Copper Cover Water System Master Plan

Calaveras County Water District

CIP 11064C-120

October 2018

Authorized by Board Resolution 2018-44

Prepared under the responsible charge of

Karl Brustad
C 57869

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ENGINEERING . CONSULTING

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REGISTERED PROFESSIONAL ENGINEER

Karl Brustad
NO. C 57869
EXP. 06/30/20

STATE OF CALIFORNIA

October 2018

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RESOLUTION NO. 2018 - 57

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE CALAVERAS COUNTY WATER DISTRICT

ADOPTION OF THE COPPER COVE WATER SYSTEM MASTER PLAN, OCTOBER 2018, CIP 11064C-120

WHEREAS, in order to better serve current and establish needs, and future raw and potable water customers in the Copper Cove water service area, a water master plan update has been developed for the community; and

WHEREAS, Peterson Brustad, Inc. was retained by the District in 2016 to prepare the water master plan update which is a replacement of the prior Copper Cove Water System Master Plan previously adopted by Resolution 2005-43 in June 2005; and

WHEREAS, the Board of Directors received the Draft Copper Cove Water System Master Plan at a public meeting on August 22, 2018 at which time a presentation was given for the purpose of receiving Board, staff, and public comment which have been incorporated into the October 2018 version submitted to the Board for consideration; and

WHEREAS, the Board of Directors of the CALAVERAS COUNTY WATER DISTRICT recognizes that a separate financial analysis and evaluation will be required to address capacity fees to fund the costs of the recommendations within said plan update; and

NOW, THEREFORE, BE IT RESOLVED, the Board of Directors of the CALAVERAS COUNTY WATER DISTRICT hereby adopts of the Copper Cove Water System Master Plan, dated October 2018 attached hereto and made a part hereof.

PASSED AND ADOPTED this 10th day of October, 2018 by the following vote:

AYES: **Directors Strange, Thomas, Underhill, and Ratterman**
NOES: **None**
ABSTAIN: **None**
ABSENT: **Director Davidson**

CALAVERAS COUNTY WATER DISTRICT

Scott Ratterman, President
Board of Directors

ATTEST

Rebecca Hitchcock
Clerk to the Board

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Introduction

This Copper Cove Water System Master Plan (WMP) update was authorized by Calaveras County Water District (District) Resolution 2016-44. The prior Copper Cove WMP was completed in 2005 and the District's goal is to update water and wastewater master plans approximately every ten years.

This report will provide a basis for the management of rehabilitation existing assets and the expansion of the District's potable water facilities to meet community approved growth. Computer aided hydraulic water system modeling, and findings from evaluation of District facility assets, were utilized in development of the report's capital and rehabilitation and replacement projects. These projects include triggers for implementation.

Developed of the Copper Cove WMP started prior to passage of California AB 1668 and impacts of the bill were not evaluated in this report.

Purpose and Specific Objectives

The purpose of this master plan report is to describe water supply, treatment, storage, and distribution system improvements required to meet current and future service area needs. In particular, this master plan report provides the following information:

- Delineation of the service area.
- Characterization of historic water demands, including existing and projected average day, maximum day, and peak hourly demands.
- Description and evaluation of the existing facilities.
- Identification of the improvements needed to meet growth, improve operations, comply with current and known future regulations, and correct deficiencies.
- Recommendations for system improvements needed to serve buildout conditions.
- Timelines and cost information for constructing the recommended improvements.

Existing System

Existing Service Area

The service area encompasses the communities of Copper Cove, Copperopolis, Saddle Creek, Lake Tulloch Shores, Calypso Beach, Connor Estates, Copper Meadows, and Peninsula Estates. The service area is defined by the *2017 Calaveras County Water District Sphere of Influence Report* [1]. The topography ranges from 1,150 feet to 550 feet above mean sea level (MSL). Hot summers and cool winters characterize the region, with temperatures ranging from the low 40's to the mid 100's.

These communities include a total of 2,562 existing connections spread out across the 5,152-acre service area according to records provided in 2017. The current facilities include one raw water pump station diverting water from the North Fork Stanislaus River located on the west shore of Lake Tulloch, one water treatment plant (Copper Cove WTP), three treated water pump

[1] *Calaveras County Water District (CCWD) Sphere of Influence Report, April 2017.* https://www.calaveraslafco.org/uploads/1/1/4/5/11454087/ccwd_soi_april_2017.pdf

stations, five treated water storage tanks, and the associated distribution system. A general map of the existing facilities is presented in Figure 1.

Water Supply

Raw water is supplied to the Copper Cove WTP from Lake Tulloch. A two-stage 4.75-mgd capacity pumping system conveys water from the lake to the WTP through the existing 24-inch raw water main. The first stage consists of two 1,650-gpm pumps (2-duty, 1-spare) and the second stage consists of three 1,750-gpm pumps (lead-lag-standby). In addition to the WTP, irrigation water is also seasonally supplied to Saddle Creek Golf Course. The demand from the golf course irrigation requirement decreases the available water supply, in peak periods, by approximately 1.0-mgd (approximately 700-gpm). The water available to supply the WTP during peak periods is approximately 2,600-gpm (3.75-mgd).

Lake Tulloch is owned and operated by the Tri-Dam Project and has a max capacity of approximately 65,000 AF. Lake Tulloch is fed by the surrounding 980 square mile drainage area and the New Melones Reservoir. The New Melones Reservoir has 2,420,000 AF and is immediately upstream of Lake Tulloch.

Raw water is drawn through an intake on the Black Creek arm of the Lake Tulloch Reservoir. The 2013/2014 drought conditions led Tri-Dam Project to consider lowering the surface water elevation in Lake Tulloch, should the drought continue. This prompted the District to relocate the intake. In 2015 the District completed the intake relocation extending the intake length and lowering the intake from 470-ft to 390-ft above MSL. Two of three intakes were moved to the lower elevation. One pump remains at the higher elevation. Relocating the raw water pumps has increased influent raw water turbidity levels and the District is working to move one of the lower pumps back to its original elevation. When complete, the District will have two pumps at 470-ft above MSL and one pump at 390-ft MSL.

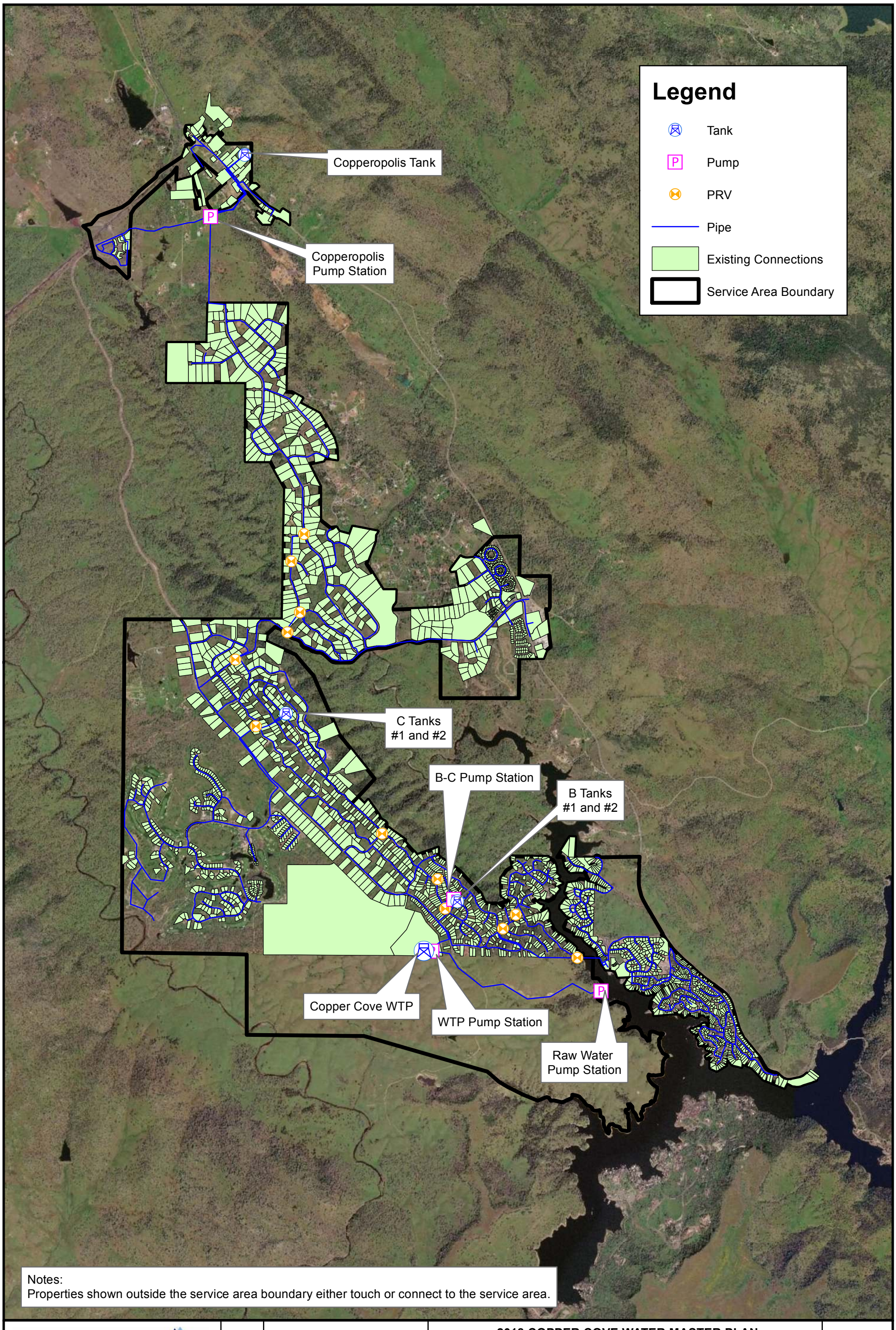
The District maintains Pre-1914 and Post-1914 water rights that allow the District to Divert up to 6,000 AF/yr to supply treated and raw water demands. These water rights can be increased if the District were to file a change petition with the SWRCB and demonstrates a need for an increased supply to the Copper Cove service area. Pursuant to contractual arrangements with NCPA and the Utica Power Authority, the District can also access pre-1914 water supplies from the North Fork Stanislaus stem after it is used for power purposes.

Water Treatment Facilities

The Copper Cove WTP was constructed in 1998 to supply treated water to the Copper Cove and Copperopolis communities. The WTP has a rated capacity of 4-mgd and has room to expand the capacity to 10-mgd. Treatment capacity is provided by two 2-mgd filter units. Service failure of one unit reduces the capacity of the WTP by half.

Treatment consists of pre-ozonation, micro-filtration, and disinfection with sodium hypochlorite. Pre-ozonation provides taste and odor control, as well as TOC and disinfection by-product reduction. A 300,000-gallon clearwell provides contact time prior to delivering water to the distribution system.

Staff operating the WTP reported significant increases in influent turbidity levels and manganese following the relocation of the raw water pumps. The average influent turbidity rose from 0.1 to 0.2 NTU to 1.5 to 2.0 NTU. Daily operations now require additional ozone, coagulant and backwash as a result of the turbidity increase.



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1" = 0.75 mi

2018 COPPER COVE WATER MASTER PLAN

Existing System Map

FIGURE

1

Treated Water Distribution System

The distribution system is operationally divided into ten pressure zones. The pressure zones allow water to be delivered at acceptable pressures to customers over a large range of elevations. The pressure zones are supplied by one of the five existing storage tanks: B Tanks (#1 and #2), C Tanks (#1 and #2) and the Copperopolis Tank. All the pressure zones are gravity fed from their respective storage tank. The pressure zones are summarized in Table 1, which presents the elevation ranges and the pressure ranges throughout each zone. The low-pressure conditions are given for the peak hour demand scenario and the high-pressure conditions are given for static pressure. The low-pressure condition assumes all storage tanks are half full tank and the high-pressure condition assumes all storage tanks are full.

Table 1. Copper Cove Pressure Zones

Pressure Zone	Storage Supply	Elevation Range		PHD Low Pressure Condition (psi)	Static High Pressure Condition (psi)
		Low (ft)	High (ft)		
B1	B Tanks	567	986	31 [1]	110
B2	B Tanks	673	735	80	107
B3	B Tanks	525	673	42	106
B4	B Tanks	499	645	41	105
C1	C Tanks	651	1,138	32 [1]	160 [2]
C2	C Tanks	811	951	46	108
C3	C Tanks	566	813	64	137
C4	C Tanks	618	949	67	150
C5	C Tanks	735	901	39	108
Copperopolis	Copperopolis Tank	883	1,006	51 [1]	110

[1] Low pressure for zones served by tanks is based on the lowest pressure at a distribution node.
[2] High pressure is given for highest pressure at a distribution node and not the force main connecting Zone C1 to Zones C3 and C4.

Treated Water Pumping Stations & Control Valves

The boundaries between pressure zones are defined by booster pumping stations, pressure regulating valves (PRVs), and isolation valves. Information about the booster pumping stations is summarized in Table 2. Information about the PRVs is summarized in Table 3. PRVs used to serve individual homes and cul-de-sacs have been omitted from this report.

Table 2. Copper Cove Pump Stations.

Station	Description	Model ID	Design Head (ft)	Design Flow (gpm)
WTP Pump Station	From Clearwell to B Tank	PMP-1	244	2,600
		PMP-10	244	2,600
B-C Pump Station	From B Tank to C Tank	TANKC_1	215	900
		TANKC_2	215	450
		TANKC_3	215	450
Copperopolis Pump Station	From Zone C5 to Copperopolis	U7008	150	90
		U7000	150	90

Table 3. Copper Cove PRVs.

CCWD ID	Model ID	Location	From Zone	To Zone	Dia. (in)	Elev. (ft)	HGL (ft)	Setting (psi)
#11	PRV-11	Sawmill Road & Fox Court	C1	C5	6	776	1,030	110
#5	PRV-131	Kiva Court	B1	B4	6	567	740	75
#3	PRV-19	Arrowhead Street & Signal Hill Trail	C1	B1	6	912	1,143	100
#12	PRV-32	Copper Cove Drive & Sawmill Road	C1	C4	8	654	885	100
#1	PRV-60	Kiva Drive & Bay View Drive	B1	B2	4	735	920	80
#2	PRV-71	Kiva Drive & Tewa Court	B2	B3	4	644	725	42
#13	PRV-90	Arrowhead Street & Signal Hill Trail	C1	B1	4	947	1,143	85
#6	SADDLE_ CRK	Wail Hill Road & Little John Road	C1	C3	10	935	1,051	50
#9	V8012	Copper Cove Drive & Arrowhead Street	C1	C2	4	869	1,061	83
#4	V8006	Flint Trail & Arrowhead Street	C1	C2	6	860	1,045	80
#8	V8010	Bearclaw Way & Cheyenne Road	C5	C4	4	741	903	70
#10	V8016	Acorn St & Sawmill Road	C1	C4	4	750	912	70

[1] Elevations and settings from InfoWater model, unless updated values were provided by the District.

Treated Water Storage Facilities

The existing water system includes five storage tanks and one clearwell that provide water storage for fire flow, emergency, and operational needs. These tanks are summarized in Table 4.

Table 4. Copper Cove Water Storage Tanks.

Name	Model ID	Type	Nominal Volume (gallons)	Ground Elevation (ft)	Diameter (ft)	Maximum Water Depth (ft)	Overflow Elevation (ft)
WTP Clearwell	WTP	Concrete	300,000	NA	NA	NA	NA
B1 Tank #1	B	Redwood	300,000	980	55.0	17.0	997
B1 Tank #2	B2	Welded Steel	750,000	980	65.0	30.0	1,010
C1 Tank #1	C	Welded Steel	543,000	1,140	60.0	26.0	1,166
C1 Tank #2	C2	Welded Steel	543,000	1,140	60.0	26.0	1,166
Copperopolis Tank	COPPER	Welded Steel	500,000	1,111	57.0	26.5	1,138

Treated Water Pipelines

The distribution system model includes approximately 54 miles of distribution pipe ranging from 4-inches to 30-inches in diameter as shown in Figure 1. The smallest distribution pipe diameter found in the model is four inches. Figure 1 does not show some distribution lines in many of the

cul-de-sacs, which in many cases are two inches in diameter. Table 5 summarizes the distribution system characteristics from the distribution system model. Pipeline materials vary throughout the distribution system. Pipeline materials include asbestos concrete, polyvinylchloride, ductile iron and steel.

Table 5. Distribution System Characteristics.

Pipe Diameter (in)	Total Length of Pipe (miles)
4	1.15
6	23.65
8	17.83
10	9.60
12	3.37
16	0.10
18	0.37
20	2.22
24	0.06
30	0.02
Total Length	***54.38***

Existing and Projected (Buildout) Demands

Existing System Demand

The existing system demands are presented in Table 6. The average daily demand (ADD) has been adopted from the 2015 Urban Water Management Plan (2015 UWMP), while the maximum daily demand (MDD) is equal to the maximum daily production on record between 2008 and 2016. For comparison, the historic water records are presented in Table 7. The historic records present an ADD less than that adopted from the UWMP. The UWMP ADD was selected to represent the existing system to provide consistency between planning documents and to be conservative. The existing ADD is 1.58-mgd and the existing MDD is 2.69-mgd. The peak hour demand (PHD) is 4.04-mgd. The PHD was calculated using CCWD's MDD:PHD peaking factor of 1.5. Losses represent multiple issues including leakage, undocumented water consumption, and inaccurate customer meters.

Table 6. Existing System Demands

User Type	Existing ADD (MGD)	Existing MDD (MGD)	Existing PHD (MGD)	ADD: MDD Peaking Factor
Residential	0.76	1.30	1.95	1.71
Landscape	0.01	0.02	0.02	2.00
Public Service	0.01	0.01	0.02	1.00
Commercial	0.14	0.24	0.37	0.24
Losses	0.61	1.12	1.68	1.12
Total	***1.58***	***2.69***	***4.04***	***1.70***

Table 7. Historic Water Demands

Year	ADD (MGD)	MDD (MGD)	ADD: MDD Peaking Factor
2008	1.41	2.62	1.86

Year	ADD (MGD)	MDD (MGD)	ADD: MDD Peaking Factor
2009	1.24	2.69	2.17
2010	1.14	2.54	2.22
2011	1.19	2.40	2.01
2012	1.28	2.47	1.93
2013	1.37	2.53	1.84
2014	1.10	2.36	2.15
2015	0.96	1.79	1.87
2016	1.11	2.41	2.17
Maximum	***1.41***	***2.69***	***2.22***

Peaking Factors

Peaking factors define the relationship between ADD and MDD and the relationship between MDD and PHD. These peaking factors will be used to model both the existing system and the buildout system. The maximum day and peak hour peaking factors proposed for the 2018 Master Plan are as follows:

- Existing ADD:MDD Peaking Factor – 1.70 (per Table 6)
- Buildout ADD:MDD Peaking Factor – 2.22 (per Table 7)
- MDD:PHD Peaking Factor – 1.5 (per the District's *Design and Construction Standards)*

Existing and buildout peaking factors are unique due to the use of the 2015 UWMP ADD which distorts the historic relationship between ADD and MDD. Using a single peaking factor would result in an erroneous buildout MDD; therefore, unique peaking factors are defined.

Buildout System Demand

The average daily water demand at buildout was determined by calculating and summing the demand for each user type. Residential demands were calculated by multiplying the buildout population (16,513 people) by the mean residential per capita user demand (173 gallons per person-day). The mean residential per capita user demand derived from the 2015 UWMP. Using this metric to project future water demands is consistent with SB 20x2020 water conservation goals. See Table 8 for how the mean residential per capita demand was derived.

Table 8. Residential per Capita Water Demand

Year	Existing	2020	2025	2030	2035	2040
Copper Cove Population	4,416	4,708	4,944	5,127	5,280	5,373
Single Family Demand (AF/yr)	856	912	958	994	1023	1041
Residential Demand (AF/yr-person)	0.194	0.194	0.194	0.194	0.194	0.194
Mean Residential Demand (AF/person-yr)	0.194					
Mean Residential GPCD (gal/person-day)	173					
ADD Per Connection (gal/day-connection)	417					

The average daily water demand at build out is projected to be 5.4-mgd. The buildout ADD was determined by summing residential, commercial, public service, landscape and water loss demands. The buildout MDD and PHD were calculated based on the buildout ADD:MDD peaking factor (2.22) and MDD:PHD peaking factor (1.5) defined in the previous section. The buildout system demands are summarized in Table 9.

Table 9. Buildout System Demands

User Type	Buildout ADD (MGD)	Buildout MDD (MGD)	Buildout PHD (MGD)
Residential	2.86	6.34	9.51
Commercial	0.09	0.20	0.31
Public Service	0.11	0.25	0.37
Landscape	0.06	0.14	0.21
Losses	2.23	4.94	7.41
Total	***5.35***	***11.87***	***17.81***

The commercial, landscape, and public service buildout demand factors were adopted directly from Appendix F of the 2015 UWMP and used to calculate the buildout water demand.

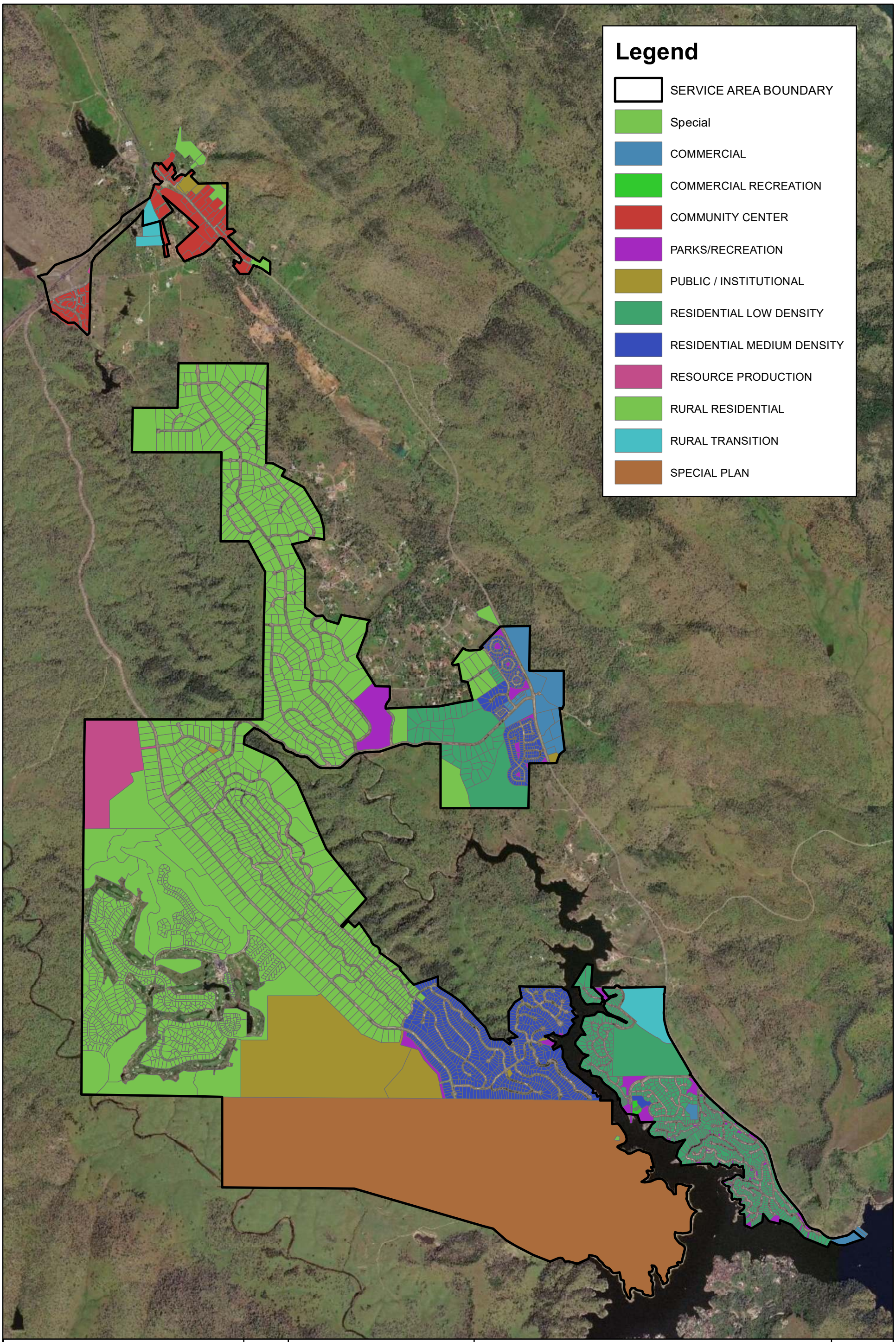
Losses at buildout were projected by deriving the percentage of water losses presented in the 2015 UWMP. Similar to the residential GPCD, losses are consistently 42 percent of the residential and non-residential (commercial, irrigation, and landscape) demands for all future demand projections. To be consistent with the 2015 UWMP, this relationship was used to calculate the average daily loss demand at buildout. Table 10 presents demand data from the 2015 UWMP to support the water loss evaluation.

Table 10. Water Loss Evaluation

Water User Type	Existing ADD (MGD)	2020 ADD (MGD)	2025 ADD (MGD)	2030 ADD (MGD)	2035 ADD (MGD)	2040 ADD (MGD)
Residential	0.76	0.81	0.86	0.89	0.91	0.93
Commercial	0.01	0.01	0.01	0.01	0.01	0.01
Public Service	0.01	0.01	0.01	0.01	0.01	0.01
Landscape	0.14	0.15	0.16	0.17	0.17	0.18
Losses	0.65	0.70	0.74	0.76	0.79	0.80
Total	1.58	1.68	1.77	1.83	1.89	1.92
Percent Losses	***0.42***	***0.42***	***0.42***	***0.42***	***0.42***	***0.42***

Infill Evaluation

The Copper Cove service area has yet to reach buildout and has considerable room to support future developments. Of the 7.5 square miles within the service area, only 3.2 square miles have been developed. The remaining 4.3 square miles provides room for future connections to be served by the WTP. A map presenting complete infill by land use type consistent with the 2016 Draft Calaveras County General Plan Update is presented in Figure 2.



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2018 Copper Cove Water Master Plan

Infill Map

FIGURE
2

Approximately 6,852 total residential connections are anticipated at buildout. The total number of residential connections represents the sum of existing connections, existing connection subdivisions, planned connections and unplanned connections. A summary of infill connections is presented in Table 11. Existing connections larger than three times the average land use parcel size were assumed to be subdivided at buildout, these connections represent the existing connection subdivisions. Planned connections include the 300 connections planned for the Tuscany Hills development and the 300 connections planned for the Copper Mill development. Unplanned infill connections include those anticipated in unplanned and undeveloped areas. Unplanned connections were calculated by dividing the total unplanned undeveloped area for each land use type by the respective land use density.

Table 11. Residential Connections at Buildout

Residential Land User Type	Existing Parcel Density (Ac/Conn.)	Unplanned Buildout Area (Ac)	Existing Residential Conn.	Existing Conn. Subdivisions	Planned Conn.	Un-planned Infill Conn.	Total Conn. Per User Type
Low Density	2.72	413	718	214	300	403	1,635
Medium	3.97	293	629	15	0	532	1,176
Rural	0.71	1,402	632	55	0	358	1,045
Transition	0.20	51	2	0	0	8	10
Special	2.72	1,980	338	35	300	2,060	2,733
Community Center	2.72	100	48	72	0	133	251
Total Residential Connections			***6,852***				

Buildout Population

The District is projected to serve approximately 16,510 people at buildout. The buildout population was determined based on the 6,852 buildout connections and the District's planning standard of 2.41 residents per residential connection.

Buildout Year

Copper Cove is assumed to grow at the same rate as the County; therefore, growth rates have been adopted from the 2017 Department of Finance (DOF) population growth rates for Calaveras County. The growth rates are consistent with the UWMP. The DOF growth rates are projected until year 2060. Projections beyond 2060 were assumed to equal the 2055-2060 growth rate, which is the highest incremental growth rate. Table 12 presents the DOF population growth rates in 5-year increments. Buildout is not projected to occur within the next fifty years based upon DOF growth projections.

Table 12. Calaveras County Growth Rates per California Department of Finance, 2017

5-year Period	2016 - 2020	2021 - 2025	2026 - 2030	2031 - 2035	2036 - 2040	2041 - 2045	2046 - 2050	2051 - 2055	2056 - 2060
5-year Incremental Growth Rate	0.59%	2.17%	2.14%	1.53%	0.82%	0.46%	0.64%	1.28%	2.17%

Model Demand Factors

Water demands have been modeled according to user type and were distributed on a demand per acre basis. Demand factors used to distribute water throughout the existing and buildout systems are provided in Table 13. The aforementioned peaking factors were used to scale the demand factors and model MDD and PHD.

Table 13. Existing and Buildout Demand Factors

User Type	Existing			Buildout		
	Area (ac)	ADD (MGD)	Demand Factor [1] (gpm/ac)	Buildout Area (ac)	ADD (MGD)	Demand Factor [2] (gpm/ac)
Residential	1,503	1.53	0.35	4,366	2.86	0.77
Landscape	52	0.14	1.91	78	0.06	0.87
Public Service	260	0.01	0.02	299	0.11	0.57
Commercial	86	0.01	0.07	178	0.09	0.67
Losses [3]	1,937	0.66	0.24	4,922	2.22	0.31

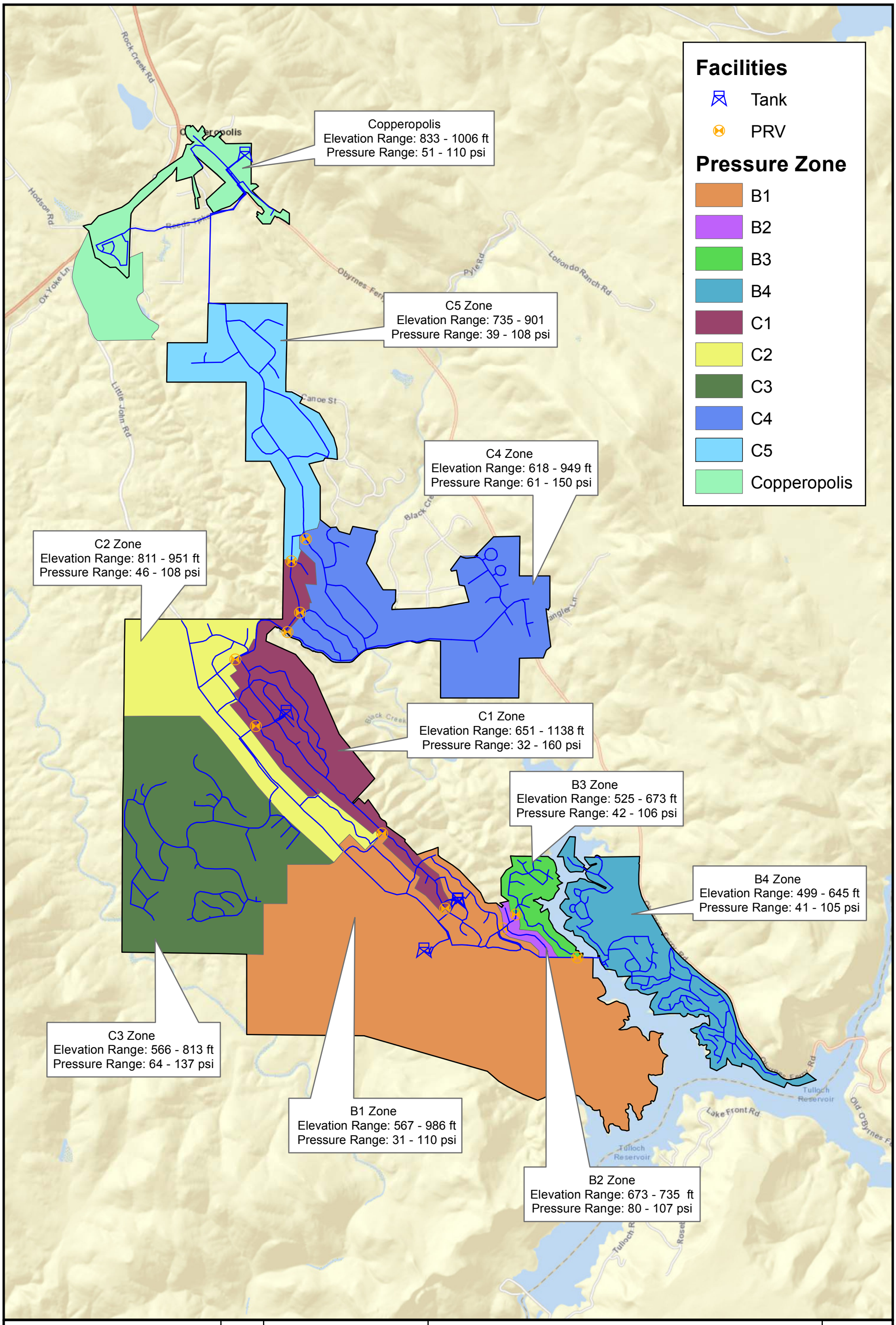
[1] Existing demand factors were all calculated based on the demands presented in the 2015 UWMP and the area associated with the respective user type
[2] The buildout demand factor for the residential user type was calculated based on the residential buildout demand and the associated area. The buildout demand factors for landscape, public service, commercial user types were adopted for the 2015 UWMP.
[3] Water losses are distributed evenly throughout the existing and buildout system models across the total area of all user types.

Demand Distribution

Existing and buildout demands were allocated throughout the model and summed to estimate the demand within each pressure zone. This process was repeated to estimate the demand by tank zone. The allocations of demands by pressure zone are shown in Table 14 and by tank zone in . Figure 3 presents a map of the system pressure zones.

Table 14. System Demand by Pressure Zone.

Pressure Zone	Baseline MDD (mgd)	Buildout MDD (mgd)
B1	0.28	3.13
B2	0.01	0.05
B3	0.07	0.22
B4	0.33	0.96
C1	0.29	0.92
C2	0.22	0.96
C3	0.26	1.24
C4	0.65	1.51
C5	0.46	2.34
Copperopolis	0.11	0.66



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System Pressure Zones

FIGURE 3

Table 15. System Demand by Tank Zone.

Tank Zone	Baseline MDD (mgd)	Buildout MDD (mgd)
B Tank	0.68	4.36
C Tank	1.89	6.96
Copperopolis Tank	0.11	0.66

Existing and Future Regulations

Drinking Water Regulations

The quality of the water provided by existing and any future facilities must meet all existing and proposed regulatory requirements. A summary of the existing and proposed drinking water quality regulations covering surface water and groundwater sources is below.

Background

The Safe Drinking Water Act (SDWA) of 1974 gave the United States Environmental Protection Agency (EPA) the authority to set standards for contaminants in drinking water supplies. The EPA established primary regulations for the control of contaminants that affect public health and secondary regulations for compounds that affect the taste, odor or aesthetics of drinking water. Under the provisions of the SDWA, the California Department of Drinking Water (DDW) has the primary enforcement responsibility. Title 22 of the California Administrative Code establishes DDW authority and stipulates State drinking water quality and monitoring standards.

Existing and Proposed Federal Regulations

The EPA has recently finalized and is in the process of finalizing several new regulations since the 1986 and 1996 Amendments to the SDWA. These regulations address both surface water and groundwater. Significant final and proposed regulations are shown in Table 16. The schedule for promulgation of the Safe Water Drinking Act Regulations (Current as of 2015) is shown in Table 17.

Table 16. Recently Adopted and Proposed Federal Regulations.

Regulations	Year Rule Finalized	Targeted Contaminants
National Interim Primary Drinking Water Regulations	1975	Set maximum levels for a wide variety of contaminants
Total Trihalomethanes	1979	Trihalomethanes
Fluoride Rule	1986	Fluoride limits
Surface Water Treatment Rule	1989	Giardia lamblia, viruses, Legionella and heterotrophic plate count
Total Coliform Rule	1989	Representative sampling of the distribution system for total and fecal coliform
Phase II Rule (organics)	1991	VOCs, SOCs and IOCs
Lead and Copper Rule	1991	Lead and copper corrosion products
Phase V Rule (organics)	1992	VOCs, SOCs and IOCs
Source Water Protection	1997	Delineate boundaries and determine origins and susceptibility of water supplies to contamination
Stage 1 Disinfection/Disinfection By-products Rule (D/DBPR)	1998	Disinfection Byproducts (THMs and HAAs); compliance date for systems serving greater than 10,000 was January 2002
Interim Enhanced Surface Water Treatment Rule (IESWTR)	1998	Giardia, Cryptosporidium, Turbidity, DBPR profiling
Variance and Exemptions Rule	1998	Variance and exceptions to help public water systems achieve compliance with MCLs
Arsenic Rule	2001	Arsenic
Filter Backwash Rule	2001	Filter backwash recycle
Long-term 1 Enhanced Surface Water Treatment Rule	2002	Microbiological, Turbidity and control of DBPs
Public Health Security and Bioterrorism Prevention and Response Act	2002	Vulnerability Assessments
Radon Rule	2004	Radon
Contaminant Candidate List 2	2004	CCL1 required no new regulated contaminants, CCL2 may include perchlorate, metolachor and MTBE
Stage 2 Disinfectants/Disinfection Byproducts Rule	2004	Introduces locational running annual average compliance for the 80/60 TTHM/HAA5 requirements
Long-term 2 Enhanced Surface Water Treatment Rule	2006	Introduction of microbial toolbox for control of Cryptosporidium
Groundwater Rule	2004	Microbial protection of groundwater supplies
Reduction of Lead in Drinking Water Act (RLDWA)	2011	Use of lead free pipes, fittings, fixtures, solder and flux for drinking water
Revised Total Coliform Rule	2014	E Coli and Total Coliforms
Drinking Water Protection Act (DWPA)	2015	Algal Toxins [1]

[1] The DWPA is an amendment to the SWDA. It requires Congress to develop a strategic plan to assess and manage the risks associated with algal toxins in public drinking water supplies. No new regulations were imposed with the amendment to the SWDA.

Table 17. Schedule for Promulgation of Safe Water Drinking Act Regulations (Current as of 2015).

Regulation	Proposed	Final	Effective
Fluoride	11/85	4/86	10/87
Trihalomethanes	2/78	11/79	11/83
8 VOCs (Phase I)	11/85	7/87	1/89
Surface Water Treatment Rule (SWTR)	11/87	6/89	6/93
Coliform Rule	11/87	6/89	12/90
Lead and Copper	8/88	6/91	1/92 [a]
Minor Revisions to Lead and Copper	4/98	1/00	1/01
26 Synthetic Contaminants [h], Seven Inorganic Contaminants (Phase II)	5/89	1/91[b]	7/92
MCLs for barium, pentachlorophenol (Phase II)	1/91	7/91	1/93
Phase V Organics, Inorganics	7/90	7/92	1/94
Radionuclides (Phase III) Except Radon	4/00	12/00	12/03
Radionuclides (Phase III) Radon	11/99	8/01 [c]	8/04 [d]
Sulfate	12/94	Decision on whether to regulate due 8/01	
MCLs for aldicarb, aldicarb sulfoxide, aldicarb sulfone	Administrative hold; no current schedule available		
Disinfectants/Disinfection Byproducts, Stage 1 DBPR	7/94	12/98 [c]	1/02 [f,g]
Disinfectants/Disinfection Byproducts, Stage 2 DBPR	9/01	5/02	5/058
Information Collection Rule	2/94	5/96	Completed
Interim ESWTR	7/94	12/98 [c]	1/02 [f]
Interim ESWTR, Stage 1 Long Term Enhanced SWTR	4/00	8/01	1/047
Interim ESWTR, Stage 2 Long Term Enhanced SWTR	9/01	5/02	5/05
Filter Backwash Recycle Rule	4/00	6/01	12/0 [c]
Consumer Confidence Reports Rule	2/98	8/98	9/98
Ground Water Rule (GWR)	5/00	11/01	6/04
Operator Certification, State Guidance	3/98	2/99	2/01
Unregulated Contaminants, Monitoring Only [i]	2/99	9/99	1/01
Five New Drinking Water Contaminants	8/00	8/01	8/04
Chlorine Gas as Restricted Use	9/00	10/01	10/03
Source Water Protection Program, Guidance [e]	8/97	Completed	Completed
Arsenic Rule	6/00	1/01	1/06
Revised Total Coliform Rule	-	4/14	4/16

Notes:
[a] Start date for tap monitoring in systems of more than 50,000 consumers.
[b] Maximum Contaminant Level (MCL), MCL + Goal (MCLG) for atrazine to be reconsidered.
[c] Dates mandated by district court
[d] Assumes regulation in effect three years after final promulgation.
[e] Program required as part of 1996 amendment.
[f] For Public Water Systems (PWS) serving more than 10,000 consumers
[g] Effective January 2004 for PWS serving more than 10,000 consumers.
[h] MCL for atrazine to be revisited.
[i] Tiered monitoring approach pending availability of analytical methods.

State Regulations

The State of California retains primacy for enforcement of drinking water regulations. In this role, the state must adopt regulations equal to or more stringent than federal regulations. For the most part, state regulations are equal to federal regulations with the following exceptions:

- Cryptosporidium Action Plan - The State set more stringent standards for the recycle of filter backwash and other recycle streams.
- California IESWTR - The State has increased the required level of monitoring for filters and may require additional inspections, monitoring and reporting.
- Source Water Assessment Program - The State has structured its SWAP to allow water utilities to conduct their own assessments to help improve and preserve water quality of the public water supply sources.

Water Age

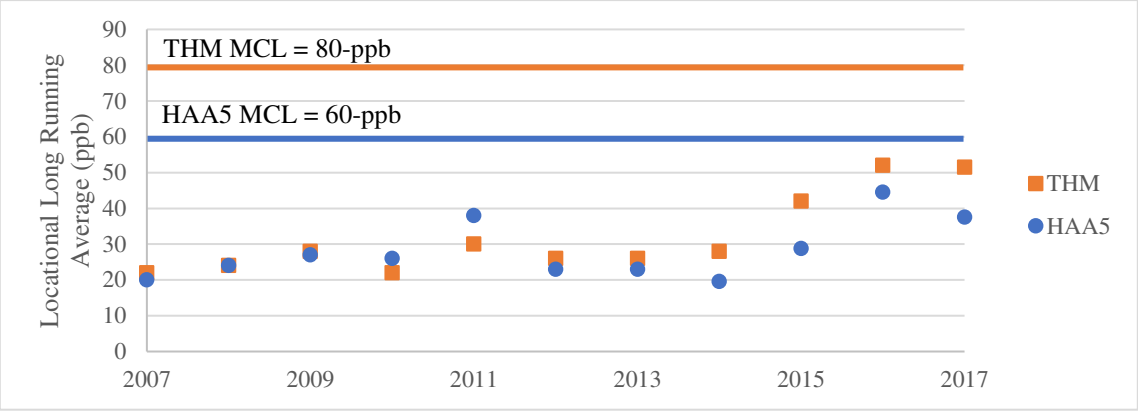
An extended period simulation water age analysis has been performed on the existing distribution and storage system under average day demands. The WTP is not detailed in the hydraulic model so water coming from the clearwell is considered "new" water (i.e., zero hours old). The hydraulic model water age analysis then calculates the age of the water after leaving the WTP (clearwell).

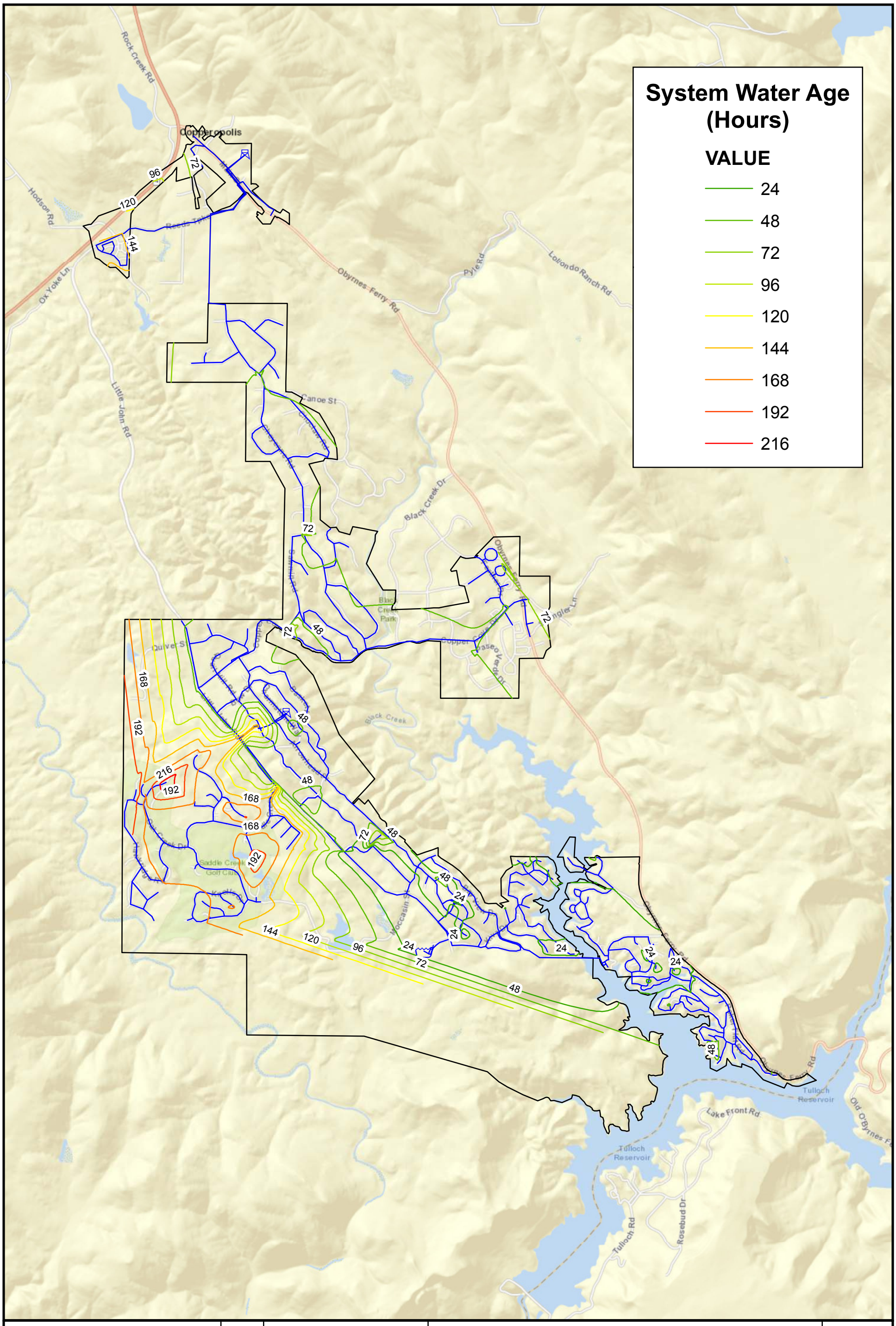
Based on the analysis, water is oldest in the Copperopolis Zone and Zone C3 (Saddle Creek). Figure 5 shows the range of values of water age, in hours, throughout the distribution system.

Disinfection By-Products

Trihalomethane (TTHM) and haloacetic acids (HAA5) monitoring and compliance is required under the Federal Environmental Protection Agency (EPA) regulations for systems with service populations of 500 to 9,999 that use treated surface water supplies. CCWD has not had a single violation in regards to either disinfection by-product over the last 10-years. Figure 4 below summarizes the disinfection by-product records presented in CCWD's Consumer Confidence Reports between 2007 and 2017.

Figure 4. Disinfection By-Product Records.





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System Water Age Existing ADD

FIGURE

5

System Evaluation

Evaluation Criteria

The Copper Cove water system will be evaluated for its ability to meet existing and future water demands and to comply with the District's Design and Construction Standards. Two different scenarios will be analyzed as part of the 2018 WMP:

1. Existing System
2. Future System at Buildout

The system will be divided into five categories for this evaluation: water supply, water treatment, storage, pumping, and piping. The district provided a system-wide hydraulic model that was updated in 2013 to analyze the system's distribution facilities, including storage, pumping, and piping. The system model has been updated to capture new demand criteria and any new or replacement water mains installed since the last model update. A comprehensive list of model programming is included as Appendix B.

A summary of the system evaluation planning criteria is presented on the following page.

System Model Criteria:

- Existing Demand (ADD) = 1.58-mgd
- Buildout Demand (ADD) = 5.35-mgd
- Existing ADD:MDD Peaking Factor = 1.70
- Buildout ADD:MDD Peaking Factor = 2.22
- MDD:PHD Peaking Factor = 1.5

Water Treatment Design Criteria[1]:

- Treatment Plant Capacity: Hydraulic and treatment capacity sized to meet MDD.

Water Storage Design Criteria[1]:

- Storage tank sizing shall be equal to the sum of the following three components:
  - Fire Storage Reservation: A minimum of four hours times the appropriate fire flow demand.
  - System Peaking Storage: Equal to 20 percent of the maximum day flow.
  - Emergency Storage: Equal to four hours of the MDD.
- Fire Storage may be supplemented by pumps.

Water Pumping Criteria[1]:

- Pump stations shall be able to deliver the MDD with the largest pump out of service. Peak hour demands and fire flows are expected to be supplied by storage without additional pumping. If the uphill zone does not have adequate storage for fire flow, the booster pump station should have the ability to deliver the fire flow to the higher zone.

[1] *Calaveras County Water District Construction and Design Standards, June 2009.*

Existing System Piping System Design Criteria[1]:

- Transmission Lines: Hydraulic capacity sized to pass PHD at a maximum velocity of five feet per second (ft/s) and/or MDD plus fire demand, while maintaining 20 psi residual pressure in the system.
- Hazen Williams "C" Factor: Pipes shall use a "C" factor of 130 for new pipe and 110 for existing pipe.
- Fire Flow Requirements[3]: A maximum velocity of 12 ft/s shall apply to fire flow conditions and the minimum velocity shall be two ft/s. The existing District minimum fire flow requirements are listed in Table 12.
- System Pressure:
  - System shall maintain a minimum pressure of 40-psi under PHD.
  - System shall maintain a maximum pressure of 120-psi under static conditions for distribution mains.

Fire Flow Design Criteria[2]:

- Required Fire Flow:
  - Residential Districts and Individual Dwellings < 3,600-sf = 1,000-gpm
  - Commercial Districts and Individual Dwellings > 3,600-sf = 1,500-gpm
  - Undeveloped Commercial Districts = 1,500-gpm

Raw Water Supply

The existing water rights have been evaluated for their ability to supply existing and projected demand.

The current water rights provide up to 6,000 AF/yr and can support substantial growth before they will need to be expanded. The total raw water demand is 2,172 AF/yr based on the combined irrigation and Copper Cove system demands. The Copper Cove system demand is 1,770 AF/yr based on the existing ADD of Copper Cove. The Saddle Creek Golf Course is the only irrigation water user and uses approximately 400 AF/yr of raw water.

The water rights will need to be expanded to meet the combined raw water demand at buildout. The annual raw water demand will be approximately 13,615 AF/yr at buildout based on the existing commercial raw water demand and the buildout average daily demand. The raw water rights will need to be expanded before the raw water demand reaches 90 percent of the current raw water rights (5,400 AF/yr). The raw water demand is expected to reach 5,400 AF/yr when the number of connections reaches 3,775. Based on the growth rates previously presented, this will occur in year 2083. The raw water rights will need to be expanded by 8,215 AF/yr to support the Copper Cove buildout system demand. Raw water rights will need to be further increased to support any additional commercial raw water demands.

The raw water pump station and pipeline can convey up to 4.75-mgd. The pump station and the transmission main to the WTP can support conveyance of both the existing commercial raw water demands and existing system demands. The golf course only uses water half the year including summer peak demand periods. The capacity of the pump station less the allocated golf course demand is 3.75-mgd.

[1] *Calaveras County Water District Construction and Design Standards, June 2009.*
[2] *Calaveras Fire Building Requirements, April 2010*

The pump station and pipeline capacity will need to be expanded to support future raw water demands. Plans to expand the raw water intake and pump station are recommended when the MDD plus irrigation demand becomes 90 percent of the raw water pumping capacity available (4.3-mgd). Based on the DOF growth rates (Table 12), the MDD is expected to reach 4.3-mgd when the number of connections reaches 3,300 or in 2056 as long as the golf course remains the only irrigation water demand. The raw water intake, pump station and transmission main will need to be reconsidered if the District decides to sell any additional raw water to new commercial customers.

The existing raw water pumps are sufficient to meet the existing demand. As note in the background, the District plans to relocate one of the raw water pumps to improve influent water quality conditions and repair the existing spare pump. No further improvements are recommended to the raw water pump station at this time.

Water Treatment

The Copper Cove WTP has not been upgraded since it was originally constructed in 1998. The existing facilities have been evaluated for their ability to support existing and future demand and remaining useful life.

The current WTP facilities are rated for 4-mgd. The existing MDD is approximately 2.7-mgd. The MDD projected at buildout is approximately 11.9-mgd.

Plans to expand the WTP should begin when the MDD becomes 90 percent of the WTP's treatment capacity (3.6-mgd). The MDD is expected to reach 3.6-mgd when the number of connections in the District is approximately 3,000. This is projected to occur in 2038 based on the DOF growth rates.

All of the existing WTP facilities are in good condition with the exception of the clearwell. The clearwell coating is failing, the interior is corroding and the roof is failing according to District Staff. The existing clearwell provides disinfection contact-time which is an irreplaceable component in the WTP process. The existing clearwell must be rehabilitated or replaced to allow the District to continue providing a safe and reliable drinking water supply to Copper Cove.

Treated Water Pumping Evaluation

Each booster pump station is required to have a firm capacity equal to the Zones MDD given that each zone is supported by at least one Tank. Firm capacity assumes the largest pump is out of service. The MDD for each pumping zone under existing and buildout conditions is presented in Table 18. The District provided a condition assessment of the existing pumps at each pump station. Current conditions are described in Table 19.

Table 18. Evaluation of Treated Water Pumping without Improvements.

Station	Description	Pump Number	Design Flow (gpm)	Firm Capacity (gpm)	Existing MDD (gpm)	Buildout MDD (gpm)
WTP Pump Station	Clearwell to B Tanks	1	2,600	2,600	1,866 [1]	8,326 [1]
		2	2,600			
B-C Pump Station	B Tanks to C Tanks	1	900	900	1,390 [2]	4,709 [2]
		2	450			
		3	450			

Station	Description	Pump Number	Design Flow (gpm)	Firm Capacity (gpm)	Existing MDD (gpm)	Buildout MDD (gpm)
Copperopolis Pump Station	Zone C5 to Copperopolis	1	90	90	78	461
		2	90			
	[1] WTP Pump Station supports the demand of the entire system [2] B-C Pump Station supports the demands of both the C Zones and Copperopolis					

Table 19. Condition Assessment of Existing Pumps per the District.

Pump Station	Existing Pump Conditions
WTP Pump Station	Satisfactory Condition
B-C Pump Station	Poor Condition
Copperopolis Pump Station	Poor Condition

The WTP pump station is in good condition and has no firm capacity deficiencies. The pump station has more than sufficient firm capacity to meet the existing system demands and sufficient firm capacity to support growth beyond the useful life of the existing pumps. Planning to expand the WTP pump station capacity should begin when the system demand reaches 90 percent of the pump station's firm capacity (3.4-mgd). The system demand is expected to reach 3.4-mgd when the number of connections reaches 2,875. This is projected to occur in 2031.

The B-C Pump Station pumps are insufficient to meet the existing firm capacity required and create high-pressure deficiencies. The B-C Pump Station pumps water from the B Tanks to the C Tanks and distributes water to connections along Arrowhead Street. Due to the elevation difference between the B Tanks and C Tanks, the system pressure exceeds the 120-psi design limit at every connection south of the intersection between Flint Trail and Arrowhead Street. The B-C pump station should be improved or replaced entirely.

While the firm capacity supports existing MDD of Copperopolis, the District's condition assessment reported that the pumps are in poor condition and recommended replacement. Furthermore, the immediate development planned to the south of Copperopolis Town Center will increase the MDD at the Copperopolis Pump Station from 78-gpm to 297-gpm when complete. For planning purposes, the Copperopolis Pump Station needs to support a minimum firm capacity of 300-gpm.

Treated Water Storage Evaluation

The treated water storage evaluation considers both the condition of the existing storage facilities and the storage capacity required by those facilities.

The tank zone capacity in each zone was compared to the required storage based on the water storage design criteria. Evaluations are presented for baseline demands and buildout demands in Table 20 and Table 21 respectively. The available storage exceeds the storage required for the existing conditions in all tank zones but is insufficient to support the buildout demands.

Table 20. Evaluation of Available Storage Capacity under Existing Demand Scenario.

Criteria	B Tank Zone	C Tank Zone	Copperopolis Tank Zone
Total Storage Capacity (gallons)	1,050,000	1,086,000	500,000
Highest FF requirement in zone (gpm)	1,500	1,500	1,500
Required FF storage (gallons)	360,000	144,000 [2]	338,000 [2]
Existing Tank Zone MDD (gallons)	685,000	1,890,000	112,000
Required emergency storage (gallons)	114,000	315,000	19,000
Required operational storage (gallons)	137,00	378,000	22,000
Total required storage (gallons) [1]	611,000	837,000	379,000
Storage deficit (gallons)	-	-	-

[1] Total Required Storage = Required FF storage (4 hours) + Emergency storage (4 hours of MDD) + Operational storage (20 percent of MDD).
[2] The required FF for the C Tank and Copperopolis Tank Zone is supplemented by the existing pump capacity.

Table 21. Evaluation of Available Storage Capacity at Buildout without Improvements.

Criteria	B Tank Zone	C Tank Zone	Copperopolis Tank Zone
Total Storage Capacity (gallons)	1,050,000	1,086,000	500,000
Highest FF requirement in zone (gpm)	1,500	1,500	1,500
Required FF storage (gallons)	360,000	144,000	338,000
Buildout Tank Zone MDD (gallons)	4,365,000	6,961,000	664,000
Required emergency storage (gallons)	727,000	1,160,000	111,000
Required operational storage (gallons)	873,000	1,392,000	133,000
Total required storage (gallons)	1,960,000	2,696,000	582,000
Storage deficit (gallons)	910,000	1,610,000	82,000

Note: Total Required Storage = Required FF storage (4 hours) + Emergency storage (4 hours of MDD) + Operational storage (20 percent of MDD).

A summary of existing tank conditions is provided in Table 22. The steel tanks were assessed by Aqua-Tech Co. in 2012 and B Tank #1 has been assessed based on feedback from operations staff. B Tanks #1 and #2 are no longer in acceptable condition. B Tank #1 is nearly 50-years old, is a redwood tank, and is leaking at this time. Figure 6 presents the B Tank #1 condition and visible leaks. B Tank needs to be replaced immediately.

B Tank #2 has deteriorated significantly and was recommend by Aqua-Tech Co. to be taken out of service for rehabilitation as soon as possible. At minimum, B Tank #2 needs the existing roof and rafters to be replaced and recoating of the interior and exterior surfaces according to Aqua-Tech Co.'s recommendation.

Table 22. Condition Assessment of Existing Tanks.

Tank	Material	Tank Condition
B Tank #1	Redwood	Unacceptable Condition
B Tank #2	Steel	Unacceptable Condition
C Tank #1	Steel	Satisfactory Condition
C Tank #2	Steel	Satisfactory Condition
Copperopolis Tank	Steel	Satisfactory Condition, Lacks Redundancy

Figure 6. Condition of B Tank #1

B Tank #1 should be replaced with a new welded steel tank sized to support the projected future storage requirement at the end of a 50-year service life. The B Zone system demand is projected to be 925,000-gallon in 2070. B Tank #1 will need to provide at least 175,000 to supplement the existing capacity of B Tank #2.

The District should also consider constructing a second tank at the Copperopolis tank site to support future maintenance of the Copperopolis tank. The Copperopolis tank was constructed in 2008 and will be due for recoating maintenance within the next 15 years. The Copperopolis tank cannot to be taken out of service for maintenance unless a second or temporary tank is installed.

Treated Water Distribution Evaluation

The InfoWater hydraulic model was used to evaluate the existing distribution system. Several model scenarios were developed to identify low system pressure areas, high system pressure areas and available fire flow.

Low System Pressure Areas

Areas of low system pressure were identified using the hydraulic model PHD scenario. Nodes throughout the model were screened to determine if the pressure under PHD fell below the 40-psi minimum system pressure design criteria. Nodes where the pressure is less than 40-psi under PHD demand conditions but maintain adequate pressure under static conditions were labeled in the model as low system pressure.

Under PHD, several areas do not maintain the minimum pressure. Low-pressure areas were identified in Zones B1, C1 and C5. Zones B1 and C1 are directly served by tanks and Zone C5 is served by PRVs. The areas identified as low pressure are presented in Figure 8. Nodes where low system pressure was the result of insufficient static head were omitted from Figure 8.

High System Pressure Areas

Areas of high system pressure were identified using the existing ADD scenario. Nodes in the hydraulic model were used to identify areas where the system pressure exceeds the District's 120-psi maximum pressure criteria. Some high-pressure areas cannot be avoided due to the ranging elevations within individual pressure zones. Zones C1, C3 (Saddle Creek) and C4 have the highest susceptibility to high pressure due to pockets of low elevations along pipe mains. Figure 9 presents a map of the areas under high pressure.

High Velocity Pipelines

High velocity pipelines were identified using the existing PHD scenario. Pipelines conveying water at a rate exceeding 5 feet per second do not comply with the current District standard and were flagged. The transmission main conveying water from the B Tanks to the C Tanks and the distribution/transmission main connecting C Tanks to Zones C1, C2, C4 and C5 were both identified as deficient based on the PHD model scenario. Figure 10 presents a map of the pipeline deficiencies.

The transmission main along Arrowhead street conveys water from B-C Pump Station to C Tanks. The maximum flow through this main is limited to the output of the pump station. When the pump station operates at full capacity (1800-gpm) a pipeline velocity of 7.3 feet per second will result under existing conditions.

The distribution/transmission main along Arrowhead Street and Copper Cove Drive connects C Tanks to Zones C1, C2, C4 and C5. Under existing PHD demand conditions the velocity of the distribution main segment along Arrowhead Drive was found to range between 5.1 and 6.4 feet per second. The transmission main segment along Copper Cove Drive was found to be 5.4 feet per second.

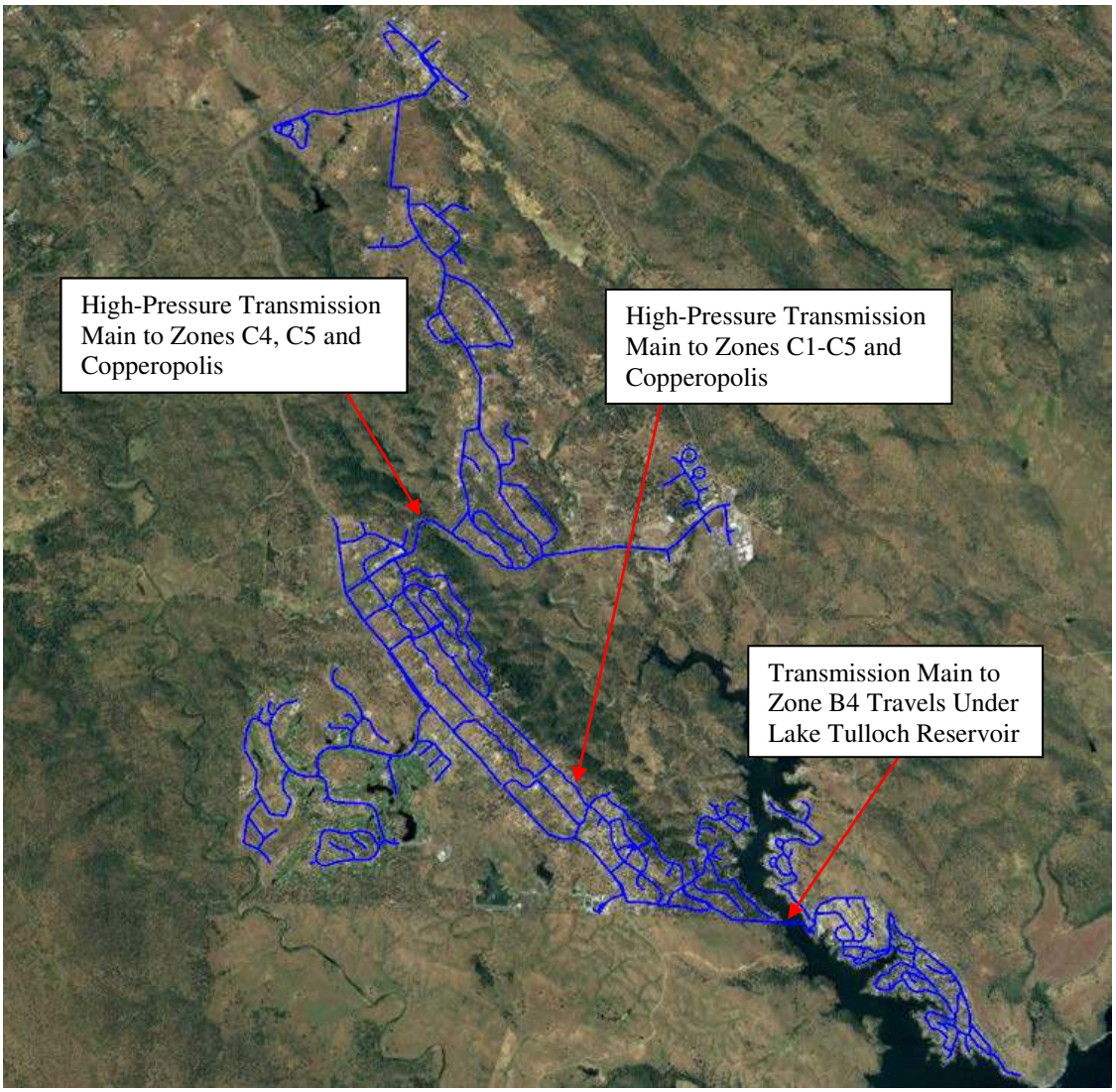
Fire Flow Deficiencies

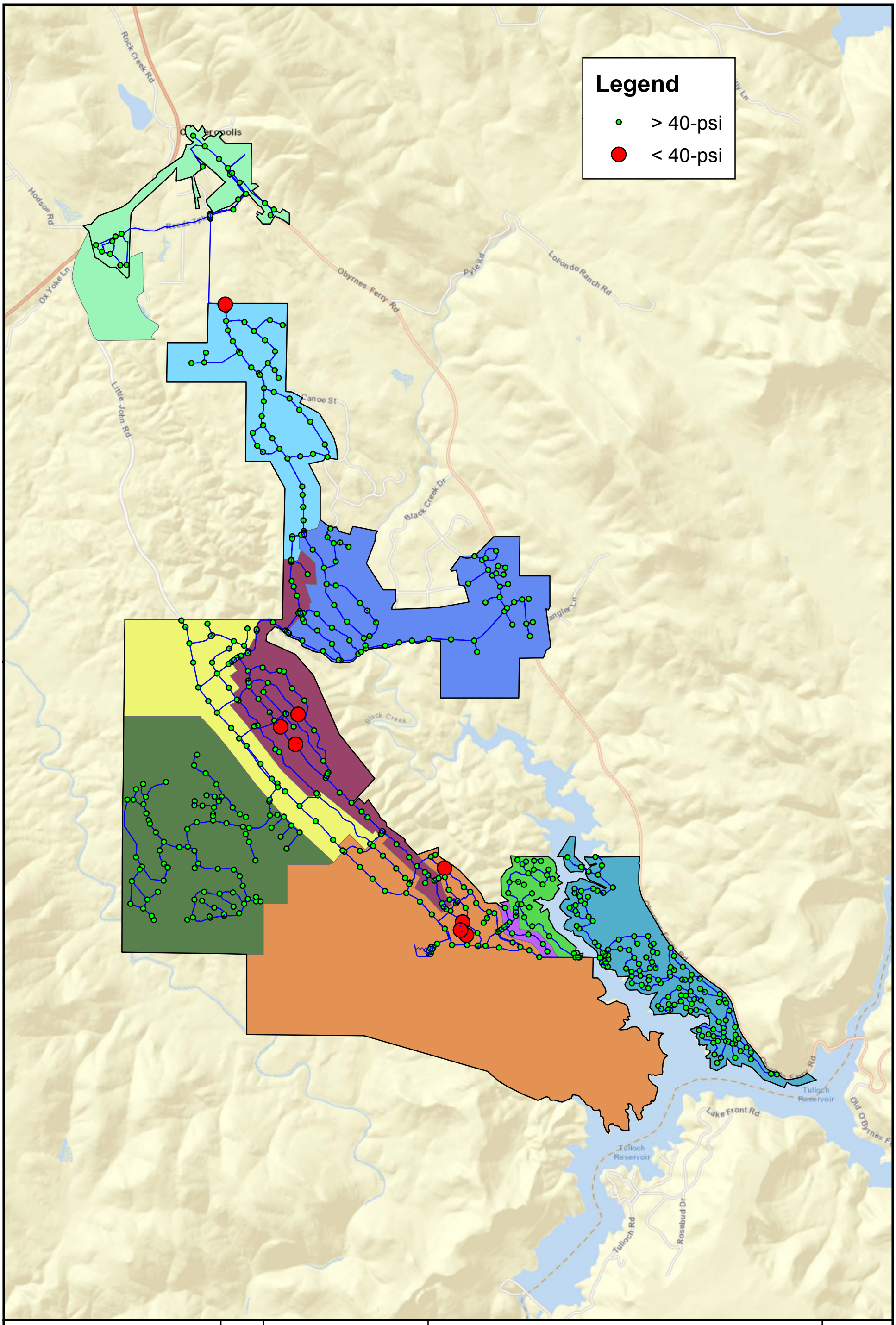
The model was used to calculate the available MDD plus fire flow for the baseline conditions. Nodes throughout the system were programmed to support either a 1,000-gpm fire flow, or a 1,500-gpm fire flow depending on the user type. All nodes within 300 feet of medium residential, commercial, or community center parcels were assigned a 1,500-gpm fire flow. All other nodes were assigned 1,000-gpm. Approximately one-third of the nodes throughout the district were found to be deficient. The greatest deficiencies were found in Zones C5 and Copperopolis where fire flows less than 500-gpm were realized, these deficiencies are presented in Figure 11.

High Risk Zones

Zone B4, Zones C1-C5, and Copperopolis are all at risk due to extended outages caused by transmission main failure (see Figure 7). Zones C1-C5 and Copperopolis are served by a single high-pressure connected to C Tanks along Arrowhead Street. Zones C4, C5, and Copperopolis are served also by a second single high-pressure transmission main along Copper Cove Drive. The high-pressure increases the potential for failure and increases the difficulty of field repairs. Similarly, Zone B4 is served by a single transmission main that crosses beneath the Lake Tulloch Reservoir. An extended outage would be unavoidable if this main were to fail within the reservoir as District field staff would be unable to perform the necessary repairs within the reservoir. It is recommended that the District construct new pipelines to loop these isolated areas to provide a redundant water service and prevent extended system outages in the event of transmission main failures.

Figure 7. High Risk Zones





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1" = 0.75 mi

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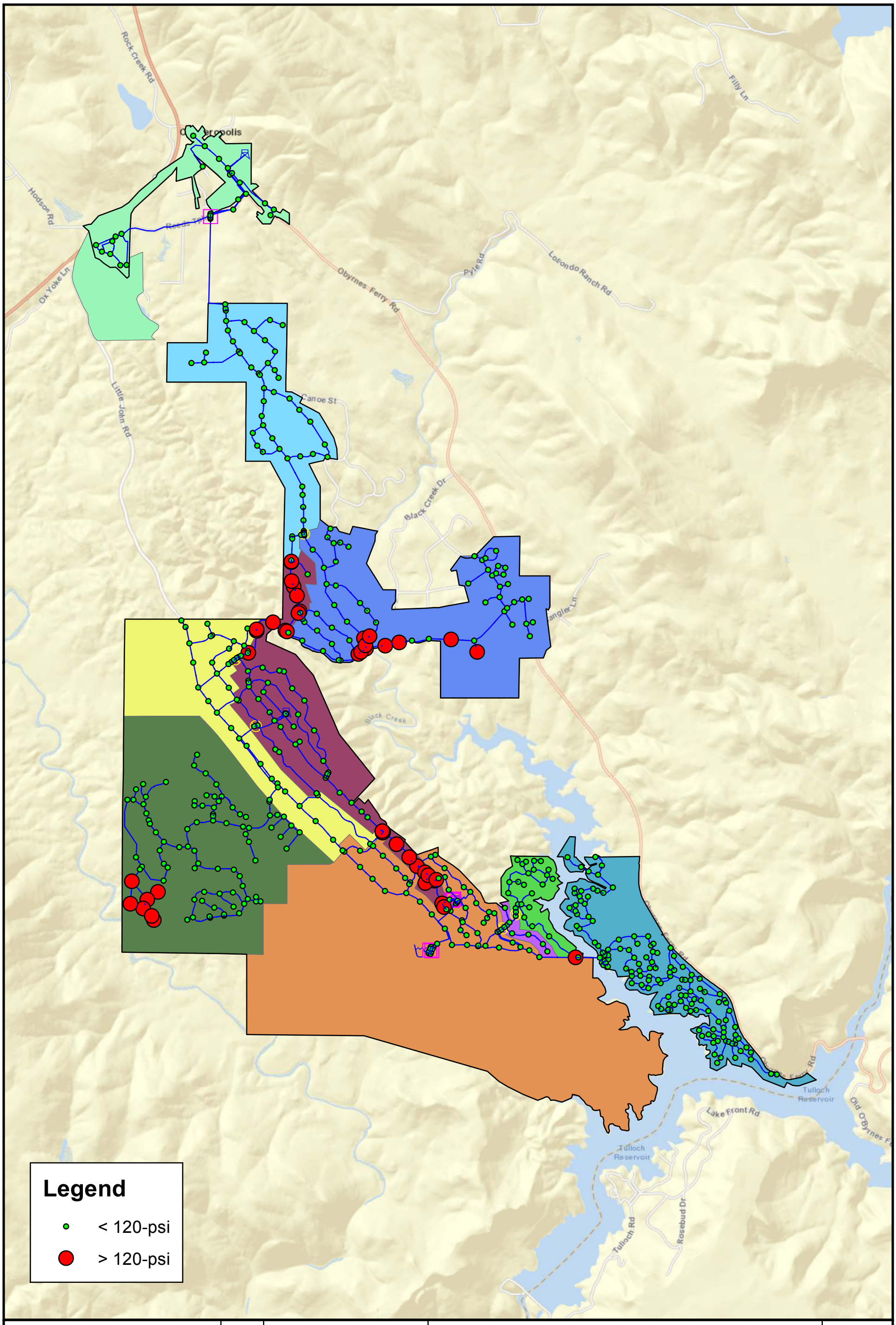
Low Pressure Nodes
Existing PHD

FIGURE

8



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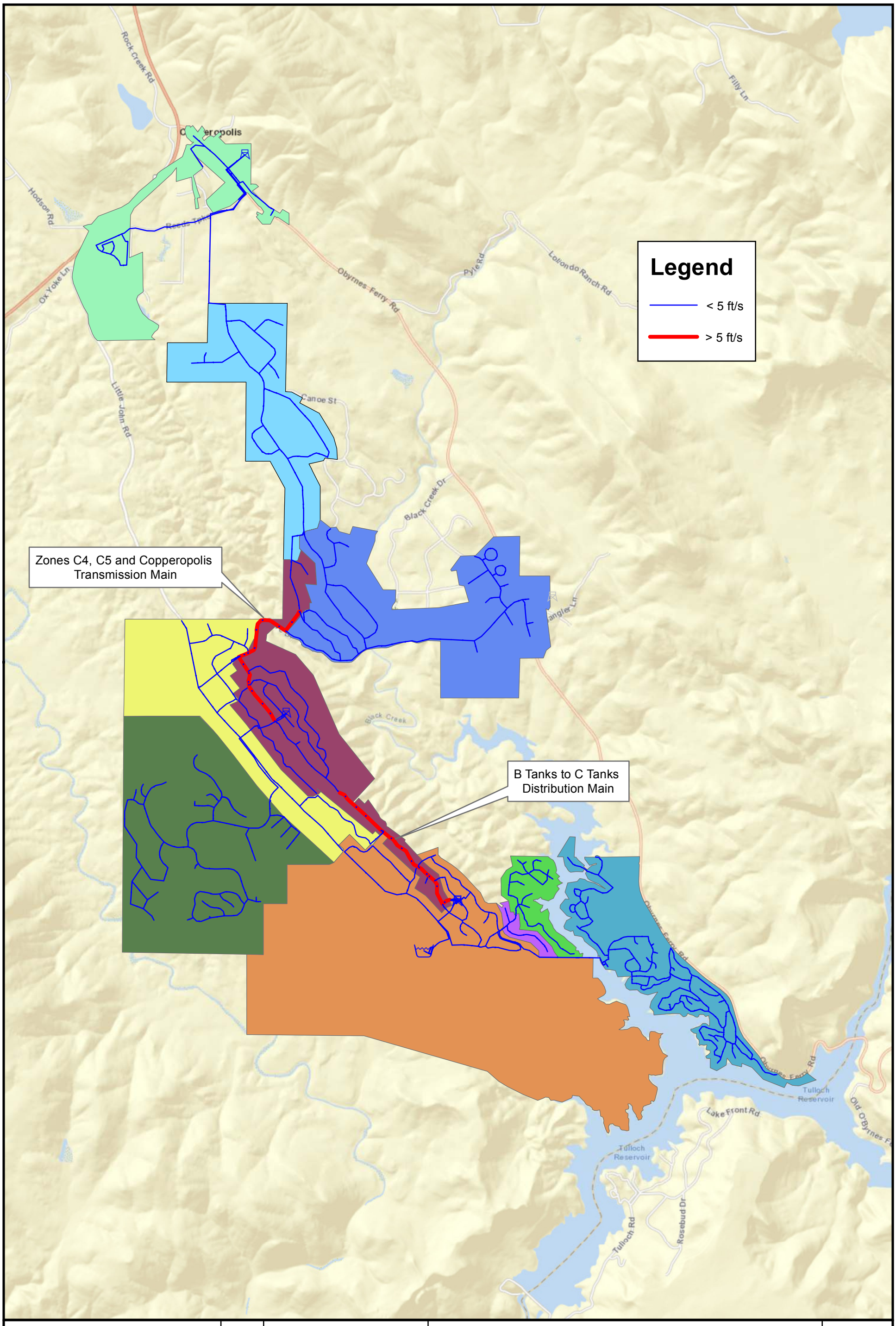
1" = 0.75 mi.

2018 COPPER COVE WATER MASTER PLAN

High Pressure Nodes
Existing ADD

FIGURE

9



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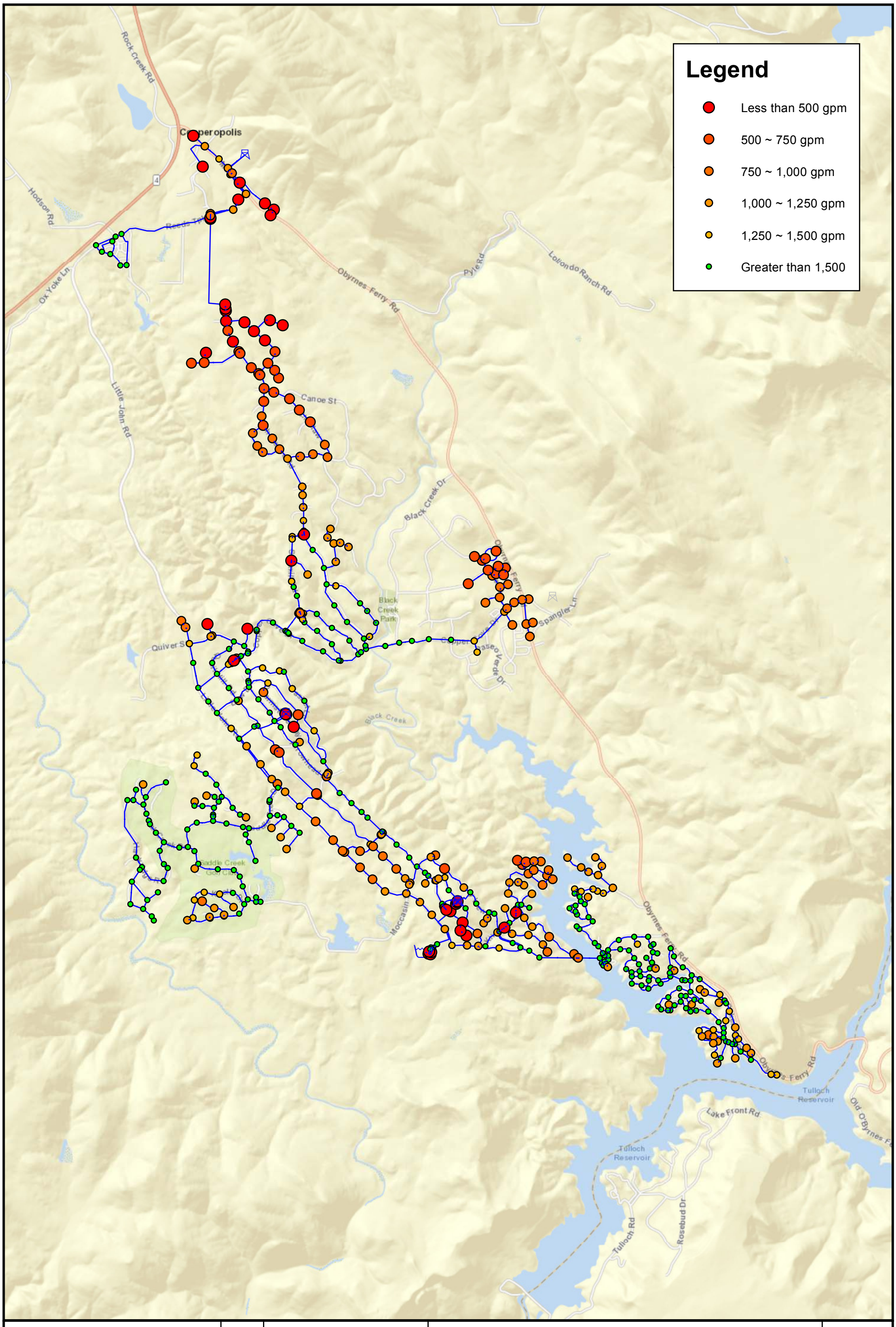
High Velocity Pipes
Existing PHD

FIGURE
10



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0 0.75 Miles

1" = 0.75 mi.

2018 COPPER COVE WATER MASTER PLAN

Fire Flow Availibility
Existing MDD

FIGURE

11

Recommended Improvements

Based on the system evaluation, the District will need to address a number of existing and near-future system deficiencies to comply with current district standards. The following projects have been identified:

- WTP Clearwell Improvements
- B Tank #1 Replacement
- B Tank #2 Rehabilitation
- C1 and Saddle Creek Transmission Main Project
- Copperopolis Pump Station Improvements
- B4 Loop Main Project
- C4 Loop Main Project
- Annual Pipe Replacement Program
- Annual Infrastructure Repair and Replacement Program

The District will need to replace existing tanks, pumps and pipelines throughout the Coper Cove Water System. For the study area to achieve a sustainable treated water supply and to be assured fire protection meets fire flow requirements, the recommended projects listed above must be in place in the immediate future. Improvements to the raw water rights, raw water pump station, WTP and WTP pump station can all be delayed until the system demand reaches their respective demand trigger (90 percent of the associated capacity). Table summarizes the projections of future improvements beyond the planning horizon of this WMP. The demand triggers are in terms of equivalent number of connections and the projected year based on the growth rates.

Table 23. Future Improvement Triggers

Future Improvement	Existing Capacity	Demand Trigger	Equivalent No. of Connections	Projected Year
Raw Water Rights	6,000-AF	5,400-AF	4,000	2083
Raw Water Pump Station	4.75-mgd	4.30-mgd	3,300	2056
Water Treatment Plant	4.00-mgd	3.60-mgd	3,000	2038
WTP Pump Station	3.75-mgd	3.40-mgd	2,875	2031

WTP Clearwell Improvements

The system evaluation identified an immediate need to rehabilitate and/or replace the existing clearwell. The clearwell is a critical WTP process and the WTP cannot be operated without it. The District can either install temporary facilities to supplement the existing clearwell and facilitate rehabilitation of the existing clearwell or construct a new clearwell. Installing a new clearwell would replace the existing clearwell and allow the District to either rehabilitate or abandon the existing clearwell.

Rehabilitation of the existing clearwell is recommended in lieu of installing a new clearwell. Efforts to install a new/secondary clearwell would be better spent at a later date when the WTP requires a capacity expansion. The existing capacity is projected to be sufficient until the District reaches 3,000 connections (projected to occur in 2033). Recoating and repairing the existing clearwell will allow the District to utilize the clearwell's remaining useful life.

B Tank #1 Replacement

The system evaluation identified that B Tank #1 is in an unacceptable condition and needs immediate replacement. B Tank #1 is one of two tanks necessary to meet the system storage requirement. The redwood of B Tank #1 has deteriorated to the point where water is leaking through the walls and could fail. B Tank #1 needs be replaced with a tank with a capacity of at least 175,000-gallon; however, a 500,000-gallon tank is recommended. A 500,000-gallon tank will exceed the emergency and operational storage volume required to allow operations staff to take B Tank #2 offline.

B Tank #2 Rehabilitation

The system evaluation identified an immediate need to rehabilitate B Tank #2. Like B Tank #1, B Tank #2 is critical to maintaining the storage capacity requirement. B Tank #2 in an unacceptable condition; the interior and exterior tank coating has worn away allowing the underlying steel to rust. The rafters supporting the roof have deteriorated to the point where it is no longer safe for personnel to walk on the tank. Rehabilitation efforts, at minimum, include replacing the rafters and roof and recoating the interior and exterior of the tank.

C1 and Saddle Creek Transmission Main Project

The C1 and Saddle Creek Transmission Main Project is recommended to address multiple distribution system deficiencies and reduce system pumping requirements identified in the system evaluation. The project consists of constructing a new transmission main to convey water to Saddle Creek and Zone C1 (C Tank); constructing a new 1,900-gpm pump station and decommissioning existing B-C Pump station; and installing new PRV at the Flint Trail and Arrowhead Street intersection.. The C1 and Saddle Creek Transmission Main Project is presented in Figure 12. The project addresses and resolves multiple system deficiencies identified in the system evaluation:

- High-pressure deficiencies in Zone C1
- High-pressure deficiencies in Zone C3 (Saddle Creek)
- High-velocity deficiencies of the B Tank to C Tank Distribution Main
- B-C Pump Station Firm Capacity Deficiency

High pressure deficiencies in Zone C1 are addressed by decommissioning the B-C Pump Station and installing a new PRV at the intersection of Flint Trail and Arrowhead Street.

The project will also relieve Zone C3 high-pressure deficiency while reducing the system pumping requirements . The majority of the time Saddle Creek does not require the head provided by the C Tanks and is better served from B Tanks. Serving Saddle Creek via the WTP will relieve the high-pressure deficiency along Quail Creek Drive between B Tanks and C Tanks. PRVs would otherwise need to be installed along Quail Creek Drive to address the high system pressure deficiencies.

High-velocity deficiencies in the distribution main along Quail Creek Drive will also be addressed. Directly distributing water to C Tanks via the new pipeline will reduce the velocity in the in the main along Quail Creek and eliminate the need to improve the distribution man.

The C Tank Pump Station firm capacity deficiency will be resolved by installing three new 950-gpm pumps designed to support the projected system demand through the next 30-years. The

project will also reduce the water age in the system by nearly 24-hours by bypassing the B Tanks and distributing water directly to Saddle Creek and C Tank.

B4 Backup Main Project

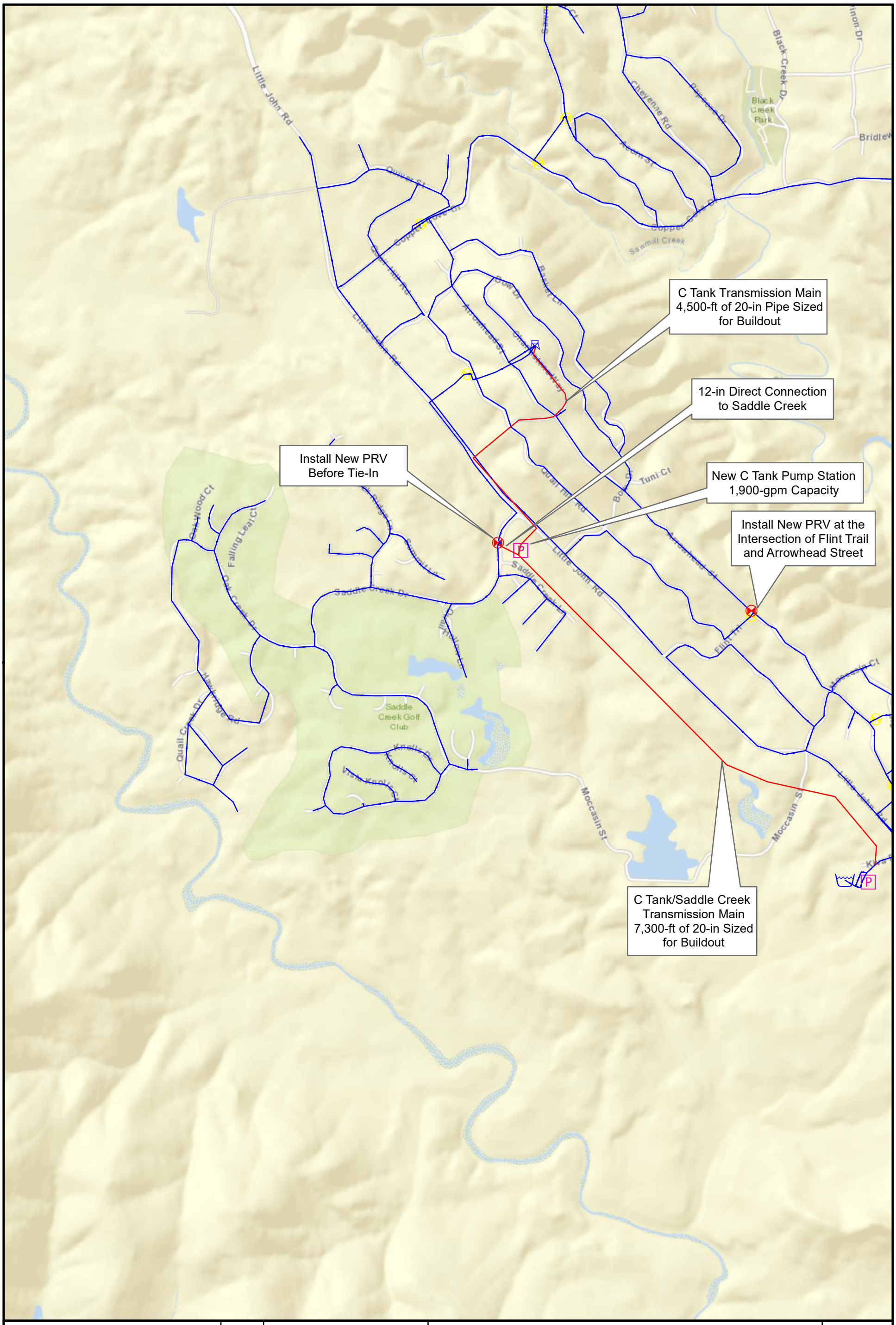
The B4 Backup Main Project is recommended to provide a redundant water source to Zone B4. The redundant water supply eliminates the risk of an extended outage if the transmission main supplying B4 fails within the segment under Lake Tulloch Reservoir. The Project consists of constructing a second 1,000-ft 12-in pipeline crossing under Lake Tulloch Reservoir.

C4 Loop Main Project

The C4 Loop Main Project is recommended to loop Zones B1 and C4. The loop provides a redundant water source and will eliminate fire flow deficiencies in Zone C4. The redundant water supply eliminates the risk of an extended outage if the high-pressure transmission main supplying C4 fails. The Project consists of constructing approximately 8,500-feet of 12-inch pipe parallel to the District's existing force main and installing a PRV. The proposed pipeline alignment is presented in Figure 13.

Copperopolis Pump Station Project

The Copperopolis Pump Station Project is recommended to replace the existing pumps and upsize the pump station capacity. The improved pump station is recommended to provide sufficient capacity to address near future developments discussed in the system evaluation and address the poor condition of existing pumps. Three 150-gpm pumps are recommended to provide a firm capacity of 300-gpm. The pump station will also help offset fire flow deficiencies in Copperopolis Zone.



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N

0 0.25 Miles

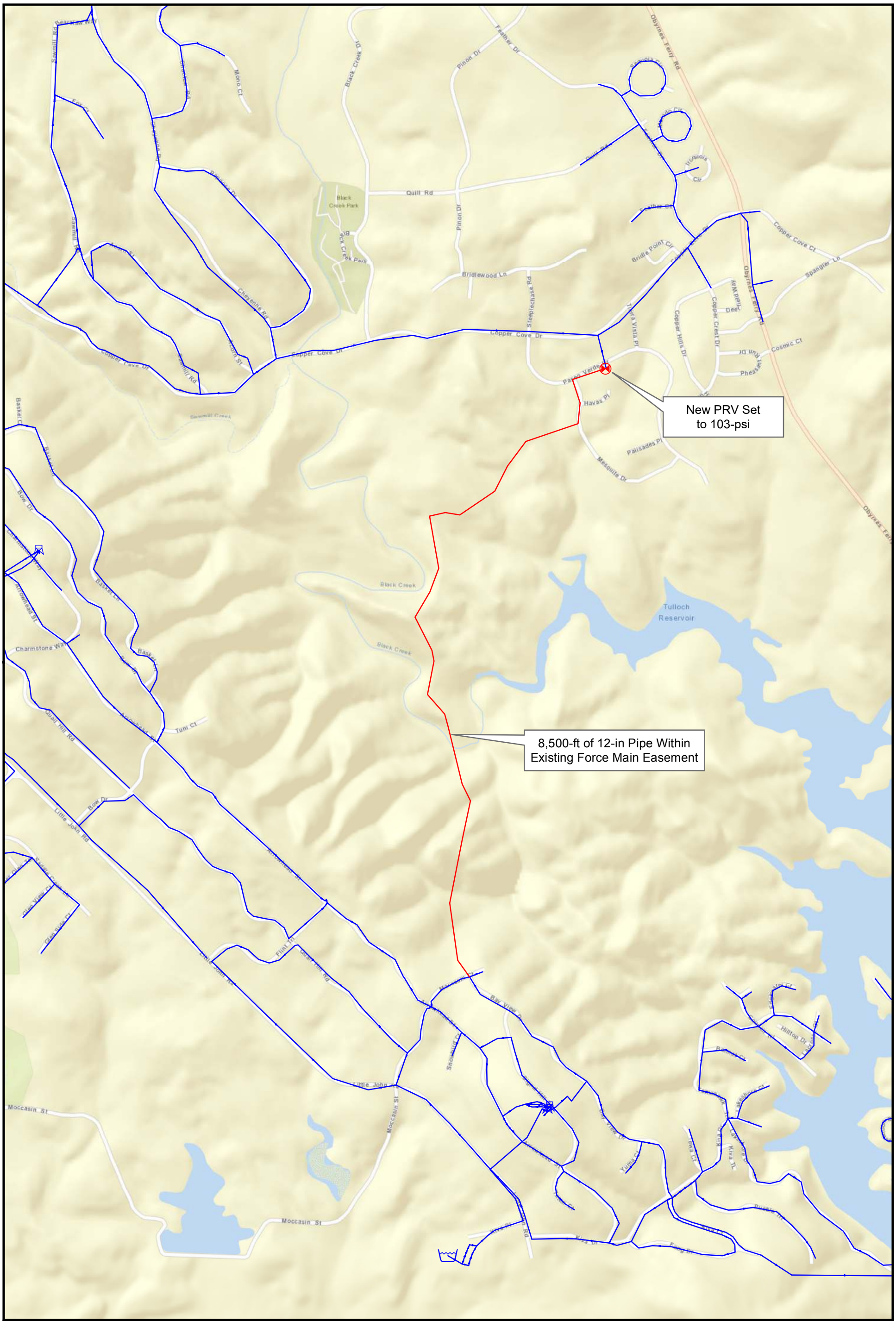
1" = 0.25 mi.

2018 COPPER COVE WATER MASTER PLAN

C1 and Saddle Creek Transmission Main Project

FIGURE

12



PETERSON . BRUSTAD . INC ENGINEERING . CONSULTING 80 Blue Ravine Rd, Suite 280 Folsom, CA 95630 Phone: (916) 608-2212	N	0 1,000 Feet 1" = 1000 ft.	2018 COPPER COVE WATER MASTER PLAN **Zone C4 Loop Project**	FIGURE 13

Annual Pipe Replacement Program

The District currently maintains approximately 54 miles of distribution lines 4-inches and greater. The average useful life of pipe is approximately 100-years. To prevent deferring maintenance, the District should plan to replace approximately 0.5 miles of pipeline each year once the Zone C1 Main Improvements are complete.

Pipe mains are recommended to be replaced with new pipe sized to meet the District Standards under buildout conditions. Appendix A lists all of the distribution system pipe segments that need to be upsized to meet buildout conditions. Pipe segments not listed in Appendix A are recommended to be replaced in kind. The pipes listed in Appendix A have been sized to meet the District's design criteria under both buildout PHD and MMD plus Fire Flow conditions.

Annual Infrastructure Repair and Replacement Program

A life cycle assessment was prepared to update the annual budget required by the District's Repair and Replacement Program (R&R) required to maintain the existing facilities. Based on the value of District assets, the District should allocate at least $464,000 annually for R&R. Table 24 presents a summary of District Assets, their value, their lifetime, and the annual cost of R&R.

Table 24. Annual Rehabilitation and Replacement Program Costs

Asset	Present Value	Lifetime (years)	Annual R&R Cost ($/year)
Copper Cove WTP & WTP Pump Station	$8,000,000 [1]	30	$267,000
Raw Water Pump Station & Pipeline	$1,500,000 [1]	30	$50,000
C Tank and Copperopolis Pump Stations	$750,000 [1]	30	$25,000
B Tank No. 1	$450,000 [2]	50	$9,000
B Tank No. 2	$937,000 [3]	50	$19,000
C Tank No. 1	$815,000 [2]	50	$16,000
C Tank No. 2	$815,000 [2]	50	$16,000
Copperopolis Tank	$815,000 [2]	50	$16,000
Annual Cost of R&R Program			***$418,000***

[1] Per 2014 Capacity Charge Update Escalated to 2018 dollars.
[2] Cost based on $1.50 per gallon for new storage tank.
[3] Cost based on $1.25 per gallon for new storage tank.

Capital Improvement Plan

Recommendations for a CIP have been developed based on the recommended projects presented in the prior chapters. The following section summarizes project recommendations, estimates the cost of each of the recommended projects and presents a prioritized implementation schedule.

Summary of Recommended Improvements and Implementation Schedule

Seven projects and two repair programs are recommended in response to the current conditions of the Copper Cove water system. The Projects have been listed in order of highest priority to lowest; 1 being the highest priority. Priority has been given to the clearwell and B Tanks improvements as they are essential to providing water to the entire system. The remaining projects were prioritized in order of the number of system deficiencies addressed. The Copperopolis Pump Station Project was given the lowest project priority given the dependence on future development in Copperopolis and can be deferred until development progresses or until the existing pumps begin to fail.

Table 25. Recommended Improvements

Priority	Projects/ Programs	Project Description	Project Goals
1	Water Treatment Plant Clearwell Improvement Project	Rehabilitate WTP Clearwell	Maintain safe and reliable of water supply
2	B Tank No. 1 Replacement Project	Replace existing redwood tank with a 500,000-gallon welded steel tank	Maintain system storage capacity requirement
3	B Tank No. 1 Rehabilitation Project	Repair rafters, roof and interior and exterior coating	Maintain system storage capacity requirement
4	C1 and Saddle Creek Transmission Main Project	Construct transmission main and pump station to supply Zones C1 and C3 (Saddle Creek)	Replace B-C Pump Station, relieve high-pressure deficiencies in C1 and C3, relieve high-velocity deficiencies, reduce pump energy and reduce system water age
5	B4 Backup Main Project	Secondary main around Lake Tulloch	Provides redundant water supply to Zone C4.
6	C4 Loop Main Project	Loops Zone B1 and C4	Provides redundant water supply to Zones B4 and relieves fire flow deficiency
7	Copperopolis Pump Station Project	Replacement of existing pumps	Increase pump station capacity
8	Annual Pipe Replacement Program	Pipeline replacement	Replace one percent of existing distribution system pipelines annually
9	Annual Infrastructure Repair and Replacement Program	Replace or rehabilitate District assets	Maintain District assets

The Projects have been broken into three phases such that all of the projects are addressed within the next 10 years and that the replacement programs are implemented following completion of the first two phases. Phases are intended to be implemented over 5-year periods according to the following schedule:

- Phase I – (2019-2023)
    - WTP Clearwell Improvements
    - B Tank #1 Replacement
    - B Tank #2 Rehabilitation
    - C1 and Saddle Creek Transmission Main Project
- Phase II – (2024-2028)
    - B4 Backup Main Project
    - C4 Loop Main Project
    - Copperopolis Pump Station Project
- Phase III – Annual Repair and Replacement Programs (2029 and Beyond)
    - Annual Pipe Repair and Replacement Program
    - Annual Infrastructure Repair and Replacement Program

Estimated Costs

Planning-level cost estimates are present in Table 26 for each of the recommended capital improvement projects.

The recommended projects, estimated costs, and proposed schedule were developed through a planning-level analysis that was appropriate for the WMP update and should be revaluated in further detail prior to implementation.

Table 26. Estimated Costs of Capital Improvement, Replacement and Rehabilitation Projects

Phase I: 2019-2023						
Project / Program	**Recommended Improvements**	**Quantity**	**Unit**	**Unit Cost**	**Component Cost**	**Project Cost**
WTP Clearwell Improvements	Aluminum Dome Roof	1	LS	$500,000	$500,000	$750,000
	Recoat Clearwell	1	LS	$250,000	$250,000	
B Tank No. 1 Replacement	500,000-Gallon Replacement Tank	1	LS	$750,000	$750,000	$750,000
B Tank No. 2 Rehabilitation	Coating, Rafters, and Roof Rehabilitation	1	LS	$400,000	$400,000	$400,000
C1 and Saddle Creek Transmission Main Project	20-inch Pipeline	11,800	FT	$690	$8,142,000	$8,652,000
	Pump Station to C Tank	1	LS	$500,000	$500,000	
	PRV Station	1	EA	$10,000	$10,000	
					Phase I Total	***$10,552,000***
Phase II: 2024-2028						
Project / Program	**Recommended Improvements**	**Quantity**	**Unit**	**Unit Cost**	**Component Cost**	**Project Cost**
B4 Backup Main Project	12-inch Pipeline	1,000	FT	$1,250	$1,250,000	$1,260,000
	PRV Station	1	EA	$10,000	$10,000	
C4 Loop Main Project	12-inch Pipeline	8,500	FT	$414	$3,519,000	$3,529,000
	PRV Station	1	EA	$10,000	$10,000	
Copperopolis Pump Station	Replace Pumps and Upgraded Electrical Systems	1	LS	$400,000	$400,000	$400,000
					Phase II Total	***$5,189,000***
Phase III: 2029 and Beyond						
Project / Program	**Recommended Improvements**	**Quantity**	**Unit**	**Unit Cost**	**Component Cost**	**Project Cost**
Annual Rehabilitation and Replacement Program	Miscellaneous R & R Projects	5	Years	$418,000 [1]	$2,090,000	$6,465,000
Annual Pipe Repair and Replacement Program	One Percent (1%) Distribution Piping System	5	Years	$875,000 [2]	$4,375,000	
					Phase III Total	***$6,465,000***
Total Cost of Implementation						***$22,206,000***

[1] See Table 24 for program costs
[2] Distribution system pipeline present value estimated at $34.50 per inch diameter per foot of length.

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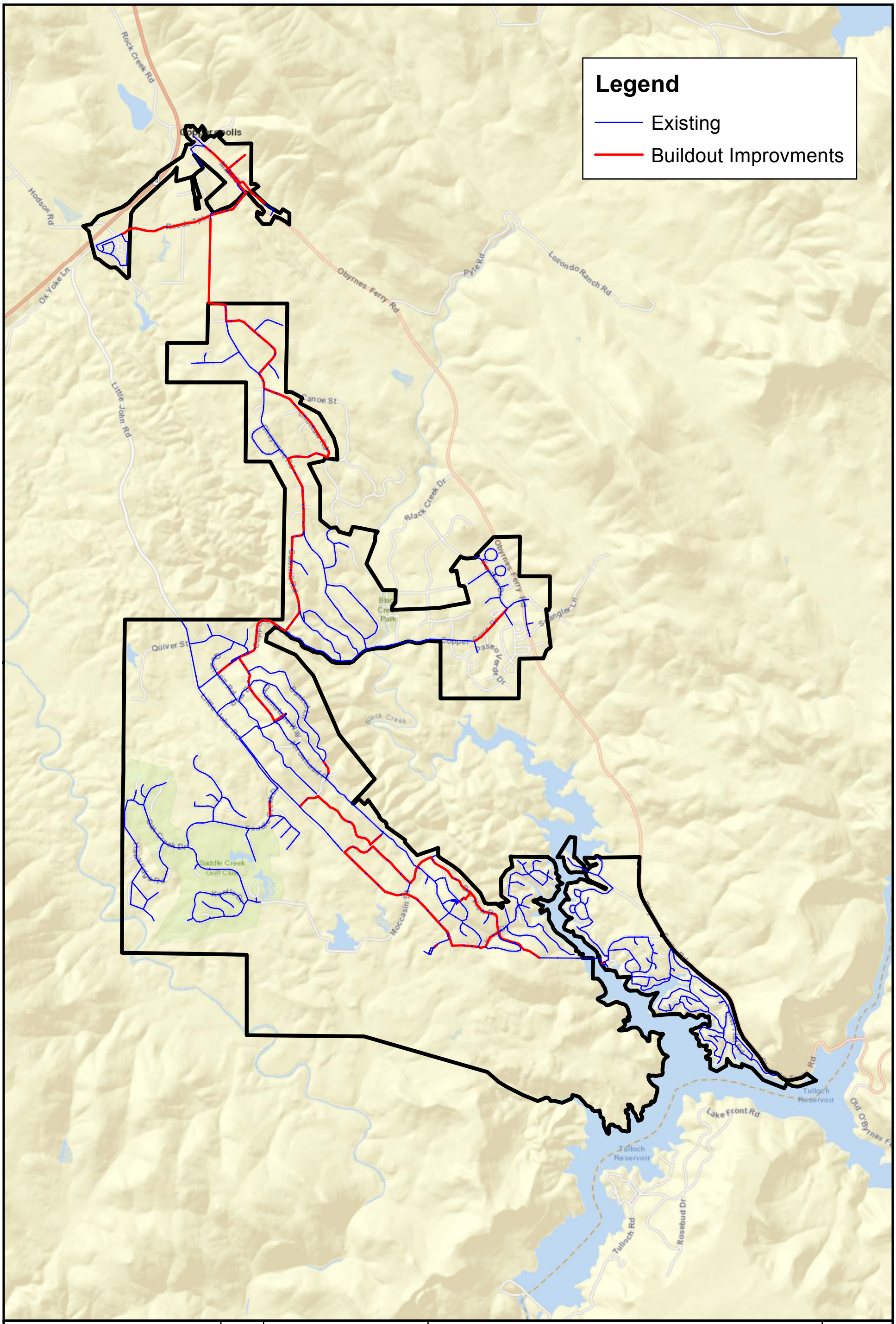
APPENDIX A

BUILDOUT PIPE DIAMETERS



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0 0.75 Miles

1" = 0.75 mi

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Distribution System Buildout Improvements

FIGURE

A-1

Pipe ID	Location	Length (ft)	Existing Diameter (in)	Buildout Diameter (in)
12	Kiva Court	411	10	16
28	Arrowhead Street	443	10	20
29	Arrowhead Street	586	10	20
38	Copper Cove Drive	1420	8	12
42	Copper Cove Drive	132	8	12
54	Feather Drive	380	6	12
67	Kiva Drive	68	6	10
70	Kiva Court	1285	10	16
92	Kiva Drive	258	6	10
94	Kiva Drive	501	6	10
100	Bay View Drive	924	6	10
109	Bow Drive	432	6	8
112	Arrowhead Street	142	10	20
113	Arrowhead Street	338	10	20
114	Arrowhead Street	572	10	20
118	Copper Cove Drive	499	6	8
140	Sawmill Road	540	8	16
151	Lake Tulloch Drive	106	6	10
414	Saddle Creek Drive	468	12	16
477	Cheyenne Road	404	8	12
509	Sawmill Road	292	8	16
514	Cheyenne Road	1062	8	12
515	Canoe Street	517	6	8
520	Choctaw Road	907	6	8
521	Choctaw Road	540	6	8
522	Choctaw Road	568	6	8
525	Salmon Road	456	6	8
526	Salmon Road	522	6	8
527	Salmon Road	434	6	8
P-13	Kiva Place	168	18	26
P-32	Antelope Street	1146	4	10
P33	Main Street	422	4	10
P35	Main Street	644	4	10
P39	Main Street	218	4	10
P-41	Cheyenne Road	346	6	12
P43	Main Street	411	4	10
P-44	Quail-Hill Road	616	6	8
P-46	Flint Trail	475	6	8
P-47	Flint Trail	635	6	8
P-48	Quail-Hill Road	2525	6	8
P49	Reeds Turnpike	6359	12	16
P-49	Bow Drive	746	6	8
P-53	Little John Road	578	6	8

Pipe ID	Location	Length (ft)	Existing Diameter (in)	Buildout Diameter (in)
P69	Sawmill Road	194	6	8
P-73	Bay View Drive	618	6	10
P-75	Moccasin Street	1211	6	8
P-76	Quail-Hill Road	215	6	8
P-78	Copper Cove Drive	88	10	16
P-79	Copper Cove Drive	851	10	16
P-101	Bay View Drive	548	10	20
P-102	Bay View Drive	637	10	20
P133	Bay View Drive	273	6	10
P-133	Cheyenne Road	485	8	12
P135	Bay View Drive	645	10	20
P141	Kiva Drive	639	6	10
P143	Little John Road	650	6	8
P-150	Cheyenne Road	452	8	12
P193	Copper Cove Drive	134	6	10
P195	Copper Cove Drive	162	6	10
P199	Sawmill Road	45	8	16
P211	Copper Cove Drive	239	10	16
P231	Sawmill Road	154	6	8
P233	Copper Cove Drive	768	10	16
P239	Copper Cove Drive	56	10	16
P241	Sawmill Road	80	8	16
P243	Sawmill Road	70	6	8
P307	Copperopolis Transmission Main	3372	6	12
P339	Sawmill Road	640	8	16
P341	Sawmill Road	732	8	16
P353	Copperopolis Transmission Main	140	6	12
P359	Copperopolis Transmission Main	70	6	12
P373	Salmon Road	627	6	8
P377	Salmon Road	471	6	8
P379	Salmon Road	473	6	8
P391	Choctaw Road	348	6	8
P401	Canoe Street	435	6	8
P403	Canoe Street	452	6	8
P405	Choctaw Road	459	6	8
P407	Choctaw Road	497	6	8
P409	Cheyenne Road	281	8	12
P411	Cheyenne Road	355	8	12
P413	Sawmill Road	174	8	16
P415	Sawmill Road	85	8	16
P417	Sawmill Road	207	8	16
P419	Sawmill Road	309	8	16

Pipe ID	Location	Length (ft)	Existing Diameter (in)	Buildout Diameter (in)
P481	Quail-Hill Road	441	6	8
P483	Quail-Hill Road	461	6	8
P485	Flint Trail	519	6	8
P499	Arrowhead Street	311	10	20
P501	Arrowhead Street	523	10	20
P503	Arrowhead Street	59	10	20
P509	Copper Cove Drive	122	6	8
P535	Little John Road	738	6	8
P537	Little John Road	740	6	8
P539	Little John Road	575	6	8
P541	Little John Road	551	6	8
P543	Little John Road	572	6	8
P545	Little John Road	605	6	8
P547	Kiva Drive	373	6	10
P553	Bay View Drive	435	10	20
P555	Bay View Drive	177	10	20
PRV-11_D	Sawmill Road	39	8	16
PRV-11_U	Sawmill Road	696	8	16
PRV-32_U	Copper Cove Drive	509	10	16

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APPENDIX B

JUNCTION REPORTS

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
1	538.04	87.57	86.93	740.55	739.07	0.74	0.71
2	786.43	99.53	95.72	1016.59	1007.79	0.8	2.84
3	681.44	95.35	76.86	901.92	859.17	3.13	10.56
4	567	75.18	74.9	740.85	740.2	0	19.98
6	705.65	84.87	66.38	901.91	859.16	1.11	2.48
8	721.66	77.95	59.46	901.91	859.16	2.34	8.92
9	621.35	121.41	102.89	902.11	859.28	10.83	61.29
10	779.87	2.03	1.58	784.56	783.51	4.53	43.39
12	951.9	82.97	75.81	1143.77	1127.21	1.28	2.97
13	877.39	51.17	51.13	995.72	995.64	0.85	3.68
15	774.07	95.59	95.62	995.11	995.19	1.09	2.15
16	834.78	69.24	69.2	994.9	994.79	0.95	6.67
17	806.44	81.47	81.39	994.83	994.65	0.26	16.41
18	964.64	77.46	70.3	1143.77	1127.22	2.14	3.52
19	887.94	143.09	103.47	1218.85	1127.22	0.57	1.36
20	938.74	124.85	81.5	1227.44	1127.22	0	0.38
21	865.15	149.57	113.33	1211.02	1127.23	0.83	2.72
22	859.02	144.88	115.99	1194.07	1127.25	1.57	2.58
23	945.35	96.03	89.16	1167.42	1151.54	1.5	4.55
24	1063.28	41.31	38.22	1158.8	1151.67	1.45	6.13
25	1046.39	45.97	45.59	1152.7	1151.82	0.81	2.71
26	945.86	88.51	88.87	1150.55	1151.37	1.19	2.41
27	871.38	119.25	120.94	1147.15	1151.05	0.6	1.22
28	867.87	83.59	83.59	1061.17	1061.18	0.76	0.99
29	650.94	212.16	162.22	1141.56	1026.06	1.05	2.8
31	653.69	108.39	90.27	904.35	862.44	1.01	1.86
32	662.57	104.55	86.16	904.35	861.81	0.85	1.42
33	603.35	130.01	111.72	904	861.69	1.01	1.3
34	566.28	145.84	127.74	903.52	861.68	0.15	0.07
35	618.37	122.77	104.18	902.28	859.28	14.05	26.67
36	644.16	111.55	93.02	902.11	859.26	9.63	13.1
37	680.06	95.94	77.46	901.93	859.19	1.98	4.64
38	714.38	81.09	62.61	901.91	859.16	0.9	17.83
39	692.27	90.64	72.17	901.88	859.16	4.41	2.74
40	703.92	85.61	67.13	901.88	859.15	9.18	14.92
41	698.26	88.05	69.57	901.87	859.15	1.73	2.57
43	703.23	85.87	67.41	901.82	859.13	2.05	2.68
44	725.91	76.07	57.6	901.82	859.12	0.54	5.66
45	713.22	81.54	63.09	901.79	859.13	0.96	1.72
46	722.26	77.64	59.18	901.79	859.12	3.37	13.18
47	723.42	77.13	58.68	901.79	859.12	3.24	5.26
48	685.3	93.67	75.19	901.91	859.18	0.52	1.79
49	696.69	88.75	70.26	901.91	859.17	1.67	3.17
50	707.55	84.05	65.56	901.91	859.16	0.79	2.33

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
51	706.24	84.6	66.12	901.87	859.15	2.35	4.43
52	709.45	83.19	64.73	901.82	859.13	0.51	0.74
53	718.43	79.29	60.84	901.79	859.12	1.16	1.87
54	817.93	76.54	76.14	994.93	994	1.28	7.84
56	845.57	64.63	64.43	995.02	994.56	0.74	9.21
57	816.3	77.3	77.17	995.06	994.76	0.98	5.84
58	720.04	86.35	86.35	919.73	919.71	0.14	0.59
59	708.04	91.54	91.53	919.73	919.71	0.39	1.38
60	619.99	64.92	62.91	770.12	765.48	0.58	0.9
61	608.19	70.03	68.02	770.12	765.48	0.28	1.02
62	577.27	83.38	81.34	770.1	765.36	1.2	3.01
63	591.33	77.3	75.23	770.08	765.3	0.53	1.45
64	543.68	97.92	95.91	770.12	765.48	1.74	3.38
65	563.81	89.22	87.21	770.12	765.48	4.57	4.13
66	533.89	102.15	100.06	770.11	765.28	1.85	15.89
67	727.29	83.22	83.21	919.73	919.7	0.44	1.83
69	576.73	83.61	81.55	770.08	765.3	1.72	4.18
70	555.13	92.95	90.88	770.08	765.3	0.57	0.9
71	525.23	105.88	103.81	770.08	765.3	1.8	3.09
72	535.4	101.49	99.42	770.08	765.3	1.47	2.39
73	552.95	93.89	91.83	770.08	765.3	0.84	1.96
74	579.81	82.28	80.21	770.08	765.3	0.61	1.35
75	629.92	60.61	58.54	770.08	765.3	0.45	1.17
76	633.33	59.14	57.07	770.08	765.3	0.76	1.69
77	623.62	63.34	61.27	770.08	765.3	0.32	1.1
78	721.81	85.59	85.58	919.73	919.71	0.78	2.18
79	861.51	57.91	57.94	995.44	995.49	1.86	3.18
80	903.62	39.68	39.59	995.39	995.16	1.54	3.25
81	752.55	119.32	115.05	1028.47	1018.62	1.94	2.93
82	912.19	35.82	35.61	995.02	994.55	0.81	2.05
83	922.49	95.69	88.53	1143.77	1127.22	0.69	2.08
84	843.44	65.62	65.48	995.18	994.85	0.84	1.43
85	815.33	77.6	77.35	994.77	994.21	1.47	3.3
87	807.41	81.03	80.79	994.79	994.23	0.88	1.16
88	792.98	87.26	86.93	994.76	994.01	3.94	7.91
90	764.21	99.86	99.91	995.13	995.25	0	0.39
92	924.4	89.52	89	1131.41	1130.21	0.9	1.78
93	639.56	56.46	54.45	770.12	765.49	0.3	0.67
94	545.88	96.96	94.91	770.1	765.36	0.91	2.52
95	811.57	79.16	78.89	994.63	993.99	3.61	7.26
96	834.88	97.4	95.16	1060.12	1054.94	2.96	8.11
97	892.13	72.7	70.68	1060.24	1055.58	0.48	4.07
98	848.81	87.35	47.18	1050.81	957.92	0.18	5.72
99	934.32	99.76	93.88	1165.01	1151.4	6.18	9.54
100	951.89	90.41	86.26	1160.96	1151.36	3.75	17.22

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
101	1002.17	64.94	64.51	1152.33	1151.35	1.86	4.08
102	962.06	82.03	81.75	1151.75	1151.11	2.75	5.25
103	1056.45	44.26	41.18	1158.8	1151.67	2.89	4.46
104	1103.59	21.07	20.65	1152.33	1151.35	1.92	3.31
105	899.28	108.08	108.94	1149.22	1151.21	2.37	3.57
106	934.44	93.24	93.78	1150.05	1151.31	0.86	1.86
107	849.95	91.24	91.02	1060.94	1060.43	2.52	4.67
108	827.59	100.88	100.26	1060.87	1059.44	1.65	19.08
109	852.47	90.08	89.34	1060.78	1059.07	4.11	7.35
110	878.91	78.69	78.02	1060.88	1059.34	3.9	27
111	905	67.41	66.69	1060.87	1059.22	1.55	28.04
112	925.66	58.48	57.99	1060.91	1059.77	0.57	3.59
113	888.5	74.58	74.31	1060.96	1060.33	2.01	4.73
114	810.84	108.09	107.68	1060.8	1059.85	3.07	5.89
115	983.37	72.28	72.59	1150.52	1151.23	2.37	5.53
117	735.52	74.85	54.56	908.61	861.69	1.27	2.69
118	600.36	131.04	113.06	903.38	861.8	1.54	2.06
119	742.64	69.41	51.83	903.14	862.5	1.18	5.63
120	776.41	152.59	107.5	1129.28	1025	1.36	2.62
121	745.33	68.23	50.74	903.13	862.66	3.2	4.54
122	776.99	109.56	104.59	1030.34	1018.85	4.63	6.84
123	499.12	104.48	104.02	740.74	739.67	0.3	1.46
124	510.2	99.68	99.17	740.71	739.53	0.25	1.53
125	508.72	100.32	99.81	740.7	739.52	0.5	13.16
126	527.63	92.11	91.57	740.63	739.38	1.86	0.96
128	536.37	88.32	87.75	740.61	739.3	0.04	0.51
129	533.92	89.38	88.81	740.61	739.29	0.2	0.27
130	523.21	94.03	93.52	740.65	739.48	0.38	0.28
131	520.75	95.11	94.6	740.7	739.52	0.74	0.2
132	516.66	96.88	96.37	740.69	739.52	3.49	4.72
134	556.33	79.68	79.08	740.59	739.21	0.62	1.64
135	550.95	82	81.34	740.56	739.03	1.69	2.45
136	543.94	85.03	84.37	740.56	739.03	1.26	2.83
137	556.73	79.49	78.8	740.54	738.95	0.89	8.39
138	562.09	77.17	76.47	740.54	738.92	1.37	2.53
139	541.87	85.91	85.21	740.54	738.91	1.13	1.63
140	544.26	84.88	84.17	740.54	738.9	0.61	1.04
141	541.79	85.94	85.24	740.53	738.9	0.24	0.48
142	550.01	82.39	81.69	740.54	738.9	1.04	1.87
143	575.52	71.36	70.65	740.54	738.9	1.16	1.97
144	540.87	86.34	85.63	740.53	738.89	0.24	0.59
145	544.5	84.77	84.06	740.53	738.88	0.99	1.58
146	553.75	80.77	80.04	740.52	738.84	0.55	1.27
147	550.04	82.37	81.63	740.52	738.8	0.48	23.45
148	534.94	88.9	88.15	740.51	738.79	1.23	2.87

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
149	528.39	91.73	90.98	740.51	738.79	0.98	1.5
150	523.71	93.75	93.01	740.51	738.78	4.09	6.4
151	544.26	84.87	84.17	740.54	738.91	0.48	0.73
152	533.46	89.54	88.83	740.53	738.88	1.56	2.24
349	840	91.15	50.96	1050.79	957.85	0.28	7.43
350	834	93.75	53.44	1050.79	957.59	0.74	11.07
352	813.88	102.43	62.18	1050.76	957.68	0	12.95
353	819.05	100.2	116.05	1050.76	1087.43	0.12	6.15
354	822.97	98.49	114.36	1050.73	1087.43	1.51	5.33
355	827.23	96.65	112.55	1050.72	1087.5	0.41	1.46
356	836.65	92.57	108.51	1050.72	1087.58	0.94	1.94
357	850.55	86.56	102.54	1050.72	1087.69	0.22	1.51
358	859.81	82.56	98.58	1050.72	1087.77	0.5	3.56
359	866.91	79.49	95.51	1050.72	1087.77	0.07	5.12
361	832.32	94.44	110.3	1050.71	1087.4	1.33	8.32
366	883.75	72.21	88.72	1050.72	1088.9	1.13	6.27
377	843.86	89.44	105.3	1050.69	1087.37	0.26	7.41
384	887.47	70.58	86.43	1050.69	1087.33	1.02	4.74
385	885.82	71.3	87.14	1050.69	1087.33	1.17	2.73
386	884.7	71.78	87.62	1050.69	1087.33	0.19	5.79
387	882.56	72.71	88.55	1050.69	1087.33	0.3	4.88
388	884.75	71.76	87.6	1050.69	1087.33	1.18	6.1
390	801.4	107.8	123.64	1050.69	1087.31	2.36	12.91
391	783.52	115.53	131.37	1050.69	1087.31	0.27	6.7
392	858.98	82.9	98.75	1050.69	1087.34	1.28	4.61
393	849.18	87.14	103	1050.69	1087.35	0.71	5.54
394	845.84	88.59	104.45	1050.7	1087.39	0.48	3.23
395	861.44	81.84	97.68	1050.69	1087.33	1.12	5.59
396	858.51	83.1	98.94	1050.69	1087.32	0.55	5.1
397	803.9	106.72	122.56	1050.69	1087.32	0.06	6.79
398	768.6	121.98	80.07	1050.69	953.76	0	5.23
399	837.59	92.13	50.57	1050.64	954.54	1.19	4.33
401	780.13	116.91	75.29	1050.5	954.24	22.27	4.05
402	785.79	114.47	72.85	1050.5	954.25	0.05	1.11
403	785.12	114.76	73.14	1050.5	954.25	2.53	5.88
404	782.25	116	74.38	1050.51	954.26	0.96	2.63
405	798.23	109.11	67.61	1050.55	954.58	0.57	10.39
406	813.21	102.64	61.13	1050.57	954.57	1.52	11.73
407	827.84	96.33	54.8	1050.6	954.55	2.46	11.53
408	784.09	115.21	73.55	1050.5	954.18	0.83	2.25
409	817.14	100.91	59.21	1050.5	954.06	1.69	5.48
410	807.55	105.06	63.33	1050.5	954.01	1.62	4.62
411	824.98	97.52	55.81	1050.5	954.05	0.14	4.13
412	825.36	97.36	55.66	1050.5	954.08	0.44	2.83
425	747.27	131.21	89.3	1050.69	953.78	0	4.25

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
429	841.08	90.56	48.83	1050.5	953.99	0.44	6.14
430	743.74	132.73	90.82	1050.69	953.76	0	4.88
431	735.14	136.45	94.54	1050.69	953.76	0	5.35
432	740.6	134.09	92.19	1050.69	953.78	0	2.79
433	766.64	122.83	80.92	1050.69	953.76	0	8.75
434	747.3	131.19	89.28	1050.69	953.76	0	9.38
435	737.78	125.23	121.38	1027.38	1018.47	1.61	2.06
438	756.17	116.49	113.25	1025.55	1018.05	5.4	7.67
439	759.9	114.24	111.49	1024.09	1017.72	4.66	10.3
440	688.95	92.59	75.04	903.05	862.47	1.7	2.51
441	738.18	122.7	120.68	1021.91	1017.24	4.46	7.7
442	771.23	108.04	106.06	1021.08	1016.48	1.25	2.27
443	765.43	110.71	108.68	1021.44	1016.75	1.87	5.66
444	839.79	78.29	76.27	1020.85	1016.16	1.54	4.38
445	799.99	95.62	93.59	1021.11	1016.4	3.78	4.85
446	833.9	80.66	78.69	1020.43	1015.87	6.06	10.83
447	849.17	73.97	72	1020.23	1015.67	5.12	7.14
448	884.1	58.7	56.72	1019.84	1015.26	2.86	3.93
449	874.1	62.73	60.95	1019.15	1015.04	0.89	1.35
450	873.19	62.86	61.12	1018.54	1014.52	2.26	3.32
451	824.25	84.18	82.43	1018.91	1014.87	2.84	3.66
453	880.41	59.65	57.97	1018.35	1014.46	3.87	5.07
458	508.05	100.54	99.89	740.54	739.04	0.95	0.94
459	519.21	95.71	95.05	740.53	739.01	1.21	10.22
460	589.95	65.12	64.46	740.53	739.01	0.58	0.95
461	565.26	75.79	75.12	740.53	738.98	0.45	0.77
462	549.97	82.4	81.73	740.53	738.98	0.71	1.31
463	519.26	95.67	94.98	740.5	738.89	0.96	1.5
464	550.67	82.09	81.38	740.5	738.87	0.04	1.73
465	549.25	82.69	81.96	740.48	738.79	1.35	2.11
466	564.63	76.04	75.3	740.47	738.77	0.85	1.25
467	567.13	74.96	74.22	740.47	738.77	0.87	1.38
468	603.31	59.31	58.57	740.46	738.75	0.61	1.32
469	513.51	98.15	97.41	740.47	738.78	0.99	1.28
470	531.16	90.51	89.77	740.47	738.76	0.55	1
471	556.62	79.5	78.76	740.47	738.75	0.81	1.43
472	562.66	76.89	76.14	740.46	738.74	0.47	0.51
473	554.73	80.32	79.58	740.47	738.75	1.22	4.18
474	548.54	82.99	82.25	740.46	738.74	0.53	0.65
475	561.88	77.22	76.48	740.46	738.75	0.55	0.89
476	593.58	63.52	62.77	740.46	738.75	0.76	1.02
477	590.2	64.98	64.23	740.46	738.74	0.39	0.51
478	612.66	55.27	54.52	740.46	738.74	1.26	1.62
479	538.73	87.24	86.49	740.46	738.74	1.49	2.37
480	562.63	76.9	76.16	740.46	738.75	0.33	0.77

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
481	547.46	83.46	82.72	740.46	738.74	0.59	0.68
482	592.31	64.06	63.31	740.45	738.72	0.38	0.88
483	550.42	82.18	81.43	740.46	738.73	0.35	0.76
484	544.48	84.75	84	740.45	738.72	0.45	0.73
485	538.5	87.33	86.58	740.45	738.71	1.21	1.3
486	536.65	88.13	87.38	740.45	738.71	0.29	0.43
487	506.85	101.02	100.27	740.45	738.71	2.26	2.64
488	545.87	84.14	83.39	740.45	738.71	0.31	0.52
489	525.29	93.04	92.29	740.45	738.71	0.3	0.62
490	525.38	93	92.25	740.45	738.71	0.35	0.7
491	567.3	74.88	74.13	740.45	738.72	0.16	0.3
492	526.77	92.4	91.65	740.45	738.71	2.11	3.39
493	555.42	80.01	79.26	740.45	738.71	3.44	7.78
494	704.27	85.46	66.98	901.91	859.16	6.88	19.68
496	884.45	57.53	56.15	1017.5	1014.31	2.6	3.33
497	781.61	1.26	0.69	784.51	783.2	0.04	4.74
500	792	97.82	93.71	1018.21	1008.7	0.56	0.2
780	882.24	58.78	57.12	1018.18	1014.33	3.05	4.54
J10	837	78.42	76.61	1018.36	1014.17	17.42	22.36
J12	852.42	72	70.14	1018.91	1014.19	1.58	9.16
J14	881.62	77.19	78.21	1060.12	1014.2	1.74	11.42
J16	602.8	59.53	66.87	740.46	1014.43	1.26	5.95
J-17	841.69	66.48	72.28	995.44	1128.06	0.46	1.55
J18	951.42	47.3	70.25	1060.8	1014.86	2.67	3.52
J-18	886.74	56.48	74.17	1017.36	1128.05	1.45	2.22
J-19	750.42	165.71	78.31	1133.63	1128.04	2.9	3.54
J20	1137.96	6.07	82.94	1152	1014.86	2.07	3.5
J-21	815.88	105.58	71.77	1060.04	1129.28	5.01	2.47
J22	551.88	81.55	59.9	740.47	1128.06	0.56	7.9
J-22	526.5	92.54	11.94	740.5	998.45	0.06	1.36
J-23	776.09	109.95	4.47	1030.34	996.06	2.15	1.23
J24	901	98.16	65.65	1128	1128.21	0.12	4.32
J-24	883	105.95	94.25	1128	1054.94	0.12	3.21
J-25	840	91.15	74.95	1050.78	1054.94	2.17	4.97
J26	791.1	147.17	52.53	1131.42	1127.96	1.82	11.49
J-26	808	104.98	62.6	1050.76	738.71	0.49	0.87
J-27	834.89	79.49	100.44	1018.71	738.71	3.72	2.58
J28	876.5	61.72	54.61	1019.23	1128.04	1.24	9.35
J-28	882.82	59.29	88.64	1019.93	738.71	2.26	0.6
J-29	734.55	124.02	66.21	1021.36	738.71	2.04	0.98
J30	754.84	118.42	58.18	1028.68	1128.05	1.82	8.62
J-30	813.49	137.26	69.65	1130.9	738.71	1.13	0.93
J-31	706.36	86.26	68.98	905.84	738.71	1.86	0.48
J32	613.07	125.51	62.68	903.31	1128.06	4.76	4.69
J-32	631.99	117.25	58.79	903.12	738.74	25.05	2.13

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J-33	667.18	102	76	903.05	738.74	1.69	1.49
J34	949.37	101.46	64.22	1184	1128.06	3.66	5.25
J-34	931.22	110.51	60.84	1186.78	738.74	2.42	0.49
J-35	813.8	78.24	89.11	994.73	738.87	2.77	0.97
J36	887.49	74.72	76.42	1060.27	1128.05	1.55	3.93
J-36	882.41	76.95	66.51	1060.36	995.49	1.91	1.62
J-38	840.22	95.39	33.43	1060.82	994.55	3.39	1.51
J-39	924.79	99.51	65.25	1154.9	994.85	1.3	2.52
J40	803.07	82.9	65.32	994.78	1127.65	4.45	16.72
J-40	833.16	69.9	71.45	994.81	1026.83	3.6	3
J-41	824.58	73.85	86.02	995.37	1060.54	0.6	2.32
J-42	588.37	78.6	46.69	770.12	1059.39	0.89	5.27
J-43	532.45	89.97	55.16	740.51	1014.3	0.83	1.87
J44	527.61	92.07	83.19	740.52	862.44	0.92	18.8
J-44	512.8	98.47	78.82	740.51	1131.3	1.22	7.41
J-45	581.97	68.53	56.24	740.46	995.79	0.64	2.47
J46	554.96	80.22	80.48	740.47	862.47	0.89	2.94
J48	616.74	53.5	158.75	740.45	1025.83	0.59	2.1
J50	851.31	62.32	118.98	995.44	1025.56	0.92	3.72
J-50	788.24	89.45	80.98	995.1	1127.22	0.58	2.5
J-51	607.58	57.51	114.39	740.56	1151.33	0.71	4.29
J52	565.22	75.83	90.43	740.58	1089.96	1.3	1.9
J-52	569.79	73.84	93.91	740.56	1009.17	0.85	5.92
J60	826.7	96.88	7.08	1050.72	1152	0.85	3.04
J62	854.43	84.88	6.07	1050.72	1152.01	1.01	1.37
J64	857.71	83.46	6.56	1050.72	1152	0.43	0.15
J66	875.84	75.61	113.32	1050.69	1151.22	0.54	5.29
J68	854.24	84.97	76.17	1050.72	1059.6	1.02	2.96
J70	614.4	54.56	87.28	740.56	1060.7	0.75	1.66
J72	537.63	87.75	67.28	740.55	994.06	7.1	2.42
J74	880	115.42	103.24	1146.91	1054.61	0	9.86
J76	870	119.46	117.41	1146.24	1127.22	0	3.36
J78	745	168.33	112.87	1134.27	1127.22	0	1.12
J82	776.8	158.65	4.76	1143.67	996.06	0	1.69
J84	750	69.93	87.31	911.71	1127.22	0	2.21
J86	859	144.7	83.91	1193.63	994.94	0	5.79
J88	803	107.04	80.82	1050.53	738.77	0	0.76
J90	980	108.3	91.84	1230.43	738.88	0	0.96
J92	980	6.85	96.2	995.85	738.71	0	1.63
J94	884	72.18	65.24	1050.92	859.13	0	2.45
J96	849	87.27	58.5	1050.81	859.17	0	11.19
J98	783	115.76	120.76	1050.69	1018.41	0	0.11
J100	851.99	71.95	52.75	1018.38	863.23	5.51	1.77
J102	833.34	80.02	104.98	1018.38	1018.86	7.1	3.59
J104	859.8	68.56	28.47	1018.34	1014.11	2.81	0

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J108	960.9	72.54	94.23	1128.66	1127.91	0.67	13.32
J120	956.52	74.43	96.12	1128.65	859.72	1.73	13.28
J124	946.95	78.57	74.31	1128.65	738.82	2.76	1.23
J126	823.07	84.69	93.8	1018.91	1127.91	2.31	0
J128	963.31	72.19	98.12	1130.25	1127.9	0.79	0
J130	989.53	60.14	105.9	1128.6	1127.9	3.18	0
J132	970.83	12.77	100.71	1000.36	1127.9	0.65	0
J134	985.72	4.53	95.09	996.2	1127.9	0.22	0
J136	976.39	65.93	96.39	1128.85	1127.9	1.83	0
J138	836.98	96.49	95.09	1060.11	1127.9	0.52	0
J140	1006.48	52.58	50.33	1128.07	957.38	7.88	0
J142	593.95	63.35	50.6	740.45	957.01	0.6	0
J144	506.45	101.19	52.61	740.45	956.67	3.84	0
J146	1001.76	54.64	54.78	1128.11	956.67	3.78	0
J148	533.72	89.4	55.79	740.45	957.01	0.25	0
J150	585.61	66.96	57.68	740.45	957.38	0.62	0
J152	993.52	58.32	62.55	1128.38	957.64	2.51	0
J154	577.66	70.4	101.26	740.45	1025.27	0.52	3.07
J156	579.21	69.73	64.69	740.45	957.59	0.3	0
J158	983.11	62.97	52.32	1128.74	1014.29	2.75	2.1
J160	563.01	76.74	46.82	740.46	1151.35	1.3	3.6
J162	979.56	64.49	64.36	1128.7	994.56	2.52	0.77
J164	598.04	61.59	55.88	740.46	1014.4	0.34	8.61
J166	532.8	89.81	66.9	740.5	1014.43	0.52	10.21
J168	951.33	76.7	77.76	1128.7	1014.72	0.76	6.39
J170	917.25	33.63	59.7	995.02	1014.58	0.78	6.42
J172	843.97	65.39	60.04	995.18	1014.37	0.89	5.84
J174	976.6	65.48	58.38	1128.02	1014.44	7.57	5.59
J176	861.6	123.06	62.05	1146.17	1014.55	1.84	6.83
J178	861.62	86.22	62.61	1061.01	1014.86	0.62	9.31
J180	670.07	100.74	59.95	903.03	1015.14	13.05	2.79
J182	949.02	79.46	57.31	1132.76	1015.35	2.91	3.81
J184	865.72	56.26	65	995.82	1015.54	0.28	6.62
J186	676.37	98.03	85.68	903.05	1015.91	1.24	6.66
J188	658.73	208.19	88.6	1140.17	1016.26	1.63	4.31
J190	939.95	124.32	100.24	1227.44	1016.5	1.45	4.78
J192	886.8	114.05	118.33	1150.54	1016.98	2.25	7.91
J194	880.85	73.51	122.03	1050.84	1016.74	0.14	5.38
J196	792	97.99	98.98	1018.59	1016.26	2.3	6.97
J198	1135.63	7.08	59.82	1152	1015.51	1.51	5.66
J200	1136.83	6.56	105.66	1152	1017.85	0.09	6.7
J202	889.17	113.01	119.04	1150.51	1018.29	2.36	6.58
J204	883.46	76.7	118.49	1060.84	1018.53	0.77	1.23
J206	858.87	87.43	114.08	1061.05	1018.64	0.22	3.25
J208	838.49	67.54	91.55	994.67	1025.2	1.36	3.45

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J210	855.7	155.82	112.32	1216.03	1025.37	1.89	7.04
J212	866.2	151.28	51.69	1216.03	861.69	0.5	1.7
J214	985.05	4.82	72.84	996.2	861.68	0.85	6.07
J216	925.32	94.47	95.32	1143.77	861.68	0.97	4.75
J218	800.9	83.97	93.68	995.09	861.68	0.61	4.85
J220	516.26	96.95	67.19	740.45	861.75	0.83	4.08
J222	708.26	83.69	81.78	901.8	862.26	1.53	3.57
J224	723.89	76.93	89.4	901.78	862.01	12.14	2.72
J226	739.15	124.64	85.01	1027.38	861.82	0.08	1.04
J228	741.24	70	116.47	903.12	861.69	1.25	0.51
J230	948.29	27.12	127.32	1011	861.72	0	0.96
J232	910	94.27	107.56	1128	861.81	0.21	2.65
J234	637.45	114.61	99.4	902.5	861.84	10.35	9.42
J236	566.99	75.03	84.81	740.49	861.9	3.57	8.78
J238	911	93.84	83.16	1128	861.96	1.84	15.29
J240	895	100.76	51.66	1128	862.35	0.63	9.64
J242	908	95.14	70.19	1128	862.23	0.43	7.37
J244	905	96.43	58.16	1128	862.55	0	8.88
J246	908	95.14	84.45	1128	862.47	0	3.32
J248	841	90.72	75.05	1050.78	862.46	1.79	2.93
J250	835	93.31	51.07	1050.78	862.97	2.78	6.79
J252	830	95.47	120.41	1050.78	861.15	5.49	2.26
J254	828	96.34	89.75	1050.78	1151.49	1.56	13.39
J256	824	98.07	90.11	1050.78	1151.47	0.98	11.48
J258	813	102.82	87.39	1050.76	1151.45	0	5.82
J260	893.31	53.53	95.23	1017.1	1151.45	1.63	6.77
J262	1043.08	47.24	83.92	1152.33	1054.94	2.07	2.65
J264	845.73	64.56	118.59	995.02	1127.24	0.44	5.03
J266	885.18	57.55	117.27	1018.27	1127.23	5	4.07
J268	859.73	68.59	116.69	1018.34	1127.22	6.48	2.07
J270	876.53	61.39	83.01	1018.51	994.19	4.02	1.51
J272	875.53	61.73	77.99	1018.28	994.16	4.01	5.88
J274	879.44	60.09	76.93	1018.41	994.1	3.28	6.05
J276	871.06	63.8	80.48	1018.59	994.03	3.98	5.38
J278	870.08	64.38	96.41	1018.95	1054.62	6.97	18.27
J280	865.23	67	99.07	1020.17	1054.72	5.16	19.05
J282	817.78	87.7	78.09	1020.58	1055.33	5.12	6.54
J284	811.39	90.63	72.77	1020.97	1055.77	2.43	5.95
J286	784.69	102.28	75.2	1021.21	1056.3	3.49	8.64
J288	743.35	120.33	70.31	1021.62	1151.23	5.85	6.12
J290	787.38	100.96	52.91	1020.84	1151.72	4.81	4.5
J292	877.17	61.8	75.77	1020.08	1151.53	3.8	4.71
J294	773.52	108.61	91.59	1024.68	1151.33	3.83	0.8
J296	743.01	122.62	85.9	1026.56	1059.93	4.69	6.58
J298	744.53	122.49	85.03	1027.79	1060.39	0.83	6.07

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J300	765.64	158.52	86.03	1132.21	1061.03	4.04	3.18
J302	742.17	71.75	77.52	908.09	1060.35	0.7	3.72
J304	693.25	92.51	60.46	907.19	1059.74	2.17	4.44
J306	641.25	114.5	92.12	906.02	1059.34	3.26	29.38
J308	645.05	112.34	94.7	904.84	1059.22	3.68	7.76
J310	673.16	99.97	81.36	904.35	1058.06	1.42	8.97
J312	655.27	107.71	69.8	904.35	1057.09	1.57	9.6
J314	665.25	103.39	103.49	904.35	1151.15	0.65	7.2
J316	592.35	134.7	88.79	903.84	1151.11	0.39	8.85
J318	567.29	145.38	91.48	903.48	1151.1	2.14	10.59
J320	665.77	102.62	97.87	903.08	1151.11	24.36	12.41
J322	669.66	100.94	83.29	903.08	1151.16	14.64	15.73
J324	742.87	69.3	33.55	903.12	1151.35	5.26	3.74
J326	699.92	87.91	83.84	903.22	993.97	2.53	18.34
J328	728.06	75.69	83.13	903.09	993.96	4.06	36.71
J330	688.91	92.6	89.18	903.04	993.96	1.56	19.98
J332	744.87	68.43	82.57	903.12	994	3.82	10.34
J334	582.71	138.6	69.55	903.22	994	8.47	8.85
J336	943.95	99.56	68.72	1174.18	994	4.92	4.98
J338	943.08	102.24	63.15	1179.52	994.31	3.65	8.98
J340	860.87	86.16	56.58	1060.11	994.56	1.33	2.93
J342	853	150.23	36.22	1200.4	994.55	2.84	2.35
J344	856.05	151.66	58.18	1206.77	995.66	2.2	3.41
J346	857.38	154.43	73.88	1214.51	995.44	1.12	2.05
J348	802.22	83.27	88.03	994.78	919.71	0.81	2.25
J350	816.2	77.19	89.73	994.7	919.7	2.55	3.04
J352	807.92	80.75	84.17	994.65	919.7	3.75	2.36
J354	831.67	98.76	77.91	1060.04	765.32	8.43	5.44
J356	825.61	101.39	78.44	1060.07	765.38	7.36	4.11
J358	874.75	80.19	76.57	1060.19	765.42	2.24	2.11
J360	988.65	70	77.4	1150.51	765.4	2.86	2.73
J362	1029.35	53.13	83.65	1152.22	765.36	1.86	1.91
J364	976.31	75.69	84.36	1151.33	765.3	1.1	0.89
J366	939.52	91.1	95.81	1150.2	738.78	0.24	3.19
J368	861.29	86.31	95.53	1060.88	738.79	4.36	1.99
J370	863.76	85.27	89.23	1060.94	738.79	4.46	9.76
J372	862.09	86.07	83.91	1061.13	738.82	2	6.43
J374	881.09	77.78	83.13	1060.95	738.85	2.56	1.74
J376	919.91	60.97	88.8	1060.9	738.88	2.51	1.54
J378	846.31	92.78	69.96	1060.87	956.78	6.02	0
J380	869.93	82.47	75.95	1060.63	738.98	2.68	0.88
J382	895.67	71.27	91.39	1060.49	738.95	2.9	1.84
J384	911.84	103.14	97.78	1150.35	738.92	4.33	2.28
J386	945.77	89.23	74.15	1152.11	738.94	0	1.26
J388	939.55	92.55	90.2	1153.57	738.78	1.37	0.79

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J390	958.55	86.11	82.63	1157.67	738.81	5.83	1.76
J392	1073.77	35.6	70.75	1156.1	738.74	1.4	2.16
J394	800.1	84.12	64.05	994.62	738.74	10.22	0.88
J396	801.72	83.42	67.79	994.64	738.73	21.51	1.43
J398	787.73	89.47	85.99	994.62	738.73	11.12	1.71
J400	835.1	69.09	79.11	994.87	738.74	2.14	1.33
J402	848.27	63.44	77.36	994.98	738.74	1.52	1.36
J404	863.72	56.78	83.27	995.02	738.74	1.1	0.95
J406	910.79	36.42	81.62	995.02	738.74	1	1.02
J408	861.11	58.18	79.47	995.65	738.74	1.49	12.53
J410	716.13	88.04	73.43	919.73	738.75	0.6	2.38
J412	712.2	89.74	92.96	919.73	738.76	0.63	1.81
J414	725.07	84.18	77.56	919.73	738.75	1.05	0.68
J416	585.17	79.98	99.67	770.11	738.71	1.77	1.28
J418	583.99	80.49	73.07	770.12	738.71	1.47	4.77
J420	586.41	79.44	78.38	770.11	738.71	1.1	1.28
J422	571.92	85.7	88.2	770.1	738.71	0.39	1.7
J424	570.21	86.43	84.77	770.08	738.71	0.28	1.31
J426	517.22	96.56	64.51	740.51	738.71	5.06	0.97
J428	517.87	96.28	67.86	740.51	738.72	1.57	0.74
J430	544.79	84.64	52.75	740.52	738.72	0.55	1.26
J432	546.62	83.85	88.35	740.53	738.71	1.17	2.6
J434	533.54	89.51	85.99	740.53	739.27	0.87	0.59
J436	795	110.6	75.35	1050.76	739.17	0.6	3.63
J438	563.35	76.61	84.64	740.53	862.01	0.46	6.28
J440	567.46	74.84	90.93	740.52	1016.47	0.4	7.15
J442	530.18	90.94	107.95	740.47	1026.44	0.41	5.5
J444	547.74	83.35	69.8	740.48	1059.25	0.55	6.85
J446	575.13	71.49	60.91	740.46	859.12	1.45	1.64
J448	590.62	64.8	62.92	740.46	859.12	0.55	1.53
J450	539.87	86.74	91.15	740.46	738.9	1.25	2.77
J452	555.81	79.85	62.35	740.46	995.49	0.6	1.68
J454	559.84	78.11	89.42	740.46	995.01	0.64	2.25
J456	546.18	84.01	57.99	740.46	994.79	0.42	15.67
J458	549.99	82.37	34.26	740.46	1151.74	0.39	4.27
J460	568.95	74.17	69.26	740.47	861.71	1.24	4.64
J462	523.79	93.7	69.73	740.47	739.15	0.83	1.86
J464	559.4	78.3	77.78	740.47	739.12	0.4	1.87
J466	508.23	100.42	56.88	740.45	739.12	0.39	0.93
J468	569.73	73.82	54.31	740.45	739.13	0.79	0.76
J470	557.45	79.13	55.6	740.45	739.15	1.03	1.02
J472	534.74	88.95	59.91	740.45	739.17	0.75	8.85
J474	542.69	85.52	48.83	740.45	739.18	0.95	10.09
J476	589.53	65.26	81.15	740.45	739.09	0.75	0.7
J478	581.78	68.62	75.23	740.45	739.19	0.48	2.34

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J480	534.39	89.11	73.22	740.45	739.1	1.38	1.1
J482	540.41	86.57	47.23	740.6	739.12	0.44	1.69
J484	564.93	75.96	54.91	740.59	739.15	1.6	1.88
J486	666.28	102.49	40.69	903.29	739.18	4.07	2.12
J488	806.19	92.96	80.18	1021.18	739.23	3.03	1.19
J490	776.8	158.71	59.03	1143.82	739.13	2.12	2
J492	897.84	70.5	63.02	1060.87	739.11	1.88	0.97
J494	718.27	79.37	59.39	901.82	739.21	1.03	7.54
J496	713.62	81.38	91.65	901.82	1088.33	0.72	6.02
J498	528.12	91.86	94.05	740.54	1088.03	2.08	4.6
J500	860.68	58.12	112.97	995.07	1087.48	1.26	1.03
J502	1072.52	35.41	102.54	1154.41	1087.77	2.06	4.55
J504	701.55	89	91.22	907.36	1088.64	2.6	4.2
J506	577.91	70.34	110.71	740.57	1087.43	1.42	9.12
J508	559.24	78.41	112.14	740.56	1087.58	1.38	2.49
J510	613.55	54.93	111.49	740.57	1087.58	0.59	3.5
J512	610.58	56.21	116.88	740.57	1087.41	0.79	5.94
J514	600.62	60.52	96.3	740.58	1087.32	0.54	4.18
J516	626.27	49.43	96.27	740.58	1087.32	0.62	4.72
J518	551.42	81.79	65.97	740.55	954.11	0.51	4.86
J520	629.89	47.86	47.87	740.56	954.02	1.31	6.04
J522	612.16	55.53	67.57	740.57	954.01	1.72	6.93
J524	645.08	41.3	45.02	740.58	954.08	1.65	3.24
J526	553.83	80.76	37.23	740.59	954.08	0.44	2.8
J528	602.63	59.65	54.5	740.57	954.04	2.18	1.94
J530	593.37	63.65	55.02	740.56	954.08	0.3	1.64
J532	601.87	59.98	65.01	740.59	954.13	0.48	3.97
J534	876.39	75.39	61.74	1050.72	954.06	1.66	2.92
J536	870.53	77.92	48.04	1050.72	954.54	1.65	7.9
J538	826.23	97.08	50.03	1050.73	954.54	0.32	8.35
J540	850.66	86.52	91.86	1050.72	1087.32	0.78	5.7
J542	877.69	74.83	80.67	1050.72	1087.33	1.03	9.54
J544	831.41	94.85	93.18	1050.74	1087.33	1.93	7.28
J546	828.25	96.21	112.81	1050.72	1087.58	0.71	3.28
J548	829.77	95.55	100.87	1050.72	1087.68	0.91	1.51
J550	817.13	101.01	99.48	1050.72	1087.77	0.99	3.13
J552	864.62	80.46	91.45	1050.69	1087.32	0.97	2.47
J554	864.71	80.43	100.95	1050.69	1087.68	0.17	3.81
J556	801.55	107.66	53.93	1050.5	739.12	1.61	1.93
J558	843.33	89.59	87.11	1050.5	739.08	1.03	2.82
J560	797.75	109.3	117.19	1050.5	1151.01	1.78	0
J564	849.97	86.72	121.47	1050.5	1150.9	1.11	0
J566	867.99	78.92	121.33	1050.5	1025.58	1.11	0
J568	828.01	96.21	107.94	1050.5	1026.41	0.82	0
J570	826.84	96.72	48.3	1050.5	861.69	0.63	0

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J572	803.81	106.68	126.46	1050.5	1151.43	2.21	0
J574	811.29	103.44	65.56	1050.5	954.61	1.71	0
J578	838.84	91.59	6.92	1050.64	996	1.53	0
J580	874.9	76.02	89.07	1050.69	1089.97	1.33	0
J582	900.77	64.83	104.2	1050.69	1089.96	2.65	0
J586	871.85	77.34	73.84	1050.69	953.76	1.26	0
PMP-1_ND	792	97.82	93.71	1018.21	1008.7	0.04	0.1
PMP-1_NU	780.51	1.73	1.16	784.51	783.2	0.04	0.1
PMP-10_ND	792	97.99	93.91	1018.59	1009.17	0.92	2.37
PMP-10_NU	777.5	3.05	2.6	784.56	783.51	1	2.58
PRV-108_ND	941.08	97.24	90.97	1165.96	1151.45	0.53	0.75
PRV-108_NU	946.02	95.33	88.85	1166.47	1151.48	0.45	0.61
PRV-11_ND	776.09	110	104.99	1030.45	1018.87	0.14	0.25
PRV-11_NU	776.15	152.67	107.61	1129.19	1024.99	0.08	0.18
PRV-131_ND	567	75.18	74.91	740.86	740.24	0	6.61
PRV-131_NU	567	184.92	184.44	994.63	993.51	0.21	6.05
PRV-19_ND	911.55	100.42	93.26	1143.77	1127.22	0.79	1.31
PRV-19_NU	898.78	138.41	98.78	1218.85	1127.22	0.34	0.66
PRV-32_ND	654.31	108.12	90	904.35	862.44	0	0.41
PRV-32_NU	657.83	208.58	159.13	1140.17	1025.83	0.14	0.44
PRV-6_ND	629	118.38	99.98	902.74	860.19	3.71	8.96
PRV-6_NU	615.55	124.26	105.93	902.9	860.52	4.92	3.88
PRV-60_ND	734.73	80	80	919.73	919.73	0.07	0.72
PRV-60_NU	755.25	103.73	103.78	995.13	995.24	0	0.67
PRV-71_ND	673	42	40	770.12	765.5	0.41	0.65
PRV-71_NU	673	106.69	106.68	919.72	919.69	0.69	1.18
PRV-90_ND	947.22	85	77.84	1143.78	1127.22	1.09	2.56
PRV-90_NU	941.01	123.86	80.52	1227.44	1127.22	0.21	0.46
SADDLE_CRK_ND	935.32	50	67	1050.95	1090.26	2.41	5.56
SADDLE_CRK_NU	949.61	87.5	87.29	1151.95	1151.46	2.38	4.29
U7008_ND	949.64	79.26	78.62	1132.94	1131.45	0	0
U7008_NU	949.03	26.75	28.1	1010.88	1014.01	0	0
V8002_ND	735.82	75.34	54.43	910.05	861.69	0.14	1.14
V8002_NU	743.06	72.7	51.3	911.19	861.69	0.82	1.11
V8006_ND	859.57	86.72	84.48	1060.11	1054.94	0.14	0.4
V8006_NU	858.55	145.09	116.2	1194.07	1127.25	0.11	0.21
V8010_ND	740.75	70.21	52.99	903.12	863.29	0.11	0.14
V8010_NU	739.89	124.32	120.42	1027.38	1018.35	0.12	0.16
V8012_ND	869.41	83	82.98	1061.34	1061.3	0.65	0.84

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
1	538.04	87.32	84.93	739.96	734.44	1.26	1.58
2	786.43	99.52	95.1	1016.57	1006.36	1.36	6.3
3	681.44	93.36	76.33	897.33	857.96	5.33	23.44
4	567	75.15	74.55	740.78	739.4	0	44.36
6	705.65	82.86	65.84	897.28	857.91	1.89	5.5
8	721.66	75.95	58.92	897.28	857.9	3.98	19.81
9	621.35	119.56	102.86	897.82	859.21	18.41	136.06
10	779.87	2.03	1.56	784.56	783.46	7.7	96.33
12	951.9	82.97	75.76	1143.76	1127.1	2.18	6.6
13	877.39	50.81	50.27	994.9	993.65	1.44	8.16
15	774.07	94.8	94.2	993.28	991.92	1.85	4.77
16	834.78	68.3	67.19	992.72	990.15	1.62	14.8
17	806.44	80.48	79.16	992.53	989.5	0.44	36.43
18	964.64	77.45	70.25	1143.75	1127.1	3.64	7.81
19	887.94	142.42	103.43	1217.29	1127.12	0.97	3.02
20	938.74	124.27	81.46	1226.11	1127.11	0.03	0.85
21	865.15	148.81	113.3	1209.27	1127.14	1.41	6.03
22	859.02	144	115.99	1192.02	1127.25	2.68	5.73
23	945.35	95.08	88.47	1165.21	1149.95	2.56	10.11
24	1063.28	40.72	37.76	1157.45	1150.61	2.47	13.61
25	1046.39	45.67	45.4	1152	1151.37	1.38	6.01
26	945.86	86.16	88.24	1145.1	1149.9	2.02	5.34
27	871.38	114.83	120.01	1136.93	1148.9	1.01	2.71
28	867.87	83.47	83.41	1060.89	1060.76	1.29	2.21
29	650.94	204.76	161.56	1124.44	1024.54	1.78	6.22
31	653.69	107.61	90.27	902.55	862.43	1.73	4.13
32	662.57	103.78	85.72	902.55	860.79	1.45	3.14
33	603.35	129.21	111.21	902.15	860.52	1.72	2.89
34	566.28	145	127.24	901.6	860.51	0.26	0.16
35	618.37	121.04	103.78	898.28	858.36	23.89	59.22
36	644.16	109.7	92.63	897.83	858.36	16.37	29.08
37	680.06	93.95	76.96	897.33	858.03	3.36	10.29
38	714.38	79.09	62.07	897.28	857.91	1.53	39.59
39	692.27	88.62	71.62	897.21	857.89	7.49	6.09
40	703.92	83.58	66.57	897.2	857.87	15.61	33.12
41	698.26	86.02	69.01	897.18	857.85	2.95	5.71
43	703.23	83.81	66.82	897.04	857.75	3.49	5.96
44	725.91	74	57	897.04	857.73	0.91	12.57
45	713.22	79.46	62.49	896.98	857.73	1.63	3.82
46	722.26	75.55	58.57	896.98	857.69	5.73	29.25
47	723.42	75.05	58.08	896.98	857.73	5.51	11.69
48	685.3	91.67	74.69	897.29	858.01	0.88	3.98
49	696.69	86.75	69.74	897.28	857.95	2.84	7.04
50	707.55	82.04	65.02	897.28	857.91	1.35	5.17

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
51	706.24	82.57	65.56	897.18	857.85	3.99	9.83
52	709.45	81.12	64.12	897.04	857.74	0.86	1.65
53	718.43	77.21	60.23	896.98	857.71	1.97	4.14
54	817.93	75.61	72.7	992.78	986.05	2.18	17.41
56	845.57	63.77	61.95	993.03	988.84	1.26	20.46
57	816.3	76.47	75.02	993.14	989.79	1.67	12.95
58	720.04	86.35	86.32	919.72	919.66	0.24	1.32
59	708.04	91.54	91.5	919.72	919.63	0.66	3.06
60	619.99	64.92	62.88	770.12	765.41	0.98	2
61	608.19	70.02	67.99	770.12	765.41	0.47	2.26
62	577.27	83.36	81.13	770.05	764.89	2.05	6.69
63	591.33	77.27	74.94	770.01	764.64	0.9	3.21
64	543.68	97.92	95.88	770.11	765.4	2.96	7.51
65	563.81	89.21	87.18	770.11	765.41	7.77	9.17
66	533.89	102.14	99.74	770.09	764.54	3.15	35.28
67	727.29	83.21	83.16	919.72	919.6	0.74	4.07
69	576.73	83.58	81.25	770.01	764.62	2.92	9.28
70	555.13	92.92	90.59	770.01	764.62	0.96	2
71	525.23	105.85	103.52	770.01	764.62	3.06	6.86
72	535.4	101.45	99.12	770.01	764.62	2.5	5.31
73	552.95	93.86	91.53	770.01	764.62	1.43	4.34
74	579.81	82.25	79.92	770.01	764.63	1.03	3
75	629.92	60.58	58.25	770.01	764.63	0.76	2.6
76	633.33	59.11	56.78	770.01	764.63	1.28	3.75
77	623.62	63.31	60.98	770.01	764.63	0.54	2.45
78	721.81	85.58	85.54	919.72	919.62	1.33	4.84
79	861.51	57.35	56.99	994.14	993.31	3.16	7.05
80	903.62	39.09	37.51	994.01	990.35	2.63	7.21
81	752.55	117.39	114.83	1024.03	1018.1	3.29	6.51
82	912.19	34.96	33.12	993.03	988.78	1.37	4.55
83	922.49	95.69	88.48	1143.76	1127.1	1.17	4.63
84	843.44	64.87	62.6	993.45	988.19	1.42	3.18
85	815.33	76.55	73.93	992.36	986.29	2.51	7.34
87	807.41	80	77.4	992.41	986.39	1.5	2.58
88	792.98	86.21	83.39	992.33	985.83	6.7	17.57
90	764.21	99.07	98.6	993.32	992.22	0	0.87
92	924.4	89.16	88.38	1130.58	1128.78	1.54	3.94
93	639.56	56.46	54.43	770.12	765.44	0.52	1.48
94	545.88	96.94	94.7	770.05	764.88	1.56	5.6
95	811.57	78.03	75.26	992	985.62	6.13	16.11
96	834.88	96.52	90.55	1058.07	1044.28	5.03	17.99
97	892.13	71.9	66.27	1058.4	1045.38	0.81	9.04
98	848.81	87.25	44.28	1050.57	951.2	0.3	12.7
99	934.32	98.5	93.09	1162.1	1149.59	10.51	21.18
100	951.89	88.68	85.45	1156.96	1149.5	6.38	38.22

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
101	1002.17	62.65	63.79	1147.05	1149.67	3.17	9.06
102	962.06	79.03	80.75	1144.83	1148.8	4.68	11.66
103	1056.45	43.68	40.72	1157.45	1150.6	4.92	9.9
104	1103.59	18.79	19.91	1147.04	1149.64	3.27	7.35
105	899.28	104.82	108.16	1141.67	1149.4	4.03	7.93
106	934.44	90.54	93.09	1143.82	1149.71	1.46	4.13
107	849.95	90.95	89.99	1060.28	1058.04	4.29	10.36
108	827.59	100.53	98.12	1060.08	1054.5	2.8	42.35
109	852.47	89.68	87.01	1059.85	1053.67	6.98	16.32
110	878.91	78.35	75.66	1060.1	1053.87	6.64	59.95
111	905	67.07	64.14	1060.09	1053.32	2.64	62.26
112	925.66	58.17	56.13	1060.18	1055.46	0.97	7.98
113	888.5	74.3	73.13	1060.31	1057.6	3.41	10.49
114	810.84	107.7	105.72	1059.9	1055.31	5.22	13.09
115	983.37	69.9	71.75	1145.02	1149.3	4.03	12.27
117	735.52	74.48	54.02	907.77	860.46	2.15	5.98
118	600.36	130.25	112.53	901.57	860.59	2.62	4.56
119	742.64	68.76	51.43	901.66	861.58	2.01	12.49
120	776.41	136.8	105.98	1092.77	1021.48	2.3	5.82
121	745.33	67.67	50.39	901.81	861.85	5.44	10.08
122	776.99	109.44	104.55	1030.07	1018.76	7.88	15.19
123	499.12	104.37	102.9	740.47	737.08	0.51	3.23
124	510.2	99.54	97.84	740.38	736.45	0.43	3.4
125	508.72	100.17	98.47	740.37	736.43	0.85	29.21
126	527.63	91.91	90.03	740.18	735.82	3.16	2.13
128	536.37	88.11	86.09	740.13	735.45	0.06	1.13
129	533.92	89.17	87.13	740.12	735.41	0.34	0.61
130	523.21	93.85	92.13	740.24	736.25	0.65	0.62
131	520.75	94.96	93.26	740.36	736.41	1.25	0.45
132	516.66	96.74	95.03	740.36	736.41	5.93	10.49
134	556.33	79.46	77.28	740.08	735.05	1.05	3.65
135	550.95	81.75	79.29	740	734.29	2.87	5.43
136	543.94	84.78	82.32	740	734.29	2.15	6.27
137	556.73	79.23	76.62	739.95	733.9	1.51	18.63
138	562.09	76.91	74.25	739.94	733.8	2.33	5.61
139	541.87	85.65	82.97	739.93	733.75	1.92	3.61
140	544.26	84.61	81.93	739.93	733.72	1.03	2.3
141	541.79	85.68	82.99	739.93	733.7	0.41	1.08
142	550.01	82.13	79.45	739.93	733.72	1.78	4.16
143	575.52	71.1	68.41	739.93	733.72	1.97	4.36
144	540.87	86.08	83.36	739.92	733.64	0.41	1.31
145	544.5	84.51	81.77	739.92	733.6	1.68	3.51
146	553.75	80.5	77.69	739.9	733.42	0.94	2.82
147	550.04	82.1	79.24	739.89	733.28	0.82	52.05
148	534.94	88.62	85.74	739.88	733.21	2.09	6.37

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
149	528.39	91.46	88.57	739.88	733.21	1.66	3.34
150	523.71	93.47	90.59	739.87	733.2	6.95	14.2
151	544.26	84.61	81.93	739.93	733.74	0.81	1.62
152	533.46	89.28	86.55	739.92	733.61	2.66	4.97
349	840	91.04	47.96	1050.52	950.91	0.47	16.49
350	834	93.63	50.1	1050.52	949.85	1.26	24.58
352	813.88	102.3	58.97	1050.45	950.24	0	28.74
353	819.05	100.06	111.2	1050.43	1076.21	0.2	13.66
354	822.97	98.33	109.51	1050.35	1076.21	2.56	11.82
355	827.23	96.49	107.82	1050.35	1076.57	0.7	3.24
356	836.65	92.41	103.94	1050.35	1077	1.6	4.31
357	850.55	86.4	98.16	1050.35	1077.54	0.38	3.36
358	859.81	82.39	94.34	1050.34	1077.97	0.85	7.9
359	866.91	79.32	91.27	1050.34	1077.97	0.12	11.37
361	832.32	94.26	105.4	1050.3	1076.05	2.27	18.47
366	883.75	72.04	86.43	1050.34	1083.61	1.92	13.91
377	843.86	89.25	100.37	1050.26	1075.97	0.44	16.46
384	887.47	70.39	81.43	1050.26	1075.78	1.74	10.52
385	885.82	71.11	82.13	1050.26	1075.75	1.99	6.06
386	884.7	71.59	82.62	1050.26	1075.75	0.32	12.85
387	882.56	72.52	83.54	1050.26	1075.75	0.51	10.84
388	884.75	71.57	82.6	1050.26	1075.75	2	13.54
390	801.4	107.61	118.6	1050.26	1075.67	4.01	28.67
391	783.52	115.35	126.34	1050.26	1075.67	0.46	14.87
392	858.98	82.72	93.76	1050.27	1075.8	2.18	10.24
393	849.18	86.96	98.01	1050.27	1075.83	1.21	12.29
394	845.84	88.4	99.52	1050.27	1075.98	0.82	7.17
395	861.44	81.65	92.68	1050.26	1075.76	1.9	12.41
396	858.51	82.92	93.92	1050.26	1075.71	0.94	11.32
397	803.9	106.53	117.53	1050.26	1075.69	0.1	15.08
398	768.6	121.8	71.67	1050.26	934.35	0	11.6
399	837.59	91.91	43.49	1050.13	938.16	2.03	9.62
401	780.13	116.59	67.59	1049.74	936.44	37.85	9
402	785.79	114.14	65.16	1049.75	936.48	0.08	2.46
403	785.12	114.43	65.45	1049.75	936.48	4.3	13.06
404	782.25	115.68	66.73	1049.77	936.57	1.63	5.85
405	798.23	108.82	60.52	1049.88	938.19	0.98	23.06
406	813.21	102.37	54.04	1049.92	938.17	2.58	26.03
407	827.84	96.08	47.71	1050.01	938.16	4.17	25.59
408	784.09	114.88	65.77	1049.76	936.18	1.4	5
409	817.14	100.59	51.26	1049.75	935.68	2.88	12.17
410	807.55	104.74	55.3	1049.75	935.45	2.75	10.26
411	824.98	97.2	47.84	1049.75	935.61	0.23	9.17
412	825.36	97.04	47.74	1049.76	935.76	0.75	6.28
425	747.27	131.02	80.94	1050.26	934.45	0	9.43

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
429	841.08	90.24	40.77	1049.75	935.36	0.75	13.63
430	743.74	132.55	82.43	1050.26	934.35	0	10.84
431	735.14	136.27	86.15	1050.26	934.36	0	11.88
432	740.6	133.91	83.82	1050.26	934.42	0	6.2
433	766.64	122.65	72.52	1050.26	934.35	0	19.43
434	747.3	131.01	80.89	1050.26	934.35	0	20.83
435	737.78	122.25	121.05	1020.49	1017.7	2.73	4.58
438	756.17	112.85	112.53	1017.14	1016.39	9.18	17.02
439	759.9	110.09	110.47	1014.48	1015.36	7.92	22.87
440	688.95	91.96	74.42	901.61	861.03	2.89	5.56
441	738.18	117.8	119.23	1010.59	1013.9	7.58	17.1
442	771.23	102.85	103.96	1009.08	1011.65	2.12	5.04
443	765.43	105.66	106.81	1009.78	1012.43	3.18	12.57
444	839.79	73.07	73.93	1008.76	1010.75	2.63	9.73
445	799.99	90.47	91.42	1009.19	1011.4	6.42	10.76
446	833.9	75.27	76.11	1007.96	1009.89	10.3	24.03
447	849.17	68.53	69.27	1007.65	1009.36	8.7	15.86
448	884.1	53.19	53.71	1007.1	1008.3	4.87	8.71
449	874.1	57.05	57.79	1006.03	1007.75	1.52	2.99
450	873.19	57.05	57.64	1005.11	1006.47	3.84	7.38
451	824.25	78.44	79.17	1005.64	1007.32	4.83	8.12
453	880.41	53.81	54.49	1004.85	1006.42	6.58	11.25
458	508.05	100.28	97.85	739.95	734.33	1.61	2.09
459	519.21	95.45	92.95	739.93	734.17	2.05	22.7
460	589.95	64.85	62.37	739.93	734.19	0.98	2.11
461	565.26	75.52	72.99	739.91	734.04	0.77	1.72
462	549.97	82.13	79.6	739.91	734.04	1.21	2.92
463	519.26	95.39	92.72	739.85	733.68	1.64	3.33
464	550.67	81.8	79.08	739.83	733.55	0.06	3.84
465	549.25	82.39	79.56	739.77	733.22	2.3	4.68
466	564.63	75.73	72.87	739.76	733.15	1.45	2.78
467	567.13	74.65	71.78	739.75	733.12	1.48	3.06
468	603.31	58.99	56.1	739.73	733.03	1.04	2.93
469	513.51	97.84	94.99	739.76	733.17	1.68	2.83
470	531.16	90.2	87.33	739.75	733.1	0.94	2.21
471	556.62	79.19	76.29	739.74	733.05	1.38	3.17
472	562.66	76.57	73.67	739.74	733.02	0.8	1.12
473	554.73	80.01	77.1	739.75	733.03	2.07	9.28
474	548.54	82.68	79.77	739.74	733.02	0.9	1.43
475	561.88	76.91	74.01	739.74	733.03	0.93	1.99
476	593.58	63.21	60.31	739.74	733.04	1.3	2.27
477	590.2	64.66	61.76	739.73	733.01	0.67	1.12
478	612.66	54.95	52.03	739.72	732.98	2.14	3.61
479	538.73	86.92	84.02	739.74	733.02	2.53	5.25
480	562.63	76.59	73.69	739.74	733.04	0.56	1.7

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
481	547.46	83.15	80.24	739.74	733.02	1	1.52
482	592.31	63.74	60.8	739.71	732.9	0.64	1.96
483	550.42	81.86	78.93	739.72	732.94	0.6	1.68
484	544.48	84.42	81.48	739.71	732.91	0.77	1.62
485	538.5	87.01	84.05	739.7	732.87	2.05	2.89
486	536.65	87.81	84.86	739.7	732.89	0.5	0.96
487	506.85	100.69	97.74	739.7	732.87	3.84	5.87
488	545.87	83.82	80.88	739.7	732.89	0.53	1.16
489	525.29	92.72	89.77	739.7	732.89	0.51	1.38
490	525.38	92.68	89.73	739.7	732.89	0.59	1.55
491	567.3	74.55	71.61	739.7	732.9	0.27	0.66
492	526.77	92.08	89.13	739.7	732.88	3.59	7.53
493	555.42	79.69	76.73	739.7	732.86	5.85	17.27
494	704.27	83.46	66.44	897.28	857.91	11.69	43.69
496	884.45	51.72	52.65	1004.05	1006.21	4.42	7.4
497	781.61	1.25	0.66	784.51	783.14	0.07	10.53
500	792	97.81	93.09	1018.19	1007.28	0.13	0.45
780	882.24	52.96	53.62	1004.7	1006.23	5.18	10.08
J10	837	72.48	72.62	1004.62	1004.94	29.61	49.64
J12	852.42	66.02	66.19	1004.67	1005.06	9.37	20.34
J14	881.62	74.09	74.27	1004.67	1005.08	12.08	25.34
J16	602.8	62.71	63.34	1004.82	1006.28	4.78	13.21
J-17	841.69	72.29	71.94	1128.06	1127.26	1.14	3.43
J18	951.42	66.26	66.98	1005.64	1007.31	2.69	7.81
J-18	886.74	74.17	73.8	1128.04	1127.18	2.94	4.93
J-19	750.42	78.31	77.93	1128.03	1127.17	4.69	7.86
J20	1137.96	78.95	79.67	1005.64	1007.31	3.92	7.78
J-21	815.88	71.9	71.26	1129.58	1128.1	1.34	5.49
J22	551.88	59.96	59.56	1128.2	1127.27	5.4	17.54
J-22	526.5	12.76	11.8	1000.34	998.11	1.11	3.03
J-23	776.09	4.53	4.45	996.19	996	0.38	2.73
J24	901	65.73	65.28	1128.39	1127.35	3.11	9.59
J-24	883	95.6	89.74	1058.06	1044.49	0.88	7.12
J-25	840	76.3	70.35	1058.06	1044.31	2.95	11.02
J26	791.1	52.03	52.04	1126.8	1126.82	13.39	25.51
J-26	808	63.03	60.08	739.7	732.88	1.01	1.93
J-27	834.89	100.87	97.92	739.7	732.89	6.53	5.72
J28	876.5	54.12	54.23	1126.91	1127.18	6.43	20.76
J-28	882.82	89.07	86.13	739.7	732.89	0.43	1.34
J-29	734.55	66.64	63.69	739.7	732.89	1.05	2.17
J30	754.84	57.99	57.82	1127.62	1127.22	4.27	19.13
J-30	813.49	70.07	67.13	739.7	732.89	0.89	2.06
J-31	706.36	69.4	66.46	739.7	732.89	0.51	1.07
J32	613.07	62.77	62.34	1128.27	1127.27	4.67	10.42
J-32	631.99	59.21	56.31	739.73	733.01	2.14	4.73

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J-33	667.18	76.42	73.52	739.73	733.03	2.22	3.32
J34	949.37	64.26	63.87	1128.17	1127.26	4.29	11.65
J-34	931.22	61.28	58.37	739.74	733.02	0.58	1.09
J-35	813.8	89.52	86.81	739.83	733.55	0.88	2.16
J36	887.49	76.47	76.05	1128.17	1127.18	1.29	8.72
J-36	882.41	65.92	65.56	994.14	993.31	0.79	3.61
J-38	840.22	32.77	30.93	993.03	988.79	1.32	3.35
J-39	924.79	64.64	62.37	993.45	988.19	1.51	5.6
J40	803.07	64.89	64.37	1126.67	1125.45	12.87	37.12
J-40	833.16	118.11	71.41	1134.74	1026.74	3.13	6.66
J-41	824.58	85.98	85.07	1060.45	1058.35	1.06	5.15
J-42	588.37	46.9	44.26	1059.88	1053.77	4.55	11.7
J-43	532.45	50.67	51.66	1003.92	1006.21	2.47	4.14
J44	527.61	100.11	82.52	901.57	860.89	22.18	41.73
J-44	512.8	79.02	78.1	1131.76	1129.63	4.95	16.45
J-45	581.97	55.98	55.75	995.17	994.64	0.47	5.48
J46	554.96	97.4	79.85	901.61	861.02	2.11	6.52
J48	616.74	200.05	157.9	1121.34	1023.88	2.78	4.66
J50	851.31	154.09	117.91	1106.75	1023.08	4.93	8.26
J-50	788.24	123.74	80.94	1226.11	1127.12	2.46	5.56
J-51	607.58	111.69	113.7	1145.07	1149.72	3.83	9.53
J52	565.22	73.43	89.92	1050.65	1088.8	0.24	4.22
J-52	569.79	97.97	93.3	1018.57	1007.76	3.91	13.14
J60	826.7	7.08	7.08	1152	1152	2.57	6.75
J62	854.43	6.07	6.07	1152	1152.01	1.26	3.04
J64	857.71	6.56	6.56	1152	1152	0.16	0.34
J66	875.84	110.63	112.46	1145.01	1149.24	4.02	11.74
J68	854.24	76.34	74.33	1060	1055.35	1.31	6.56
J70	614.4	87.22	86.52	1060.56	1058.93	0.38	3.69
J72	537.63	66.43	63.71	992.1	985.83	2.31	5.37
J74	880	104.64	98.14	1057.87	1042.83	8.51	21.89
J76	870	155.11	117.37	1214.4	1127.12	3.22	7.47
J78	745	150.57	112.83	1214.4	1127.13	0.85	2.49
J82	776.8	4.82	4.73	996.19	996	1.45	3.75
J84	750	94.46	87.26	1143.75	1127.1	1.65	4.91
J86	859	83.16	82.07	993.21	990.69	1.04	12.85
J88	803	81.24	78.39	739.76	733.15	0.96	1.69
J90	980	92.26	89.56	739.84	733.6	0.11	2.13
J92	980	96.62	93.67	739.7	732.87	1.42	3.63
J94	884	81.62	64.64	896.99	857.74	2.6	5.44
J96	849	74.84	57.96	896.94	857.92	20.64	24.83
J98	783	121.64	120.39	1020.46	1017.55	0.14	0.24
J100	851.99	69.77	52.71	902.59	863.13	2.13	3.94
J102	833.34	109.84	104.95	1030.08	1018.79	3.66	7.98
J104	859.8	21.58	24.97	998.18	1006.03	0	0

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J108	960.9	94.27	94.1	1128	1127.61	0.36	29.57
J120	956.52	113.04	95.65	898.86	858.63	17.59	29.47
J124	946.95	74.73	71.95	739.8	733.37	6.07	2.73
J126	823.07	93.84	93.68	1128	1127.62	3.12	0
J128	963.31	98.16	97.98	1128	1127.57	0.2	0
J130	989.53	105.95	105.76	1128	1127.57	0.2	0
J132	970.83	100.76	100.57	1128	1127.57	1.07	0
J134	985.72	95.13	94.95	1128	1127.57	0.74	0
J136	976.39	96.43	96.25	1128	1127.57	0	0
J138	836.98	95.13	94.95	1128	1127.57	0	0
J140	1006.48	90.6	46.71	1050.51	949.01	3.04	0
J142	593.95	91.03	46.49	1050.51	947.52	3.69	0
J144	506.45	93.19	48.06	1050.5	946.14	4.72	0
J146	1001.76	95.35	50.22	1050.49	946.14	9.34	0
J148	533.72	96.22	51.68	1050.51	947.52	2.65	0
J150	585.61	97.95	54.06	1050.51	949.01	1.66	0
J152	993.52	102.68	59.28	1050.45	950.09	0	0
J154	577.66	133.43	99.96	1099.65	1022.27	3.09	6.81
J156	579.21	104.84	61.37	1050.45	949.91	0.84	0
J158	983.11	47.73	48.82	1003.68	1006.2	2.78	4.65
J160	563.01	44.96	46.09	1147.05	1149.66	3.52	7.98
J162	979.56	63.7	61.88	993.03	988.83	0.75	1.7
J164	598.04	51.72	52.39	1004.77	1006.32	8.51	19.11
J166	532.8	62.74	63.38	1004.82	1006.3	11.01	22.66
J168	951.33	73.71	74.42	1005.34	1006.98	6.33	14.19
J170	917.25	55.58	56.27	1005.05	1006.66	6.83	14.24
J172	843.97	55.91	56.54	1004.81	1006.28	6.81	12.96
J174	976.6	54.28	54.89	1004.96	1006.37	5.57	12.41
J176	861.6	58	58.59	1005.17	1006.55	6.77	15.16
J178	861.62	58.65	59.34	1005.72	1007.3	11.85	20.68
J180	670.07	56.06	56.87	1006.14	1008.01	2.11	6.19
J182	949.02	53.79	54.36	1007.21	1008.53	3.84	8.47
J184	865.72	61.58	62.2	1007.63	1009.06	8.77	14.69
J186	676.37	82.39	83.15	1008.3	1010.06	8.7	14.8
J188	658.73	85.43	86.33	1008.95	1011.02	4.13	9.57
J190	939.95	97.15	98.16	1009.36	1011.69	5.93	10.61
J192	886.8	115.33	116.65	1010.05	1013.12	9.94	17.56
J194	880.85	118.93	120.15	1009.58	1012.4	3.47	11.95
J196	792	95.69	96.71	1008.66	1011.01	8.18	15.48
J198	1135.63	56.32	56.99	1007.42	1008.95	6.46	12.58
J200	1136.83	104.66	104.76	1015.55	1015.78	6.51	14.88
J202	889.17	119.34	118.53	1018.98	1017.11	7.98	14.6
J204	883.46	119.9	118.19	1021.8	1017.85	1.41	2.72
J206	858.87	116.69	113.88	1024.68	1018.18	3.1	7.22
J208	838.49	123.01	90.2	1097.96	1022.07	1.92	7.67

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J210	855.7	145.54	111.1	1102.2	1022.56	6.88	15.62
J212	866.2	71.33	51.15	907.11	860.45	1.18	3.78
J214	985.05	91.99	72.3	905.98	860.44	3.69	13.48
J216	925.32	113.86	94.79	904.54	860.44	5.54	10.54
J218	800.9	111.6	93.15	903.13	860.47	6.25	10.78
J220	516.26	85.62	66.7	904.35	860.62	3.16	9.05
J222	708.26	99.2	81.65	902.55	861.98	2.42	7.93
J224	723.89	106.93	89.1	902.55	861.31	2.67	6.05
J226	739.15	102.62	84.58	902.55	860.83	1.11	2.31
J228	741.24	133.89	115.97	901.96	860.52	0.67	1.12
J230	948.29	144.56	126.81	901.59	860.53	3.64	2.14
J232	910	124.7	107.03	901.45	860.59	8.1	5.87
J234	637.45	116.41	98.85	901.18	860.58	42.58	20.92
J236	566.99	101.79	84.25	901.15	860.6	41.42	19.49
J238	911	100.12	82.59	901.18	860.65	24.89	33.95
J240	895	68.6	51.2	901.52	861.27	8.94	21.41
J242	908	87.22	69.72	901.62	861.15	4.31	16.36
J244	905	75.09	57.66	901.71	861.4	6.91	19.71
J246	908	101.37	83.82	901.61	861.02	2.88	7.36
J248	841	91.97	74.4	901.59	860.96	2.65	6.5
J250	835	68.05	50.88	902.23	862.54	6.5	15.08
J252	830	137.55	119.89	900.79	859.96	14.39	5.01
J254	828	98.6	88.94	1171.95	1149.61	8.36	29.72
J256	824	101.29	89.22	1177.32	1149.41	6.2	25.48
J258	813	100.52	86.45	1181.82	1149.28	6.23	12.92
J260	893.31	109.59	94.26	1184.64	1149.21	4.12	15.04
J262	1043.08	85.27	79.42	1058.06	1044.54	2.26	5.89
J264	845.73	149.38	118.57	1198.45	1127.2	4.83	11.16
J266	885.18	150.87	117.24	1204.94	1127.16	3.74	9.04
J268	859.73	153.71	116.65	1212.84	1127.13	1.91	4.59
J270	876.53	82.24	79.59	992.4	986.28	1.37	3.36
J272	875.53	77.18	74.52	992.27	986.13	4.7	13.05
J274	879.44	76.09	73.4	992.16	985.94	4.33	13.44
J276	871.06	79.62	76.89	992.05	985.72	6.38	11.94
J278	870.08	97.82	91.33	1057.87	1042.87	14.33	40.57
J280	865.23	100.47	94.14	1057.94	1043.3	12.51	42.29
J282	817.78	79.36	73.59	1058.27	1044.92	3.8	14.51
J284	811.39	73.94	68.43	1058.48	1045.74	2.64	13.21
J286	784.69	76.24	71.11	1058.72	1046.86	3.25	19.19
J288	743.35	67.62	69.46	1145.01	1149.28	4.86	13.58
J290	787.38	52.38	52.62	1150.48	1151.04	3.16	9.99
J292	877.17	74.09	75.3	1147.63	1150.44	1.86	10.46
J294	773.52	88.51	90.92	1144.19	1149.77	0.4	1.77
J296	743.01	85.97	84.37	1060.1	1056.39	7.42	14.6
J298	744.53	84.98	83.93	1060.28	1057.86	7.58	13.48

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J300	765.64	85.91	85.67	1060.76	1060.21	3.4	7.06
J302	742.17	77.49	76.35	1060.29	1057.66	4.36	8.25
J304	693.25	60.65	58.56	1060.17	1055.33	4.26	9.85
J306	641.25	92.44	89.76	1060.08	1053.89	10.23	65.23
J308	645.05	95.01	92.43	1059.94	1053.97	5.77	17.23
J310	673.16	81.95	78.32	1059.45	1051.05	4.56	19.91
J312	655.27	70.65	66.16	1059.05	1048.66	4.92	21.31
J314	665.25	99.99	102.58	1143.06	1149.05	7.36	15.98
J316	592.35	86.28	87.78	1145.28	1148.76	0	19.65
J318	567.29	89.78	90.45	1147.17	1148.71	2.33	23.5
J320	665.77	96.91	96.83	1148.89	1148.71	2.21	27.55
J322	669.66	83.88	82.29	1152.52	1148.84	9.9	34.91
J324	742.87	33.55	32.77	1151.36	1149.56	2.39	8.3
J326	699.92	82.97	80.19	991.97	985.54	17.37	40.72
J328	728.06	82.29	79.5	992.01	985.56	36.57	81.49
J330	688.91	88.32	85.54	991.97	985.54	18.9	44.36
J332	744.87	81.87	79.04	992.39	985.84	7.57	22.95
J334	582.71	68.89	66.04	992.48	985.87	6.11	19.65
J336	943.95	68.12	65.23	992.62	985.95	3.64	11.07
J338	943.08	62.55	60.25	992.92	987.61	2.59	19.94
J340	860.87	55.92	54.09	993.03	988.81	1.87	6.5
J342	853	35.56	33.73	993.03	988.78	1.71	5.21
J344	856.05	57.77	57.49	994.71	994.05	2.53	7.56
J346	857.38	73.25	72.86	993.97	993.08	1.02	4.56
J348	802.22	88.04	88	919.72	919.63	1.01	4.99
J350	816.2	89.74	89.69	919.72	919.61	1.08	6.75
J352	807.92	84.18	84.12	919.72	919.6	1.79	5.23
J354	831.67	79.97	77.65	770.09	764.73	3.01	12.08
J356	825.61	80.48	78.27	770.1	764.98	2.49	9.13
J358	874.75	78.59	76.46	770.11	765.17	1.51	4.69
J360	988.65	79.42	77.26	770.07	765.07	1.88	6.05
J362	1029.35	85.68	83.44	770.05	764.88	0.66	4.24
J364	976.31	86.4	84.07	770.01	764.62	0.47	1.99
J366	939.52	96.28	93.4	739.87	733.2	8.61	7.08
J368	861.29	96	93.12	739.87	733.21	2.67	4.41
J370	863.76	89.7	86.81	739.88	733.21	1.41	21.66
J372	862.09	84.37	81.55	739.9	733.36	0.93	14.27
J374	881.09	83.58	80.8	739.91	733.47	1.99	3.86
J376	919.91	89.25	86.52	739.92	733.62	1.49	3.43
J378	846.31	110.46	65.62	1050.45	946.74	1.02	0
J380	869.93	76.35	73.81	739.91	734.04	0.78	1.95
J382	895.67	91.8	89.21	739.88	733.91	1.56	4.08
J384	911.84	98.19	95.56	739.86	733.78	2.08	5.06
J386	945.77	74.56	71.97	739.88	733.88	0.67	2.79
J388	939.55	90.63	87.77	739.76	733.16	0.7	1.76

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J390	958.55	83.05	80.25	739.79	733.31	0.93	3.91
J392	1073.77	71.18	68.28	739.73	733.03	2.47	4.8
J394	800.1	64.48	61.57	739.73	733	0.93	1.95
J396	801.72	68.21	65.29	739.72	732.96	1.08	3.17
J398	787.73	86.42	83.5	739.72	732.97	2.13	3.81
J400	835.1	79.54	76.63	739.74	733.02	1.02	2.94
J402	848.27	77.8	74.89	739.74	733.02	1.08	3.03
J404	863.72	83.7	80.79	739.74	733.02	0.71	2.12
J406	910.79	82.06	79.15	739.74	733.02	0.67	2.27
J408	861.11	79.91	77	739.74	733.02	1.51	27.82
J410	716.13	73.86	70.96	739.75	733.05	2.11	5.29
J412	712.2	93.39	90.5	739.75	733.08	1.41	4.01
J414	725.07	77.99	75.09	739.74	733.04	0.68	1.51
J416	585.17	100.1	97.15	739.7	732.89	0.67	2.85
J418	583.99	73.5	70.55	739.7	732.87	1.35	10.59
J420	586.41	78.81	75.85	739.7	732.87	1.76	2.83
J422	571.92	88.63	85.68	739.7	732.87	1.27	3.78
J424	570.21	85.2	82.25	739.7	732.88	1.62	2.91
J426	517.22	64.94	61.99	739.7	732.88	1.27	2.16
J428	517.87	68.29	65.35	739.7	732.9	0.81	1.64
J430	544.79	53.18	50.24	739.71	732.93	1	2.79
J432	546.62	88.78	85.82	739.7	732.86	2.35	5.78
J434	533.54	86.36	84.28	740.11	735.31	0.75	1.3
J436	795	75.73	73.5	740.07	734.9	2.72	8.05
J438	563.35	101.76	84.14	901.59	860.85	6.91	13.95
J440	567.46	87.83	88.84	1009.31	1011.64	5.15	15.86
J442	530.18	152.52	107.6	1129.49	1025.61	3.6	12.21
J444	547.74	70.16	67.29	1060.09	1053.45	3.2	15.2
J446	575.13	77.31	60.31	897.04	857.73	1.74	3.63
J448	590.62	79.32	62.32	897.04	857.73	1.22	3.39
J450	539.87	91.59	88.91	739.93	733.73	3.54	6.16
J452	555.81	61.76	61.4	994.14	993.31	1.57	3.73
J454	559.84	88.65	87.71	993.24	991.06	0.99	4.99
J456	546.18	57.29	55.91	993.17	989.96	2.14	34.78
J458	549.99	35.03	33.93	1153.52	1150.99	3.5	9.48
J460	568.95	88.51	68.74	906.21	860.5	4.42	10.31
J462	523.79	70.1	67.85	740.03	734.82	2.41	4.13
J464	559.4	78.17	75.86	740	734.67	2.34	4.15
J466	508.23	57.26	54.95	740	734.65	1.21	2.06
J468	569.73	54.69	52.4	740.02	734.73	1.01	1.69
J470	557.45	55.98	53.71	740.03	734.79	1.35	2.26
J472	534.74	60.29	58.06	740.05	734.88	0.92	19.65
J474	542.69	49.21	46.99	740.06	734.94	1.05	22.4
J476	589.53	81.54	79.19	739.98	734.54	0.86	1.56
J478	581.78	75.6	73.4	740.05	734.96	2.21	5.19

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J480	534.39	73.6	71.27	739.99	734.6	1.45	2.43
J482	540.41	47.62	45.3	740	734.65	2.23	3.74
J484	564.93	55.29	53.03	740.03	734.79	2.93	4.18
J486	666.28	41.07	38.86	740.06	734.94	2.81	4.71
J488	806.19	80.54	78.42	740.09	735.17	0.75	2.65
J490	776.8	59.41	57.12	740.02	734.73	3.71	4.44
J492	897.84	63.4	61.08	739.99	734.61	0.51	2.16
J494	718.27	59.76	57.59	740.07	735.04	0.81	16.73
J496	713.62	75.22	88.38	1050.34	1080.78	2.82	13.36
J498	528.12	77.76	90.27	1050.34	1079.27	2.81	10.2
J500	860.68	96.92	108.21	1050.35	1076.47	0.55	2.28
J502	1072.52	86.35	98.3	1050.34	1077.96	1.33	10.1
J504	701.55	74.66	88.49	1050.34	1082.32	1.75	9.33
J506	577.91	94.69	105.86	1050.39	1076.21	3.29	20.24
J508	559.24	96.04	107.57	1050.35	1077	1.21	5.52
J510	613.55	95.39	106.91	1050.35	1076.99	1.54	7.77
J512	610.58	100.84	111.99	1050.33	1076.12	1.67	13.19
J514	600.62	80.28	91.28	1050.26	1075.72	1.66	9.29
J516	626.27	80.24	91.25	1050.26	1075.72	0.29	10.48
J518	551.42	107.33	58.1	1049.76	935.89	2.73	10.79
J520	629.89	89.27	39.86	1049.75	935.5	1.74	13.42
J522	612.16	108.97	59.54	1049.75	935.44	3.02	15.38
J524	645.08	86.39	37.09	1049.75	935.74	1.89	7.19
J526	553.83	78.6	29.3	1049.75	935.74	1.89	6.21
J528	602.63	95.89	46.53	1049.75	935.61	1.39	4.31
J530	593.37	96.4	47.1	1049.75	935.75	1.07	3.65
J532	601.87	106.36	57.16	1049.76	936	3.76	8.8
J534	876.39	103.12	53.79	1049.75	935.68	2.9	6.47
J536	870.53	89.41	40.96	1050.22	938.17	4.08	17.53
J538	826.23	91.37	42.95	1050.13	938.15	2.61	18.53
J540	850.66	75.83	86.84	1050.26	1075.72	2.27	12.66
J542	877.69	64.64	75.67	1050.26	1075.75	4.5	21.17
J544	831.41	77.15	88.18	1050.26	1075.77	2.15	16.17
J546	828.25	96.71	108.24	1050.35	1076.99	1.45	7.28
J548	829.77	84.72	96.48	1050.35	1077.54	1.71	3.36
J550	817.13	83.3	95.24	1050.34	1077.97	0.73	6.96
J552	864.62	75.42	86.43	1050.26	1075.72	0.91	5.48
J554	864.71	84.8	96.56	1050.34	1077.53	1.73	8.45
J556	801.55	54.32	52	740	734.65	1.27	4.28
J558	843.33	87.5	85.13	739.97	734.5	12.07	6.26
J560	797.75	110.87	116.23	1136.38	1148.78	0	0
J564	849.97	114.55	120.42	1134.9	1148.46	0	0
J566	867.99	157.05	120.29	1108.19	1023.16	0	0
J568	828.01	152.36	107.56	1129.14	1025.54	0	0
J570	826.84	69.91	47.76	911.67	860.46	0	0

Node ID	Elevation	Pressure (psi)		Head (ft)		Demand (gpm)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout
J572	803.81	143.82	125.43	1191.58	1149.06	0	0
J574	811.29	106.74	58.48	1049.83	938.23	0	0
J578	838.84	6.85	6.92	995.85	996	0	0
J580	874.9	72.16	88.58	1050.88	1088.85	0	0
J582	900.77	87.17	103.69	1050.59	1088.79	0	0
J586	871.85	115.57	65.45	1050.26	934.35	0	0
PMP-1_ND	792	97.81	93.09	1018.19	1007.28	0.07	0.23
PMP-1_NU	780.51	1.73	1.14	784.51	783.14	0.06	0.22
PMP-10_ND	792	97.97	93.3	1018.57	1007.76	1.56	5.26
PMP-10_NU	777.5	3.05	2.58	784.56	783.46	1.7	5.72
PRV-108_ND	941.08	96.1	90.22	1163.33	1149.73	0.91	1.67
PRV-108_NU	946.02	94.25	88.12	1163.98	1149.8	0.76	1.36
PRV-11_ND	776.09	109.99	104.97	1030.44	1018.83	0.24	0.56
PRV-11_NU	776.15	136.78	106.08	1092.45	1021.45	0.14	0.39
PRV-131_ND	567	75.16	74.62	740.8	739.55	0	14.66
PRV-131_NU	567	183.78	180.55	991.98	984.53	0.36	13.42
PRV-19_ND	911.55	100.41	93.22	1143.75	1127.11	1.34	2.9
PRV-19_NU	898.78	137.73	98.74	1217.29	1127.11	0.59	1.47
PRV-32_ND	654.31	107.34	90	902.55	862.44	0	0.91
PRV-32_NU	657.83	200.43	158.28	1121.34	1023.86	0.25	0.98
PRV-6_ND	629	116.98	99.47	899.51	859.02	6.31	19.89
PRV-6_NU	615.55	122.98	105.42	899.93	859.33	8.36	8.61
PRV-60_ND	734.73	80	79.99	919.73	919.71	0.12	1.59
PRV-60_NU	755.25	102.95	102.45	993.32	992.17	0	1.5
PRV-71_ND	673	42	39.99	770.12	765.49	0.7	1.44
PRV-71_NU	673	106.69	106.61	919.71	919.54	1.16	2.61
PRV-90_ND	947.22	85	77.79	1143.78	1127.11	1.86	5.69
PRV-90_NU	941.01	123.29	80.48	1226.11	1127.11	0.35	1.03
SADDLE_CRK_ND	935.32	50	67	1050.95	1090.26	4.09	12.34
SADDLE_CRK_NU	949.61	87.46	86.38	1151.85	1149.37	4.05	9.52
U7008_ND	949.64	78.82	77.9	1131.91	1129.77	0	0
U7008_NU	949.03	21.21	24.61	998.08	1005.93	0	0
V8002_ND	735.82	75.13	53.9	909.57	860.46	0.24	2.53
V8002_NU	743.06	72.63	50.77	911.01	860.46	1.39	2.46
V8006_ND	859.57	85.83	80	1058.06	1044.57	0.24	0.9
V8006_NU	858.55	144.2	116.19	1192.02	1127.23	0.18	0.47
V8010_ND	740.75	69.99	52.97	902.62	863.26	0.19	0.32
V8010_NU	739.89	121.32	120.01	1020.43	1017.42	0.21	0.35
V8012_ND	869.41	82.99	82.93	1061.33	1061.19	1.11	1.86

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APPENDIX C

PIPELINE REPORTS

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
2	224.83	8	8	2	9	0.01	0.06	0	0	0	0
12	410.58	10	16	133	681	0.55	1.09	0.07	0.15	0.17	0.35
16	184.11	24	24	5520	10703	3.91	7.59	0.44	1.49	2.38	8.1
22	340.19	10	10	1216	-27	4.97	0.11	3.49	0	10.26	0.01
23	623.73	10	10	1213	-33	4.96	0.14	6.37	0.01	10.22	0.01
24	674.63	10	10	-1209	41	4.94	0.17	6.85	0.01	10.15	0.02
26	1,519.42	10	10	883	-132	3.61	0.54	8.62	0.26	5.67	0.17
27	782.42	10	10	878	-143	3.59	0.58	4.4	0.15	5.62	0.19
28	443.41	10	20	441	-1308	1.8	1.34	0.7	0.18	1.57	0.4
29	585.58	10	20	433	1153	1.77	1.18	0.89	0.19	1.51	0.32
33	814.38	8	8	-2	124	0.02	0.79	0	0.36	0	0.44
34	678.2	8	8	-133	-92	0.85	0.59	0.34	0.17	0.51	0.26
35	203.53	8	8	244	86	1.55	0.55	0.32	0.05	1.55	0.23
37	771.46	8	8	85	65	0.54	0.41	0.17	0.1	0.22	0.13
38	1,419.79	8	12	64	109	0.41	0.31	0.19	0.07	0.13	0.05
40	222.73	12	12	1	18	0	0.05	0	0	0	0
41	279.83	8	8	-12	-32	0.08	0.21	0	0.01	0.01	0.04
42	132.13	8	12	59	75	0.38	0.21	0.01	0	0.11	0.02
43	315.88	8	8	14	36	0.09	0.23	0	0.01	0.01	0.04
44	453.84	8	8	-45	-37	0.29	0.24	0.03	0.02	0.07	0.05
45	531.53	8	8	-9	-15	0.06	0.1	0	0	0	0.01
46	345.85	8	8	31	20	0.2	0.12	0.01	0.01	0.03	0.01
47	280.51	6	6	2	4	0.03	0.05	0	0	0	0
50	459.24	6	6	27	13	0.31	0.14	0.05	0.01	0.11	0.03
51	141.01	6	6	3	10	0.03	0.11	0	0	0	0.02
52	277.17	6	6	1	5	0.01	0.05	0	0	0	0
54	379.88	6	12	9	22	0.1	0.06	0.01	0	0.01	0
55	123.91	6	6	5	15	0.05	0.17	0	0	0	0.04
57	645.63	6	6	2	7	0.02	0.08	0	0.01	0	0.01
58	290.12	6	6	-3	-5	0.04	0.06	0	0	0	0.01
61	122.39	10	10	29	73	0.12	0.3	0	0.01	0.01	0.06
62	503.57	6	6	1	2	0.01	0.02	0	0	0	0

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
64	602.87	6	6	1	4	0.02	0.05	0	0	0	0
67	67.92	6	10	-38	-331	0.43	1.35	0.01	0.06	0.2	0.92
70	1,285.19	10	16	134	687	0.55	1.1	0.22	0.46	0.17	0.36
72	452.42	8	8	50	-8	0.32	0.05	0.03	0	0.07	0
73	106.88	10	10	7	9	0.03	0.03	0	0	0	0
74	288.1	10	10	5	4	0.02	0.02	0	0	0	0
75	547.29	6	6	2	3	0.02	0.04	0	0	0	0
76	585.11	6	6	13	30	0.15	0.34	0.02	0.08	0.03	0.13
77	303.75	6	6	1	4	0.01	0.05	0	0	0	0
78	906.1	6	6	9	20	0.11	0.23	0.01	0.06	0.01	0.06
80	134.25	6	6	0	1	0	0.01	0	0	0	0
81	222.66	6	6	1	2	0.01	0.02	0	0	0	0
82	218.49	6	6	4	9	0.05	0.1	0	0	0	0.01
83	316.1	6	6	1	3	0.01	0.03	0	0	0	0
84	498.77	6	6	2	4	0.03	0.05	0	0	0	0
85	189.59	6	6	1	2	0.02	0.03	0	0	0	0
86	227.67	6	6	2	3	0.02	0.04	0	0	0	0
87	370.31	6	6	-1	-2	0.02	0.02	0	0	0	0
88	603.03	6	6	3	6	0.04	0.07	0	0	0	0.01
89	489.43	6	6	6	28	0.07	0.31	0	0.05	0.01	0.11
91	532.39	6	6	5	2	0.06	0.02	0	0	0.01	0
92	258.26	6	10	33	300	0.38	1.22	0.04	0.2	0.16	0.77
94	500.94	6	10	-27	-272	0.3	1.11	0.05	0.32	0.11	0.64
99	312.64	6	6	23	65	0.26	0.74	0.02	0.17	0.08	0.54
100	924.37	6	10	52	255	0.59	1.04	0.33	0.52	0.36	0.57
105	857.96	6	6	13	28	0.15	0.32	0.03	0.1	0.03	0.12
106	500.01	12	12	107	31	0.3	0.09	0.02	0	0.05	0
107	1,910.43	6	6	149	-8	1.69	0.09	4.85	0.02	2.54	0.01
109	431.79	6	8	302	38	3.43	0.24	4.05	0.02	9.39	0.05
110	1,291.62	6	6	149	29	1.7	0.33	3.29	0.16	2.54	0.12
111	1,547.27	6	6	2	3	0.02	0.04	0	0	0	0
112	142.02	10	20	563	1102	2.3	1.13	0.35	0.04	2.46	0.29

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
113	337.83	10	20	561	1100	2.29	1.12	0.83	0.1	2.45	0.29
114	571.88	10	20	693	1065	2.83	1.09	2.07	0.16	3.62	0.27
115	636.4	6	6	138	-24	1.57	0.27	1.4	0.05	2.2	0.09
116	173.04	6	6	3	4	0.03	0.05	0	0	0	0
118	498.71	6	8	52	213	0.59	1.36	0.18	0.6	0.37	1.21
119	779.33	6	6	25	102	0.29	1.16	0.07	0.99	0.1	1.26
120	573.19	6	6	25	55	0.28	0.62	0.05	0.23	0.09	0.4
122	784.61	6	6	-37	-101	0.41	1.15	0.15	0.97	0.19	1.24
123	846.79	6	6	-1	29	0.02	0.32	0	0.1	0	0.12
124	562.93	6	6	3	35	0.04	0.4	0	0.1	0	0.17
125	772	6	6	-15	-63	0.17	0.71	0.03	0.39	0.03	0.51
126	770.74	6	6	-20	-76	0.23	0.86	0.05	0.56	0.06	0.73
129	764.75	6	6	7	-19	0.08	0.22	0.01	0.04	0.01	0.06
134	672.98	6	6	-140	23	1.59	0.26	1.53	0.05	2.27	0.08
135	744.13	6	6	-116	-1	1.31	0.01	1.18	0	1.58	0
136	246.29	8	8	115	-70	0.73	0.45	0.1	0.04	0.39	0.15
137	793.29	8	8	60	-68	0.38	0.43	0.09	0.12	0.12	0.15
138	1,059.86	6	6	15	40	0.18	0.46	0.04	0.24	0.04	0.23
139	549.85	8	8	-32	137	0.2	0.88	0.02	0.29	0.04	0.54
140	539.99	8	16	324	623	2.07	0.99	1.42	0.16	2.62	0.3
141	763.37	6	6	-5	-7	0.05	0.08	0	0.01	0	0.01
143	184.73	10	10	133	301	0.54	1.23	0.03	0.14	0.17	0.77
144	90.31	10	10	70	77	0.29	0.32	0	0.01	0.05	0.06
145	102.44	10	10	69	64	0.28	0.26	0.01	0	0.05	0.04
146	144.07	10	10	-127	-281	0.52	1.15	0.02	0.1	0.16	0.68
148	126.93	10	10	126	280	0.51	1.14	0.02	0.09	0.15	0.68
149	121.76	10	10	35	85	0.14	0.35	0	0.01	0.01	0.07
151	105.65	6	10	-63	-222	0.71	0.91	0.05	0.05	0.51	0.44
152	79.62	6	6	-65	-59	0.74	0.67	0.04	0.04	0.55	0.46
153	135.84	6	6	-3	-5	0.04	0.05	0	0	0	0
154	186.32	10	10	90	194	0.37	0.79	0.02	0.06	0.08	0.34
156	716.61	8	8	-32	-79	0.21	0.5	0.03	0.14	0.04	0.19

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
157	123.59	8	8	1	3	0.01	0.02	0	0	0	0
158	525.36	8	8	29	74	0.19	0.47	0.02	0.09	0.03	0.17
159	198.8	8	8	28	65	0.18	0.42	0	0.02	0.02	0.12
160	462.05	8	8	-13	-29	0.08	0.19	0	0.01	0.01	0.03
161	111.61	8	8	12	28	0.07	0.18	0	0	0	0.02
162	210.94	8	8	8	20	0.05	0.13	0	0	0	0.01
163	238.85	8	8	9	23	0.05	0.15	0	0	0	0.02
164	451.3	8	8	14	34	0.09	0.21	0	0.02	0.01	0.04
165	275.81	6	6	1	2	0.01	0.02	0	0	0	0
166	158.97	8	8	12	30	0.08	0.19	0	0.01	0.01	0.03
167	155.16	8	8	20	52	0.13	0.33	0	0.01	0.02	0.09
168	211.29	6	6	-5	-12	0.06	0.13	0	0	0	0.02
169	241.42	6	6	2	8	0.03	0.09	0	0	0	0.01
170	187.69	8	8	15	40	0.1	0.26	0	0.01	0.01	0.05
171	404.93	8	8	17	46	0.11	0.3	0	0.03	0.01	0.07
172	379.81	8	8	14	37	0.09	0.24	0	0.02	0.01	0.05
173	650.2	8	8	14	26	0.09	0.16	0	0.02	0.01	0.02
174	334.74	8	8	2	11	0.01	0.07	0	0	0	0.01
175	339.54	8	8	11	12	0.07	0.07	0	0	0	0.01
268	154.11	8	8	3	6	0.02	0.04	0	0	0	0
301	265.03	8	8	-4	23	0.03	0.15	0	0	0	0.02
330	319.7	8	8	-6	-3	0.04	0.02	0	0	0	0
349	244.09	8	8	-6	-8	0.04	0.05	0	0	0	0
414	467.91	12	16	107	466	0.3	0.74	0.02	0.07	0.04	0.15
415	250.58	8	8	16	213	0.1	1.36	0	0.26	0.01	1.05
417	907.76	12	12	91	245	0.26	0.69	0.03	0.17	0.03	0.19
419	566.35	12	12	90	-6	0.26	0.02	0.02	0	0.03	0
442	878.64	8	8	0	37	0	0.24	0	0.04	0	0.04
445	145.51	8	8	14	-115	0.09	0.74	0	0.05	0.01	0.34
446	238.62	8	8	13	-118	0.08	0.75	0	0.08	0.01	0.35
447	252.9	8	8	10	-129	0.06	0.82	0	0.1	0	0.41
448	189.1	8	8	7	-136	0.05	0.87	0	0.09	0	0.45

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
449	555.78	8	8	1	6	0	0.04	0	0	0	0
450	462.75	8	8	5	-152	0.03	0.97	0	0.26	0	0.56
452	550.4	12	12	-73	-95	0.21	0.27	0.01	0.02	0.02	0.03
453	596.81	12	12	71	71	0.2	0.2	0.01	0.01	0.02	0.02
454	420.77	8	8	9	27	0.06	0.17	0	0.01	0	0.02
455	552.26	12	12	-17	-63	0.05	0.18	0	0.01	0	0.02
456	290.15	8	8	-17	-68	0.11	0.43	0	0.04	0.01	0.13
457	320.23	8	8	-7	-31	0.04	0.2	0	0.01	0	0.03
459	380.78	8	8	-4	-3	0.02	0.02	0	0	0	0
460	493.78	8	8	-6	-26	0.04	0.16	0	0.01	0	0.02
461	462.68	8	8	4	16	0.03	0.11	0	0	0	0.01
465	708.24	8	8	48	-21	0.3	0.13	0.05	0.01	0.06	0.01
466	544.16	8	8	45	-32	0.29	0.2	0.03	0.02	0.06	0.03
467	298.85	8	8	44	-44	0.28	0.28	0.02	0.02	0.06	0.06
468	336.34	8	8	43	-54	0.27	0.35	0.02	0.03	0.05	0.08
469	283.19	8	8	25	42	0.16	0.27	0.01	0.01	0.02	0.05
470	147.56	8	8	22	35	0.14	0.22	0	0.01	0.02	0.04
473	200.46	8	8	17	133	0.11	0.85	0	0.09	0.01	0.44
474	461.94	8	8	6	61	0.04	0.39	0	0.05	0	0.1
475	532.42	8	8	-6	-61	0.04	0.39	0	0.05	0	0.1
476	474.29	8	8	3	50	0.02	0.32	0	0.03	0	0.07
477	404.49	8	12	-292	-382	1.86	1.08	0.88	0.2	2.16	0.49
478	642.28	8	8	2	44	0.01	0.28	0	0.04	0	0.06
479	511.3	8	8	-2	-47	0.01	0.3	0	0.03	0	0.06
480	613.66	8	8	1	-33	0.01	0.21	0	0.02	0	0.03
499	443.99	8	8	0	-5	0	0.03	0	0	0	0
500	321.15	8	8	0	-15	0	0.09	0	0	0	0.01
501	384.28	8	8	0	-34	0	0.21	0	0.01	0	0.03
502	447.98	8	8	0	13	0	0.09	0	0	0	0.01
504	753.39	8	8	0	-4	0	0.03	0	0	0	0
505	155.34	8	8	0	36	0	0.23	0	0.01	0	0.04
509	292.19	8	16	-304	-590	1.94	0.94	0.68	0.08	2.34	0.27

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
513	621.7	6	6	19	30	0.22	0.35	0.04	0.08	0.06	0.13
514	1,061.68	8	12	283	365	1.81	1.03	2.17	0.48	2.05	0.45
515	516.68	6	8	65	132	0.74	0.84	0.28	0.26	0.54	0.5
517	609.24	6	6	-54	-55	0.61	0.63	0.24	0.25	0.39	0.4
518	488.2	6	6	-47	-46	0.53	0.52	0.14	0.14	0.3	0.28
520	907.11	6	8	59	122	0.67	0.78	0.41	0.39	0.45	0.43
521	539.67	6	8	53	112	0.6	0.71	0.2	0.2	0.37	0.36
522	567.67	6	8	44	99	0.5	0.63	0.15	0.17	0.26	0.29
525	456.49	6	8	64	113	0.73	0.72	0.24	0.17	0.53	0.37
526	521.54	6	8	54	96	0.61	0.61	0.2	0.14	0.38	0.28
527	434.09	6	8	37	68	0.42	0.44	0.08	0.06	0.19	0.15
528	398.59	8	8	-105	-74	0.67	0.47	0.13	0.07	0.33	0.17
535	237.74	6	6	14	34	0.16	0.38	0.01	0.04	0.03	0.16
536	287.31	10	10	50	107	0.21	0.44	0.01	0.03	0.03	0.11
537	300.6	10	10	50	106	0.2	0.43	0.01	0.03	0.03	0.11
538	435.26	10	10	49	103	0.2	0.42	0.01	0.05	0.03	0.11
539	338.05	6	6	13	24	0.14	0.27	0.01	0.03	0.03	0.08
540	359.5	6	6	-1	0	0.01	0	0	0	0	0
541	459.25	6	6	10	21	0.11	0.23	0.01	0.03	0.02	0.06
542	175.7	10	10	38	80	0.15	0.33	0	0.01	0.02	0.07
543	490.66	10	10	33	62	0.14	0.26	0.01	0.02	0.01	0.04
544	438.18	10	10	32	60	0.13	0.25	0.01	0.02	0.01	0.04
545	297.13	10	10	27	46	0.11	0.19	0	0.01	0.01	0.02
546	850.12	10	10	26	45	0.11	0.18	0.01	0.02	0.01	0.02
547	177.03	10	10	4	13	0.02	0.05	0	0	0	0
548	382.95	10	10	-22	-48	0.09	0.2	0	0.01	0.01	0.03
549	497.35	8	8	7	18	0.04	0.11	0	0.01	0	0.01
551	237.6	6	6	3	-1	0.04	0.02	0	0	0	0
552	249.98	6	6	2	-4	0.02	0.05	0	0	0	0
553	461.21	8	8	13	28	0.09	0.18	0	0.01	0.01	0.03
555	255.81	10	10	23	40	0.09	0.16	0	0	0.01	0.02
556	291.31	10	10	20	36	0.08	0.15	0	0	0.01	0.02

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
557	315.59	8	8	-4	-9	0.03	0.06	0	0	0	0
558	359.36	6	6	1	1	0.01	0.01	0	0	0	0
559	157.88	6	6	3	7	0.03	0.08	0	0	0	0.01
560	473.53	8	8	8	17	0.05	0.11	0	0.01	0	0.01
561	306.77	8	8	-4	-1	0.02	0.01	0	0	0	0
562	436.91	8	8	2	-2	0.01	0.01	0	0	0	0
563	504.73	6	6	8	12	0.1	0.14	0.01	0.01	0.01	0.03
564	393.49	6	6	5	10	0.06	0.11	0	0.01	0	0.02
565	582.99	8	8	14	25	0.09	0.16	0	0.01	0.01	0.02
566	156.18	6	6	11	18	0.13	0.21	0	0.01	0.02	0.05
567	558.62	6	6	-4	-7	0.04	0.07	0	0	0	0.01
568	480.11	6	6	1	-1	0.01	0.01	0	0	0	0
569	163.27	6	6	7	10	0.07	0.11	0	0	0.01	0.02
570	159.16	6	6	5	7	0.06	0.08	0	0	0	0.01
571	584.08	6	6	3	7	0.04	0.08	0	0	0	0.01
572	94.84	6	6	1	0	0.02	0	0	0	0	0
574	164.52	8	8	9	16	0.06	0.1	0	0	0	0.01
575	126.53	8	8	9	16	0.06	0.1	0	0	0	0.01
577	912.36	8	8	5	10	0.03	0.07	0	0	0	0
583	73.55	24	24	2760	7557	1.96	5.36	0.05	0.31	0.66	4.25
1091	805.29	8	8	0	-5	0	0.03	0	0	0	0
1093	936.94	8	8	4	10	0.03	0.06	0	0	0	0
1095	2,061.45	8	8	1	-10	0.01	0.06	0	0.01	0	0
1099	63.33	6	6	0	0	0	0	0	0	0	0
P-3	143.73	10	10	-65	-142	0.27	0.58	0.01	0.02	0.04	0.16
P-4	522.79	8	8	3	29	0.02	0.19	0	0.02	0	0.03
P-6	428.6	12	12	7	1	0.02	0	0	0	0	0
P-8	381.89	8	8	11	-57	0.07	0.36	0	0.04	0	0.11
P13	153.48	10	10	-26	-67	0.11	0.28	0	0.01	0.01	0.05
P-13	168.06	18	26	5511	10615	6.95	6.41	1.62	0.91	9.62	5.4
P15	1,262.65	6	6	30	43	0.34	0.49	0.16	0.32	0.13	0.25
P17	332.22	6	6	6	9	0.06	0.1	0	0	0.01	0.01

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-18	1,688.11	18	18	5510	4088	6.95	5.15	16.24	9.34	9.62	5.53
P19	428.57	6	6	17	22	0.2	0.25	0.02	0.03	0.05	0.08
P-19	431.84	18	18	5509	4087	6.95	5.15	4.15	2.39	9.62	5.53
P21	684.31	6	6	9	16	0.11	0.18	0.01	0.03	0.01	0.04
P23	329.93	6	6	4	7	0.04	0.08	0	0	0	0.01
P25	291.98	6	6	2	4	0.02	0.04	0	0	0	0
P27	829.17	6	6	-120	-104	1.36	1.18	1.4	1.08	1.69	1.3
P29	715.47	6	6	-82	-24	0.93	0.28	0.6	0.06	0.83	0.09
P31	304.39	6	6	-82	-60	0.93	0.68	0.26	0.14	0.84	0.47
P-32	1,146.30	4	10	5	7	0.13	0.03	0.04	0	0.04	0
P33	422.34	4	10	22	46	0.55	0.19	0.22	0.01	0.52	0.02
P-33	369.85	4	4	4	6	0.11	0.15	0.01	0.02	0.03	0.04
P-34	209.15	4	4	3	4	0.07	0.09	0	0	0.01	0.02
P35	643.76	4	10	19	38	0.49	0.15	0.26	0.01	0.41	0.02
P37	516.97	4	4	8	11	0.2	0.29	0.04	0.08	0.08	0.16
P-37	681.23	6	6	-120	-106	1.37	1.21	1.16	0.93	1.71	1.36
P39	218.03	4	10	-24	-19	0.63	0.08	0.14	0	0.64	0
P-39	58.36	12	12	0	-1	0	0	0	0	0	0
P41	89.47	4	4	-36	-40	0.91	1.02	0.12	0.14	1.29	1.58
P-41	345.63	6	12	130	123	1.48	0.35	0.68	0.02	1.97	0.06
P-42	614.87	8	8	-145	-132	0.93	0.84	0.36	0.31	0.59	0.5
P43	411.29	4	10	8	16	0.22	0.07	0.04	0	0.09	0
P-44	616.43	6	8	20	52	0.23	0.33	0.04	0.06	0.06	0.09
P45	790.84	4	4	1	4	0.02	0.1	0	0.02	0	0.02
P-46	474.72	6	8	-1	-3	0.02	0.02	0	0	0	0
P47	1,243.31	4	4	8	17	0.19	0.43	0.09	0.39	0.07	0.32
P-47	635.15	6	8	-13	-38	0.14	0.25	0.02	0.03	0.03	0.05
P-48	2,524.69	6	8	2	6	0.02	0.04	0	0	0	0
P49	6,359.31	12	16	3	116	0.01	0.19	0	0.09	0	0.01
P-49	745.78	6	8	-4	-11	0.04	0.07	0	0	0	0.01
P-50	1,924.75	6	6	2	5	0.03	0.06	0	0.01	0	0.01
P-52	680.58	6	6	27	67	0.31	0.75	0.08	0.39	0.11	0.57

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-53	578.12	6	8	-12	-7	0.14	0.05	0.01	0	0.03	0
P-54	404.19	6	6	3	6	0.04	0.07	0	0	0	0.01
P-55	446.36	8	8	5	9	0.03	0.06	0	0	0	0
P-56	132.09	6	6	1	-1	0.01	0.01	0	0	0	0
P-57	89.83	6	6	-3	-4	0.04	0.05	0	0	0	0
P-58	495.11	6	6	-4	-3	0.04	0.03	0	0	0	0
P59	48.79	8	8	0	190	0	1.21	0	0.05	0	0.98
P-59	175.59	6	6	-1	-1	0.01	0.01	0	0	0	0
P-60	205.58	6	6	1	1	0.01	0.01	0	0	0	0
P61	730.94	8	8	5	-181	0.03	1.16	0	0.65	0	0.9
P-61	344.87	6	6	-1	-2	0.02	0.03	0	0	0	0
P-62	204.38	6	6	-1	-2	0.01	0.02	0	0	0	0
P63	343.81	6	6	1	3	0.01	0.03	0	0	0	0
P-63	536.74	6	6	-3	-4	0.03	0.04	0	0	0	0
P-64	205.93	6	6	0	0	0	0.01	0	0	0	0
P65	310.55	6	6	13	19	0.15	0.21	0.01	0.02	0.03	0.05
P-65	163.57	6	6	1	1	0.01	0.01	0	0	0	0
P67	88.32	12	12	0	130	0	0.37	0	0.01	0	0.07
P-68	202.95	6	6	3	5	0.03	0.06	0	0	0	0
P69	193.67	6	10	266	-2	3.02	0.01	1.43	0	7.41	0
P-69	620.52	6	6	3	6	0.03	0.07	0	0	0	0.01
P-70	295.15	6	6	2	4	0.02	0.05	0	0	0	0
P71	25.48	6	6	267	0	3.03	0	0.19	0	7.45	0
P-71	59.08	6	6	0	0	0	0	0	0	0	0
P-73	617.69	6	10	50	251	0.57	1.03	0.21	0.34	0.34	0.55
P-74	157.58	6	6	1	1	0.01	0.02	0	0	0	0
P75	1,239.97	12	12	2	1	0	0	0	0	0	0
P-75	1,211.21	6	8	-49	-129	0.55	0.82	0.39	0.58	0.32	0.48
P-76	214.99	6	8	-25	-62	0.28	0.39	0.02	0.03	0.09	0.12
P77	658.65	12	12	107	389	0.3	1.1	0.03	0.29	0.04	0.44
P-77	769.97	6	6	-142	23	1.61	0.26	1.78	0.06	2.32	0.08
P-78	88.36	10	16	600	770	2.45	1.23	0.25	0.04	2.78	0.45

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-79	851.35	10	16	598	767	2.44	1.22	2.35	0.38	2.76	0.44
P-80	379.13	6	6	-32	-65	0.36	0.74	0.05	0.21	0.14	0.55
P-81	598.3	2	2	3	6	0.31	0.6	0.21	0.7	0.35	1.16
P-82	227.83	6	6	35	73	0.4	0.83	0.04	0.15	0.18	0.68
P-83	407.85	2	2	-3	-5	0.27	0.54	0.11	0.39	0.27	0.94
P-84	839.31	12	12	10	12	0.03	0.03	0	0	0	0
P-88	778.65	6	6	121	108	1.38	1.23	1.35	1.09	1.73	1.4
P97	80.8	16	16	2752	3091	4.39	4.93	0.38	0.47	4.72	5.85
P-101	548.47	10	20	208	1112	0.85	1.14	0.21	0.16	0.39	0.3
P-102	636.9	10	20	-262	-1377	1.07	1.41	0.38	0.28	0.6	0.44
P103	15.16	30	30	440	-1311	0.2	0.59	0	0	0.01	0.05
P-103	832.11	6	6	-4	1	0.04	0.01	0	0	0	0
P105	16.24	30	30	181	-3241	0.08	1.47	0	0	0	0.26
P107	25.46	30	30	259	1930	0.12	0.88	0	0	0	0.1
P109	33.96	30	30	179	2805	0.08	1.27	0	0.01	0	0.2
P111	218.67	12	12	0	65	0	0.19	0	0	0	0.02
P113	1,143.28	12	12	1	51	0	0.15	0	0.01	0	0.01
P115	208.63	12	12	1	-5	0	0.01	0	0	0	0
P117	534.1	12	12	1	-5	0	0.01	0	0	0	0
P119	477.85	8	8	1	-1	0.01	0.01	0	0	0	0
P121	273.19	10	10	1220	-20	4.98	0.08	2.82	0	10.32	0.01
P123	276.09	6	6	2	3	0.02	0.04	0	0	0	0
P125	614.89	8	8	0	-1	0	0.01	0	0	0	0
P-126	831.84	10	10	1221	-10	4.99	0.04	8.6	0	10.33	0
P127	29.96	18	18	4932	2545	6.22	3.21	0.2	0.06	6.75	1.98
P129	85.02	6	6	7	7	0.08	0.08	0	0	0.01	0.01
P-130	623.02	6	6	-27	-80	0.3	0.91	0.07	0.5	0.11	0.8
P131	115.43	6	6	0	9	0	0.1	0	0	0	0.01
P-131	604.28	6	6	10	21	0.11	0.24	0.01	0.04	0.02	0.07
P-132	2,143.51	6	6	8	17	0.09	0.19	0.02	0.1	0.01	0.05
P133	272.89	6	10	-53	-258	0.6	1.06	0.1	0.16	0.37	0.58
P-133	485.31	8	12	218	259	1.39	0.73	0.61	0.12	1.26	0.24

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-134	835.04	6	6	-22	-71	0.25	0.8	0.06	0.53	0.07	0.64
P135	645.38	10	20	204	1104	0.83	1.13	0.24	0.19	0.38	0.29
P137	807.76	6	6	-12	-37	0.13	0.42	0.02	0.15	0.02	0.19
P139	668.72	6	6	13	45	0.15	0.51	0.02	0.18	0.03	0.27
P141	638.87	6	10	-24	-284	0.27	1.16	0.05	0.44	0.08	0.7
P143	649.57	6	8	-23	-6	0.26	0.04	0.05	0	0.08	0
P145	141.2	10	10	32	85	0.13	0.35	0	0.01	0.01	0.07
P147	183.18	10	10	32	83	0.13	0.34	0	0.01	0.01	0.07
P149	171.47	10	10	-18	-36	0.07	0.15	0	0	0	0.02
P-150	451.65	8	12	297	390	1.9	1.1	1.01	0.23	2.24	0.51
P151	485.57	6	6	19	38	0.22	0.44	0.03	0.1	0.06	0.21
P153	127.01	10	10	57	120	0.23	0.49	0	0.02	0.04	0.14
P155	221.85	6	6	-2	-6	0.03	0.07	0	0	0	0.01
P157	290.82	12	12	0	-3	0	0.01	0	0	0	0
P159	216.46	6	6	2	3	0.03	0.03	0	0	0	0
P161	247.94	6	6	-2	-4	0.02	0.05	0	0	0	0
P163	654.81	6	6	2	7	0.02	0.07	0	0.01	0	0.01
P165	304.11	6	6	1	4	0.01	0.05	0	0	0	0
P167	238.41	6	6	22	0	0.25	0	0.02	0	0.08	0
P169	803.1	6	6	12	-24	0.14	0.27	0.02	0.07	0.02	0.09
P171	681.07	10	10	133	302	0.54	1.23	0.12	0.53	0.17	0.78
P173	274.62	8	8	-34	-84	0.22	0.54	0.01	0.06	0.04	0.22
P175	302.5	12	12	0	-5	0	0.01	0	0	0	0
P177	710.73	12	12	0	52	0	0.15	0	0.01	0	0.01
P179	220.2	8	8	15	202	0.09	1.29	0	0.21	0.01	0.95
P181	548.18	6	6	1	0	0.01	0	0	0	0	0
P183	389.04	8	8	12	202	0.08	1.29	0	0.37	0.01	0.95
P185	520.72	6	6	2	0	0.02	0	0	0	0	0
P187	360.11	8	8	8	202	0.05	1.29	0	0.34	0	0.95
P189	43.19	8	8	0	190	0	1.21	0	0.04	0	0.98
P191	41.92	8	8	0	190	0	1.21	0	0.04	0	0.98
P193	134.11	6	10	92	293	1.04	1.2	0.14	0.1	1.04	0.74

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P195	161.9	6	10	91	292	1.03	1.19	0.16	0.12	1.01	0.73
P197	95.39	6	6	124	116	1.41	1.31	0.17	0.15	1.81	1.58
P199	44.68	8	16	315	606	2.01	0.97	0.11	0.01	2.49	0.29
P201	65.11	6	6	124	116	1.41	1.31	0.12	0.1	1.81	1.58
P203	699.54	6	6	5	0	0.06	0	0	0	0	0
P205	233.59	12	12	1	232	0	0.66	0	0.04	0	0.17
P207	274.68	12	12	1	232	0	0.66	0	0.05	0	0.17
P209	662.87	8	8	1	232	0	1.48	0	0.81	0	1.22
P211	238.79	10	16	600	770	2.45	1.23	0.66	0.11	2.78	0.45
P221	690.29	8	8	109	140	0.7	0.89	0.24	0.38	0.35	0.56
P231	154.46	6	10	266	-1	3.02	0	1.14	0	7.41	0
P233	768.43	10	16	596	762	2.44	1.22	2.11	0.34	2.74	0.44
P237	659.24	10	10	37	78	0.15	0.32	0.01	0.04	0.02	0.06
P239	56.43	10	16	596	762	2.44	1.22	0.15	0.02	2.74	0.44
P241	80.04	8	16	593	626	3.79	1	0.65	0.02	8.06	0.31
P243	69.58	6	8	267	0	3.03	0	0.52	0	7.45	0
P247	22.25	6	6	267	0	3.03	0	0.17	0	7.46	0
P255	469.12	8	8	43	178	0.27	1.13	0.03	0.35	0.05	0.74
P273	81.42	8	8	314	162	2.01	1.04	0.2	0.06	2.48	0.73
P275	18.41	8	8	594	0	3.79	0	0.15	0	8.06	0
P277	16.23	8	8	636	0	4.06	0	0.15	0	9.15	0
P279	2,090.35	12	12	107	33	0.3	0.09	0.08	0.01	0.04	0
P307	3,371.98	6	12	124	116	1.41	0.33	6.1	0.18	1.81	0.05
P309	536.25	8	8	147	144	0.94	0.92	0.33	0.31	0.61	0.59
P311	475.13	8	8	0	0	0	0	0	0	0	0
P317	410.64	8	8	206	212	1.31	1.35	0.47	0.49	1.14	1.2
P321	510.62	8	8	185	174	1.18	1.11	0.41	0.37	0.8	0.72
P331	423.61	8	8	113	149	0.72	0.95	0.16	0.26	0.37	0.62
P339	640.34	8	16	317	609	2.02	0.97	1.61	0.19	2.52	0.29
P341	731.61	8	16	593	626	3.79	1	5.9	0.22	8.06	0.3
P353	140.2	6	12	126	118	1.43	0.33	0.26	0.01	1.85	0.06
P359	70.46	6	12	127	120	1.45	0.34	0.13	0	1.89	0.06

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P367	354.92	6	6	4	7	0.05	0.08	0	0	0	0.01
P369	32.63	6	6	4	10	0.05	0.11	0	0	0	0.01
P371	369.03	6	6	2	4	0.02	0.04	0	0	0	0
P373	627.01	6	8	32	60	0.36	0.38	0.09	0.07	0.14	0.11
P375	457.24	6	6	3	6	0.03	0.07	0	0	0	0.01
P377	470.82	6	8	58	102	0.65	0.65	0.2	0.15	0.43	0.31
P379	472.5	6	8	50	90	0.56	0.57	0.16	0.11	0.33	0.24
P381	327.75	8	8	-101	-68	0.65	0.43	0.1	0.05	0.31	0.15
P383	390.5	8	8	-109	-79	0.69	0.51	0.14	0.08	0.35	0.19
P385	75.99	8	8	-141	-126	0.9	0.8	0.04	0.03	0.56	0.45
P387	313.15	8	8	-152	-142	0.97	0.9	0.2	0.18	0.65	0.57
P389	59.8	8	8	217	256	1.39	1.63	0.07	0.1	1.25	1.7
P391	347.76	6	8	42	95	0.47	0.61	0.08	0.09	0.24	0.27
P393	428.6	8	8	180	168	1.15	1.07	0.33	0.29	0.76	0.67
P395	322.27	8	8	190	181	1.21	1.16	0.27	0.25	0.84	0.77
P397	441.54	6	6	-44	-41	0.5	0.47	0.12	0.1	0.27	0.24
P399	285.67	6	6	-51	-51	0.57	0.57	0.1	0.1	0.34	0.34
P401	434.56	6	8	73	145	0.83	0.92	0.29	0.26	0.67	0.59
P403	452.38	6	8	67	137	0.76	0.87	0.26	0.24	0.58	0.53
P405	459.09	6	8	64	129	0.72	0.83	0.24	0.22	0.52	0.48
P407	497.09	6	8	48	104	0.54	0.67	0.15	0.16	0.31	0.32
P409	280.91	8	12	-288	-375	1.84	1.06	0.59	0.13	2.11	0.48
P411	355.34	8	12	302	396	1.93	1.12	0.82	0.19	2.3	0.53
P413	174.07	8	16	-304	-588	1.94	0.94	0.41	0.05	2.33	0.27
P415	85.36	8	16	-306	-592	1.96	0.95	0.2	0.02	2.37	0.27
P417	207	8	16	318	613	2.03	0.98	0.52	0.06	2.53	0.29
P419	309.42	8	16	320	616	2.04	0.98	0.79	0.09	2.56	0.29
P421	296.72	6	6	-122	-13	1.38	0.15	0.52	0.01	1.74	0.03
P423	524.38	6	6	-121	-11	1.37	0.13	0.9	0.01	1.72	0.02
P425	700.57	6	6	-119	-5	1.35	0.06	1.17	0	1.67	0.01
P427	563.01	6	6	-112	4	1.27	0.05	0.84	0	1.49	0
P429	675.06	6	6	-139	27	1.57	0.3	1.49	0.07	2.21	0.11

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P431	509.72	8	8	-1	128	0.01	0.81	0	0.24	0	0.47
P433	621.54	8	8	-4	121	0.03	0.77	0	0.26	0	0.43
P435	57.83	8	8	-5	120	0.03	0.77	0	0.02	0	0.42
P437	107.17	8	8	244	87	1.56	0.55	0.17	0.02	1.55	0.23
P439	104.54	8	8	117	-69	0.75	0.44	0.04	0.02	0.4	0.15
P441	200.8	6	6	-53	4	0.61	0.05	0.08	0	0.38	0
P443	578.78	6	6	-49	7	0.55	0.08	0.18	0	0.32	0.01
P445	492.82	6	6	-24	16	0.27	0.18	0.04	0.02	0.08	0.04
P447	350.04	6	6	1	25	0.01	0.28	0	0.03	0	0.09
P449	313.82	6	6	21	50	0.23	0.57	0.02	0.11	0.07	0.33
P451	809.72	8	8	54	-82	0.34	0.52	0.08	0.17	0.09	0.2
P453	482.32	6	6	23	39	0.26	0.45	0.04	0.1	0.08	0.22
P455	291.6	6	6	3	6	0.03	0.07	0	0	0	0.01
P457	222.96	6	6	15	22	0.17	0.25	0.01	0.02	0.03	0.07
P459	571.54	8	8	1	-188	0.01	1.2	0	0.55	0	0.96
P461	654.56	8	8	126	155	0.81	0.99	0.3	0.44	0.46	0.67
P463	680.97	10	10	-1194	79	4.88	0.32	6.76	0.04	9.92	0.06
P465	535.05	10	10	-1199	65	4.9	0.27	5.35	0.02	10	0.05
P467	445.03	10	10	-1202	54	4.91	0.22	4.47	0.01	10.05	0.03
P469	275.41	10	10	-1206	48	4.93	0.2	2.78	0.01	10.11	0.03
P471	56.16	6	6	0	0	0	0	0	0	0	0
P473	622.25	10	10	1210	-38	4.94	0.16	6.33	0.01	10.17	0.02
P475	414.42	10	10	1215	-29	4.96	0.12	4.25	0	10.25	0.01
P477	147.93	10	10	1217	-25	4.97	0.1	1.52	0	10.28	0.01
P479	68.46	6	6	23	66	0.26	0.75	0.01	0.04	0.08	0.57
P481	440.79	6	8	23	58	0.26	0.37	0.04	0.05	0.08	0.11
P483	461	6	8	18	46	0.2	0.3	0.02	0.03	0.05	0.07
P485	518.75	6	8	-16	-44	0.19	0.28	0.02	0.03	0.04	0.06
P487	470.37	6	6	5	10	0.06	0.11	0	0.01	0	0.02
P489	742.31	6	6	21	47	0.24	0.54	0.05	0.22	0.07	0.3
P491	366.78	6	6	30	73	0.34	0.83	0.05	0.25	0.13	0.68
P493	248.87	6	6	-30	-77	0.34	0.88	0.03	0.19	0.13	0.75

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P495	619.69	6	6	-32	-83	0.36	0.94	0.09	0.53	0.14	0.86
P497	153.87	6	6	5	11	0.06	0.13	0	0	0.01	0.02
P499	310.85	10	20	435	1158	1.78	1.18	0.47	0.1	1.53	0.32
P501	522.72	10	20	432	1149	1.76	1.17	0.79	0.16	1.51	0.32
P503	58.51	10	20	562	1101	2.3	1.12	0.14	0.02	2.46	0.29
P505	473.93	6	6	-22	-74	0.25	0.84	0.04	0.32	0.08	0.69
P507	412.45	6	6	2	-25	0.03	0.29	0	0.04	0	0.1
P509	121.77	6	8	54	216	0.62	1.38	0.05	0.15	0.39	1.24
P511	307.63	6	6	9	-16	0.11	0.18	0	0.01	0.02	0.04
P513	63.32	6	6	-17	-67	0.2	0.76	0	0.04	0.05	0.58
P515	656.92	6	6	-7	-1	0.08	0.01	0.01	0	0.01	0
P517	477.42	6	6	22	47	0.25	0.53	0.03	0.14	0.07	0.3
P519	699.22	6	6	-39	-110	0.45	1.25	0.15	1.01	0.21	1.45
P521	767.68	6	6	-34	-92	0.38	1.04	0.12	0.79	0.16	1.03
P523	542.7	6	6	134	-31	1.52	0.35	1.13	0.08	2.07	0.14
P525	156.6	6	6	141	-19	1.6	0.21	0.36	0.01	2.28	0.05
P527	642.53	6	6	141	-10	1.6	0.11	1.47	0.01	2.28	0.02
P529	571.15	6	6	142	1	1.61	0.01	1.33	0	2.32	0
P531	1,171.92	6	6	144	13	1.63	0.15	2.77	0.03	2.36	0.03
P533	1,512.49	6	6	148	-12	1.68	0.13	3.77	0.04	2.5	0.02
P535	738.15	6	8	9	31	0.1	0.2	0.01	0.03	0.01	0.03
P537	739.76	6	8	-34	-44	0.38	0.28	0.12	0.05	0.16	0.06
P539	575.45	6	8	-1	13	0.01	0.08	0	0	0	0.01
P541	550.77	6	8	-15	13	0.17	0.08	0.02	0	0.04	0.01
P543	571.86	6	8	-20	3	0.22	0.02	0.03	0	0.06	0
P545	605.48	6	8	-25	-11	0.29	0.07	0.06	0	0.1	0
P547	373.14	6	10	-28	-281	0.32	1.15	0.04	0.25	0.12	0.68
P549	471.13	6	6	4	9	0.04	0.1	0	0.01	0	0.01
P551	264.16	6	6	1	2	0.01	0.02	0	0	0	0
P553	434.68	10	20	209	1116	0.85	1.14	0.17	0.13	0.39	0.3
P555	177.28	10	20	204	1106	0.83	1.13	0.07	0.05	0.38	0.29
P557	352.6	6	6	3	9	0.03	0.11	0	0.01	0	0.02

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P559	554.06	6	6	2	7	0.02	0.08	0	0.01	0	0.01
P561	292.08	6	6	0	2	0	0.02	0	0	0	0
P563	1,056.54	6	6	2	16	0.02	0.18	0	0.04	0	0.04
P565	837.75	6	6	4	21	0.04	0.24	0	0.06	0	0.07
P567	453	6	6	5	25	0.06	0.29	0	0.04	0	0.1
P569	373.03	6	6	12	28	0.13	0.31	0.01	0.04	0.02	0.11
P571	213.33	6	6	1	3	0.01	0.03	0	0	0	0
P573	237.17	6	6	1	2	0.01	0.02	0	0	0	0
P575	584.14	8	8	4	6	0.03	0.04	0	0	0	0
P577	288.94	8	8	9	10	0.06	0.06	0	0	0	0
P579	419.93	8	8	1	2	0.01	0.01	0	0	0	0
P581	213.44	8	8	15	43	0.09	0.28	0	0.01	0.01	0.06
P583	161.27	8	8	15	45	0.1	0.29	0	0.01	0.01	0.07
P585	144.51	6	6	-4	-10	0.05	0.12	0	0	0	0.02
P589	119.84	6	6	-1	1	0.01	0.01	0	0	0	0
P591	394.38	6	6	11	22	0.12	0.25	0.01	0.03	0.02	0.08
P593	431.65	6	6	9	18	0.1	0.21	0.01	0.02	0.01	0.05
P595	336.4	10	10	50	104	0.2	0.43	0.01	0.04	0.03	0.11
P597	104.97	10	10	-18	-37	0.08	0.15	0	0	0	0.02
P599	299.01	10	10	-34	-64	0.14	0.26	0	0.01	0.01	0.04
P601	189.84	6	6	-1	-1	0.01	0.02	0	0	0	0
P603	95.74	10	10	21	37	0.09	0.15	0	0	0.01	0.02
P605	264.65	6	6	4	8	0.05	0.1	0	0	0	0.01
P607	287.84	6	6	7	11	0.08	0.12	0	0.01	0.01	0.02
P609	191.95	8	8	2	-1	0.02	0	0	0	0	0
P611	184.16	8	8	-3	0	0.02	0	0	0	0	0
P613	222.37	6	6	2	-4	0.02	0.04	0	0	0	0
P615	76.61	6	6	3	-2	0.03	0.03	0	0	0	0
P617	163.22	6	6	4	11	0.05	0.13	0	0	0	0.02
P619	502.21	8	8	5	15	0.03	0.1	0	0	0	0.01
P621	399.83	8	8	8	20	0.05	0.12	0	0.01	0	0.01
P623	222.7	8	8	-4	-10	0.03	0.06	0	0	0	0

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P625	363.11	6	6	-4	-8	0.05	0.09	0	0	0	0.01
P627	207.7	6	6	2	5	0.03	0.06	0	0	0	0.01
P629	486.06	6	6	2	0	0.02	0.01	0	0	0	0
P631	233.12	6	6	0	-3	0	0.03	0	0	0	0
P633	312.68	8	8	6	11	0.04	0.07	0	0	0	0
P635	219.31	6	6	3	5	0.03	0.06	0	0	0	0
P637	150.57	6	6	4	7	0.04	0.08	0	0	0	0.01
P639	270.69	8	8	14	24	0.09	0.15	0	0.01	0.01	0.02
P641	193.25	8	8	3	8	0.02	0.05	0	0	0	0
P643	94.15	8	8	-35	-85	0.22	0.54	0	0.02	0.04	0.22
P645	165.73	8	8	-34	-83	0.22	0.53	0.01	0.03	0.04	0.21
P647	705.71	8	8	56	-74	0.36	0.47	0.07	0.12	0.1	0.17
P649	426.28	8	8	150	151	0.96	0.97	0.27	0.27	0.63	0.64
P653	259.44	6	6	2	28	0.02	0.32	0	0.03	0	0.11
P655	274.02	6	6	0	3	0	0.03	0	0	0	0
P657	243.43	6	6	0	3	0	0.03	0	0	0	0
P659	201.94	6	6	2	3	0.02	0.04	0	0	0	0
P661	308.76	6	6	12	42	0.14	0.48	0.01	0.08	0.03	0.25
P663	490.07	6	6	-10	-21	0.12	0.24	0.01	0.03	0.02	0.07
P665	305.78	10	10	876	-147	3.58	0.6	1.71	0.06	5.6	0.2
P667	531.92	6	6	-143	18	1.62	0.21	1.25	0.03	2.34	0.05
P669	270.57	6	6	-1	-4	0.01	0.05	0	0	0	0
P671	289.47	6	6	3	7	0.04	0.08	0	0	0	0.01
P673	452.2	12	12	88	-15	0.25	0.04	0.01	0	0.03	0
P675	403.68	12	12	-72	-89	0.2	0.25	0.01	0.01	0.02	0.03
P677	180.17	8	8	-5	-22	0.03	0.14	0	0	0	0.01
P679	541.38	8	8	-8	-66	0.05	0.42	0	0.06	0	0.12
P681	524.43	8	8	3	53	0.02	0.34	0	0.04	0	0.08
P683	364.98	8	8	-9	-65	0.05	0.41	0	0.04	0	0.11
P687	128.63	12	12	6	13	0.02	0.04	0	0	0	0
P689	341.48	8	8	7	19	0.05	0.12	0	0	0	0.01
P691	202.53	6	6	2	8	0.02	0.09	0	0	0	0.01

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P693	448.12	6	6	2	6	0.03	0.07	0	0	0	0.01
P695	469.5	6	6	1	3	0.01	0.03	0	0	0	0
P697	42.02	6	6	-1	-2	0.01	0.02	0	0	0	0
P699	202.41	6	6	2	7	0.02	0.08	0	0	0	0.01
P701	652.85	6	6	2	3	0.02	0.03	0	0	0	0
P703	395.74	8	8	2	9	0.02	0.06	0	0	0	0
P705	57.09	8	8	13	-116	0.09	0.74	0	0.02	0.01	0.34
P707	270.57	8	8	2	7	0.01	0.04	0	0	0	0
P709	132.57	6	6	1	4	0.01	0.04	0	0	0	0
P711	211.09	8	8	2	5	0.01	0.03	0	0	0	0
P713	555.62	8	8	1	6	0	0.04	0	0	0	0
P715	337.22	8	8	1	8	0.01	0.05	0	0	0	0
P717	219.91	6	6	1	5	0.01	0.05	0	0	0	0
P719	508.72	6	6	3	10	0.03	0.11	0	0.01	0	0.01
P721	378.61	8	8	1	23	0	0.15	0	0.01	0	0.02
P723	363.18	8	8	1	6	0.01	0.04	0	0	0	0
P725	195.87	8	8	-1	15	0.01	0.09	0	0	0	0.01
P727	305.85	6	6	1	4	0.01	0.04	0	0	0	0
P729	509.32	8	8	4	-157	0.02	1	0	0.3	0	0.59
P731	488.88	8	8	2	-163	0.01	1.04	0	0.31	0	0.63
P733	392.23	8	8	1	-167	0.01	1.07	0	0.26	0	0.66
P735	303.07	10	10	58	114	0.24	0.47	0.01	0.03	0.03	0.11
P737	315.07	10	10	56	112	0.23	0.46	0.01	0.03	0.03	0.11
P739	260.42	6	6	10	21	0.12	0.24	0	0.02	0.02	0.06
P741	238.5	6	6	9	20	0.11	0.23	0	0.01	0.01	0.05
P743	392.07	8	8	-19	-37	0.12	0.23	0	0.02	0.01	0.04
P745	206.86	8	8	-20	-38	0.12	0.24	0	0.01	0.01	0.04
P747	258.11	8	8	1	2	0.01	0.01	0	0	0	0
P749	358.41	8	8	-22	-42	0.14	0.27	0.01	0.02	0.02	0.05
P751	151.5	8	8	2	2	0.01	0.01	0	0	0	0
P753	223.98	8	8	-25	-45	0.16	0.29	0	0.01	0.02	0.06
P755	88.75	8	8	2	2	0.01	0.01	0	0	0	0

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P757	327.32	8	8	-28	-48	0.18	0.3	0.01	0.02	0.02	0.07
P759	464.96	10	10	-28	-57	0.11	0.23	0	0.01	0.01	0.03
P761	289.56	8	8	2	2	0.01	0.01	0	0	0	0
P763	544.7	10	10	-30	-69	0.12	0.28	0.01	0.02	0.01	0.04
P765	402.67	10	10	-59	-116	0.24	0.48	0.01	0.05	0.03	0.11
P767	269.63	8	8	-28	-56	0.18	0.36	0.01	0.02	0.02	0.09
P769	552.74	10	10	-45	-89	0.18	0.36	0.01	0.04	0.02	0.07
P771	266.52	6	6	1	2	0.01	0.02	0	0	0	0
P773	212.76	10	10	-38	-86	0.15	0.35	0	0.01	0.01	0.07
P775	523.98	10	10	31	76	0.13	0.31	0.01	0.03	0.01	0.05
P777	37.64	6	6	3	8	0.03	0.09	0	0	0	0.01
PMP-1_D	126.01	99	99	2760	4431	0.12	0.18	0	0	0	0
PMP-1_U	115.37	99	99	2760	4432	0.12	0.18	0	0	0	0
PMP-10_D	109.11	99	99	2754	3097	0.11	0.13	0	0	0	0
PMP-10_U	121.4	99	99	2756	3102	0.11	0.13	0	0	0	0
PMP-101	1	99	99	2755	3100	0.11	0.13	0	0	0	0
PMP-102	1	99	99	2755	3100	0.11	0.13	0	0	0	0
PMP-11	1	99	99	2760	4432	0.12	0.18	0	0	0	0
PMP-12	1	99	99	2760	4432	0.12	0.18	0	0	0	0
PRV-108_D	97.46	6	6	309	47	3.5	0.54	0.95	0.03	9.75	0.3
PRV-108_U	97.46	6	6	310	49	3.51	0.55	0.96	0.03	9.81	0.32
PRV-1081	77.96	6	6	309	48	3.51	0.55	0.5	0.02	6.47	0.21
PRV-11_D	38.82	8	16	315	607	2.01	0.97	0.1	0.01	2.5	0.29
PRV-11_U	695.84	8	16	-308	-596	1.97	0.95	1.67	0.19	2.4	0.28
PRV-111	1	6	6	315	606	3.58	6.88	0.01	0.02	6.71	22.46
PRV-112	1	6	6	315	606	3.58	6.88	0.01	0.02	6.71	22.52
PRV-131_D	40.29	10	10	133	322	0.54	1.32	0.01	0.04	0.17	0.88
PRV-131_U	1,206.44	10	10	133	335	0.54	1.37	0.21	1.14	0.17	0.94
PRV-1311	56.36	6	6	133	329	1.51	3.73	0.08	0.41	1.36	7.25
PRV-1312	27.86	6	6	133	329	1.51	3.73	0.04	0.2	1.36	7.25
PRV-18_U	687.83	6	6	-36	-75	0.4	0.85	0.12	0.49	0.18	0.71
PRV-19_D	443.43	6	6	2	-5	0.02	0.05	0	0	0	0

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
PRV-19_U	259.77	6	6	-1	7	0.01	0.08	0	0	0	0.01
PRV-191	1	6	6	0	8	0	0.09	0	0	0	0
PRV-192	1	6	6	0	8	0	0.09	0	0	0	0
PRV-32_D	63.65	12	12	0	129	0	0.37	0	0	0	0.07
PRV-32_U	508.66	10	16	595	759	2.43	1.21	1.39	0.22	2.73	0.43
PRV-321	1	8	8	0	130	0	0.83	0	0	0	0.37
PRV-322	1	8	8	0	130	0	0.83	0	0	0	0.37
PRV-6_D	751.32	8	8	99	127	0.63	0.81	0.22	0.35	0.29	0.46
PRV-6_U	802.97	8	8	118	153	0.75	0.98	0.32	0.52	0.4	0.65
PRV-601	1	4	4	32	84	0.81	2.15	0	0	0.67	4.15
PRV-602	1	4	4	32	84	0.81	2.15	0	0	0.67	4.15
PRV-71_D	210.78	10	10	26	68	0.11	0.28	0	0.01	0.01	0.05
PRV-71_U	367.93	10	10	27	70	0.11	0.29	0	0.02	0.01	0.05
PRV-711	1	4	4	27	69	0.68	1.75	0	0	0.49	2.87
PRV-712	1	4	4	27	69	0.68	1.75	0	0	0.49	2.87
PRV-90_D	726.55	6	6	6	4	0.07	0.05	0	0	0.01	0
PRV-90_U	76.29	6	6	7	7	0.08	0.08	0	0	0.01	0.01
PRV-901	1	4	4	7	7	0.18	0.17	0	0	0	0
PRV-902	1	4	4	7	7	0.18	0.17	0	0	0	0
SADDLE_CRK1	1	10	10	110	394	0.45	1.61	0	0	0.12	0.85
SADDLE_CRK2	1	10	10	110	394	0.45	1.61	0	0	0	0.85
U70081	1	99	99	124	116	0.01	0	0	0	0	0
U70082	1	99	99	124	116	0.01	0	0	0	0	0
V80061	1	6	6	0	0	0	0	0	0	0	0
V80062	1	6	6	0	0	0	0	0	0	0	0
V80101	1	4	4	0	190	0	4.85	0	0.02	0	18.92

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
2	224.83	8	8	3.98	19.81	0.03	0.13	0	0	0	0.01
12	410.58	10	16	226.93	1526.36	0.93	2.44	0.19	0.65	0.46	1.58
16	184.11	24	24	5524.81	10871.31	3.92	7.71	0.44	1.54	2.38	8.34
22	340.19	10	10	1230.2	-59.03	5.03	0.24	3.57	0.01	10.49	0.04
23	623.73	10	10	1225.05	-74.1	5	0.3	6.49	0.04	10.4	0.06
24	674.63	10	10	-1217.37	151.9	4.97	0.62	6.94	0.15	10.28	0.22
26	1,519.42	10	10	834.15	-321.06	3.41	1.31	7.76	1.32	5.11	0.87
27	782.42	10	10	826.76	-344.57	3.38	1.41	3.93	0.78	5.02	0.99
28	443.41	10	20	6.4	-2558.78	0.03	2.61	0	0.62	0	1.39
29	585.58	10	20	812.33	2188.74	3.32	2.24	2.85	0.61	4.86	1.04
33	814.38	8	8	-4.14	205.35	0.03	1.31	0	0.92	0	1.13
34	678.2	8	8	-143.94	-145.53	0.92	0.93	0.4	0.4	0.58	0.6
35	203.53	8	8	262.92	120.93	1.68	0.77	0.36	0.09	1.78	0.42
37	771.46	8	8	143.97	-39.93	0.92	0.25	0.45	0.04	0.59	0.05
38	1,419.79	8	12	109.2	255.76	0.7	0.73	0.5	0.33	0.35	0.24
40	222.73	12	12	1.53	39.59	0	0.11	0	0	0	0.01
41	279.83	8	8	-20.44	-71.8	0.13	0.46	0	0.05	0.02	0.16
42	132.13	8	12	100.51	180.07	0.64	0.51	0.04	0.02	0.3	0.12
43	315.88	8	8	23.28	78.84	0.15	0.5	0.01	0.06	0.02	0.19
44	453.84	8	8	-76.35	-97.25	0.49	0.62	0.08	0.13	0.18	0.28
45	531.53	8	8	-15.61	-33.12	0.1	0.21	0.01	0.02	0.01	0.04
46	345.85	8	8	53.25	58.04	0.34	0.37	0.03	0.04	0.09	0.11
47	280.51	6	6	3.99	9.83	0.05	0.11	0	0	0	0.02
50	459.24	6	6	46.32	42.5	0.53	0.48	0.13	0.11	0.29	0.25
51	141.01	6	6	4.74	21.25	0.05	0.24	0	0.01	0	0.07
52	277.17	6	6	1.93	9.98	0.02	0.11	0	0	0	0.02
54	379.88	6	12	14.85	48.9	0.17	0.14	0.01	0	0.04	0.01
55	123.91	6	6	7.7	33.4	0.09	0.38	0	0.02	0.01	0.16
57	645.63	6	6	2.88	14.68	0.03	0.17	0	0.02	0	0.03
58	290.12	6	6	-5.51	-11.69	0.06	0.13	0	0.01	0.01	0.02
61	122.39	10	10	48.71	162.92	0.2	0.67	0	0.03	0.03	0.25
62	503.57	6	6	1.33	4.84	0.02	0.05	0	0	0	0

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
64	602.87	6	6	2.53	9.31	0.03	0.11	0	0.01	0	0.01
67	67.92	6	10	-63.97	-776.63	0.73	3.17	0.04	0.3	0.53	4.47
70	1,285.19	10	16	228.55	1541.16	0.93	2.46	0.6	2.07	0.46	1.61
72	452.42	8	8	85.4	31.62	0.55	0.2	0.09	0.01	0.19	0.03
73	106.88	10	10	11.2	18.94	0.05	0.08	0	0	0	0.01
74	288.1	10	10	7.77	9.17	0.03	0.04	0	0	0	0
75	547.29	6	6	2.96	7.51	0.03	0.09	0	0.01	0	0.01
76	585.11	6	6	21.99	67.38	0.25	0.76	0.04	0.34	0.07	0.58
77	303.75	6	6	2.21	9.84	0.03	0.11	0	0.01	0	0.02
78	906.1	6	6	15.85	44.8	0.18	0.51	0.04	0.25	0.04	0.27
80	134.25	6	6	0.54	2.45	0.01	0.03	0	0	0	0
81	222.66	6	6	1.28	3.75	0.01	0.04	0	0	0	0
82	218.49	6	6	7.07	18.98	0.08	0.22	0	0.01	0.01	0.06
83	316.1	6	6	1.9	6.33	0.02	0.07	0	0	0	0.01
84	498.77	6	6	4.14	9.65	0.05	0.11	0	0.01	0	0.02
85	189.59	6	6	2.5	5.31	0.03	0.06	0	0	0	0.01
86	227.67	6	6	3.06	6.86	0.03	0.08	0	0	0	0.01
87	370.31	6	6	-2.38	-4.54	0.03	0.05	0	0	0	0
88	603.03	6	6	5.3	13.82	0.06	0.16	0	0.02	0.01	0.03
89	489.43	6	6	10.17	61.17	0.12	0.69	0.01	0.24	0.02	0.49
91	532.39	6	6	8.81	4.4	0.1	0.05	0.01	0	0.01	0
92	258.26	6	10	56.29	706.28	0.64	2.89	0.11	0.97	0.42	3.75
94	500.94	6	10	-45.42	-644.58	0.52	2.63	0.14	1.59	0.28	3.17
99	312.64	6	6	38.32	104.38	0.43	1.18	0.06	0.41	0.2	1.31
100	924.37	6	10	88.42	706.99	1	2.89	0.89	3.47	0.96	3.76
105	857.96	6	6	22.84	62.45	0.26	0.71	0.07	0.43	0.08	0.51
106	500.01	12	12	182.07	72.49	0.52	0.21	0.06	0.01	0.13	0.02
107	1,910.43	6	6	161.3	-34.64	1.83	0.39	5.6	0.32	2.93	0.17
109	431.79	6	8	343.58	51.69	3.9	0.33	5.14	0.04	11.89	0.09
110	1,291.62	6	6	175.9	48.11	2	0.55	4.45	0.4	3.44	0.31
111	1,547.27	6	6	3.27	7.35	0.04	0.08	0	0.01	0	0.01
112	142.02	10	20	940.67	2058.49	3.84	2.1	0.91	0.13	6.38	0.93

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
113	337.83	10	20	938.8	2052.58	3.83	2.1	2.15	0.31	6.36	0.92
114	571.88	10	20	1084.18	1959.5	4.43	2	4.75	0.49	8.3	0.85
115	636.4	6	6	156.77	-69.17	1.78	0.78	1.77	0.39	2.78	0.61
116	173.04	6	6	4.92	9.9	0.06	0.11	0	0	0	0.02
118	498.71	6	8	89.1	425.32	1.01	2.71	0.49	2.17	0.98	4.35
119	779.33	6	6	43.11	204.49	0.49	2.32	0.2	3.55	0.25	4.55
120	573.19	6	6	42.57	86.47	0.48	0.98	0.14	0.53	0.25	0.92
122	784.61	6	6	-62.14	-164.49	0.71	1.87	0.39	2.39	0.5	3.04
123	846.79	6	6	-2.26	75.67	0.03	0.86	0	0.61	0	0.72
124	562.93	6	6	5.84	77.46	0.07	0.88	0	0.42	0.01	0.75
125	772	6	6	-24.97	-126.97	0.28	1.44	0.07	1.45	0.09	1.88
126	770.74	6	6	-34.75	-156.5	0.39	1.78	0.13	2.14	0.17	2.77
129	764.75	6	6	11.49	-44.34	0.13	0.5	0.02	0.21	0.02	0.27
134	672.98	6	6	-156.46	39.27	1.78	0.45	1.86	0.14	2.77	0.21
135	744.13	6	6	-127.62	9.81	1.45	0.11	1.41	0.01	1.9	0.02
136	246.29	8	8	44.5	-27.51	0.28	0.18	0.02	0.01	0.07	0.03
137	793.29	8	8	-26.42	-63.92	0.17	0.41	0.02	0.1	0.03	0.13
138	1,059.86	6	6	48.69	48.38	0.55	0.55	0.34	0.33	0.32	0.32
139	549.85	8	8	97.28	176.51	0.62	1.13	0.16	0.47	0.28	0.85
140	539.99	8	16	607.46	1108.63	3.88	1.77	4.54	0.47	8.42	0.88
141	763.37	6	6	-7.88	-15.19	0.09	0.17	0.01	0.03	0.01	0.04
143	184.73	10	10	225.61	667.38	0.92	2.73	0.08	0.62	0.45	3.38
144	90.31	10	10	118.9	171.31	0.49	0.7	0.01	0.02	0.14	0.27
145	102.44	10	10	118.05	142.1	0.48	0.58	0.01	0.02	0.14	0.19
146	144.07	10	10	-216.5	-623.21	0.88	2.55	0.06	0.43	0.42	2.98
148	126.93	10	10	213.34	621.08	0.87	2.54	0.05	0.38	0.41	2.96
149	121.76	10	10	59.47	189.24	0.24	0.77	0	0.04	0.04	0.33
151	105.65	6	10	-106.29	-492.67	1.21	2.01	0.14	0.2	1.35	1.93
152	79.62	6	6	-110.86	-131.16	1.26	1.49	0.12	0.16	1.46	2
153	135.84	6	6	-5.93	-10.49	0.07	0.12	0	0	0.01	0.02
154	186.32	10	10	153.81	430.71	0.63	1.76	0.04	0.28	0.22	1.5
156	716.61	8	8	-54.61	-175.64	0.35	1.12	0.07	0.61	0.1	0.85

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
157	123.59	8	8	2.15	6.27	0.01	0.04	0	0	0	0
158	525.36	8	8	49.6	163.94	0.32	1.05	0.04	0.39	0.08	0.74
159	198.8	8	8	48.09	145.3	0.31	0.93	0.01	0.1	0.07	0.51
160	462.05	8	8	-21.77	-65.17	0.14	0.42	0.01	0.05	0.02	0.12
161	111.61	8	8	19.85	61.56	0.13	0.39	0	0.01	0.01	0.1
162	210.94	8	8	13.59	44.05	0.09	0.28	0	0.01	0.01	0.07
163	238.85	8	8	14.46	51.48	0.09	0.33	0	0.02	0.01	0.09
164	451.3	8	8	23.99	74.53	0.15	0.48	0.01	0.08	0.02	0.17
165	275.81	6	6	1.97	4.36	0.02	0.05	0	0	0	0
166	158.97	8	8	20.25	66.01	0.13	0.42	0	0.02	0.02	0.14
167	155.16	8	8	34.31	116.41	0.22	0.74	0.01	0.06	0.04	0.39
168	211.29	6	6	-8.25	-26.27	0.09	0.3	0	0.02	0.01	0.1
169	241.42	6	6	4.11	17.88	0.05	0.2	0	0.01	0	0.05
170	187.69	8	8	25.65	88.83	0.16	0.57	0	0.04	0.02	0.24
171	404.93	8	8	28.08	103.2	0.18	0.66	0.01	0.13	0.03	0.32
172	379.81	8	8	24.22	82.24	0.15	0.52	0.01	0.08	0.02	0.21
173	650.2	8	8	23.4	57.05	0.15	0.36	0.01	0.07	0.02	0.11
174	334.74	8	8	3.07	25	0.02	0.16	0	0.01	0	0.02
175	339.54	8	8	18.23	25.68	0.12	0.16	0	0.01	0.01	0.02
268	154.11	8	8	4.3	13.06	0.03	0.08	0	0	0	0.01
301	265.03	8	8	-6.68	59.01	0.04	0.38	0	0.03	0	0.1
330	319.7	8	8	-9.91	0.79	0.06	0.01	0	0	0	0
349	244.09	8	8	-10.23	-12.06	0.07	0.08	0	0	0	0.01
414	467.91	12	16	181.76	984.7	0.52	1.57	0.05	0.28	0.11	0.61
415	250.58	8	8	26.36	454.83	0.17	2.9	0.01	1.06	0.02	4.25
417	907.76	12	12	154.93	513.37	0.44	1.46	0.07	0.67	0.08	0.74
419	566.35	12	12	152.87	-13.66	0.43	0.04	0.04	0	0.08	0
442	878.64	8	8	-0.44	90.7	0	0.58	0	0.19	0	0.21
445	145.51	8	8	23.2	-281.78	0.15	1.8	0	0.25	0.02	1.75
446	238.62	8	8	21.94	-287.3	0.14	1.83	0	0.43	0.02	1.81
447	252.9	8	8	16.14	-312.18	0.1	1.99	0	0.53	0.01	2.12
448	189.1	8	8	12.32	-327.36	0.08	2.09	0	0.44	0.01	2.31

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
449	555.78	8	8	1.09	14.21	0.01	0.09	0	0	0	0.01
450	462.75	8	8	9.29	-363.69	0.06	2.32	0	1.3	0	2.81
452	550.4	12	12	-123.82	-236.06	0.35	0.67	0.03	0.1	0.05	0.17
453	596.81	12	12	119.88	199.59	0.34	0.57	0.03	0.08	0.05	0.13
454	420.77	8	8	14.89	52.61	0.1	0.34	0	0.03	0.01	0.08
455	552.26	12	12	-28.36	-130.95	0.08	0.37	0	0.03	0	0.06
456	290.15	8	8	-29.57	-143.24	0.19	0.91	0.01	0.15	0.03	0.5
457	320.23	8	8	-11.29	-68.1	0.07	0.43	0	0.04	0	0.13
459	380.78	8	8	-6.23	-5.13	0.04	0.03	0	0	0	0
460	493.78	8	8	-9.39	-55.69	0.06	0.36	0	0.04	0	0.09
461	462.68	8	8	6.79	35.08	0.04	0.22	0	0.02	0	0.04
465	708.24	8	8	80.76	3.48	0.52	0.02	0.12	0	0.17	0
466	544.16	8	8	76.58	-22.12	0.49	0.14	0.09	0.01	0.16	0.02
467	298.85	8	8	74.01	-48.15	0.47	0.31	0.04	0.02	0.15	0.07
468	336.34	8	8	73.03	-71.21	0.47	0.45	0.05	0.05	0.14	0.14
469	283.19	8	8	42.24	111.08	0.27	0.71	0.01	0.09	0.05	0.31
470	147.56	8	8	37.85	95.56	0.24	0.61	0.01	0.03	0.04	0.24
473	200.46	8	8	29.16	296.5	0.19	1.89	0.01	0.39	0.03	1.92
474	461.94	8	8	10.4	136.6	0.07	0.87	0	0.21	0	0.46
475	532.42	8	8	-10.87	-135.31	0.07	0.86	0	0.24	0	0.45
476	474.29	8	8	5.27	111.97	0.03	0.71	0	0.15	0	0.32
477	404.49	8	12	-402.16	-702.01	2.57	1.99	1.59	0.62	3.92	1.53
478	642.28	8	8	3.65	98.49	0.02	0.63	0	0.16	0	0.25
479	511.3	8	8	-2.88	-104.54	0.02	0.67	0	0.14	0	0.28
480	613.66	8	8	2.12	-72.85	0.01	0.46	0	0.09	0	0.14
499	443.99	8	8	0	-11.6	0	0.07	0	0	0	0
500	321.15	8	8	0.26	-33	0	0.21	0	0.01	0	0.03
501	384.28	8	8	0	-74.58	0	0.48	0	0.06	0	0.15
502	447.98	8	8	0.26	29.69	0	0.19	0	0.01	0	0.03
504	753.39	8	8	-0.26	-8.86	0	0.06	0	0	0	0
505	155.34	8	8	0	80.78	0	0.52	0	0.03	0	0.17
509	292.19	8	16	-574.97	-1034.85	3.67	1.65	2.22	0.23	7.6	0.77

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
513	621.7	6	6	32.72	67.68	0.37	0.77	0.09	0.36	0.15	0.59
514	1,061.68	8	12	387.73	664.26	2.47	1.88	3.89	1.46	3.66	1.38
515	516.68	6	8	88.43	235.16	1	1.5	0.5	0.75	0.96	1.45
517	609.24	6	6	-73.85	-100.67	0.84	1.14	0.42	0.75	0.69	1.22
518	488.2	6	6	-61.5	-79.3	0.7	0.9	0.24	0.38	0.49	0.79
520	907.11	6	8	78.13	214.64	0.89	1.37	0.69	1.11	0.77	1.23
521	539.67	6	8	67.83	190.61	0.77	1.22	0.32	0.53	0.59	0.98
522	567.67	6	8	52.67	162.17	0.6	1.04	0.21	0.41	0.37	0.73
525	456.49	6	8	82.53	185.64	0.94	1.18	0.39	0.43	0.85	0.94
526	521.54	6	8	64.76	147.74	0.73	0.94	0.28	0.32	0.54	0.61
527	434.09	6	8	35.56	86.37	0.4	0.55	0.08	0.1	0.18	0.23
528	398.59	8	8	-112.15	-83.14	0.72	0.53	0.15	0.08	0.37	0.21
535	237.74	6	6	23.54	74.87	0.27	0.85	0.02	0.17	0.08	0.71
536	287.31	10	10	85.5	237.47	0.35	0.97	0.02	0.14	0.08	0.5
537	300.6	10	10	84.52	235.36	0.35	0.96	0.02	0.15	0.07	0.49
538	435.26	10	10	84.09	228.3	0.34	0.93	0.03	0.2	0.07	0.46
539	338.05	6	6	21.48	52.17	0.24	0.59	0.02	0.12	0.07	0.36
540	359.5	6	6	-1.79	0.6	0.02	0.01	0	0	0	0
541	459.25	6	6	16.93	45.77	0.19	0.52	0.02	0.13	0.05	0.28
542	175.7	10	10	64.28	178.11	0.26	0.73	0.01	0.05	0.04	0.29
543	490.66	10	10	56.33	138.61	0.23	0.57	0.02	0.09	0.03	0.18
544	438.18	10	10	54.02	133.93	0.22	0.55	0.01	0.08	0.03	0.17
545	297.13	10	10	45.57	102.67	0.19	0.42	0.01	0.03	0.02	0.11
546	850.12	10	10	44.08	99.61	0.18	0.41	0.02	0.08	0.02	0.1
547	177.03	10	10	7.01	28.48	0.03	0.12	0	0	0	0.01
548	382.95	10	10	-36.58	-107.64	0.15	0.44	0.01	0.04	0.02	0.12
549	497.35	8	8	11.43	39.36	0.07	0.25	0	0.03	0.01	0.05
551	237.6	6	6	5.74	-3.03	0.07	0.03	0	0	0.01	0
552	249.98	6	6	2.88	-9.94	0.03	0.11	0	0	0	0.02
553	461.21	8	8	22.81	62.05	0.15	0.4	0.01	0.06	0.02	0.12
555	255.81	10	10	38.36	88.57	0.16	0.36	0	0.02	0.02	0.08
556	291.31	10	10	34.62	80.76	0.14	0.33	0	0.02	0.01	0.07

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
557	315.59	8	8	-6.79	-20.25	0.04	0.13	0	0	0	0.02
558	359.36	6	6	1.3	2.27	0.01	0.03	0	0	0	0
559	157.88	6	6	4.94	16.28	0.06	0.18	0	0.01	0	0.04
560	473.53	8	8	13.96	37.13	0.09	0.24	0	0.02	0.01	0.05
561	306.77	8	8	-6.09	-3.23	0.04	0.02	0	0	0	0
562	436.91	8	8	2.98	-4.26	0.02	0.03	0	0	0	0
563	504.73	6	6	14.41	27.62	0.16	0.31	0.02	0.06	0.03	0.11
564	393.49	6	6	8.26	21.84	0.09	0.25	0	0.03	0.01	0.07
565	582.99	8	8	24.22	55.32	0.15	0.35	0.01	0.06	0.02	0.1
566	156.18	6	6	18.86	40.79	0.21	0.46	0.01	0.04	0.06	0.23
567	558.62	6	6	-6.2	-14.51	0.07	0.16	0	0.02	0.01	0.03
568	480.11	6	6	1.05	-1.81	0.01	0.02	0	0	0	0
569	163.27	6	6	11.22	21.81	0.13	0.25	0	0.01	0.02	0.07
570	159.16	6	6	8.27	15.54	0.09	0.18	0	0.01	0.01	0.04
571	584.08	6	6	5.49	15.09	0.06	0.17	0	0.02	0.01	0.04
572	94.84	6	6	2.27	-0.93	0.03	0.01	0	0	0	0
574	164.52	8	8	15.86	35.31	0.1	0.23	0	0.01	0.01	0.04
575	126.53	8	8	15.59	34.65	0.1	0.22	0	0.01	0.01	0.04
577	912.36	8	8	8.19	23.05	0.05	0.15	0	0.02	0	0.02
583	73.55	24	24	2760.27	7648.4	1.96	5.42	0.05	0.32	0.66	4.35
1091	805.29	8	8	0.26	-10.56	0	0.07	0	0	0	0
1093	936.94	8	8	6.7	20	0.04	0.13	0	0.01	0	0.02
1095	2,061.45	8	8	2.22	-23.54	0.01	0.15	0	0.04	0	0.02
1099	63.33	6	6	0.18	60.9	0	0.69	0	0.02	0	0.48
P-3	143.73	10	10	-110.64	-314.43	0.45	1.28	0.02	0.1	0.1	0.72
P-4	522.79	8	8	5.33	65.4	0.03	0.42	0	0.07	0	0.14
P-6	428.6	12	12	11.69	1.73	0.03	0	0	0	0	0
P-8	381.89	8	8	18.41	-324.77	0.12	2.07	0	1.01	0.01	2.64
P13	153.48	10	10	-44.34	-149.49	0.18	0.61	0	0.03	0.02	0.21
P-13	168.06	18	26	5509.61	10675.45	6.95	6.45	1.62	0.92	9.62	5.46
P15	1,262.65	6	6	51.06	95.32	0.58	1.08	0.44	1.4	0.35	1.11
P17	332.22	6	6	9.37	20.34	0.11	0.23	0.01	0.02	0.02	0.06

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-18	1,688.11	18	18	5508.25	3822.69	6.94	4.82	16.23	8.25	9.61	4.89
P19	428.57	6	6	29.61	49.64	0.34	0.56	0.05	0.14	0.13	0.33
P-19	431.84	18	18	5507.14	3819.66	6.94	4.82	4.15	2.11	9.61	4.88
P21	684.31	6	6	15.79	35.88	0.18	0.41	0.03	0.12	0.04	0.18
P23	329.93	6	6	6.61	15.59	0.08	0.18	0	0.01	0.01	0.04
P25	291.98	6	6	2.69	7.81	0.03	0.09	0	0	0	0.01
P27	829.17	6	6	-109.71	-85.27	1.24	0.97	1.19	0.75	1.44	0.9
P29	715.47	6	6	-45.23	91.38	0.51	1.04	0.2	0.73	0.28	1.02
P31	304.39	6	6	-70.37	-45.31	0.8	0.51	0.19	0.08	0.63	0.28
P-32	1,146.30	4	10	8.77	16.22	0.22	0.07	0.11	0	0.1	0
P33	422.34	4	10	36.95	102.51	0.94	0.42	0.58	0.04	1.38	0.11
P-33	369.85	4	4	7.63	12.79	0.19	0.33	0.03	0.07	0.07	0.19
P-34	209.15	4	4	4.69	7.86	0.12	0.2	0.01	0.02	0.03	0.08
P35	643.76	4	10	32.68	83.38	0.83	0.34	0.71	0.05	1.1	0.07
P37	516.97	4	4	13.39	25.51	0.34	0.65	0.11	0.36	0.21	0.69
P-37	681.23	6	6	-111.05	-90.76	1.26	1.03	1	0.69	1.47	1.01
P39	218.03	4	10	-17.22	16.64	0.44	0.07	0.07	0	0.34	0
P-39	58.36	12	12	-0.38	-2.73	0	0.01	0	0	0	0
P41	89.47	4	4	-36.23	-30.37	0.92	0.78	0.12	0.09	1.33	0.96
P-41	345.63	6	12	127.21	127.36	1.44	0.36	0.65	0.02	1.89	0.06
P-42	614.87	8	8	-179.38	-213.41	1.14	1.36	0.54	0.75	0.88	1.21
P43	411.29	4	10	14.34	36.59	0.37	0.15	0.1	0.01	0.24	0.02
P-44	616.43	6	8	34.45	99.45	0.39	0.63	0.1	0.18	0.17	0.29
P45	790.84	4	4	1.29	8.72	0.03	0.22	0	0.08	0	0.1
P-46	474.72	6	8	-2.5	53.64	0.03	0.34	0	0.04	0	0.09
P47	1,243.31	4	4	12.87	37.12	0.33	0.95	0.24	1.73	0.2	1.39
P-47	635.15	6	8	-21.43	-68.69	0.24	0.44	0.04	0.09	0.07	0.15
P-48	2,524.69	6	8	3.38	-46.53	0.04	0.3	0.01	0.18	0	0.07
P49	6,359.31	12	16	5.7	258.42	0.02	0.41	0	0.38	0	0.06
P-49	745.78	6	8	-6.33	35.5	0.07	0.23	0.01	0.03	0.01	0.04
P-50	1,924.75	6	6	4.02	11.74	0.05	0.13	0.01	0.04	0	0.02
P-52	680.58	6	6	46.71	87.23	0.53	0.99	0.2	0.64	0.3	0.94

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-53	578.12	6	8	-20.97	-32.5	0.24	0.21	0.04	0.02	0.07	0.04
P-54	404.19	6	6	5.91	13.62	0.07	0.15	0	0.01	0.01	0.03
P-55	446.36	8	8	8.15	21.04	0.05	0.13	0	0.01	0	0.02
P-56	132.09	6	6	1.69	-2.48	0.02	0.03	0	0	0	0
P-57	89.83	6	6	-5.28	-9.54	0.06	0.11	0	0	0.01	0.01
P-58	495.11	6	6	-6.53	-5.72	0.07	0.06	0	0	0.01	0.01
P59	48.79	8	8	151.5	293.9	0.97	1.88	0.03	0.11	0.64	2.19
P-59	175.59	6	6	-1.05	-2.17	0.01	0.02	0	0	0	0
P-60	205.58	6	6	0.89	2.06	0.01	0.02	0	0	0	0
P61	730.94	8	8	-142.34	-273.98	0.91	1.75	0.42	1.41	0.57	1.93
P-61	344.87	6	6	-2.45	-5.31	0.03	0.06	0	0	0	0.01
P-62	204.38	6	6	-2.14	-4.73	0.02	0.05	0	0	0	0
P63	343.81	6	6	2.11	6.52	0.02	0.07	0	0	0	0.01
P-63	536.74	6	6	-4.69	-8.11	0.05	0.09	0	0.01	0	0.01
P-64	205.93	6	6	0.58	1.09	0.01	0.01	0	0	0	0
P65	310.55	6	6	22.18	41.73	0.25	0.47	0.02	0.07	0.07	0.24
P-65	163.57	6	6	0.88	2.16	0.01	0.02	0	0	0	0
P67	88.32	12	12	0.25	219.3	0	0.62	0	0.02	0	0.18
P-68	202.95	6	6	4.72	10.78	0.05	0.12	0	0	0	0.02
P69	193.67	6	10	301.08	-4.99	3.42	0.02	1.8	0	9.31	0
P-69	620.52	6	6	4.4	13.11	0.05	0.15	0	0.02	0	0.03
P-70	295.15	6	6	3.08	9.76	0.03	0.11	0	0	0	0.02
P71	25.48	6	6	302.71	0	3.43	0	0.24	0	9.41	0
P-71	59.08	6	6	0	0	0	0	0	0	0	0
P-73	617.69	6	10	85.79	699.78	0.97	2.86	0.56	2.28	0.91	3.69
P-74	157.58	6	6	1.42	3.18	0.02	0.04	0	0	0	0
P75	1,239.97	12	12	1.54	0.71	0	0	0	0	0	0
P-75	1,211.21	6	8	-82.86	-230.16	0.94	1.47	1.03	1.69	0.85	1.39
P-76	214.99	6	8	-41.66	-119.84	0.47	0.76	0.05	0.09	0.24	0.42
P77	658.65	12	12	182.3	912.52	0.52	2.59	0.07	1.41	0.11	2.14
P-77	769.97	6	6	-148.96	67.34	1.69	0.76	1.95	0.45	2.53	0.58
P-78	88.36	10	16	926.64	1365.93	3.79	2.18	0.55	0.11	6.2	1.29

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-79	851.35	10	16	923.52	1359.28	3.77	2.17	5.25	1.09	6.17	1.28
P-80	379.13	6	6	-54.01	-130.9	0.61	1.49	0.15	0.76	0.39	1.99
P-81	598.3	2	2	5.22	13.09	0.53	1.34	0.56	3.04	0.93	5.09
P-82	227.83	6	6	60.29	149.13	0.68	1.69	0.11	0.58	0.47	2.54
P-83	407.85	2	2	-4.55	-11.7	0.46	1.2	0.29	1.69	0.72	4.14
P-84	839.31	12	12	17.56	27.04	0.05	0.08	0	0	0	0
P-88	778.65	6	6	112.59	94.71	1.28	1.07	1.17	0.85	1.51	1.09
P97	80.8	16	16	2749.67	3102.47	4.39	4.95	0.38	0.48	4.71	5.89
P-101	548.47	10	20	352.76	2525.98	1.44	2.58	0.57	0.74	1.04	1.36
P-102	636.9	10	20	-445.62	-3254.17	1.82	3.32	1.02	1.38	1.6	2.17
P103	15.16	30	30	3.83	-2565.53	0	1.16	0	0	0	0.16
P-103	832.11	6	6	-6.63	2.2	0.08	0.02	0.01	0	0.01	0
P105	16.24	30	30	7.32	-3406.83	0	1.55	0	0	0	0.29
P107	25.46	30	30	-3.65	840.97	0	0.38	0	0	0	0.02
P109	33.96	30	30	6.06	2428.91	0	1.1	0	0.01	0	0.15
P111	218.67	12	12	1.26	144.87	0	0.41	0	0.02	0	0.08
P113	1,143.28	12	12	1.31	113.54	0	0.32	0	0.05	0	0.05
P115	208.63	12	12	1.11	-10.05	0	0.03	0	0	0	0
P117	534.1	12	12	0.91	-10.05	0	0.03	0	0	0	0
P119	477.85	8	8	0.91	-1.99	0.01	0.01	0	0	0	0
P121	273.19	10	10	1236.18	-44.48	5.05	0.18	2.89	0.01	10.58	0.02
P123	276.09	6	6	3.22	7.47	0.04	0.08	0	0	0	0.01
P125	614.89	8	8	0.18	-1.99	0	0.01	0	0	0	0
P-126	831.84	10	10	1237.73	-22.17	5.06	0.09	8.82	0.01	10.61	0.01
P127	29.96	18	18	4756.45	525.51	6	0.66	0.19	0	6.32	0.11
P129	85.02	6	6	12.22	16.61	0.14	0.19	0	0	0.02	0.04
P-130	623.02	6	6	-45.61	-152.65	0.52	1.73	0.18	1.65	0.28	2.65
P131	115.43	6	6	0.59	19.29	0.01	0.22	0	0.01	0	0.06
P-131	604.28	6	6	16.73	47.12	0.19	0.53	0.03	0.18	0.04	0.3
P-132	2,143.51	6	6	12.9	37.59	0.15	0.43	0.06	0.42	0.03	0.2
P133	272.89	6	10	-89.86	-715.15	1.02	2.92	0.27	1.05	0.99	3.84
P-133	485.31	8	12	277.38	428.9	1.77	1.22	0.96	0.3	1.97	0.61

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-134	835.04	6	6	-36.88	-131.49	0.42	1.49	0.16	1.68	0.19	2.01
P135	645.38	10	20	346.23	2507.04	1.41	2.56	0.65	0.86	1	1.34
P137	807.76	6	6	-19.92	-86.37	0.23	0.98	0.05	0.74	0.06	0.92
P139	668.72	6	6	21.94	104.21	0.25	1.18	0.05	0.87	0.07	1.31
P141	638.87	6	10	-40.18	-667.64	0.46	2.73	0.14	2.16	0.22	3.38
P143	649.57	6	8	-39.61	-69.79	0.45	0.45	0.14	0.1	0.22	0.15
P145	141.2	10	10	53.7	188.38	0.22	0.77	0	0.05	0.03	0.32
P147	183.18	10	10	53.58	185.29	0.22	0.76	0.01	0.06	0.03	0.31
P149	171.47	10	10	-30.53	-80.85	0.12	0.33	0	0.01	0.01	0.07
P-150	451.65	8	12	411.34	719.04	2.63	2.04	1.85	0.72	4.09	1.6
P151	485.57	6	6	32.91	85.45	0.37	0.97	0.08	0.44	0.15	0.9
P153	127.01	10	10	97.29	265.68	0.4	1.09	0.01	0.08	0.1	0.61
P155	221.85	6	6	-4.01	-14.29	0.05	0.16	0	0.01	0	0.03
P157	290.82	12	12	-1.07	-8.07	0	0.02	0	0	0	0
P159	216.46	6	6	3.84	5.87	0.04	0.07	0	0	0	0.01
P161	247.94	6	6	-3.63	-9.53	0.04	0.11	0	0	0	0.02
P163	654.81	6	6	2.85	14.57	0.03	0.17	0	0.02	0	0.03
P165	304.11	6	6	1.95	9.62	0.02	0.11	0	0	0	0.02
P167	238.41	6	6	38.09	15.29	0.43	0.17	0.05	0.01	0.2	0.04
P169	803.1	6	6	20.64	-39.04	0.23	0.44	0.05	0.17	0.07	0.21
P171	681.07	10	10	226.13	670.61	0.92	2.74	0.31	2.32	0.46	3.41
P173	274.62	8	8	-58.38	-187.34	0.37	1.2	0.03	0.26	0.11	0.95
P175	302.5	12	12	-0.9	-10.05	0	0.03	0	0	0	0
P177	710.73	12	12	0.9	115.3	0	0.33	0	0.03	0	0.05
P179	220.2	8	8	25.1	430.25	0.16	2.75	0	0.84	0.02	3.83
P181	548.18	6	6	1.66	0	0.02	0	0	0	0	0
P183	389.04	8	8	20.4	430.25	0.13	2.75	0.01	1.49	0.01	3.83
P185	520.72	6	6	2.65	0	0.03	0	0	0	0	0
P187	360.11	8	8	14.06	430.24	0.09	2.75	0	1.38	0.01	3.83
P189	43.19	8	8	151.36	293.67	0.97	1.87	0.03	0.09	0.64	2.19
P191	41.92	8	8	150.97	293	0.96	1.87	0.03	0.09	0.64	2.18
P193	134.11	6	10	156.52	590.85	1.78	2.41	0.37	0.36	2.77	2.7

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P195	161.9	6	10	154.47	587.41	1.75	2.4	0.44	0.43	2.71	2.67
P197	95.39	6	6	117.54	111.16	1.33	1.26	0.16	0.14	1.63	1.47
P199	44.68	8	16	592.9	1071.75	3.78	1.71	0.36	0.04	8.05	0.82
P201	65.11	6	6	117.54	111.16	1.33	1.26	0.11	0.1	1.63	1.47
P203	699.54	6	6	9.34	0	0.11	0	0.01	0	0.01	0
P205	233.59	12	12	1.86	484.64	0.01	1.37	0	0.15	0	0.66
P207	274.68	12	12	1.86	484.64	0.01	1.37	0	0.18	0	0.66
P209	662.87	8	8	1.02	484.64	0.01	3.09	0	3.17	0	4.78
P211	238.79	10	16	926.64	1365.93	3.79	2.18	1.48	0.31	6.2	1.29
P219	26.14	10	#N/A	926.64	#N/A	3.79	#N/A	0.16	#N/A	6.2	#N/A
P221	690.29	8	8	185.45	112.63	1.18	0.72	0.65	0.26	0.93	0.37
P231	154.46	6	10	301.32	-2.46	3.42	0.01	1.44	0	9.33	0
P233	768.43	10	16	919.91	1347.07	3.76	2.15	4.7	0.97	6.12	1.26
P237	659.24	10	10	63.33	172.11	0.26	0.7	0.03	0.18	0.04	0.27
P239	56.43	10	16	919.91	1347.07	3.76	2.15	0.35	0.07	6.12	1.26
P241	80.04	8	16	915.11	1116.89	5.84	1.78	1.44	0.07	17.98	0.89
P243	69.58	6	8	302.71	0	3.43	0	0.65	0	9.41	0
P247	22.25	6	6	302.71	0	3.43	0	0.21	0	9.41	0
P255	469.12	8	8	73.03	413.43	0.47	2.64	0.07	1.67	0.14	3.56
P273	81.42	8	8	303.24	33.5	1.94	0.21	0.19	0	2.32	0.04
P275	18.41	8	8	604.86	0	3.86	0	0.15	0	8.35	0
P277	16.23	8	8	647.55	0	4.13	0	0.15	0	9.47	0
P279	2,090.35	12	12	182.3	76.7	0.52	0.22	0.23	0.05	0.11	0.02
P307	3,371.98	6	12	117.54	111.16	1.33	0.32	5.5	0.17	1.63	0.05
P309	536.25	8	8	196.14	253.4	1.25	1.62	0.56	0.89	1.04	1.67
P311	475.13	8	8	0	0	0	0	0	0	0	0
P317	410.64	8	8	278.31	382.5	1.78	2.44	0.81	1.47	1.98	3.57
P321	510.62	8	8	242.19	298.6	1.55	1.91	0.67	0.99	1.32	1.95
P331	423.61	8	8	191.76	132.52	1.22	0.85	0.42	0.21	0.99	0.5
P339	640.34	8	16	595.58	1078.52	3.8	1.72	5.2	0.53	8.11	0.83
P341	731.61	8	16	915.11	1116.89	5.84	1.78	13.15	0.65	17.98	0.89
P353	140.2	6	12	120.32	115.81	1.37	0.33	0.24	0.01	1.7	0.05

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P359	70.46	6	12	122.79	119.95	1.39	0.34	0.12	0	1.77	0.06
P367	354.92	6	6	6.79	15.33	0.08	0.17	0	0.01	0.01	0.04
P369	32.63	6	6	7.03	21.31	0.08	0.24	0	0	0.01	0.07
P371	369.03	6	6	2.59	8.8	0.03	0.1	0	0	0	0.01
P373	627.01	6	8	27.05	67.26	0.31	0.43	0.07	0.09	0.11	0.14
P375	457.24	6	6	4.78	13.21	0.05	0.15	0	0.01	0	0.03
P377	470.82	6	8	71.09	161.93	0.81	1.03	0.3	0.34	0.64	0.73
P379	472.5	6	8	57.93	133.5	0.66	0.85	0.21	0.24	0.44	0.51
P381	327.75	8	8	-105.34	-70.18	0.67	0.45	0.11	0.05	0.33	0.15
P383	390.5	8	8	-117.72	-95.55	0.75	0.61	0.16	0.11	0.4	0.27
P385	75.99	8	8	-172.62	-198.24	1.1	1.27	0.06	0.08	0.82	1.06
P387	313.15	8	8	-191.23	-234.08	1.22	1.49	0.31	0.45	0.99	1.44
P389	59.8	8	8	275.27	422.72	1.76	2.7	0.12	0.26	1.94	4.3
P391	347.76	6	8	48.83	153.71	0.55	0.98	0.11	0.23	0.32	0.66
P393	428.6	8	8	233.42	283.91	1.49	1.81	0.53	0.76	1.23	1.77
P395	322.27	8	8	250.89	313.4	1.6	2	0.45	0.69	1.41	2.13
P397	441.54	6	6	-57.38	-69.73	0.65	0.79	0.19	0.27	0.43	0.62
P399	285.67	6	6	-67.92	-90.06	0.77	1.02	0.17	0.28	0.59	1
P401	434.56	6	8	101.84	264.67	1.16	1.69	0.54	0.79	1.25	1.81
P403	452.38	6	8	91.9	247.11	1.04	1.58	0.47	0.72	1.03	1.59
P405	459.09	6	8	86.31	230.12	0.98	1.47	0.42	0.64	0.92	1.39
P407	497.09	6	8	59.13	174.75	0.67	1.12	0.23	0.42	0.46	0.84
P409	280.91	8	12	-395.65	-687.13	2.53	1.95	1.07	0.41	3.8	1.47
P411	355.34	8	12	419.32	733.64	2.68	2.08	1.51	0.59	4.24	1.66
P413	174.07	8	16	-573.56	-1032.12	3.66	1.65	1.32	0.13	7.57	0.77
P415	85.36	8	16	-578.26	-1041.36	3.69	1.66	0.66	0.07	7.68	0.78
P417	207	8	16	597.5	1086.19	3.81	1.73	1.69	0.17	8.16	0.84
P419	309.42	8	16	600.59	1093	3.83	1.74	2.55	0.26	8.24	0.85
P421	296.72	6	6	-138.04	-17.99	1.57	0.2	0.65	0.02	2.2	0.05
P423	524.38	6	6	-136.86	-14.21	1.55	0.16	1.13	0.02	2.16	0.03
P425	700.57	6	6	-133.17	-0.73	1.51	0.01	1.44	0	2.06	0
P427	563.01	6	6	-121.37	20.59	1.38	0.23	0.97	0.04	1.73	0.06

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P429	675.06	6	6	-153.31	48.32	1.74	0.55	1.8	0.21	2.67	0.31
P431	509.72	8	8	-1.73	213.28	0.01	1.36	0	0.62	0	1.21
P433	621.54	8	8	-6.81	199.3	0.04	1.27	0	0.66	0	1.07
P435	57.83	8	8	-7.93	196.99	0.05	1.26	0	0.06	0	1.05
P437	107.17	8	8	263.59	122.05	1.68	0.78	0.19	0.05	1.79	0.43
P439	104.54	8	8	48.14	-25.37	0.31	0.16	0.01	0	0.08	0.02
P441	200.8	6	6	-68.3	-31.85	0.78	0.36	0.12	0.03	0.6	0.15
P443	578.78	6	6	-60.21	-25.98	0.68	0.29	0.27	0.06	0.47	0.1
P445	492.82	6	6	-17.63	-5.06	0.2	0.06	0.02	0	0.05	0
P447	350.04	6	6	23.79	14.43	0.27	0.16	0.03	0.01	0.08	0.03
P449	313.82	6	6	57.63	69.78	0.65	0.79	0.14	0.19	0.44	0.62
P451	809.72	8	8	-37.64	-94.23	0.24	0.6	0.04	0.22	0.05	0.27
P453	482.32	6	6	39.62	87.39	0.45	0.99	0.11	0.45	0.22	0.94
P455	291.6	6	6	4.99	13.88	0.06	0.16	0	0.01	0	0.03
P457	222.96	6	6	24.84	48.24	0.28	0.55	0.02	0.07	0.09	0.31
P459	571.54	8	8	-148.83	-289.06	0.95	1.85	0.36	1.22	0.62	2.13
P461	654.56	8	8	214.52	146.14	1.37	0.93	0.8	0.39	1.22	0.6
P463	680.97	10	10	-1192.46	235.05	4.87	0.96	6.74	0.33	9.9	0.49
P465	535.05	10	10	-1200.83	205.34	4.91	0.84	5.36	0.2	10.03	0.38
P467	445.03	10	10	-1207.02	179.86	4.93	0.73	4.51	0.13	10.12	0.3
P469	275.41	10	10	-1213.25	166.93	4.96	0.68	2.81	0.07	10.22	0.26
P471	56.16	6	6	-0.24	59.53	0	0.68	0	0.03	0	0.46
P473	622.25	10	10	1220.23	-85.26	4.98	0.35	6.43	0.05	10.33	0.07
P475	414.42	10	10	1228.79	-65.06	5.02	0.27	4.34	0.02	10.46	0.05
P477	147.93	10	10	1232.11	-54.44	5.03	0.22	1.56	0	10.52	0.03
P479	68.46	6	6	39.7	107.74	0.45	1.22	0.01	0.1	0.22	1.39
P481	440.79	6	8	39.15	112.5	0.44	0.72	0.09	0.16	0.21	0.37
P483	461	6	8	30.12	86.01	0.34	0.55	0.06	0.1	0.13	0.23
P485	518.75	6	8	-27.81	-80.64	0.32	0.51	0.06	0.1	0.11	0.2
P487	470.37	6	6	8.51	21.89	0.1	0.25	0.01	0.03	0.01	0.07
P489	742.31	6	6	35.35	104.74	0.4	1.19	0.13	0.98	0.18	1.32
P491	366.78	6	6	50.52	101.74	0.57	1.15	0.13	0.46	0.34	1.25

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P493	248.87	6	6	-51.33	-110.78	0.58	1.26	0.09	0.36	0.35	1.46
P495	619.69	6	6	-53.97	-123.99	0.61	1.41	0.24	1.12	0.39	1.8
P497	153.87	6	6	8.87	25.33	0.1	0.29	0	0.01	0.01	0.1
P499	310.85	10	20	815.49	2198.73	3.33	2.25	1.52	0.33	4.9	1.05
P501	522.72	10	20	810.46	2178.28	3.31	2.22	2.53	0.54	4.84	1.03
P503	58.51	10	20	940.26	2056.71	3.84	2.1	0.37	0.05	6.38	0.93
P505	473.93	6	6	-38.19	-138.05	0.43	1.57	0.1	1.04	0.2	2.2
P507	412.45	6	6	3.91	-57.82	0.04	0.66	0	0.18	0	0.44
P509	121.77	6	8	92.5	432.38	1.05	2.76	0.13	0.55	1.05	4.48
P511	307.63	6	6	15.85	-36.09	0.18	0.41	0.01	0.06	0.04	0.18
P513	63.32	6	6	-29.23	-136.82	0.33	1.55	0.01	0.14	0.12	2.16
P515	656.92	6	6	-12.49	10.44	0.14	0.12	0.02	0.01	0.03	0.02
P517	477.42	6	6	36.8	69.24	0.42	0.79	0.09	0.29	0.19	0.61
P519	699.22	6	6	-66.7	-184.4	0.76	2.09	0.4	2.63	0.57	3.76
P521	767.68	6	6	-57.21	-143.18	0.65	1.62	0.33	1.81	0.43	2.35
P523	542.7	6	6	149.41	-85.16	1.7	0.97	1.38	0.49	2.54	0.9
P525	156.6	6	6	161.45	-57.51	1.83	0.65	0.46	0.07	2.94	0.43
P527	642.53	6	6	161.45	-37.86	1.83	0.43	1.89	0.13	2.94	0.2
P529	571.15	6	6	163.78	-14.36	1.86	0.16	1.72	0.02	3.02	0.03
P531	1,171.92	6	6	165.99	13.2	1.88	0.15	3.62	0.03	3.09	0.03
P533	1,512.49	6	6	158.92	-42.95	1.8	0.49	4.31	0.38	2.85	0.25
P535	738.15	6	8	15.29	52.58	0.17	0.34	0.03	0.07	0.04	0.09
P537	739.76	6	8	-57.54	-113.99	0.65	0.73	0.32	0.28	0.43	0.38
P539	575.45	6	8	-2.07	11.86	0.02	0.08	0	0	0	0.01
P541	550.77	6	8	-25.92	-27.19	0.29	0.17	0.05	0.01	0.1	0.03
P543	571.86	6	8	-33.49	-50.14	0.38	0.32	0.09	0.05	0.16	0.08
P545	605.48	6	8	-43.24	-80.86	0.49	0.52	0.16	0.12	0.26	0.2
P547	373.14	6	10	-48.01	-664.52	0.54	2.71	0.12	1.25	0.31	3.35
P549	471.13	6	6	6.27	19.61	0.07	0.22	0	0.03	0.01	0.06
P551	264.16	6	6	1.37	4.55	0.02	0.05	0	0	0	0
P553	434.68	10	20	355.29	2533.55	1.45	2.59	0.46	0.59	1.05	1.37
P555	177.28	10	20	347.25	2511.6	1.42	2.56	0.18	0.24	1.01	1.34

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P557	352.6	6	6	4.62	21.05	0.05	0.24	0	0.02	0	0.07
P559	554.06	6	6	3.61	16.06	0.04	0.18	0	0.02	0	0.04
P561	292.08	6	6	0.74	4.07	0.01	0.05	0	0	0	0
P563	1,056.54	6	6	3.15	35.28	0.04	0.4	0	0.19	0	0.18
P565	837.75	6	6	6.16	47.35	0.07	0.54	0.01	0.25	0.01	0.3
P567	453	6	6	8.65	56.48	0.1	0.64	0.01	0.19	0.01	0.42
P569	373.03	6	6	20.11	61.33	0.23	0.7	0.02	0.18	0.06	0.49
P571	213.33	6	6	1.56	5.6	0.02	0.06	0	0	0	0.01
P573	237.17	6	6	1.43	4.34	0.02	0.05	0	0	0	0
P575	584.14	8	8	6.95	14.2	0.04	0.09	0	0	0	0.01
P577	288.94	8	8	15.56	21.28	0.1	0.14	0	0	0.01	0.02
P579	419.93	8	8	1.66	3.34	0.01	0.02	0	0	0	0
P581	213.44	8	8	25.15	96.51	0.16	0.62	0	0.06	0.02	0.28
P583	161.27	8	8	26.09	99.33	0.17	0.63	0	0.05	0.02	0.29
P585	144.51	6	6	-6.77	-22.85	0.08	0.26	0	0.01	0.01	0.08
P589	119.84	6	6	-1.01	2.56	0.01	0.03	0	0	0	0
P591	394.38	6	6	18.48	49.85	0.21	0.57	0.02	0.13	0.05	0.33
P593	431.65	6	6	14.85	40.71	0.17	0.46	0.02	0.1	0.04	0.23
P595	336.4	10	10	84.76	231.09	0.35	0.94	0.02	0.16	0.07	0.47
P597	104.97	10	10	-31.23	-82.61	0.13	0.34	0	0.01	0.01	0.07
P599	299.01	10	10	-57.26	-142.52	0.23	0.58	0.01	0.06	0.04	0.19
P601	189.84	6	6	-2.22	-3.32	0.03	0.04	0	0	0	0
P603	95.74	10	10	35.55	82.71	0.15	0.34	0	0.01	0.02	0.07
P605	264.65	6	6	7.18	18.66	0.08	0.21	0	0.01	0.01	0.05
P607	287.84	6	6	12.27	23.81	0.14	0.27	0.01	0.02	0.03	0.08
P609	191.95	8	8	4	-1.31	0.03	0.01	0	0	0	0
P611	184.16	8	8	-5.01	-0.2	0.03	0	0	0	0	0
P613	222.37	6	6	3.59	-7.82	0.04	0.09	0	0	0	0.01
P615	76.61	6	6	5.07	-5.3	0.06	0.06	0	0	0	0
P617	163.22	6	6	7.24	24.79	0.08	0.28	0	0.01	0.01	0.09
P619	502.21	8	8	9.32	34.07	0.06	0.22	0	0.02	0	0.04
P621	399.83	8	8	12.84	43.37	0.08	0.28	0	0.03	0.01	0.06

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P623	222.7	8	8	-7.47	-21.76	0.05	0.14	0	0	0	0.02
P625	363.11	6	6	-6.87	-17.36	0.08	0.2	0	0.02	0.01	0.05
P627	207.7	6	6	4.15	11.62	0.05	0.13	0	0	0	0.02
P629	486.06	6	6	2.8	1.02	0.03	0.01	0	0	0	0
P631	233.12	6	6	-0.23	-5.59	0	0.06	0	0	0	0.01
P633	312.68	8	8	9.77	23.95	0.06	0.15	0	0.01	0	0.02
P635	219.31	6	6	4.64	11.46	0.05	0.13	0	0	0	0.02
P637	150.57	6	6	6.72	15.26	0.08	0.17	0	0.01	0.01	0.04
P639	270.69	8	8	23.22	52.53	0.15	0.34	0.01	0.02	0.02	0.09
P641	193.25	8	8	5.85	17.27	0.04	0.11	0	0	0	0.01
P643	94.15	8	8	-59.14	-188.64	0.38	1.2	0.01	0.09	0.11	0.96
P645	165.73	8	8	-57.33	-183.69	0.37	1.17	0.02	0.15	0.11	0.92
P647	705.71	8	8	-33.33	-77.87	0.21	0.5	0.03	0.13	0.04	0.19
P649	426.28	8	8	201.28	269.26	1.28	1.72	0.46	0.8	1.09	1.87
P653	259.44	6	6	2.64	62.26	0.03	0.71	0	0.13	0	0.5
P655	274.02	6	6	0.21	5.98	0	0.07	0	0	0	0.01
P657	243.43	6	6	0.71	6.59	0.01	0.07	0	0	0	0.01
P659	201.94	6	6	3.16	7.05	0.04	0.08	0	0	0	0.01
P661	308.76	6	6	20.95	99.22	0.24	1.13	0.02	0.37	0.07	1.19
P663	490.07	6	6	-17.77	-51.59	0.2	0.59	0.02	0.17	0.05	0.36
P665	305.78	10	10	823.27	-354.04	3.36	1.45	1.52	0.32	4.98	1.04
P667	531.92	6	6	-160.88	28.96	1.83	0.33	1.55	0.06	2.92	0.12
P669	270.57	6	6	-1.9	-9.73	0.02	0.11	0	0	0	0.01
P671	289.47	6	6	5.44	15.88	0.06	0.18	0	0.01	0	0.03
P673	452.2	12	12	149.58	-33.9	0.42	0.1	0.03	0	0.08	0
P675	403.68	12	12	-122.15	-222.87	0.35	0.63	0.02	0.06	0.05	0.16
P677	180.17	8	8	-7.74	-46.4	0.05	0.3	0	0.01	0	0.06
P679	541.38	8	8	-13.13	-147.39	0.08	0.94	0	0.29	0.01	0.53
P681	524.43	8	8	4.62	117.96	0.03	0.75	0	0.18	0	0.35
P683	364.98	8	8	-14.63	-144.11	0.09	0.92	0	0.18	0.01	0.51
P687	128.63	12	12	10.74	22.9	0.03	0.06	0	0	0	0
P689	341.48	8	8	12.74	36.44	0.08	0.23	0	0.01	0.01	0.04

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P691	202.53	6	6	2.61	18.53	0.03	0.21	0	0.01	0	0.05
P693	448.12	6	6	3.78	13.41	0.04	0.15	0	0.01	0	0.03
P695	469.5	6	6	1.89	6.21	0.02	0.07	0	0	0	0.01
P697	42.02	6	6	-1.39	-4.31	0.02	0.05	0	0	0	0
P699	202.41	6	6	3.02	15.38	0.03	0.17	0	0.01	0	0.03
P701	652.85	6	6	2.9	6.47	0.03	0.07	0	0	0	0.01
P703	395.74	8	8	4.2	20.57	0.03	0.13	0	0.01	0	0.01
P705	57.09	8	8	22.65	-284.06	0.14	1.81	0	0.1	0.02	1.77
P707	270.57	8	8	2.99	15.06	0.02	0.1	0	0	0	0.01
P709	132.57	6	6	1.54	7.77	0.02	0.09	0	0	0	0.01
P711	211.09	8	8	3.44	11.82	0.02	0.08	0	0	0	0.01
P713	555.62	8	8	1.09	14.22	0.01	0.09	0	0	0	0.01
P715	337.22	8	8	2.06	17.06	0.01	0.11	0	0	0	0.01
P717	219.91	6	6	1.33	10.1	0.02	0.11	0	0	0	0.01
P719	508.72	6	6	4.5	21.17	0.05	0.24	0	0.03	0	0.06
P721	378.61	8	8	1.24	52.16	0.01	0.33	0	0.03	0	0.08
P723	363.18	8	8	2.27	12.66	0.01	0.08	0	0	0	0.01
P725	195.87	8	8	-1.94	34.02	0.01	0.22	0	0.01	0	0.03
P727	305.85	6	6	1.73	8.45	0.02	0.1	0	0	0	0.01
P729	509.32	8	8	6.49	-373.9	0.04	2.39	0	1.5	0	2.95
P731	488.88	8	8	3.67	-387.25	0.02	2.47	0	1.54	0	3.15
P733	392.23	8	8	1.92	-396.58	0.01	2.53	0	1.29	0	3.29
P735	303.07	10	10	98.38	253.39	0.4	1.04	0.03	0.15	0.08	0.48
P737	315.07	10	10	95.97	249.26	0.39	1.02	0.03	0.15	0.08	0.47
P739	260.42	6	6	17.53	47.61	0.2	0.54	0.01	0.07	0.04	0.26
P741	238.5	6	6	16.08	45.17	0.18	0.51	0.01	0.06	0.04	0.24
P743	392.07	8	8	-32.66	-81.16	0.21	0.52	0.01	0.07	0.03	0.17
P745	206.86	8	8	-33.17	-83.31	0.21	0.53	0.01	0.04	0.03	0.18
P747	258.11	8	8	2.23	3.74	0.01	0.02	0	0	0	0
P749	358.41	8	8	-37.88	-93.4	0.24	0.6	0.02	0.08	0.04	0.23
P751	151.5	8	8	3.71	4.44	0.02	0.03	0	0	0	0
P753	223.98	8	8	-42.61	-99.53	0.27	0.64	0.01	0.06	0.05	0.25

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P755	88.75	8	8	2.93	4.18	0.02	0.03	0	0	0	0
P757	327.32	8	8	-46.88	-105.97	0.3	0.68	0.02	0.09	0.06	0.29
P759	464.96	10	10	-47.81	-125.62	0.2	0.51	0.01	0.06	0.02	0.13
P761	289.56	8	8	2.81	4.71	0.02	0.03	0	0	0	0
P763	544.7	10	10	-51.67	-152.74	0.21	0.62	0.01	0.1	0.03	0.19
P765	402.67	10	10	-100.58	-258.59	0.41	1.06	0.04	0.2	0.09	0.5
P767	269.63	8	8	-47.88	-124.76	0.31	0.8	0.02	0.1	0.07	0.39
P769	552.74	10	10	-76.09	-197.51	0.31	0.81	0.03	0.17	0.05	0.31
P771	266.52	6	6	1.27	4.28	0.01	0.05	0	0	0	0
P773	212.76	10	10	-64.02	-191.25	0.26	0.78	0.01	0.06	0.04	0.29
P775	523.98	10	10	52.48	169.47	0.21	0.69	0.01	0.12	0.03	0.23
P777	37.64	6	6	4.85	17.06	0.06	0.19	0	0	0	0.04
PMP-1_D	126.01	99	99	2760.07	4461.6	0.12	0.19	0	0	0	0
PMP-1_U	115.37	99	99	2760.21	4462.04	0.12	0.19	0	0	0	0
PMP-10_D	109.11	99	99	2753.57	3115.61	0.11	0.13	0	0	0	0
PMP-10_U	121.4	99	99	2756.83	3126.59	0.11	0.13	0	0	0	0
PMP-101	1	99	99	2755.13	3120.87	0.11	0.13	0	0	0	0
PMP-102	1	99	99	2755.14	3120.87	0.11	0.13	0	0	0	0
PMP-11	1	99	99	2760.14	4461.82	0.12	0.19	0	0	0	0
PMP-12	1	99	99	2760.14	4461.82	0.12	0.19	0	0	0	0
PRV-108_D	97.46	6	6	354.09	72.87	4.02	0.83	1.23	0.07	12.58	0.67
PRV-108_U	97.46	6	6	355.75	75.9	4.04	0.86	1.24	0.07	12.69	0.73
PRV-1081	77.96	6	6	354.99	74.54	4.03	0.85	0.65	0.04	8.36	0.47
PRV-11_D	38.82	8	16	593.27	1072.7	3.79	1.71	0.31	0.03	8.06	0.82
PRV-11_U	695.84	8	16	-581.36	-1048.58	3.71	1.67	5.4	0.55	7.76	0.79
PRV-111	1	6	6	593.13	1072.31	6.73	12.17	0.02	0.06	21.61	64.76
PRV-112	1	6	6	593.13	1072.31	6.73	12.17	0.02	0.06	21.61	64.7
PRV-131_D	40.29	10	10	226.13	714.97	0.92	2.92	0.02	0.15	0.46	3.84
PRV-131_U	1,206.44	10	10	226.48	743.06	0.93	3.04	0.55	4.97	0.46	4.12
PRV-1311	56.36	6	6	226.13	729.63	2.57	8.28	0.2	1.79	3.63	31.74
PRV-1312	27.86	6	6	226.13	729.63	2.57	8.28	0.1	0.88	3.62	31.74
PRV-18_U	687.83	6	6	-60.67	-152.82	0.69	1.73	0.33	1.82	0.48	2.65

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
PRV-19_D	443.43	6	6	2.99	-10.01	0.03	0.11	0	0.01	0	0.02
PRV-19_U	259.77	6	6	-1.34	14.92	0.02	0.17	0	0.01	0	0.04
PRV-191	1	6	6	0	17.82	0	0.2	0	0	0	0.12
PRV-192	1	6	6	0	17.82	0	0.2	0	0	0	0
PRV-32_D	63.65	12	12	0	217.41	0	0.62	0	0.01	0	0.17
PRV-32_U	508.66	10	16	918.13	1340.85	3.75	2.14	3.1	0.63	6.1	1.25
PRV-321	1	8	8	0	218.32	0	1.39	0	0	0	0.85
PRV-322	1	8	8	0	218.32	0	1.39	0	0	0	0.85
PRV-6_D	751.32	8	8	167.86	83.16	1.07	0.53	0.58	0.16	0.78	0.21
PRV-6_U	802.97	8	8	200.12	141.13	1.28	0.9	0.86	0.45	1.08	0.56
PRV-601	1	4	4	53.69	186.88	1.37	4.77	0	0.02	1.83	18.37
PRV-602	1	4	4	53.69	186.88	1.37	4.77	0	0.02	1.83	18.37
PRV-71_D	210.78	10	10	44.86	150.97	0.18	0.62	0	0.05	0.02	0.22
PRV-71_U	367.93	10	10	46.72	155.02	0.19	0.63	0.01	0.08	0.02	0.23
PRV-711	1	4	4	45.55	152.41	1.16	3.89	0	0.01	1.34	12.57
PRV-712	1	4	4	45.55	152.41	1.16	3.89	0	0.01	1.34	12.63
PRV-90_D	726.55	6	6	9.98	9.03	0.11	0.1	0.01	0.01	0.02	0.01
PRV-90_U	76.29	6	6	12.19	15.75	0.14	0.18	0	0	0.02	0.04
PRV-901	1	4	4	11.84	14.72	0.3	0.38	0	0	0.12	0.12
PRV-902	1	4	4	11.84	14.72	0.3	0.38	0	0	0.12	0.24
SADDLE_CRK1	1	10	10	186.4	928.36	0.76	3.79	0	0	0.24	4.15
SADDLE_CRK2	1	10	10	186.4	924.86	0.76	3.78	0	0	0.12	4.15
U70081	1	99	99	117.54	111.16	0	0	0	0	0	0
U70082	1	99	99	117.54	111.16	0	0	0	0	0	0
V80061	1	6	6	0	60.43	0	0.69	0	0	0	0.37
V80062	1	6	6	0	60.43	0	0.69	0	0	0	0.37
V80101	1	4	4	151.16	293.32	3.86	7.49	0.01	0.04	12.39	42.3

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
2	224.83	8	8	5.97	29.71	0.04	0.19	0	0.01	0	0.03
12	410.58	10	16	340.39	2295.31	1.39	3.66	0.4	1.38	0.97	3.37
16	184.11	24	24	5530.59	10996.65	3.92	7.8	0.44	1.57	2.39	8.52
22	340.19	10	10	1249.62	-88.54	5.1	0.36	3.67	0.03	10.79	0.08
23	623.73	10	10	1241.9	-111.15	5.07	0.45	6.66	0.08	10.67	0.12
24	674.63	10	10	-1230.37	318.3	5.03	1.3	7.08	0.58	10.49	0.86
26	1,519.42	10	10	760.37	-537.33	3.11	2.19	6.54	3.44	4.3	2.26
27	782.42	10	10	749.28	-572.59	3.06	2.34	3.28	1.99	4.19	2.54
28	443.41	10	20	-516.45	-3706.66	2.11	3.79	0.93	1.23	2.1	2.76
29	585.58	10	20	1253.68	3095.86	5.12	3.16	6.36	1.16	10.86	1.98
33	814.38	8	8	80.96	284.14	0.52	1.81	0.16	1.68	0.2	2.06
34	678.2	8	8	-232.41	-197.96	1.48	1.26	0.96	0.72	1.42	1.06
35	203.53	8	8	358.14	157.5	2.29	1.01	0.64	0.14	3.16	0.69
37	771.46	8	8	215.96	-123.73	1.38	0.79	0.96	0.34	1.24	0.44
38	1,419.79	8	12	163.79	389.13	1.05	1.1	1.05	0.73	0.74	0.51
40	222.73	12	12	2.29	59.39	0.01	0.17	0	0	0	0.02
41	279.83	8	8	-30.66	-107.57	0.2	0.69	0.01	0.1	0.03	0.34
42	132.13	8	12	150.76	275.48	0.96	0.78	0.08	0.04	0.64	0.27
43	315.88	8	8	34.91	118.14	0.22	0.75	0.01	0.13	0.04	0.41
44	453.84	8	8	-114.53	-151.37	0.73	0.97	0.17	0.29	0.38	0.64
45	531.53	8	8	-23.41	-49.68	0.15	0.32	0.01	0.04	0.02	0.08
46	345.85	8	8	79.88	92.56	0.51	0.59	0.07	0.09	0.2	0.26
47	280.51	6	6	5.98	14.75	0.07	0.17	0	0.01	0.01	0.04
50	459.24	6	6	69.47	69.24	0.79	0.79	0.28	0.28	0.62	0.61
51	141.01	6	6	7.11	31.87	0.08	0.36	0	0.02	0.01	0.15
52	277.17	6	6	2.89	14.97	0.03	0.17	0	0.01	0	0.04
54	379.88	6	12	22.27	73.35	0.25	0.21	0.03	0.01	0.08	0.02
55	123.91	6	6	11.56	50.09	0.13	0.57	0	0.04	0.02	0.34
57	645.63	6	6	4.31	22.02	0.05	0.25	0	0.05	0	0.07
58	290.12	6	6	-8.27	-17.53	0.09	0.2	0	0.01	0.01	0.05
61	122.39	10	10	73.07	244.39	0.3	1	0.01	0.06	0.06	0.53
62	503.57	6	6	1.99	7.26	0.02	0.08	0	0	0	0.01

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
64	602.87	6	6	3.8	13.96	0.04	0.16	0	0.02	0	0.03
67	67.92	6	10	-95.96	-1180	1.09	4.82	0.08	0.66	1.12	9.71
70	1,285.19	10	16	342.82	2317.51	1.4	3.7	1.26	4.41	0.98	3.43
72	452.42	8	8	128.1	255.84	0.82	1.63	0.18	0.66	0.41	1.46
73	106.88	10	10	16.8	28.41	0.07	0.12	0	0	0	0.01
74	288.1	10	10	11.65	13.76	0.05	0.06	0	0	0	0
75	547.29	6	6	4.44	11.26	0.05	0.13	0	0.01	0	0.02
76	585.11	6	6	32.98	101.08	0.37	1.15	0.09	0.72	0.16	1.23
77	303.75	6	6	3.32	14.76	0.04	0.17	0	0.01	0	0.03
78	906.1	6	6	23.78	67.21	0.27	0.76	0.08	0.52	0.08	0.58
80	134.25	6	6	0.81	3.67	0.01	0.04	0	0	0	0
81	222.66	6	6	1.93	5.62	0.02	0.06	0	0	0	0.01
82	218.49	6	6	10.6	28.47	0.12	0.32	0	0.03	0.02	0.12
83	316.1	6	6	2.85	9.5	0.03	0.11	0	0	0	0.02
84	498.77	6	6	6.21	14.47	0.07	0.16	0	0.02	0.01	0.03
85	189.59	6	6	3.74	7.97	0.04	0.09	0	0	0	0.01
86	227.67	6	6	4.6	10.3	0.05	0.12	0	0	0	0.02
87	370.31	6	6	-3.58	-6.8	0.04	0.08	0	0	0	0.01
88	603.03	6	6	7.95	20.72	0.09	0.24	0.01	0.04	0.01	0.07
89	489.43	6	6	15.25	91.76	0.17	1.04	0.02	0.5	0.04	1.03
91	532.39	6	6	13.21	6.6	0.15	0.07	0.02	0	0.03	0.01
92	258.26	6	10	84.43	1074.48	0.96	4.39	0.23	2.11	0.88	8.16
94	500.94	6	10	-68.13	-981.93	0.77	4.01	0.3	3.46	0.59	6.91
99	312.64	6	6	57.49	141.37	0.65	1.6	0.14	0.72	0.43	2.3
100	924.37	6	10	132.62	1108.97	1.5	4.53	1.89	8	2.04	8.65
105	857.96	6	6	34.25	93.68	0.39	1.06	0.14	0.92	0.17	1.07
106	500.01	12	12	273.1	124.97	0.77	0.35	0.13	0.03	0.27	0.06
107	1,910.43	6	6	183.85	-68.57	2.09	0.78	7.14	1.15	3.74	0.6
109	431.79	6	8	410.55	42.82	4.66	0.27	7.14	0.03	16.54	0.06
110	1,291.62	6	6	217.13	54.05	2.46	0.61	6.57	0.5	5.08	0.39
111	1,547.27	6	6	4.91	11.02	0.06	0.13	0.01	0.03	0	0.02
112	142.02	10	20	1388.08	2883.87	5.67	2.95	1.86	0.25	13.11	1.74

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
113	337.83	10	20	1385.29	2875.02	5.66	2.94	4.41	0.58	13.06	1.73
114	571.88	10	20	1556.64	2717.28	6.36	2.78	9.27	0.89	16.21	1.55
115	636.4	6	6	188.44	-121.87	2.14	1.38	2.49	1.11	3.91	1.74
116	173.04	6	6	7.38	14.85	0.08	0.17	0	0.01	0.01	0.04
118	498.71	6	8	133.65	567.22	1.52	3.62	1.03	3.7	2.07	7.41
119	779.33	6	6	64.67	270.21	0.73	3.07	0.42	5.94	0.54	7.62
120	573.19	6	6	63.86	75.65	0.72	0.86	0.3	0.41	0.53	0.72
122	784.61	6	6	-93.21	-156.28	1.06	1.77	0.83	2.17	1.06	2.77
123	846.79	6	6	-3.39	131.03	0.04	1.49	0	1.69	0	2
124	562.93	6	6	8.76	116.19	0.1	1.32	0.01	0.9	0.01	1.6
125	772	6	6	-37.46	-172.93	0.43	1.96	0.15	2.57	0.2	3.34
126	770.74	6	6	-52.13	-217.23	0.59	2.46	0.28	3.92	0.36	5.09
129	764.75	6	6	17.24	-68.68	0.2	0.78	0.04	0.46	0.05	0.6
134	672.98	6	6	-164.03	55.35	1.86	0.63	2.04	0.27	3.02	0.4
135	744.13	6	6	-138.69	18.27	1.57	0.21	1.65	0.04	2.22	0.05
136	246.29	8	8	30.51	4.18	0.19	0.03	0.01	0	0.03	0
137	793.29	8	8	-70.3	-62.26	0.45	0.4	0.12	0.1	0.16	0.12
138	1,059.86	6	6	78.6	60.75	0.89	0.69	0.82	0.51	0.77	0.48
139	549.85	8	8	182.15	219.32	1.16	1.4	0.5	0.7	0.9	1.28
140	539.99	8	16	877.8	1555.31	5.6	2.48	8.99	0.89	16.64	1.64
141	763.37	6	6	-11.82	-22.78	0.13	0.26	0.02	0.06	0.02	0.08
143	184.73	10	10	338.42	1001.07	1.38	4.09	0.18	1.32	0.96	7.16
144	90.31	10	10	178.35	256.96	0.73	1.05	0.03	0.05	0.29	0.58
145	102.44	10	10	177.07	213.15	0.72	0.87	0.03	0.04	0.29	0.41
146	144.07	10	10	-324.76	-934.81	1.33	3.82	0.13	0.91	0.89	6.31
148	126.93	10	10	320.02	931.62	1.31	3.81	0.11	0.8	0.87	6.27
149	121.76	10	10	89.21	283.86	0.36	1.16	0.01	0.08	0.08	0.69
151	105.65	6	10	-159.43	-739.01	1.81	3.02	0.3	0.43	2.87	4.08
152	79.62	6	6	-166.3	-196.74	1.89	2.23	0.25	0.34	3.1	4.23
153	135.84	6	6	-8.89	-15.73	0.1	0.18	0	0.01	0.01	0.04
154	186.32	10	10	230.72	646.06	0.94	2.64	0.09	0.59	0.47	3.18
156	716.61	8	8	-81.91	-263.46	0.52	1.68	0.15	1.28	0.21	1.79

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
157	123.59	8	8	3.22	9.41	0.02	0.06	0	0	0	0
158	525.36	8	8	74.39	245.91	0.47	1.57	0.09	0.83	0.17	1.58
159	198.8	8	8	72.13	217.96	0.46	1.39	0.03	0.22	0.14	1.09
160	462.05	8	8	-32.65	-97.75	0.21	0.62	0.01	0.11	0.03	0.25
161	111.61	8	8	29.77	92.33	0.19	0.59	0	0.02	0.03	0.22
162	210.94	8	8	20.39	66.08	0.13	0.42	0	0.03	0.02	0.14
163	238.85	8	8	21.69	77.22	0.14	0.49	0	0.04	0.02	0.18
164	451.3	8	8	35.99	111.79	0.23	0.71	0.02	0.17	0.04	0.37
165	275.81	6	6	2.95	6.55	0.03	0.07	0	0	0	0.01
166	158.97	8	8	30.38	99.01	0.19	0.63	0.01	0.05	0.03	0.29
167	155.16	8	8	51.47	174.62	0.33	1.11	0.01	0.13	0.09	0.84
168	211.29	6	6	-12.38	-39.41	0.14	0.45	0.01	0.05	0.03	0.22
169	241.42	6	6	6.16	26.82	0.07	0.3	0	0.03	0.01	0.11
170	187.69	8	8	38.47	133.25	0.25	0.85	0.01	0.1	0.05	0.51
171	404.93	8	8	42.11	154.8	0.27	0.99	0.02	0.27	0.06	0.67
172	379.81	8	8	36.33	123.36	0.23	0.79	0.02	0.17	0.05	0.44
173	650.2	8	8	35.1	85.58	0.22	0.55	0.03	0.15	0.04	0.22
174	334.74	8	8	4.61	37.5	0.03	0.24	0	0.02	0	0.05
175	339.54	8	8	27.35	38.53	0.17	0.25	0.01	0.02	0.03	0.05
268	154.11	8	8	6.45	19.6	0.04	0.13	0	0	0	0.01
301	265.03	8	8	-10.02	130.97	0.06	0.84	0	0.11	0	0.42
330	319.7	8	8	-14.86	37.23	0.09	0.24	0	0.01	0.01	0.04
349	244.09	8	8	-15.35	17.96	0.1	0.11	0	0	0.01	0.01
414	467.91	12	16	272.64	1268.63	0.77	2.02	0.11	0.45	0.23	0.97
415	250.58	8	8	39.54	604.2	0.25	3.86	0.01	1.8	0.05	7.18
417	907.76	12	12	232.39	639.69	0.66	1.81	0.15	1.01	0.17	1.11
419	566.35	12	12	229.3	-20.49	0.65	0.06	0.09	0	0.17	0
442	878.64	8	8	-0.66	178.51	0	1.14	0	0.66	0	0.75
445	145.51	8	8	34.8	-531.35	0.22	3.39	0.01	0.82	0.04	5.66
446	238.62	8	8	32.92	-539.64	0.21	3.44	0.01	1.39	0.03	5.83
447	252.9	8	8	24.22	-576.95	0.15	3.68	0	1.67	0.02	6.6
448	189.1	8	8	18.48	-599.72	0.12	3.83	0	1.34	0.01	7.09

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
449	555.78	8	8	1.63	21.32	0.01	0.14	0	0.01	0	0.01
450	462.75	8	8	13.94	-654.22	0.09	4.18	0	3.85	0.01	8.32
452	550.4	12	12	-185.73	-462.76	0.53	1.31	0.06	0.33	0.11	0.61
453	596.81	12	12	179.82	465.31	0.51	1.32	0.06	0.37	0.11	0.61
454	420.77	8	8	22.33	42.87	0.14	0.27	0.01	0.02	0.02	0.05
455	552.26	12	12	-42.54	-153.96	0.12	0.44	0	0.04	0.01	0.08
456	290.15	8	8	-44.36	-172.4	0.28	1.1	0.02	0.2	0.06	0.7
457	320.23	8	8	-16.94	-95.74	0.11	0.61	0	0.08	0.01	0.24
459	380.78	8	8	-9.35	-1.28	0.06	0.01	0	0	0	0
460	493.78	8	8	-14.09	-77.12	0.09	0.49	0	0.08	0.01	0.16
461	462.68	8	8	10.19	46.2	0.07	0.29	0	0.03	0	0.06
465	708.24	8	8	121.14	213.63	0.77	1.36	0.26	0.74	0.37	1.05
466	544.16	8	8	114.88	175.24	0.73	1.12	0.18	0.39	0.33	0.73
467	298.85	8	8	111.01	136.19	0.71	0.87	0.09	0.14	0.31	0.46
468	336.34	8	8	109.54	101.6	0.7	0.65	0.1	0.09	0.3	0.26
469	283.19	8	8	63.35	239.85	0.4	1.53	0.03	0.37	0.11	1.3
470	147.56	8	8	56.78	216.57	0.36	1.38	0.01	0.16	0.09	1.07
473	200.46	8	8	43.75	449.56	0.28	2.87	0.01	0.83	0.06	4.16
474	461.94	8	8	15.6	207.44	0.1	1.32	0	0.46	0.01	0.99
475	532.42	8	8	-16.31	-205.22	0.1	1.31	0	0.52	0.01	0.97
476	474.29	8	8	7.91	170.22	0.05	1.09	0	0.33	0	0.69
477	404.49	8	12	-533.61	-990.83	3.41	2.81	2.68	1.17	6.62	2.89
478	642.28	8	8	5.48	149.99	0.03	0.96	0	0.35	0	0.54
479	511.3	8	8	-4.31	-159.36	0.03	1.02	0	0.31	0	0.61
480	613.66	8	8	3.18	-111.53	0.02	0.71	0	0.19	0	0.31
499	443.99	8	8	0	-17.4	0	0.11	0	0	0	0.01
500	321.15	8	8	0.57	-49.51	0	0.32	0	0.02	0	0.07
501	384.28	8	8	0	-111.87	0	0.71	0	0.12	0	0.32
502	447.98	8	8	0.57	44.54	0	0.28	0	0.03	0	0.06
504	753.39	8	8	-0.57	-13.3	0	0.08	0	0	0	0.01
505	155.34	8	8	0	121.17	0	0.77	0	0.06	0	0.37
509	292.19	8	16	-829.06	-1444.64	5.29	2.31	4.37	0.42	14.97	1.43

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
513	621.7	6	6	49.07	101.52	0.56	1.15	0.2	0.77	0.32	1.24
514	1,061.68	8	12	511.96	934.21	3.27	2.65	6.51	2.75	6.13	2.59
515	516.68	6	8	116.3	328.38	1.32	2.1	0.83	1.39	1.6	2.69
517	609.24	6	6	-97.44	-141.51	1.11	1.61	0.7	1.4	1.15	2.3
518	488.2	6	6	-78.92	-109.46	0.9	1.24	0.38	0.7	0.78	1.43
520	907.11	6	8	100.85	297.61	1.14	1.9	1.11	2.04	1.23	2.24
521	539.67	6	8	85.41	261.56	0.97	1.67	0.49	0.95	0.9	1.77
522	567.67	6	8	62.66	218.9	0.71	1.4	0.29	0.72	0.51	1.27
525	456.49	6	8	103.7	250.95	1.18	1.6	0.59	0.75	1.29	1.64
526	521.54	6	8	77.05	194.09	0.87	1.24	0.39	0.53	0.75	1.02
527	434.09	6	8	33.24	102.03	0.38	0.65	0.07	0.13	0.16	0.31
528	398.59	8	8	-118.68	-90.04	0.76	0.57	0.16	0.1	0.41	0.25
535	237.74	6	6	35.3	112.31	0.4	1.27	0.04	0.36	0.18	1.5
536	287.31	10	10	128.25	356.2	0.52	1.46	0.05	0.3	0.16	1.06
537	300.6	10	10	126.77	353.04	0.52	1.44	0.05	0.31	0.16	1.04
538	435.26	10	10	126.13	342.45	0.52	1.4	0.07	0.43	0.15	0.98
539	338.05	6	6	32.22	78.26	0.37	0.89	0.05	0.26	0.15	0.77
540	359.5	6	6	-2.69	0.9	0.03	0.01	0	0	0	0
541	459.25	6	6	25.39	68.66	0.29	0.78	0.04	0.28	0.1	0.6
542	175.7	10	10	96.41	267.16	0.39	1.09	0.02	0.11	0.09	0.62
543	490.66	10	10	84.49	207.91	0.35	0.85	0.04	0.19	0.07	0.39
544	438.18	10	10	81.03	200.9	0.33	0.82	0.03	0.16	0.07	0.37
545	297.13	10	10	68.35	154.01	0.28	0.63	0.01	0.07	0.05	0.22
546	850.12	10	10	66.13	149.42	0.27	0.61	0.04	0.18	0.05	0.21
547	177.03	10	10	10.52	42.72	0.04	0.17	0	0	0	0.02
548	382.95	10	10	-54.88	-161.46	0.22	0.66	0.01	0.09	0.03	0.24
549	497.35	8	8	17.15	59.04	0.11	0.38	0.01	0.06	0.01	0.11
551	237.6	6	6	8.6	-4.54	0.1	0.05	0	0	0.01	0
552	249.98	6	6	4.32	-14.91	0.05	0.17	0	0.01	0	0.04
553	461.21	8	8	34.22	93.08	0.22	0.59	0.02	0.12	0.04	0.26
555	255.81	10	10	57.54	132.86	0.24	0.54	0.01	0.04	0.04	0.17
556	291.31	10	10	51.93	121.14	0.21	0.49	0.01	0.04	0.03	0.14

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
557	315.59	8	8	-10.19	-30.37	0.07	0.19	0	0.01	0	0.03
558	359.36	6	6	1.94	3.4	0.02	0.04	0	0	0	0
559	157.88	6	6	7.41	24.42	0.08	0.28	0	0.01	0.01	0.09
560	473.53	8	8	20.94	55.69	0.13	0.36	0.01	0.05	0.02	0.1
561	306.77	8	8	-9.14	-4.84	0.06	0.03	0	0	0	0
562	436.91	8	8	4.47	-6.39	0.03	0.04	0	0	0	0
563	504.73	6	6	21.61	41.42	0.25	0.47	0.04	0.12	0.07	0.24
564	393.49	6	6	12.39	32.75	0.14	0.37	0.01	0.06	0.03	0.15
565	582.99	8	8	36.33	82.98	0.23	0.53	0.03	0.12	0.05	0.21
566	156.18	6	6	28.28	61.19	0.32	0.69	0.02	0.08	0.12	0.49
567	558.62	6	6	-9.3	-21.77	0.11	0.25	0.01	0.04	0.01	0.07
568	480.11	6	6	1.57	-2.72	0.02	0.03	0	0	0	0
569	163.27	6	6	16.82	32.71	0.19	0.37	0.01	0.02	0.04	0.15
570	159.16	6	6	12.4	23.31	0.14	0.26	0	0.01	0.03	0.08
571	584.08	6	6	8.23	22.64	0.09	0.26	0.01	0.05	0.01	0.08
572	94.84	6	6	3.41	-1.4	0.04	0.02	0	0	0	0
574	164.52	8	8	23.79	52.97	0.15	0.34	0	0.02	0.02	0.09
575	126.53	8	8	23.38	51.98	0.15	0.33	0	0.01	0.02	0.09
577	912.36	8	8	12.29	34.57	0.08	0.22	0.01	0.04	0.01	0.04
583	73.55	24	24	2760.84	7711.49	1.96	5.47	0.05	0.32	0.66	4.41
1091	805.29	8	8	0.57	-15.84	0	0.1	0	0.01	0	0.01
1093	936.94	8	8	10.04	23.58	0.06	0.15	0	0.02	0	0.02
1095	2,061.45	8	8	3.34	-41.72	0.02	0.27	0	0.12	0	0.06
1099	63.33	6	6	0.27	181.8	0	2.06	0	0.14	0	3.66
P-3	143.73	10	10	-165.96	-471.64	0.68	1.93	0.03	0.22	0.22	1.53
P-4	522.79	8	8	7.99	98.22	0.05	0.63	0	0.15	0	0.29
P-6	428.6	12	12	17.54	2.47	0.05	0.01	0	0	0	0
P-8	381.89	8	8	27.61	-556.48	0.18	3.55	0.01	2.73	0.03	7.15
P13	153.48	10	10	-66.51	-224.24	0.27	0.92	0.01	0.07	0.05	0.45
P-13	168.06	18	26	5507.79	10702.86	6.94	6.47	1.62	0.92	9.61	5.49
P15	1,262.65	6	6	76.59	142.97	0.87	1.62	0.93	2.96	0.74	2.34
P17	332.22	6	6	14.06	30.51	0.16	0.35	0.01	0.04	0.03	0.13

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-18	1,688.11	18	18	5505.75	3671.4	6.94	4.63	16.22	7.66	9.61	4.54
P19	428.57	6	6	44.41	74.45	0.5	0.84	0.12	0.3	0.27	0.7
P-19	431.84	18	18	5504.08	3666.86	6.94	4.62	4.15	1.95	9.6	4.53
P21	684.31	6	6	23.69	53.82	0.27	0.61	0.06	0.26	0.08	0.38
P23	329.93	6	6	9.92	23.39	0.11	0.27	0.01	0.03	0.02	0.08
P25	291.98	6	6	4.03	11.72	0.05	0.13	0	0.01	0	0.02
P27	829.17	6	6	-94.93	-65.72	1.08	0.75	0.91	0.46	1.1	0.56
P29	715.47	6	6	1.78	199.26	0.02	2.26	0	3.1	0	4.34
P31	304.39	6	6	-55.33	-29.87	0.63	0.34	0.12	0.04	0.4	0.13
P-32	1,146.30	4	10	13.15	24.33	0.34	0.1	0.23	0.01	0.2	0.01
P33	422.34	4	10	55.43	153.77	1.42	0.63	1.23	0.09	2.92	0.22
P-33	369.85	4	4	11.45	19.18	0.29	0.49	0.06	0.15	0.16	0.41
P-34	209.15	4	4	7.04	11.79	0.18	0.3	0.01	0.03	0.06	0.17
P35	643.76	4	10	49.02	125.07	1.25	0.51	1.5	0.1	2.33	0.15
P37	516.97	4	4	20.08	38.26	0.51	0.98	0.23	0.76	0.45	1.47
P-37	681.23	6	6	-96.94	-73.96	1.1	0.84	0.78	0.47	1.14	0.69
P39	218.03	4	10	-6.42	49.05	0.16	0.2	0.01	0.01	0.05	0.03
P-39	58.36	12	12	-0.57	-4.09	0	0.01	0	0	0	0
P41	89.47	4	4	-34.94	-21.47	0.89	0.55	0.11	0.05	1.24	0.5
P-41	345.63	6	12	121.18	128.85	1.38	0.37	0.6	0.02	1.73	0.07
P-42	614.87	8	8	-219.54	-285.44	1.4	1.82	0.79	1.28	1.28	2.08
P43	411.29	4	10	21.51	54.89	0.55	0.22	0.21	0.01	0.51	0.03
P-44	616.43	6	8	51.68	143.54	0.59	0.92	0.22	0.36	0.36	0.58
P45	790.84	4	4	1.93	13.08	0.05	0.33	0	0.16	0.01	0.2
P-46	474.72	6	8	-3.75	170.92	0.04	1.09	0	0.38	0	0.8
P47	1,243.31	4	4	19.3	55.67	0.49	1.42	0.52	3.66	0.41	2.95
P-47	635.15	6	8	-32.14	-97.4	0.36	0.62	0.09	0.18	0.15	0.28
P-48	2,524.69	6	8	5.07	-160.25	0.06	1.02	0.01	1.8	0	0.71
P49	6,359.31	12	16	8.54	387.62	0.02	0.62	0	0.8	0	0.13
P-49	745.78	6	8	-9.5	143.71	0.11	0.92	0.01	0.43	0.02	0.58
P-50	1,924.75	6	6	6.02	17.61	0.07	0.2	0.01	0.09	0.01	0.05
P-52	680.58	6	6	70.07	40.4	0.8	0.46	0.43	0.15	0.63	0.23

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-53	578.12	6	8	-31.46	-54.39	0.36	0.35	0.08	0.06	0.14	0.1
P-54	404.19	6	6	8.86	20.43	0.1	0.23	0.01	0.03	0.01	0.06
P-55	446.36	8	8	12.23	31.56	0.08	0.2	0	0.02	0.01	0.04
P-56	132.09	6	6	2.53	-3.72	0.03	0.04	0	0	0	0
P-57	89.83	6	6	-7.92	-14.32	0.09	0.16	0	0	0.01	0.03
P-58	495.11	6	6	-9.8	-8.59	0.11	0.1	0.01	0.01	0.02	0.01
P59	48.79	8	8	263.49	395.42	1.68	2.52	0.09	0.19	1.79	3.8
P-59	175.59	6	6	-1.58	-3.25	0.02	0.04	0	0	0	0
P-60	205.58	6	6	1.34	3.1	0.02	0.04	0	0	0	0
P61	730.94	8	8	-249.74	-365.53	1.59	2.33	1.19	2.4	1.62	3.29
P-61	344.87	6	6	-3.68	-7.96	0.04	0.09	0	0	0	0.01
P-62	204.38	6	6	-3.21	-7.1	0.04	0.08	0	0	0	0.01
P63	343.81	6	6	3.16	9.78	0.04	0.11	0	0.01	0	0.02
P-63	536.74	6	6	-7.03	-12.17	0.08	0.14	0	0.01	0.01	0.02
P-64	205.93	6	6	0.87	1.64	0.01	0.02	0	0	0	0
P65	310.55	6	6	33.28	62.6	0.38	0.71	0.05	0.16	0.16	0.51
P-65	163.57	6	6	1.33	3.24	0.02	0.04	0	0	0	0
P67	88.32	12	12	87.54	305.06	0.25	0.87	0	0.03	0.03	0.33
P-68	202.95	6	6	7.08	16.17	0.08	0.18	0	0.01	0.01	0.04
P69	193.67	6	10	328.21	-7.48	3.72	0.03	2.12	0	10.93	0
P-69	620.52	6	6	6.6	19.66	0.07	0.22	0	0.04	0.01	0.06
P-70	295.15	6	6	4.62	14.64	0.05	0.17	0	0.01	0	0.03
P71	25.48	6	6	330.66	0	3.75	0	0.28	0	11.08	0
P-71	59.08	6	6	0	0	0	0	0	0	0	0
P-73	617.69	6	10	128.68	1098.16	1.46	4.49	1.19	5.25	1.93	8.5
P-74	157.58	6	6	2.13	4.77	0.02	0.05	0	0	0	0
P75	1,239.97	12	12	3.34	0.71	0.01	0	0	0	0	0
P-75	1,211.21	6	8	-124.28	-324.41	1.41	2.07	2.19	3.19	1.81	2.63
P-76	214.99	6	8	-62.49	-174.13	0.71	1.11	0.11	0.18	0.51	0.83
P77	658.65	12	12	273.45	1577.17	0.78	4.47	0.15	3.88	0.23	5.89
P-77	769.97	6	6	-165.33	117.61	1.88	1.33	2.36	1.26	3.07	1.63
P-78	88.36	10	16	1320.34	1917.39	5.39	3.06	1.06	0.21	11.95	2.42

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-79	851.35	10	16	1315.64	1907.4	5.37	3.04	10.11	2.04	11.87	2.39
P-80	379.13	6	6	-81.02	-176.67	0.92	2	0.31	1.32	0.82	3.47
P-81	598.3	2	2	7.83	19.63	0.8	2	1.18	6.45	1.97	10.78
P-82	227.83	6	6	90.44	204.01	1.03	2.31	0.23	1.03	1	4.53
P-83	407.85	2	2	-6.82	-17.56	0.7	1.79	0.62	3.58	1.52	8.77
P-84	839.31	12	12	26.35	40.44	0.07	0.11	0	0.01	0	0.01
P-88	778.65	6	6	99.25	79.87	1.13	0.91	0.93	0.62	1.19	0.8
P97	80.8	16	16	2747.45	3104.5	4.38	4.95	0.38	0.48	4.71	5.9
P-101	548.47	10	20	529.14	3809.81	2.16	3.89	1.21	1.59	2.2	2.91
P-102	636.9	10	20	-668.43	-4950.59	2.73	5.06	2.16	3.01	3.39	4.72
P103	15.16	30	30	-520.31	-3716.78	0.24	1.69	0	0.01	0.01	0.33
P-103	832.11	6	6	-9.95	3.3	0.11	0.04	0.01	0	0.02	0
P105	16.24	30	30	-212.34	-3430.61	0.1	1.56	0	0	0.01	0.29
P107	25.46	30	30	-308.21	-286.67	0.14	0.13	0	0	0	0
P109	33.96	30	30	-214.23	2283.72	0.1	1.04	0	0	0	0.14
P111	218.67	12	12	1.18	217.29	0	0.62	0	0.04	0	0.17
P113	1,143.28	12	12	2.69	170.33	0.01	0.48	0	0.11	0	0.1
P115	208.63	12	12	2.38	-15.06	0.01	0.04	0	0	0	0
P117	534.1	12	12	2.09	-15.06	0.01	0.04	0	0	0	0
P119	477.85	8	8	1.81	-2.18	0.01	0.01	0	0	0	0
P121	273.19	10	10	1258.59	-66.72	5.14	0.27	2.99	0.01	10.94	0.05
P123	276.09	6	6	4.83	11.2	0.05	0.13	0	0.01	0	0.02
P125	614.89	8	8	0.7	-2.18	0	0.01	0	0	0	0
P-126	831.84	10	10	1260.91	-33.25	5.15	0.14	9.13	0.01	10.98	0.01
P127	29.96	18	18	4543.26	-1215.92	5.73	1.53	0.17	0.02	5.8	0.51
P129	85.02	6	6	18.33	24.91	0.21	0.28	0	0.01	0.05	0.09
P-130	623.02	6	6	-68.41	-192.56	0.78	2.19	0.37	2.54	0.6	4.07
P131	115.43	6	6	0.88	28.94	0.01	0.33	0	0.01	0	0.12
P-131	604.28	6	6	25.1	70.68	0.28	0.8	0.06	0.38	0.09	0.64
P-132	2,143.51	6	6	19.35	56.39	0.22	0.64	0.12	0.9	0.06	0.42
P133	272.89	6	10	-134.79	-1121.22	1.53	4.58	0.57	2.41	2.1	8.83
P-133	485.31	8	12	346.44	581.16	2.21	1.65	1.44	0.52	2.97	1.08

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P-134	835.04	6	6	-55.32	-160.82	0.63	1.82	0.34	2.43	0.4	2.92
P135	645.38	10	20	519.35	3781.39	2.12	3.86	1.37	1.85	2.12	2.87
P137	807.76	6	6	-29.88	-131.34	0.34	1.49	0.1	1.62	0.13	2
P139	668.72	6	6	32.91	158.11	0.37	1.79	0.1	1.89	0.15	2.83
P141	638.87	6	10	-60.28	-1014.74	0.68	4.15	0.3	4.69	0.47	7.34
P143	649.57	6	8	-59.41	-125.52	0.67	0.8	0.3	0.29	0.46	0.45
P145	141.2	10	10	80.55	282.57	0.33	1.15	0.01	0.1	0.07	0.69
P147	183.18	10	10	80.36	277.93	0.33	1.14	0.01	0.12	0.07	0.67
P149	171.47	10	10	-45.8	-121.28	0.19	0.5	0	0.02	0.02	0.14
P-150	451.65	8	12	547.38	1016.37	3.49	2.88	3.13	1.37	6.94	3.03
P151	485.57	6	6	49.37	128.17	0.56	1.45	0.16	0.93	0.33	1.92
P153	127.01	10	10	145.94	398.52	0.6	1.63	0.03	0.17	0.2	1.3
P155	221.85	6	6	-6.02	-21.44	0.07	0.24	0	0.02	0.01	0.07
P157	290.82	12	12	-1.33	-12.89	0	0.04	0	0	0	0
P159	216.46	6	6	5.76	8.8	0.07	0.1	0	0	0.01	0.01
P161	247.94	6	6	-5.44	-14.3	0.06	0.16	0	0.01	0.01	0.03
P163	654.81	6	6	4.28	21.86	0.05	0.25	0	0.05	0	0.07
P165	304.11	6	6	2.92	14.43	0.03	0.16	0	0.01	0	0.03
P167	238.41	6	6	57.13	28.43	0.65	0.32	0.1	0.03	0.43	0.12
P169	803.1	6	6	30.96	-53.07	0.35	0.6	0.11	0.3	0.14	0.37
P171	681.07	10	10	339.19	1005.92	1.39	4.11	0.66	4.92	0.96	7.22
P173	274.62	8	8	-87.57	-281	0.56	1.79	0.06	0.55	0.23	2.02
P175	302.5	12	12	-0.63	-15.06	0	0.04	0	0	0	0
P177	710.73	12	12	0.63	172.94	0	0.49	0	0.07	0	0.1
P179	220.2	8	8	37.66	567.33	0.24	3.62	0.01	1.41	0.04	6.39
P181	548.18	6	6	2.49	0	0.03	0	0	0	0	0
P183	389.04	8	8	30.6	567.33	0.2	3.62	0.01	2.49	0.03	6.39
P185	520.72	6	6	3.98	0	0.05	0	0	0	0	0
P187	360.11	8	8	21.08	567.33	0.13	3.62	0.01	2.3	0.01	6.39
P189	43.19	8	8	263.28	395.06	1.68	2.52	0.08	0.16	1.79	3.79
P191	41.92	8	8	262.68	394.06	1.68	2.52	0.07	0.16	1.78	3.78
P193	134.11	6	10	234.78	795.83	2.66	3.25	0.79	0.63	5.88	4.68

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P195	161.9	6	10	231.7	790.66	2.63	3.23	0.93	0.75	5.73	4.62
P197	95.39	6	6	106.68	104.55	1.21	1.19	0.13	0.13	1.36	1.31
P199	44.68	8	16	855.95	1500	5.46	2.39	0.71	0.07	15.88	1.53
P201	65.11	6	6	106.68	104.55	1.21	1.19	0.09	0.09	1.36	1.31
P203	699.54	6	6	14	0	0.16	0	0.02	0	0.03	0
P205	233.59	12	12	2.79	596.58	0.01	1.69	0	0.23	0	0.97
P207	274.68	12	12	2.79	596.58	0.01	1.69	0	0.27	0	0.97
P209	662.87	8	8	1.53	596.58	0.01	3.81	0	4.65	0	7.02
P211	238.79	10	16	1320.34	1917.39	5.39	3.06	2.85	0.58	11.95	2.42
P221	690.29	8	8	278.17	99.62	1.78	0.64	1.37	0.2	1.98	0.3
P231	154.46	6	10	328.58	-3.69	3.73	0.02	1.69	0	10.95	0
P233	768.43	10	16	1310.24	1889.08	5.35	3.01	9.06	1.81	11.78	2.35
P237	659.24	10	10	95	258.17	0.39	1.05	0.06	0.38	0.09	0.58
P239	56.43	10	16	1310.24	1889.08	5.35	3.01	0.67	0.13	11.79	2.35
P241	80.04	8	16	1215.86	1567.71	7.76	2.5	2.44	0.13	30.42	1.66
P243	69.58	6	8	330.66	0	3.75	0	0.77	0	11.08	0
P247	22.25	6	6	330.66	0	3.75	0	0.25	0	11.08	0
P255	469.12	8	8	109.54	698.18	0.7	4.46	0.14	4.41	0.3	9.39
P273	81.42	8	8	289.65	-77.52	1.85	0.49	0.17	0.02	2.13	0.19
P275	18.41	8	8	619.6	0	3.95	0	0.16	0	8.73	0
P277	16.23	8	8	663.33	0	4.23	0	0.16	0	9.9	0
P279	2,090.35	12	12	273.45	131.3	0.78	0.37	0.48	0.12	0.23	0.06
P307	3,371.98	6	12	106.68	104.55	1.21	0.3	4.6	0.15	1.36	0.04
P309	536.25	8	8	254.25	351.76	1.62	2.25	0.9	1.64	1.68	3.06
P311	475.13	8	8	0	0	0	0	0	0	0	0
P317	410.64	8	8	364.17	535.92	2.32	3.42	1.34	2.74	3.26	6.67
P321	510.62	8	8	309.99	410.07	1.98	2.62	1.07	1.79	2.09	3.5
P331	423.61	8	8	287.64	129.46	1.84	0.83	0.89	0.2	2.11	0.48
P339	640.34	8	16	859.97	1510.16	5.49	2.41	10.26	0.99	16.02	1.55
P341	731.61	8	16	1215.86	1567.71	7.76	2.5	22.26	1.22	30.42	1.66
P353	140.2	6	12	110.85	111.53	1.26	0.32	0.21	0.01	1.46	0.05
P359	70.46	6	12	114.56	117.74	1.3	0.33	0.11	0	1.55	0.06

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P367	354.92	6	6	10.19	22.99	0.12	0.26	0.01	0.03	0.02	0.08
P369	32.63	6	6	10.54	31.96	0.12	0.36	0	0	0.02	0.15
P371	369.03	6	6	3.88	13.19	0.04	0.15	0	0.01	0	0.03
P373	627.01	6	8	20.49	73.37	0.23	0.47	0.04	0.11	0.06	0.17
P375	457.24	6	6	7.17	19.82	0.08	0.22	0	0.03	0.01	0.06
P377	470.82	6	8	86.54	215.38	0.98	1.37	0.44	0.58	0.93	1.23
P379	472.5	6	8	66.81	172.73	0.76	1.1	0.27	0.39	0.57	0.82
P381	327.75	8	8	-108.47	-70.59	0.69	0.45	0.11	0.05	0.35	0.16
P383	390.5	8	8	-127.04	-108.65	0.81	0.69	0.18	0.14	0.46	0.35
P385	75.99	8	8	-209.38	-262.69	1.34	1.68	0.09	0.14	1.17	1.78
P387	313.15	8	8	-237.31	-316.45	1.51	2.02	0.46	0.79	1.48	2.52
P389	59.8	8	8	343.28	571.89	2.19	3.65	0.17	0.45	2.92	7.53
P391	347.76	6	8	56.9	206.2	0.65	1.32	0.15	0.4	0.43	1.14
P393	428.6	8	8	296.84	388.04	1.89	2.48	0.83	1.36	1.93	3.16
P395	322.27	8	8	323.04	432.26	2.06	2.76	0.73	1.25	2.25	3.86
P397	441.54	6	6	-72.72	-95.1	0.83	1.08	0.3	0.49	0.67	1.1
P399	285.67	6	6	-88.55	-125.59	1	1.43	0.28	0.53	0.97	1.84
P401	434.56	6	8	136.42	372.64	1.55	2.38	0.93	1.48	2.15	3.4
P403	452.38	6	8	121.51	346.3	1.38	2.21	0.78	1.34	1.74	2.97
P405	459.09	6	8	113.13	320.83	1.28	2.05	0.7	1.18	1.52	2.58
P407	497.09	6	8	72.35	237.77	0.82	1.52	0.33	0.74	0.66	1.48
P409	280.91	8	12	-523.84	-968.51	3.34	2.75	1.8	0.78	6.4	2.77
P411	355.34	8	12	559.35	1038.27	3.57	2.95	2.57	1.12	7.22	3.15
P413	174.07	8	16	-826.95	-1440.56	5.28	2.3	2.59	0.25	14.9	1.42
P415	85.36	8	16	-834	-1454.41	5.32	2.32	1.29	0.12	15.14	1.45
P417	207	8	16	862.85	1521.66	5.51	2.43	3.34	0.33	16.12	1.58
P419	309.42	8	16	867.48	1531.88	5.54	2.44	5.04	0.49	16.28	1.59
P421	296.72	6	6	-154.33	-23.44	1.75	0.27	0.8	0.02	2.7	0.08
P423	524.38	6	6	-152.55	-17.76	1.73	0.2	1.39	0.03	2.64	0.05
P425	700.57	6	6	-147.01	2.45	1.67	0.03	1.73	0	2.47	0
P427	563.01	6	6	-129.32	34.44	1.47	0.39	1.1	0.09	1.95	0.17
P429	675.06	6	6	-159.3	68.93	1.81	0.78	1.93	0.41	2.86	0.61

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P431	509.72	8	8	84.59	296.03	0.54	1.89	0.11	1.13	0.22	2.22
P433	621.54	8	8	76.95	275.07	0.49	1.76	0.11	1.21	0.18	1.94
P435	57.83	8	8	75.29	271.6	0.48	1.73	0.01	0.11	0.18	1.9
P437	107.17	8	8	359.15	159.19	2.29	1.02	0.34	0.08	3.18	0.7
P439	104.54	8	8	35.98	7.39	0.23	0.05	0	0	0.04	0
P441	200.8	6	6	-96.89	-59.6	1.1	0.68	0.23	0.09	1.14	0.46
P443	578.78	6	6	-84.74	-50.79	0.96	0.58	0.52	0.2	0.89	0.34
P445	492.82	6	6	-20.87	-19.41	0.24	0.22	0.03	0.03	0.07	0.06
P447	350.04	6	6	41.25	9.82	0.47	0.11	0.08	0.01	0.23	0.02
P449	313.82	6	6	92.01	92.86	1.04	1.05	0.33	0.33	1.04	1.05
P451	809.72	8	8	-87.13	-107.73	0.56	0.69	0.19	0.28	0.23	0.34
P453	482.32	6	6	59.43	131.09	0.67	1.49	0.22	0.96	0.46	2
P455	291.6	6	6	7.49	20.82	0.08	0.24	0	0.02	0.01	0.07
P457	222.96	6	6	37.26	72.35	0.42	0.82	0.04	0.15	0.19	0.66
P459	571.54	8	8	-259.48	-388.16	1.66	2.48	1	2.1	1.74	3.67
P461	654.56	8	8	321.78	149.88	2.05	0.96	1.7	0.41	2.59	0.63
P463	680.97	10	10	-1193.01	443.04	4.87	1.81	6.75	1.08	9.91	1.58
P465	535.05	10	10	-1205.56	398.46	4.92	1.63	5.4	0.7	10.1	1.3
P467	445.03	10	10	-1214.85	360.24	4.96	1.47	4.56	0.48	10.24	1.08
P469	275.41	10	10	-1224.2	340.86	5	1.39	2.86	0.27	10.39	0.97
P471	56.16	6	6	-0.36	179.76	0	2.04	0	0.2	0	3.58
P473	622.25	10	10	1234.65	-127.9	5.04	0.52	6.57	0.1	10.56	0.16
P475	414.42	10	10	1247.51	-97.59	5.1	0.4	4.46	0.04	10.76	0.1
P477	147.93	10	10	1252.48	-81.66	5.12	0.33	1.6	0.01	10.84	0.07
P479	68.46	6	6	59.54	146.41	0.68	1.66	0.03	0.17	0.46	2.45
P481	440.79	6	8	58.73	163.12	0.67	1.04	0.2	0.32	0.45	0.74
P483	461	6	8	45.18	123.38	0.51	0.79	0.13	0.2	0.28	0.44
P485	518.75	6	8	-41.71	-115.32	0.47	0.74	0.12	0.2	0.24	0.39
P487	470.37	6	6	12.76	32.83	0.14	0.37	0.01	0.07	0.03	0.15
P489	742.31	6	6	53.02	157.12	0.6	1.78	0.28	2.07	0.37	2.79
P491	366.78	6	6	75.78	62.16	0.86	0.71	0.27	0.18	0.72	0.5
P493	248.87	6	6	-76.99	-75.72	0.87	0.86	0.19	0.18	0.75	0.72

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P495	619.69	6	6	-80.96	-95.53	0.92	1.08	0.51	0.69	0.82	1.11
P497	153.87	6	6	13.31	37.99	0.15	0.43	0	0.03	0.03	0.2
P499	310.85	10	20	1258.42	3110.84	5.14	3.18	3.4	0.62	10.94	2
P501	522.72	10	20	1250.88	3080.17	5.11	3.15	5.65	1.03	10.81	1.96
P503	58.51	10	20	1387.48	2881.21	5.67	2.94	0.77	0.1	13.1	1.73
P505	473.93	6	6	-57.28	-170.66	0.65	1.94	0.2	1.54	0.43	3.25
P507	412.45	6	6	5.87	-88.9	0.07	1.01	0	0.4	0.01	0.97
P509	121.77	6	8	138.75	577.81	1.57	3.69	0.27	0.93	2.22	7.67
P511	307.63	6	6	23.78	-56.3	0.27	0.64	0.03	0.13	0.08	0.42
P513	63.32	6	6	-43.85	-187.71	0.5	2.13	0.02	0.25	0.26	3.88
P515	656.92	6	6	-18.74	33.19	0.21	0.38	0.04	0.1	0.05	0.16
P517	477.42	6	6	55.2	49.81	0.63	0.57	0.19	0.16	0.4	0.33
P519	699.22	6	6	-100.04	-186.14	1.14	2.11	0.85	2.67	1.21	3.82
P521	767.68	6	6	-85.82	-124.32	0.97	1.41	0.7	1.39	0.91	1.81
P523	542.7	6	6	177.4	-145.85	2.01	1.65	1.9	1.32	3.5	2.43
P525	156.6	6	6	195.46	-104.38	2.22	1.18	0.66	0.21	4.18	1.31
P527	642.53	6	6	195.46	-74.89	2.22	0.85	2.69	0.45	4.18	0.71
P529	571.15	6	6	198.96	-39.64	2.26	0.45	2.47	0.12	4.32	0.22
P531	1,171.92	6	6	202.27	1.69	2.3	0.02	5.22	0	4.46	0
P533	1,512.49	6	6	180.27	-81.03	2.05	0.92	5.45	1.24	3.6	0.82
P535	738.15	6	8	22.94	73.24	0.26	0.47	0.06	0.12	0.08	0.17
P537	739.76	6	8	-86.31	-176.63	0.98	1.13	0.68	0.63	0.92	0.85
P539	575.45	6	8	-3.11	12.16	0.04	0.08	0	0	0	0.01
P541	550.77	6	8	-38.89	-61.61	0.44	0.39	0.12	0.07	0.21	0.12
P543	571.86	6	8	-50.24	-96.04	0.57	0.61	0.19	0.16	0.34	0.28
P545	605.48	6	8	-64.86	-142.12	0.74	0.91	0.33	0.35	0.54	0.57
P547	373.14	6	10	-72.01	-1011.84	0.82	4.13	0.25	2.72	0.66	7.3
P549	471.13	6	6	9.41	29.42	0.11	0.33	0.01	0.06	0.02	0.13
P551	264.16	6	6	2.06	6.83	0.02	0.08	0	0	0	0.01
P553	434.68	10	20	532.93	3821.15	2.18	3.9	0.97	1.27	2.23	2.92
P555	177.28	10	20	520.88	3788.23	2.13	3.87	0.38	0.51	2.13	2.88
P557	352.6	6	6	6.93	31.57	0.08	0.36	0	0.05	0.01	0.14

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P559	554.06	6	6	5.41	24.09	0.06	0.27	0	0.05	0.01	0.09
P561	292.08	6	6	1.11	6.11	0.01	0.07	0	0	0	0.01
P563	1,056.54	6	6	4.72	52.92	0.05	0.6	0	0.39	0	0.37
P565	837.75	6	6	9.24	71.03	0.1	0.81	0.01	0.54	0.01	0.64
P567	453	6	6	12.98	84.72	0.15	0.96	0.01	0.4	0.03	0.89
P569	373.03	6	6	30.17	92	0.34	1.04	0.05	0.39	0.13	1.04
P571	213.33	6	6	2.33	8.4	0.03	0.1	0	0	0	0.01
P573	237.17	6	6	2.14	6.52	0.02	0.07	0	0	0	0.01
P575	584.14	8	8	10.43	21.3	0.07	0.14	0	0.01	0	0.02
P577	288.94	8	8	23.34	31.91	0.15	0.2	0.01	0.01	0.02	0.04
P579	419.93	8	8	2.49	5.01	0.02	0.03	0	0	0	0
P581	213.44	8	8	37.72	144.77	0.24	0.92	0.01	0.13	0.05	0.59
P583	161.27	8	8	39.14	149	0.25	0.95	0.01	0.1	0.05	0.62
P585	144.51	6	6	-10.15	-34.27	0.12	0.39	0	0.02	0.02	0.17
P589	119.84	6	6	-1.52	3.83	0.02	0.04	0	0	0	0
P591	394.38	6	6	27.72	74.78	0.31	0.85	0.04	0.28	0.11	0.71
P593	431.65	6	6	22.27	61.07	0.25	0.69	0.03	0.21	0.07	0.49
P595	336.4	10	10	127.14	346.64	0.52	1.42	0.05	0.34	0.16	1
P597	104.97	10	10	-46.85	-123.92	0.19	0.51	0	0.02	0.02	0.15
P599	299.01	10	10	-85.88	-213.78	0.35	0.87	0.02	0.12	0.08	0.41
P601	189.84	6	6	-3.33	-4.98	0.04	0.06	0	0	0	0
P603	95.74	10	10	53.32	124.07	0.22	0.51	0	0.01	0.03	0.15
P605	264.65	6	6	10.77	27.99	0.12	0.32	0.01	0.03	0.02	0.11
P607	287.84	6	6	18.41	35.71	0.21	0.41	0.02	0.05	0.05	0.18
P609	191.95	8	8	6.01	-1.97	0.04	0.01	0	0	0	0
P611	184.16	8	8	-7.51	-0.31	0.05	0	0	0	0	0
P613	222.37	6	6	5.39	-11.73	0.06	0.13	0	0.01	0.01	0.02
P615	76.61	6	6	7.6	-7.95	0.09	0.09	0	0	0.01	0.01
P617	163.22	6	6	10.87	37.18	0.12	0.42	0	0.03	0.02	0.19
P619	502.21	8	8	13.98	51.1	0.09	0.33	0	0.04	0.01	0.09
P621	399.83	8	8	19.26	65.06	0.12	0.42	0.01	0.05	0.01	0.13
P623	222.7	8	8	-11.21	-32.64	0.07	0.21	0	0.01	0.01	0.04

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P625	363.11	6	6	-10.31	-26.04	0.12	0.3	0.01	0.04	0.02	0.1
P627	207.7	6	6	6.23	17.43	0.07	0.2	0	0.01	0.01	0.05
P629	486.06	6	6	4.21	1.54	0.05	0.02	0	0	0	0
P631	233.12	6	6	-0.34	-8.39	0	0.1	0	0	0	0.01
P633	312.68	8	8	14.66	35.92	0.09	0.23	0	0.01	0.01	0.04
P635	219.31	6	6	6.96	17.19	0.08	0.2	0	0.01	0.01	0.05
P637	150.57	6	6	10.08	22.89	0.11	0.26	0	0.01	0.02	0.08
P639	270.69	8	8	34.83	78.8	0.22	0.5	0.01	0.05	0.04	0.19
P641	193.25	8	8	8.77	25.9	0.06	0.17	0	0	0	0.02
P643	94.15	8	8	-88.7	-282.95	0.57	1.81	0.02	0.19	0.24	2.04
P645	165.73	8	8	-85.99	-275.53	0.55	1.76	0.04	0.32	0.23	1.95
P647	705.71	8	8	-80.67	-83.18	0.51	0.53	0.14	0.15	0.2	0.21
P649	426.28	8	8	261.97	375.56	1.67	2.4	0.76	1.47	1.77	3.45
P653	259.44	6	6	3.96	93.39	0.04	1.06	0	0.28	0	1.07
P655	274.02	6	6	0.31	8.97	0	0.1	0	0	0	0.01
P657	243.43	6	6	1.06	9.88	0.01	0.11	0	0	0	0.02
P659	201.94	6	6	4.73	10.58	0.05	0.12	0	0	0	0.02
P661	308.76	6	6	31.43	150.61	0.36	1.71	0.04	0.8	0.14	2.58
P663	490.07	6	6	-26.66	-79.17	0.3	0.9	0.05	0.38	0.1	0.78
P665	305.78	10	10	744.04	-586.81	3.04	2.4	1.26	0.81	4.13	2.66
P667	531.92	6	6	-170.66	39.88	1.94	0.45	1.73	0.12	3.25	0.22
P669	270.57	6	6	-2.85	-14.59	0.03	0.17	0	0.01	0	0.03
P671	289.47	6	6	8.17	23.82	0.09	0.27	0	0.02	0.01	0.07
P673	452.2	12	12	224.37	-50.85	0.64	0.14	0.07	0	0.16	0.01
P675	403.68	12	12	-183.22	-442.98	0.52	1.26	0.04	0.23	0.11	0.56
P677	180.17	8	8	-11.6	-63.19	0.07	0.4	0	0.02	0	0.11
P679	541.38	8	8	-19.7	-223.63	0.13	1.43	0.01	0.62	0.01	1.14
P681	524.43	8	8	6.93	179.48	0.04	1.15	0	0.4	0	0.76
P683	364.98	8	8	-21.95	-218.42	0.14	1.39	0.01	0.4	0.02	1.09
P687	128.63	12	12	16.11	-1.7	0.05	0	0	0	0	0
P689	341.48	8	8	19.11	18.62	0.12	0.12	0	0	0.01	0.01
P691	202.53	6	6	3.91	27.79	0.04	0.32	0	0.02	0	0.1

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P693	448.12	6	6	5.67	20.11	0.06	0.23	0	0.02	0	0.05
P695	469.5	6	6	2.84	9.32	0.03	0.11	0	0.01	0	0.01
P697	42.02	6	6	-2.08	-6.47	0.02	0.07	0	0	0	0.01
P699	202.41	6	6	4.54	23.06	0.05	0.26	0	0.01	0	0.07
P701	652.85	6	6	4.35	9.71	0.05	0.11	0	0.01	0	0.01
P703	395.74	8	8	6.3	30.86	0.04	0.2	0	0.01	0	0.03
P705	57.09	8	8	33.97	-534.77	0.22	3.41	0	0.33	0.03	5.73
P707	270.57	8	8	4.49	22.58	0.03	0.14	0	0	0	0.02
P709	132.57	6	6	2.31	11.66	0.03	0.13	0	0	0	0.02
P711	211.09	8	8	5.16	17.72	0.03	0.11	0	0	0	0.01
P713	555.62	8	8	1.63	21.32	0.01	0.14	0	0.01	0	0.01
P715	337.22	8	8	3.09	25.59	0.02	0.16	0	0.01	0	0.02
P717	219.91	6	6	2	15.15	0.02	0.17	0	0.01	0	0.03
P719	508.72	6	6	6.75	31.75	0.08	0.36	0	0.06	0.01	0.12
P721	378.61	8	8	1.86	84.65	0.01	0.54	0	0.07	0	0.19
P723	363.18	8	8	3.4	18.98	0.02	0.12	0	0	0	0.01
P725	195.87	8	8	-2.9	57.44	0.02	0.37	0	0.02	0	0.09
P727	305.85	6	6	2.6	12.68	0.03	0.14	0	0.01	0	0.02
P729	509.32	8	8	9.73	-669.52	0.06	4.27	0	4.43	0	8.69
P731	488.88	8	8	5.51	-689.56	0.04	4.4	0	4.49	0	9.18
P733	392.23	8	8	2.89	-703.55	0.02	4.49	0	3.74	0	9.52
P735	303.07	10	10	147.57	380.09	0.6	1.55	0.05	0.31	0.18	1.03
P737	315.07	10	10	143.95	373.9	0.59	1.53	0.05	0.31	0.17	1
P739	260.42	6	6	26.3	71.41	0.3	0.81	0.02	0.15	0.09	0.56
P741	238.5	6	6	24.12	67.76	0.27	0.77	0.02	0.12	0.07	0.51
P743	392.07	8	8	-48.99	-121.73	0.31	0.78	0.03	0.14	0.07	0.37
P745	206.86	8	8	-49.75	-124.97	0.32	0.8	0.01	0.08	0.07	0.39
P747	258.11	8	8	3.35	5.62	0.02	0.04	0	0	0	0
P749	358.41	8	8	-56.83	-140.09	0.36	0.89	0.03	0.17	0.09	0.48
P751	151.5	8	8	5.57	6.66	0.04	0.04	0	0	0	0
P753	223.98	8	8	-63.91	-149.29	0.41	0.95	0.03	0.12	0.11	0.54
P755	88.75	8	8	4.39	6.27	0.03	0.04	0	0	0	0

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
P757	327.32	8	8	-70.33	-158.96	0.45	1.01	0.04	0.2	0.13	0.61
P759	464.96	10	10	-71.71	-188.43	0.29	0.77	0.02	0.13	0.05	0.28
P761	289.56	8	8	4.22	7.07	0.03	0.05	0	0	0	0
P763	544.7	10	10	-77.51	-229.11	0.32	0.94	0.03	0.22	0.05	0.4
P765	402.67	10	10	-150.87	-387.88	0.62	1.58	0.07	0.43	0.19	1.07
P767	269.63	8	8	-71.82	-187.15	0.46	1.19	0.04	0.22	0.14	0.82
P769	552.74	10	10	-114.14	-296.26	0.47	1.21	0.06	0.36	0.11	0.65
P771	266.52	6	6	1.91	6.42	0.02	0.07	0	0	0	0.01
P773	212.76	10	10	-96.03	-286.87	0.39	1.17	0.02	0.13	0.08	0.61
P775	523.98	10	10	78.72	254.21	0.32	1.04	0.03	0.26	0.06	0.49
P777	37.64	6	6	7.28	25.58	0.08	0.29	0	0	0.01	0.08
PMP-1_D	126.01	99	99	2760.54	4477.42	0.12	0.19	0	0	0	0
PMP-1_U	115.37	99	99	2760.74	4478.08	0.12	0.19	0	0	0	0
PMP-10_D	109.11	99	99	2753.31	3124.21	0.11	0.13	0	0	0	0
PMP-10_U	121.4	99	99	2758.2	3140.68	0.11	0.13	0	0	0	0
PMP-101	1	99	99	2755.65	3132.1	0.11	0.13	0	0	0	0
PMP-102	1	99	99	2755.65	3132.1	0.11	0.13	0	0	0	0
PMP-11	1	99	99	2760.65	4477.76	0.12	0.19	0	0	0	0
PMP-12	1	99	99	2760.65	4477.76	0.12	0.19	0	0	0	0
PRV-108_D	97.46	6	6	426.31	74.59	4.84	0.85	1.73	0.07	17.74	0.7
PRV-108_U	97.46	6	6	428.81	79.14	4.87	0.9	1.75	0.08	17.93	0.79
PRV-1081	77.96	6	6	427.67	77.09	4.85	0.87	0.92	0.04	11.8	0.49
PRV-11_D	38.82	8	16	856.51	1501.43	5.47	2.4	0.62	0.06	15.9	1.54
PRV-11_U	695.84	8	16	-838.64	-1465.25	5.35	2.34	10.64	1.02	15.29	1.47
PRV-111	1	6	6	856.3	1500.84	9.72	17.03	0.04	0.12	42.72	120.67
PRV-112	1	6	6	856.3	1500.84	9.72	17.03	0.04	0.12	42.72	120.73
PRV-131_D	40.29	10	10	339.19	1072.45	1.39	4.38	0.04	0.33	0.97	8.13
PRV-131_U	1,206.44	10	10	339.72	1114.59	1.39	4.55	1.17	10.54	0.97	8.73
PRV-1311	56.36	6	6	339.19	1094.45	3.85	12.42	0.43	3.79	7.68	67.25
PRV-1312	27.86	6	6	339.19	1094.45	3.85	12.42	0.21	1.87	7.68	67.25
PRV-18_U	687.83	6	6	-91.01	-209.54	1.03	2.38	0.7	3.27	1.02	4.76
PRV-19_D	443.43	6	6	4.48	-15.02	0.05	0.17	0	0.02	0	0.04

Node ID	Elevation	Diameter (in)		Flow (gpm)		Velocity (ft/s)		Headloss (ft)		Headloss/1000 (ft/1000-ft)	
		Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout	Existing	Buildout
PRV-19_U	259.77	6	6	-2	22.38	0.02	0.25	0	0.02	0	0.08
PRV-191	1	6	6	0	26.73	0	0.3	0	0	0	0
PRV-192	1	6	6	0	26.73	0	0.3	0	0	0	0.12
PRV-32_D	63.65	12	12	87.17	302.22	0.25	0.86	0	0.02	0.03	0.32
PRV-32_U	508.66	10	16	1307.56	1879.75	5.34	3	5.97	1.19	11.74	2.33
PRV-321	1	8	8	87.17	303.59	0.56	1.94	0	0	0.24	1.59
PRV-322	1	8	8	87.17	303.59	0.56	1.94	0	0	0.12	1.59
PRV-6_D	751.32	8	8	251.79	55.41	1.61	0.35	1.24	0.08	1.65	0.1
PRV-6_U	802.97	8	8	300.18	142.37	1.92	0.91	1.83	0.46	2.28	0.57
PRV-601	1	4	4	80.54	280.33	2.06	7.16	0	0.04	3.91	38.88
PRV-602	1	4	4	80.54	280.33	2.06	7.16	0	0.04	3.85	38.88
PRV-71_D	210.78	10	10	67.28	226.46	0.27	0.93	0.01	0.1	0.05	0.46
PRV-71_U	367.93	10	10	70.08	232.54	0.29	0.95	0.02	0.18	0.05	0.48
PRV-711	1	4	4	68.33	228.61	1.74	5.84	0	0.03	2.87	26.67
PRV-712	1	4	4	68.33	228.61	1.74	5.84	0	0.03	2.81	26.67
PRV-90_D	726.55	6	6	14.97	13.54	0.17	0.15	0.03	0.02	0.04	0.03
PRV-90_U	76.29	6	6	18.28	23.63	0.21	0.27	0	0.01	0.05	0.08
PRV-901	1	4	4	17.76	22.08	0.45	0.56	0	0	0.24	0.37
PRV-902	1	4	4	17.76	22.08	0.45	0.56	0	0	0.24	0.37
SADDLE_CRK1	1	10	10	279.6	1596.76	1.14	6.52	0	0.01	0.49	11.23
SADDLE_CRK2	1	10	10	279.6	1595.68	1.14	6.52	0	0.01	0.37	11.23
U70081	1	99	99	106.68	104.55	0	0	0	0	0	0
U70082	1	99	99	106.68	104.55	0	0	0	0	0	0
V80061	1	6	6	0	181.1	0	2.05	0	0	0	2.44
V80062	1	6	6	0	181.1	0	2.05	0	0	0	2.44
V80101	1	4	4	262.97	394.54	6.71	10.07	0.03	0.07	34.55	73.24