046332	3255	9.17	3397.76	61.86
J176	1125100.3	10046582	3252	9.17	3397.92	63.23

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446.5	10046575	3264	9.17	3397.91	58.02
J18	1124240	10039216	3210	9.17	3387.77	77.03
J180	1125708.8	10046321	3268	9.17	3397.65	56.18
J182	1125708.8	10046551	3274	9.17	3397.65	53.58
J184	1125954.1	10046316	3277	9.17	3397.64	52.27
J186	1125958.6	10046567	3282	9.17	3397.64	50.1
J188	1126222	10046313	3287	9.17	3397.64	47.94
J190	1125106.7	10046822	3249	9.17	3398.07	64.59
J192	1125604.9	10046828	3267	9.17	3397.83	56.69
J194	1126476.6	10046310	3290	9.17	3397.64	46.64
J196	1126225.2	10046578	3288	9.17	3397.65	47.51
J198	1126452.5	10046572	3290	9.17	3397.65	46.64
J20	1124935.7	10039498	3260	9.17	3388.12	55.52
J200	1126153	10046838	3286	9.17	3397.69	48.4
J202	1126401.3	10046870	3290	9.17	3397.69	46.66
J204	1125109.7	10047063	3250	9.17	3398.24	64.23
J206	1125853.2	10047423	3272	9.17	3397.78	54.5
J208	1125600.4	10047197	3268	9.17	3397.83	56.26
J210	1125865.3	10047045	3275	9.17	3397.78	53.2
J212	1126130.5	10047146	3284	9.17	3397.69	49.26
J214	1126359.2	10047149	3290	9.17	3397.69	46.66
J216	1126359.2	10047412	3285	9.17	3397.71	48.84
J218	1126130.5	10047418	3278	9.17	3397.72	51.87
J22	1124947.8	10039509	3260	9.17	3388.13	55.52
J220	1125104.9	10047917	3205	9.17	3398.8	83.97
J222	1125104.9	10047957	3205	9.17	3398.81	83.98
J224	1124995	10047917	3197	9.17	3398.79	87.43
J226	1124010.1	10045975	3250	9.17	3395.59	63.08
J228	1123938.1	10045852	3250	9.17	3395.22	62.92
J230	1123803.7	10045935	3245	9.17	3394.8	64.91
J232	1123645.1	10045276	3242	9.17	3391.83	64.92
J234	1124171.6	10045197	3230	9.17	3391.3	69.89
J236	1123445.4	10045194	3248	9.17	3392.06	62.42
J238	1123390.9	10044874	3240	9.17	3392.03	65.87
J24	1124612.1	10039537	3227	9.17	3387.2	69.42
J240	1124671	10045070	3230	9.17	3392.43	70.38
J242	1124652.8	10044538	3220	9.17	3391.58	74.35
J244	1124858.6	10044541	3218	9.17	3391.5	75.18

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124643.7	10044290	3218	9.17	3391.49	75.17
J248	1123356.6	10044196	3234	9.17	3391.2	68.11
J250	1123989.9	10044107	3214	9.17	3387.96	75.38
J252	1123858.9	10043966	3210	9.17	3387.68	76.99
J254	1124682.6	10044130	3212	9.17	3389.75	77.02
J256	1124684	10043432	3205	9.17	3390.09	80.2
J258	1124684	10043249	3203	9.17	3390.03	81.04
J26	1124424	10039560	3211	9.17	3387.13	76.32
J260	1124881.9	10043093	3198	9.17	3389.9	83.15
J262	1124653.5	10042762	3194	9.17	3389.87	84.87
J264	1124261.5	10042774	3190	9.17	3389.8	86.57
J266	1123934.2	10042774	3190	9.17	3389.65	86.51
J268	1123637.4	10042774	3190	9.17	3389.55	86.47
J270	1123610.7	10042979	3200	9.17	3389.52	82.12
J272	1123619.5	10043324	3207	9.17	3389.51	79.08
J274	1123621.4	10043427	3212	9.17	3389.24	76.8
J276	1123381.7	10043327	3221	9.17	3388.88	72.74
J278	1123166.1	10043500	3225	9.17	3390.25	71.6
J28	1124399.9	10039807	3203	9.17	3387.02	79.73
J280	1123977.2	10043483	3198	9.17	3389.86	83.13
J282	1124278.7	10043485	3198	9.17	3389.86	83.13
J284	1124647.5	10042156	3188	9.17	3388.53	86.89
J286	1124341.1	10041745	3188	9.17	3388.25	86.77
J288	1124622.2	10041108	3188	9.17	3385.9	85.75
J290	1124622.2	10040543	3195	9.17	3386.38	82.92
J292	1124828	10040539	3198	9.17	3386.3	81.59
J294	1124725.1	10040253	3195	9.17	3386.86	83.13
J296	1124918.3	10040249	3203	9.17	3386.78	79.63
J298	1124145.4	10041286	3188	9.17	3383.5	84.71
J30	1124834.9	10039531	3244	9.17	3388.08	62.43
J300	1124042.5	10041114	3188	9.17	3383.53	84.72
J302	1124040.4	10040785	3189	9.17	3383.64	84.34
J304	1124195.8	10040785	3188	9.17	3383.62	84.76
J306	1123769.5	10040791	3189	9.17	3383.77	84.39
J308	1123922.8	10040785	3189	9.17	3383.78	84.4
J310	1124727.2	10039992	3198	9.17	3387.52	82.12
J312	1124756.6	10039992	3198	9.17	3387.53	82.12
J314	1124252.5	10039999	3195	9.17	3387.43	83.38

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914.4	10040005	3193	9.17	3386.91	84.02
J318	1123886.8	10039438	3210	9.17	3387.65	76.98
J32	1125375.6	10039941	3260	9.17	3388.22	55.56
J320	1123306.8	10040009	3190	9.17	3386.31	85.06
J322	1122289.5	10040159	3030	9.17	3385.1	153.87
J324	1122839.8	10040396	3184	9.17	3385.34	87.24
J326	1122999.4	10040261	3186	9.17	3384.22	85.89
J328	1123180.1	10040549	3182	9.17	3384.22	87.62
J330	1123007.8	10040618	3178	9.17	3384.22	89.35
J332	1123230.5	10040679	3182	9.17	3384.23	87.63
J334	1123283	10040818	3179	9.17	3384.24	88.93
J336	1123545.5	10041082	3185	9.17	3382.93	85.76
J338	1122894.4	10040872	3178	9.17	3384.39	89.43
J340	1122440.4	10040465	3169	9.17	3384.2	93.25
J342	1122623.3	10040641	3178	9.17	3384.22	89.36
J344	1122772.2	10040780	3178	9.17	3384.55	89.5
J346	1122741.5	10040713	3178	9.17	3384.58	89.51
J350	1122729.7	10040740	3178	9.17	3384.56	89.5
J352	1122722.3	10040733	3178	9.17	3384.58	89.51
J354	1122884.2	10041060	3183	9.17	3384.29	87.22
J356	1123612	10041383	3188	9.17	3384.05	84.95
J358	1122415.4	10041101	3192	9.17	3384.22	83.29
J36	1125567.1	10040443	3255	9.17	3388.47	57.83
J360	1122205.7	10041099	3192	9.17	3384.22	83.29
J364	1122181.1	10040941	3189	9.17	3383.44	84.25
J366	1122148.2	10040941	3189	9.17	3383.43	84.24
J368	1122218.1	10040941	3188	9.17	3383.45	84.69
J370	1122183.1	10041179	3194	9.17	3383.44	82.08
J372	1122865.7	10041749	3195	9.17	3382.67	81.32
J374	1123108.3	10041533	3188	9.17	3381.46	83.82
J376	1123749.9	10041802	3188	9.17	3382.47	84.26
J378	1122925.9	10042198	3198	9.17	3386.6	81.72
J38	1125085.4	10040522	3214	9.17	3388.08	75.43
J380	1123041.2	10043167	3222	9.17	3389.5	72.58
J382	1123039.2	10043368	3226	9.17	3389.49	70.84
J384	1123030.9	10043048	3222	9.17	3389.18	72.44
J386	1122922.2	10043502	3228	9.17	3390.45	70.39
J388	1123012.2	10044175	3237	9.17	3390.88	66.67

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018.4	10044630	3245	9.17	3389.67	62.69
J392	1123078	10045202	3250	9.17	3392.63	61.8
J394	1123075.9	10045132	3248	9.17	3392.61	62.66
J396	1123078	10045461	3252	9.17	3392.54	60.89
J398	1122933.5	10045990	3220	9.17	3382.62	70.46
J40	1125639.4	10040959	3255	9.17	3388.74	57.95
J400	1122775.2	10045992	3220	9.17	3383.04	70.64
J402	1122775.2	10046090	3205	9.17	3382.77	77.03
J404	1122470.9	10045807	3208	9.17	3392.99	80.16
J406	1122464.8	10046021	3204	9.17	3393.13	81.95
J408	1122468.9	10045657	3214	9.17	3392.93	77.53
J410	1122207.8	10045663	3212	9.17	3392.9	78.39
J412	1122586.1	10045406	3233	9.17	3390.62	68.3
J414	1122795.8	10045445	3245	9.17	3374.07	55.93
J416	1122322.9	10045307	3222	9.17	3388.64	72.21
J418	1122320.8	10045427	3220	9.17	3388.6	73.05
J42	1125221	10040818	3221	9.17	3388.54	72.59
J420	1122388.7	10045020	3209	9.17	3388.62	77.83
J422	1122884.2	10045014	3238	9.17	3388.2	65.08
J424	1122388.6	10044892	3209	9.17	3388.62	77.83
J426	1122376.3	10044717	3215	9.17	3388.7	75.27
J428	1122880	10044707	3242	9.17	3388.52	63.49
J430	1122384.4	10044188	3240	9.17	3389.13	64.62
J432	1122684.6	10044186	3240	9.17	3390.07	65.03
J434	1122742.1	10043462	3232	9.17	3389.46	68.23
J436	1122197.2	10043462	3228	9.17	3387.94	69.3
J438	1122207.5	10044182	3236	9.17	3388.23	65.96
J44	1125638	10041202	3255	9.17	3388.88	58.01
J440	1121938.2	10044182	3240	9.17	3387.74	64.01
J442	1121938.2	10043551	3234	9.17	3387.61	66.56
J444	1122875.7	10043237	3224	9.17	3389.46	71.69
J446	1122869.5	10043168	3223	9.17	3389.47	72.13
J448	1122869.5	10042870	3222	9.17	3388.04	71.95
J450	1122869.5	10042833	3222	9.17	3387.88	71.88
J452	1122577.6	10042833	3220	9.17	3387.26	72.47
J454	1122577.6	10043042	3224	9.17	3387.24	70.73
J456	1122332.9	10042839	3220	9.17	3387.03	72.37
J458	1122832.5	10042692	3221	9.17	3387.82	72.28

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125333.9	10041215	3220	9.17	3388.77	73.13
J460	1122321.2	10042093	3208	9.17	3383.87	76.2
J462	1122197.2	10042443	3216	9.17	3384.26	72.91
J464	1121806.6	10042513	3224	9.17	3384.3	69.46
J466	1121781.6	10042455	3224	9.17	3384.17	69.4
J468	1121773.3	10042102	3218	9.17	3383.81	71.84
J470	1121275.8	10042124	3222	9.17	3383.49	69.98
J472	1122184.8	10042099	3208	9.17	3383.8	76.18
J474	1121872.3	10041867	3209	9.17	3383.36	75.55
J476	1121843.5	10041417	3202	9.17	3383.4	78.6
J478	1121573.4	10040954	3197	9.17	3383.33	80.74
J48	1125796.1	10041657	3255	9.17	3389.18	58.14
J480	1121534.4	10041237	3208	9.17	3383.33	75.97
J482	1121530.2	10040954	3195	9.17	3383.33	81.6
J484	1121380.2	10040935	3195	9.17	3383.33	81.6
J486	1121376	10041089	3205	9.17	3383.33	77.27
J488	1121080	10041046	3195	9.17	3383.33	81.61
J490	1120796.2	10041219	3195	9.17	3383.33	81.6
J492	1121080	10041410	3215	9.17	3383.37	72.96
J498	1121390.4	10041422	3216	9.17	3383.39	72.53
J50	1125374.5	10041666	3215	9.17	3388.07	74.99
J502	1121106.7	10041773	3220	9.17	3383.4	70.8
J504	1121151.6	10042114	3220	9.17	3383.46	70.83
J508	1120997.8	10042132	3200	9.17	3383.39	79.46
J510	1121404.9	10043101	3215	9.17	3388.07	74.99
J512	1121400.8	10043516	3225	9.17	3388.23	70.73
J514	1121674.3	10043531	3228	9.17	3387.51	69.11
J516	1121668.1	10043862	3234	9.17	3387.54	66.53
J518	1126598.3	10045335	3307	9.17	3392.73	37.15
J52	1125329.4	10041667	3213	9.17	3387.93	75.8
J520	1126585.9	10044363	3315	9.17	3392.66	33.65
J522	1126614.9	10044079	3320	9.17	3392.54	31.43
J524	1126475.1	10044087	3300	9.17	3392.48	40.07
J526	1126512	10043330	3310	9.17	3392.53	35.76
J528	1124645.6	10044860	3224	9.17	3392.49	73.01
J530	1123982.9	10043964	3210	9.17	3388.02	77.14
J532	1121044.8	10041644	3220	9.17	3383.39	70.79
J534	1121275.6	10042112	3222	9.17	3383.49	69.98

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328.1	10040934	3188	9.17	3383.51	84.71
J54	1125327.9	10041538	3216	9.17	3387.88	74.47
J540	1123216.8	10044007	3230	9.17	3390.25	69.44
J542	1123717.6	10043709	3210	9.17	3391.18	78.5
J544	1122921.4	10044178	3238	9.17	3390.8	66.21
J546	1122910.7	10043167	3223	9.17	3389.5	72.15
J548	1122836.4	10040607	3178	9.17	3384.9	89.65
J550	1121429.3	10042126	3224	9.17	3383.57	69.14
J552	1121429.7	10042109	3224	9.17	3383.57	69.14
J554	1124113.5	10047573	3180	9.17	3398.11	94.51
J556	1123927.3	10047480	3182	9.17	3397.02	93.17
J558	1123608.1	10046856	3178	9.17	3395.48	94.23
J56	1125148.8	10041667	3203	9.17	3387.86	80.1
J560	1123546	10046621	3188	9.17	3395.27	89.81
J562	1123275.6	10046630	3188	9.17	3395.05	89.71
J564	1123000.7	10046638	3194	9.17	3394.32	86.8
J566	1122690.4	10046638	3194	9.17	3394.01	86.67
J568	1123546	10046479	3195	9.17	3395.24	86.76
J570	1123541.6	10046364	3198	9.17	3395.23	85.46
J572	1123541.6	10046093	3218	9.17	3235.17	62.9
J574	1122965.3	10047746	3090	9.17	3235.08	68.06
J576	1122756.9	10047990	3078	9.17	3235.07	66.32
J578	1122699.2	10047932	3082	9.17	3388.18	81.54
J58	1125227	10041771	3200	9.17	3235.09	54.2
J580	1123430.8	10048198	3110	9.17	3395.24	82.43
J582	1123719	10046486	3205	9.17	3384.87	83.14
J584	1123918.9	10040419	3193	9.17	3386	84.93
J586	1124622.2	10040824	3190	9.17	3388.52	86.02
J588	1124667	10041753	3190	9.17	3388.82	86.15
J590	1124650.8	10042484	3190	9.17	3389.85	78.8
J592	1124676.5	10043672	3208	9.17	3389.77	77.89
J594	1124679.8	10043917	3210	9.17	3385.72	83.94
J596	1123916.8	10040224	3192	9.17	3384.27	84.18
J598	1123920.7	10040593	3190	9.17	3388.15	81.52
J60	1125153.3	10041773	3200	9.17	3387.66	76.98
J600	1123960.9	10039405	3210	9.17	3387.99	94.45
J602	1123915.7	10038691	3170	9.17	3387.89	81.41
J604	1123276.7	10038802	3200	9.17	3388.58	57.88

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J606	1125613.8	10040660	3255	9.17	3394.01	85.8
J608	1123041.2	10046372	3196	9.17	3394.14	87.59
J610	1122685.5	10046975	3192	9.17	3392.18	65.94
J612	1123831	10044869	3240	9.17	3391.54	67.39
J614	1123362.1	10044494	3236	9.17	3388.91	71.02
J616	1122374.6	10044421	3225	9.17	3388.28	68.58
J618	1121393.2	10043917	3230	9.17	3389.03	84.07
J62	1125227	10042052	3195	9.17	3388.4	72.97
J620	1121762.7	10044511	3220	9.17	3385.11	71.54
J622	1121867.2	10042802	3220	9.17	3387.91	71.89
J624	1122343.9	10043246	3222	9.17	3383.61	79.56
J626	1122184	10041675	3200	9.17	3383.65	82.61
J628	1122418.5	10041365	3193	9.17	3384.08	85.4
J630	1123200.4	10041386	3187	9.17	3384.31	86.79
J632	1123215.5	10041139	3184	9.17	3385.88	86.18
J634	1122840.7	10040181	3187	9.17	3386.61	84.33
J636	1123632.3	10040007	3192	9.17	3387.59	79.12
J638	1124246.6	10039627	3205	9.17	3389.43	58.25
J64	1125882	10042044	3255	9.17	3382.51	82.55
J640	1123271.9	10041808	3192	9.17	3391.35	73.38
J642	1125480.4	10043891	3222	9.17	3388.01	84.5
J644	1123629.7	10042456	3193	9.17	3386.72	82.64
J646	1123015	10042460	3196	9.17	3389.51	82.11
J648	1123944.2	10043324	3200	9.17	3389.8	84.84
J650	1124266.5	10043316	3194	9.17	3396.04	113.11
J652	1123418.2	10047310	3135	9.17	3235.11	58.54
J654	1123431.2	10047915	3100	9.17	3388.21	68.55
J656	1125435.9	10040502	3230	9.17	3386.76	84.39
J658	1123772.5	10040006	3192	9.17	3389.62	58.76
J66	1125912	10042285	3254	9.17	3383.94	82.73
J660	1122416.7	10041207	3193	9.17	3384.64	70.47
J662	1121815.8	10042660	3222	9.17	3383.72	69.21
J664	1121600.9	10042286	3224	9.17	3388.23	71.6
J666	1121217.4	10043511	3223	9.17	3386.11	70.24
J668	1121875.6	10043169	3224	9.17	3387.12	84.11
J670	1123316.2	10042458	3193	9.17	3389.72	86.54
J672	1124092	10042774	3190	9.17	3388.72	80.04
J674	1123980	10043719	3204	9.17	3391.4	67.77

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J676	1123903.4	10045204	3235	9.17	3235.09	54.2
J678	1123442.7	10048158	3110	9.17	3385.42	68.21
J68	1125672.7	10042286	3228	9.17	3235.09	54.2
J680	1123380.6	10048225	3110	9.17	3235.08	58.53
J682	1123063.1	10048169	3100	9.17	3235.12	64.62
J684	1122895.5	10047898	3086	9.17	3396.18	93.67
J688	1123855.6	10047023	3180	9.17	3388.3	73.79
J690	1122626.7	10045017	3218	9.17	3387.64	64.84
J692	1121938.2	10043885	3238	9.17	3388.03	65.01
J694	1122202.5	10043832	3238	9.17	3389.71	65.74
J696	1122682.3	10043746	3238	9.17	3388.99	84.92
J698	1125018.8	10042054	3193	9.17	3385.38	68.19
J70	1125672.7	10042387	3228	9.17	3388.99	85.35
J700	1125011	10041754	3192	9.17	3389.26	85.47
J702	1124652.3	10042638	3192	9.17	3388.59	86.48
J704	1124649.1	10042317	3189	9.17	3390.33	78.14
J706	1125145.1	10043429	3210	9.17	3390.26	75.51
J708	1125467.3	10043244	3216	9.17	3389.93	79.7
J710	1124674.9	10043553	3206	9.17	3235.09	54.2
J712	1123455.6	10048115	3110	9.17	3235.09	54.2
J714	1123332.5	10048225	3110	9.17	3383.08	73.26
J72	1125457.5	10042300	3214	9.17	3398.69	94.76
J720	1124205.5	10047608	3180	9.17	3392.79	37.17
J722	1126592.1	10044849	3307	9.17	3397.4	63.87
J724	1125103.4	10045484	3250	9.17	3234.92	73.63
J726	1122233.4	10047038	3065	9.17	3234.92	75.79
J728	1121872.3	10047177	3060	9.17	3234.84	82.26
J730	1121326.8	10045288	3045	9.17	3234.83	95.25
J732	1120850	10044576	3015	9.17	3390.95	61.94
J734	1126122	10043420	3248	9.17	3388.98	57.19
J736	1125636.5	10041358	3257	9.17	3391.18	72.44
J738	1123723	10044190	3224	9.17	3382.93	73.2
J74	1125457.5	10042413	3214	9.17	3398.4	64.74
J740	1125109.4	10047292	3249	9.17	3387.9	55.42
J742	1125247.9	10039961	3260	9.17	3398.93	87.5
J744	1125220.9	10049016	3197	9.17	3399.05	76.28
J746	1125859.8	10048968	3223	9.17	3399.36	66.02
J748	1125769.5	10047902	3247	9.17	3398.8	77.48

Projected Worst Case Demand (2038) System Performance - (PDD)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J750	1124992.9	10050432	3220	9.17	3398.8	78.34
J752	1124948.6	10050389	3218	9.17	3398.63	135.9
J754	1123449.9	10048728	3085	9.17	3398.6	124.62
J756	1123880.9	10048778	3111	9.17	3398.64	123.77
J758	1123501.1	10048585	3113	9.17	3382.85	77.06
J76	1125255.8	10042431	3205	9.17	3398.65	116.41
J760	1123667.7	10048341	3130	9.17	3387.95	94.44
J762	1123896.5	10038697	3170	9.17	3382.75	77.02
J78	1125242.3	10042303	3205	9.17	3382.8	75.31
J80	1125361.2	10042301	3209	9.17	3382.76	74.86
J82	1125361.2	10042198	3210	9.17	3390	58.5
J84	1125934.7	10042714	3255	9.17	3390	44.63
J86	1126252.3	10042705	3287	9.17	3390.06	58.52
J88	1125934.6	10042756	3255	9.17	3386.59	70.02
J90	1125457.4	10042761	3225	9.17	3386.56	73.04
J92	1125457.4	10042860	3218	9.17	3386.31	71.63
J94	1125454.4	10042665	3221	9.17	3386.26	76.81
J96	1125323.5	10042668	3209	9.17	3386.3	73.36
J98	1125452.9	10042630	3217	9.17	3234.84	83.12
V8002_NU	1121346.3	10045216	3043	9.17	3234.84	83.12
V8002_ND	1121366.9	10045146	3043	9.17	3395.7	119.46
V8004_NU	1123221.5	10047426	3120	9.17	3235.39	50
V8004_ND	1123060.2	10047523	3120	9.17	3234.92	73.62
V8010_NU	1122217.1	10046991	3065	9.17	3234.92	73.62
V8010_ND	1121854.4	10046291	3065	9.17	3393.46	85.97

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J100	1125999.3	10043006	3254	10.59	3387.37	57.79
J102	1125788.6	10043009	3236	10.59	3385.34	64.71
J104	1125787.1	10042941	3240	10.59	3385.31	62.96
J106	1125744.9	10043014	3234	10.59	3385.16	65.5
J108	1125746.4	10043169	3238	10.59	3385.16	63.77
J110	1125653.1	10043014	3227	10.59	3385.12	68.51
J112	1126111	10043156	3255	10.59	3387.66	57.48
J114	1126189.2	10043213	3260	10.59	3387.18	55.11
J116	1126077.9	10043285	3250	10.59	3387.9	59.75
J118	1125925.8	10043283	3244	10.59	3387.88	62.34
J120	1126005.6	10043423	3248	10.59	3388.16	60.73
J122	1125841.3	10043421	3242	10.59	3387.96	63.24
J124	1125842.9	10043313	3239	10.59	3387.9	64.52
J126	1125666.8	10043422	3228	10.59	3387.76	69.22
J128	1125668.3	10043677	3232	10.59	3386.82	67.08
J130	1125668.3	10043732	3233	10.59	3386.79	66.64
J132	1125164.1	10043574	3220	10.59	3386.53	72.16
J134	1125471.1	10043427	3218	10.59	3387.59	73.48
J136	1125463.6	10043063	3215	10.59	3387.18	74.6
J138	1125894	10043888	3247	10.59	3389.41	61.71
J14	1123884.3	10038702	3170	10.59	3384.2	92.81
J140	1125067.4	10043894	3220	10.59	3388.49	73.01
J142	1125820	10044147	3253	10.59	3390.16	59.43
J144	1125157.7	10044156	3229	10.59	3389.84	69.69
J146	1125772	10044440	3249	10.59	3390.97	61.52
J150	1125760.2	10044468	3249	10.59	3391.12	61.58
J152	1125070.4	10044495	3230	10.59	3390.78	69.67
J154	1125604.7	10044857	3250	10.59	3392.26	61.64
J156	1124669.9	10044862	3224	10.59	3390.21	72.02
J158	1125083.8	10044940	3234	10.59	3392.74	68.78
J16	1122873.1	10038869	3220	10.59	3384.16	71.13
J160	1125559.4	10044955	3250	10.59	3392.79	61.87
J162	1125461.5	10045164	3250	10.59	3393.8	62.31
J164	1125082.3	10045119	3237	10.59	3393.75	67.92
J166	1125311.2	10045480	3248	10.59	3395.29	63.82
J170	1125095.7	10046118	3253	10.59	3396.89	62.35
J174	1125098.7	10046332	3255	10.59	3397.07	61.56
J176	1125100.3	10046582	3252	10.59	3397.28	62.95

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J178	1125446.5	10046575	3264	10.59	3397.27	57.75
J18	1124240	10039216	3210	10.59	3384.01	75.4
J180	1125708.8	10046321	3268	10.59	3396.93	55.87
J182	1125708.8	10046551	3274	10.59	3396.93	53.26
J184	1125954.1	10046316	3277	10.59	3396.91	51.96
J186	1125958.6	10046567	3282	10.59	3396.91	49.79
J188	1126222	10046313	3287	10.59	3396.91	47.63
J190	1125106.7	10046822	3249	10.59	3397.48	64.34
J192	1125604.9	10046828	3267	10.59	3397.17	56.4
J194	1126476.6	10046310	3290	10.59	3396.91	46.32
J196	1126225.2	10046578	3288	10.59	3396.93	47.2
J198	1126452.5	10046572	3290	10.59	3396.92	46.33
J20	1124935.7	10039498	3260	10.59	3384.47	53.93
J200	1126153	10046838	3286	10.59	3396.98	48.09
J202	1126401.3	10046870	3290	10.59	3396.98	46.35
J204	1125109.7	10047063	3250	10.59	3397.7	64
J206	1125853.2	10047423	3272	10.59	3397.1	54.21
J208	1125600.4	10047197	3268	10.59	3397.16	55.97
J210	1125865.3	10047045	3275	10.59	3397.09	52.9
J212	1126130.5	10047146	3284	10.59	3396.99	48.96
J214	1126359.2	10047149	3290	10.59	3396.98	46.36
J216	1126359.2	10047412	3285	10.59	3397.01	48.53
J218	1126130.5	10047418	3278	10.59	3397.02	51.57
J22	1124947.8	10039509	3260	10.59	3384.47	53.93
J220	1125104.9	10047917	3205	10.59	3398.44	83.82
J222	1125104.9	10047957	3205	10.59	3398.44	83.82
J224	1124995	10047917	3197	10.59	3398.42	87.27
J226	1124010.1	10045975	3250	10.59	3394.23	62.5
J228	1123938.1	10045852	3250	10.59	3393.75	62.29
J230	1123803.7	10045935	3245	10.59	3393.2	64.21
J232	1123645.1	10045276	3242	10.59	3389.32	63.83
J234	1124171.6	10045197	3230	10.59	3388.62	68.73
J236	1123445.4	10045194	3248	10.59	3389.61	61.36
J238	1123390.9	10044874	3240	10.59	3389.57	64.81
J24	1124612.1	10039537	3227	10.59	3383.26	67.71
J240	1124671	10045070	3230	10.59	3390.1	69.37
J242	1124652.8	10044538	3220	10.59	3388.99	73.22
J244	1124858.6	10044541	3218	10.59	3388.89	74.05

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J246	1124643.7	10044290	3218	10.59	3388.87	74.04
J248	1123356.6	10044196	3234	10.59	3388.49	66.94
J250	1123989.9	10044107	3214	10.59	3384.27	73.78
J252	1123858.9	10043966	3210	10.59	3383.9	75.35
J254	1124682.6	10044130	3212	10.59	3386.59	75.65
J256	1124684	10043432	3205	10.59	3387.04	78.88
J258	1124684	10043249	3203	10.59	3386.96	79.71
J26	1124424	10039560	3211	10.59	3383.17	74.6
J260	1124881.9	10043093	3198	10.59	3386.8	81.81
J262	1124653.5	10042762	3194	10.59	3386.76	83.52
J264	1124261.5	10042774	3190	10.59	3386.67	85.22
J266	1123934.2	10042774	3190	10.59	3386.46	85.13
J268	1123637.4	10042774	3190	10.59	3386.34	85.07
J270	1123610.7	10042979	3200	10.59	3386.3	80.72
J272	1123619.5	10043324	3207	10.59	3386.29	77.69
J274	1123621.4	10043427	3212	10.59	3385.92	75.36
J276	1123381.7	10043327	3221	10.59	3385.46	71.26
J278	1123166.1	10043500	3225	10.59	3387.26	70.31
J28	1124399.9	10039807	3203	10.59	3383.02	78
J280	1123977.2	10043483	3198	10.59	3386.74	81.78
J282	1124278.7	10043485	3198	10.59	3386.74	81.78
J284	1124647.5	10042156	3188	10.59	3385	85.36
J286	1124341.1	10041745	3188	10.59	3384.63	85.2
J288	1124622.2	10041108	3188	10.59	3381.56	83.87
J290	1124622.2	10040543	3195	10.59	3382.18	81.11
J292	1124828	10040539	3198	10.59	3382.08	79.76
J294	1124725.1	10040253	3195	10.59	3382.81	81.38
J296	1124918.3	10040249	3203	10.59	3382.71	77.87
J298	1124145.4	10041286	3188	10.59	3378.43	82.51
J30	1124834.9	10039531	3244	10.59	3384.41	60.84
J300	1124042.5	10041114	3188	10.59	3378.46	82.53
J302	1124040.4	10040785	3189	10.59	3378.6	82.16
J304	1124195.8	10040785	3188	10.59	3378.59	82.58
J306	1123769.5	10040791	3189	10.59	3378.78	82.23
J308	1123922.8	10040785	3189	10.59	3378.79	82.24
J310	1124727.2	10039992	3198	10.59	3383.68	80.45
J312	1124756.6	10039992	3198	10.59	3383.69	80.46
J314	1124252.5	10039999	3195	10.59	3383.56	81.7

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J316	1123914.4	10040005	3193	10.59	3382.88	82.28
J318	1123886.8	10039438	3210	10.59	3383.85	75.33
J32	1125375.6	10039941	3260	10.59	3384.58	53.98
J320	1123306.8	10040009	3190	10.59	3382.1	83.24
J322	1122289.5	10040159	3030	10.59	3380.52	151.88
J324	1122839.8	10040396	3184	10.59	3380.83	85.29
J326	1122999.4	10040261	3186	10.59	3379.36	83.78
J328	1123180.1	10040549	3182	10.59	3379.37	85.52
J330	1123007.8	10040618	3178	10.59	3379.36	87.25
J332	1123230.5	10040679	3182	10.59	3379.38	85.53
J334	1123283	10040818	3179	10.59	3379.39	86.83
J336	1123545.5	10041082	3185	10.59	3377.69	83.49
J338	1122894.4	10040872	3178	10.59	3379.59	87.35
J340	1122440.4	10040465	3169	10.59	3379.34	91.14
J342	1122623.3	10040641	3178	10.59	3379.37	87.25
J344	1122772.2	10040780	3178	10.59	3379.79	87.44
J346	1122741.5	10040713	3178	10.59	3379.84	87.46
J350	1122729.7	10040740	3178	10.59	3379.8	87.44
J352	1122722.3	10040733	3178	10.59	3379.83	87.45
J354	1122884.2	10041060	3183	10.59	3379.46	85.13
J356	1123612	10041383	3188	10.59	3379.14	82.82
J358	1122415.4	10041101	3192	10.59	3379.36	81.18
J36	1125567.1	10040443	3255	10.59	3384.91	56.29
J360	1122205.7	10041099	3192	10.59	3379.36	81.18
J364	1122181.1	10040941	3189	10.59	3378.34	82.04
J366	1122148.2	10040941	3189	10.59	3378.33	82.04
J368	1122218.1	10040941	3188	10.59	3378.36	82.48
J370	1122183.1	10041179	3194	10.59	3378.34	79.88
J372	1122865.7	10041749	3195	10.59	3377.33	79.01
J374	1123108.3	10041533	3188	10.59	3375.75	81.35
J376	1123749.9	10041802	3188	10.59	3377.08	81.93
J378	1122925.9	10042198	3198	10.59	3382.48	79.94
J38	1125085.4	10040522	3214	10.59	3384.41	73.84
J380	1123041.2	10043167	3222	10.59	3386.28	71.18
J382	1123039.2	10043368	3226	10.59	3386.25	69.44
J384	1123030.9	10043048	3222	10.59	3385.86	71
J386	1122922.2	10043502	3228	10.59	3387.51	69.12
J388	1123012.2	10044175	3237	10.59	3388.07	65.46

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J390	1123018.4	10044630	3245	10.59	3386.5	61.31
J392	1123078	10045202	3250	10.59	3390.37	60.82
J394	1123075.9	10045132	3248	10.59	3390.33	61.67
J396	1123078	10045461	3252	10.59	3390.24	59.9
J398	1122933.5	10045990	3220	10.59	3377.29	68.15
J40	1125639.4	10040959	3255	10.59	3385.27	56.45
J400	1122775.2	10045992	3220	10.59	3377.84	68.39
J402	1122775.2	10046090	3205	10.59	3377.49	74.74
J404	1122470.9	10045807	3208	10.59	3390.84	79.22
J406	1122464.8	10046021	3204	10.59	3391.02	81.04
J408	1122468.9	10045657	3214	10.59	3390.75	76.59
J410	1122207.8	10045663	3212	10.59	3390.72	77.44
J412	1122586.1	10045406	3233	10.59	3387.74	67.05
J414	1122795.8	10045445	3245	10.59	3366.13	52.49
J416	1122322.9	10045307	3222	10.59	3385.15	70.69
J418	1122320.8	10045427	3220	10.59	3385.09	71.53
J42	1125221	10040818	3221	10.59	3385.01	71.06
J420	1122388.7	10045020	3209	10.59	3385.12	76.31
J422	1122884.2	10045014	3238	10.59	3384.58	63.51
J424	1122388.6	10044892	3209	10.59	3385.12	76.31
J426	1122376.3	10044717	3215	10.59	3385.23	73.76
J428	1122880	10044707	3242	10.59	3384.99	61.96
J430	1122384.4	10044188	3240	10.59	3385.79	63.17
J432	1122684.6	10044186	3240	10.59	3387.02	63.7
J434	1122742.1	10043462	3232	10.59	3386.22	66.82
J436	1122197.2	10043462	3228	10.59	3384.23	67.69
J438	1122207.5	10044182	3236	10.59	3384.61	64.39
J44	1125638	10041202	3255	10.59	3385.45	56.53
J440	1121938.2	10044182	3240	10.59	3383.97	62.38
J442	1121938.2	10043551	3234	10.59	3383.8	64.91
J444	1122875.7	10043237	3224	10.59	3386.22	70.29
J446	1122869.5	10043168	3223	10.59	3386.23	70.73
J448	1122869.5	10042870	3222	10.59	3384.36	70.35
J450	1122869.5	10042833	3222	10.59	3384.15	70.26
J452	1122577.6	10042833	3220	10.59	3383.34	70.77
J454	1122577.6	10043042	3224	10.59	3383.31	69.03
J456	1122332.9	10042839	3220	10.59	3383.04	70.65
J458	1122832.5	10042692	3221	10.59	3384.08	70.66

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J46	1125333.9	10041215	3220	10.59	3385.31	71.63
J460	1122321.2	10042093	3208	10.59	3378.91	74.06
J462	1122197.2	10042443	3216	10.59	3379.43	70.81
J464	1121806.6	10042513	3224	10.59	3379.48	67.37
J466	1121781.6	10042455	3224	10.59	3379.31	67.3
J468	1121773.3	10042102	3218	10.59	3378.83	69.69
J470	1121275.8	10042124	3222	10.59	3378.42	67.78
J472	1122184.8	10042099	3208	10.59	3378.83	74.02
J474	1121872.3	10041867	3209	10.59	3378.24	73.33
J476	1121843.5	10041417	3202	10.59	3378.3	76.39
J478	1121573.4	10040954	3197	10.59	3378.21	78.52
J48	1125796.1	10041657	3255	10.59	3385.85	56.7
J480	1121534.4	10041237	3208	10.59	3378.2	73.75
J482	1121530.2	10040954	3195	10.59	3378.21	79.38
J484	1121380.2	10040935	3195	10.59	3378.2	79.38
J486	1121376	10041089	3205	10.59	3378.2	75.05
J488	1121080	10041046	3195	10.59	3378.21	79.38
J490	1120796.2	10041219	3195	10.59	3378.2	79.38
J492	1121080	10041410	3215	10.59	3378.26	70.74
J498	1121390.4	10041422	3216	10.59	3378.28	70.32
J50	1125374.5	10041666	3215	10.59	3384.39	73.4
J502	1121106.7	10041773	3220	10.59	3378.3	68.59
J504	1121151.6	10042114	3220	10.59	3378.38	68.62
J508	1120997.8	10042132	3200	10.59	3378.29	77.25
J510	1121404.9	10043101	3215	10.59	3384.41	73.4
J512	1121400.8	10043516	3225	10.59	3384.61	69.16
J514	1121674.3	10043531	3228	10.59	3383.67	67.45
J516	1121668.1	10043862	3234	10.59	3383.71	64.87
J518	1126598.3	10045335	3307	10.59	3390.5	36.18
J52	1125329.4	10041667	3213	10.59	3384.21	74.19
J520	1126585.9	10044363	3315	10.59	3390.4	32.67
J522	1126614.9	10044079	3320	10.59	3390.24	30.43
J524	1126475.1	10044087	3300	10.59	3390.17	39.07
J526	1126512	10043330	3310	10.59	3390.23	34.76
J528	1124645.6	10044860	3224	10.59	3390.18	72.01
J530	1123982.9	10043964	3210	10.59	3384.34	75.54
J532	1121044.8	10041644	3220	10.59	3378.28	68.58
J534	1121275.6	10042112	3222	10.59	3378.42	67.78

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J536	1122328.1	10040934	3188	10.59	3378.44	82.52
J54	1125327.9	10041538	3216	10.59	3384.15	72.86
J540	1123216.8	10044007	3230	10.59	3387.26	68.14
J542	1123717.6	10043709	3210	10.59	3388.46	77.33
J544	1122921.4	10044178	3238	10.59	3387.98	64.98
J546	1122910.7	10043167	3223	10.59	3386.28	70.75
J548	1122836.4	10040607	3178	10.59	3380.25	87.63
J550	1121429.3	10042126	3224	10.59	3378.52	66.95
J552	1121429.7	10042109	3224	10.59	3378.52	66.95
J554	1124113.5	10047573	3180	10.59	3397.53	94.26
J556	1123927.3	10047480	3182	10.59	3396.1	92.77
J558	1123608.1	10046856	3178	10.59	3394.09	93.63
J56	1125148.8	10041667	3203	10.59	3384.12	78.48
J560	1123546	10046621	3188	10.59	3393.81	89.18
J562	1123275.6	10046630	3188	10.59	3393.53	89.05
J564	1123000.7	10046638	3194	10.59	3392.58	86.04
J566	1122690.4	10046638	3194	10.59	3392.17	85.87
J568	1123546	10046479	3195	10.59	3393.78	86.13
J570	1123541.6	10046364	3198	10.59	3393.76	84.82
J572	1123541.6	10046093	3218	10.59	3235.1	62.87
J574	1122965.3	10047746	3090	10.59	3234.99	68.02
J576	1122756.9	10047990	3078	10.59	3234.97	66.28
J578	1122699.2	10047932	3082	10.59	3384.54	79.96
J58	1125227	10041771	3200	10.59	3234.99	54.16
J580	1123430.8	10048198	3110	10.59	3393.78	81.8
J582	1123719	10046486	3205	10.59	3380.21	81.12
J584	1123918.9	10040419	3193	10.59	3381.69	83.06
J586	1124622.2	10040824	3190	10.59	3384.99	84.49
J588	1124667	10041753	3190	10.59	3385.38	84.66
J590	1124650.8	10042484	3190	10.59	3386.72	77.44
J592	1124676.5	10043672	3208	10.59	3386.62	76.53
J594	1124679.8	10043917	3210	10.59	3381.33	82.04
J596	1123916.8	10040224	3192	10.59	3379.43	82.08
J598	1123920.7	10040593	3190	10.59	3384.5	79.94
J60	1125153.3	10041773	3200	10.59	3383.86	75.33
J600	1123960.9	10039405	3210	10.59	3384.29	92.85
J602	1123915.7	10038691	3170	10.59	3384.16	79.8
J604	1123276.7	10038802	3200	10.59	3385.07	56.36

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J606	1125613.8	10040660	3255	10.59	3392.17	85
J608	1123041.2	10046372	3196	10.59	3392.34	86.81
J610	1122685.5	10046975	3192	10.59	3389.78	64.9
J612	1123831	10044869	3240	10.59	3388.93	66.27
J614	1123362.1	10044494	3236	10.59	3385.51	69.55
J616	1122374.6	10044421	3225	10.59	3384.68	67.02
J618	1121393.2	10043917	3230	10.59	3385.65	82.61
J62	1125227	10042052	3195	10.59	3384.84	71.42
J620	1121762.7	10044511	3220	10.59	3380.53	69.56
J622	1121867.2	10042802	3220	10.59	3384.19	70.28
J624	1122343.9	10043246	3222	10.59	3378.57	77.37
J626	1122184	10041675	3200	10.59	3378.62	80.43
J628	1122418.5	10041365	3193	10.59	3379.19	83.27
J630	1123200.4	10041386	3187	10.59	3379.48	84.7
J632	1123215.5	10041139	3184	10.59	3381.53	84.29
J634	1122840.7	10040181	3187	10.59	3382.49	82.54
J636	1123632.3	10040007	3192	10.59	3383.77	77.46
J638	1124246.6	10039627	3205	10.59	3386.17	56.84
J64	1125882	10042044	3255	10.59	3377.13	80.22
J640	1123271.9	10041808	3192	10.59	3388.69	72.23
J642	1125480.4	10043891	3222	10.59	3384.33	82.9
J644	1123629.7	10042456	3193	10.59	3382.64	80.87
J646	1123015	10042460	3196	10.59	3386.28	80.72
J648	1123944.2	10043324	3200	10.59	3386.67	83.48
J650	1124266.5	10043316	3194	10.59	3394.82	112.58
J652	1123418.2	10047310	3135	10.59	3235.03	58.51
J654	1123431.2	10047915	3100	10.59	3384.58	66.98
J656	1125435.9	10040502	3230	10.59	3382.68	82.62
J658	1123772.5	10040006	3192	10.59	3386.42	57.38
J66	1125912	10042285	3254	10.59	3379	80.59
J660	1122416.7	10041207	3193	10.59	3379.91	68.42
J662	1121815.8	10042660	3222	10.59	3378.72	67.04
J664	1121600.9	10042286	3224	10.59	3384.62	70.03
J666	1121217.4	10043511	3223	10.59	3381.84	68.39
J668	1121875.6	10043169	3224	10.59	3383.17	82.4
J670	1123316.2	10042458	3193	10.59	3386.56	85.17
J672	1124092	10042774	3190	10.59	3385.25	78.53
J674	1123980	10043719	3204	10.59	3388.75	66.62

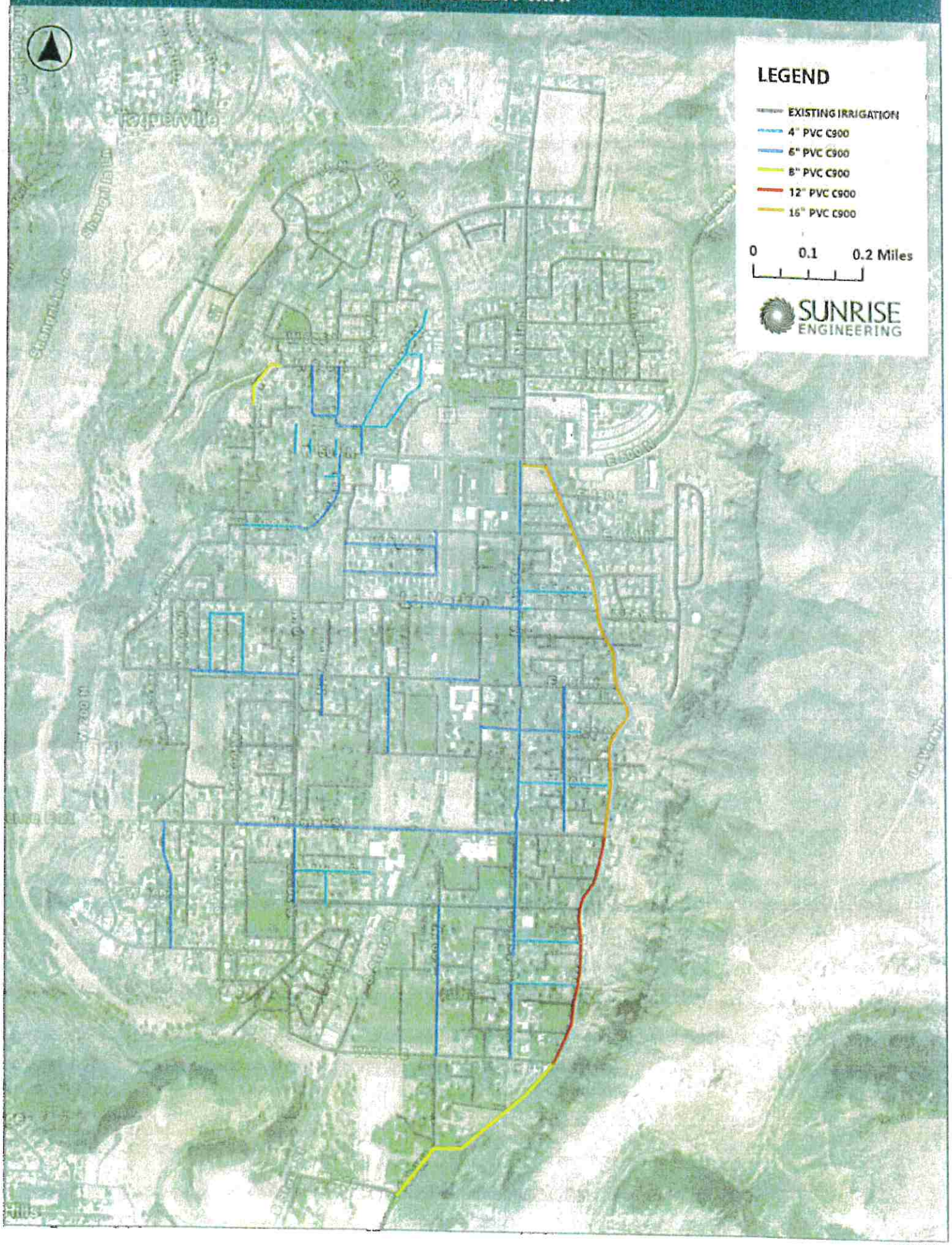
Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J676	1123903.4	10045204	3235	10.59	3235	54.16
J678	1123442.7	10048158	3110	10.59	3380.93	66.27
J68	1125672.7	10042286	3228	10.59	3234.99	54.16
J680	1123380.6	10048225	3110	10.59	3234.99	58.49
J682	1123063.1	10048169	3100	10.59	3235.04	64.58
J684	1122895.5	10047898	3086	10.59	3395.01	93.16
J688	1123855.6	10047023	3180	10.59	3384.7	72.23
J690	1122626.7	10045017	3218	10.59	3383.84	63.19
J692	1121938.2	10043885	3238	10.59	3384.35	63.41
J694	1122202.5	10043832	3238	10.59	3386.55	64.37
J696	1122682.3	10043746	3238	10.59	3385.6	83.45
J698	1125018.8	10042054	3193	10.59	3380.88	66.24
J70	1125672.7	10042387	3228	10.59	3385.59	83.88
J700	1125011	10041754	3192	10.59	3385.96	84.04
J702	1124652.3	10042638	3192	10.59	3385.08	84.96
J704	1124649.1	10042317	3189	10.59	3387.35	76.85
J706	1125145.1	10043429	3210	10.59	3387.26	74.21
J708	1125467.3	10043244	3216	10.59	3386.84	78.36
J710	1124674.9	10043553	3206	10.59	3235	54.16
J712	1123455.6	10048115	3110	10.59	3234.99	54.16
J714	1123332.5	10048225	3110	10.59	3377.88	71.01
J72	1125457.5	10042300	3214	10.59	3398.29	94.58
J720	1124205.5	10047608	3180	10.59	3390.57	36.21
J722	1126592.1	10044849	3307	10.59	3396.6	63.52
J724	1125103.4	10045484	3250	10.59	3234.78	73.56
J726	1122233.4	10047038	3065	10.59	3234.78	75.73
J728	1121872.3	10047177	3060	10.59	3234.67	82.18
J730	1121326.8	10045288	3045	10.59	3234.66	95.18
J732	1120850	10044576	3015	10.59	3388.16	60.73
J734	1126122	10043420	3248	10.59	3385.58	55.71
J736	1125636.5	10041358	3257	10.59	3388.47	71.26
J738	1123723	10044190	3224	10.59	3377.68	70.92
J74	1125457.5	10042413	3214	10.59	3397.91	64.52
J740	1125109.4	10047292	3249	10.59	3384.17	53.8
J742	1125247.9	10039961	3260	10.59	3398.61	87.36
J744	1125220.9	10049016	3197	10.59	3398.77	76.16
J746	1125859.8	10048968	3223	10.59	3399.16	65.93
J748	1125769.5	10047902	3247	10.59	3398.44	77.32

Projected Worst Case Demand (2038) System Performance - (PID)						
Junction ID	X	Y	El. (ft)	Nodal Demand (gpm)	Head (ft)	Pressure (psi)
J750	1124992.9	10050432	3220	10.59	3398.44	78.18
J752	1124948.6	10050389	3218	10.59	3398.21	135.71
J754	1123449.9	10048728	3085	10.59	3398.18	124.43
J756	1123880.9	10048778	3111	10.59	3398.23	123.59
J758	1123501.1	10048585	3113	10.59	3377.58	74.78
J76	1125255.8	10042431	3205	10.59	3398.24	116.23
J760	1123667.7	10048341	3130	10.59	3384.23	92.83
J762	1123896.5	10038697	3170	10.59	3377.45	74.72
J78	1125242.3	10042303	3205	10.59	3377.51	73.02
J80	1125361.2	10042301	3209	10.59	3377.46	72.56
J82	1125361.2	10042198	3210	10.59	3386.92	57.16
J84	1125934.7	10042714	3255	10.59	3386.91	43.29
J86	1126252.3	10042705	3287	10.59	3387	57.2
J88	1125934.6	10042756	3255	10.59	3382.47	68.23
J90	1125457.4	10042761	3225	10.59	3382.42	71.24
J92	1125457.4	10042860	3218	10.59	3382.1	69.81
J94	1125454.4	10042665	3221	10.59	3382.04	74.98
J96	1125323.5	10042668	3209	10.59	3382.08	71.53
J98	1125452.9	10042630	3217	10.59	3234.67	83.05
V8002_NU	1121346.3	10045216	3043	10.59	3234.67	83.05
V8002_ND	1121366.9	10045146	3043	10.59	3394.37	118.89
V8004_NU	1123221.5	10047426	3120	10.59	3235.39	50
V8004_ND	1123060.2	10047523	3120	10.59	3234.77	73.56
V8010_NU	1122217.1	10046991	3065	10.59	3234.77	73.56
V8010_ND	1121854.4	10046291	3065	10.59	3391.45	85.09

APPENDIX C

LaVerkin City
Map of Recommended Improvements

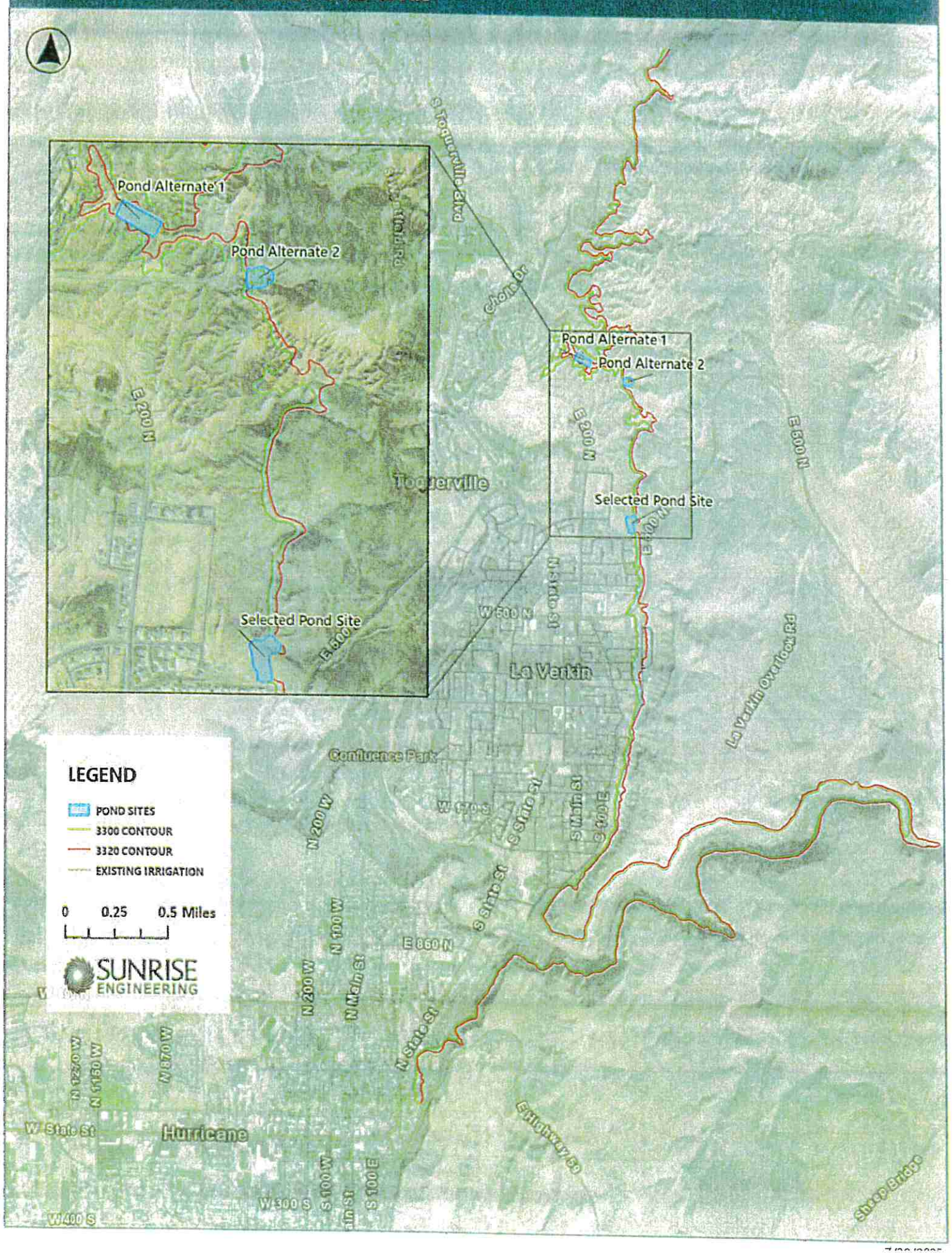
LAVERKIN CITY RECOMMENDED IMPROVEMENT MAP



APPENDIX D

Evaluated Pond Site Locations

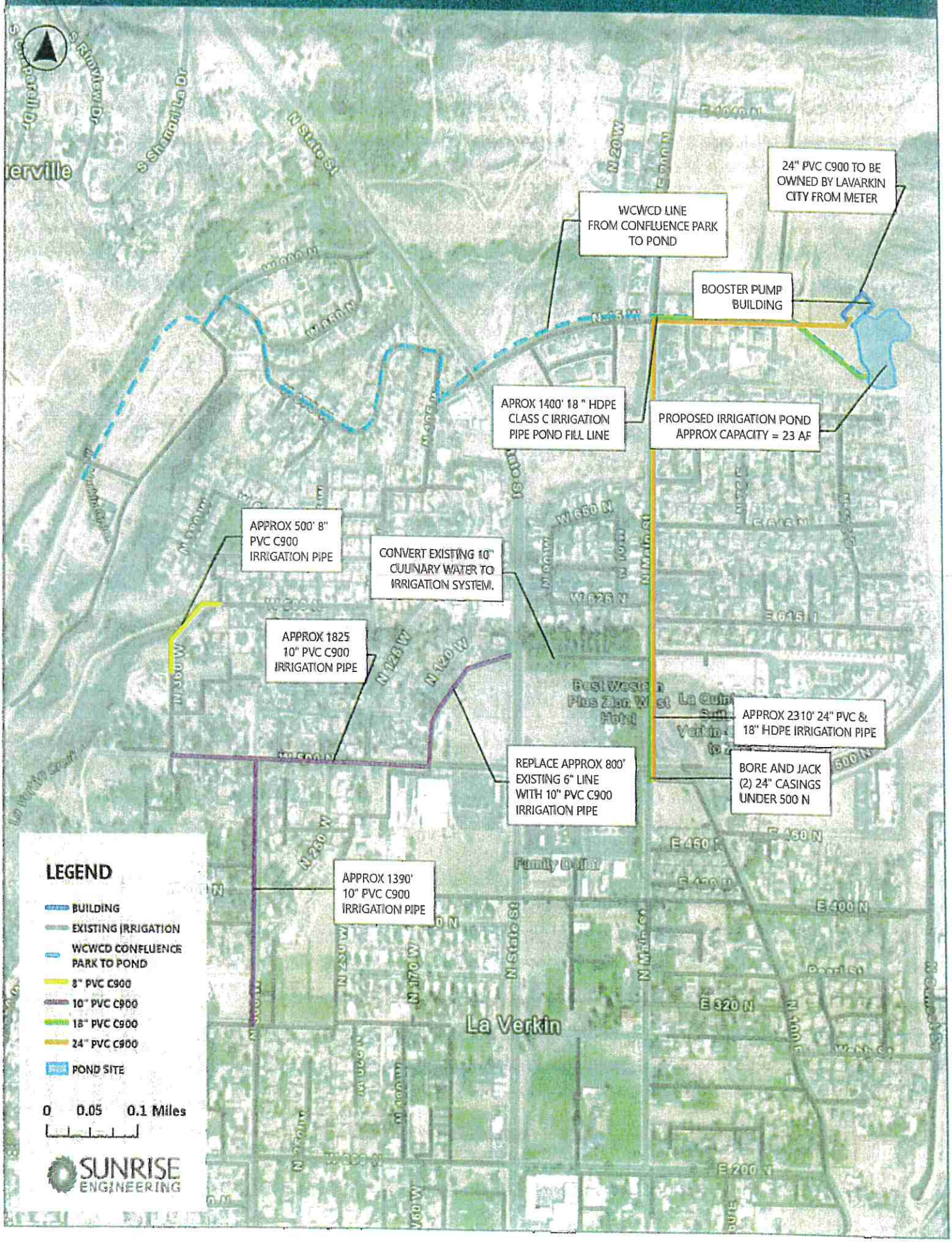
LAVERKIN CITY POTENTIAL POND SITES



APPENDIX E

LaVerkin Pond & Pipeline Project

LAVERKIN POND AND PIPELINE PROJECT



7/29/2025

APPENDIX F

Opinions of Probable Cost

Engineer's Opinion of Probable Cost

LaVerkin Pond & Pipeline Project
LaVerkin City & WCWCD

28-Apr-25
PJA/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	$ 350,000.00	$ 350,000.00
2	Traffic Control	1	LS	$ 10,000.00	$ 10,000.00
3	Subsurface Investigation	20	HR	$ 225.00	$ 4,500.00
4	Compaction & Materials Testing	1	LS	$ 15,000.00	$ 15,000.00
5	SWPPP Compliance & Erosion Control	1	LS	$ 6,500.00	$ 6,500.00
6	Construction Staking	1	LS	$ 7,000.00	$ 7,000.00
7	Dust Control & Watering	1	LS	$ 10,000.00	$ 10,000.00
8	Restore Surface Improvements	1	LS	$ 25,000.00	$ 25,000.00
				General Construction Subtotal	$ 428,000.00
INSTALL 18" POND FILL LINE AND 24" POND OUTLET LINE FROM POND DOWN MAIN STREET ACROSS 500 N					
9	24" PVC C900, Fittings, & Installation	3,700	LF	$ 165.00	$ 610,500.00
10	18" - HDPE - Irrigation Class C	3,700	LF	$ 75.00	$ 277,500.00
11	Asphalt Removal	27,600	SF	$ 1.00	$ 27,500.00
12	24" Gate Valve Assembly	5	EA	$ 10,500.00	$ 52,500.00
13	18" Gate Valve Assembly	5	EA	$ 7,800.00	$ 39,000.00
14	3" Bituminous Surface Course - Category II	27,400	SF	$ 2.75	$ 75,350.00
15	Boring & Jacking	200	LF	$ 900.00	$ 180,000.00
16	Miscellaneous Connections, Fittings & Tie-Ins	1	LS	$ 35,000.00	$ 35,000.00
17	Concrete Meter Vault	2	LS	$ 115,000.00	$ 230,000.00
				Main Street Lines Subtotal	$ 1,527,350.00
CONSTRUCT 7.4 MG STORAGE POND & BOOSTER PUMP STATION					
18	Earthwork for Irrigation Pond Subgrade	28,000	CY	$ 15.00	$ 420,000.00
19	Imported Select Structural Fill for Pond Embankment	2,000	CY	$ 75.00	$ 150,000.00
20	12" Thick Imported Low Permeable Liner Subgrade	1,500	CY	$ 65.00	$ 97,500.00
21	6" Thick Imported Select Liner Cover Soil	750	CY	$ 75.00	$ 56,500.00
22	Geofabric	51,000	SF	$ 0.85	$ 43,500.00
23	40-mil Reinforced Polyethelyne Liner (2 Layers)	102,000	SF	$ 3.50	$ 357,000.00
24	12" Thick Concrete Lined Settling Basin	1,500	CY	$ 500.00	$ 750,000.00
25	Concrete Transfer Structure	1	EA	$ 100,000.00	$ 100,000.00
26	Pond Aerator	1	EA	$ 5,500.00	$ 5,500.00
27	Concrete Pipe Inlet & Outlet Structures	3	EA	$ 100,000.00	$ 300,000.00
28	12' Gravel Access Road Around Pond	14,400	SF	$ 1.15	$ 16,500.00
29	Booster Pump Station Building	1	LS	$ 450,000.00	$ 450,000.00
30	Booster Pump Skid	1	LS	$ 275,000.00	$ 275,000.00
31	Miscellaneous Electrical Improvements	1	LS	$ 150,000.00	$ 150,000.00
				7.4 MG Storage Pond Subtotal	$ 3,171,500.00
			PROJECT SUBTOTAL		$ 5,126,850.00
			CONTINGENCY	20%	$ 1,025,400.00
			CONSTRUCTION TOTAL		$ 6,152,250.00
INCIDENTALS (PH 2)					
1	Funding & Administration Services	0.1%	EST	$ 7,000.00	$ 7,000.00
2	Bonding Attorney	0.5%	EST	$ 37,000.00	$ 37,000.00
3	Engineering Design Services	5.4%	EST	$ 400,000.00	$ 400,000.00
4	Bidding & Negotiating	0.2%	EST	$ 13,000.00	$ 13,000.00
5	Construction Administration & Observation Services	5.0%	EST	$ 370,000.00	$ 370,000.00
6	SCADA Design	0.6%	EST	$ 44,000.00	$ 44,000.00
7	SCADA Improvements	1.2%	EST	$ 87,000.00	$ 87,000.00
8	Geotechnical Investigations	1.0%	EST	$ 74,000.00	$ 74,000.00
9	Topographic & Property Survey	0.4%	EST	$ 31,000.00	$ 31,000.00
10	Regulatory Compliance	1.2%	EST	$ 87,000.00	$ 87,000.00
11	Miscellaneous Professional Services	1.0%	EST	$ 74,000.00	$ 74,000.00
				PH 2 Subtotal	$ 1,224,000.00
			SUBTOTAL		$ 1,224,000.00
			TOTAL PROJECT COST		$ 7,376,300.00

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

LaVerkin City Irrigation Transmission Line Improvements
LaVerkin City & WCWCD

20-May-25
PJA/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	$ 60,000.00	$ 60,000.00
2	Traffic Control	1	LS	$ 10,000.00	$ 10,000.00
3	Subsurface Investigation	20	HR	$ 225.00	$ 4,500.00
4	Compaction & Materials Testing	1	LS	$ 6,500.00	$ 6,500.00
5	SWPPP Compliance & Erosion Control	1	LS	$ 6,500.00	$ 6,500.00
6	Construction Staking	1	LS	$ 7,000.00	$ 7,000.00
7	Dust Control & Watering	1	LS	$ 10,000.00	$ 10,000.00
8	Restore Surface Improvements	1	LS	$ 25,000.00	$ 25,000.00
9	Miscellaneous Connections, Fittings & Tie-Ins	1	LS	$ 20,000.00	$ 20,000.00
10	10" PVC C900, Fittings, & Installation	4,050	LF	$ 96.00	$ 388,800.00
11	8" PVC C900, Fittings, & Installation	500	LF	$ 75.00	$ 37,500.00
12	Asphalt Removal	18,300	SF	$ 1.00	$ 18,300.00
13	10" Butterfly Valve Assembly	6	EA	$ 3,750.00	$ 22,500.00
14	8" Gate Valve Assembly	2	EA	$ 2,800.00	$ 5,600.00
15	1" Setter, Idler, and Meter Barrel	30	EA	$ 1,800.00	$ 54,000.00
16	1" Service Lateral Pipe (Including Service Saddle & Corporation Stop)	2,500	LF	$ 35.00	$ 87,500.00
17	3" Bituminous Surface Course - Category II	18,300	SF	$ 2.75	$ 50,325.00
			SUBTOTAL		$ 814,025.00
			CONTINGENCY	20%	$ 162,800.00
			CONSTRUCTION TOTAL		$ 976,825.00
INCIDENTALS					
1	Funding & Administration Services	0.9%	EST	$ 9,800.00	$ 9,800.00
2	Bonding Attorney	0.5%	EST	$ 5,900.00	$ 5,900.00
3	Engineering Design Services	5.8%	HR	$ 67,000.00	$ 67,000.00
4	Bidding & Negotiating	0.5%	HR	$ 5,300.00	$ 5,300.00
5	Construction Administration & Observation Services	6.0%	EST	$ 69,000.00	$ 69,000.00
6	GIS Mapping	0.4%	EST	$ 4,900.00	$ 4,900.00
7	Loan Origination Fee	0.5%	EST	$ 5,900.00	$ 5,900.00
8	Miscellaneous Professional Services	0.7%	EST	$ 7,500.00	$ 7,500.00
			SUBTOTAL		$ 175,300.00
			TOTAL PROJECT COST		$ 1,152,100.00

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Engineer's Opinion of Probable Cost

LaVerkin City In-Town Replacements
LaVerkin City
Approximately 36000 LF Irrigation Pipe

7-Feb-25
PJA/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	$ 450,000.00	$ 450,000.00
2	Traffic Control	1	LS	$ 144,000.00	$ 144,000.00
3	SWPPP Compliance & Erosion Control	1	LS	$ 108,000.00	$ 108,000.00
4	Dust Control & Watering	1	LS	$ 107,500.00	$ 107,500.00
5	Construction Staking	1	LS	$ 72,000.00	$ 72,000.00
6	Subsurface Investigation	160	HR	$ 350.00	$ 56,000.00
7	Clearing, Grubbing, & Demolition	1	LS	$ 395,000.00	$ 395,000.00
8	Restore Surface Improvements	1	LS	$ 358,000.00	$ 358,000.00
9	Compaction & Materials Testing	1	LS	$ 50,000.00	$ 50,000.00
10	Miscellaneous Connections, Fittings & Tie-Ins	1	LS	$ 394,000.00	$ 394,000.00
11	6" Purple PVC C900, Fittings, & Installation	20,000	LF	$ 70.00	$ 1,400,000.00
12	4" Purple PVC C900, Fittings, & Installation	10,500	LF	$ 50.00	$ 525,000.00
13	6" Gate Valve Assembly	82	EA	$ 2,500.00	$ 205,000.00
14	4" Gate Valve Assembly	32	EA	$ 1,500.00	$ 48,000.00
15	1" Setter, Idler, and Meter Barrel	510	EA	$ 2,250.00	$ 1,147,500.00
16	1" Service Lateral Pipe (Including Service Saddle & Corporation Stop)	13,400	LF	$ 40.00	$ 536,000.00
17	8" Untreated Base Course	181,800	SF	$ 1.50	$ 272,700.00
18	3" Bituminous Surface Course - Category II	181,800	SF	$ 4.50	$ 818,000.00
19	Boring & Jacking	300	LF	$ 800.00	$ 240,000.00
			SUBTOTAL		$ 7,326,700.00
			CONTINGENCY	20%	$ 1,465,300.00
			CONSTRUCTION TOTAL		$ 8,792,000.00
INCIDENTALS					
1	Funding & Administration Services	0.4%	EST	$ 44,000.00	$ 44,000.00
2	Bonding Attorney	0.4%	EST	$ 45,000.00	$ 45,000.00
3	Engineering Design Services	4.9%	LS	$ 492,000.00	$ 492,000.00
4	Bidding & Negotiating	0.2%	HR	$ 25,000.00	$ 25,000.00
5	Construction Administration & Observation Services	4.6%	HR	$ 466,000.00	$ 466,000.00
6	GIS Mapping	0.4%	EST	$ 36,000.00	$ 36,000.00
7	Loan Origination Fee	0.4%	EST	$ 44,000.00	$ 44,000.00
8	Miscellaneous Professional Services	1.1%	EST	$ 115,000.00	$ 115,000.00
9	Topographic & Property Survey	0.5%	EST	$ 52,800.00	$ 52,800.00
			SUBTOTAL		$ 1,319,800.00
			TOTAL PROJECT COST		$ 10,111,800.00

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Engineer's Opinion of Probable Cost

100 E Transmission Line Improvement

7-Feb-25

PJA/bcw

LaVerkin City

Approximately 8000 LF Irrigation Pipe

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	1	LS	$ 135,000.00	$ 135,000.00
2	Traffic Control	1	LS	$ 35,000.00	$ 35,000.00
3	SWPPP Compliance & Erosion Control	1	LS	$ 25,000.00	$ 25,000.00
4	Dust Control & Watering	1	LS	$ 25,000.00	$ 25,000.00
5	Construction Staking	1	LS	$ 16,000.00	$ 16,000.00
6	Subsurface Investigation	100	HR	$ 350.00	$ 35,000.00
7	Clearing, Grubbing, & Demolition	1	LS	$ 100,000.00	$ 100,000.00
8	Restore Surface Improvements	1	LS	$ 80,000.00	$ 80,000.00
9	Compaction & Materials Testing	1	LS	$ 15,000.00	$ 15,000.00
10	Miscellaneous Connections, Fittings & Tie-Ins	1	LS	$ 100,000.00	$ 100,000.00
11	15" Purple PVC C900, Fittings, & Installation	3,800	LF	$ 125.00	$ 475,000.00
12	12" Purple PVC C900, Fittings, & Installation	2,200	LF	$ 115.00	$ 253,000.00
13	8" Purple PVC C900, Fittings, & Installation	2,000	LF	$ 75.00	$ 150,000.00
14	15" Butterfly Valve Assembly	12	EA	$ 6,750.00	$ 81,000.00
15	12" Butterfly Valve Assembly	4	EA	$ 4,100.00	$ 16,400.00
16	10" Butterfly Valve Assembly	1	EA	$ 3,750.00	$ 4,000.00
17	8" Gate Valve Assembly	2	EA	$ 2,800.00	$ 5,600.00
18	6" Gate Valve Assembly	8	EA	$ 2,500.00	$ 20,000.00
19	4" Gate Valve Assembly	5	EA	$ 1,500.00	$ 7,500.00
20	3" Gate Valve Assembly	18	EA	$ 950.00	$ 17,000.00
21	Asphalt Removal	27,000	SF	$ 1.00	$ 27,000.00
22	8" Untreated Base Course	27,000	SF	$ 1.50	$ 40,500.00
23	3" Bituminous Surface Course - Category II	27,000	SF	$ 4.50	$ 122,000.00
24	Remove & Replace 5' Sidewalk	300	SF	$ 20.00	$ 6,000.00
			SUBTOTAL		$ 1,791,000.00
			CONTINGENCY	20%	$ 358,200.00
			CONSTRUCTION TOTAL		$ 2,149,200.00
INCIDENTALS					
1	Funding & Administration Services	0.6%	EST	$ 16,000.00	$ 16,000.00
2	Bonding Attorney	0.3%	EST	$ 8,000.00	$ 8,000.00
3	Engineering Design Services	5.4%	LS	$ 134,000.00	$ 134,000.00
4	Bidding & Negotiating	0.2%	HR	$ 5,000.00	$ 5,000.00
5	Construction Administration & Observation Services	4.6%	HR	$ 114,000.00	$ 114,000.00
6	GIS Mapping	0.4%	EST	$ 9,000.00	$ 9,000.00
7	Loan Origination Fee	0.4%	EST	$ 11,000.00	$ 11,000.00
8	Miscellaneous Professional Services	1.1%	EST	$ 28,000.00	$ 28,000.00
9	Topographic & Property Survey	0.5%	EST	$ 13,000.00	$ 13,000.00
			SUBTOTAL		$ 338,000.00
			TOTAL PROJECT COST		$ 2,487,200.00

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.

APPENDIX G

Impact Fee Certification

CERTIFICATION OF IMPACT FEE ANALYSIS BY CONSULTANT

In accordance with Utah Code Annotated § 11-36a-306, Blaine Worrell, P.E., on behalf of Sunrise Engineering, LLC., makes the following certification:

I certify that the attached Impact Fee Facilities Plan and Impact Fee Analysis:

1. Includes only the costs of public facilities that are:
    a. Allowed under the Impact Fees Act; and
    b. Actually incurred; or
    c. Projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents; or
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and that methodological standards set forth by the Federal Office of Management and Budget for federal grant reimbursement;
3. Offsets costs with grants or other alternate sources of payment; and
4. Complies in each and every relevant respect with the Impact Fees Act.

Blaine Worrell, P.E., makes this certification with the following qualifications:

1. All of the recommendations for implementation of the Impact Fee Facilities Plan ("IFFP") made in the IFFP documents or in the Impact Fee Analysis documents are followed in their entirety by LaVerkin City, Utah, staff, and elected officials.
2. If all or a portion of the IFFP or Impact Fee Analyses are modified or amended, this certification is no longer valid.
3. All information provided to Sunrise Engineering, LLC., its contractors or suppliers, is assumed to be correct, complete and accurate. This includes information provided by LaVerkin City, Utah, and outside sources.

4. The undersigned is trained and licensed as a professional engineer and has not been trained or licensed as a lawyer. Nothing in the foregoing certification shall be deemed an opinion of law or an opinion of compliance with law which under applicable professional licensing laws or regulations or other laws or regulations must be rendered by a lawyer licensed in the State of Utah.

5. The foregoing Certification is an expression of professional opinion based on the undersigned's best knowledge, information and belief and shall not be construed as a warranty or guaranty of any fact or circumstance.

6. The foregoing certification is made only to the LaVerkin City, Utah, and may not be used or relied upon by any other person or entity without the expressed written authorization of the undersigned.

Sunrise Engineering, LLC.

By: _____

Dated: _____

APPENDIX H

Lay Person Summary

SUNRISE ENGINEERING

11 North 300 West, Washington, Utah 84780
Tel: 435.652.8450 | **Fax:** 435.652.8416

An Impact Fee Analysis for the LaVerkin City secondary water system has been completed. This summary, designed to be understood by a lay person, has been prepared pursuant to § 11-36a-303 (2) of the Utah Impact Fees Act.

A Secondary Water Impact Fee Analysis, as per the Utah Impact Fees Act, is a study conducted by local authorities to determine the impact of new developments on secondary water management systems. Secondary water refers to water that is not culinary water and is delivered to and used by an end user for the irrigation of landscaping or a garden.

The analysis evaluates how much new developments, like housing or commercial projects, might contribute to secondary water usage and examines use trends to determine the impact of expansion on the secondary water system.

By studying these factors, the analysis helps decide if an Impact Fee, a one-time charge to new development for the purpose of paying for new or expanded public facilities, should be assessed as a condition of development. An Impact Fee is a fair share contribution towards the cost of upgrading or maintaining secondary water infrastructure to handle the increased demand from new development. The Impact Fee Analysis establishes the percentage of each proposed project that serves growth or future development. This percentage is the Impact Fee eligible percentage of each project. The Impact Fee helps ensure that the culinary water system can handle new development projects.

The LaVerkin City Secondary Water Impact Fee Analysis has identified two future Impact Fee Facilities Plans and Impact Fee Analyses to be fully impact fee eligible.

The Town anticipates conducting a new Impact Fee Facilities Plan and Impact Fee Analysis at 5-year intervals. Within the 10-year planning period, the anticipated combined future cost of both plans is $161,700. This fee will be commissioned to study, among other things, the effects of new growth on the system. Impact Fee Facilities Plans and Impact Fee Analyses are generally considered to be 100% Impact Fee eligible.

The total cost of Impact Fee eligible improvements and impact fee eligible debt is $161,700.00. This total is then divided by the total number of anticipated connections over the length of the planning period to determine a maximum allowable impact fee of $241.62 per new connection. Larger meter connections are considered to consume larger amounts of secondary water and are therefore required to pay a higher impact fee based on the meter size. The maximum allowable impact fee for each meter size is shown in Table 1 below.

Table 1 – Maximum allowable impact fee by meter size

LaVerkin City Secondary Water Proposed Impact Fee Schedule	
Meter Size	Impact Fee
1"	$ 241.62
2"	$ 569.30
3"	$ 948.83
4"	$ 1,328.37
6"	$ 3,795.33

APPENDIX I

Cash Flow Analysis

Cash Flow - 20 Year Planning Horizon

	Actual	Actual	Actual	Actual	Actual	Budgeted	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Fiscal Year Beginning July 1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Ending June 30	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Average Rate Per Connection	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$21.99	$21.99	$21.99	$21.99	$21.99	$23.01
Impact Fee/Connection						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$241.62	$241.62	$241.62	$241.62	$241.62
[illegible]																
Total Current Billable Connections	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
Total [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1085	1125	1168	1208	1248
New [illegible] Connections		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	40	40	40	40
IRRIGATION FUND INCOME																
3100 Irrigation Revenue	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$287,101.44	$297,056.64	$308,211.84	$318,767.04	$345,646.08
3110 Irrigation Connection Fees	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$5,341.12	$5,488.00	$5,638.92	$5,793.99	$5,953.22
3130 Irrigation Penalties	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$1,163.01	$1,197.90	$1,233.83	$1,270.85	$1,306.97
3150 Irrigation Assessments	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$30,351.00	$30,351.00	$30,351.00	$30,351.00	$30,351.00
3160 Irrigation MISCELLANEOUS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]										
3410 Irrigation INTEREST INCOME	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]										
TOTAL REVENUE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$323,956.56	$334,093.53	$345,435.59	$356,182.88	$383,259.38
IRRIGATION FUND OPERATING EXPENSES																
110 Irrigation SALARIES & WAGES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$72,522.71	$74,698.39	$76,939.34	$79,247.52	$81,624.95
130 Irrigation EMPLOYEE BENEFITS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$37,402.19	$38,524.25	$39,680.98	$40,870.38	$42,096.49
240 Irrigation OFFICE EXPENSE, SUPPLIES & P	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$1,361.72	$1,402.57	$1,444.64	$1,487.93	$1,532.62
250 Irrigation EQUIPMENT OPERATING SUPPLIES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$4,823.85	$5,063.09	$5,114.97	$5,268.42	$5,426.47
260 Irrigation NEW WATER METERS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$399.46	$411.45	$423.79	$436.50	$449.60
280 Irrigation TELEPHONE & COMMUNICATIONS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$1,123.86	$1,157.57	$1,192.30	$1,228.07	$1,264.91
310 Irrigation [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$1,965.62	$2,022.53	$2,083.20	$2,145.70	$2,210.07
330 Irrigation WATER MAIN REPAIR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$17,393.61	$17,884.51	$18,421.05	$18,973.68	$19,542.89
450 Irrigation CONTRACTED SERVICES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0.00	$0.00	$0.00	$0.00	$0.00
510 Irrigation INSURANCE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$6,424.13	$6,647.76	$6,847.19	$7,052.60	$7,264.13
[illegible] Irrigation DEPRECIATION	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$15,538.89	$15,965.61	$16,434.58	$16,937.92	$17,446.05
Booster Pump [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$53,743.35	$55,355.34	$57,016.00	$58,725.46	$60,487.27
Total Operating Expenses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$211,684.28	$218,065.97	$224,637.05	$232,378.26	$239,346.51
EXISTING DEBT SERVICE																
[illegible] Irrigation Water Revenue Bond	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$11,000.00	$11,000.00	$11,000.00	$11,000.00	$11,000.00
Sub-Total Existing Debt Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$11,000.00	$11,000.00	$11,000.00	$11,000.00	$11,000.00
NEW DEBT SERVICE																
Scheduled Payments - Proposed Projects [illegible]							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0.00	$0.00	$0.00	$0.00	$0.00
Assessments [illegible]							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0.00	$0.00	$0.00	$0.00	$0.00
[illegible] Impact Fee Fund Eligible																
Sub-Total New Debt Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0.00	$0.00	$0.00	$0.00	$0.00
Total Debt Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$11,000.00	$11,000.00	$11,000.00	$11,000.00	$11,000.00
TOTAL EXPENSES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$222,684.28	$229,065.97	$235,637.05	$243,378.26	$250,346.51
Net Cash Flow Irrigation Fund	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$100,364.29	$104,637.57	$109,828.54	$112,807.62	$132,912.86
CASH ON HAND																
Cash Project Costs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0.00	$0.00	$0.00	$0.00	$10,000.00
[illegible] Fee Eligible Debt Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$11,000.00	$11,000.00	$11,000.00	$11,000.00	$11,000.00
Irrigation Fund Balance [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$711,637.30	$816,264.87	$925,093.42	$1,037,901.04	$1,041,013.90
Net Cash Flow to Irrigation Fund						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$100,300.29	$104,637.57	$108,828.55	$112,807.62	$98,112.86
Renewal & Replacement Fund Balance																
Total Cash on Hand	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$711,637.30	$816,264.87	$925,093.42	$1,037,901.04	$1,041,013.90
IMPACT FEE FUND ACCOUNTING																
Impact Fees Collected	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$9,664.73	$9,664.73	$9,664.73	$9,664.73	$9,664.73
Impact Fees Expended						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0.00	$0.00	$0.00	$0.00	$86,800.00
Impact Fee Funds on Hand	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$89,908.96	$99,613.46	$109,378.19	$118,943.12	$41,807.85
PROJECT IMPLEMENTATION																

Cash Flow - 20 Year Planning Horizon

	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Fiscal Year Beginning July 1	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Ending June 30	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Average Rate Per Connection	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00
Impact Fee/Connection	$241.62	$241.62	$241.62	$241.62	$241.62	$241.62	$241.62	$241.62	$241.62	$241.62
System Users:										
Total Contract Holder Connections	292	292	292	292	292	292	292	292	292	292
Total Lease Users	1364	1364	1364	1364	1364	1364	1364	1364	1364	1364
New Lease User Connections	40	40	40	0	0	0	0	0	0	0
IRRIGATION FUND INCOME										
5110 Irrigation Revenue	$356,724.00	$357,302.94	$378,181.29	$378,181.29	$378,181.29	$378,181.29	$378,181.29	$378,181.29	$378,181.29	$378,181.29
5110 Irrigation Connection Fees	$7,117.00	$6,290.25	$6,463.50	$6,636.75	$6,810.00	$7,000.00	$7,000.00	$7,000.00	$7,000.00	$7,000.00
5410 Irrigation Penalties	$1,540.24	$1,360.00	$1,480.25	$1,475.28	$1,537.46	$1,562.19	$1,600.57	$1,638.95	$1,717.71	$1,796.47
5550 Irrigation Assessment	$30,000.00	$30,000.00	$30,000.00	$30,000.00	$30,000.00	$30,000.00	$30,000.00	$30,000.00	$30,000.00	$30,000.00
5490 Irrigation MISCELLANEOUS										
5610 Irrigation INTEREST INCOME										
	$394,381.74	$395,952.45	$417,124.54	$417,293.32	$417,547.92	$417,800.94	$418,600.19	$418,820.72	$418,918.98	$419,018.23
IRRIGATION FUND OPERATING EXPENSES										
6310.110 Irrigation SALARIES & WAGES	$84,097.70	$84,588.98	$85,188.29	$85,809.00	$86,429.80	$87,064.00	$87,698.20	$88,332.40	$88,966.60	$89,600.80
6310.130 Irrigation EMPLOYER BENEFITS	$45,131.32	$46,000.17	$46,900.97	$47,829.97	$48,787.37	$49,773.37	$50,787.37	$51,829.37	$52,899.37	$53,997.37
6310.245 Irrigation OFFICE EXPENSE, SUPPLIES & P	$1,378.00	$1,420.06	$1,463.34	$1,507.91	$1,553.79	$1,600.98	$1,649.49	$1,699.33	$1,750.50	$1,803.01
6310.250 Irrigation EQUIPMENT OPERATING SUPPLIES	$3,089.27	$3,179.69	$3,272.84	$3,368.74	$3,467.39	$3,568.80	$3,673.00	$3,780.00	$3,889.82	$4,002.47
6310.270 Irrigation NEW WATER MAINS	$460.00	$474.10	$488.63	$503.68	$519.27	$535.41	$552.09	$569.33	$586.13	$603.49
6310.280 Irrigation TELEPHONE & COMMUNICATIONS	$1,705.46	$1,744.08	$1,783.70	$1,824.37	$1,866.10	$1,908.91	$1,952.80	$1,997.81	$2,043.95	$2,091.24
6310.315 Irrigation COMPUTER EQUIPMENT	$2,275.47	$2,344.06	$2,413.06	$2,483.48	$2,555.07	$2,627.83	$2,701.75	$2,776.83	$2,853.07	$2,930.44
6310.450 Irrigation WATER MAIN REPAIR	$24,136.18	$24,710.01	$25,303.34	$25,915.79	$26,546.38	$27,195.13	$27,862.05	$28,547.15	$29,250.43	$29,971.93
6310.490 Irrigation CONTRACTED SERVICES	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6310.510 Irrigation INSURANCE	$3,182.14	$3,256.32	$3,332.19	$3,409.76	$3,489.11	$3,569.98	$3,653.04	$3,738.11	$3,825.21	$3,914.37
6310.690 Irrigation DEPRECIATION	$17,500.00	$18,000.00	$19,000.00	$20,000.00	$20,000.00	$20,000.00	$21,000.00	$21,000.00	$22,000.00	$22,000.00
Booster Pump O&M	$52,250.00	$54,127.25	$56,067.13	$58,068.04	$60,132.46	$62,260.38	$64,452.78	$66,709.64	$69,030.93	$71,416.61
Total Operating Expense	$240,324.92	$241,923.72	$245,225.68	$249,346.42	$257,444.31	$263,792.28	$274,344.02	$280,159.06	$287,292.95	$293,441.79
EXISTING DEBT SERVICE										
2010 Irrigation Water Revenue Bond	$71,000.00	$71,000.00	$71,000.00	$71,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Sub-Total Existing Debt Service	$71,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
NEW DEBT SERVICE										
Combined Payments - Proposed Projects: 1A Victor City In-Town Replacements , 100 ft Transmission Line Improvements @ 0% Impact Fee Fund Eligible	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Sub-Total New Debt Service	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Debt Service	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	$311,324.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Expenditures	$551,324.92	$241,923.72	$245,225.68	$249,346.42	$257,444.31	$263,792.28	$274,344.02	$280,159.06	$287,292.95	$293,441.79
Net Monthly Operating Fund	$117,011.48	$151,988.11	$171,898.86	$167,946.90	$160,099.71	$154,008.66	$123,257.17	$138,661.66	$131,626.03	$125,576.44
CASH ON HAND										
Cash Project Costs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Non-Impact Fee Eligible Debt Service	$11,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Irrigation Fund Balance (FY End June 30)	$1,221,027.78	$1,372,916.86	$1,528,815.24	$1,676,162.14	$1,836,261.84	$1,990,270.50	$2,113,527.67	$2,252,189.33	$2,383,815.36	$2,509,391.80
Net Cash Flow to Irrigation Fund	$117,011.48	$151,988.11	$155,898.38	$147,346.90	$160,099.71	$154,008.66	$123,257.17	$138,661.66	$131,626.03	$125,576.44
Renewal & Replacement Fund Balance										
Total Cash Fund	$1,221,027.78	$1,372,916.86	$1,528,815.24	$1,676,162.14	$1,836,261.84	$1,990,270.50	$2,113,527.67	$2,252,189.33	$2,383,815.36	$2,509,391.80
IMPACT FEE FUND ACCOUNTING										
Impact Fees Collected	$79,464.75	$79,464.75	$79,464.75	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Impact Fees Expended	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Impact Fee Fund on Hand	$471,472.98	$551,137.31	$630,602.05	$630,602.05	$630,602.05	$630,602.05	$630,602.05	$630,602.05	$630,602.05	$630,602.05
PROJECT IMPLEMENTATION										