
LAND USE ASSUMPTIONS & CAPITAL IMPROVEMENTS PLAN

for

**WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY
2014 IMPACT FEE STUDY**

September 2018



Prepared for:

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INTRODUCTION

The purpose of this report is to develop the Land Use Assumptions and Capital Improvements Plan in support of the West Travis County Public Utility Agency 2018 Impact Fee Study (IFS) for the 2018-2027 planning period. The process and methodology used will be described and the results summarized in tabular and graphical form for use in the impact fee calculations prepared by Nelisa Heddin Consulting, LLC. This report is prepared in accordance with the applicable provisions of Chapter 395 of the Local Government Code: *Financing Capital Improvements Required by New Development in Municipalities, Counties, and Certain Other Local Governments*.

BACKGROUND

Water

The West Travis County Public Utility Agency (WTCPUA) regional water system currently serves approximately 16,800 Living Unit Equivalents (LUEs) in western Travis and northern Hays Counties. Raw water is diverted from Lake Austin under Firm Water Contracts with the Lower Colorado River Authority at an intake structure and delivered to both raw water customers as well as to the Uplands Water Treatment Plant located on Bee Cave Road at its intersection with Bee Cave Parkway. Potable water service throughout the service area including wholesale customers is provided via the Uplands Water Treatment Plant. The distribution system is generally divided into the SH71 & US290 Systems, with the demark being the Southwest Parkway Pump Station and the facilities that supply it with water for pumping into the US290 System. Table 1 provides a summary of existing LUEs by system.

Table 1: Summary of Existing LUEs (Water)

System	Total Existing Water LUEs
SH71	8,836
US290	7,966
TOTAL	16,802

A detailed tabulation of existing LUEs broken down by system, geographic area (census block), and retail vs. wholesale is provided in Appendix A: *Existing Water LUE Tabulation*.

Division of the system into two main service areas is an operational and planning tool that also logically precipitates to the considerations taken into account for impact fee calculation. As such, the two-system planning and service strategy is carried through the Land Use Assumptions (LUA) and Capital Improvements Plan (CIP) to the calculation of impact fees. The Preliminary Retail Planning Area (RPA) is the service area within which the WTCPUA plans for retail water service to new customers. In addition the WTCPUA has wholesale customers both inside and outside the RPA. The RPA together with the wholesale customer service area boundaries define the footprint within which the WTCPUA is planning for water service in the 2018 IFS. Appendix B: *Water CIP Exhibit* shows the WTCPUA water system, general division between the SH71 and US290 Systems, RPA, wholesale customer boundaries, major system components, and CIP facilities.

Wastewater

The WTCPUA regional wastewater system currently serves approximately 3,787 LUEs in an approximately 4,800-acre service area generally within the extraterritorial jurisdiction (ETJ) of the City of Bee Cave. A detailed tabulation of existing LUEs similar to that provided for water is provided in Appendix C: *Existing Wastewater LUE Tabulation*. The wastewater collection system

includes 22 lift stations and approximately 60 miles of pipe, which deliver raw wastewater for treatment to two wastewater treatment plants. Treated effluent is stored in two effluent holding ponds and used for irrigation under a Texas Land Application Permit (TLAP) as well as an Authorization for Reclaimed Water (210 Authorization). Appendix D: *Wastewater CIP Exhibit* shows the wastewater collection system, service area boundary, major system components, CIP facilities.

LAND USE ASSUMPTIONS

In order to develop a robust planning basis for the prior IFS (performed in 2014), the WTCPUA retained the services of Population and Survey Analysts (PASA), a consulting firm specializing in demographic analysis and projections. The PASA scope of study included detailed analysis of the entire WTCPUA service area and projection of land use, housing occupancies, and ultimately LUEs. For this analysis 1 Service Unit is defined as 1 LUE. For the 2014 IFS, Murfee Engineering used the data generated by the PASA study to focus on the specific projections applicable to the IFS and, taking direction from the WTCPUA Board of Directors and General Manager, developed projections of LUEs categorized to facilitate development of the CIP following the two-system organization. For this study, growth projected in the 2014 study was compared to that actually realized during the 2014-2018 period as a starting point. The comparison was facilitated by using the demographer's geographic organization basis (census block group as defined by the United States Census Bureau) to assign a planning unit (PU) to each entry in the WTCPUA customer database.

The comparison of projected to actual growth showed a deficit in actual LUEs served in 2018 (detailed in Appendix A) to those projected in the 2014 IFS. In order to both adjust the projections downward to account for the deficit in actual connection growth compared to the projections and preserve the character of the data set developed by PASA, which potential for development is still

believed to exist, the end point for the 2014 Study in terms of LUEs was used for this current study. Several minor adjustments were made to reconcile projections against Service Extension Requests which were processed after the issuance of the 2014 study.

Table 2 on the following page presents the Land Use Assumptions for the water service area.

Table 2: Land Use Assumption Summary Tabulation (Water)

Impact Fee Planning Period Year	GROWTH									TOTAL LUEs		
	Residential		Commercial		Wholesale		TOTAL					
	SH71	US290	SH71	US290	SH71	US290	SH71	US290	TOTAL	SH71	US290	TOTAL
Oct-15	345	127	75	40	279	135	699	302	1,000	8,836	7,966	16,802
Oct-16	299	124	75	40	391	358	765	52	1,287	9,535	8,268	17,803
Oct-17	245	135	75	40	827	402	846	577	1,423	10,300	8,790	19,090
Oct-18	204	118	75	40	478	486	756	644	1,400	11,146	9,367	20,513
Oct-19	216	100	75	40	438	427	728	567	1,295	11,902	10,011	21,913
Oct-20	235	156	75	40	422	348	732	544	1,276	12,630	10,578	23,208
Oct-21	256	188	75	40	412	407	742	635	1,377	13,362	11,122	24,484
Oct-22	217	184	75	40	387	442	679	666	1,344	14,104	11,757	25,861
Oct-23	195	165	75	40	350	402	619	607	1,227	14,782	12,423	27,205
Oct-24	177	180	75	40	236	293	488	513	1,001	15,402	13,030	28,432
Subtotals	2,389	1,477	746	400	3,919	3,700	7,054	5,577	12,631	15,890	13,543	29,433
TOTALS	3,867		1,145		7,619							

Appendix E provides a graphical representation of the LUA.

Table 3 provides a similar summary tabulation for wastewater.

Table 3: Land Use Assumption Summary Tabulation (Wastewater)

Impact Fee Planning Period Year	GROWTH				TOTAL LUES
	Retail		Wholesale	Total	
	Residential	Commercial			
					3,377
2018	330	84	52	466	4,252
2019	256	84	58	397	4,649
2020	189	84	65	337	4,986
2021	160	84	65	309	5,295
2022	174	84	65	323	5,618
2023	173	84	56	312	5,930
2024	185	84	52	320	6,250
2025	126	57	47	257	6,506
2026	92	84	36	212	6,718
2027	63	84	14	161	6,880
Subtotal	1,748	836	510	3,094	
TOTAL	2,584				

A graphical representation of the wastewater LUA is presented in Appendix F.

SYSTEM PLANNING CRITERIA

In order to step forward to a Capital Improvements Plan (CIP) from the LUA it is necessary to define the units used in the projections in terms of water and wastewater system usage as well as the criteria used to establish the capacities of regional facilities.

Unit Usage

Unit usage in gallons per day per living unit equivalent (gpd/LUE) for both the water and wastewater systems is a critical piece of the LUE definition that assists in translation of the Land Use Assumptions into required capacities for system components. Unit usage analysis is performed using the operational history of the system under the WTCPUA and the existing LUE tabulations

presented in Appendices A & C, revised has been developed. Table 4 presents a comparison of the unit usage used in the prior studies to that used in this report.

Table 4: Water System Unit Usage Comparison

System	2012 IFS Unit Usage (gpd/LUE)	2014 IFS Unit Usage (gpd/LUE)	2014 IFS Unit Usage (gpd/LUE)	Description
Water	450	450	450	Annual average
	1,090	924	900	Peak day
Wastewater	205	180	180	30-day average

Unit usage analysis for the water system is based on a peak day and annual average analysis of the 2014-2018 period. The analysis returned small discrepancies from that performed in prior years, which indicates that

1. A long-term floor in terms of the effects of water conservation in periods without drought restrictions is perhaps being reached.
2. The conservative prior adjustment based on the short operational history at the time of the 2014 IFS and the effects of drought restrictions at the time was prudent.
3. The use of the annual average, also sometimes represented as 2 LUEs per acre-foot per year (LUEs/afy) as a longer-term planning number is reasonable.

Wastewater unit usage was not revised based on an analysis of the most recent 12-months of flow data that indicated a potential adjustment below the margin of error of the analysis. Unit usage in both the water and wastewater systems is expected to trend slightly downward in the future.

System Criteria

The primary criteria used to establish the capacity of the existing facilities and allocate for growth in future CIP projects are pipe velocities, pumping capacity, and system storage. Transmission main

capacity is evaluated using peak day unit usage and a 5 feet per second (fps) limitation on velocity. Pumping capacity is evaluated using a number of measures. The water distribution system model is used to evaluate the system dynamically and assist in sizing of facilities to provide minimum service level benchmarks. Once facilities are evaluated using the water distribution system model the facility service areas are delineated and the preliminary capacity evaluated in terms of the Texas Commission on Environmental Quality (TCEQ) minimum water system capacity requirements contained in TAC §290.45. For the WTCPUA water system the pumping requirements are 2.0 gpm/connection in service sub-areas where 200 gallons/connection of elevated storage are not provided and 0.6 gpm/connection in sub-areas that meet the 200 gallons/connection threshold. Total storage is evaluated using the water distribution system model and dynamic peak day analysis as well as TCEQ minimum criteria of 200 gallons/connection total storage, 100 gallons/connection elevated storage, 20 gallons/connection hydropneumatic system storage, and clearwell storage capacity of 5% of water plant production capacity.

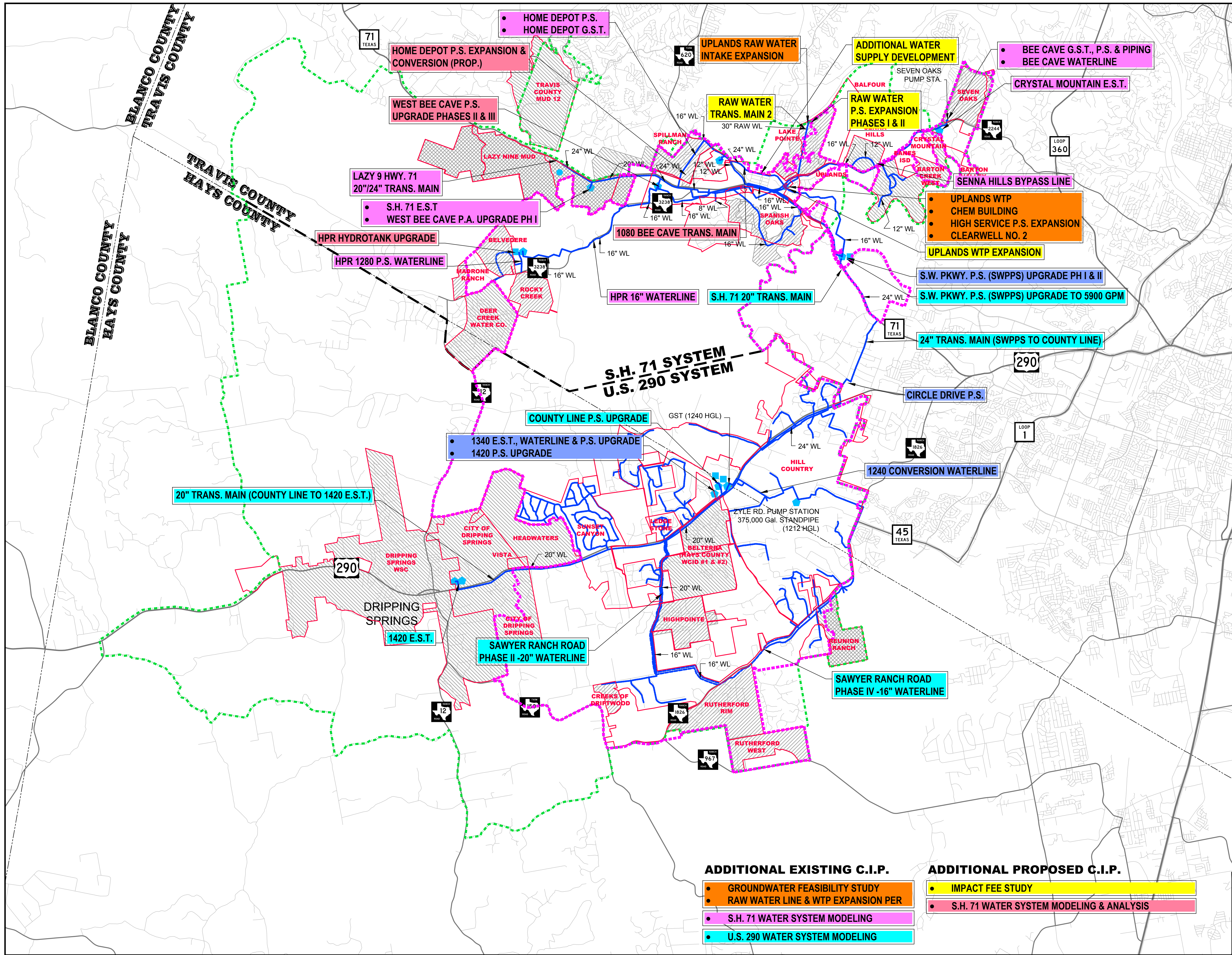
CAPITAL IMPROVEMENTS PLAN

Using the above-described Land Use Assumptions and the unit usage and system planning criteria, a Capital Improvements Plan (CIP) was developed that identifies the projects required to meet the forecasted demands as well as estimated dates that the projects will be needed and forecasted project costs. Appendix E contains tables for existing project capacity assessment and allocations as well as those for the proposed projects for both water and wastewater and define the CIP for the purposes of the impact fee calculations.

APPENDIX A:
Existing Water LUE Tabulation

Murfee Engineering Company, Inc.			Date:	3/5/2018
Texas Registered Firm No. F-353			Data:	2/1/2018
WTCPUA - Existing Water LUE Summary 2018				
RETAIL CUSTOMERS				
Demography Planning				
System	Description	Unit	Connections	Existing LUEs*
	Heritage Country, Big Country	18.3	93	93
	Sunset Canyon	19.3	370	386
	Townes	19.4	9	38
	Key Ranch, Saratoga Hills	20.1	78	105
	Heritage Oaks, Ledge Stone, Oak Run West, Polo Club	20.2	494	548
	Hays Country Acres & Creek	33.2	1	1
	Sunset Canyon S.	35.1	126	133
	Meadow Creek Ranch, Dripping Springs Ranch II	35.2	12	18
	SW of Sawyer Ranch and US290 to Sunset Canyon	36	221	279
	Signal Hill	38	97	100
	Bear Creek Oaks, Echo Bluff, Hills of Texas	39	270	276
	Friendship Ranch, Whispering Oaks, Wildwood, Parten	40	2	1
	Highpointe	41	799	826
	E. of Sawyer Highpointe to Darden Hill	42	10	10
	Onion Creek Ranch, Creek of Driftwood	43.1	77	77
	Woodland Estates	43.2	7	7
	Driftwood	43.3	2	2
	Green Hills	44	17	17
	Rim Rock	45	573	574
	Fox Run, Barsana	46.1	5	12
	S. of FM1826 Barsana to Bear Creek Pass	47.1	14	14
	Bear Creek Estates	47.3	23	23
	N. of Fitzhugh to the county line	113	15	15
	Oak Run, S. of Fitzhugh to Blackstone	114	17	21
	NW of Circle Dr.	116	8	8
	US290 South of Circle Dr., Tanglewood W., Hillside	117	185	203
	Rimrock Tr., Spring Valley, Ledgestone Terrace, Derecho	118	228	260
	Appaloosa Run, Zyle Rd.	119	139	143
	Overlook at Lewis Mountain	120	2	2
	Rutherford West	122	27	28
SH71	Senna Hills	102	2	4
	Seven Oaks	103	231	357
	N. Crystal Creek Dr.	104	5	18
	S. Crystal Creek Drive	106	2	2
	Angelwylde	107	11	11
	N. of Hamilton Pool Madrone Ranch to Creeks Edge	3D.2	213	223
	Destiny Hills	3D.3	1	1
	Bella Colinas	3D.4	4	4
	Bee Cave West, Travis County,	3D.5	43	83
	W. of Crumley HPR to county line, Rocky Creek	3E.1	374	390
	Homestead, Meadowfox, LTYA	3G.1	181	176
	Spanish Oaks, Shops at the Galleria	3H.1	632	1234
	Uplands, HEB	4A.1	218	414
	The Preserve at Barton Creek	4A.2	46	46
	Lake Pointe	5A	1075	1151
	Cielo	5B	1	1
	Hill Country Galleria & Surrounding	5C	42	174
	Falconhead	8A	598	721
	Ladera, Morningside, Skaggs	8F	387	618
				TOTAL
			SH71 System	5625
			US290 System	4218
* - Calculation of LUEs is based on meter size. Meters with zero consumption were not counted.				
WHOLESALE CUSTOMERS				
System	Customer	Jan 2017-Dec 2017 Average Usage (gpd)	Standardized Water LUEs ¹	
US290	City of Dripping Springs	0	0	
	City of Dripping Springs - Headwaters	76,485	170	
	Dripping Springs WSC	648,844	1,442	
	Hays 1	429,674	955	
	Hays 2	356,460	792	
	Reunion Ranch WCID	175,326	390	
SH71	Barton Creek West	301,233	669	
	Crystal Mountain	36,068	80	
	Deer Creek	170,638	379	
	Eanes ISD	15,649	35	
	Lazy Nine MUD	283,564	630	
	Lake Travis ISD	5,003	11	
	Senna Hills	200,781	446	
	TC MUD 12	385,236	856	
	TC MUD 18	47,000	104	
TOTAL		3,131,961	6,960	
0 - LUEs based on Water Resources Management spreadsheet "wholesale reservations"				
dated 4/5/12				
1 - Using 450 gpd/LUE			SH71 System	3,211
2- Contract states 310 built out LUEs, max 400 gpm consumption			US290 System	3,748
			SH71 System	8,836
			US290 System	7,966
			GRAND TOTAL	16,802

APPENDIX B:
Water CIP Exhibit

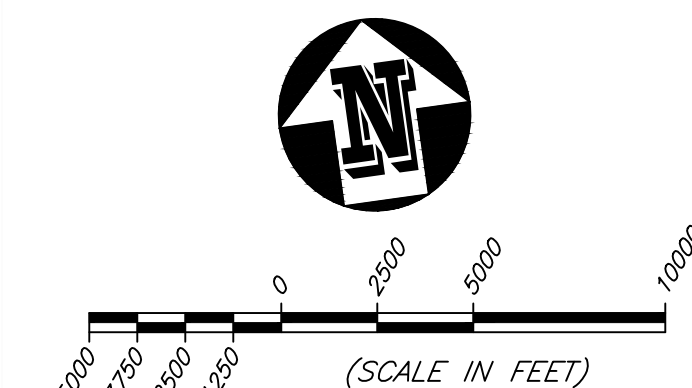


C.I.P. PROJECTS LEGEND

- SYSTEM WIDE
PROPOSED
EXISTING
- S.H. 71 SYSTEM
PROPOSED
EXISTING
- U.S. 290 SYSTEM
PROPOSED
EXISTING

LEGEND

- WEST TRAVIS COUNTY P.U.A. WATER SYSTEM BOUNDARY
- WEST TRAVIS COUNTY P.U.A. PRELIMINARY RETAIL PLANNING AREA
- EXISTING FACILITIES AND FACILITIES PROPOSED IN C.I.P. PLANS
- EXIST. WHOLESALE CUSTOMERS
- REIMBURSEMENT OBLIGATIONS
- EXIST. WHOLESALE CUSTOMERS WITH REIMBURSEMENT OBLIGATIONS



FOR PLANNING PURPOSES ONLY

ADDITIONAL EXISTING C.I.P.

- GROUNDWATER FEASIBILITY STUDY
- RAW WATER LINE & WTP EXPANSION PER
- S.H. 71 WATER SYSTEM MODELING
- U.S. 290 WATER SYSTEM MODELING

ADDITIONAL PROPOSED C.I.P.

- IMPACT FEE STUDY
- S.H. 71 WATER SYSTEM MODELING & ANALYSIS

APPENDIX C:

Existing Wastewater LUE Tabulation

WTCPUA - April 2018 SH71 System WW LUE Summary

RETAIL CUSTOMERS

Rate District	Read Route & Description	Connections	Exist WW LUEs*
SH 71	313 Seven Oaks	2	2
	314 Falcon Head	407	409
	315 Spanish Oaks & Hwy 71	434	492
	316 Lake Pointe 1	260	266
	317 Lake Pointe 2	219	232
	318 Shops at the Galleria	75	379
	319 Lake Pointe 3	206	209
	320 Lake Pointe 4	250	249
	321 620 & 71	545	907
TOTAL		2,398	3,145

* - Calculation of LUEs is based on meter size. Meters with zero consumption were not counted.

WHOLESALE CUSTOMERS

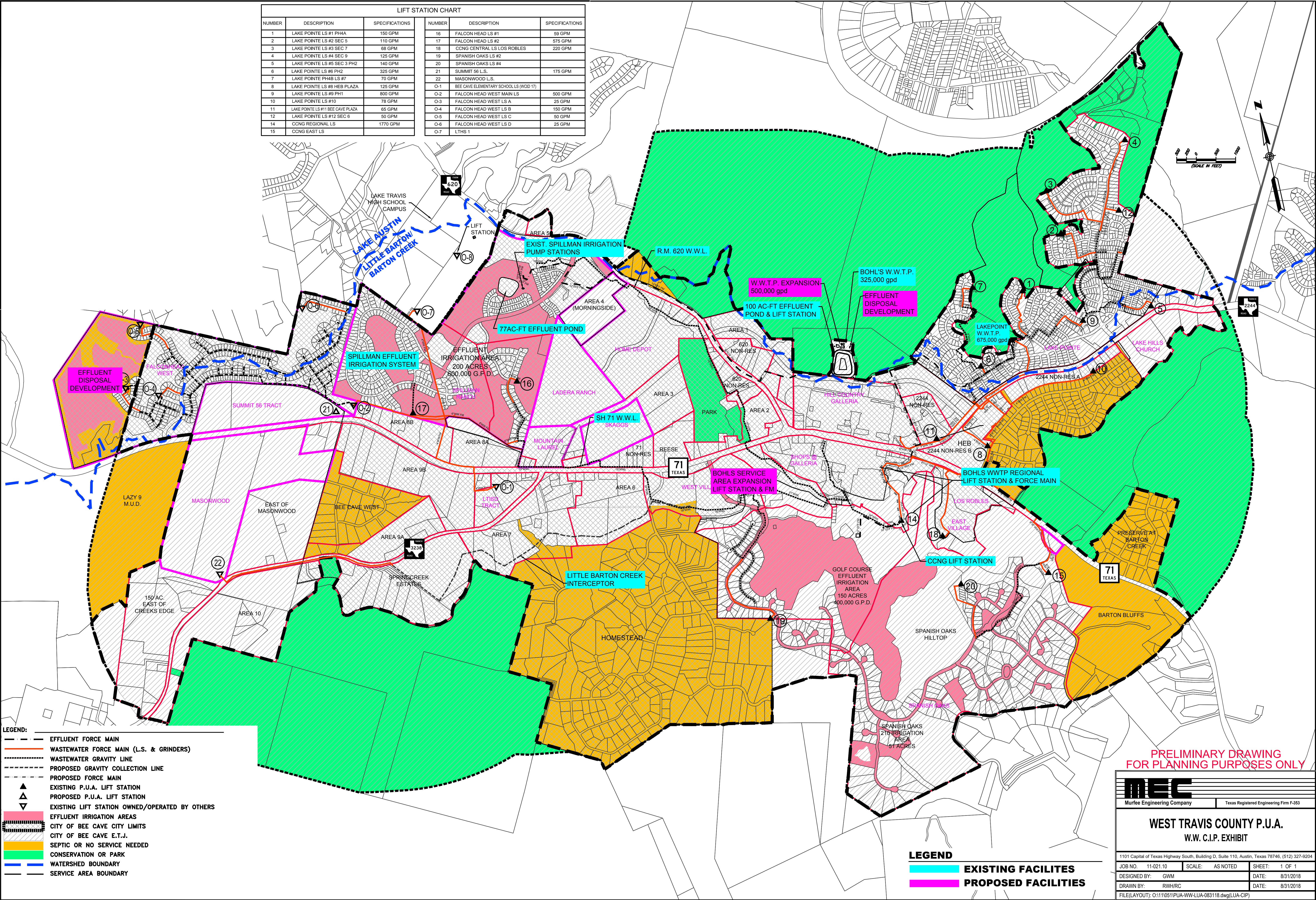
Customer	January- December 2017 Average Usage (gpd)	January-December 2017 Peak Month Usage (gpd)	Exist WW LUEs*
Masonwood	41,833	46,129	232
WCID 17	73,759	87,484	410
TOTAL	115,592	133,613	642

* - Calculation of Wholesale LUEs is based on 180 gpd/LUE

GRAND TOTAL 3,787

APPENDIX D:
Wastewater CIP Exhibit

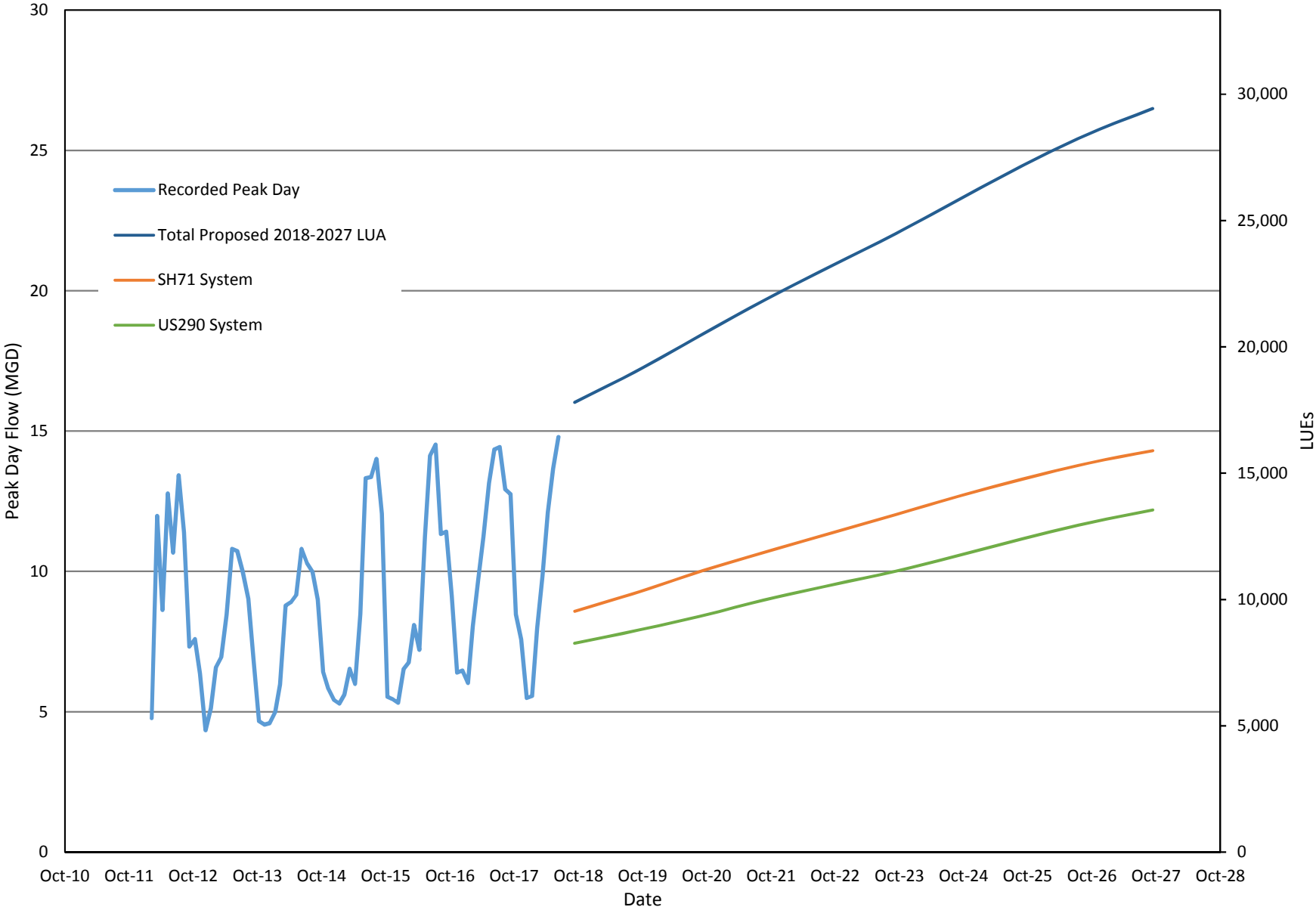
LIFT STATION CHART						
NUMBER	DESCRIPTION	SPECIFICATIONS		NUMBER	DESCRIPTION	SPECIFICATIONS
1	LAKE POINTE LS #1 PH4A	150 GPM		16	FALCON HEAD LS #1	59 GPM
2	LAKE POINTE LS #2 SEC 5	110 GPM		17	FALCON HEAD LS #2	575 GPM
3	LAKE POINTE LS #3 SEC 7	88 GPM		18	CCNG CENTRAL LS LOS ROBLES	220 GPM
4	LAKE POINTE LS #4 SEC 9	125 GPM		19	SPANISH OAKS LS #2	
5	LAKE POINTE LS #5 SEC 3 PH2	140 GPM		20	SPANISH OAKS LS #4	
6	LAKE POINTE LS #6 PH2	325 GPM		21	SUMMIT 56 L.S.	175 GPM
7	LAKE POINTE PH4B LS #7	70 GPM		22	MASONWOOD L.S.	
8	LAKE POINTE LS #8 HEB PLAZA	125 GPM		O-1	BEE CAVE ELEMENTARY SCHOOL LS (WOD 17)	
9	LAKE POINTE LS #9 PH1	800 GPM		O-2	FALCON HEAD WEST MAIN LS	500 GPM
10	LAKE POINTE LS #10	78 GPM		O-3	FALCON HEAD WEST LS A	25 GPM
11	LAKE POINTE LS #11 BEE CAVE PLAZA	65 GPM		O-4	FALCON HEAD WEST LS B	150 GPM
12	LAKE POINTE LS #12 SEC 6	50 GPM		O-5	FALCON HEAD WEST LS C	50 GPM
14	CCNG REGIONAL LS	1770 GPM		O-6	FALCON HEAD WEST LS D	25 GPM
15	CCNG EAST LS			O-7	LTHS 1	



APPENDIX E:

Water LUA Summary Figure

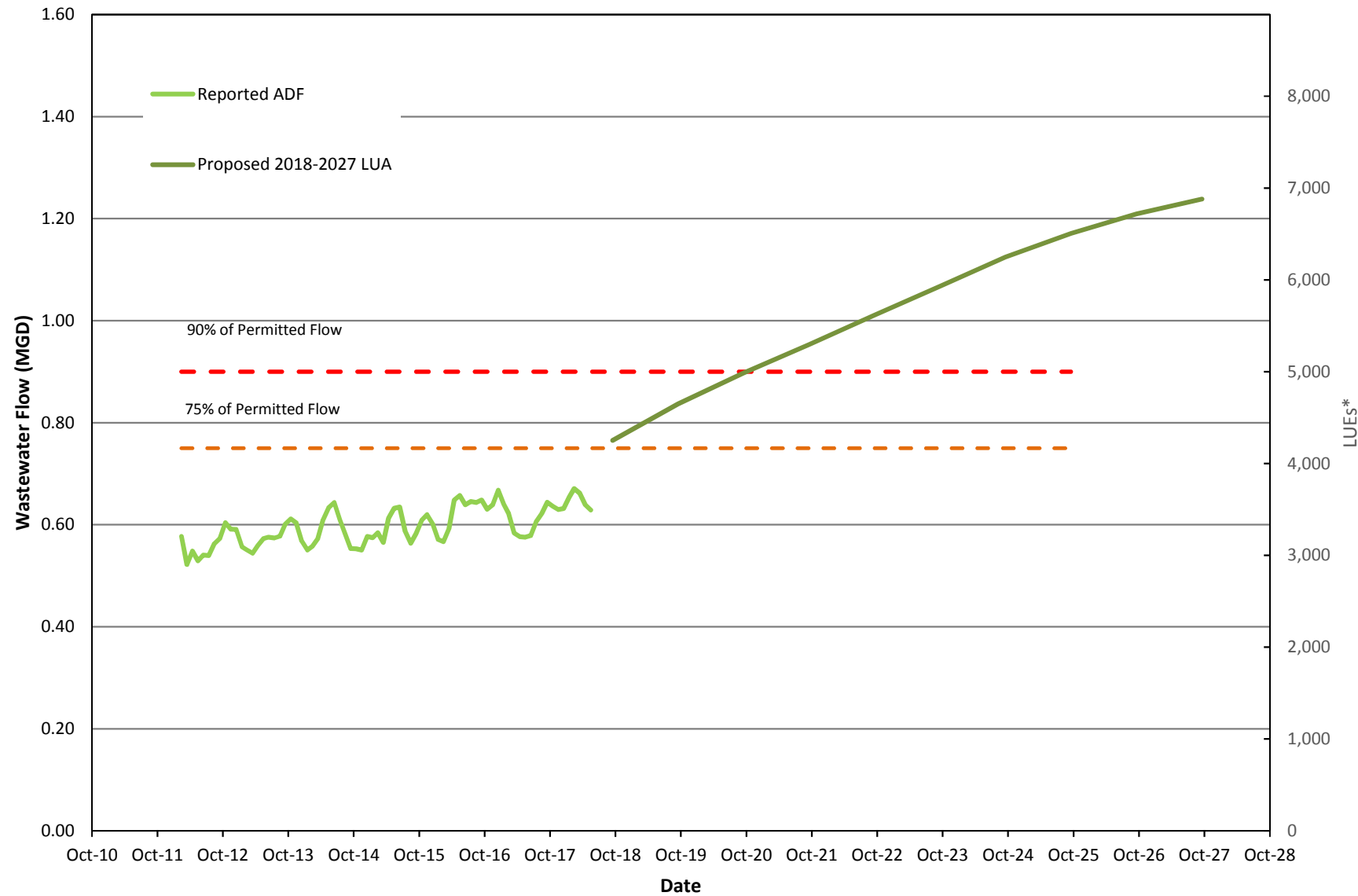
WTCPUA - Water LUA Summary 2018



APPENDIX F:

Wastewater LUA Summary Figure

WTCPUA - Wastewater LUA Summary 2018



*Note: LUE= 180 gpd/LUE

APPENDIX G:

CIP Tables

WTCPUA Capital Improvements Program - Water								
Existing Projects								
Project	Project Cost	Capacity (MGD or LUEs)	Current Capacity Used (MGD or LUEs)	Capacity Used 2018-2027 (MGD or LUEs)	Allocation for Current Capacity	Allocation for 2018-2027	Cost Allocation - Current	Cost Allocation - Growth
System-wide								
Uplands WTP Chem Building	\$ 2,141,458	20	15.14	4.86	76%	24%	\$ 1,621,083.71	\$ 520,374
Uplands WTP	\$ 40,249,533	20	15.14	4.86	76%	24%	\$ 30,468,896	\$ 9,780,637
Uplands Raw Water Intake Expansion	\$ 416,305	20	15.14	4.86	76%	24%	\$ 315,143	\$ 101,162
High Service Pump Station 8MGD-14MGD	\$ 4,034,066	20	15.14	4.86	76%	24%	\$ 3,053,788	\$ 980,278
Uplands Clearwell No. 2	\$ 997,229	20	15.14	4.86	76%	24%	\$ 754,902.35	\$ 242,327
	\$ 47,838,591						\$ 36,213,813	\$ 11,624,778
SH71 System								
Lazy 9 SW 71 Transmission Main	\$ 3,090,461	20	15.14	4.86	76%	24%	\$ 2,339,479	\$ 750,982
SH71 EST (1.0 Mgal)	\$ 1,955,487	3000	1150	1850	38%	62%	\$ 749,603	\$ 1,205,884
West Bee Cave PS Upgrade (Phase I)	\$ 157,711	750	550	200	73%	27%	\$ 115,655	\$ 42,056
Transmission Main from Uplands Plant to Bee Cave Pump Station	\$ 1,556,779	20	15.14	4.86	76%	24%	\$ 1,178,482	\$ 378,297
Crystal Mountain EST	\$ 1,917,518	20	15.14	4.86	76%	24%	\$ 1,451,561	\$ 465,957
Senna Hills Bypass Line	\$ 559,677	20	15.14	4.86	76%	24%	\$ 423,675	\$ 136,002
HPR 1280 Pump Station Water Line	\$ 330,552	20	15.14	4.86	76%	24%	\$ 250,228	\$ 80,324
HPR Water Line	\$ 6,624,510	20	15.14	4.86	76%	24%	\$ 5,014,754	\$ 1,609,756
Home Depot Pump Station	\$ 392,792	20	15.14	4.86	76%	24%	\$ 297,344	\$ 95,448
Home Depot Ground Storage Tank	\$ 147,043	20	15.14	4.86	76%	24%	\$ 111,312	\$ 35,731
Bee Cave Ground Storage Tank, Pump Station & Piping (off Cuernevaca)	\$ 699,851	20	15.14	4.86	76%	24%	\$ 529,787	\$ 170,064
Bee Cave Waterline to Cuernevaca	\$ 990,492	20	15.14	4.86	76%	24%	\$ 749,802	\$ 240,690
	\$ 18,422,873						\$ 13,211,682	\$ 5,211,191
US290 System								
County Line Pump Station Upgrade	\$ 1,684,429	20	15.14	4.86	76%	24%	\$ 1,275,113	\$ 409,316
290 Pipeline								
24" SWPPS to County Line	\$ 12,841,593	20	15.14	4.86	76%	24%	\$ 9,721,085.90	\$ 3,120,507
20" County Line to 1420 EST	\$ 3,411,212	20	15.14	4.86	76%	24%	\$ 2,582,287.48	\$ 828,925
SH71 20" Transmission Main	\$ 3,630,945	20	15.14	4.86	76%	24%	\$ 2,748,625.37	\$ 882,320
20" Main Uplands to SWPPS Easements	\$ 506,714	20	15.14	4.86	76%	24%	\$ 383,582.50	\$ 123,132
1420 EST	\$ 2,197,353	20	15.14	4.86	76%	24%	\$ 1,663,396.22	\$ 533,957
Sawyer Ranch Road Ph 1 20"	\$ 1,183,948	20	15.14	4.86	76%	24%	\$ 896,248.64	\$ 287,699
Sawyer Ranch Road Ph 1 (Darden Hill)	\$ 1,293,619	20	15.14	4.86	76%	24%	\$ 979,269.58	\$ 314,349
SWPPS Upgrade to 5,900 gpm	\$ 243,213	20	15.14	4.86	76%	24%	\$ 184,112.24	\$ 59,101
1826 Phase IV 16" Water Line	\$ 1,006,560	20	15.14	4.86	76%	24%	\$ 761,965.92	\$ 244,594
	\$ 27,999,586						\$ 21,195,687	\$ 6,803,899

WTCPUA Capital Improvements Program - Water					
Proposed Projects					
Project	Planning Horizon Project Costs	Year Scheduled	Capacity (increase)	Capacity Allocation - Growth	Cost Allocation - Growth
System-wide (12,631 LUEs added)					
Impact Fee Study	\$ 74,000	2023	n/a	100%	\$ 74,000
System Hydraulic Modelling	\$ 175,000	2019	n/a	100%	\$ 175,000
Uplands WTP Expansion	\$ 13,500,000	2022	5 MGD	100%	\$ 13,500,000
Additional Water Supply Development	\$ 1,000,000	2020	0.375 MGD	38%	\$ 378,667
Raw Water Pump Station Expansion (Phase I)	\$ 1,500,000	2018	3 MGD	100%	\$ 1,500,000
Raw Water Pump Station Expansion (Phase II)	\$ 1,650,000	2025	7 MGD	30%	\$ 495,000
Raw Water Transmission Main No. 2	\$ 5,000,000	2018	16.5 MGD	31%	\$ 1,545,455
	\$ 22,899,000				\$ 17,668,121
SH71 System (7,054 LUEs added)					
HPR Conversion and Upgrade to 1,500 gpm	\$ 275,000	2019	375 LUEs	375 LUEs	\$ 275,000
West Bee Cave PS Upgrade (Phases II & III)	\$ 1,220,000	2019	2,500 LUEs	2,500 LUEs	\$ 1,220,000
Home Depot Pump Station Expansion & Conversion	\$ 320,000	2019	1,500 LUEs	700 LUEs	\$ 149,333
1080 Bee Cave Transmission Main	\$ 4,900,000	2019	5,229 LUEs	2500 LUEs	\$ 2,342,704.15
	\$ 6,715,000				\$ 3,987,037
US290 System (5,577 LUEs added)					
SWPPS Upgrade (Phase I)	\$ 1,400,000	2019	5,000 LUEs	2,500 LUEs	\$ 700,000
SWPPS Upgrade (Phase II)	\$ 1,200,000	2023	2,500 LUEs	2,500 LUEs	\$ 1,200,000
Circle Drive Pump Station	\$ 3,960,000	2022	3,000 LUEs	3,000 LUEs	\$ 3,960,000
1240 Conversion Water Line	\$ 1,400,000	2020	2,700 LUEs	1,800 LUEs	\$ 933,333
1340 EST, Pump Station Upgrade & WL	\$ 6,500,000	2018	3,000 LUEs	2,500 LUEs	\$ 5,417,000
RM1826 Phase V 16"		2028			
Heritage Oaks Loop Line		2027			
1420 Pump Station Upgrade	\$ 1,300,000	2023	1,950 gpm	1,500 gpm	\$ 1,000,000
	\$ 15,760,000				\$ 13,210,333
TOTALS	\$ 45,374,000				\$ 34,865,492

WTCPUA Capital Improvements Program - Wastewater									
Existing Projects									
Project	Project Cost	Capacity (MGD)	Current Capacity Used (MGD)	Capacity Used 2018-2027 (MGD)	Allocation for Current Capacity	Allocation for 2018-2027	Cost Allocation - Current	Cost Allocation - Growth	
Lake Pointe WWTP	\$ 15,317,630	0.675	0.410	0.265	61%	39%	\$ 9,304,042	\$ 6,013,588	
Bee Cave Regional System	\$ 8,499,620	1.0	0.612	0.388	61%	39%	\$ 5,201,767	\$ 3,297,853	
Spillman Effluent Irrigation System	\$ 530,458	1.0	0.612	0.388	61%	39%	\$ 324,640	\$ 205,818	
CCNG Lift Station	\$ 141,970	1.0	0.612	0.388	61%	39%	\$ 86,886	\$ 55,084	
RM 620 WW Line	\$ 1,262,030	1.0	0.612	0.388	61%	39%	\$ 772,362	\$ 489,668	
SH71 WW Line	\$ 998,809	1.0	0.612	0.388	61%	39%	\$ 611,271	\$ 387,538	
Bohls Effluent Pond and Lift Station	\$ 3,816,591	0.325	0.201	0.124	62%	38%	\$ 2,360,415	\$ 1,456,176	
Bohls WWTP	\$ 5,570,796	0.325	0.201	0.124	62%	38%	\$ 3,445,323	\$ 2,125,473	
Bohls WWTP Regional Lift Station/FM	\$ 2,101,571	0.325	0.201	0.124	62%	38%	\$ 1,299,741	\$ 801,830	
Little Barton Creek Interceptor	\$ 2,750,000	0.267	0.038	0.229	14%	86%	\$ 388,733	\$ 2,361,267	
TOTALS	\$ 40,989,475						\$ 23,795,181	\$ 17,194,294	

WTCPUA Capital Improvements Program - Wastewater					
Proposed Projects					
Project	Planning Horizon Project Costs	Year Scheduled	Capacity (increase)	Capacity Allocation - Growth	Cost Allocation - Growth
3,093 LUEs Added					
Impact Fee Update	\$ 10,000	2023	n/a	n/a	\$ 10,000
Master Planning & Permitting	\$ 175,000	2020	0.5	100%	\$ 175,000
Future WWTP Expansion	\$ 3,650,000	2019	0.5 MGD	32%	\$ 1,168,000
Effluent Disposal Development	\$ 5,500,000	2019	0.375 MGD	61%	\$ 3,373,333
Bohls Service Area Expansion Lift Station & Force Main	\$ 780,000	2026	500 LUEs	75%	\$ 585,000
TOTALS	\$ 10,115,000				\$ 5,311,333