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**LAND USE ASSUMPTIONS & CAPITAL IMPROVEMENTS PLAN**

**for**

**WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY  
2024 IMPACT FEE STUDY**

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October 2024



Prepared for:

West Travis County Public Utility Agency  
13215 Bee Cave Parkway  
Bldg B, Suite 110  
Bee Cave, Texas 78738



Prepared by:

Murfee Engineering Company, Inc.  
1101 Capital of Texas Highway, South  
Building D, Suite 110  
Austin, Texas 78746

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## **INTRODUCTION**

The purpose of this report is to develop the Land Use Assumptions (LUA) and Capital Improvements Plan (CIP) in support of the West Travis County Public Utility Agency 2024 Impact Fee Study for the 2024-2034 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 23,776 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 intake structures and is 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 is provided to retail and wholesale customers throughout the WTCPUA service area by the Uplands Water Treatment Plant. The distribution system is generally divided into the SH71 and US290 Systems, with the demarcation being the Southwest Parkway Pump Station and the facilities that supply it with water for pumping into the US290 System. This demarcation also includes future facilities that will supply the 290 system with water from Hamilton Pool Road south toward Fitzhugh road. Table 1 provides a summary of existing LUEs by system.

**Table 1: Summary of Existing Water LUEs**

<b>System</b>	<b>Total Existing Water LUEs</b>
SH71	11,598
US290	12,178
<b>TOTAL</b>	<b>23,776</b>

The division of the system into two main service areas is an operational and planning tool that also leads to separate impact fee calculation for each system. As such, the two-system planning and service strategy is carried through the Land Use Assumptions and Capital Improvements Plan to the calculation of impact fees. Table 2 shows the existing and projected water LUEs and Table 3 shows the existing and projected water LUEs by pressure plane. Table 4 depicts the water LUE growth assumptions by year. Appendix A-1: *Water CIP Exhibit* shows the WTCPUA water system, general division between the SH71 and US290 Systems, major system components, and existing CIP facilities. Appendix A-2: *Proposed CIP* depicts the proposed additional CIP facilities to serve the new growth for the next 10 years.

### ***Wastewater***

The WTCPUA regional wastewater system currently serves approximately 4,877 LUEs in a 4,800± acre service area generally within the extraterritorial jurisdiction (ETJ) of the City of Bee Cave. The wastewater collection system includes 21 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 is used for irrigation under a Texas Land Application Permit (TLAP) as well as an Authorization for Reclaimed Water (210 Authorization). Appendix B-1: *Wastewater CIP Exhibit* shows the wastewater collection system, service area boundary, major system components, and existing CIP facilities. Appendix B-2: *Proposed Wastewater CIP* shows the proposed CIP addition to provide services for full buildout which is expected in the next ten years.

**Table 2: Existing and Projected Water LUE Summary 2024-2034**

Murfee Engineering Company, Inc.							Date:	9/4/2024
Texas Registered Firm No. F-353		WTCPUA - Existing and Projected Water LUE Summary 2024-2034						
RETAIL CUSTOMERS								
System	Pressure Plane	Description	Demography Planning Unit	2023 Connections	2023 LUEs	2024-2034 Projected Growth	Ultimate 20 yr +/-	
US 290	1240	Echo Bluff, Hills of Texas, Bear Creek	39	275	288	67	355	
		Friendship Ranch, Whispering Oaks, Wildwood, Parten, Skyridge	40	461	667	173	840	
		Rim Rock	45	636	834	0	834	
		Fox Run, Barsana	46.1	5	12	8	20	
		S. of FM1826 Barsana to Bear Creek Pass	47.1	11	13.5	5	18	
		Bear Creek Estates	47.3	26	29	0	29	
		NW of Circle Dr.	116	3	3	5	8	
		US290 South of Circle Dr., Tanglewood W., Hillside	117	195	224	0	224	
		Appaloosa Run, Zyle Rd.	119	150	165	15	179	
		Overlook at Lewis Mountain	120	0	0	2	2	
		Rutherford West	122	170	215	0	215	
		Infill (Nuttly Brown)	38	40	46	84	200	
<b>1240 Retail Pressure Plane Total</b>			<b>1972</b>	<b>2496</b>	<b>359</b>	<b>2924</b>		
US 290	1340 N	Heritage Country, Big Country	18.3	118	137	6	143	
		Heritage Oaks, Ledge Stone, Oak Run West, Polo Club	20.2	510	718	41	759	
		Meadow Creek Ranch, Dripping Springs Ranch II	35.2	4	4	9	20	
		Fire Station West of Belterra	37.1	1	1	0	1	
		Signal Hill	38	40	46	71	167	
		Green Hills	44	23	27	6	33	
		N. of Fitzhugh to the County Line	113	18	22	4	26	
		Infill	16	N/A	0	275	550	
		Oak Run, S. of Fitzhugh to Blackstone	114	17	35	31	73	
		<b>1340 N Retail Pressure Plane Total</b>			<b>731</b>	<b>990</b>	<b>443</b>	<b>1772</b>
US 290	1340 S	Fire Station West of Belterra	37.1	1	1	0	1	
		Highpointe	41	1039	1223	0	1223	
		E. of Sawyer Highpointe to Darden Hill	42	44	63	57	133	
		Woodland Estates, Cypress Springs Elementary	43.2	4	13	26	58	
		Infill	34	N/A	0	275	550	
		Onion Creek Ranch, Creek of Driftwood	43.1	92	108	7	114	
		Darden Hill, KW, Penn	42	44	63	1437	3000	
Rimrock Tr., Spring Valley, Ledge Stone Terrace, Derecho	118	248	306	42	347			
<b>1340 S Retail Pressure Plane Total</b>			<b>1471</b>	<b>1775</b>	<b>1844</b>	<b>5426</b>		
US 290	1420 (290)	Sunset Canyon	19.3	391	443	43	486	
		Key Ranch, Saratoga Hills	20.1	157	224	33	257	
		Hays Country Acres & Creek	33.2	8	36	0	36	
		Sunset Canyon S, Sunset Canyon S Infill	35.1	157	183	28	211	
		Sawyer Ranch, US290 to Sunset Canyon Commercial Frontage	36	236	310	12	322	
		<b>1420 (290) Retail Pressure Plane Total</b>			<b>949</b>	<b>1196</b>	<b>116</b>	<b>1312</b>
<b>US 290 System Retail Subtotal</b>				<b>5,123</b>	<b>6,457</b>	<b>2,762</b>	<b>11,433</b>	
HWY 71	1080 (BCR)	Bee Cave West, Travis County, Infill	3D.5	122	222	109	330	
		Lake Pointe	5A	1084	1216	91	1307	
		Irrigation near Senna Hills	102	2	4	0	4	
		Seven Oaks	103	273	475	40	515	
		N. Crystal Creek Drive	104	7	24	4	28	
		S. Crystal Creek Drive	106	3	5	6	12	
	Angelwylde	107	1	1	9	20		
	<b>1080 (BCR) Retail Pressure Plane Total</b>			<b>1492</b>	<b>1946</b>	<b>259</b>	<b>2216</b>	
	1080 (CoBC)	Shops at the Galleria, Paseo, East Village, Infill	3H.1	401	696	180	876	
		Barton Creek Preserve	3H.2	4	5	6	13	
Uplands, HEB		4A.1	204	303	140	442		
The Preserve at Barton Creek		4A.2	46	56	0	56		
Backyard		8F	0	0	205	409		
Pearl, Hill Country Galleria & Surrounding (1080PPP)	5C	52	233	152	385			
<b>1080 (CoBC) Retail Pressure Plane Total</b>			<b>707</b>	<b>1292</b>	<b>683</b>	<b>2181</b>		
1280 (HPR)	Destiny Hills	3D.3	4	6	6	14		
	W. of Crumley HPR to county line, Rocky Creek	3E.1	399	586	238	823		
	Shield Ranch (Now inside conservancy)	3F	1	1.5	0.5	2		
	<b>1280 (HPR) Retail Pressure Plane Total</b>			<b>404</b>	<b>593</b>	<b>245</b>	<b>839</b>	
1280 (CoBC)	Spanish Oaks	3H.1	201	348	848	1992		
	Homestead, Meadowfox, LTYA	3G.1	189	223	14	237		
	Lake Travis Middle School	3K.1	1	50	10	60		
	Cielo Apartments	5B	0	0	59	117		
	Falconhead, Brisa Townhomes	8A	732	950	38	987		
	Ladera, Morningside, Skaggs	8F	396	852	313	1165		
Hill Country Galleria & Surrounding (1175PPP)	5C	26	117	42	158			
<b>1280 (CoBC) Retail Pressure Plane Total</b>			<b>1544</b>	<b>2539</b>	<b>1324</b>	<b>4716</b>		
1420 (HPR)	Reimers Ranch and Peacock Commercial	3A	0	0	50	100		
	Lake Travis Independent School District	2C.1	0	0	50	100		
	N. of Hamilton Pool Madrone Ranch to Creeks Edge, Hatchett/Provence (TC MUD 22), Harris, Preservation Ranch, Huthnace Peacock	3D.2	672	907	1059	2621		
<b>1420 (HPR) Retail Pressure Plane Total</b>			<b>672</b>	<b>907</b>	<b>1159</b>	<b>2821</b>		
<b>HWY 71 System Retail Subtotal</b>				<b>4,819</b>	<b>7,277</b>	<b>3,670</b>	<b>12,773</b>	
<b>RETAIL TOTAL</b>				<b>9,942</b>	<b>13,734</b>	<b>6,432</b>	<b>24,206</b>	

\* - Calculation of LUEs is based on meter size.

**Table 2: Existing and Projected Water LUE Summary 2024-2034 Continued**

WHOLESALE CUSTOMERS								
System	Pressure Plane	Customer	Demography Planning Unit	Sep 2022-Sep 2023 Average Usage (gpd)	2023 Standardized Water LUEs <sup>1</sup>	2024-2034 Projected Growth	Buildout Total LUEs	
US290	1240 (1160)	Reunion Ranch WCID <sup>2</sup>	47.2	297,906	662	0	524	
		City of Dripping Springs - Driftwood	43.3 / 121	132,698	295	406	1,000	
	<b>1240 (1160) Wholesale Pressure Plane Total</b>				<b>430,604</b>	<b>957</b>	<b>406</b>	<b>1,524</b>
	1340 N	City of Dripping Springs - N.E.		0	0	2158	4,316	
		<b>1340 N Wholesale Pressure Plane Total</b>				<b>0</b>	<b>0</b>	<b>2,158</b>
	1340 S	Hays 1, Hays 2		74.2	950,973	2113	233	2,346
		<b>1340 S Wholesale Pressure Plane Total</b>				<b>950,973</b>	<b>2,113</b>	<b>233</b>
	1420 (290)	City of Dripping Springs - N.E.		43.3 / 121	0	0	759	1,518
			City of Dripping Springs - Headwaters	19.2	316,698	704	579	1,425
		Dripping Springs WSC		n/a	876,123	1947	276	2,222
<b>1420 (290) Wholesale Pressure Plane Total</b>				<b>1,192,821</b>	<b>2,651</b>	<b>1,614</b>	<b>5,165</b>	
<b>US 290 System Wholesale Subtotal</b>				<b>2,574,398</b>	<b>5,721</b>	<b>4,411</b>	<b>13,351</b>	
HWY 71	1080 (BCR)	Barton Creek West WSC <sup>2</sup>	108	308,687	686	0	427	
		Crystal Mountain	105	58,281	130	0	118	
		Eanes ISD	n/a	18,976	42	16	58	
		Senna Hills	102	212,225	472	14	485	
		<b>1080 (BCR) Wholesale Pressure Plane Total</b>				<b>598,169</b>	<b>1,329</b>	<b>30</b>
	1280 (71)	Lazy Nine MUD 1A - Sweetwater		3K.1	90,483	201	1009	2,420
		TC MUD 12 - Rough Hollow		2C.2	850,335	1890	256	2,145
		TC MUD 18 - Bella Colinas / Masonwood		3D.4	214,497	477	167	643
	<b>1280 (71) Wholesale Pressure Plane Total</b>				<b>1,155,315</b>	<b>2,567</b>	<b>1,432</b>	<b>5,208</b>
	1420 (HPR)	Deer Creek <sup>2,3</sup>		n/a	191,253	425	0	310
<b>1420 (HPR) Wholesale Pressure Plane Total</b>				<b>191,253</b>	<b>425</b>	<b>0</b>	<b>310</b>	
<b>HWY 71 System Wholesale Subtotal</b>				<b>1,944,737</b>	<b>4,322</b>	<b>1,462</b>	<b>6,606</b>	
<b>WHOLESALE TOTAL</b>				<b>4,519,135</b>	<b>10,043</b>	<b>5,873</b>	<b>19,957</b>	
1 - Using 450 gpd/LUE								
2-2020 Wholesale contract a nnuual average consumption exceeds agreement amount								
3- Contract states 310 built out LUEs, max 400 gpm consumption								
					<b>US 290 System Total</b>	<b>12,178</b>	<b>7,173</b>	<b>24,784</b>
					<b>HWY 71 System Total</b>	<b>11,598</b>	<b>5,132</b>	<b>19,379</b>
					<b>GRAND TOTAL</b>	<b>23,776</b>	<b>12,305</b>	<b>44,163</b>

## LAND USE ASSUMPTIONS

The Living Unit Equivalent is utilized as the service unit to determine the ultimate system's demand. For this analysis one Service Unit is defined as one LUE. Table 4 shows the ten-year growth for the water service area. The land use assumptions include existing customers, wholesale and retail commitments, assumptions on infill and projects that are known to be in the development pipeline. Notably in the 290 System an additional 7,173 LUEs are in the planning stages and 5,132 LUEs have been committed to by the PUA for service in the Dripping Springs area, US290 corridor, RR 1826 corridor, and Fitzhugh Lane. In addition to these corridors, growth along Nutty Brown Road is also occurring, including a new HEB constructed in 2023. Within the SH 71 System Bee Cave Road is essentially built-out, while the City of Bee Cave has 2900± LUEs in the development pipeline with infill of 760 LUEs expected in the SH71 and Bee Cave Parkway area. Hamilton Pool Road has commitments for service from the PUA for Belvedere, Provence, Preserve, Huthnance and Deer Creek. A minor amount of infill is expected along Hamilton Pool Road. Of note: Table 2 identifies four wholesale customers that are exceeding their contracted amounts based on an average day usage. These wholesale users include Reunion Ranch WCID, Barton Creek West WSC, Crystal Mountain and Deer Creek; it is unknown if this trend is expected to continue. Wholesale LUEs were calculated by sorting the wholesale customer data from September 2022 to September 2023 and summing the billed consumption for each month by customer. After calculating the total billed consumptions an average was taken for the year in gpd usage and this average was used to calculate LUEs using a 450 gpd/LUE assumption.

**Table 3: Existing and Projected Water LUE Count by Pressure Plane**

Existing and Projected Water LUE Count by Pressure Plane				
System	Pressure Plane	2023 LUES*	2024-2034 Projected Growth	Ultimate 20 yr +/-
<b>US 290</b>	1240	3,453	765	4,448
	1340 N	990	2,601	6,088
	1340 S	3,887	2,077	7,771
	1420 (290)	3,847	1,730	6,477
<b>US 290 Total</b>		<b>12,178</b>	<b>7,173</b>	<b>24,784</b>
<b>HWY 71</b>	1080 (BCR)	3,275	289	3,304
	1080 (CoBC)	1,292	683	2,181
	1280 (HPR)	593	245	839
	1280 (CoBC)	2,539	1,324	4,716
	1280 (71)	2,567	1,432	5,208
	1420 (HPR)	1,332	1,159	3,131
<b>HWY 71 Total</b>		<b>11,598</b>	<b>5,132</b>	<b>19,379</b>
<b>TOTAL</b>		<b>23,776</b>	<b>12,305</b>	<b>44,163</b>

\*Calculation of LUE based on meter size

**Table 4: Water Land Use Growth Assumption Summary Tabulation**

Impact Fee Planning Period Year	TOTAL LUEs		
	US290	SH71	TOTAL
<b>Oct-25</b>	12,890	13,123	26,013
<b>Oct-26</b>	13,478	13,571	27,049
<b>Oct-27</b>	14,100	14,009	28,109
<b>Oct-28</b>	14,759	14,436	29,195
<b>Oct-29</b>	15,447	14,851	30,298
<b>Oct-30</b>	16,168	15,253	31,421
<b>Oct-31</b>	16,920	15,643	32,562
<b>Oct-32</b>	17,704	16,020	33,724
<b>Oct-33</b>	18,514	16,382	34,896
<b>Oct-34</b>	19,351	16,730	36,081

Appendix C: *Water LUE Summary Figures* provide a graphical representation of the water LUA.



Tables 5-7 provide a similar summary tabulation for wastewater to that described and provided for water. Since not all water customers in the Bee Caves/ Hwy 71 system receive wastewater service, the growth and total connections will differ.

**Table 5: Existing Wastewater LUEs**

Murfee Engineering Company, Inc. Texas Registered Firm No. F-353			6/05/2024	
<b>WTCPUA - April 2024 SH71 System WW LUE Summary</b>				
<b>RETAIL CUSTOMERS</b>				
<b>Rate District</b>	<b>Read Route &amp; Description</b>	<b>Connections</b>	<b>Exist WW LUEs*</b>	
SH 71	311 Seven Oaks	9	39	
	312 Uplands	7	50	
	313 Seven Oaks	1	5	
	314 Falconhead	463	504	
	315 Spanish Oaks & Hwy 71	443	457	
	316 Lake Pointe 1	266	273	
	317 Lake Pointe 2	217	233	
	318 Shops at the Galleria	95	570	
	319 Lake Pointe 3	208	212	
	320 Lake Pointe 4	253	253	
	321 620 & 71	739	1297	
<b>TOTAL</b>		<b>2,701</b>	<b>3,892</b>	
* - Calculation of LUEs is based on meter size. Meters with zero consumption were not counted.				
<b>WHOLESALE CUSTOMERS</b>				
<b>Customer</b>	<b>January-December 2023 Average Usage (gpd)</b>	<b>January-December 2023 Peak Month Usage (gpd)</b>	<b>Exist WW LUEs</b>	
Masonwood	102,547	122,107	570	
WCID 17**	74,816	79,867	416	
<b>TOTAL</b>		<b>177,363</b>	<b>201,974</b>	<b>985</b>
** - Calculation of Wholesale LUEs is based on 180 gpd/LUE				
<b>GRAND TOTAL</b>			<b>4,877</b>	

**Table 6: Wastewater Land Use Assumption Tabulation; by Development**

Upcoming Development	GROWTH from 2024-2034				TOTAL LUEs
	Retail		Wholesale	Total	
	Residential	Commercial			
Backyard	0	357	0	357	4,877
Ladera Ridge	0	19	0	19	5,234
Masonwood	0	0	80	80	5,333
Pearl (Terraces)	205	0	0	205	5,538
West Village	337.5	337.5	0	675	6,213
Infill/Buildout*	0	225	0	225	6,438
<b>Subtotal</b>	<b>542.5</b>	<b>938.5</b>	<b>80</b>	<b>1,561</b>	<b>6,438</b>
<b>TOTAL</b>	<b>1,481</b>				

\*Infill/Buildout assumed to be commercial

**Table 7: Wastewater Land Use Assumption Tabulation; by Year**

Impact Fee Planning Period Year	GROWTH				TOTAL LUEs
	Retail		Wholesale	Total	
	Residential	Commercial			
2025	95	24	8	127	4,877
2026	112.5	62.5	8	183	5,004
2027	47.5	52.5	8	108	5,187
2028	47.5	103.5	8	159	5,295
2029	47.5	103.5	8	159	5,454
2030	42.5	118.5	8	169	5,613
2031	37.5	118.5	8	164	5,782
2032	37.5	118.5	8	164	5,946
2033	37.5	118.5	8	164	6,110
2034	37.5	118.5	8	164	6,274
<b>Subtotal</b>	<b>542.5</b>	<b>938.5</b>	<b>80</b>	<b>1,561</b>	<b>6,438</b>
<b>TOTAL</b>	<b>1,481</b>				

A graphical representation of the wastewater LUA is presented in Appendix D: *Wastewater LUA Summary Figure*.

## SYSTEM PLANNING CRITERIA

In order to step forward to a Capital Improvements Plan from the Land Use Assumptions it is necessary to define the units used in the projections. Therefore the projections are defined in terms of water and wastewater system usage as well as the criteria used to establish the capacities of regional facilities. The capacity of the system's existing and proposed CIP infrastructure are generally sized to serve the projected growth.

### *Unit Usage*

Based on the operational history of the system under the WTCPUA, which now spans approximately twelve years, unit usage in gallons per day per living unit equivalent (gpd/LUE) has been developed for both the water and wastewater systems. Table 8 presents a comparison of the unit usage used in the 2012 Impact Fee Study (IFS) and the revised unit usage used in this report. As can be seen below peak day water usage has dropped to 864 gpd/LUE (the state minimum requirement) from 1,090 gpd/LUE. Similarly the wastewater demand average has decreased to 180 gpd/LUE from 205 gpd/LUE.

**Table 8: Water System Unit Usage Comparison**

System	2012 IFS Unit Usage (gpd/LUE)	2024 IFS Unit Usage (gpd/LUE)	Description
Water	450	450	Annual average
	1,090	864	Peak day
Wastewater	205	180	30-day average

### *System Criteria*

The primary criteria used to establish the capacity of the existing facilities and allocate for growth in 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 the Firm Capacity (the capacity of a pump station when the largest pump

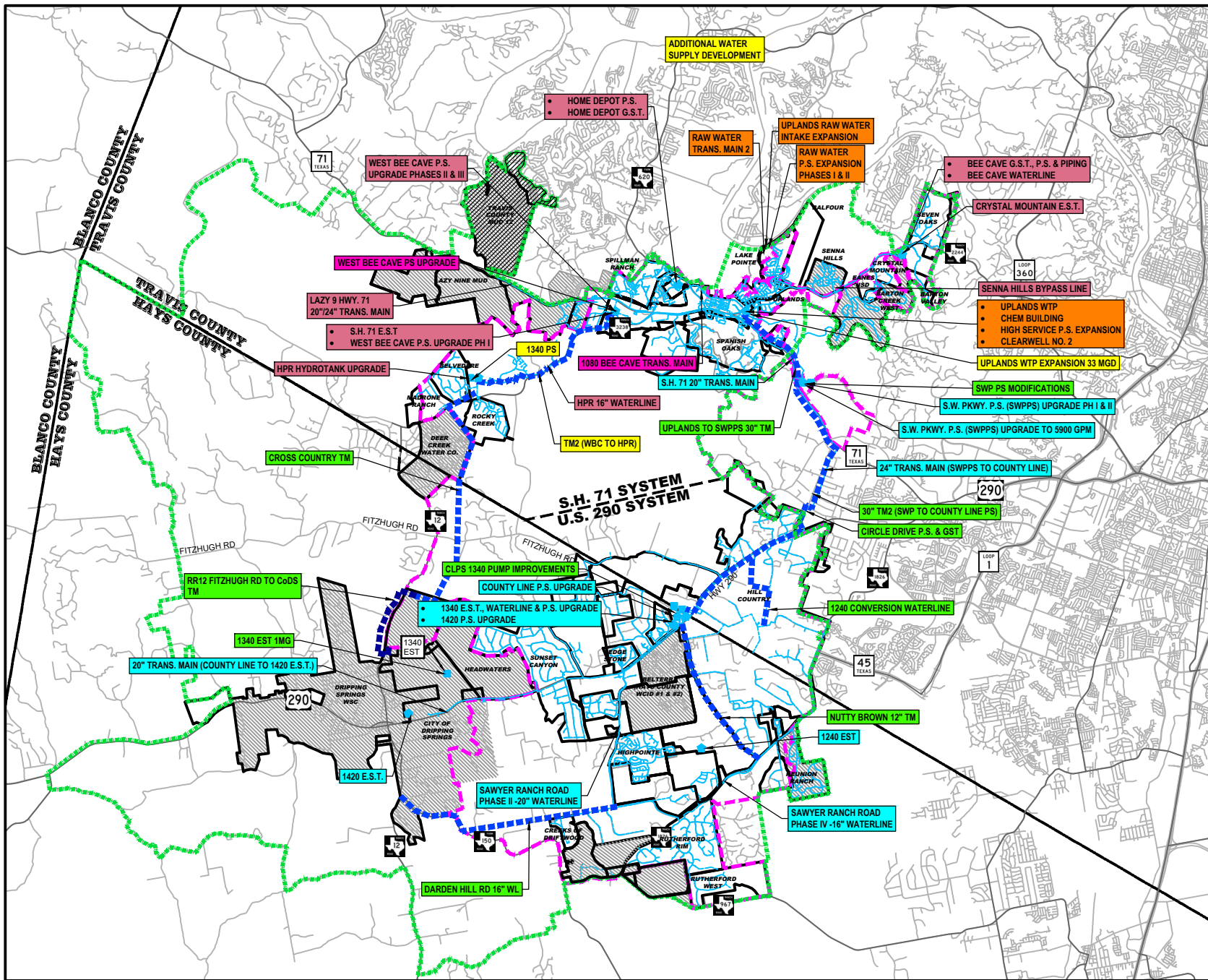
is out of service), which is the methodology required by the Texas Commission on Environmental Quality (TCEQ). A water distribution system model is used to evaluate the system dynamically and assist in sizing the facilities to provide minimum service level benchmarks. Once facilities are evaluated using the water distribution system model, the facilities' service areas are delineated and the preliminary capacity is evaluated in terms of the TCEQ minimum water system capacity requirements described 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 ground and 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 dynamic peak day analyses in the water distribution system model as well as the TCEQ minimum criteria of 200 gallons/connection total storage, 100 gallons/connection elevated storage, 20 gallons/connection hydropneumatic system storage, and a clearwell storage capacity of 5% of the water plant's production capacity.

### **CAPITAL IMPROVEMENTS PLAN**

Using the above-described LUAs and the unit usage and system planning criteria, a Capital Improvements Plan 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 water and wastewater project capacity assessments and allocations for existing projects as well as those for the proposed projects. The existing and proposed projects together define the CIP for the purposes of the impact fee calculations.

APPENDIX A-1:

2024 Impact Fee Study Overall Water Exhibit



**C.I.P. PROJECTS LEGEND**

PROPOSED

**LEGEND**

- WTCPUA WATER SYSTEM BOUNDARY
- EXISTING CIP FACILITIES
- PROPOSED CIP FACILITIES
- REGIONAL BOUNDARIES
- EXISTING WHOLESALE CUSTOMERS
- SERVICE PRELIM RETAIL

**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

**PROPOSED C.I.P.**

- SYSTEM WIDE
- S.H. 71 WATER SYSTEM MODELING & ANALYSIS
- U.S. 290 WATER SYSTEM MODELING & ANALYSIS

**PRELIMINARY DRAWING FOR PLANNING PURPOSES ONLY**

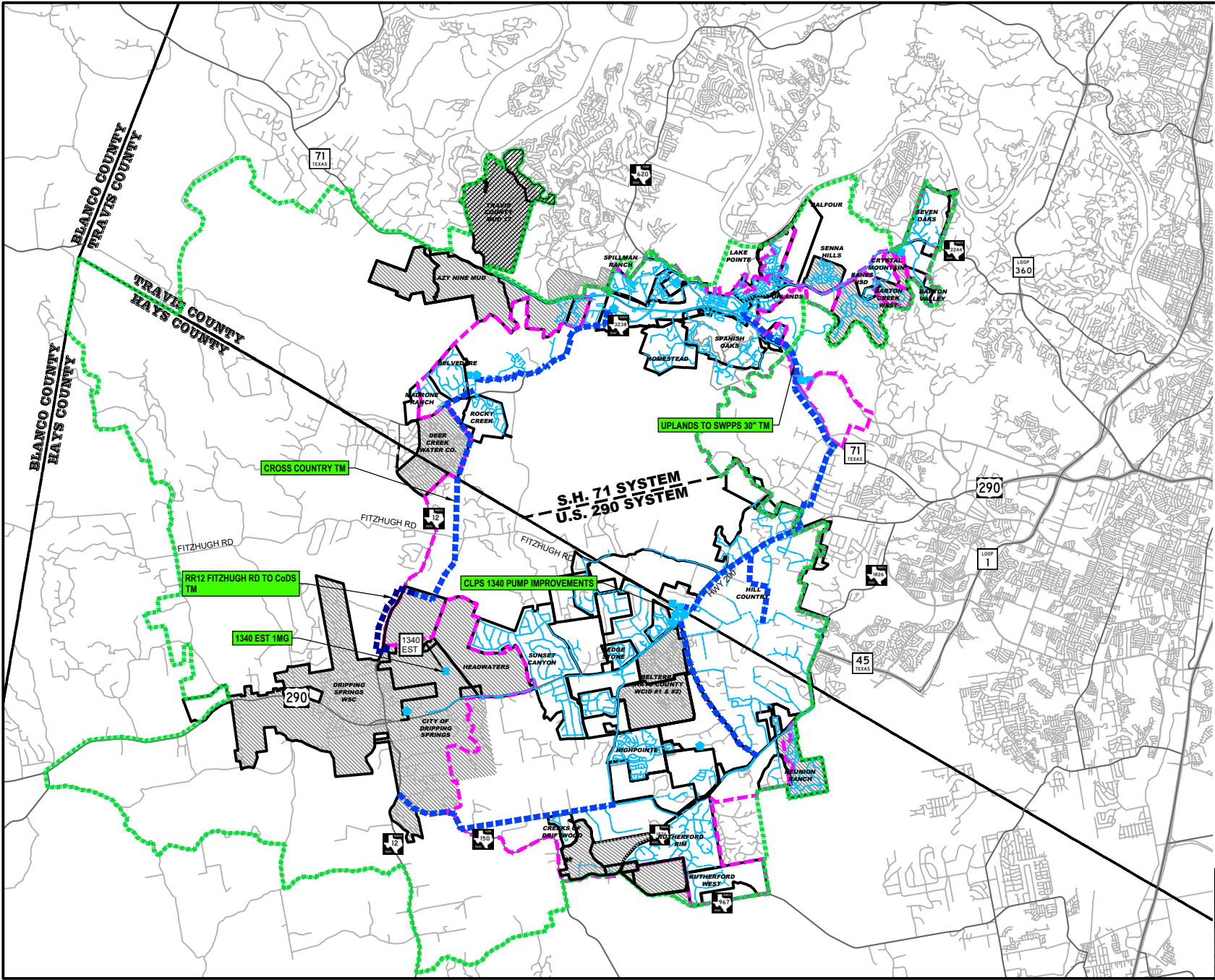
Murre Engineering Company Texas Registered Engineering Firm F-353 1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746, (512) 327-9004		
<b>WEST TRAVIS COUNTY P.U.A.</b> <b>IMPACT FEE STUDY 2024</b>		
DATE: 10/1/2024	JOB NO: 11461-184	SCALE: AS NOTED
DESIGNED BY: GMM	DRAWN BY: RLW	CHECKED BY: GMM

PLOT DATE: 2024-10-15  
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APPENDIX A-2:  
Proposed 2024 Water CIP Exhibit



- LEGEND**
- WTCPLA WATER SYSTEM BOUNDARY
  - EXISTING CIP FACILITIES
  - PROPOSED CIP FACILITIES
  - REGIONAL BOUNDARIES
  - EXISTING WHOLESALE CUSTOMERS
  - SERVICE PRELIM RETAIL



**PRELIMINARY DRAWING FOR PLANNING PURPOSES ONLY**

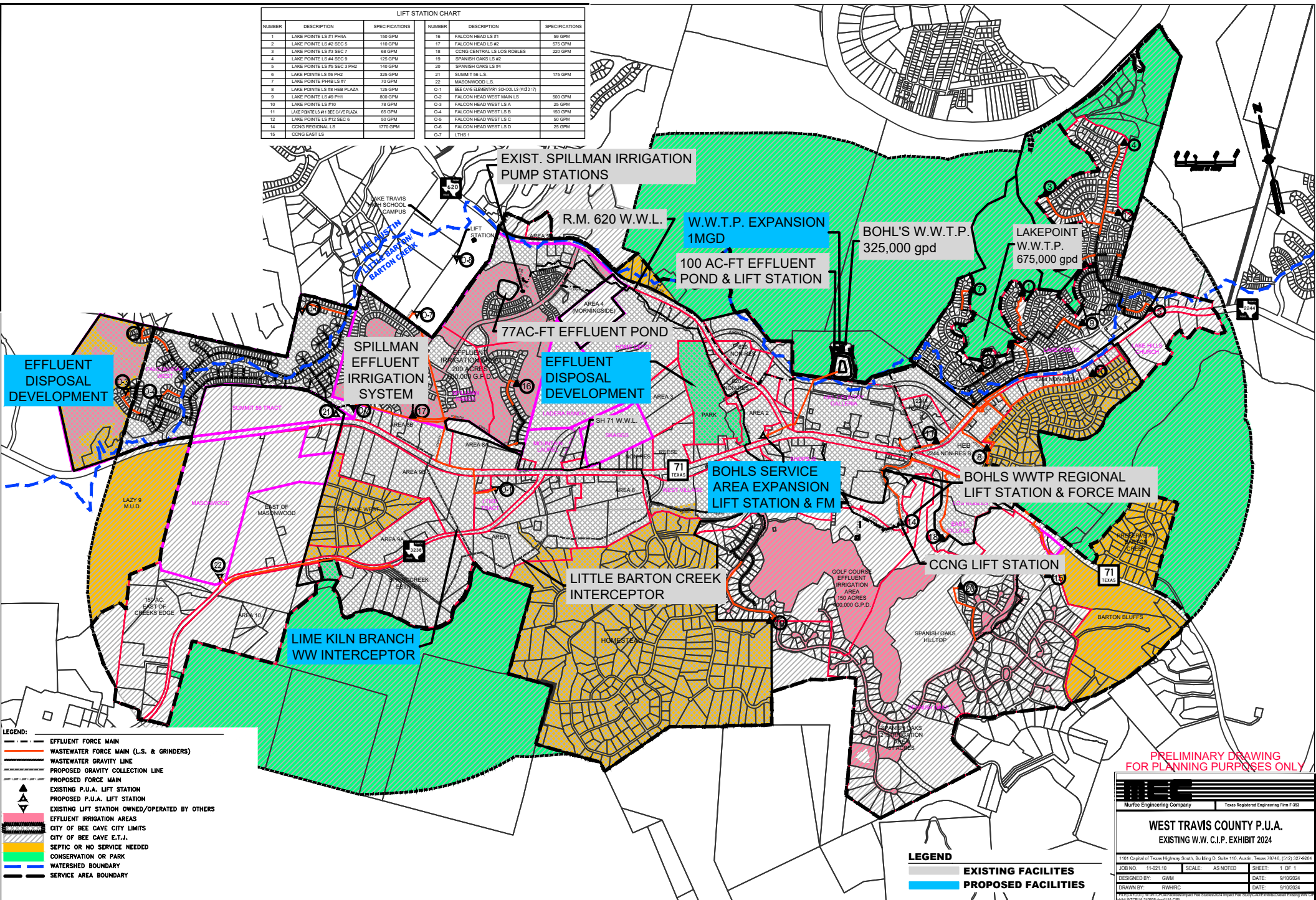
Murfee Engineering Company Texas Registered Engineering Firm F-353 1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746, (512) 327-9004		
<b>WEST TRAVIS COUNTY P.U.A.</b> <b>IMPACT FEE STUDY 2024</b>		
DATE: 10/1/2024	JOB NO: 11461-184	SCALE: AS NOTED
DESIGNED BY: GMM	DRAWN BY: RLW	CHECKED BY: GMM

PLOT DATE: 2024.10.15  
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APPENDIX B-1:  
Existing 2024 Wastewater CIP

LIFT STATION CHART					
NUMBER	DESCRIPTION	SPECIFICATIONS	NUMBER	DESCRIPTION	SPECIFICATIONS
1	LAKE POINTS LS #1 PHA	150 GPM	16	FALCON HEAD LS #1	50 GPM
2	LAKE POINTS LS #2 SEC 5	110 GPM	17	FALCON HEAD LS #2	50 GPM
3	LAKE POINTS LS #3 SEC 7	68 GPM	18	CCNG CENTRAL LS LOS ROBLES	220 GPM
4	LAKE POINTS LS #4 SEC 9	125 GPM	19	SPANISH OAKS LS #2	
5	LAKE POINTS LS #5 SEC 3 PH2	140 GPM	20	SPANISH OAKS LS #4	
6	LAKE POINTS LS #6 PH2	220 GPM	21	SUMMIT ST LS	
7	LAKE POINTS PHB LS #7	70 GPM	22	MASONWOOD LS	175 GPM
8	LAKE POINTS #8 HEB PLAZA	125 GPM	O-1	BEE CAVE ELEMENTARY SCHOOL LS (WCD '1)	
9	LAKE POINTS #9 PH1	800 GPM	O-2	FALCON HEAD WEST MAIN LS	500 GPM
10	LAKE POINTS LS #10	70 GPM	O-3	FALCON HEAD WEST LS A	25 GPM
11	LAKE POINTS #11 BEE CAVE PLAZA	65 GPM	O-4	FALCON HEAD WEST LS B	150 GPM
12	LAKE POINTS #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	LTHB '1	



**LEGEND:**

- EFFLUENT FORCE MAIN
- WASTEWATER FORCE MAIN (L.S. & GRINDERS)
- WASTEWATER GRAVITY LINE
- PROPOSED GRAVITY COLLECTION LINE
- PROPOSED FORCE MAIN
- ▲ EXISTING P.U.A. LIFT STATION
- ▲ PROPOSED P.U.A. LIFT STATION
- ▲ EXISTING LIFT STATION OWNED/OPERATED BY OTHERS
- EFFLUENT IRRIGATION AREAS
- CITY OF BEE CAVE CITY LIMITS
- CITY OF BEE CAVE E.T.J.
- SEPTIC OR NO SERVICE NEEDED
- CONSERVATION OR PARK
- WATERSHED BOUNDARY
- SERVICE AREA BOUNDARY

**LEGEND**

- EXISTING FACILITIES
- PROPOSED FACILITIES

PRELIMINARY DRAWING FOR PLANNING PURPOSES ONLY

**Murfee Engineering Company**  
Texas Registered Engineering Firm F-333

**WEST TRAVIS COUNTY P.U.A.**  
EXISTING W.W. C.I.P. EXHIBIT 2024

1101 Capitol of Texas Highway, South, Building D, Suite 110, Austin, Texas 78746, (512) 321-6204

JOB NO:	11-021-10	SCALE:	AS NOTED	SHEET:	1 OF 1
DESIGNED BY:	GWM	DATE:	9/10/2024		
DRAWN BY:	RW/RRC	DATE:	9/10/2024		

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APPENDIX B-2:  
Proposed 2024 Wastewater CIP

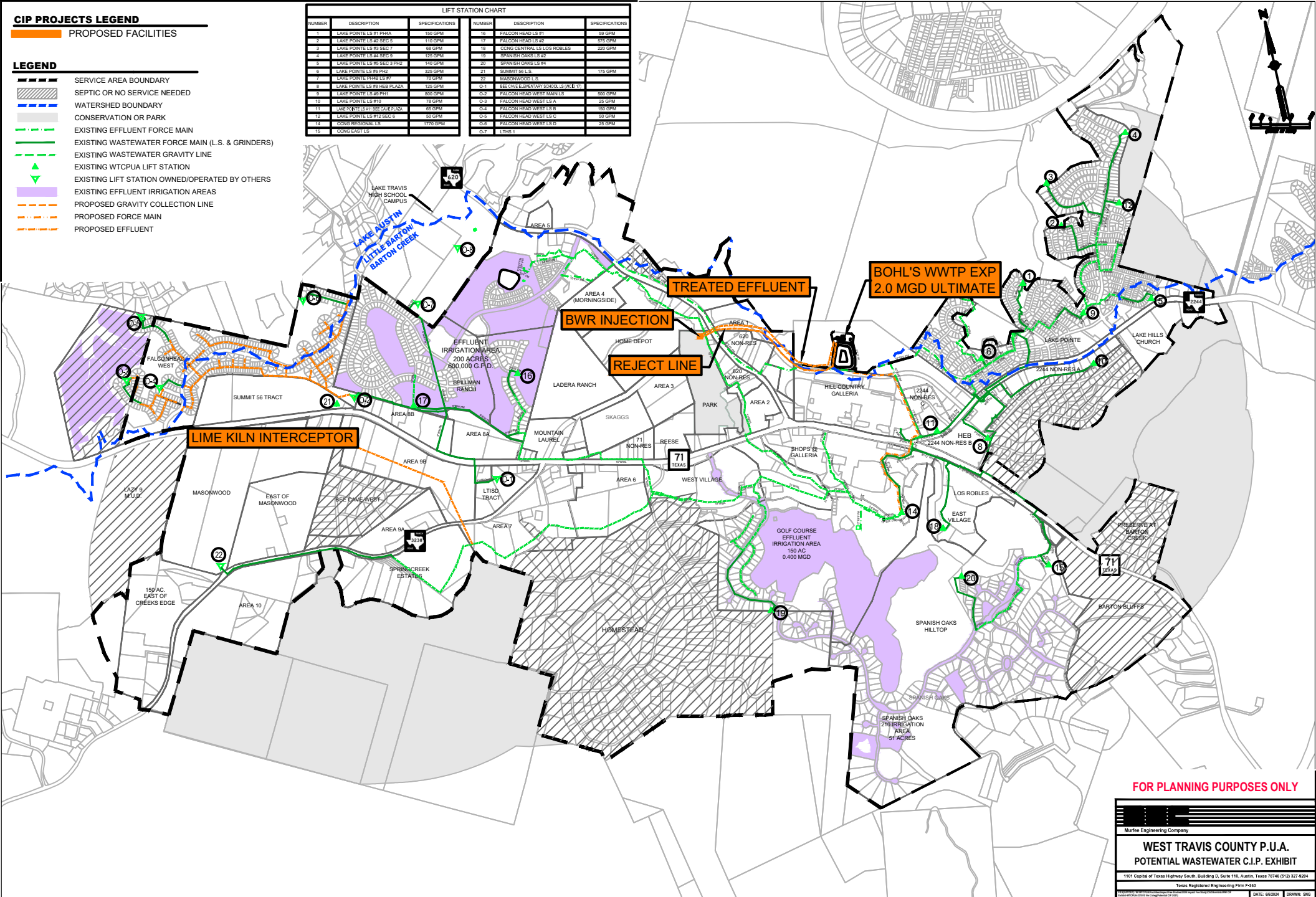
**CIP PROJECTS LEGEND**

PROPOSED FACILITIES

**LEGEND**

- SERVICE AREA BOUNDARY
- SEPTIC OR NO SERVICE NEEDED
- WATERSHED BOUNDARY
- CONSERVATION OR PARK
- EXISTING EFFLUENT FORCE MAIN
- EXISTING WASTEWATER FORCE MAIN (L.S. & GRINDERS)
- EXISTING WASTEWATER GRAVITY LINE
- EXISTING WTCPUA LIFT STATION
- EXISTING LIFT STATION OWNED/OPERATED BY OTHERS
- EXISTING EFFLUENT IRRIGATION AREAS
- PROPOSED GRAVITY COLLECTION LINE
- PROPOSED FORCE MAIN
- PROPOSED EFFLUENT

LIFT STATION CHART					
NUMBER	DESCRIPTION	SPECIFICATIONS	NUMBER	DESCRIPTION	SPECIFICATIONS
1	LAKE PONTE LS #1 PHA1	150 GPM	16	FALCON HEAD LS #1	50 GPM
2	LAKE PONTE LS #2 SEC 5	110 GPM	17	FALCON HEAD LS #2	230 GPM
3	LAKE PONTE LS #3 SEC 7	60 GPM	18	COING CENTRAL LS LOS ROBLES	220 GPM
4	LAKE PONTE LS #4 SEC 9	120 GPM	19	SPANISH OAKS LS #2	
5	LAKE PONTE LS #5 SEC 3 PH2	140 GPM	20	SPANISH OAKS LS #4	
6	LAKE PONTE LS #6 PH2	320 GPM	21	SUMMIT 56	175 GPM
7	LAKE PONTE PRBLE LS #7	70 GPM	22	MASONWOOD L.S.	
8	LAKE PONTE LS #8 HEB PLAZA	120 GPM	0-1	SEE CAVE ELEMENTARY SCHOOL LS (W/17)	
9	LAKE PONTE LS #9 PH1	800 GPM	0-2	FALCON HEAD WEST MAIN LS	500 GPM
10	LAKE PONTE LS #10 PH2	110 GPM	0-3	FALCON HEAD WEST LS A	100 GPM
11	LAKE PONTE LS #11 SEE CAVE PLAZA	60 GPM	0-4	FALCON HEAD WEST LS B	100 GPM
12	LAKE PONTE LS #12 SEC 6	50 GPM	0-5	FALCON HEAD WEST LS C	50 GPM
13	COING REGIONAL LS	1770 GPM	0-6	FALCON HEAD WEST LS D	25 GPM
14	COING EAST LS		0-7	LH# 1	



FOR PLANNING PURPOSES ONLY

Murco Engineering Company

**WEST TRAVIS COUNTY P.U.A.**  
**POTENTIAL WASTEWATER C.I.P. EXHIBIT**

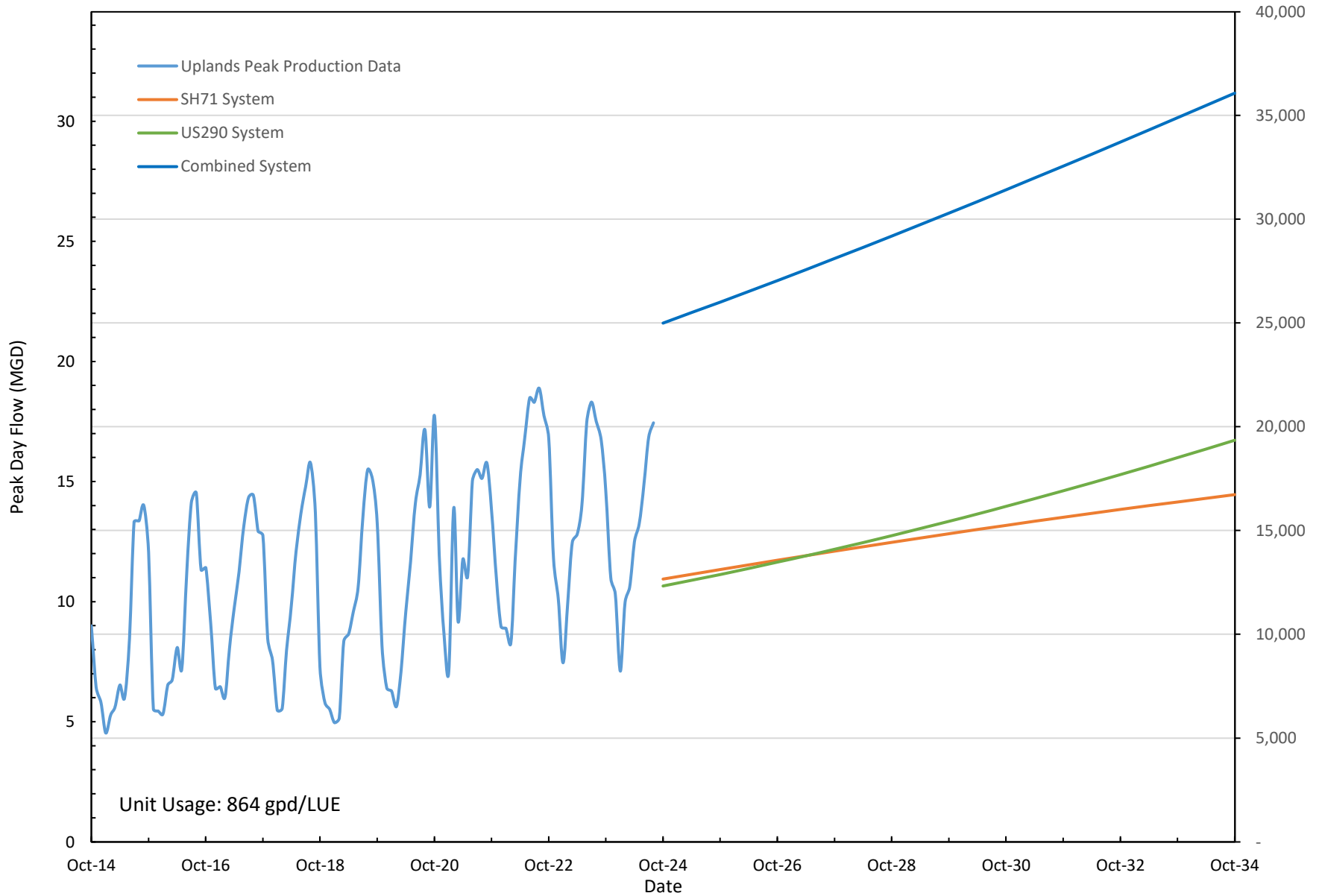
1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746 (512) 327-0204

Texas Registered Engineering Firm F-353

DATE: 06/20/24 DRAWN: SMO

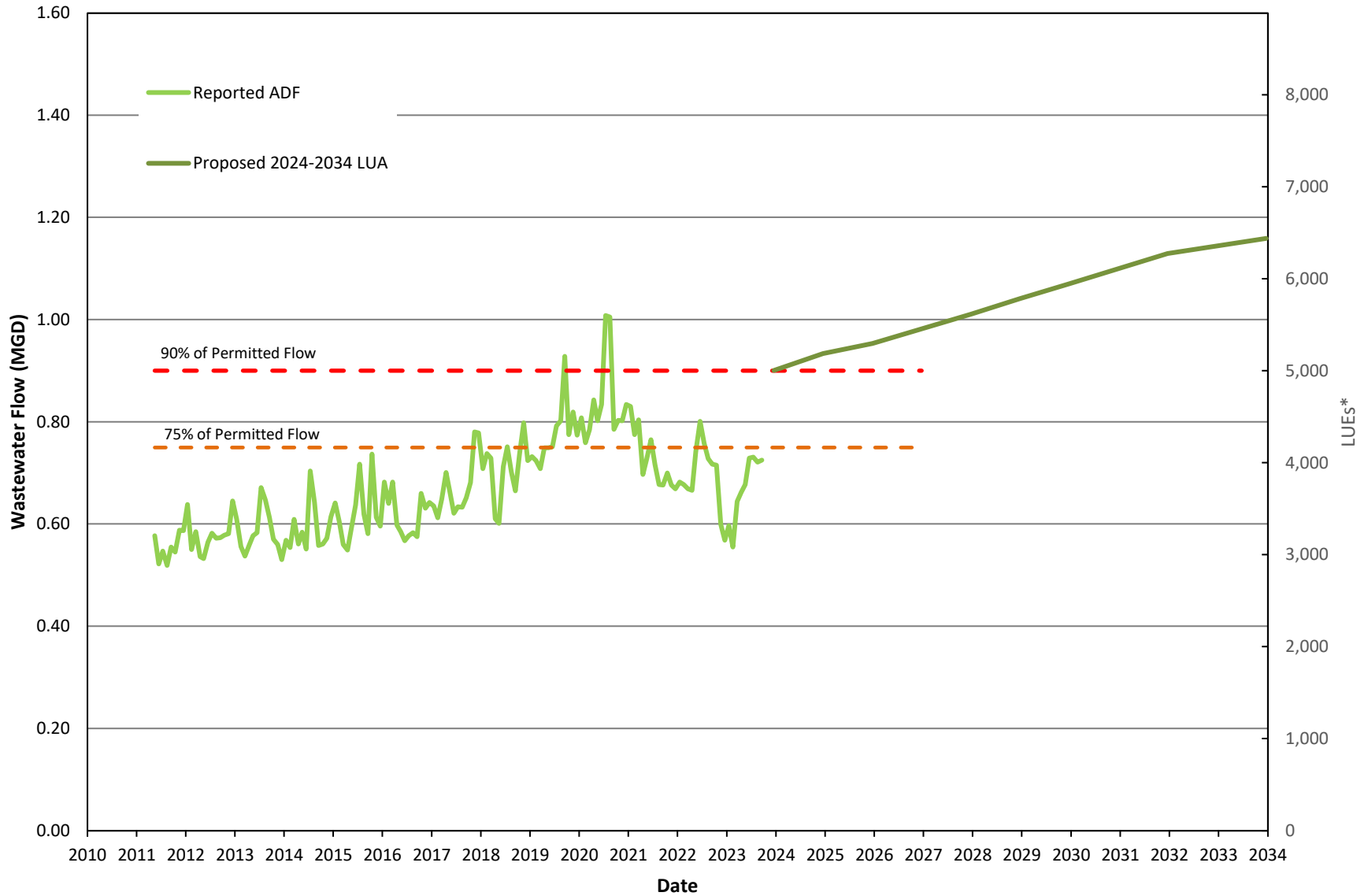
APPENDIX C:  
Water LUEs Summary Figures

### WTCPUA - Water LUA Summary 2024



APPENDIX D:  
Wastewater LUA Summary Figure

### WTCPUA - Wastewater LUA Summary 2024



\*Note: LUE= 180 gpd/LUE



APPENDIX E:

CIP Tables

E-1 Total Capital Allocated to Growth

E-2 Growth Allocation Existing Projects - Water

E-3 Growth Allocation Proposed 2024 CIP Projects - Water

E-4 Growth Allocation Existing Projects-Wastewater

E-5 Growth Allocation Proposed 2024 CIP Projects - Wastewater

## E-1 Total Capital Allocated to Growth

Table E-1 Total Capital Allocated to Growth

**WATER**

Proposed 2024 CIP Projects

System	Total Capital Allocated to Growth					Unit Cost	Combined*
	2024-2034 LUE Projected Growth	Existing	2024 CIP	Total	Total		
System-Wide	12,305	\$ 8,588,546	\$ 76,958,387	\$ 85,546,933	\$ 6,952.21		
US290	7,173	\$ 10,660,943	\$ 56,766,738	\$ 67,427,682	\$ 9,400.21	\$ 16,352.42	
SH71	3,995	\$ 4,917,377	\$ 8,339,413	\$ 13,256,790	\$ 3,318.35	\$ 10,270.55	

\* - unadjusted maximum allowable

**WASTEWATER**

2024 Impact Fee Study

System	Total Capital Allocated to Growth				Unit Cost
	LUEs	Existing	2024 CIP	Total	
System-Wide	1,561	\$ 8,186,714	\$ 17,420,500	\$ 25,607,214	\$ 16,404.37

\* - unadjusted maximum allowable

## E-2 Growth Allocation Existing Projects - Water

Table E-2 Growth Allocation Existing Projects - Water

WTCPUA Capital Improvements Program - Water									
Existing CIP Projects									
Project	Project Cost	Capacity (MGD or LUEs)	Current Capacity Used (MGD or LUEs)	Capacity Used 2024-2034 (MGD or LUEs)	Allocation for Current Capacity	Allocation for 2024-2034	Cost Allocation - Current	Cost Allocation - Growth	
<b>System-wide</b>									
System Hydraulic Modelling (2022)	\$ 75,917	N/A	N/A	N/A	10%	90%	\$ 7,592	\$ 68,325	
Uplands WTP Chem Building*	\$ 2,141,458	20	19.5	0.5	98%	2%	\$ 2,087,922	\$ 53,536	
Uplands WTP Ph1 (2012)	\$ 299,650	20	19.5	0.5	98%	2%	\$ 292,159	\$ 7,491	
Uplands WTP*	\$ 40,249,533	20	19.5	0.5	98%	2%	\$ 39,243,295	\$ 1,006,238	
Uplands Raw Water Intake Expansion*	\$ 416,305	20	19.5	0.5	98%	2%	\$ 405,897	\$ 10,408	
High Service Pump Station 8MGD-14MGD*	\$ 4,034,066	20	19.5	0.5	98%	2%	\$ 3,933,214	\$ 100,852	
Uplands Clearwell No. 2*	\$ 997,229	20	19.5	0.5	98%	2%	\$ 972,298.28	\$ 24,931	
Groundwater Feasibility Study	\$ 40,000	N/A	N/A	N/A	84%	16%	\$ 33,600	\$ 6,400	
Raw Water Line & (Uplands) WTP Expansion PER	\$ 173,726	N/A	N/A	N/A	28%	72%	\$ 48,643.28	\$ 125,083	
Raw Water Pump Station Expansion (Phase I) (3MGD)	\$ 1,592,603	3	0.4	2.6	13%	87%	\$ 212,347.07	\$ 1,380,256	
Raw Water Transmission Main No. 2	\$ 6,182,157	16.5	1.4	15.1	8%	92%	\$ 524,546.65	\$ 5,657,610	
Raw Water Transmission Main No. 2 Chlorine Injection Improvements	\$ 161,083	16.5	1.4	15.1	8%	92%	\$ 13,667.65	\$ 147,415	
Subtotal	\$ 56,363,727						\$ 47,775,181	\$ 8,588,546	
<b>SH71 System</b>									
HPR GST2	\$ 1,669,785	5000	200	2000	4%	96%	\$ 66,791	\$ 1,602,994	
West Bee Cave PS Upgrade (Phases III) <sup>1</sup>	\$ 178,073	2500	200	2000	8%	92%	\$ 14,246	\$ 163,827	
Lazy 9 SW 71 (20") Transmission Main*	\$ 3,090,461	20	19.5	0.5	98%	2%	\$ 3,013,199	\$ 77,262	
71 System Modeling	\$ 49,578	N/A	N/A	N/A	84%	16%	\$ 41,645.52	\$ 7,932	
SH71 EST (1.0 Mgal)	\$ 2,169,142	3000	1350	1650	45%	55%	\$ 976,114	\$ 1,193,028	
Misc. Improvements for 1280 Pressure Plane	\$ 177,037	3000	1350	1650	45%	55%	\$ 79,667	\$ 97,370	
West Bee Cave PS Upgrade (Phase I) (Add pump 4)	\$ 67,711	750	650	100	87%	13%	\$ 58,683	\$ 9,028	
West Bee Cave PS Upgrade (Phase II) (GST No2) <sup>2</sup>	\$ 1,448,644	5000	50	4950	1%	99%	\$ 14,486	\$ 1,434,158	
Transmission Main from Uplands Plant to Bee Cave Pump Station (1080-16)*	\$ 1,556,779	20	19.5	0.5	98%	2%	\$ 1,517,860	\$ 38,919	
Crystal Mountain EST*	\$ 1,917,518	20	19.5	0.5	98%	2%	\$ 1,869,580	\$ 47,938	
Senna Hills Bypass Line*	\$ 559,677	20	19.5	0.5	98%	2%	\$ 545,685	\$ 13,992	
HPR 1280 Pump Station Water	\$ 330,552	20	19.5	0.5	98%	2%	\$ 322,288	\$ 8,264	
HPR Water Line*	\$ 6,624,510	20	19.5	0.5	98%	2%	\$ 6,458,897	\$ 165,613	
Home Depot Pump Station*	\$ 392,792	20	19.5	0.5	98%	2%	\$ 382,972	\$ 9,820	
Home Depot Pump Station Expansion & Conversion	\$ 31,838	20	19.5	0.5	98%	2%	\$ 31,042	\$ 796	
Home Depot Ground Storage Tank*	\$ 147,043	20	19.5	0.5	98%	2%	\$ 143,367	\$ 3,676	
Bee Cave Ground Storage Tank, Pump Station & Piping (off Cuernevaca)*	\$ 699,851	20	19.5	0.5	98%	2%	\$ 682,355	\$ 17,496	
Bee Cave Waterline to Cuernevaca*	\$ 990,492	20	19.5	0.5	98%	2%	\$ 965,730	\$ 24,762	
HPR Conversion and Upgrade to 1,500 gpm	\$ 530	375	20	355	5%	95%	\$ 28	\$ 502	
Subtotal	\$ 22,102,013						\$ 17,184,636	\$ 4,917,377	
<b>US290 System</b>									
1240 EST	\$ 4,491,000	2250	662	1588 LUEs	29%	71%	\$ 1,321,352	\$ 3,169,648	
1420 Pump Station Upgrade <sup>2</sup>	\$ 649,509	3000	150	1100	5%	95%	\$ 32,475	\$ 617,034	
1340 TM (Sawyer Ranch Road Ext)	\$ 1,515,839	4500	2000	2500	44%	56%	\$ 673,706	\$ 842,133	
1340 Pump Station	\$ 1,863,638	2250	2000	250	89%	11%	\$ 1,656,567	\$ 207,071	
SWPPS Upgrade GST2 Phase 2 <sup>3</sup>	\$ 1,746,824	9500	500	9000	5%	95%	\$ 91,938	\$ 1,654,886	
County Line Pump Station Upgrade*	\$ 1,684,429	20	19.5	0.5	98%	2%	\$ 1,642,318	\$ 42,111	
290 Pipeline*									
24" SWPPS to County Line	\$ 12,841,593	20	19.5	0.5	98%	2%	\$ 12,520,553	\$ 321,040	
20" County Line to 1420 EST	\$ 3,411,212	20	19.5	0.5	98%	2%	\$ 3,325,932	\$ 85,280	
SH71 20" Transmission Main*	\$ 3,630,945	20	19.5	0.5	98%	2%	\$ 3,540,171	\$ 90,774	
20" Main Uplands to SWPPS Easements*	\$ 506,714	20	19.5	0.5	98%	2%	\$ 494,046	\$ 12,668	
1420 EST*	\$ 2,197,353	20	19.5	0.5	98%	2%	\$ 2,142,419	\$ 54,934	
Sawyer Ranch Road Ph 1 20"*	\$ 1,183,948	20	19.5	0.5	98%	2%	\$ 1,154,349	\$ 29,599	
Sawyer Ranch Road Ph 1 (Darden Hill)*	\$ 1,293,619	20	19.5	0.5	98%	2%	\$ 1,261,279	\$ 32,340	
SWPPS Upgrade to 5,900 gpm & GST1*	\$ 243,213	20	19.5	0.5	98%	2%	\$ 237,133	\$ 6,080	
SWPPS Upgrade Phase 1 GST	\$ 1,960,902	20	19.5	0.5	98%	2%	\$ 1,911,879	\$ 49,023	
1826 Phase IV 16" Water Line*	\$ 1,006,560	20	19.5	0.5	98%	2%	\$ 981,396	\$ 25,164	
1826 Phase IV 16" Water Line	\$ 48,480	20	19.5	0.5	98%	2%	\$ 47,268	\$ 1,212	
US290 System Modeling	\$ 79,955	N/A	N/A	N/A	84%	16%	\$ 67,162	\$ 12,793	
1340 EST	\$ 2,399,334	3000	1000	2000	33%	67%	\$ 799,778	\$ 1,599,556	
1340 Transmission	\$ 2,711,399	3000	1000	2000	33%	67%	\$ 903,800	\$ 1,807,599	
Subtotal	\$ 45,466,466						\$ 34,805,523	\$ 10,660,943	
<b>TOTALS</b>	\$ 123,932,206						\$ 99,765,340	\$ 24,166,866	

\*Denotes Projects Constructed by the LCRA, Purchased by WTCPUA

1. WBPS PH II & PH III projects separated. Phase II completed in 2020, consisting of a 0.5MG tank at 1LUE/200 gallons of capacity. Phase III construction started in 2021 & has been completed.

2. Two 900 GPM Pumps Under Construction June 2021

3. GST 2: Second of two 950,000 Gal GST tanks Under Construction, one 750,000 GST Tank Demolished, Increase 1.15 MG (2018 IFA Project Capacity Increase 0.75MG), 200gpm/connection 500,000 gal tank

## E-3 Growth Allocation Proposed 2024 CIP Projects - Water

Table E-3 Growth Allocation Proposed Projects CIP - Water

WTCPUA Capital Improvements Program - Water						
Proposed CIP Projects						
Project	Planning Horizon	Project Costs	Completion Year Scheduled	Capacity (increase)	Capacity Allocation - Growth	Cost Allocation - Growth
<b>System-wide</b>						
<b>CIP Projects</b>						
CIP 2024/Impact Fee Study 2024		\$ 150,000	2024	N/A	100%	\$ 150,000
Uplands WTP Expansion to 33MGD (13 MGD) <sup>1</sup>		\$ 80,000,000	2027	13 MGD	93%	\$ 74,400,000
HPR TM No. 2 Upsize (West Bee Cave to HPR) <sup>7</sup>		\$ 2,000,000	2027	3100 LUEs	2400 LUEs	\$ 1,548,387
Ranch Road 12 16" TM (HPR to Fitzhugh) <sup>8</sup>		\$ -	2034	5200 LUEs	2100 LUEs	\$ -
Raw Water Pump Station Expansion (Phase II - PER Only) <sup>9</sup>		\$ -	2033	7 MGD	15%	\$ -
Additional Water Supply Development <sup>5</sup>		\$ 1,000,000	2033	N/A	86%	\$ 860,000
Subtotal		\$ <b>83,150,000</b>				\$ <b>76,958,387</b>
<b>SH71 System</b>						
<b>CIP Projects</b>						
1080 Bee Cave Transmission Main (Seg A+B) <sup>2</sup>		\$ 10,247,968	2025	15229 LUEs	9950 LUEs	\$ 6,696,000
West Bee Cave PS Upgrade (Electrical & Pumping)		\$ 1,560,000	2026	4200LUEs	2100 LUEs	\$ 780,000
HPR TM No. 2 (West Bee Cave to HPR)		\$ 1,760,000	2027	1963 LUEs	963 LUEs	\$ 863,413
Subtotal		\$ <b>13,567,968</b>				\$ <b>8,339,413</b>
<b>US290 System</b>						
<b>CIP Projects</b>						
Uplands WTP 30" TM to SWPPS Easement Acquisition <sup>6</sup>		\$ 1,000,000	2027	18350 LUEs	9175 LUEs	\$ 500,000
RR 12 Fitzhugh to CoDS TM		\$ 6,000,000	2027	5200 LUEs	2200 LUEs	\$ 2,538,000
1340 PS (HPR) <sup>10</sup>		\$ 2,822,400	2028	5200 LUEs	2100 LUEs	\$ 1,139,815
1340 EST at CoDS <sup>3</sup>		\$ 4,000,000	2025	5200 LUEs	4350 LUEs	\$ 3,346,000
Cross Country 16" TM		\$ 6,800,000	2027	5200 LUEs	2200 LUEs	\$ 2,876,923
CLPS 1340 Pump Improvements		\$ 2,725,000	2027	2500 LUEs	2500 LUEs	\$ 2,725,000
Nutty Brown 12" TM		\$ 5,640,000	2028	2900 LUEs	1000 LUEs	\$ 1,945,000
30" Parallel TM 2 (SWPPS to County Line)		\$ 32,780,000	2027	12000 LUEs	8810 LUEs	\$ 24,066,000
SWP PS Modifications		\$ 4,950,000	2025	12000 LUEs	8810 LUEs	\$ 3,634,000
Darden Hill RD 16" WL		\$ 8,000,000	2034	5200 LUEs	1800 LUEs	\$ 2,769,000
Fitzhugh Road 16" TM (CLPS to Crumley) <sup>8</sup>		\$ -	2034	5200 LUEs	3800 LUEs	\$ -
Fitzhugh Road 16" TM (Crumley to RR12) <sup>8</sup>		\$ -	2034	5200 LUEs	2200 LUEs	\$ -
1240 Conversion Water Line		\$ 4,400,000	2027	2700	2250	\$ 3,667,000
RM1826 Phase V 16" <sup>4</sup>		\$ -	TBD			\$ -
Heritage Oaks Loop Line <sup>4</sup>		\$ -	TBD			\$ -
Circle Drive Pump Station & GST		\$ 7,560,000	2027	3000	3000	\$ 7,560,000
Subtotal		\$ <b>86,677,400</b>				\$ <b>56,766,738</b>
<b>TOTALS</b>		\$ <b>183,395,368</b>				\$ <b>142,064,539</b>

1. Building, site improvements, electrical, & controls incorporated into 2024 expansion.
2. Additional Cost from 2018/2021 IFA, due to constraints in alignment, construction cost increase; easement delays and cost required phased construction
3. 1.0 MGD; Support Growth Fitzhugh Road to CoDS
4. Projects unnecessary in 10-year projected LUA growth phase; proposed capacity to be replaced by Nutty Brown and Fitzhugh TMs
5. AWS PER currently underway to study an increase in capacity in future expansions beyond the 10 year planning period
6. 2021 CIP Prop. Hwy 71 Parallel 20" TM2 (Uplands to SWPPS)
7. \$2,000,000 is the cost to oversize the Masonwood Development 16" TM to a 20" TM.
8. Project unnecessary in 10-year projected LUA growth phase; proposed capacity to be replaced by Cross Country 16" TM and CLPS 1340 Improvements.
9. Future expansion in coordination with AWS PER.
10. Moved to US290 system from System Wide as support for delivery of water to the City of Dripping Springs.

## E-4 Growth Allocation Existing Projects-Wastewater



Table E-4 Growth Allocation Existing Projects - Wastewater

WTCPUA Capital Improvements Program - Wastewater									
Existing CIP Projects									
Project	Project Cost	Capacity (MGD)	Current Capacity Used (MGD)	Capacity Used 2024-2034 (MGD)	Allocation for Current Capacity	Allocation for 2024-2034	Cost Allocation - Current	Cost Allocation - Growth	
Lake Pointe WWTP*	\$ 15,317,630	0.675	0.590	0.085	87%	13%	\$ 13,388,743	\$ 1,928,887	
Bee Cave Regional System*	\$ 8,499,620	1.0	0.800	0.200	80%	20%	\$ 6,799,696	\$ 1,699,924	
Spillman Effluent Irrigation System*	\$ 530,458	1.0	0.800	0.200	80%	20%	\$ 424,366	\$ 106,092	
CCNG Lift Station*	\$ 141,970	1.0	0.800	0.200	80%	20%	\$ 113,576	\$ 28,394	
RM 620 WW Line*	\$ 1,262,030	1.0	0.800	0.200	80%	20%	\$ 1,009,624	\$ 252,406	
SH71 WW Line*	\$ 998,809	1.0	0.800	0.200	80%	20%	\$ 799,047	\$ 199,762	
Bohls Effluent Pond and Lift Station	\$ 3,784,993	0.325	0.290	0.035	89%	11%	\$ 3,377,378	\$ 407,615	
Bohls WWTP	\$ 5,602,394	0.325	0.290	0.035	89%	11%	\$ 4,999,059	\$ 603,335	
Bohls WWTP Regional Lift Station/FM	\$ 2,100,864	0.325	0.290	0.035	89%	11%	\$ 1,874,617	\$ 226,247	
Little Barton Creek Interceptor*	\$ 2,851,077	0.267	0.038	0.229	14%	86%	\$ 403,021	\$ 2,448,056	
Master Planning & Permitting	\$ 310,867	N/A	N/A	N/A	8%	92%	\$ 24,869	\$ 285,998	
<b>TOTALS</b>	<b>\$ 41,400,712</b>						<b>\$ 33,213,998</b>	<b>\$ 8,186,714</b>	

\*Denotes Projects Constructed by the LCRA, Purchased by WTCPUA

1. Wastewater flow had a marginal increase in flow as calculated in Table 5; therefore percent allocations remain the same for the 2021 and 2024 Impact Fee Calculations

## E-5 Growth Allocation Proposed 2024 CIP Projects - Wastewater

Table E-5 Growth Allocation Proposed Projects 2024 CIP - Wastewater

<b>WTCPUA Capital Improvements Program - Wastewater</b>						
<b>Proposed 2024 CIP Projects</b>						
<b>Project</b>	<b>Planning Horizon Project Costs</b>	<b>Completion Year Scheduled</b>	<b>Capacity (increase)</b>	<b>Capacity Allocation - Growth</b>	<b>Cost Allocation - Growth</b>	
<b>2024 CIP Projects</b>						
CIP 2024/Impact Fee Study 2024	\$ 35,500	2024	N/A	100%	\$	35,500
Bohls WWTP Expansion. <sup>1</sup>	\$ 15,000,000	2027	1.0 MGD	32%	\$	4,800,000
BWR & Effluent Disposal Injection Well <sup>2</sup>	\$ -	2034	0.375 MGD	80%	\$	-
BWR Phase 1 Supply/Reject FMs <sup>2</sup>	\$ -	2034	0.5 MGD	60%	\$	-
Lime Kiln Interceptor	\$ 2,870,000	2027	1800 LUEs	50%	\$	1,435,000
<b>TLAP Disposal</b>	\$ 8,000,000	2027	0.232 MGD	100%	\$	8,000,000
<b>Effluent Line Extension</b>	\$ 1,800,000	2027	0.232 MGD	100%	\$	1,800,000
Bohls Service Area Expansion Lift Station & Force Main	\$ 1,800,000	2034	500 LUEs	75%	\$	1,350,000
<b>TOTALS</b>	<b>\$ 29,505,500</b>				<b>\$</b>	<b>17,420,500</b>

1. Increase in cost due to facility location space constraints, and BWR Phase 1 site relocation. Bohls expansion scope increased from 0.5 MGD to 1.0 MGD. Complete list of CIP Project expansions at Bohls' site, and potential Lake Pointe plant decommissioning, not listed due to no foreseeable allocation to growth.

2. BWR & DPR/Injection well not approved by TCEQ and no support from the board moving forward.