



MEMORANDUM

To: Mayor and Council

From: Greg Meszaros, Director, Austin Water

Date: July 27, 2018

Subject: Austin Water Impact Fees Update Report

Background: Under cover of this memo Austin Water (AW) is providing a copy of the water and wastewater impact fee revision report. By way of background, State law requires that impact fees be updated every 5 years. The revision process requires the Utility to update Land Use Assumptions (LUA) and the Capital Improvement Plan (CIP) that will serve new development over the next 10 years and determine the maximum allowable water and wastewater impact fees that can be collected. The actual fees collected, up to the maximum allowable fee, are determined by the City Council.

Recommendation: Austin Water recommends adopting the LUA and CIP as presented, along with the proposed collected impact fee of \$4,700 for water (a 13% decrease) and \$2,500 for wastewater (a 14% increase) for a combined total of \$7,200 (a 5% decrease).

Next Steps: The public hearing is set for Thursday August 30, 2018 and possible Council action on Tuesday September 11, 2018. If you have any questions or need additional information please contact me.

cc: Spencer Cronk, City Manager
Robert D. Goode, P.E., Assistant City Manager
David Anders, Assistant Director, Austin Water
Martin F. Tower, P.E., Division Manager, Austin Water
Ross Crow, Assistant City Attorney, Law Department



WATER & WASTEWATER IMPACT FEE REPORTS:

ASSESSED AND COLLECTED FEES AND

LAND USE ASSUMPTIONS AND

CAPITAL IMPROVEMENTS PLAN

City of Austin, Texas
Austin Water

June 13, 2018



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ASSESSED AND COLLECTED FEES

City of Austin, Texas
Austin Water

ASSESSED AND COLLECTED FEES

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ASSESSED AND COLLECTED FEES

I. INTRODUCTION

Austin Water has developed this periodic impact fee update in close collaboration with the Impact Fee Advisory Committee (IFAC) and other City of Austin (City) departments in accordance with state law. The 5-year update takes a fresh look at the Land Use Assumptions (LUA) and the impact fee Capital Improvement Plan (CIP) that will serve new development in the next 10 years. The basic requirements for determining the costs “Necessitated by and attributed to” new development are prescribed in the Impact Fee Act, Section 395.016 of the Texas Local Government Code. Facility capacity that will be used by new growth and its cost are determined by first projecting the demand on the system, the LUA, and then deriving the facility plan for serving that demand, the CIP. The end-products are the maximum allowable impact fees for water and wastewater, which reflect the calculated cost of serving new growth that is not recouped in new customer rate payments. The law also sets the terms of fee assessment for a given tract of land.

The actual fees collected, up to the maximum allowable fee, are the purview of the Austin City Council. AW is proposing new collected fees for consideration via the public hearing mandated by the impact fee law. These proposed fees are presented in Section III. Subsequent to the hearing, Austin City Council will enact an ordinance adopting new fees and that ordinance will be appended to this document.

As detailed in the LUA document, Austin continues to be one of the fastest growing cities in the country, with the projected 10-year growth estimated to slightly exceed 99,000 service units, a 41% increase on the 2013 10-year growth projection. The impact fee service area has not changed significantly from the 2013 update.

As detailed in the CIP document, Austin’s investments in infrastructure necessitated by and attributed to growth are planned to exceed \$629M for water and \$337M for wastewater, an average increase of 37% over the 2013 10-year capital improvements program plan. Due in large part to the realization of the Imagine Austin priority of a “compact and connected” city, as well as the success of Austin Water conservation efforts, the increased CIP expenditures are anticipated to be spread over an even larger group of growth users, resulting in a lower service unit fee.

An additional factor in calculating the new maximum allowable fees is the rate revenue credit. To avoid double charging new customers, the law requires that monies paid by new users toward the growth projects in the form of rates be subtracted from the 10-year growth project costs. Similar to the previous update in 2013, the rate revenue credit amount is calculated for Austin-specific conditions resulting in a credit of approximately 25%, and is detailed in the CIP document.

The final maximum allowable fee for a single service unit was calculated to be \$4,752 for water and \$2,572 for wastewater.

II. ASSESSED FEES

The Impact Fee Act provides what is called fee assessment in order to set the timing for establishing fees for a given tract of land. It states that impact fees must be assessed on all property no later than the time of subdivision (with certain exceptions where development occurs without the need for subdivision). Accordingly, the assessed fees for a particular lot are those in effect at the time of subdivision recordation. After 1990 the impact fee update reports and ordinances included the assessed fee separate from the maximum allowable and collected fees. The assessed fee remained constant until the 2007 update. Since then the assessed fee is deemed to be the maximum allowable amount, thereby keeping open the option of setting collected fees up to the maximum allowable fee in effect at the time a subdivision plat is recorded.

III. COLLECTED FEES

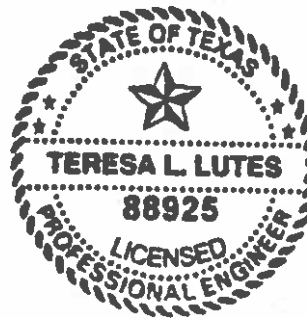
After the required public hearing and Austin City Council adoption of the LUA and CIP periodic update, Council considers adoption of the ordinance that sets the impact fees actually assessed and collected at the time of tap sale for water meter purchase and/or wastewater service. The collected fees are generally referred to as Austin’s impact fees. Historically, the collected amounts have been set by ordinance at amounts lower than the maximum allowable fees. The collected fees are proposed to be \$4,700 for water and \$2,500 for wastewater.

IV. ADOPTED FEES

This section reserved for fees adopted by Austin City Council ordinance subsequent to the public hearing.

IMPACT FEE LAND USE ASSUMPTIONS

City of Austin, Texas
Austin Water



Teresa L. Lutes

7/24/18

IMPACT FEE LAND USE ASSUMPTIONS

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IMPACT FEE LAND USE ASSUMPTIONS

City of Austin, Texas
Austin Water Utility

I. INTRODUCTION

Texas law, specifically Texas Local Government Code, Chapter 395, enacted by the State Legislature in 1987 (Senate Bill 336) and amended as recently as 2011, empowers cities to impose and collect "impact fees" and establishes the guidelines cities must follow to do so. The term "impact fee" includes the "capital recovery fees" that the City of Austin charges for facility expansion of its water and wastewater systems. The City of Austin water and wastewater impact fees are further governed by the Austin City Code, Title 25 Land Development, Chapter 25-9 Water and Wastewater, Article 3 Water and Wastewater Capital Recovery Fees, Sections 25-9-311 through 25-9-353, other sections of the Land Development Code referred to by these sections, and ordinances approved amending these sections.

Among the several requirements imposed on cities by Chapter 395 is the development and approval of a report called "land use assumptions." Section 395.001 (5) of the Local Government Code defines the term succinctly: "'Land use assumptions' includes a description of the service area and projections of changes in land uses, densities, intensities, and population therein over at least a 10-year period." In a definitive article written by three people who helped develop Chapter 395, entitled "Impact Fees: The Intent Behind the New Law" (St. B. Tex. Envtl. L. J., vol. 19; 1989; pp. 68-73) by Ray Farabee, et al., the term is so described:

"Land use assumptions" are the basic projections of population growth and future land uses on which plans for new or expanded facilities must be based. The land use assumptions may be general and do not require detailed projections for specific parcels of land. They should, however, be thorough enough to permit reasonably accurate long range planning. The time period on which these projections are based must be at least ten years.

This report has been prepared for the purpose of complying with the requirements of Chapter 395 of the Local Government Code with respect to "land use assumptions." It is an amendment to the City's impact fee land use assumptions approved by the City Council on February 13, 1997, and subsequently amended and updated, most recently in August 2013, and adopted by City Council September 17, 2013. State law requires that the land use assumptions be updated at least every five years.

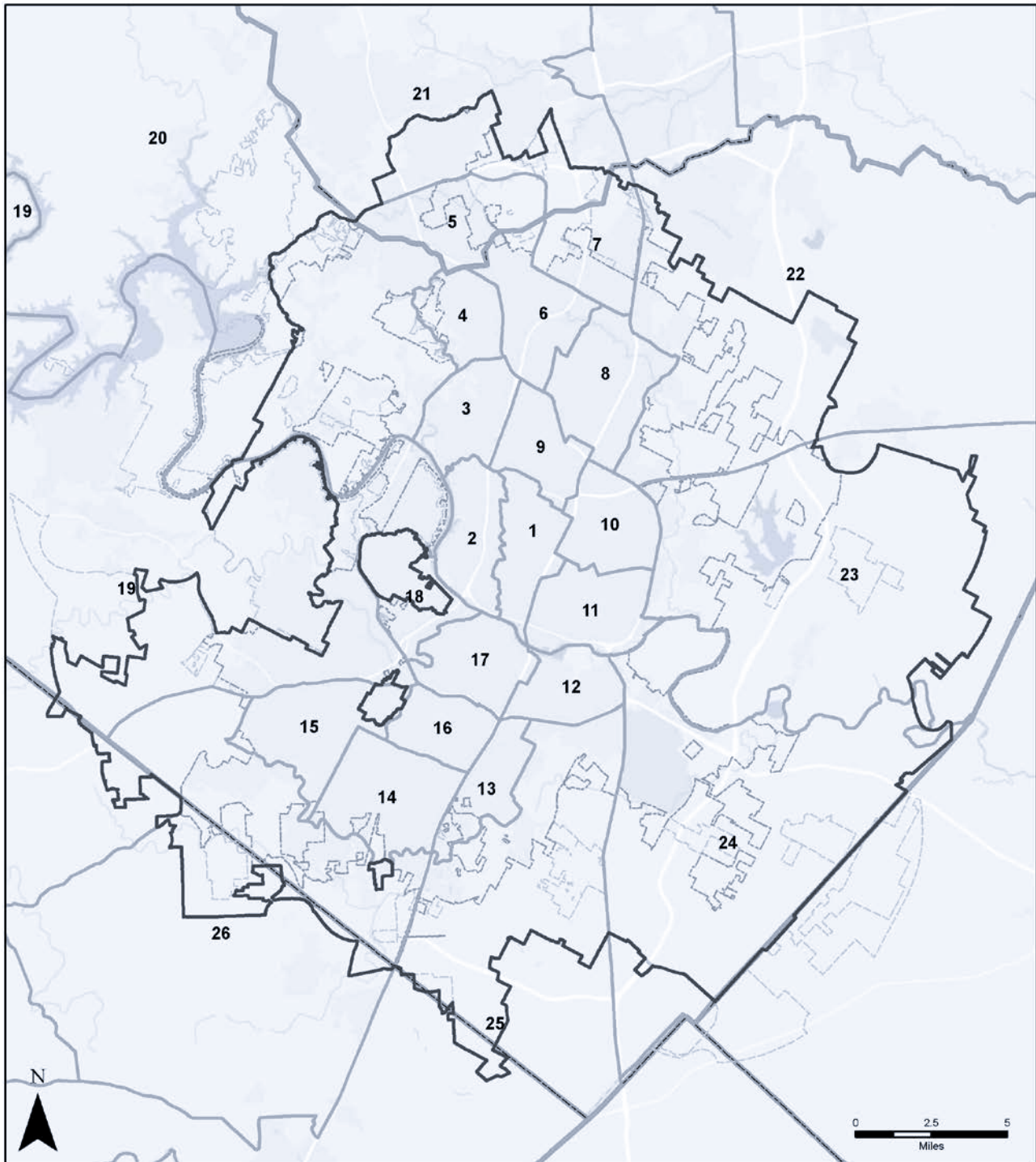
II. SERVICE AREA

The "service area", for the purposes of these land use assumptions, is the entire area within the corporate boundary of the City of Austin and its existing extraterritorial jurisdiction (ETJ) that is anticipated to be served within the next ten years by the existing city water and wastewater systems and the facilities listed in the revised Impact Fee Capital Improvements Plan. The boundary encompassing this area is illustrated by Map 1. For general reference the areas are:

- 2013 outer boundary = 544 sq. mi. (347,965 acres)
- 2018 outer boundary = 538 sq. mi. (344,083 acres)

Appendix A of this land use assumptions report provides the written description of the updated impact fee service area boundary for ordinance purposes. The written description, not the map, is the official service area description.

The Impact Fee "service area" defines the area to be used to calculate projected "service units" and the impact fee. The service area for this 2018 update was reduced in size by eliminating land considered to be transferred since 2013 from the Austin ETJ to other ETJ's. The service area was increased in part to include property added to the ETJ since 2013, and where necessary, to include land adjacent to existing water or wastewater mains.



-  Impact Fee and Service Area Boundary - Update 2018
-  Planning Areas 2018
-  Austin ETJ
-  County Boundaries
-  Austin Full Purpose City Limit

Impact Fee & Service Area Boundary Year 2018 Update



Austin Water
Infrastructure Management Division
Prepared 4/2/2018

This map has been produced by the City of Austin for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness. 2018

These land use assumptions anticipate that the impact fees to be calculated will be imposed uniformly over the entire service area and will be calculated in a manner consistent with that premise. This is explicitly provided for by 1989 amendments to Chapter 395 of the Local Government Code, which added Section 395.0455. This section reads in part:

System-Wide Land Use Assumptions

(a) In lieu of adopting land use assumptions for each service area, a political subdivision may, except for storm water, drainage, flood control and roadway facilities, adopt system-wide land use assumptions, which cover all of the area subject to the jurisdiction of the political subdivision for the purpose of imposing impact fees under this chapter.

Another paragraph in this section further clarifies the requirements of state law:

(c) After adoption of system-wide land use assumptions, a political subdivision is not required to adopt additional land use assumptions for a service area for water supply, treatment, and distribution facilities or wastewater collection and treatment facilities as a prerequisite to the adoption of a capital improvements plan or impact fee, provided the capital improvements plan and impact fee are consistent with the system-wide land use assumptions.

III. GROWTH PROJECTIONS

For the 2018 update, estimated 2015 and 2025 population and employment data were based on the U.S. Census data, City Demographer estimates, Planning and Development Review Department data and Austin Water billing data. The period from 2015 to 2025 is used as the basis for determining the amount of growth in a 10-year planning horizon as required in the Impact Fee Act. The Geographic Information System (GIS) -based spatial analysis procedure for updating the growth projections were done in coordination with the City Demographer from the Planning and Development Review Department. The basis of the geospatial growth projections used by Austin Water are the Delphi Trends Imagine Austin (DTI) polygons that each have estimates of 2010, 2015, 2020, 2025, and 2040 population and employment. DTI polygons are roughly analogous to Census Tracts. When aggregated the DTI polygons allow Austin Water to estimate population and employment growth to the selected impact fee service area and to the Planning Areas illustrated on Map 1.

Results for the Planning Areas illustrated on Map 1 are:

Table 1 - Population Growth. Shows estimated 2015 and projected 2025 population aggregated to Planning Areas and to total service area. As noted above, these figures are consistent with Austin Water population estimates for 2015 and 2025. These population figures correspond to estimates and projections of residents actually receiving City of Austin water and/or wastewater service. This table includes the calculated average annual growth rate, the number of estimated dwelling units, and the gross population density. The gross densities are calculated by dividing the estimated or projected population by the total acres in each Planning Area.

Table 2 - Employment Growth. Shows estimated 2015 and projected 2025 employment aggregated to Planning Area and to total service area. As noted above, these figures are consistent with Planning and Development Review Department data and Austin Water employment estimates for 2015 and 2025. This table includes the calculated average annual growth rate, and the gross employment density. The gross densities are calculated by dividing the estimated or projected employees by the total acres in each Planning Area.

Table 1: Population Growth

Planning Area Summary	2015 Austin Water Population	2025 Austin Water Population	Population Annual Growth Rate	Acres for 2015 Served Area	2015 Residential Gross Density Pop/Ac	2025 Residential Gross Density Pop/Ac*	Change in Residential Gross Density
1	69,652	93,477	2.98%	5,121	13.60	18.25	34.21%
2	27,553	34,546	2.28%	5,325	5.17	6.49	25.38%
3	28,128	30,547	0.83%	5,179	5.43	5.90	8.60%
4	21,161	22,589	0.65%	3,986	5.31	5.67	6.75%
5	39,829	51,112	2.52%	4,427	9.00	11.55	28.33%
6	36,702	44,421	1.92%	6,329	5.80	7.02	21.03%
7	33,092	38,243	1.45%	3,387	9.77	11.29	15.57%
8	78,275	86,582	1.01%	8,076	9.69	10.72	10.61%
9	33,374	44,326	2.88%	4,698	7.10	9.44	32.82%
10	44,691	62,357	3.39%	5,352	8.35	11.65	39.53%
11	40,738	52,396	2.54%	6,211	6.56	8.44	28.62%
12	48,271	55,031	1.31%	4,194	11.51	13.12	14.00%
13	36,660	41,279	1.19%	3,922	9.35	10.52	12.60%
14	51,789	58,164	1.16%	7,753	6.68	7.50	12.31%
15	42,104	44,516	0.56%	7,017	6.00	6.34	5.73%
16	33,510	38,331	1.35%	4,242	7.90	9.04	14.39%
17	48,166	62,427	2.62%	5,442	8.85	11.47	29.61%
18	12,907	13,456	0.42%	2,289	5.64	5.88	4.26%
19	32,522	38,604	1.72%	8,392	3.88	4.60	18.70%
20	36,608	42,624	1.53%	8,538	4.29	4.99	16.43%
21	26,123	46,267	6.03%	3,695	7.07	12.52	77.11%
22	45,389	70,028	4.47%	9,896	4.59	7.08	54.28%
23	22,863	37,671	5.20%	6,698	3.41	5.62	64.77%
24	18,996	28,665	4.23%	13,360	1.42	2.15	50.90%
25	26,776	36,007	3.01%	5,819	4.60	6.19	34.48%
26	36,944	44,676	1.91%	6,131	6.03	7.29	20.93%
Total Within Boundary	972,823	1,218,343	2.27%	155,479	6.26	7.84	25.24%

* Based on 2015 served area acreage

Table 2: Employment Growth

Planning Area Summary	2015 Austin Water Employment	2025 Austin Water Employment	Employment Annual Growth Rate	Acres for 2015 Served Area	2015 Employment Gross Density Pop/Ac	2025 Employment Gross Density Pop/Ac*	Change in Employment Gross Density
1	139,170	171,160	2.08%	5,121	27.18	33.43	22.99%
2	23,047	30,688	2.90%	5,325	4.33	5.76	33.15%
3	22,550	27,204	1.89%	5,179	4.35	5.25	20.64%
4	14,761	16,638	1.20%	3,986	3.70	4.17	12.71%
5	18,046	24,203	2.98%	4,427	4.08	5.47	34.12%
6	53,367	65,504	2.06%	6,329	8.43	10.35	22.74%
7	14,438	18,110	2.29%	3,387	4.26	5.35	25.43%
8	29,737	37,485	2.34%	8,076	3.68	4.64	26.06%
9	35,470	47,752	3.02%	4,698	7.55	10.16	34.63%
10	20,679	26,650	2.56%	5,352	3.86	4.98	28.88%
11	20,091	26,727	2.89%	6,211	3.23	4.30	33.03%
12	13,835	19,046	3.25%	4,194	3.30	4.54	37.66%
13	10,509	12,847	2.02%	3,922	2.68	3.28	22.25%
14	11,317	14,682	2.63%	7,753	1.46	1.89	29.73%
15	10,937	13,644	2.23%	7,017	1.56	1.94	24.75%
16	14,944	21,571	3.75%	4,242	3.52	5.09	44.35%
17	36,489	48,256	2.83%	5,442	6.70	8.87	32.25%
18	22,081	24,933	1.22%	2,289	9.65	10.89	12.92%
19	25,917	30,426	1.61%	8,392	3.09	3.63	17.40%
20	10,557	12,271	1.51%	8,538	1.24	1.44	16.23%
21	7,228	10,168	3.48%	3,695	1.96	2.75	40.68%
22	33,218	42,377	2.46%	9,896	3.36	4.28	27.57%
23	8,939	13,004	3.84%	6,698	1.33	1.94	45.48%
24	8,441	12,794	4.28%	13,360	0.63	0.96	51.57%
25	11,963	15,447	2.58%	5,819	2.06	2.65	29.13%
26	4,449	5,728	2.55%	6,131	0.73	0.93	28.75%
Total Within Boundary	622,179	789,314	2.40%	155,479	4.00	5.08	26.86%

* Based on 2015 served area acreage

IV. SERVICE UNITS

Centralized Water and Wastewater Service Unit Assumptions

Calculation of the impact fee in accordance with Chapter 395 of the Local Government Code requires the use of a "service unit." Within the definitions section of Chapter 395.001(10), "'Service unit' means a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years."

To use a simplified explanation, the number of projected new service units are divided into the costs of capital projects allocated to this new growth in order to calculate the allowable impact fee (per service unit). The journal article by Ray Farabee, et.al, mentioned previously, states that the "'Service unit' is one of the most important, but conceptually difficult, elements of the (new) law." This article also observes that "Cities may select their own standards for measuring service units, but any measure chosen must attempt to accurately reflect differences in service consumption between users." Austin's capital recovery fee ordinances have for years used the "fee unit" for this purpose, and it remains the most appropriate choice for the "service unit" under the terms of Chapter 395. The term "service unit" has replaced "fee unit" in the Austin ordinances and codes in recent years. The service unit is based on the size of water meter sold, exactly as the fee unit was calculated. Table 3 illustrates the relationship between service units and meter sizes. The service unit calculation depends on the relative differences between the various sizes and types of meters as determined by their rated maximum flows and rated continuous flows.

Table 3: Calculation of Service Units

The size and type of water meter purchased determines number of service units in accordance with the following schedule:

METER SIZE	TYPE	SERVICE UNITS
5/8"	positive displacement	1.0
3/4"	positive displacement	1.5
1"	positive displacement	2.5
1 1/2"	positive displacement	5
1 1/2"	turbine	9
2"	positive displacement	8
2"	compound	8
2"	turbine	16
3"	single-jet	16
3"	compound	17.5
3"	turbine	35
4"	single-jet	25
4"	compound	30
4"	turbine	65
6"	compound	67.5
6"	turbine	140
8"	compound	90
8"	turbine	240
10"	turbine	350
12"	turbine	440

The service unit is determined on the basis of the American Water Works Association (AWWA) standards C700-15, C701-15, C702-15 and C712-15 recommended maximum rate for continuous duty (flow) of the meter purchased at sale of tap. The service unit, as described here, has for years been in Austin's capital recovery fee ordinances; it is well accepted, and it is extraordinarily easy to calculate at time of collection. In addition, it is based on Uniform Plumbing Code meter size and type criteria counting plumbing fixtures that directly reflect the differences in service consumption between different users. Table 4 shows the latest count of all meters in the system in September 2015 by size. From that list is calculated the number of hypothetical service units installed in the system. That figure is 393,263 service units as shown on Table 4.

Table 4: Estimate of Service Units in the Austin Water Distribution System

Meter Size	Meters September 2015*	Service Unit Multiplier	September 2015 Service Units
5/8"	189,124	1	189,124
3/4"	13,863	1.5	20,795
1"	9,501	2.5	23,753
1 1/2"	4,206	6.5	27,322
2"	4,139	10.91	45,144
3"	1,596	19.79	31,591
4"	737	33.73	24,857
6"	254	76.10	19,328
8"	58	108.10	6,270
10"	12	350	4,200
12"	2	440	880
Total	223,492		393,263

* Meter count September 2015 without individual customers in wholesale utilities.

Existing Water System Service Units

To determine the flow equivalent of a water system service unit, the system pumpage is divided by the total number of service units. The actual water system pumpage for FY15 (October 2014-September 2015) was 43,481 million gallons. Therefore the current system-wide flow average is 303 gallons per day per service unit.

$$\frac{\text{Total Water System Pumpage}}{\text{Total Number of Water System Service Units}} = \text{Water Flow per Day per Service Unit}$$

$$\frac{43,481 \text{ Million Gallons per Year}}{393,263 \text{ Service Units}} = 303 \text{ Gallons per Day per Service Unit}$$

Existing Wastewater System Service Units

The wastewater collection system does not have individual meters for a majority of the customers. In most cases wastewater is billed based on water meter data and water customers are also wastewater customers. Therefore wastewater collection system service units are estimated based on the water distribution system service units and the known differences between water and wastewater customers. It is assumed that there is a direct relationship between the number of water & wastewater customers (population and employees) and the number of service units so the number of wastewater service units is estimated to be 96.4% of the water distribution system service units or 379,240 service units based on the number of wastewater and water customers sewed.

The wastewater collection system service unit flow equivalent is calculated using the total system influent treated at the wastewater treatment plants. The FY15 total wastewater collection system influent is estimated to be 41,230 Million gallons. Therefore the flow equivalent per wastewater service unit is estimated to be 298 gallons per day per service unit.

$$\frac{\text{Total Wastewater System Influent}}{\text{Total Number of Wastewater System Service Units}} = \text{Wastewater Flow per Day per Service Unit}$$

$$\frac{41,230 \text{ Million Gallons per Year}}{379,240 \text{ Service Units}} = 298 \text{ Gallons per Day per Service Unit}$$

Future Water and Wastewater Service Units

The projection of new service units presents a challenge in that it depends on size, type and number of meters sold, while the basis for the forecasts are population and employment converted to water and wastewater flows. The projection estimates of future service units are based on relationships between population, employment, total flow, and per capita flow projections.

Future service unit forecasts are derived from projections of population and employment combined with planned water pumpage forecasts. 2025 water pumpage forecasts are calculated with the Disaggregated Demand Model (DDM), Austin Water's Integrated Water Resource Plan (Water Forward) demand forecasting model. The DDM incorporates projected additional passive water conservation and estimates a slight reduction in the per capita pumpage over the planning horizon, while increasing the population and employment. Projected additional passive water conservation results in a reduced number of gallons per service unit in the future. The gallons per capita per day (gpcd) is calculated by dividing the total system pumpage by the total population. The 2015 gallon per capita day Pumpage was 122 gpcd. The 2025 forecasted population and total system pumpage from the DDM and equates to 119 gpcd. The 2025 water flow per service unit is expected to be reduced proportionally with the per capita flow so the 2025 water flow per service unit is estimated to be 295 gallons per day per service unit.

$$\frac{122 \text{ gallons per capita day (2015)}}{119 \text{ gallons per capita day (2025)}} = \frac{303 \text{ gallons per day per service unit (2015)}}{295 \text{ gallons per day per service unit (2025)}}$$

The 2025 total water system pumpage, based on the DDM is 53,006 million gallons. Dividing the total annual pumpage by 295 gallons per day per service unit gives a 2025 estimate of 492,514 service units.

Future wastewater service units were estimated based on water service unit estimates and the population and employment estimates for water and wastewater customers. Wastewater treatment flow per capita has not declined recently. It appears that most water conservation related demand reductions are related to outdoor water use and wastewater inflow and infiltration seems to largely offset indoor water conservation measures. For these reasons, the wastewater flow per service unit estimate, 298 gallons per service unit per day is assumed to remain constant from 2015 to 2025. The 2025 total wastewater system influent flow is projected to be 52,107 million gallons per year. Dividing 52,107 million gallons per year by 298 gallons per service unit per day gives a 2025 estimate of 479,059 service units.

The spatial summary of the results of this exercise is presented in Table 5. The population and employment projections of Section III Tables 1 and 2 were converted to average daily water pumpage and then to forecasts of new service units for the entire service area.

Table 5: Projections of Water Service Units

Planning Area Summary	2015 Residential MGD	2015 Employment MGD	2015 Total MGD	2015 Service Units	2025 Residential MGD	2025 Employment MGD	2025 Total MGD	2025 Service Units
1	5.6	9.2	14.8	48,762	7.2	11.3	18.4	62,459
2	2.2	1.5	3.7	12,320	2.6	2.0	4.7	15,818
3	2.3	1.5	3.7	12,364	2.3	1.8	4.1	14,002
4	1.7	1.0	2.7	8,822	1.7	1.1	2.8	9,578
5	3.2	1.2	4.4	14,484	3.9	1.6	5.5	18,674
6	2.9	3.5	6.5	21,346	3.4	4.3	7.7	26,149
7	2.7	1.0	3.6	11,913	2.9	1.2	4.1	13,973
8	6.3	2.0	8.2	27,217	6.6	2.5	9.1	30,850
9	2.7	2.3	5.0	16,567	3.4	3.1	6.5	22,165
10	3.6	1.4	5.0	16,345	4.8	1.8	6.5	22,141
11	3.3	1.3	4.6	15,170	4.0	1.8	5.8	19,571
12	3.9	0.9	4.8	15,804	4.2	1.3	5.5	18,542
13	2.9	0.7	3.6	12,003	3.2	0.8	4.0	13,587
14	4.2	0.7	4.9	16,188	4.5	1.0	5.4	18,382
15	3.4	0.7	4.1	13,538	3.4	0.9	4.3	14,606
16	2.7	1.0	3.7	12,134	2.9	1.4	4.4	14,768
17	3.9	2.4	6.3	20,709	4.8	3.2	8.0	26,979
18	1.0	1.5	2.5	8,228	1.0	1.6	2.7	9,057
19	2.6	1.7	4.3	14,261	3.0	2.0	5.0	16,814
20	2.9	0.7	3.6	11,999	3.3	0.8	4.1	13,808
21	2.1	0.5	2.6	8,496	3.5	0.7	4.2	14,285
22	3.6	2.2	5.8	19,261	5.4	2.8	8.2	27,641
23	1.8	0.6	2.4	8,005	2.9	0.9	3.7	12,685
24	1.5	0.6	2.1	6,872	2.2	0.8	3.0	10,299
25	2.1	0.8	2.9	9,700	2.8	1.0	3.8	12,798
26	3.0	0.3	3.3	10,758	3.4	0.4	3.8	12,882
Total Within Boundary	78.1	41.0	119.1	393,263	93.3	51.9	145.2	492,514

IMPACT FEE LAND USE ASSUMPTIONS – APPENDIX A

Description of Impact Fee Boundary for 5-Year Update Adopted TBD (Ord-)

All jurisdiction boundaries such as county lines, utility companies, municipalities, etc., used in this description are those boundaries as they exist on the date this boundary is adopted and are to be recognized as the most accurate location of the impact fee boundary if another landmark or distance reference creates an ambiguity.

All street and landmark names reflect one of the names shown in commonly available maps of the Austin area. The City of Austin GIS was used for street names in this description. Distances have been scaled from Austin GIS and are intended to approximately place the boundary when landmarks are not available or may be ambiguous. The referenced landmark is to be taken as the accurate location.

When a road, street, etc. is referenced, the boundary is assumed to follow the centerline, and only one side of the road, street, etc. is within the impact fee service area boundary.

Boundaries of any city's jurisdiction (ETJ or city limits), counties, and the service area of another utility, can be found by referring to maps available from those individual entities. The accuracy of those maps is not warranted by the City of Austin or the Austin Water Utility. Taxing authority records also indicate inclusion in the individual entities.

The impact fee service area described below shall not include the certificated service area of another utility providing water and/or wastewater service to its customers under a certificate of convenience and necessity from the Texas Commission on Environmental Quality or its predecessor and successor agency and with whom the City has no wholesale contract to provide water and/or sewer service providing for the payment of impact fees.

The impact fee service area described below shall not include land within the jurisdiction of cities other than Austin; provided, that within the jurisdiction of cities other than Austin, land is included within the impact fee service area where it is included in the service area of those utilities with whom the City has wholesale contracts to provide water and/or sewer service providing for the payment of impact fees or where that other city has executed an agreement with Austin for the City to supply retail water and/or wastewater service providing for the payment of impact fees.

Where the impact fee service area is described by the Austin jurisdiction passing through a tract, the entire tract which is partially in the Austin jurisdiction and not in the jurisdiction of another city will be considered to be in the service area.

In addition to land within the impact fee service area described below, the impact fee service area includes land in the service areas of those utilities with whom the City has wholesale contracts to provide water and/or wastewater service providing for the payment of impact fees, to the extent such land has been approved by the City to receive water and/or wastewater service from the City.

Any tract of land which is not entirely within the impact fee service area, as described below or according to the conditions described above, is not considered to be in the impact fee service area.

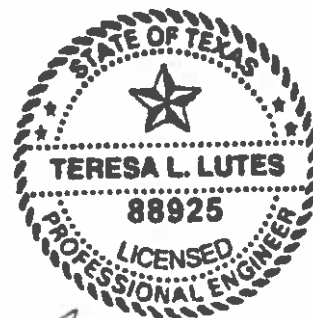
Accordingly, the City of Austin Impact Fee Service Area Boundary is described as follows:

1. Beginning at the common city limits of Buda, Hays County, and Austin the boundary proceeds in a general east and south direction along the jurisdiction boundary of Hays County for 1.8 miles to the common jurisdiction boundary of Austin and Niederwald.
2. Then proceeding in a general east direction along the common jurisdiction boundary of Austin and Niederwald for 1.1 miles.
3. Then proceeding in a general east direction along the City of Austin 5 mile ETJ for 190 feet to the common jurisdiction boundary of Austin and the Village of Creedmoor.
4. Then proceeding north and east along the common jurisdiction boundary of Austin and the Village of Creedmoor for 10.2 miles to the common jurisdiction boundary of Austin and the Village of Mustang Ridge.
5. Then proceeding in a general east direction along the jurisdiction boundary of Austin and the Village of Mustang Ridge for 6.7 miles to the Bastrop county line.
6. Then proceeding in a general northeast direction along the Bastrop county line for 2.3 miles until it intersects with FM 812 at the boundary of the Austin Water CCN.
7. Then proceeding generally north and east along the boundary of the Austin Water CCN for 1.7 miles before returning to the Bastrop County Line.
8. Then proceeding in a general northeast direction along the Bastrop county line for 5.5 miles until it intersects with State Highway 71 at the Austin 5 mile ETJ boundary.
9. Then proceeding in a general north and east direction along the Austin 5 mile ETJ for 3.6 miles to the common jurisdiction boundary of Austin and the Village of Webberville.
10. Then proceeding along the common jurisdiction boundary of Austin and Webberville for 9.2 miles.
11. Then proceeding in a general north direction along the Austin 5 mile ETJ for 4.3 miles to the common jurisdiction boundary of Austin and Manor.

12. Then proceeding in a general west and north direction along the common jurisdiction boundary of Austin and Manor for 15.0 miles to the common jurisdiction boundary of Austin and Pflugerville.
13. Then proceeding in a general west direction along the common jurisdiction boundary of Austin and Pflugerville for 15.0 miles to the common jurisdiction boundary of Austin and Round Rock.
14. Then proceeding in a general north and west direction along the common jurisdiction boundary of Austin and Round Rock for 11.2 miles to the common jurisdiction boundary of Austin and Cedar Park.
15. Then proceeding in a general south and west direction along the common jurisdiction boundary of Austin and Cedar Park for 10.9 miles until it intersects with FM 2769.
16. Then proceeding in a general west direction along FM 2769 for 1.0 miles until it intersects with Bullick Hollow Road.
17. Then proceeding in a general south direction along Bullick Hollow Road for 1.0 miles until it intersects the eastern boundary of Travis County WCID #17.
18. Then proceeding in a general south direction along the eastern boundary of Travis County WCID #17 for 8.3 miles until reaching the Colorado River.
19. Then proceeding south across the river for 0.1 miles to the northern tip of the Balfour Track.
20. Then proceeding in a counter clockwise direction around the boundary of Balfour for 4.4 miles.
21. Then proceeding along the Austin Full Purpose City Limit for 9.6 miles until reaching the boundary of Travis County WCID #10.
22. Then proceeding in a general south direction along the western boundary of Travis County WCID #10 for 3.1 miles.
23. Then proceeding along the Austin Full Purpose City Limit for 8.0 miles until it intersects with Amarra Drive.
24. Then proceeding along the Austin Limited Purpose City Limit for 0.4 miles to the southeast corner of the Barton Creek Habitat Preserve.
25. Then proceeding along the southern border of the Barton Creek Habitat Preserve for 1.6 miles to the edge of the West Travis County Public Utility Agency.
26. Then proceeding along the West Travis County Public Utility Agency boundary for 13.9 miles to the boundary of the Shield-Ayres City of Austin Conservation Easement.
27. Then proceeding in a general west direction along the Shield-Ayres City of Austin Conservation Easement boundary for 3.5 miles until it intersects with the Austin 5 mile ETJ.
28. Then proceeding in a general south direction along the Austin 5 mile ETJ for 2.3 miles to the common jurisdiction boundary of Austin and Dripping Springs
29. Then proceeding in a general south and east direction along the common jurisdiction boundary of Austin and Dripping Springs for 7.5 miles to the common jurisdiction boundary of Austin and the Village of Bear Creek.
30. Then proceeding along the common jurisdiction boundary of Austin and the Village of Bear Creek for 3.7 miles to the common jurisdiction boundary of Austin and Dripping Springs.
31. Then proceeding in a general south and east direction along the common jurisdiction boundary of Austin and Dripping Springs for 5.9 miles to the common jurisdiction boundary of Austin and the City of Hays.
32. Then proceeding along the common jurisdiction boundary of Austin and the City of Hays for 9.7 miles to the common jurisdiction boundary of Austin and Buda.
33. Then proceeding along the jurisdiction boundary of Austin and Buda for 9.9 miles ending at the common city limits of Buda, Hays County, and Austin which marks both the end and beginning points of the Impact Fee Service Area Boundary.

IMPACT FEE CAPITAL IMPROVEMENTS PLAN

**City of Austin, Texas
Austin Water**



T. Lutes

7/24/18

IMPACT FEE CAPITAL IMPROVEMENTS PLAN
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I. INTRODUCTION

The Texas Impact Fee Act (Chapter 395 of the Texas Local Government Code) provides methods and procedures that cities like Austin must follow to continue to impose water and wastewater impact fees. This act requires the determination of the costs of capital improvements attributable to new growth for a specified period of time. These costs are the principal building blocks on which the calculation of impact fees is based. The plan that identifies the capital improvements or facility expansions for which impact fees may be assessed is termed the "capital improvements plan" (CIP). In 1990, the City of Austin achieved compliance with the Texas Impact Fee Act by approving land use assumptions on April 5, 1990 and then approving the impact fee CIP and amendments to the ordinance on June 7, 1990. In subsequent years, the City has maintained compliance with periodic updates. From 1990 to 2001, the Texas Impact Fee Act stipulated that the land use assumptions and impact fee CIP be updated at least every three years. Beginning September 1, 2001, the Texas Impact Fee Act stipulates that these updates are to be done at least every five years. The five-year period begins on the day the impact fee CIP is adopted. This document represents the update to the CIP. Both it and the land use assumptions can be adopted at the same time.

The law outlines a methodology for calculating the cost of particular facilities attributable to new growth based on a defined planning period (not to exceed 10 years). The planning period establishes a time frame in which to evaluate capacity made available for new growth as compared to the demand for that capacity represented by the land use assumptions. One of the keys to the methodology is the expression of both demand and capacity for a particular project in terms of service units. By knowing the number of service units associated with the impact fee projects that are expected to be used during the planning period, the capacity and cost attributable to new growth can readily be determined. Using this cost and the projected total number of new service units within the utility service boundary during the planning period, the "maximum fee per service unit" may be calculated as prescribed by the law. The methodology of the Capital Improvements Plan provides the framework for calculating the maximum allowable impact fee, which is the upper limit on the fee pursuant to the law.

The methodologies employed in this Impact Fee CIP comply with the provisions of the Texas Impact Fee Act. This update is as comprehensive as previous updates, including a thorough review of the list of qualified CIP projects. It continues to exclude projects that are predominately attributable to existing users, or that may not be constructed and in service within the ten-year planning period. And in cases where other participants contributed funds, only the City of Austin's shares of the costs were included.

The Impact Fee CIP process calculates the maximum allowable fees. This calculation conforms to the state requirement for the Impact Fee CIP to include a plan for awarding a credit for the portion of water and wastewater utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the Impact Fee CIP. Note that, beginning September 1, 2001, Impact Fee CIP updates prior to the 2013 Update incorporated an alternative credit method that was equal to 50 percent of the total projected cost of implementing the capital improvements plan. Beginning with the City's 2013 update, a rate revenue credit method was used. Additional discussion of the rate revenue credit method applied in this 2018 Impact Fee update can be found in Section VII.

II. FACILITY PLANNING – DEFINING THE LEVEL OF CAPACITY USAGE AND RESERVE CAPACITY NEEDS

Section 395.014 of the impact fee law as codified in the Texas Local Government Code speaks to a capital improvements plan that addresses:

- (1) a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, or environmental or regulatory standards.
- (2) an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements.

Using the methodology described later in this document, major facilities targeted to benefit new growth were identified and the portions of capacity serving existing and future users estimated. To provide an overall comparison of the capacity and costs associated with new growth projects versus those associated with existing needs, the recent Capital Improvements Program (CIP) projects of Austin Water have been divided into the three groups. Appendices C and D include those projects from the FY 2018/2022 CIP built in prior years or scheduled to be built in the next few

years that are targeted to benefit existing users and to meet stricter safety, efficiency, environmental or regulatory standards. Tables 1 (CIP-3) and 2 (CIP-15) list those water and wastewater impact fees projects that have been built or plan to be built in the future and that will largely benefit new Utility customers during the next ten years. Table 3 (CIP-25) is composed of projects that are anticipated to be built late in the ten-year planning period or beyond, and thus are not included in the group of projects on which impact fee calculations are based. Projects removed from the project listing adopted in the 2013 Impact Fee CIP are shown on Table 4 (CIP-26). Major utility facilities are shown on Water Map 1, 1A, 1B, 1C, 1D, 1E, following Table 1 and Wastewater Map 2, 2A, 2B, 2C, 2D and 2E following Table 2. These maps also illustrate the location of the Impact Fees CIP projects.

A comparison of the dollar value of projects in the Appendices and Tables 1, 2, and 3 gives an indication of the relative investment in capacity to serve existing and future needs (as defined by the law) as a function of the Capital Improvements Programs (CIPs) of the 1980s. Some of the projects in Appendices C and D will certainly benefit future users; however, in order to take a conservative approach to ensuring full compliance with the law, they will not be considered impact fee projects when they are made necessary by environmental and regulatory requirements. Other projects in Appendices C and D will also benefit future users as well as existing users (annexation areas, highway utility relocations, and certain trunk lines internal to the system) but when their benefit to existing users outweighs the benefit to future users, they are not included in with the impact fee projects in Tables 1 and 2.

Analysis of the level of existing usage of capacity in the case of water and wastewater treatment plants is a straightforward examination of flow data. Flow data for pipes in the water distribution system and wastewater collection system is generally not available, so hydraulic analysis was used to help estimate utilization levels of pipes under selected demand conditions (existing or future). The summary tables at the end of this document, Tables 8 and 9, include an estimate of the existing users and the total capacity of impact fee projects expressed in service units for water pressure zones and wastewater collection areas. Inspection of these figures gives an indication of the level of existing capacity usage and the reserve capacity associated with the facilities.

In sizing and timing new facilities, both population projections (the Land Use Assumptions) and trending from historical flow data regression are used in predicting demands (flows) associated with future growth. These demands are then input into the computer models. Model simulations yield the necessary pipe capacity to meet pressure and flow performance objectives. CIP Planning at Austin Water considers a number of factors to identify the best infrastructure timing and sizing investment alternatives. The principle factors weighed in this analysis are:

- * alternatives analysis
- * capital costs
- * operation and maintenance costs
- * time value of money
- * economy of scale
- * environmental and other key non-pecuniary impacts

The Utility's CIP, especially the group of impact fees projects, is the set of facilities that will satisfy needs for additional capacity in the next ten years as indicated by the Land Use Assumptions.

The Utility seeks to maintain a healthy, cost-effective amount of reserve capacity in the water and wastewater system in order to carry out its mission of providing safe, reliable service. In this way, the commitments that the City makes to its customers in the form of tap sales, service extension requests, developer reimbursement contracts, and Municipal Utility District and other district contracts, can be fulfilled in a manner that allows all parties in the development process to plan efficiently. The impact fee methodology prescribed by state statute serves the function of quantifying the cost of the reserve capacity that constitutes the Utility's plan for serving new customers for a ten-year planning horizon. This Impact Fee update is consistent with a number of core principles of the City's Imagine Austin comprehensive plan including:

- Growth as a compact and connected city
- Develop as an affordable and healthy community
- Sustainably manage water and other environmental resources

Imagine Austin's planning framework and guidelines are part of Austin Water's planning processes and are integrated into the development of the Utility's CIP.

Table 1 Water Impact Fee Project

Subproject / Map ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost
City Construction						
2006.003	Four Points and Forest Ridge Pump Station Upgrades	NWB: 5.8 MGD, NWC: 10.4 MGD	Northw est C	2007	\$ 755	\$ 803
2006.003	Four Points and Forest Ridge Pump Station Upgrades	NWB: 5.8 MGD, NWC: 10.4 MGD	Northw est C	2007	\$ 142	\$ -
2032.001	Four Points Reservoir	8 MG	Northw est C	1988	\$ 5,194	\$ 5,526
3889.001	Canyon Creek 30" Transmission Main	30"	Northw est C	1987	\$ 1,231	\$ 1,310
5038.001	Anderson Mill Northw est C Pump Station and Tank	11.2 MGD, 1.5 MG	Northw est C	2016	\$ 1,339	\$ -
5038.001	Anderson Mill Northw est C Pump Station and Tank	11.2 MGD, 1.5 MG	Northw est C	2016	\$ 10,125	\$ 10,773
5038.002	Anderson Mill/RR 620 Transmission Main	24/36"	Northw est C	2016	\$ 4,708	\$ 5,010
793.001	Anderson Mill Transmission Main III	16"	Northw est B	2016	\$ 4,736	\$ 5,039
793.002	Anderson Mill Transmission Main Ph IIA & IV	24"	Northw est B	2000	\$ 2,085	\$ 2,218
1086.001	Jollyville Transmission Main Ph IIA & III	48"	Northw est B	2001	\$ 8,138	\$ 8,658
1086.002	Jollyville Transmission Main Ph IIB	48"	Northw est B	2001	\$ 1,135	\$ 1,207
3616.001	Anderson Mill Reservoir	3 MG	Northw est B	1989	\$ 4,149	\$ 4,414
3897.001	Jollyville Pump Station	45 MGD	Northw est B	1989	\$ 6,751	\$ 7,183
6935.019	Parmer & 620 Interconnect	24"	Northw est B	2021	\$ 2,220	\$ 2,362
2014.001	Martin Hill - Northw est A Pressure Zone Reservoir	34 MG	Northw est A	1988	\$ 8,378	\$ 8,915
2014.001	Martin Hill - Northw est A Pressure Zone Reservoir	34 MG	Northw est A	1988	\$ 1,639	\$ -
3212.093	How ard Lane Projects	16"	Northw est A	2012	\$ 1,027	\$ 1,093
4758.002	16" FM 1825 Interconnect	16"	Northw est A	2005	\$ 803	\$ -
4814.002	How ard Lane East Transmission Main - Segment 2	36"	Northw est A	2000	\$ 4,765	\$ 5,070
2028.001	Martin Hill Transmission Main	54"	Northw est A/B/C	2017	\$ 25,076	\$ 26,680
4814.003	How ard Lane Pump Station and TM	24/36/42/54", 43/65 MGD	Northw est A/B/C	2001	\$ 15,193	\$ 16,165
4814.004	How ard Lane Water Transmission Main	24/36/42/54"	Northw est A/B/C	2001	\$ 1,922	\$ -
6935.016	Jollyville Northw est A Transmission Main (Plant 4)	84"	Northw est A/B/C	2015	\$ 118,172	\$ 125,735
6935.031	McNeil Road Transmission Main	72"	Northw est A/B/C	2025	\$ 21,550	\$ 22,929
844.001	East Austin - Parmer Lane TM	48/54"	North	1997	\$ 6,657	\$ 7,083

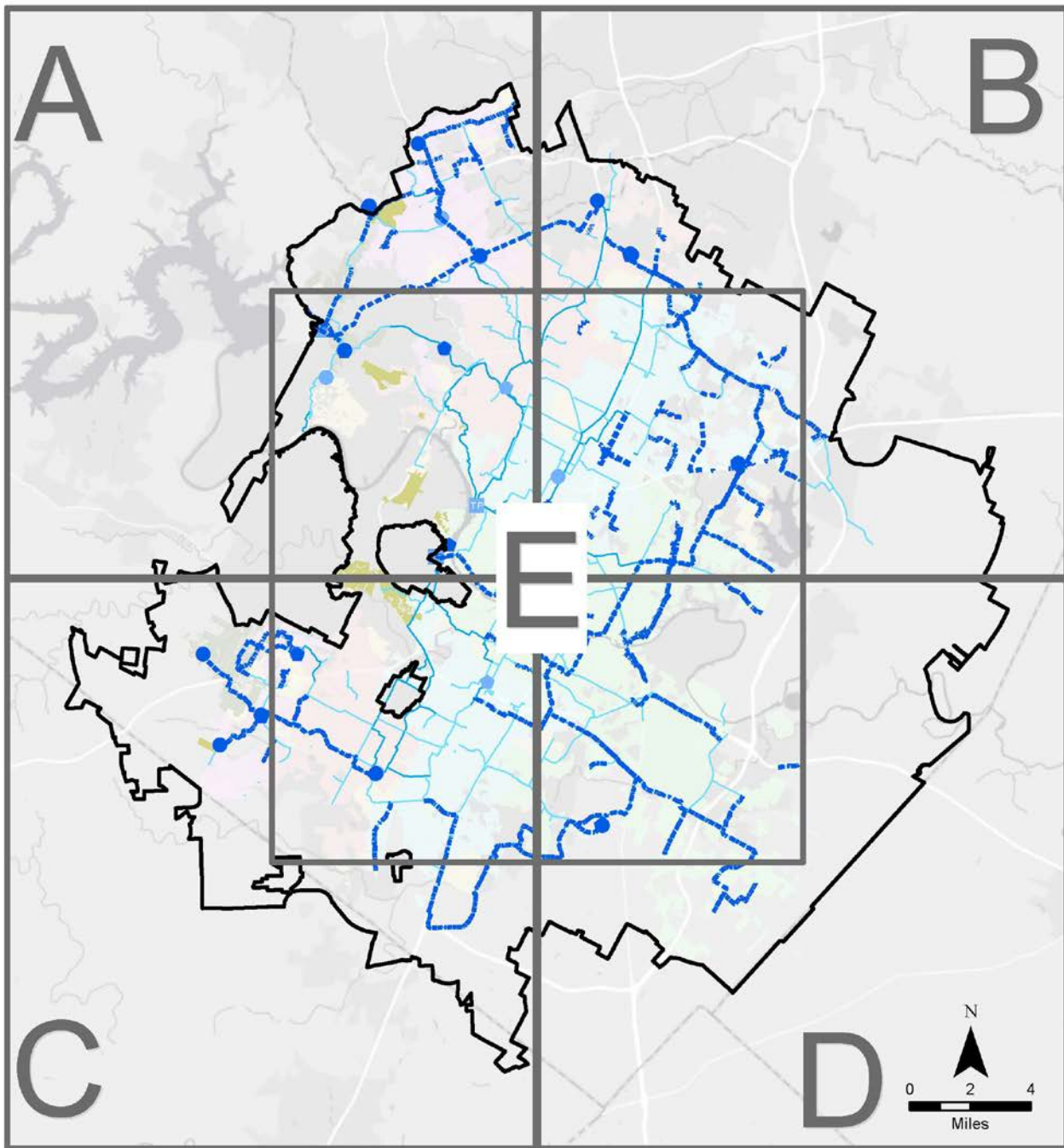
Subproject / Map ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost
City Construction						
2088.001	Parmer Ln/Howard Ln Transmission Main	48"	North	1989	\$ 3,593	\$ 3,823
2090.005	Johnny Morris Rd 16" Water Main	16"	North	1999	\$ 462	\$ 491
2939.001	Dessau Rd Transmission Main	16"	North	1990	\$ 934	\$ 994
3779.001	Northtown Transmission Main	48"	North	1988	\$ 610	\$ 649
3783.001	East Austin Pump Station	55 MGD	North	1989	\$ 1,974	\$ 2,101
4814.001	Northeast Area Water Improvements	48"	North	1999	\$ 1,718	\$ 1,828
5028.006	RMMA Redevelopment North WPZ Imp Phase 3 (SER 2278)	30"	North	2012	\$ 5,585	\$ 5,942
6935.003	Boyce Lane Water Main	24"	North	2017	\$ 7,201	\$ 7,662
6935.021	Austin Film Society	16"	North	2012	\$ 1,017	\$ 1,082
6935.022	Springdale/290 Water Line Improvements	16"	North	2021	\$ 5,721	\$ 6,088
6935.033	Johnny Morris/Hwy 290 Area Water Line Extensions	24"	North	2019	\$ 1,309	\$ -
6935.035	Howard Lane Water Main Extension	16"	North	2020	\$ 1,185	\$ 1,261
6935.039	Cameron Rd : Gregg Lane to School	12"/16"	North	2019	\$ 1,634	\$ 1,738
7487.002	Braker Ln Extension from Dessau Rd. to Samsung Blvd (City Funded)	24"	North	2021	\$ 35	\$ -
1168.003	Ullrich to Green Transmission Main (Pipeline)	72"	Central	2000	\$ 4,461	\$ 4,746
1168.003	Ullrich to Green Transmission Main (Pipeline)	72"	Central	2000	\$ 1,137	\$ -
1168.004	Ullrich to Green Transmission Main (Lake Austin Tunnel)	72"	Central	2000	\$ 150	\$ -
1168.004	Ullrich to Green Transmission Main (Lake Austin Tunnel)	72"	Central	2000	\$ 25,987	\$ 27,650
2097.001	Eroy Transmission Main	36"	Central	2014	\$ 5,005	\$ 5,326
2231.155	Eroy Road Water Rehabilitation Phase 2	16"	Central	2016	\$ 1,634	\$ 1,738
2231.157	Eroy Rd Water Rehabilitation Ph 3 - FM 812 Maha Loop Water Rehab	16"	Central	2017	\$ 2,590	\$ 2,756
2231.214	Boggy Creek at US 183 Water Line Replacement	24"	Central	2016	\$ 2,386	\$ 2,539
2937.001	Springdale Rd 48" Transmission Main	48"	Central	1998	\$ 6,118	\$ 6,510
2963.001	Moore's Crossing Reservoir & Transmission Main	36"	Central	1990	\$ 2,402	\$ 2,556
3612.001	Green WTP Transmission Main	60"	Central	1989	\$ 4,049	\$ 4,308
3617.001	Bluff Springs (Pilot Knob) Transmission Main	48"	Central	1992	\$ 7,466	\$ 7,944
3618.001	East Austin Transmission Main	66"	Central	1989	\$ 8,203	\$ 8,728
3620.001	East Austin Reservoir	12 MG	Central	1987	\$ 2,141	\$ 2,278
3626.001	Bluff Springs (Pilot Knob) Reservoir	10 MG	Central	1989	\$ 2,139	\$ 2,276
3628.001	South Central Transmission Main	48"	Central	1987	\$ 4,578	\$ 4,871
3761.001	Green WTP Transmission Main South	48"	Central	1989	\$ 1,572	\$ 1,673
3769.001	Bluff Springs Transmission Main II	36"	Central	1988	\$ 1,913	\$ 2,036
3871.001	E Ben White Blvd Transmission Main	24"	Central	1993	\$ 3,506	\$ 3,731
3898.001	Pilot Knob Transmission Main Sector III	48"	Central	1992	\$ 1,805	\$ 1,921
3901.001	Burelson Rd Transmission Main	48"	Central	1992	\$ 478	\$ 508
4800.028	West Campus System Improvements	12"	Central	2013	\$ 3,191	\$ 3,395
4800.033	West Campus Water & WW Improvements Area 5	12"	Central	2016	\$ 4,703	\$ 5,005
5403.001	Rio Grande: from MLK to 24th St. Street Reconstruction & Utility Adjustment	16"	Central	2014	\$ 1,113	\$ 1,185
6055.004	E 7th Street Improvements from Northwestern to Pleasant Valley	12"	Central	2013	\$ 729	\$ -

Subproject / Map ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost
City Construction						
6055.024	Second Street District Streetscape Street Recon. & Utility Adj. Phase 3	12"	Central	2017	\$ 718	\$ 764
6684.001	MLK: Rio Grande to Lamar	12"	Central	2012	\$ 826	\$ 878
6935.061	Piland Triangle Interconnect	24"	Central	2020	\$ 750	\$ -
6959.001	Group 30: Oltorf St E/Congress Ave-IH35	24"/12"	Central	2015	\$ 1,263	\$ 1,344
6960.001	Brazos St/Cesar Chavez-11th St E	12"	Central	2014	\$ 1,590	\$ 1,692
6961.002	Colorado St. Reconstruction and Utility Adjustments from 7th St to 10th St	12"	Central	2018	\$ 720	\$ 766
8158.001	3rd St. Reconstruction Phase 3 - Congress Ave. to Guadalupe St.	12"	Central	2017	\$ 110	\$ -
8158.002	3rd St Phase 2 - Congress Ave to Brazos St & San Jacinto Blvd to Trinity St	12"	Central	2017	\$ 117	\$ 125
8158.003	3rd St. Phase 1 - Brazos St. to San Jacinto Blvd.	12"	Central	2015	\$ 252	\$ 268
3766.001	S IH-35 Transmission Main	36"	South	1988	\$ 2,812	\$ 2,992
3876.001	Slaughter Ln Transmission Main	24/30"	South	1992	\$ 2,673	\$ 2,845
6935.059	Slaughter Lane Waterline Extension	16"	South	2017	\$ 149	\$ -
6937.001	S IH-35 Transmission Main	36"	South	2010	\$ 17	\$ 18
6937.003	So. IH35 W/WW Infrastructure Improvs PMC	PMC	South	2013	\$ 8,510	\$ 9,055
6937.005	S I-35, Pilot Knob Pump Station	22 MGD	South	2016	\$ 10,488	\$ 11,159
6937.006	S I-35, Segment 21 - Pilot Knob Reservoir 48-inch Water Main	48"	South	2013	\$ 660	\$ 703
6937.008	S I-35, Segment 6 - I 35 South of Onion Creek, 36-Inch Water Main	36"	South	2012	\$ 1,459	\$ 1,552
6937.009	S I-35, Seg. 13/14 - Pleasant Valley Ext., Rinard Crk to E Slaughter Ln, 42	42"	South	2013	\$ 1,837	\$ 1,955
6937.010	S I-35, Segment 17/18/19 - Slaughter Ln Ext to Thaxton, 48-inch Water Main	48"	South	2016	\$ 3,200	\$ 3,404
6937.011	S I-35, Segment 4 - I 35, N of FM 1626 to Onion Creek, 36-Inch Water Main	36"	South	2012	\$ 1,358	\$ 1,445
6937.012	S I-35, Segment 7 - I 35, north of FM 1327, 42-Inch Water Main	42"	South	2013	\$ 2,014	\$ 2,143
6937.013	S I-35, Segment 9.0 - FM 1327, I 35 to Bradshaw Rd, 42-Inch Water Main	42"	South	2016	\$ 2,935	\$ 3,123
6937.014	S I-35, Segment 9.1 - FM 1327 to Bradshaw Road north of FM 1327	42"	South	2016	\$ 3,126	\$ 3,326
6937.015	S IH-35 Transmission Main, Segment 18&19 - E Slaughter Ln, Marble Creek to Thaxton	48"	South	2010	\$ 317	\$ 337
6937.016	S I-35, Seg. 20.1/21 - Wm Cannon from McKinney Falls to Pilot Knob WTM	48"	South	2016	\$ 3,265	\$ 3,474
6937.017	S I-35, Seg. 2/5 - I 35 Slaughter and Onion Crk Crossings, 36-In Water Main	36"	South	2016	\$ 7,998	\$ 8,509
6937.018	S I-35, Segment 8 - I 35 Crossing North of FM 1327, 42-In Water Main	42"	South	2012	\$ 1,565	\$ 1,666
6937.019	S I-35, Segment 20.0 - McKinney Falls Pkwy, Thaxton to Wm Cannon, 48-Inch W	48"	South	2014	\$ 3,414	\$ 3,633
6937.020	S I-35, Segment 15 - Goodnight Ranch Ph I, 48-Inch Water Main	48"	South	2011	\$ 1,011	\$ 1,076
6937.021	S I-35, Segment 1 - I 35 Slaughter Ln to Slaughter Crk, 36-In Water Main	36"	South	2016	\$ 2,917	\$ 3,104
6937.022	S I-35, Seg. 11/12 - S. Pleasant Val. Ext. at Legends Way, 42-In Water Main	42"	South	2016	\$ 1,924	\$ 2,047
6937.023	S I-35, Segment10 - Bradshaw Rd, S of River Plantation Dr, 42-In Water Main	42"	South	2016	\$ 1,702	\$ 1,811
6937.024	S I-35, Segment 16 - Goodnight Ranch Phase II, 48-Inch Water Main	48"	South	2012	\$ 1,360	\$ 1,447
6937.030	S IH-35 Transmission Main, E Slaughter Ln ROW Acquisition	Sites of Seg. 17,18,19	South	2011	\$ 496	\$ 527

Subproject / Map ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost
City Construction						
3825.001	Southw est B Camp Ben McCullough Transmission Main	16"	Southw est B	1992	\$ 504	\$ 536
3859.001	Windmill Run Southw est B Transmission Main	36"	Southw est B	1990	\$ 1,962	\$ 2,087
4800.005	New Thomas Springs Reservoir	1.25 MGD	Southw est C	2001	\$ 2,322	\$ 2,471
4800.005	New Thomas Springs Reservoir	1.25 MGD	Southw est C	2001	\$ 25	\$ -
4800.010	Southw est C Pressure Zone Pump Station	8.2 MGD	Southw est C	2006	\$ 130	\$ -
4800.010	Southw est C Pressure Zone Pump Station	8.2 MGD	Southw est C	2006	\$ 5,731	\$ 6,098
4800.021	Southw est C Pressure Zone Transmission Main Ph 2	30"	Southw est C	2007	\$ 48	\$ -
4800.021	Southw est C Pressure Zone Transmission Main Ph 2	30"	Southw est C	2007	\$ 2,057	\$ 2,188
4800.022	Southw est C Pressure Zone Transmission Main Ph 1	30"	Southw est C	2007	\$ 5,546	\$ -
5335.001	Ullrich WTP 160 MGD Expansion	67 MGD Exp.	Ullrich Service	2011	\$ 109,123	\$ 116,107
5335.002	Ullrich Water Treatment Plant 160 MGD Expansion - Low Service Pump Station	67 MGD Exp.	Ullrich Service	2006	\$ 2,567	\$ 2,731
6683.002	Water Treatment Plant No. 4	50 MGD	Plant 4 Service	2017	\$ 2,053	\$ -
6683.002	Water Treatment Plant No. 4	50 MGD	Plant 4 Service	2017	\$ 99,682	\$ 106,062
6683.007	Water Treatment Plant No. 4 - Property Fencing	50 MGD	Plant 4 Service	2009	\$ 359	\$ 382
6683.009	Water Treatment Plant #4-Environmental Commissioning	50 MGD	Plant 4 Service	2017	\$ 1	\$ -
6683.009	Water Treatment Plant #4-Environmental Commissioning	50 MGD	Plant 4 Service	2017	\$ 2,831	\$ 3,012
6683.010	WTP 4-Plant Site Storm Water Facilities	50 MGD	Plant 4 Service	2011	\$ 3,327	\$ 3,540
6683.013	WTP4 Raw Water Pump Station Excavation and Stormw ater Facilities	50 MGD	Plant 4 Service	2012	\$ 3,435	\$ 3,654
6683.014	Water Treatment Plant No. 4 Raw Water Pump Station Facility	50 MGD	Plant 4 Service	2014	\$ 7,243	\$ 7,706
6683.018	Value Engineering	50 MGD	Plant 4 Service	2011	\$ 574	\$ 610
6683.019	Water Treatment Plant #4 - Construction Manager at Risk	50 MGD	Plant 4 Service	2015	\$ 26,451	\$ -
6683.019	Water Treatment Plant #4 - Construction Manager at Risk	50 MGD	Plant 4 Service	2015	\$ 262,982	\$ 279,812
6683.020	WTP4 Bullick Hollow Roadway Improvements	50 MGD	Plant 4 Service	2011	\$ 1,081	\$ 1,150
8702.003	Shaw Lane Sludge Facility Improvements	616,000 CY	Entire System	2017	\$ 5,428	\$ 5,775

Subproject / Map ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost
Developer Reimbursements						
3353.022	AMAX Self-Storage Reimbursement	24"	Northw est C	2007	\$ 169	\$ 180
3353.027	Canyon Creek Subdivision Reimbursement	24"	Northw est C	2002	\$ 1,100	\$ 1,170
3041.001	Davis Springs Service Extension Reimbursement	24"	Northw est B	1997	\$ 941	\$ -
3353.018	Avery Ranch Service Extension	24/36/48", 3 MG	Northw est B	2015	\$ 3,756	\$ -
3353.018	Avery Ranch Service Extension	24/36/48", 3 MG	Northw est B	2015	\$ 9,760	\$ 10,385
3353.038	Stone Hedge Service Extension	24"	Northw est B	2011	\$ 8,931	\$ 9,502
3353.094	Pearson Ranch - RRISD (SER 2869 and 2870)	24"	Northw est B	2019	\$ 2,638	\$ 2,807
3353.019	IBM/Tivoli Service Extension	16"	Northw est A	2002	\$ 341	\$ -
3353.032	How ard Lane Service Extension	24/16"	Northw est A	2000	\$ 220	\$ -
3353.065	Schultz 45 Acre Tract Water--Wells Branch Commerce Park	24"	Northw est A	2013	\$ 304	\$ 323
2090.003	Decker Lake 24-inch Woodlands Transmission Main (SER 1745)	24"	North	1996	\$ 1,148	\$ 1,221
3353.007	Jourdan's Crossing Service Extension	24"	North	2001	\$ 194	\$ -
3353.009	Dell 24-inch Water Reimbursement	24"	North	1998	\$ 1,769	\$ -
3353.028	Wild Horse Ranch	24/36"	North	2018	\$ 6,015	\$ 6,400
3353.033	Pioneer Crossing Service Extension (SER 1825), Ph II	24"	North	2004	\$ 1,243	\$ 1,323
3353.042	Parmer Park Service Extension	24"	North	2002	\$ 871	\$ 926
3353.099	Pioneer Hill	16"	North	2015	\$ 1	\$ 1
5028.002	Robert Mueller Municipal Airport Reimbursement	16/24"	North	2007	\$ 1,119	\$ 1,190
5028.004	Mueller Water Improvements Reimbursement (SER 2277), Ph II	16"	North	2008	\$ 6,106	\$ 6,496
5815.002	Triangle - Infrastructure Incentives	16/24"	North	2005	\$ 413	\$ 440
3353.049	Robertson Hill Development	16"	Central	2008	\$ 643	\$ 685
3353.052	Del Valle Junior High Number 2	24"	Central	2005	\$ 349	\$ 371
3353.059	Pearce Lane Tract	36"	Central	2004	\$ 2,598	\$ 2,765
3353.069	University Neighborhood Overlay District	24"	Central	2007	\$ 1,828	\$ 1,945
3353.095	Whisper Valley_Indian Hills	48"	Central	2024	\$ 2,283	\$ 2,429
3353.096	Formula One United States	24/36"	Central	2014	\$ 4,430	\$ 4,714
3353.100	71 Commercial	24"	Central	2014	\$ 1,098	\$ 1,168
3353.106	Eastside Village (SER-3393) 12-Inch Water Line Improvements	12"	Central	2015	\$ 0	\$ 0
3353.062	Zachary Scott Tract Service Extension	24"	South	2009	\$ 1,240	\$ 1,320
3353.072	Goodnight Ranch	24"	South	2016	\$ 2,442	\$ 2,599
3353.074	Alexan Onion Creek	24/36"	South	2010	\$ 884	\$ 940
3353.025	Travis County West Developer Reimbursement Southw est C	2.1 MGD PS, 16"	Southw est C	2003	\$ 1,680	\$ 1,788
3353.008	Lantana Service Extension Developer Reimbursement Southw est B&C	14 MGD PS	Southw est B/C	2002	\$ 3,254	\$ -

Subproject / Map ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost
Roadway Utility Betterments						
3212.064	Harris Branch Parkway/Cameron Rd. Water Lines Relocation	12"	North	2012	\$ 168	\$ 178
3212.123	CTRMA/TxDOT Utility Relocation: US290E Manor Expressway	16"/24"	North	2016	\$ 525	\$ -
3212.123	CTRMA/TxDOT Utility Relocation: US290E Manor Expressway	16"/24"	North	2016	\$ 483	\$ 514
3212.151	TxDOT IH 35 Waterline Relocation: Rundberg To 290 East Segment	12"	North	2019	\$ 597	\$ -
3212.133	Travis County Utility Relocation: FM 969 (Phase I): Decker Lane to FM 973	16"	Central	2019	\$ 1,739	\$ -
3212.133	Travis County Utility Relocation: FM 969 (Phase I): Decker Lane to FM 973	16"	Central	2019	\$ 1,004	\$ 1,068
3212.136	TxDOT Utility Relocation: US 183 Bergstrom Expressway (US 290 to SH 71)	24"/16"/12"	Central	2018	\$ 3,349	\$ -
3212.136	TxDOT Utility Relocation: US 183 Bergstrom Expressway (US 290 to SH 71)	24"/16"/12"	Central	2018	\$ 4,966	\$ 5,284
3212.104	Manchaca Rd-Ravenscroft to FM 1626	16"	South	2013	\$ 2,295	\$ 2,442
Contract Revenue Bond Projects						
82.224	82/22-40 Howard Lane Reservoirs (NCAGC-MUD)	20 MG	North	1987	\$ 3,824	\$ 4,069
1001.001	Davis Lane Reservoir SO-MUD (Add 10 to 20 MG)	10 MG	South	1988	\$ 1,819	\$ 1,935
85.2277	85/22-77 Southwest B 36" Transmission Main (CC#3-MUD)	36"	Southwest B	1988	\$ 1,130	\$ 1,202
85.2278	85/22-78 Southwest B Pump Station (CC#3 MUD)	22 MGD	Southwest B	1988	\$ 2,290	\$ 2,437
1000.001	Southwest B Reservoir #1 (CC#3-MUD)	2 MG	Southwest B	1988	\$ 1,903	\$ 2,025
1988.0628	Southwest B 16" Trans Main (CC#3-MUD)	16"	Southwest B	1988	\$ 197	\$ 210
85.2265	Southwest A Site Development CC#3-MUD	n/a	Southwest A/B/C	1988	\$ 266	\$ 283
85.2276	85/22-65 Davis Lane Pump Station (VWO-MUD)	56 MGD	Southwest A/B/C	1988	\$ 5,758	\$ 6,127
85.2276	85/22-76 SWA Storage Tank (Slaughter Lane, MR-MUD)	6 MG	Southwest A/B/C	1988	\$ 1,256	\$ 1,336
85.2279	85/22-79 SWA TM Phases 1,1A,2,3,4A,4B (MR-MUD)	48"	Southwest A/B/C	1987	\$ 4,501	\$ 4,789
1987.0508	Davis Lane TM (PS discharge, SO-MUD)	48"	Southwest A/B/C	1987	\$ 220	\$ 234
1987.0627	SWA 48" Interconnector (MR-MUD)	48"	Southwest A/B/C	1987	\$ 1,016	\$ 1,081
Totals					\$1,118,414	\$1,124,924
Total Cost to Build w / Interest						\$2,243,339



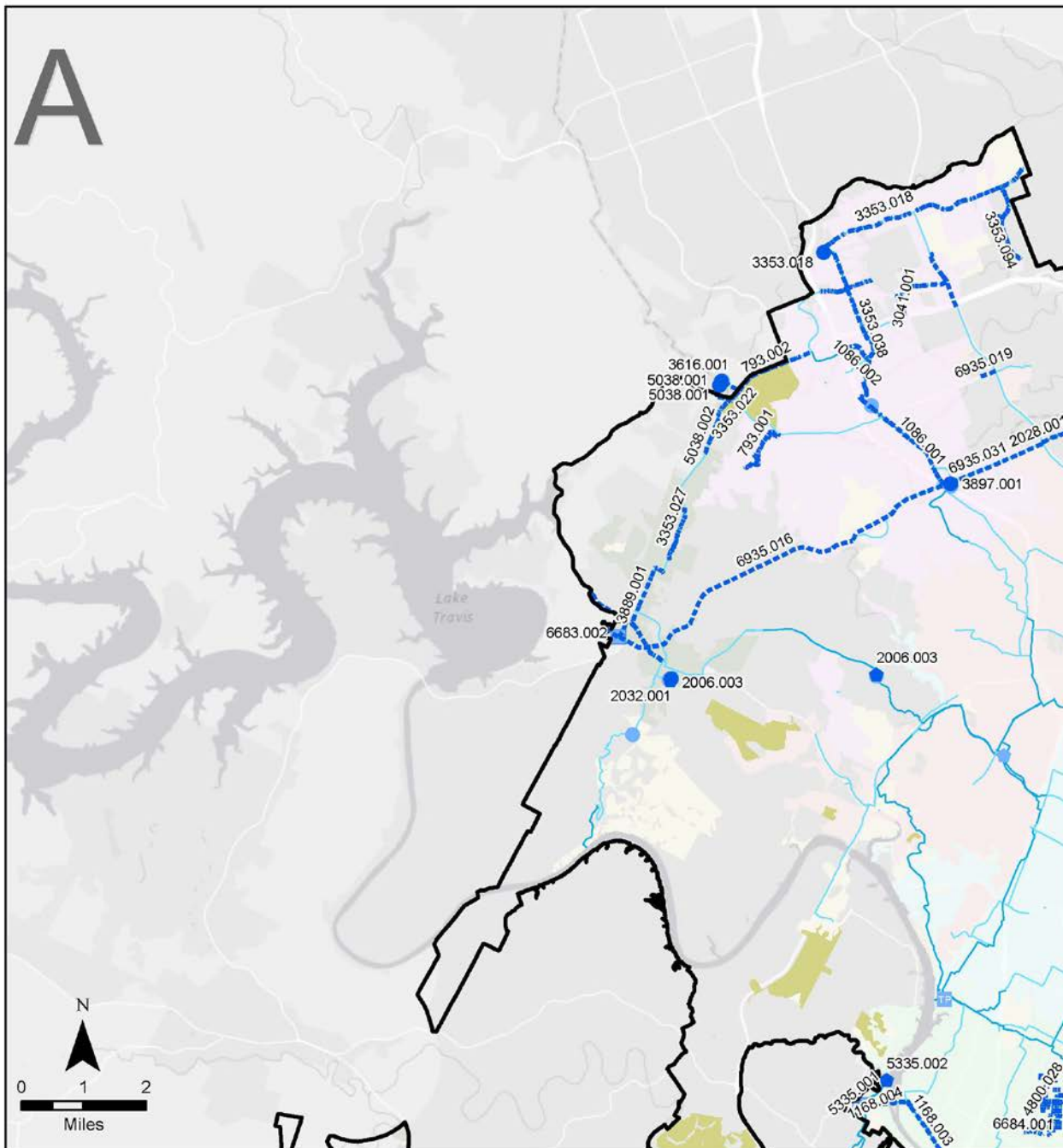
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| 2018 Impact Fee Boundary Update | Existing Pump Station |
| CIP Pump Station | Existing Reservoir |
| CIP Reservoir | Existing Water Treatment Plant |
| CIP Water Treatment Plant | Existing Water Pipes 24"-30" |
| CIP Water Pipes | Existing Water Pipes 36"-108" |

Impact Fee CIP Major Water Facilities



Austin Water
Infrastructure Management Division
Prepared 10/27/2017

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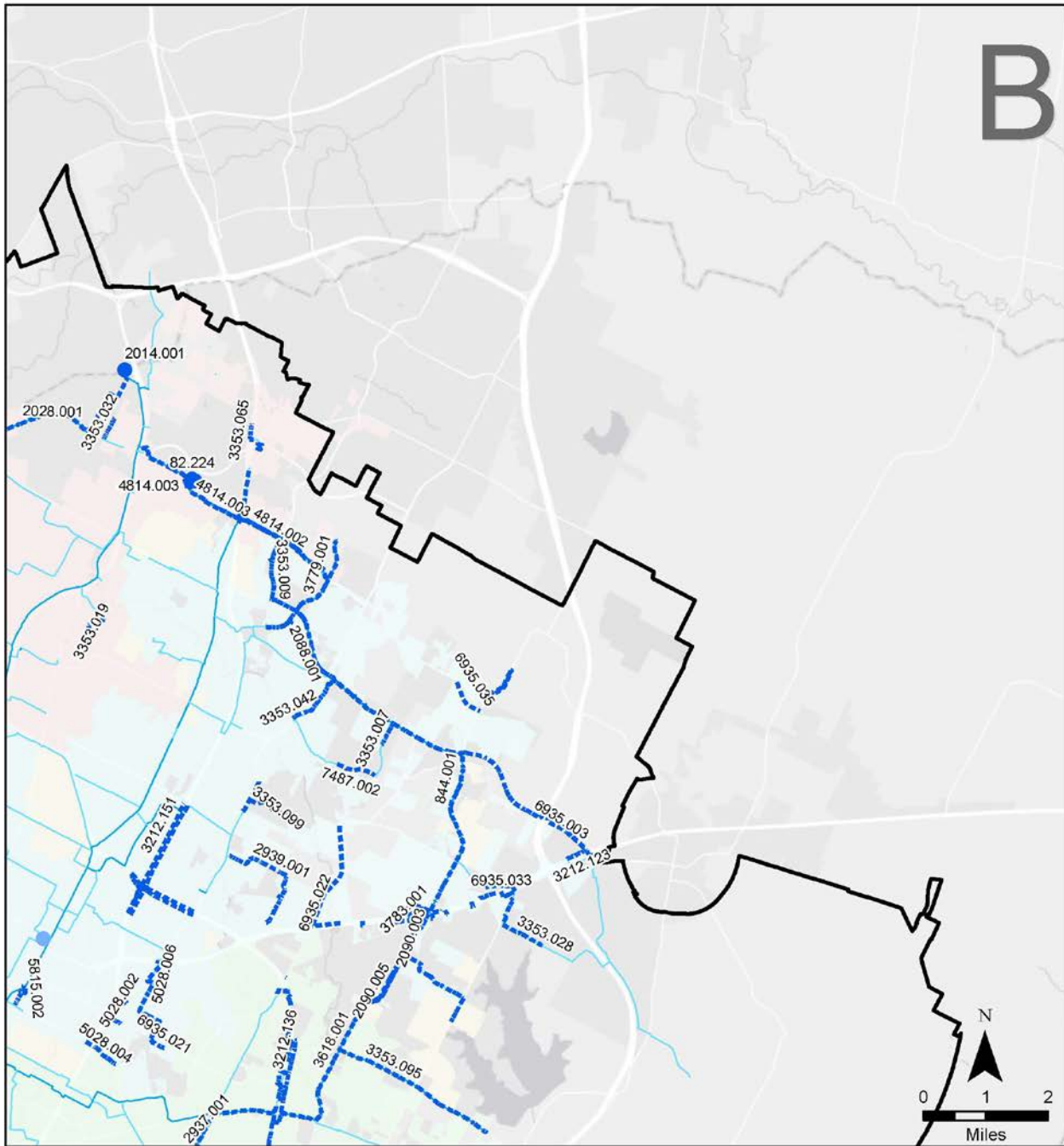
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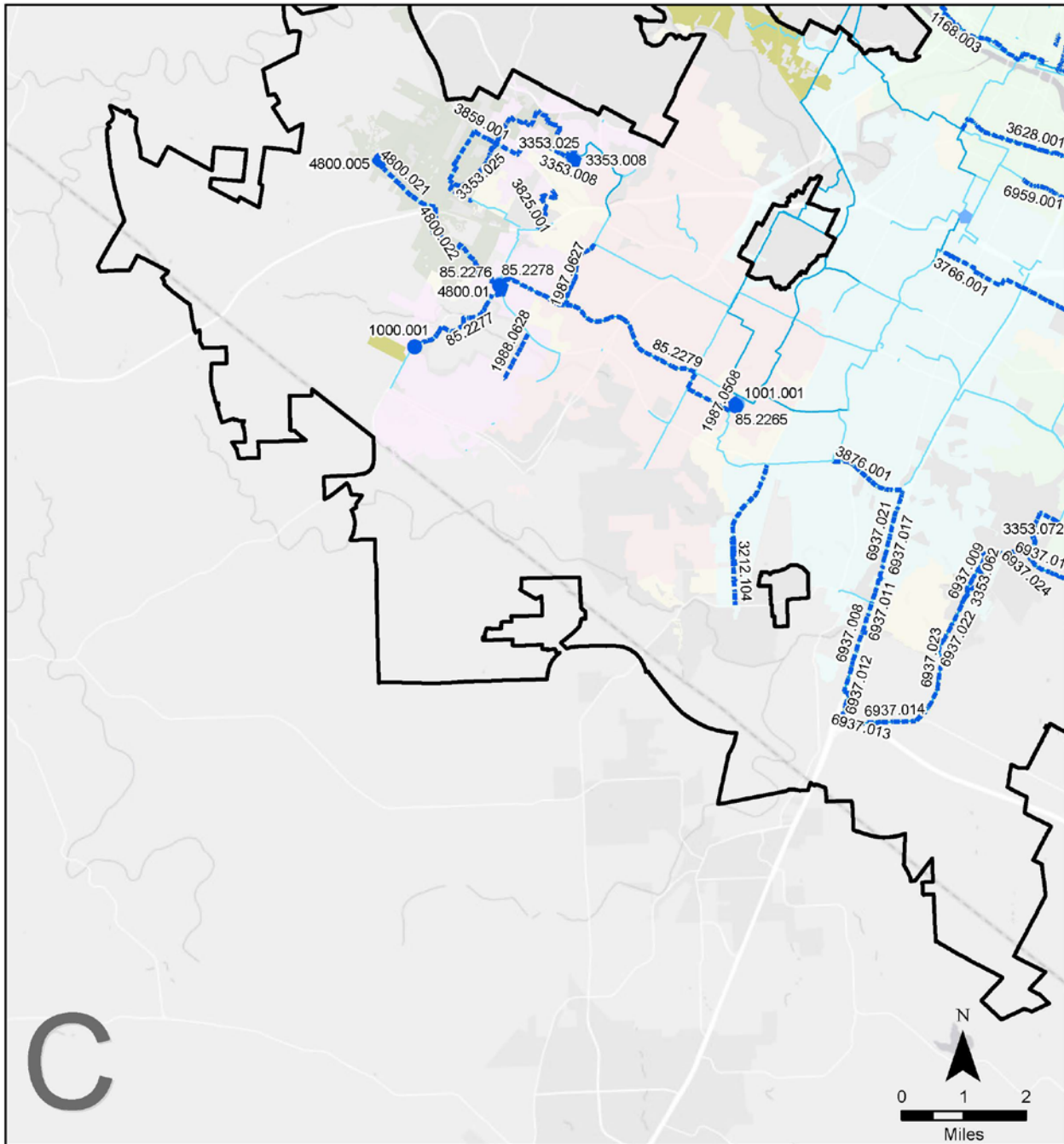
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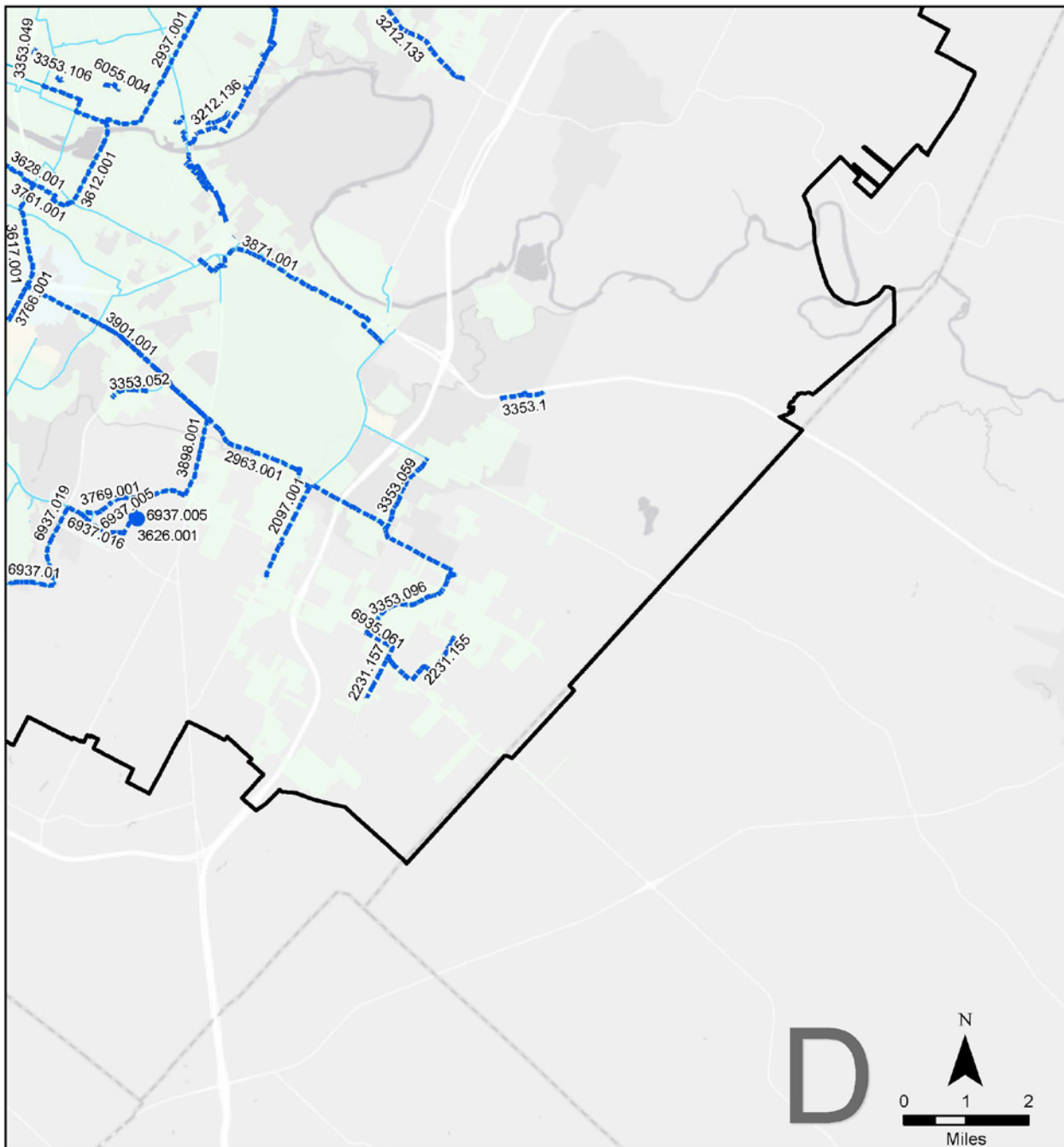
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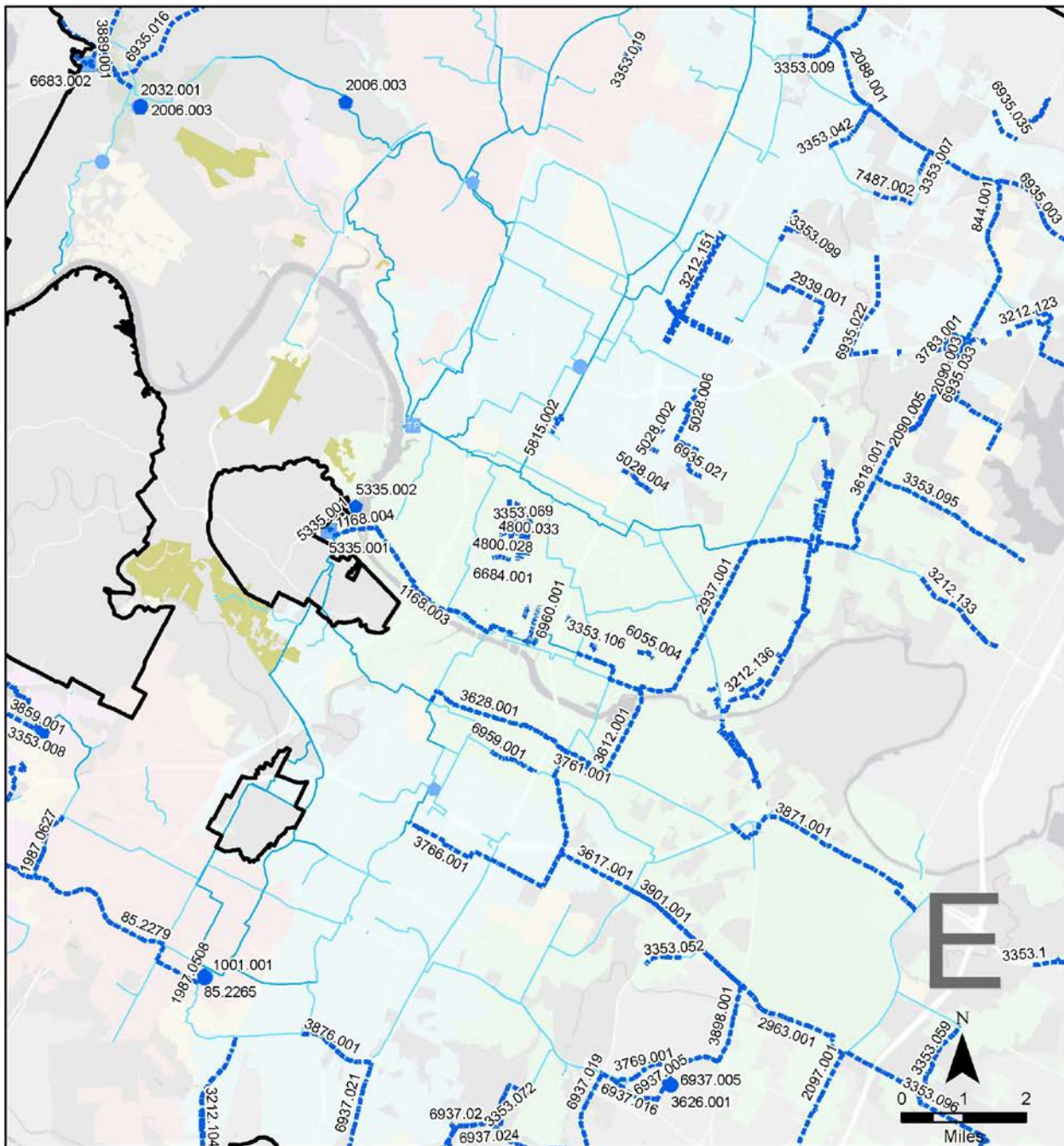
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- ★ CIP Pump Station
- CIP Reservoir
- TP CIP Water Treatment Plant
- CIP Water Pipes
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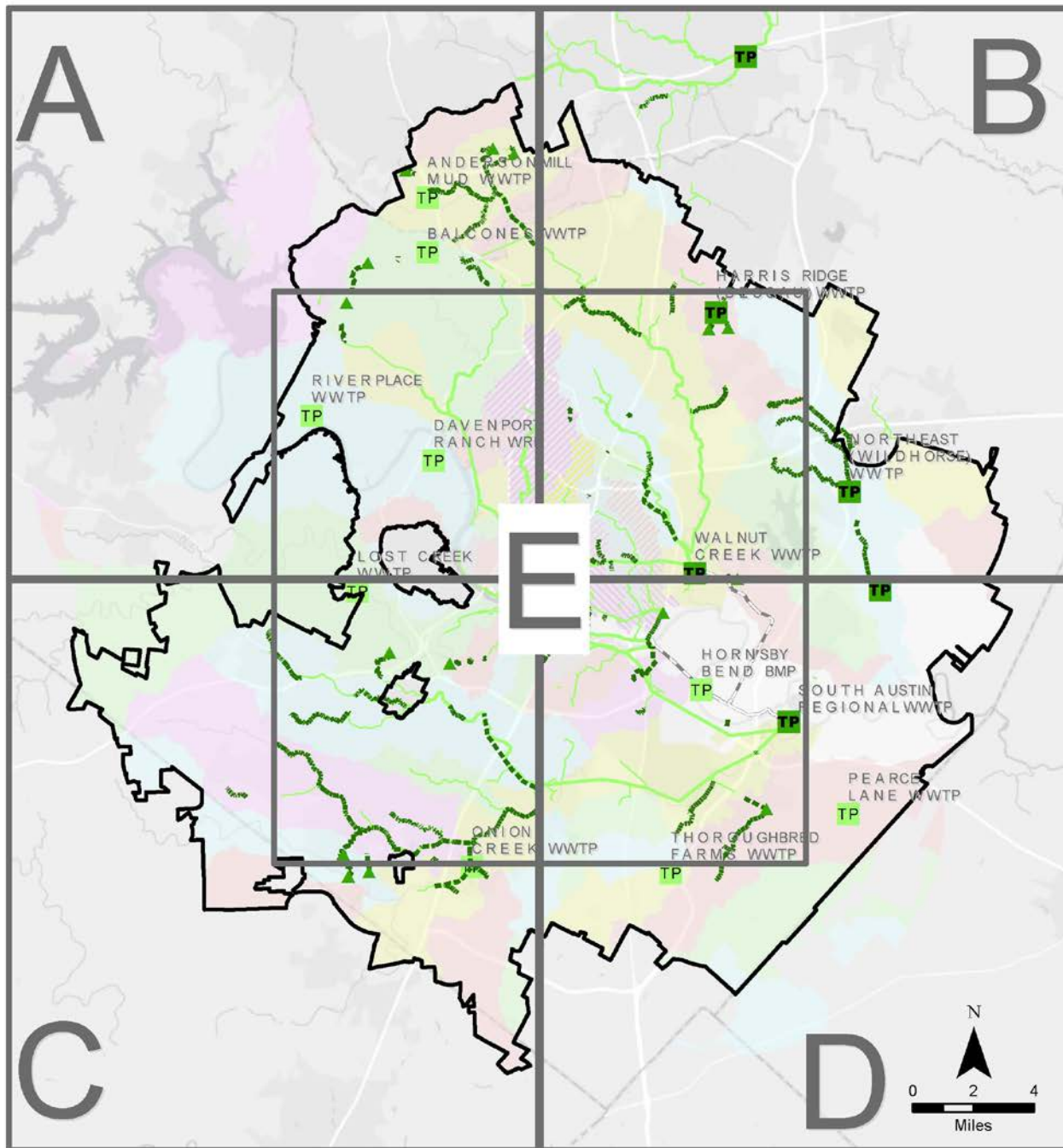
Table 2 Wastewater Impact Fee Projects
(Costs in 1000s)

SubProjectID / Map ID	Project Description	Size	Drainage Basin	Completion Date	Cost to Build	Interest Cost
City Construction						
3168.076	South Area Lift Station Improvements: Barton Creek Plaza	1MGD	Barton	2019	1,125	0
3168.139	Travis Country Lift Station Improvement - Pump Installation	2400 gpm	Barton	2017	0	0
3168.109	Marbridge Lift Station Improvements	430 gpm	Bear	2016	27	0
3168.138	Southland Oaks Wet Well Conversion	2100 gpm	Bear	2018	100	0
3168.057	Rock Harbour Lift Station Improvements	6200 gpm	Bull	2021	2,628	2,796
3168.085	Northwest Lift Station Improvements: Boulder Lane Lift Station	14"FM/1950gpmLS	Bull	2023	1,434	0
6943.022	Canyon Creek Interceptor - Upsize	18"/24"	Bull	2019	105	0
6943.029	Barrington Way Forcemain Reroute and Gravity System Upgrade	15"	Bull	2017	2,616	0
6943.032	Four Points Center Forcemain Improvements	12" FM	Bull	2018	665	708
6943.041	Barrington Oaks Downstream Gravity Improvements Phase 2	15"	Bull	2024	4,020	4,277
6943.025	Hergotz-Lockheed Wastewater Improvements	48"	Carson	2020	2,662	2,832
6943.034	Carson Creek Basin Wastewater Line Improvements	18"/24"	Carson	2019	2,558	2,722
3168.054	Govalle Wastewater Flow Diversion	36" FM	Colorado River	2020	2,917	0
4769.008	Wildhorse Northwest Interceptor Phase 2	12"/18"/21"/24"/27"/30"	Decker/Gilleland	2013	2,548	0
3168.037	Pearce Lane Lift Station Upgrade (900 to 1800 gpm)	900 gpm exp	Dry South	2014	54	0
3168.059	South Area Lift Station Improvements: Pearce Lane Upgrade & New Force Main	4500 gpm	Dry South	2021	2,970	3,160
4769.002	NE AREA INTERIM WWTP	20"FM/30"gravity/0.75 MGD plant	Gilleland	2008	8,752	9,312
4769.006	Northeast Service Area North Interceptor (Wildhorse North Interceptor)	8"/18"/36"	Gilleland	2005	2,329	2,478
4769.015	Wildhorse North Interceptor Ext No. of 290	42"	Gilleland	2015	3,593	3,823
7265.004	Northeast WWTP Expansion to 1.5 MGD	0.75 mgd exp	Gilleland	2021	7,705	8,199
5481.001	Downtown Wastewater Tunnel	42"/48"/54"/78"/90"	Govalle/SAR	2015	49,474	52,640
5481.001	Downtown Wastewater Tunnel	42"/48"/54"/78"/90"	Govalle/SAR	2015	8,205	0
6943.043	Harpers Branch Creek Interceptor	15" or 18" depending on slope	Harpers Branch	2019	2,596	0
3353.102	Fort Dessau	18"/24"/FM/750gpmLS	Harris Branch	2016	1,417	1,508
4769.010	Harris Branch Interceptor Lower A	12"/30"/36"	Harris Branch	2018	7,280	7,746
7265.002	Purchase of Dessau Utilities	.5 mgd plant/4100 gpm LS/16" FM/284 gpm LS/6"FM	Harris Branch	2006	2,061	0
7265.014	Dessau WWTP Expansion to 0.99 MGD	.49 mgd EXP	Harris Branch	2021	5,345	5,687
4769.018	Harris Branch Interceptor Lower B	36"	Harris Branch/Gilleland	2016	872	927
4769.018	Harris Branch Interceptor Lower B	36"	Harris Branch/Gilleland	2016	5,533	0
6943.004	Parmer Lane Interceptor	42"	Lake Creek/Rattan	2020	32,531	34,613
6943.004	Parmer Lane Interceptor	42"	Lake Creek/Rattan	2020	1,679	0
4926.021	ACWP - Little Walnut/Buttermilk @ 290 & 183	42"	Little Walnut	2010	1,931	2,054
4926.023	ACWP-Little Walnut/Buttermilk @ Centre Creek	42"	Little Walnut	2009	4,732	5,035
4926.028	ACWP - Little Walnut/Buttermilk - South	8"/42"/60"	Little Walnut	2009	11,069	11,778
4926.028	ACWP - Little Walnut/Buttermilk - South	8"/42"/60"	Little Walnut	2009	5,753	0

SubProjectID / Map ID	Project Description	Size	Drainage Basin	Completion Date	Cost to Build	Interest Cost
City Construction						
3168.043	Boggy Creek LS Upgrade	25 MGD	Lower Boggy	2016	4,048	4,307
3168.077	Gonzales Lift Station Abandonment	18"	Lower Boggy	2018	739	0
4197.001	ONION CRK INTRCPTR	54"	Onion	1988	1,965	2,090
4292.001	ONION CK INTER EXIST-BOGGY CK	54"	Onion	1989	2,351	2,501
6937.003	So. IH35 W/WW Infrastructure Improvs PMC	PMC	Onion	2013	3,752	3,992
6937.003	So. IH35 W/WW Infrastructure Improvs PMC	PMC	Onion	2013	644	0
6937.025	S I-35, Onion Creek Wastewater Interceptor - Rinard to Slaughter (N Tunnel)	54"	Onion	2017	13,501	14,366
6937.026	S I-35, Onion Creek Golf Course WW Int - I 35 to Rinard (South Tunnel)	42"	Onion	2016	10,849	11,544
6937.027	S I-35, Onion Creek Wastewater Tie-in Line - Phase 1	24"	Onion	2012	2,409	2,564
6943.035	FM 973 Wastewater Line Improvements	15"/18"	Onion	2018	4,463	0
4926.097	ACWP Pedernales (Line Y only)	36"	Pedernales	2012	4,846	5,156
3353.062	Zachary Scott Tract SER (both city const. and dev design)	36"	Rinard	2012	5,937	6,317
3353.062	Zachary Scott Tract SER (both city const. and dev design)	36"	Rinard	2012	2,310	0
3333.001	SAR Expansion & Improvements Project (50 to 75 mgd)	25 mgd exp	SAR WWTP	2006	19,067	20,287
3333.005	SAR Lift Station Interconnect Tunnel	25 mgd exp	SAR WWTP	2006	3,941	4,194
3333.006	SAR Train C South	25 mgd exp	SAR WWTP	2006	23,217	24,703
3333.006	SAR Train C South	25 mgd exp	SAR WWTP	2006	6,170	0
3333.007	SAR Train C North	25 mgd exp	SAR WWTP	2006	25,606	27,244
3333.007	SAR Train C North	25 mgd exp	SAR WWTP	2006	2,826	0
3333.008	SAR New Electrical Substation and Miscellaneous Areas	25 mgd exp	SAR WWTP	2007	13,238	14,085
6943.055	Southland Oaks Wastewater Improvements	30"	Slaughter	2019	1,027	1,093
6943.045	Upper Boggy Creek Wastewater Line Improvements	18"	Upper Boggy	2022	1,400	0
4926.037	ACWP - Shoal Creek WW Improvements / 29th to 34th St.	8"/12"/66"	Upper Shoal	2006	12,270	13,055
6943.053	Burrell Drive Wastewater Improvements	12"	Upper Shoal	2020	1,148	1,222
3168.039	Waters Park Wastewater Relief Main	36"	Walnut	2018	7,228	7,690
3023.003	Walnut Creek WWTP	15 mgd exp	Walnut WWTP	2004	20,474	21,784
3023.017	Walnut Creek WWTP 75 MGD Upgrade	15 mgd exp	Walnut WWTP	2004	17,609	18,735
3023.017	Walnut Creek WWTP 75 MGD Upgrade	15 mgd exp	Walnut WWTP	2004	10,002	0
4579.001	WALNUT CREEK WWTP, PH III	15 mgd exp	Walnut WWTP	2004	15,483	16,474
6943.026	Barton Creek Plaza Lift Station Downstream Improvements	15"	West Bouldin	2019	3,199	0
4221.001	WILLIAMSON CREEK INT PH II	42"	Williamson	1989	820	872
4534.001	OAK HILL BR. OF WMSON.CRK.INTER	30"	Williamson	1989	1,533	1,631
6943.031	Williamson Creek Wastewater Interceptor	66"/72"	Williamson	2023	42,341	45,051

SubProjectID / Map ID	Project Description	Size	Drainage Basin	Completion Date	Cost to Build	Interest Cost
Developer Reimbursements						
3353.054	Marbridge Farms Wastewater	350 gpm LS	Bear	2007	217	231
3353.071	Rancho Alto Ventures	481 gpm LS, FM	Bear	2008	442	470
3351.001	Cullen/Southland Acquisition	12"FM/18"	Bear/Slaughter	1997	761	0
3168.024	Balcones LS Relief - Phase I & 3A	8"	Bull	2005	612	651
3353.013	Metro Center Services Extension (#1537)	24"	Carson	2000	151	0
3353.028	Wild Horse Ranch	8"/12"/18"/21"/24"/27"/36"	Decker/Gilleland	2018	4,076	4,337
3353.096	Formula One United States	30"	Dry South	2016	6,267	0
3353.103	Moore's Crossing MUD Lift Station Interceptor WW Service Extension Plan	21"	Dry South	2017	75	80
3353.105	Finspeed 30-Inch Offsite Wastewater Line	30"	Dry South	2018	303	322
3353.067	Austin Blue Sky Investments, Inc. SER 2271 (Quickstream Lift Station)	12"Gravity/12"FM/1000gpmLS	Elm Creek	2006	680	724
3353.076	Wildhorse Addition	12"/18"	Gilleland	2009	793	843
3353.077	Scots Glen	18"	Gilleland	2009	1	1
3353.077	Scots Glen	18"	Gilleland	2009	844	0
3353.095	Whisper Valley Public Improvement District	30"Gravity/LS/0.1 mgd TP	Gilleland	2024	2,611	2,778
3353.101	Bellingham Meadows/Wm. Wallace Way Lift Station Wastewater Relief Main	15"/18"	Gilleland	2017	2,339	2,489
3041.001	Davis Springs Reimbursement	21"Gravity/16"FM/3600gpmLS #1	Lake Creek	1996	1,476	0
3041.001	Davis Springs Reimbursement	21"Gravity/16"FM/3600gpmLS #1	Lake Creek	1996	566	603
3168.024	Balcones LS Relief - Phase I & 3A	8"/12"/18"/24"	Lake Creek	2005	414	440
3168.024	Balcones LS Relief - Phase I & 3A	8"/12"/18"/24"	Lake Creek	2005	749	0
3168.029	Balcones LS Relief - Phase IIIC	18"/24"	Lake Creek	2002	1,577	1,678
3353.091	Pearson Avery Ranch	12/24/FM/1100gpmLS	Lake Creek	2016	2,827	3,008
3353.093	Lakeline Condos-Gencap Partners SER 2846	8"/15" gravity/10"FM/1100gpmLS	Lake Creek	2014	1,341	1,427
5028.005	RMMA Redevelopment South WW Improvements (SER 2281)	15"	Lower Tannehill	2008	1,301	1,385
3353.049	Robertson Hill Development	12"	Lower Waller	2008	693	738
3353.084	Legends Way	30"	Rinard	2016	1,905	2,027
3353.016	Akin High School Reimbursement	18"	Slaughter	2000	459	0
5028.003	RMMA-Airport Rd WW Improvs Phase Two (SER 2279)	15"/18"/24"	Upper Boggy	2009	2,011	2,140
5028.007	RMMA Redevelopment Catellus SER #2263	12"/15"	Upper Boggy	2012	447	476
5028.007	RMMA SE WW Improvements (SER 2282)	15"/30"	Upper Tannehill	2012	2,539	0
5028.007	RMMA SE WW Improvements (SER 2282)	15"/30"	Upper Tannehill	2012	3,091	3,289
3353.007	Jourdan's Crossing Service Extension (Samsung)	12"/18"/36"/48"	Walnut	1998	2,406	0
3353.011	Dell 18	18"	Walnut	2000	652	0
3353.112	Del Curto Road Wastewater Improvements (SER-3486R2)	15"	West Bouldin	2017	0	0
3353.006	Travis Country Service Extension	21"	Williamson	1997	41	43

SubProjectID / Map ID	Project Description	Size	Drainage Basin	Completion Date	Cost to Build	Interest Cost
Capital Investment in Brushy Creek Regional Wastewater System						
6943.033	Brushy Creek WW Improvements-Southwest Interceptor/Lake Creek Interceptor	36"	Brushy Creek	2016	998	1,062
7265.040	Brushy Creek Regional Wastewater Treatment Plant Expansion Participation	3 mgd exp	Brushy Creek	2023	20,700	22,025
Roadway Utility Betterment Projects						
3212.151	TxDOT IH 35 Waterline Relocation: Rundberg To 290 East Segment	8"/12"/18"	Buttermilk	2019	310	0
3212.057	TxDOT Utility Relocation: FM 973 @ Colorado River	10" FM	Colorado River	2017	1,557	1,656
3212.136	TxDOT Utility Relocation: US 183 Bergstrom Exprway (US 290 to SH 71)	24"/30"	Lower Boggy/Colorado/Carson	2019	5,260	5,597
3212.137	TxDOT Utility Relocation:SH 71: East of US 183 to Onion Crk-Toll Road	15"	Onion	2018	1,584	1,685
3212.116	Hwy 290 & Airport Blvd WWL Relocation	15"	Upper Tannehill	2014	390	415
Contract Revenue Bond Projects						
Circle C MUD #3 Slaughter Creek Facilities						
8223.131	North Bank Upper Slaughter Cr.Int. A&B CC#3 MUD	36"	Slaughter	1988	1,650	1,756
8223.132	Slaughter Creek Interceptor Phases 1, 2A & 2B CC#3 MUD	48"/54"	Slaughter	1990	9,280	9,874
Circle C MUD #4 Slaughter Creek Facility						
89.0506	South Branch Interceptor and Extension CC#4 MUD	21"/30"	Slaughter	1988	1,295	1,378
Maple Run at Austin MUD Williamson Creek Facility						
85.0777	Williamson Creek 30" WW Interceptor MR-MUD	30"	Williamson	1989	500	532
North Austin MUD #1 27.7669	Lake Creek Wastewater System Improvements Contracts 1&2 (LS at capacity)	30"/36"/42"/48"	Lake Creek	1989	3,627	3,859
North Central Austin Growth Corridor MUD #1 Walnut Creek Facilities						
23.7642	Upper Walnut Creek Int Phases 3A,3B,4&5 NCAGC-MUD	12"/16"/30"/36"/42"/48"	Walnut	1987	6,253	6,653
Southland Oaks MUD Onion Creek Facility						
87.0704	Onion Creek Int Phase 3 (Slaught. To Boggy) SO-MUD	54"	Onion	1988	2,935	3,123
Southland Oaks MUD Slaughter Creek Facilities						
8223.132	Slaughter Creek Interceptor 1 & 2 SO-MUD	48"	Slaughter	1990	701	746
8223.134	Slaughter North Branch Interceptor SO-MUD	30"	Slaughter	1990	1,595	1,697
8223.135	Slaughter Tunnel SO-MUD	54"	Slaughter	1988	3,442	3,662
Village at Western Oaks MUD						
88.0553	North Williamson Creek Int & Easements VWO MUD	42"	Williamson	1989	3,097	3,295
85.0836	South Williamson Trunk Phases 1 and 2 VWO-MUD	15"/24"	Williamson	1989	919	978
Totals					586,458	533,424
					Total Cost to Build w/Interest	1,119,882

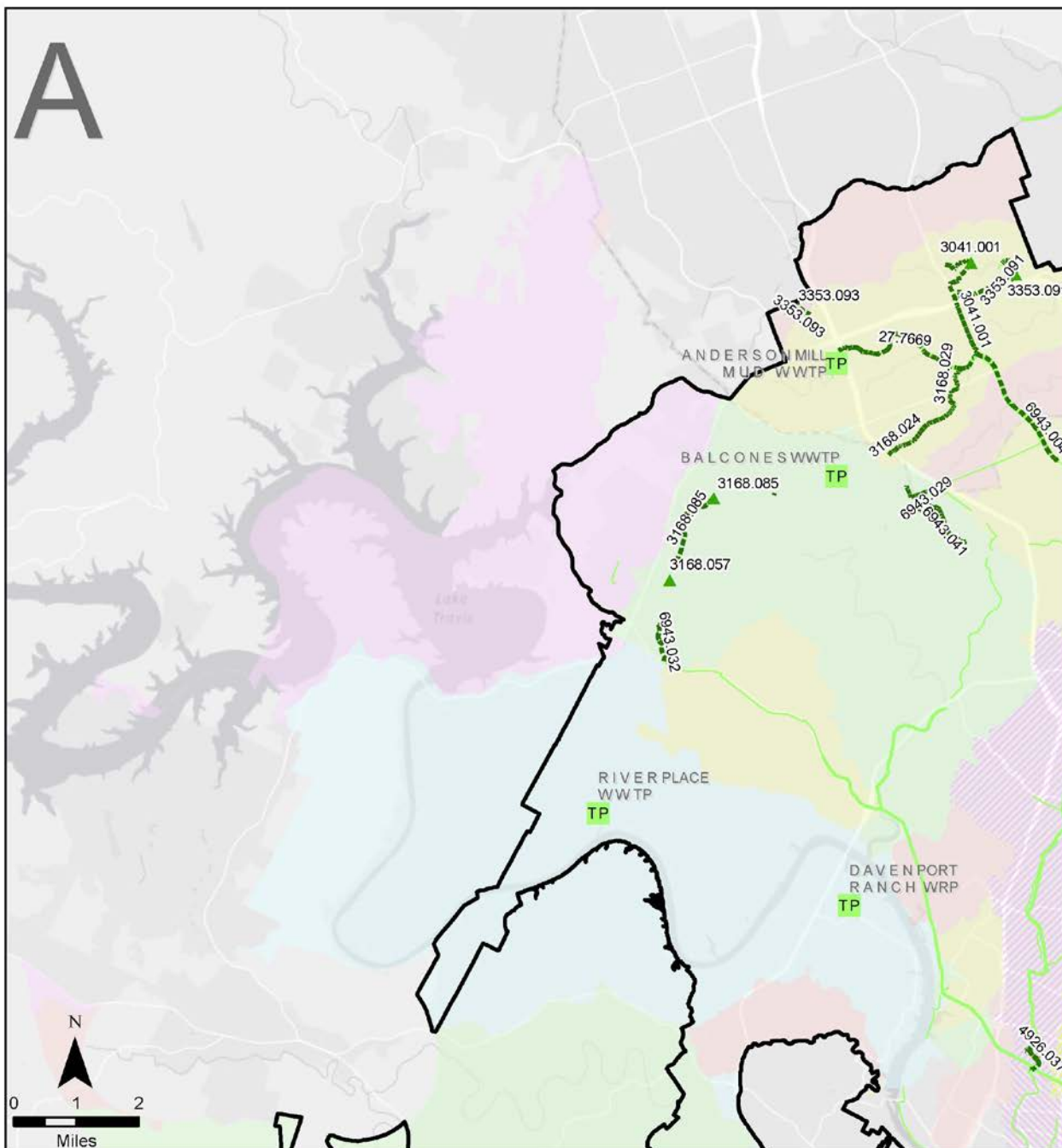


Impact Fee CIP Major Wastewater Facilities



Austin Water
Infrastructure Management Division
Prepared 10/30/2017

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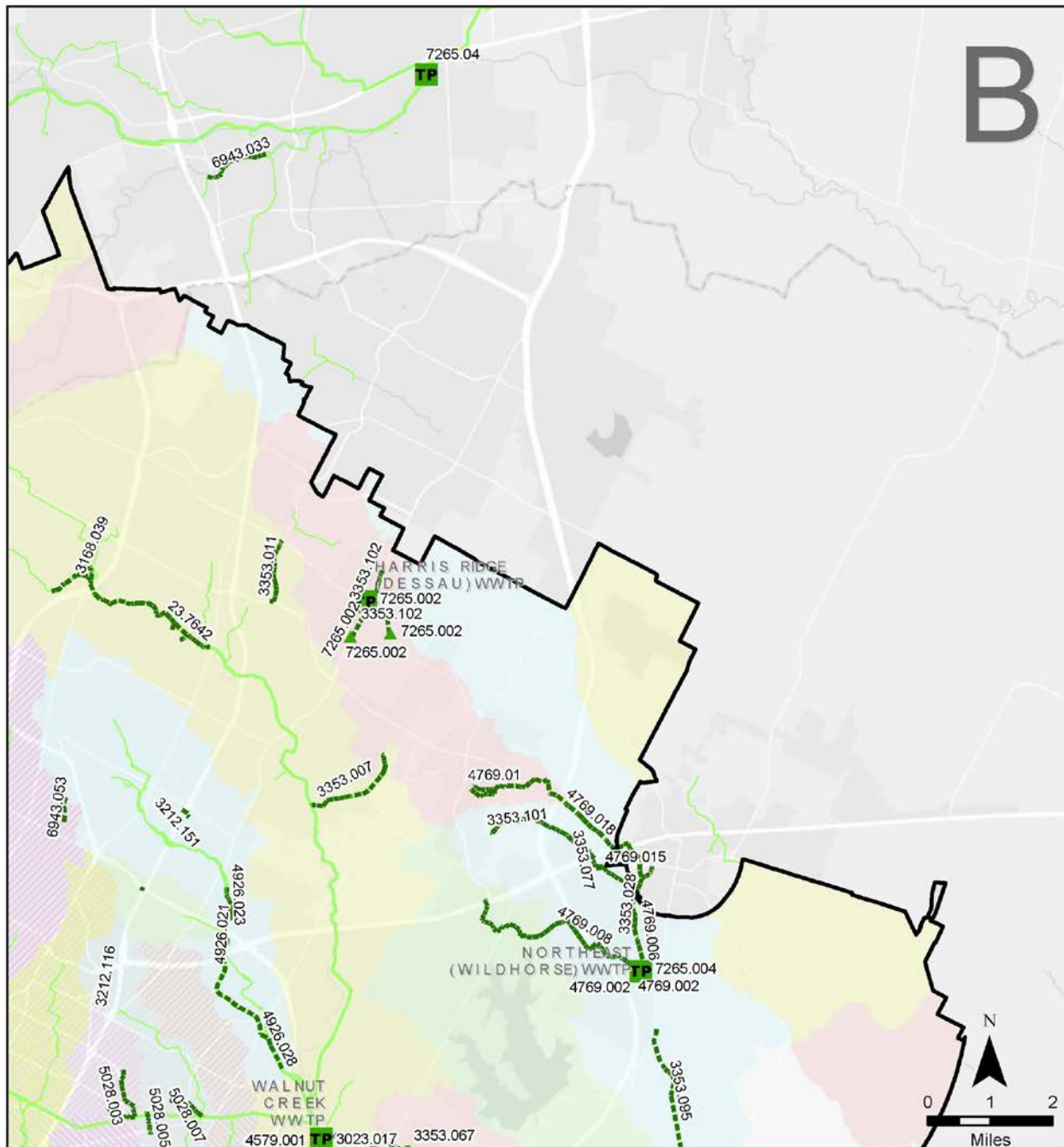
- 2018 Impact Fee Boundary Update
- CIP Lift Station
- CIP WW Treatment Plant
- CIP Wastewater Pipes
- Existing City WW Treatment Plant
- Existing Wastewater Pipes 24"-36"
- Existing Wastewater Pipes 42-60"
- Existing Wastewater Sludge Line

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Impact Fee CIP Major Wastewater Facilities



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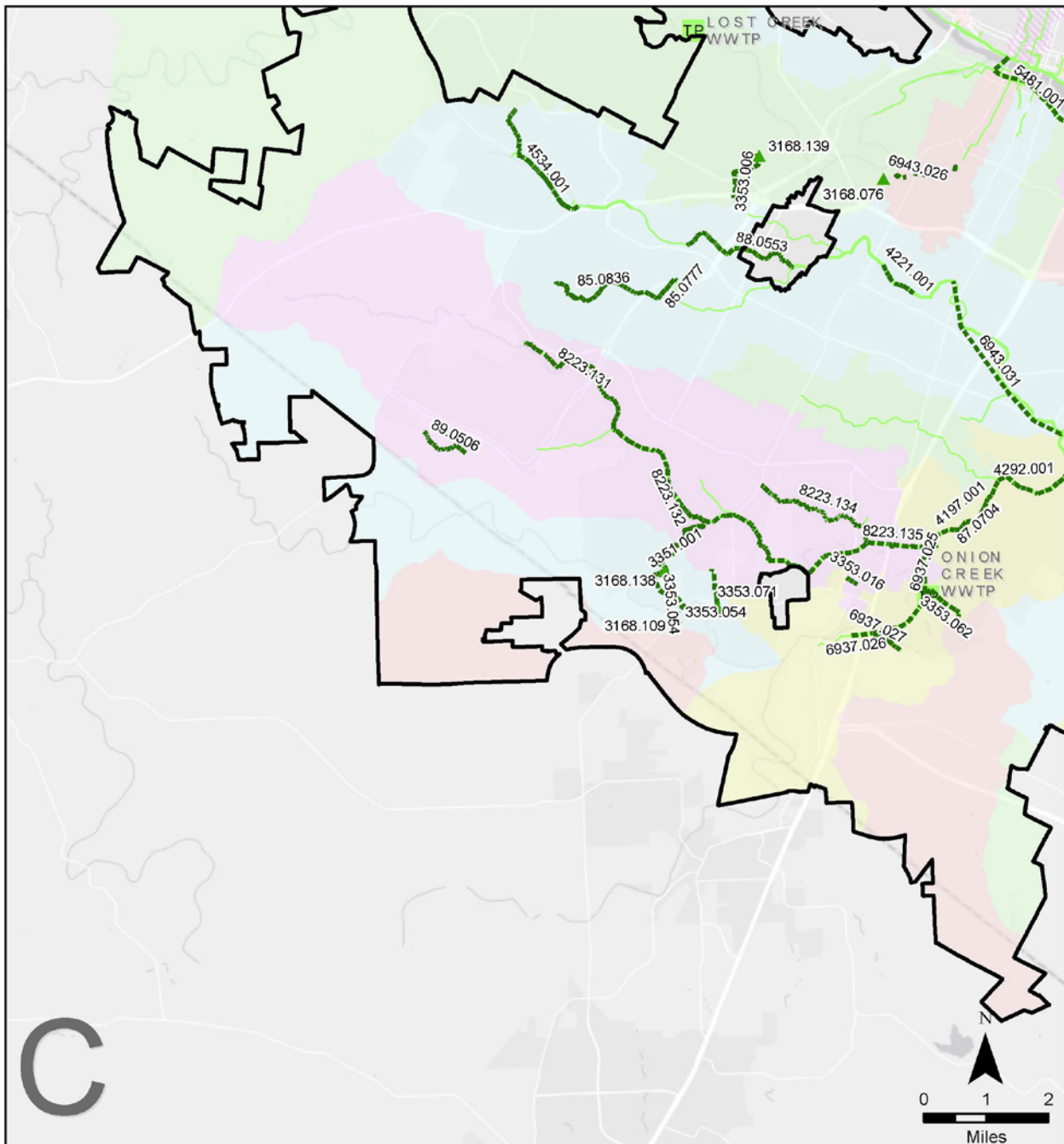


Impact Fee CIP Major Wastewater Facilities



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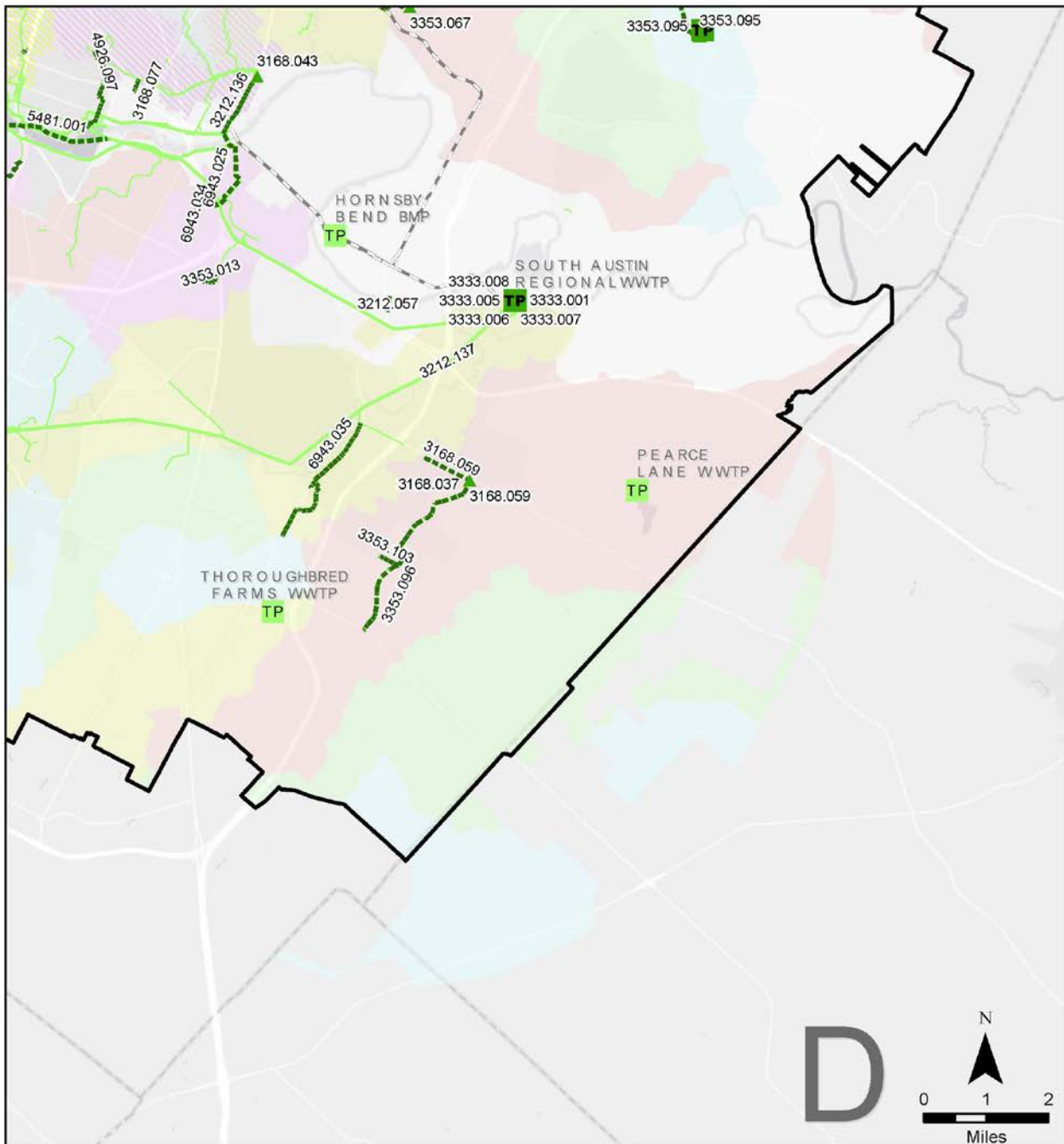
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Impact Fee CIP Major Wastewater Facilities



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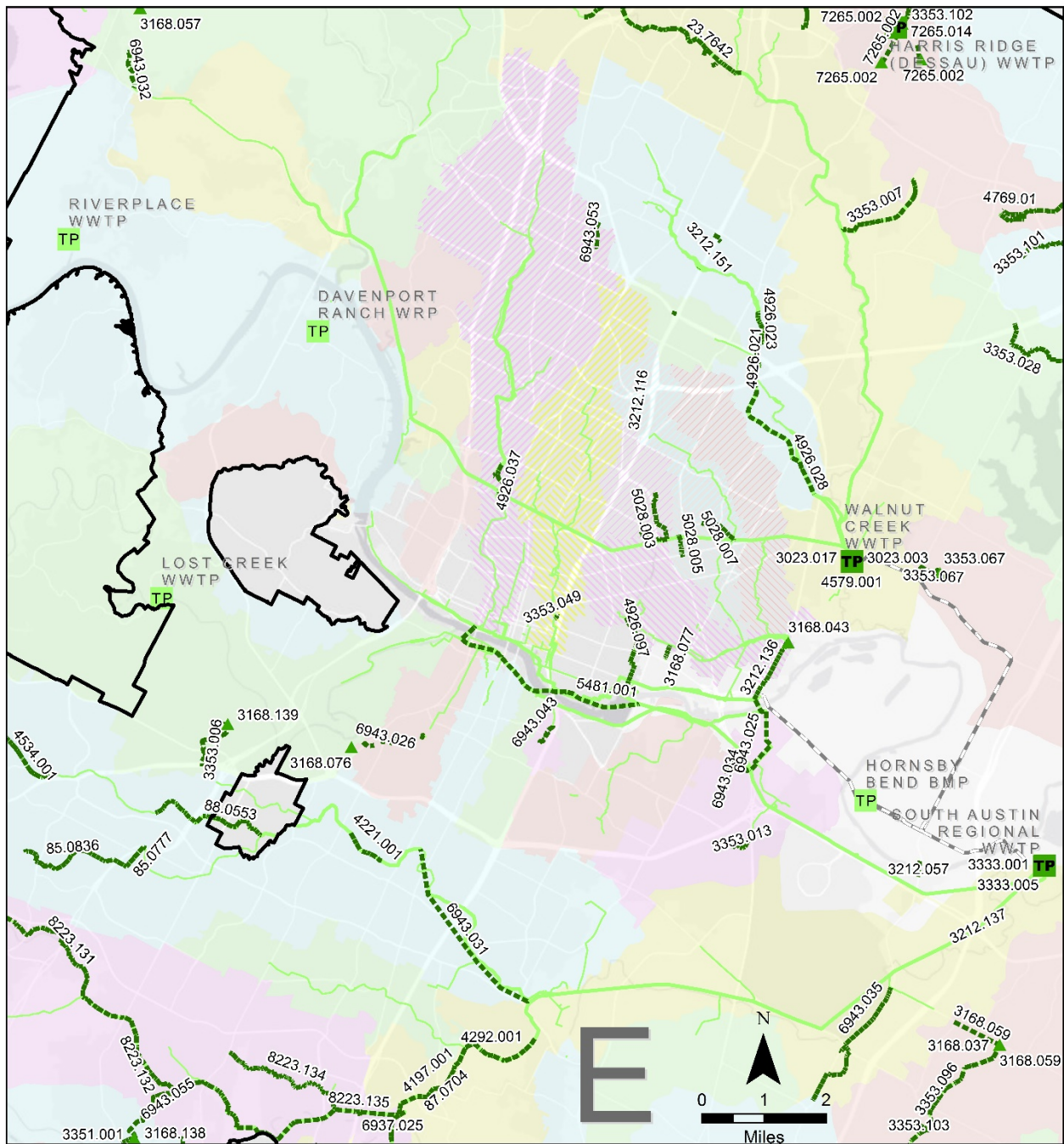
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Impact Fee CIP Major Wastewater Facilities



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Impact Fee CIP Major Wastewater Facilities



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Table 3 Long-Range Future Growth Projects in the Capital Improvements Program
Capital Improvement Projects Targeted to Meet Long-Range Future Needs
Timing uncertain, or beyond 2025, or not serving new users in 10-year planning horizon

			(Costs in 1000s)
WATER			
DEPT	SUBPROJECT ID	SUBPROJECT NAME	COST
2207	2006.013	Far South Pressure Zone Pump Station	\$5,100
2207	2006.031	Martin Hill Pump Station	\$24,757
2207	2127.016	Southwest Parkway SWB Elevated Reservoir	\$3,350
2207	2127.022	Far South Pressure Zone Elevated Tank	\$25,755
2207	2127.031	Martin Hill Elevated Reservoir	\$5,154
2207	2127.033	South I-35 Elevated Water Tank	\$8,500
2207	3353.060	Pioneer Crossing Amended PUD (North)	\$5,238
2207	3353.068	Circle C CCR 103 Water Line Improvements	\$2,077
2207	3353.073	Watersedge Public Utility District (PUD)	\$8,166
2207	4857.031	Annexation Projects Future Program	\$8,510
2207	5335.003	Ullrich WTP Contract II Raw Water Pipeline Construction	\$5,150
2207	6935.001	Davis Medium Service Water Transmission Main	\$38,930
2207	6935.005	Springdale Road/US 183/Hwy 71 Transmission Main	\$8,000
2207	6935.013	Forest Ridge/North West Austin Transmission Main	\$18,625
2207	6935.015	Highway 183 - Pilot Knob Pump Station Water Supply Transmission Main	\$9,350
2207	6935.018	FM 969: Decker Lane (FM 3177) to Hunters Bend Road Water Line	\$3,701
2207	6935.024	East Austin Pump Station to IH35 Water Transmission Main	\$18,400
2207	6935.025	Southwest Parkway TM (SWB)	\$3,500
2207	6935.026	Moore Rd Transmission Main	\$2,975
2207	6935.029	FM 812 TM	\$6,800
2207	6935.030	Harris Branch Pkwy/Cameron Rd 24	\$5,099
2207	6935.040	Westlake/West Rim Water System Improvements	\$1,080
2207	6935.043	Water System Improvements to Meet Minimum Standards Future Program	\$54,500
2207	6935.057	Advanced Metering Infrastructure for Potable & Reclaimed Water Services	\$80,670
WASTEWATER			(Costs in 1000s)
DEPT	SUBPROJECT ID	SUBPROJECT NAME	COST
2307	3023.033	Walnut Creek WWTP Sludge Transfer Line	\$6,812
2307	3023.046	Walnut Creek Wastewater Treatment Plant 100 Million Gallons Expansion	\$579,984
2307	3023.059	Walnut Creek Wastewater Treatment Plant (WWTP) Influent Lift Station	\$10,000
2307	3164.076	Hornsby Bend Dewatering Belt Press	\$850
2307	3168.056	Barrington Oaks Lift Station Improvements	\$3,000
2307	3168.060	New Pearce Lane Lift Station Facilities and Force Main	\$11,400
2307	3168.074	Northwest Lift Station Improvements: Four Points #2 Lift Station	\$2,025
2307	3168.087	Travis Country Lift Station Improvements	\$2,000
2307	3168.089	McNeil Lift Station Improvements	\$1,020
2307	3168.090	Davenport Limited Lift Station Improvements	\$500
2307	3168.091	Loop 360 Lift Station Improvements	\$500
2307	3168.115	Coomer Path LS Pump Upgrades	\$300
2307	3168.116	Kale Lift Station Improvements	\$2,500
2307	3168.119	Bull Creek Area Lift Station Improvements	\$3,020
2307	3333.021	South Austin Regional WWTP Expansion to 100 Million Gallons per Day	\$287,505
2307	3353.053	Colton Bluff Subdivision	\$781
2307	3353.060	Pioneer Crossing Amended PUD (SER, North)	\$1,170
2307	3353.073	Watersedge Public Utility District (SER)	\$8,166
2307	3353.083	The Vistas (SER)	\$4,239
2307	3353.107	Buratti Subdivision	\$3,207
2307	4769.017	Upper Gilleland Interceptors -18 inch	\$20,048
2307	4769.019	Upper Gilleland Interceptor -24 inch	\$3,441
2307	4769.022	Upper Harris Branch Interceptor East	\$5,727
2307	4769.023	Dessau WWTP Relief Interceptor	\$217
2307	6943.002	Onion Interceptor Upgrade - Slaughter to Tunnel	\$29,520
2307	6943.003	Lower Tannehill Wastewater Interceptor Improvements	\$2,311
2307	6943.014	Wolf Ranch Interceptor	\$500
2307	6943.015	Eastwood Central	\$900
2307	6943.017	Parmer and Hwy 290	\$500
2307	6943.020	Walnut Creek Wastewater Plant to South Austin Regional WWTP Flow Transfer	\$1,333
2307	6943.021	Equivest North	\$1,000
2307	6943.023	Onion Interceptor Upgrade - Segment 2-Etj To Bear	\$2,500
2307	6943.024	Robinson Ranch Walnut Interceptor	\$6,940
2307	6943.056	Berkman Drive Wastewater Improvements	\$1,162
2307	6943.057	Upper Lake Creek Wastewater Improvements	\$1,964
2307	6943.058	Cottonmouth Creek Interceptor	\$12,125
2307	7265.015	Northeast WWTP Expansion to 2.25 MGD	\$11,250
2307	7265.019	Northwest Lift Station Improvements: Four Points #2 Lift Station	\$8,243
2307	7265.020	Taylor Lane Wastewater Treatment Plant Expansion to 0.35 MGD	\$3,814
2307	7265.027	Desau Wastewater Treatment Plant Expanion to 1.5 MGD	\$3,780

Table 4 Projects Removed from Previous Impact Fee Listing

Removed Water Impact Fee Projects (All costs in 1000s of dollars)						
Subproject #	Project Description	Size	Pressure Zone	Completion Date	Cost to Build (1,000s)	Reason
3353.068	Circle C CCR 103 Water Line Improvements	16"	Southwest B		2,077	Moved to future, Table 3
3353.073	Watersedge Public Utility District (PUD)	24"	Central		8,166	Moved to future, Table 3
3353.089	Fox Hill	16/24"	South	2015	0	MUD built infrastructure, no cost-participation
3353.095	Whisper Valley-Indian Hills CRA - north line	24"	North	2015-18	0	Infrastructure to be paid for by developer
6935.018	FM 969 Decker to SH 130	24"	Central	2018	2,987	Replaced by Travis Co. Utility Reloc. 3212.133
Removed Wastewater Impact Fee Projects (All costs in 1000s of dollars)						
Subproject #	Project Description	Size	Drainage Basin	Completion Date	Cost to Build (1,000s)	Reason
22.264	Wells Branch WW Trunk Line Phases, 1,1A, 2&3 NCAGC-MUD	18"/21"/24"	Walnut	1985	1,468	Capacity utilized by 2015
23.7353	Upper Walnut Creek WW Trunk Line Phase 2 NCAGC-MUD	48"/54"	Walnut	1985	1,325	Capacity utilized by 2015
23.7641	Lower Walnut Creek WW Imp Phases A,B&C NCAGC-MUD	24"/30"/42"/48"/54"/60"/66"/72"	Walnut	1987	12,221	Capacity utilized by 2015
99.084	Purchase of Brushy System Capacity from LCRA, to 0.84mgd	0.5 mgd increase	Brushy Creek	2010	12,063	Capacity utilized by 2015
810.001	Upper Walnut Creek Interceptor	14"/36"	Walnut	2002	8,976	Capacity utilized by 2015
3353.092	Stratford Tracts 1,2,3-SER	15/18/24	Onion	2014		Project became PID - no cost reimbursement/all developer funded ww portion moved to 3353.091. That project
3353.094	Pearson Ranch-RRISD SER 2869 and 2870	12/24/FM/1100gpmLS	Lake Creek	2016	2,060	was added.
4295.001	GOVALLE I & D SYSTEM	96"	Govalle/SAR	1990	5,913	Capacity utilized by 2015
4299.001	ONION CK INTERCEPTOR PH 4 tunnel	84"	Onion	1986	11,568	Completed in 1986
4577.001	ONION CREEK INTERCEPTOR	54"	Onion	1986	627	Completed in 1986
4577.001	ONION CREEK INT REALLO tunnel	84"	Onion	1986	10,576	Completed in 1986
4688.001	Govalle Inter & Diversion Sys	96"	Govalle/SAR	1990	38,085	Capacity utilized by 2015
5815.002	Triangle - Infrastructure Incentives	18"	Upper Waller	2005	1,193	Capacity utilized by 2015

III. IMPACT FEE FACILITIES AND FEE CALCULATION METHODOLOGY

The facilities that provide the bulk of water and wastewater capacity for new growth in Austin's service area are listed in Table 1 and Table 2 (and again in Tables 8 and 9 in Section VI). They were selected from the complete list of planned projects, including the major facilities built with contract bonds and developer contract reimbursements, according to the following criteria:

- Has the predominant function of serving new growth rather than existing customers;
- Does not provide repair, operation, or maintenance of existing facilities;
- Does not upgrade, expand or replace existing facilities serving existing development in order to meet stricter safety, environmental or regulatory standards.

These impact fee projects represent the individual projects that provide capacity necessitated by new development projected to occur within the next ten years. As shown in Table 1 and Table 2, most are already built as part of the City's CIP program, with only a portion not yet constructed. Impact fee facilities are shown graphically in Map 1 and Map 2.

To determine the costs of projects attributable to new growth, the Texas Impact Fee Act outlines a 4-step process based on quantifying the demand versus capacity relationship for projects in service areas. The process can be stated as follows:

1. Determine capacity of project in service units, and cost per service unit;
2. Determine future demand (capacity used up) for project in service units for the ten-year planning period;
3. Determine the impact project cost attributable to new growth, which is the cost per service unit (step 1) multiplied by the planning period demand (step 2).
4. Determine the cost per service unit by dividing the summation of the costs of the capital improvements (step 3) by the total number of projected service units for the ten-year planning period from the Land Use Assumptions.

The complex part of this methodology is step 2, determining the capacity that will be used in an individual project during the planning period. One might be tempted to simply add up the cost per service unit of each project to come up with a fee. This would be invalid because each new user does not use a service unit of capacity in every new project, and would result in double counting. Instead, the spatial allocation of new users from the Land Use Assumptions must be used to estimate the actual usage of a given project. To carry out this approach in a manageable manner, the water and wastewater service areas were divided up into subareas, pressure zones for water and drainage areas for wastewater. Sets of projects are assigned to each subarea, and the capacity addition to the subarea system is then defined. The assumption is made that each new user in a subarea uses a service unit of the available capacity associated with the selected set of impact fee projects in that subarea. The structure of Tables 8 and 9 illustrates this "subarea" methodology.

Calculation of the impact fee is not sensitive to the length of the planning period or the number of new growth users as long as all projects have more than enough capacity for growth (in excess of capacity serving existing users) in the planning period, as is the case with the great majority of Austin's impact fee improvements, because the number of new service units occurs in both the numerator and the denominator of the fee calculation. The calculation is more sensitive to the location of new users. If a large proportion of new users are projected to locate in areas with high cost per service unit for impact fee facilities, the calculated impact fee is correspondingly higher. If instead, more are projected to locate in areas with few or lower cost impact fee facilities, the calculated fee will be lower.

IV. SERVICE UNIT DEMAND AND CAPACITY RELATIONSHIPS

See Land Use Assumptions Section IV, SERVICE UNITS, page LUA-6 for service unit calculation discussion.

Water Service Unit Equivalency:

For 2015 residential use, 303 gallons per day per service unit divided by an average flow per capita of 80.3 gallons per capita per day (2015 residential pumpage divided by 2015 population) yields 3.77 residents per service unit. 2015 non-residential service unit equivalency is estimated at 4.59 employees per service unit by dividing 303 gallons per day per service unit by an average flow per employee of 66.0 gpcd (2015 non-residential pumpage divided by the 2015 number of employees). The number of residential customers per average service unit in Austin appears to be high because this calculation is skewed by the large percentage of customers living in multi-family housing and by municipal utility districts with master meters. These types of customers typically have large master meters with more efficient ratios between number of users and maximum capacity (on which the number of service units is determined) than do small residential meters. A summary of this information is provided in Table 5 below.

Table 5. LAND USE - SERVICE UNIT EQUIVALENCY MATRIX FOR THE WATER SYSTEM: CONVERSIONS FOR A TEN-YEAR PERIOD

Year	Service Units	Average Number of Residents / Service Unit	Average Number of Employees / Service Unit	Average Number of Gallons / Day Water Use
2015	1	3.77	4.59	303
2025	1	3.76	4.64	295

Meter size selection usually involves a count of water-using fixtures and an analysis of the number of fixtures that may be used at one time, calculated by a builder, engineer or architect. The result is a determination of the flow characteristics of a structure, or other facility relating the land use, to continuous and maximum flow requirements, which in turn are compared against meter flow ratings to select a meter size. Thus, a given meter size reflects a user-defined level of use or consumption in terms of flow. The average daily flow of one service unit, defined above, was chosen as the basis of consumption in this analysis so that every customer charged an impact fee will be placed on a uniform, flow-based footing. This indicates that on an average, each meter purchaser would be expected to use about 303 gallons per day per service unit (gpd/su) (in year 2015) and 295 gpd/su (in year 2025) of meter capacity purchased. The corresponding maximum day and peak hour consumption (needed to determine the required capacity in facilities) are readily determined from the known relationships between these flows derived from flow measurements in the water pressure zones.

Service Unit Conversion Factors:

The foregoing basic service unit definitions are specific to particular terms for relating magnitude and duration of flow, average daily pumpage in the case of water service units and average daily flow for wastewater. Utility facilities are sized using varied design flow criteria appropriate for the type of infrastructure. To calculate the capacity of a given facility in service units the basic service unit value must be converted to the necessary design flow basis for that type of facility using the appropriate peaking factor relationship. These relationships are shown on Tables 6 and 7 along with the capacity sizing basis for each type of facility. Note for example, that for wastewater lift stations and force mains, a peaking factor of 4 is used to convert the basic wastewater service unit (298 gpd/su) to a wet weather peak basis, so that an infiltration and inflow flow component is factored into the calculation of service unit capacity.

Table 6 Service Unit Conversion Factors for Facility Capacity

Water Facilities

Service Unit Flow Definition: Q/SU -- annual average flow basis

2018 analysis: 303 gpd/SU for 2015 and 295 gpd/SU for 2025. Average used for capacity calculation = **299 gpd/SU**

2013 analysis: 388 gpd/SU for 2010 and 348 gpd/SU for 2020. Average used for capacity calculation = 368 gpd/SU

2006 analysis: 445 gpd/SU all years

Facility	Capacity Sizing Basis	2013 Peaking Factor	2013 Service Unit Flow gpd per SU	2018 Peaking Factor	2018 Service Unit Flow gpd per SU
Water Treatment Plant	max day flow = plant rated capacity	1.75	$368 \times 1.75 = 644$	1.73	$299 \times 1.73 = 517$
Pump Station	1.25 x zone max day flow = pump station rated capacity				
NWC	"	2.04	$368 \times 2.04 \times 1.25 = 938$	1.58	$299 \times 1.58 \times 1.25 = 590$
NWB	"	2.10	$368 \times 2.1 \times 1.25 = 966$	2.09	$299 \times 2.09 \times 1.25 = 782$
NWA	"	1.95	$368 \times 1.95 \times 1.25 = 897$	1.76	$299 \times 1.76 \times 1.25 = 660$
North	"	1.69	$368 \times 1.69 \times 1.25 = 777$	1.71	$299 \times 1.71 \times 1.25 = 639$
Central	"	1.40	$368 \times 1.4 \times 1.25 = 644$	1.77	$299 \times 1.77 \times 1.25 = 661$
South	"	1.65	$368 \times 1.65 \times 1.25 = 759$	1.68	$299 \times 1.68 \times 1.25 = 629$
SWA	"	2.29	$368 \times 2.29 \times 1.25 = 1053$	2.02	$299 \times 2.02 \times 1.25 = 755$
SWB	"	2.45	$368 \times 2.45 \times 1.25 = 1127$	2.60	$299 \times 2.6 \times 1.25 = 972$
SWC	"	2.61	$368 \times 2.61 \times 1.25 = 1201$	1.47	$299 \times 1.47 \times 1.25 = 551$
Transmission Main	zone peak hour flow = pipe capacity at 5 fps				
NWC	"	4.09	$368 \times 4.09 = 1505$	2.48	$299 \times 2.48 = 742$
NWB	"	3.82	$368 \times 3.82 = 1406$	3.50	$299 \times 3.5 = 1047$
NWA	"	3.15	$368 \times 3.15 = 1159$	3.19	$299 \times 3.19 = 953$
North	"	2.59	$368 \times 2.59 = 953$	2.09	$299 \times 2.09 = 626$
Central	"	1.93	$368 \times 1.93 = 710$	2.21	$299 \times 2.21 = 659$
South	"	2.48	$368 \times 2.48 = 913$	1.93	$299 \times 1.93 = 578$
SWA	"	4.01	$368 \times 4.01 = 1476$	3.12	$299 \times 3.12 = 933$
SWB	"	5.47	$368 \times 5.47 = 2013$	7.12	$299 \times 7.12 = 2130$
SWC	"	4.99	$368 \times 4.99 = 1836$	2.11	$299 \times 2.11 = 631$
Storage Tank	city volumetric criteria 200 gal/capita	na	$200\text{gal/capita} \times 875,936 \text{ capita} / 352,521 \text{ SU}$ = 497 gal/SU	na	$200\text{gal/capita} \times 972,823 \text{ capita} / 393,263 \text{ SU}$ = 495 gal/SU

Table 7 Wastewater Service Unit Conversion Factors for Facility Capacity

Wastewater Facilities

Wastewater Service Unit Flow Definition: Q/SU - annual average flow basis

2018 -- total annual 2015 influent flow to all WWTPs / total number of SU -- 298 gpd/SU

2013 -- weather normalized flow based -- 287 gpd/SU

2006 -- at 61.73% return flow = 275 gpd/SU

2001 -- at 65% return flow = 318 gpd/SU

Facility	Capacity Sizing Basis	2013 Peaking Factor	2013 Service Unit Flow gpd per SU	2018 Peaking Factor	2018 Service Unit Flow gpd per SU
Wastewater Treatment Plant	annual average flow = plant rated capacity	1	287x1 = 287	1	298x1 = 298
Interceptor	peak hour flow (5yr storm I/I) = 80% pipe full capacity (18" and larger) = 85% pipe full capacity (15" and smaller)	4	287x4 = 1148	4	298x4 = 1192
Lift Station	peak hour flow (5yr storm I/I) = rated firm capacity	4	287x4 = 1148	4	298x4 = 1192
Forcemain	peak hour flow (5yr storm I/I) = capacity at velocity of 6 fps	N.A.	N.A.	4	298x4 = 1192

V. SERVICE UNIT DEMAND PROJECTIONS

The Land Use Assumptions provide the foundation for estimating the cost of capital improvements attributable to new growth by making it possible to quantify the demand for service from those improvements. The source data obtained from the Planning and Development Review Department gives population and employment data distributed by Delphi Trends Imagine Austin (DTI) polygons within the City's extraterritorial jurisdiction. The DTI polygon distribution not only allows the Utility to allocate growth to the selected impact fee service area, but it also can be translated into demands in specific areas in the water and wastewater pipe networks using a geographic information system (GIS).

The translation of population and employment demand data to flow based service units was described in the previous section. Land use data expressed in service units by Planning Area was included in Table 5 of the Land Use Assumptions. The DTI polygon information was allocated to water pressure zones and wastewater drainage areas to quantify demand by subarea. Demand sets for 2015 and 2025 were developed for the ten-year growth period.

Demand projections describing the impact fee project subareas are presented in Tables 8 and 9. All water pressure zones include impact projects; and since they do not overlap, the ten-year growth summed by zones equals the system-wide growth total. Accounting for the growth service units in wastewater project drainage areas is more complex, since the drainage area of one interceptor project may be a subset of a downstream interceptor project drainage area. For example, the Slaughter Creek project drainage area is a subset of the Onion Creek project drainage area. Service unit totals by wastewater treatment plant drainage areas are also presented to indicate a system-wide total.

VI. CAPACITY AND COST ATTRIBUTABLE TO NEW GROWTH

Water and Wastewater Capacity and Costs

Tables 8 and 9 present the capacity and cost attributable to new growth according to the impact fee methodology outlined in Section III. The cost used in the impact fee calculation is simply the cost per service unit multiplied by the ten-year growth in service units derived from the land use assumptions for the subarea served by each set of facilities.

The following outline illustrates the methodology used to calculate the maximum impact fees allowed by law. The letters of each item correspond to the lettered columns in Tables 8 and 9.

For wastewater, sheet "Table 9"

- A. The reference table to the Impact Fee project listing tables.
- B. Project ID.
- C. Project description. Columns A, B, and C are used to identify the Impact CIP projects.
- D. Project size. This is the design size of the facility.
- E. Pressure zone or drainage area.
- F. Completion date
- G. Cost to build. The cost to build a given facility includes the cost to the City for land acquisition, engineering, and construction, along with related cost components. The cost is listed in thousands of dollars, and excludes interest.
- H. Interest cost. The law allows interest cost to be added into the cost of a project if the impact fee will be used to repay both principal and interest. The amount of debt service assigned to each project was calculated by the Utility using the following assumptions: all bonds for the selected impact fee capital improvements projects were sold at the same time, an interest rate of 5.5% was assumed and the term of the bonds was thirty years. The amount of interest cost is indicated in thousands of dollars.
- I. Total cost to build (G plus H). Tables 8 and 9 provide cost figures with and without interest to provide a cost comparison.
- J. Design capacity of impact fee new facility or expansion. Capacity of the impact fee projects are expressed in service units for the subarea as a whole. All of the projects in a subarea are evaluated as a group to determine the best estimate of capacity added to the subarea by the facilities acting together. Typically one project "size" best represents the capacity addition for the subarea as a whole. See Tables 6 and 7 for capacity equations.
- K. Cost to build per service unit without interest (G divided by J).
- L. Cost to build per service unit with interest (I divided by J).

- M. Year 2015 land use assumptions. The population and land use level in a particular pressure zone or drainage area in the year 2015, expressed in service units.
- N. Year 2025 land use assumptions. The population and land use level in a particular pressure zone or drainage area in the year 2025, expressed in service units. Growth users ($N - M$). The number of service units of new growth entering a particular pressure zone or drainage area in the ten year growth period. Each service unit of new growth uses a service unit of capacity in the set of facilities making up the subarea.
- O. Impact costs without interest (K times O). The cost per service unit of the facilities multiplied by the number of growth users in the specific pressure zone or drainage area, excluding interest.
- P. Impact costs with interest (L times O). The cost per service unit of the facilities multiplied by the number of growth users in the specific pressure zone or drainage area, including interest.
- Q. Existing users. The number of existing users (expressed in service units) whose service is enhanced by the addition of the facilities in the subarea; therefore, capacity attributable to existing needs.
- R. Excess service units in the subarea ($J - R - O$). The number of service units remaining unused in the subarea impact fee facilities after the 10-year planning period.

Steps A through S define the costs of the impact fee projects attributable to new growth. The procedure for summing these costs to calculate the maximum allowable impact fee is presented in the next section.

Table 8 Water Impact Fee Calculation by Pressure Zone Areas

A	B	C	D	E	F	(All costs in 1000s of dollars unless preceded by "\$")			J	K	L	M	N	O	P	Q	R	S		
Ref. Table	Subproject ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/ Interest	2015 Land Use Assumptions SU	2025 Use Assumptions SU	Lar 10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Benefitting Existing Users SU	2025 Excess SU After 10 years		
						G+H			G/J		I/J			N-M		K x O	L x O	J-R-O		
1	2006.003	Four Points and Forest Ridge Pump Station Upgrades	NWB: 5.8 MGD, NWC: 10.4	Northwest C	2007		896	803												
1	2032.001	Four Points Reservoir	8 MG	Northwest C	1988	5,194	5,526													
1	3889.001	Canyon Creek 30" Transmission Main	30"	Northwest C	1987	1,231	1,310													
1	5038.001	Anderson Mill Northwest C Pump Station and Tank	11.2 MGD, 1.5 MG	Northwest C	2016	11,464	10,773													
1	5038.002	Anderson Mill/RR 620 Transmission Main	24/36"	Northwest C	2016	4,708	5,010													
1	3353.022	AMAX Self-Storage Reimbursement	24"	Northwest C	2007	169	180													
1	3353.027	Canyon Creek Subdivision Reimbursement	24"	Northwest C	2002	1,100	1,170													
Facility Size That Determines Capacity						11.2 MGD PS		24,763	24,772	49,535	18,972	1.31	2.61	7,884	9,606	1,722	2,247	4,495	5,913	11,338
1	793.001	Anderson Mill Transmission Main III	16"	Northwest B	2016	4,736	5,039													
1	793.002	Anderson Mill Transmission Main Ph IIA & IV	24"	Northwest B	2000	2,085	2,218													
1	1086.001	Jollyville Transmission Main Ph IIA & III	48"	Northwest B	2001	8,138	8,658													
1	1086.002	Jollyville Transmission Main Ph IIB	48"	Northwest B	2001	1,135	1,207													
1	3616.001	Anderson Mill Reservoir	3 MG	Northwest B	1989	4,149	4,414													
1	3897.001	Jollyville Pump Station	45 MGD	Northwest B	1989	6,751	7,183													
1	6935.019	Parmer & 620 Interconnect	24"	Northwest B	2021	2,220	2,362													
1	3041.001	Davis Springs Service Extension	24"	Northwest B	1997	941	-													
1	3353.018	Avery Ranch Service Extension	24/36/48", 3	Northwest B	2015	13,516	10,385													
1	3353.038	Stone Hedge Service Extension	24"	Northwest B	2011	8,931	9,502													
1	3353.094	Pearson Ranch - RRISD (SER 2869 and 2870)	24"	Northwest B	2019	2,638	2,807													
Facility Size That Determines Capacity						45 MGD PS		55,239	53,777	109,015	57,527	0.96	1.90	34,095	43,244	9,150	8,786	17,339	34,095	14,282
1	2014.001	Martin Hill - Northwest A Pressure Zone	34 MG	Northwest A	1988	10,018	8,915													
1	3212.093	Howard Lane Projects	16"	Northwest A	2012	1,027	1,093													
1	4758.002	16" FM 1825 Interconnect	16"	Northwest A	2005	803	-													
1	4814.002	Howard Lane East Transmission Main - Segment	36"	Northwest A	2000	4,765	5,070													
1	3353.019	IBM/Tivoli Service Extension	16"	Northwest A	2002	341	-													
1	3353.032	Howard Lane Service Extension	24/16"	Northwest A	2000	220	-													
1	3353.065	Schultz 45 Acre Tract Water--Wells Branch Commerce Park	24"	Northwest A	2013	304	323													
Facility Size That Determines Capacity						34 MG Tank		17,478	15,401	32,878	68,687	0.25	0.48	57,313	70,057	12,744	3,243	6,100	25,791	30,152
1	2028.001	Martin Hill Transmission Main	54"	Northwest A/B/C	2017	25,076	26,680													
1	4814.003	Howard Lane Pump Station and TM	24/36/42/54", 43/65 MGD	Northwest A/B/C	2001	15,193	16,165													
1	4814.004	Howard Lane Water Transmission Main	24/36/42/54"	Northwest A/B/C	2001	1,922	-													
1	6935.016	Jollyville Northwest A Transmission Main (Plant 4)	84"	Northwest A/B/C	2015	118,172	125,735													
1	6935.031	McNeil Road Transmission Main	72"	Northwest A/B/C	2025	21,550	22,929													
Facility Size That Determines Capacity						84" TM		181,912	191,510	373,422	240,443	0.76	1.55	99,292	122,908	23,615	17,867	36,676	60,558	156,270

A	B	C	D	E	F	(All costs in 1000s of dollars unless preceded by "\$")		I	J	K	L	M	N	O	P	Q	R	S
						G	H											
Ref. Table	Subproject ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/ Interest	2015 Land Use Assumptions SU	2025 Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Benefitting Existing Users SU	2025 Excess SU After 10 years
						G+H				G/J	I/J			N-M	K x O	L x O		J-R-O
1	844.001	East Austin - Parmer Lane TM	48/54"	North	1997	6,657	7,083											
1	2088.001	Parmer Ln/Howard Ln Transmission Main	48"	North	1989	3,593	3,823											
1	2090.005	Johnny Morris Rd 16" Water Main	16"	North	1999	462	491											
1	2939.001	Dessau Rd Transmission Main	16"	North	1990	934	994											
1	3779.001	Northtown Transmission Main	48"	North	1988	610	649											
1	3783.001	East Austin Pump Station	55 MGD	North	1989	1,974	2,101											
1	4814.001	Northeast Area Water Improvements	48"	North	1999	1,718	1,828											
1	5028.006	RMMA Redevelopment North WPZ Imp Phase 3 (SER 2278)	30"	North	2012	5,585	5,942											
1	6935.003	Boyce Lane Water Main	24"	North	2017	7,201	7,662											
1	6935.021	Austin Film Society	16"	North	2012	1,017	1,082											
1	6935.022	Springdale/290 Water Line Improvements	16"	North	2021	5,721	6,088											
1	6935.033	Johnny Morris/Hwy 290 Area Water Line	24"	North	2019	1,309	-											
1	6935.035	Howard Lane Water Main Extension	16"	North	2020	1,185	1,261											
1	6935.039	Cameron Rd : Gregg Lane to School	12"/16"	North	2019	1,634	1,738											
1	7487.002	Braker Ln Extension from Dessau Rd. to Samsung Blvd (City Funded)	24"	North	2021	35	-											
1	2090.003	Decker Lake 24-inch Woodlands Transmission Main (SER 1745)	24"	North	1996	1,148	1,221											
1	3353.007	Jourdan's Crossing Service Extension	24"	North	2001	194	-											
1	3353.009	Dell 24-inch Water Reimbursement	24"	North	1998	1,769	-											
1	3353.028	Wild Horse Ranch	24/36"	North	2018	6,015	6,400											
1	3353.033	Pioneer Crossing Service Extension (SER 1825), Ph II	24"	North	2004	1,243	1,323											
1	3353.042	Parmer Park Service Extension	24"	North	2002	871	926											
1	3353.099	Pioneer Hill	16"	North	2015	1	1											
1	5028.002	Robert Mueller Municipal Airport	16/24"	North	2007	1,119	1,190											
1	5028.004	Mueller Water Improvements Reimbursement (SER 2277), Ph II	16"	North	2008	6,106	6,496											
1	5815.002	Triangle - Infrastructure Incentives	16/24"	North	2005	413	440											
1	3212.064	Harris Branch Parkway/Cameron Rd. Water Lines Relocation	12"	North	2012	168	178											
1	3212.123	CTRMA/TxDOT Utility Relocation: US290E Manor Expressway	16"/24"	North	2016	1,008	514											
1	3212.151	TxDOT IH 35 Waterline Relocation: Rundberg To 290 East Segment	12"	North	2019	597	-											
1	82.224	82/22-40 Howard Lane Reservoirs (NCAGC-Facility Size That Determines Capacity	20 MG 54" TM	North	1987	3,824	4,069											
						64,111	63,500	127,611	82,155	0.78	1.55	90,999	117,733	26,734	20,862	41,526	22,750	32,671

A	B	C	D	E	F	(All costs in 1000s of dollars unless preceded by "\$")		I	J	K	L	M	N	O	P	Q	R	S
						G	H											
Ref. Table	Subproject ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/ Interest	2015 Land Use Assumptions SU	2025 Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Benefiting Existing Users SU	2025 Excess SU After 10 years
						G+H				G/J	I/J			N-M	K x O	L x O		J-R-O
1	1168.003	Ullrich to Green Transmission Main (Pipeline)	72"	Central	2000	5,598	4,746											
1	1168.004	Ullrich to Green Transmission Main (Lake Austin Tunnel)	72"	Central	2000	26,137	27,650											
1	2097.001	Elroy Transmission Main	36"	Central	2014	5,005	5,326											
1	2231.155	Elroy Road Water Rehabilitation Phase 2	16"	Central	2016	1,634	1,738											
1	2231.157	Elroy Rd Water Rehabilitation Ph 3 - FM 812 Maha Loop Water Rehab	16"	Central	2017	2,590	2,756											
1	2231.214	Boggy Creek at US 183 Water Line Replacement	24"	Central	2016	2,386	2,539											
1	2937.001	Springdale Rd 48" Transmission Main	48"	Central	1998	6,118	6,510											
1	2963.001	Moore's Crossing Reservoir & Transmission Main	36"	Central	1990	2,402	2,556											
1	3612.001	Green WTP Transmission Main	60"	Central	1989	4,049	4,308											
1	3617.001	Bluff Springs (Pilot Knob) Transmission Main	48"	Central	1992	7,466	7,944											
1	3618.001	East Austin Transmission Main	66"	Central	1989	8,203	8,728											
1	3620.001	East Austin Reservoir	12 MG	Central	1987	2,141	2,278											
1	3626.001	Bluff Springs (Pilot Knob) Reservoir	10 MG	Central	1989	2,139	2,276											
1	3628.001	South Central Transmission Main	48"	Central	1987	4,578	4,871											
1	3761.001	Green WTP Transmission Main South	48"	Central	1989	1,572	1,673											
1	3769.001	Bluff Springs Transmission Main II	36"	Central	1988	1,913	2,036											
1	3871.001	E Ben White Blvd Transmission Main	24"	Central	1993	3,506	3,731											
1	3898.001	Pilot Knob Transmission Main Sector III	48"	Central	1992	1,805	1,921											
1	3901.001	Burelson Rd Transmission Main	48"	Central	1992	478	508											
1	4800.028	West Campus System Improvements	12"	Central	2013	3,191	3,395											
1	4800.033	West Campus Water & WW Improvements Area 5	12"	Central	2016	4,703	5,005											
1	5403.001	Rio Grande: from MLK to 24th St. Street Reconstruction & Utility Adjustment	16"	Central	2014	1,113	1,185											
1	6055.004	E. 7th Street Improvements from Northwestern to Pleasant Valley	12"	Central	2013	729	-											
1	6055.024	Second Street District Streetscape Street Recon. & Utility Adj. Phase 3	12"	Central	2017	718	764											
1	6684.001	MLK: Rio Grande to Lamar	12"	Central	2012	826	878											
1	6935.061	Piland Triangle Interconnect	24"	Central	2020	750	-											
1	6959.001	Group 30: Oltorf St E/Congress Ave-IH35	24"/12"	Central	2015	1,263	1,344											
1	6960.001	Brazos St/Cesar Chavez-11th St E	12"	Central	2014	1,590	1,692											
1	6961.002	Colorado St. Reconstruction and Utility Adjustments from 7th St to 10th St	12"	Central	2018	720	766											
1	8158.001	3rd St. Reconstruction Phase 3 - Congress Ave. to Guadalupe St.	12"	Central	2017	110	-											
1	8158.002	3rd St Phase 2 - Congress Ave to Brazos St & San Jacinto Blvd to Trinity St	12"	Central	2017	117	125											
1	8158.003	3rd St. Phase 1 - Brazos St. to San Jacinto Blvd.	12"	Central	2015	252	268											
1	3353.049	Robertson Hill Development	16"	Central	2008	643	685											
1	3353.052	Del Valle Junior High Number 2	24"	Central	2005	349	371											
1	3353.059	Pearce Lane Tract	36"	Central	2004	2,598	2,765											
1	3353.069	University Neighborhood Overlay District	24"	Central	2007	1,828	1,945											
1	3353.095	Whisper Valley Indian Hills	48"	Central	2024	2,283	2,429											
1	3353.096	Formula One United States	24/36"	Central	2014	4,430	4,714											
1	3353.100	71 Commercial	24"	Central	2014	1,098	1,168											
1	3353.106	Eastside Village (SER-3393) 12-Inch Water Line Improvements	12"	Central	2015	0	0											
1	3212.133	Travis County Utility Relocation: FM 969 (Phase I): Decker Lane to FM 973	16"	Central	2019	2,743	1,068											
1	3212.136	TxDOT Utility Relocation: US 183 Bergstrom Expwy (US 290 to SH 71)	24"/16"/12"	Central	2018	8,315	5,284											
Facility Size That Determines Capacity			72" TM			130,092	129,943	260,035	138,575	0.94	1.88	107,515	138,159	30,644	28,768	57,503	53,757	54,173

A	B	C	D	E	F	(All costs in 1000s of dollars unless preceded by "\$")			J	K	L	M	N	O	P	Q	R	S
						G	H	I										
Ref. Table	Subproject ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/ Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Benefitting Existing Users SU	2025 Excess SU After 10 years
						G+H				G/J	I/J			N-M	K x O	L x O		J-R-O
1	3766.001	S IH-35 Transmission Main	36"	South	1988	2,812	2,992											
1	3876.001	Slaughter Ln Transmission Main	24/30"	South	1992	2,673	2,845											
1	6935.059	Slaughter Lane Waterline Extension	16"	South	2017	149	-											
1	6937.001	S IH-35 Transmission Main	36"	South	2010	17	18											
1	6937.003	So. IH35 W/WW Infrastructure Improvs PMC	PMC	South	2013	8,510	9,055											
1	6937.005	S I-35, Pilot Knob Pump Station	22 MGD	South	2016	10,488	11,159											
1	6937.006	S I-35, Segment 21 - Pilot Knob Reservoir 48-inch Water Main	48"	South	2013	660	703											
1	6937.008	S I-35, Segment 6 - I 35 South of Onion Creek, 36 Inch Water Main	36"	South	2012	1,459	1,552											
1	6937.009	S I-35, Seg. 13/14 - Pleasant Valley Ext., Rinard Crk to E Slaughter Ln, 42	42"	South	2013	1,837	1,955											
1	6937.010	S I-35, Segment 17/18/19 - Slaughter Ln Ext to Thaxton, 48-inch Water Main	48"	South	2016	3,200	3,404											
1	6937.011	S I-35, Segment 4 - I 35, N of FM 1626 to Onion Creek, 36-Inch Water Main	36"	South	2012	1,358	1,445											
1	6937.012	S I-35, Segment 7 - I 35, north of FM 1327, 42-Inch Water Main	42"	South	2013	2,014	2,143											
1	6937.013	S I-35, Segment 9.0 - FM 1327, I 35 to Bradshaw Rd, 42-Inch Water Main	42"	South	2016	2,935	3,123											
1	6937.014	S I-35, Segment 9.1 - FM 1327 to Bradshaw Road north of FM 1327	42"	South	2016	3,126	3,326											
1	6937.015	S IH-35 Transmission Main, Segment 18&19 - E Slaughter Ln, Marble Creek to Thaxton	48"	South	2010	317	337											
1	6937.016	S I-35, Seg. 20.1/21 - Wm Cannon from McKinney Falls to Pilot Knob WTM	48"	South	2016	3,265	3,474											
1	6937.017	S I-35, Seg. 2/5 - I 35 Slaughter and Onion Crk Crossings, 36-In Water Main	36"	South	2016	7,998	8,509											
1	6937.018	S I-35, Segment 8 - I 35 Crossing North of FM 1327, 42-In Water Main	42"	South	2012	1,565	1,666											
1	6937.019	S I-35, Segment 20.0 - McKinney Falls Pkwy, Thaxton to Wm Cannon, 48-Inch W	48"	South	2014	3,414	3,633											
1	6937.020	S I-35, Segment 15 - Goodnight Ranch Ph I, 48-Inch Water Main	48"	South	2011	1,011	1,076											
1	6937.021	S I-35, Segment 1 - I 35 Slaughter Ln to Slaughter Crk, 36-In Water Main	36"	South	2016	2,917	3,104											
1	6937.022	S I-35, Seg. 11/12 - S. Pleasant Val. Ext. at Legends Way, 42-In Water Main	42"	South	2016	1,924	2,047											
1	6937.023	S I-35, Segment 10 - Bradshaw Rd, S of River Plantation Dr, 42-In Water Main	42"	South	2016	1,702	1,811											
1	6937.024	S I-35, Segment 16 - Goodnight Ranch Phase II, 48-Inch Water Main	48"	South	2012	1,360	1,447											
1	6937.030	S IH-35 Transmission Main, E Slaughter Ln ROW Acquisition	Sites of Seg. 17,18,19	South	2011	496	527											
1	3353.062	Zachary Scott Tract Service Extension	24"	South	2009	1,240	1,320											
1	3353.072	Goodnight Ranch	24"	South	2016	2,442	2,599											
1	3353.074	Alexan Onion Creek	24/36"	South	2010	884	940											
1	3212.104	Manchaca Rd-Ravenscroft to FM 1626	16"	South	2013	2,295	2,442											
1	1001.001	Davis Lane Reservoir SO-MUD (Add 10 to 20	10 MG	South	1988	1,819	1,935											
		Facility Size That Determines Capacity	48" TM			75,888	80,587	156,475	70,316	1.08	2.23	54,544	67,139	12,596	13,594	28,029	8,182	49,539

A	B	C	D	E	F	(All costs in 1000s of dollars unless preceded by "\$")			J	K	L	M	N	O	P	Q	R	S
						G	H	I										
Ref. Table	Subproject ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/ Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Benefiting Existing Users SU	2025 Excess SU After 10 years
						G+H				G/J	I/J			N-M	K x O	L x O		J-R-O
1	3825.001	Southwest B Camp Ben McCullough Transmission Main	16"	Southwest B	1992	504	536											
1	3859.001	Windmill Run Southwest B Transmission Main	36"	Southwest B	1990	1,962	2,087											
1	85.2277	85/22-77 Southwest B 36" Transmission Main (CC#3-MUD)	36"	Southwest B	1988	1,130	1,202											
1	85.2278	85/22-78 Southwest B Pump Station (CC#3)	22 MGD	Southwest B	1988	2,290	2,437											
1	1000.001	Southwest B Reservoir #1 (CC#3-MUD)	2 MG	Southwest B	1988	1,903	2,025											
1	1988.0628	Southwest B 16" Trans Main (CC#3-MUD)	16"	Southwest B	1988	197	210											
		Facility Size That Determines Capacity	(Subproject ID 85.2277)			7,985	8,496	16,482	10,724	0.74	1.54	9,286	10,751	1,466	1,091	2,252	5,571	3,687
1	4800.005	New Thomas Springs Reservoir	1.25 MG	Southwest C	2001	2,347	2,471											
1	4800.010	Southwest C Pressure Zone Pump Station	8.2 MGD	Southwest C	2006	5,862	6,098											
1	4800.021	Southwest C Pressure Zone Transmission Main Ph 2	30"	Southwest C	2007	2,104	2,188											
1	4800.022	Southwest C Pressure Zone Transmission Main Ph 1	30"	Southwest C	2007	5,546	-											
1	3353.025	Travis County West Developer Reimbursement Southwest C	2.1 MGD PS, 16"	Southwest C	2003	1,680	1,788											
		Facility Size That Determines Capacity	30" TM			17,539	12,545	30,084	25,138	0.70	1.20	2,951	3,536	584	408	699	2,361	22,193
1	3353.008	Lantana Service Extension Developer Reimbursement Southwest B&C	14 MGD PS	Southwest B/C	2002	3,254	-											
		Facility Size That Determines Capacity	14 MGD PS			3,254	-	3,254	16,866	0.19	0.19	12,237	14,287	2,050	396	396	7,342	7,474
		Southwest A Site Development CC#3-MUD	n/a	Southwest A/B/C	1988	266	283											
1	85.2265	85/22-65 Davis Lane Pump Station (VVO-MUD)	56 MGD	Southwest A/B/C	1988	5,758	6,127											
1	85.2276	85/22-76 SWA Storage Tank (Slaughter Lane, MR-MUD)	6 MG	Southwest A/B/C	1988	1,256	1,336											
1	85.2279	85/22-79 SWA TM Phases 1,1A,2,3,4A,4B (MR-MUD)	48"	Southwest A/B/C	1987	4,501	4,789											
1	1987.0508	Davis Lane TM (PS discharge, SO-MUD)	48"	Southwest A/B/C	1987	220	234											
1	1987.0627	SWA 48" Interconnector (MR-MUD)	48"	Southwest A/B/C	1987	1,016	1,081											
		Facility Size That Determines Capacity	48" TM			13,017	13,850	26,867	36,018	0.36	0.75	40,912	46,575	5,663	2,046	4,224	20,456	9,899

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Ref. Table	Subproject ID	Project Description	Size	Pressure Zone	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/ Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Benefiting Existing Users SU	2025 Excess SU After 10 years
						G+H				G/J	I/J			N-M	K x O	L x O		J-R-O
1	5335.001	Ullrich WTP 160 MGD Expansion	67 MGD Exp.	Ullrich	2011	109,123	116,107											
1	5335.002	Ullrich Water Treatment Plant 160 MGD Expansion - Low Service Pump Station	67 MGD Exp.	Ullrich Service	2006	2,567	2,731											
		Facility Size That Determines Capacity	67 MGD			111,690	118,838	230,528	129,526	0.86	1.78	See Notes 1 and 2		61,512	53,042	109,478		See Note 3
1	6683.002	Water Treatment Plant No. 4	50 MGD	Plant 4 Service	2017	101,736	106,062											
1	6683.007	Water Treatment Plant No. 4 - Property Fencing	50 MGD	Plant 4 Service	2009		359	382										
1	6683.009	Water Treatment Plant #4-Environmental Commissioning	50 MGD	Plant 4 Service	2017	2,833	3,012											
1	6683.010	WTP 4-Plant Site Storm Water Facilities	50 MGD	Plant 4 Service	2011	3,327	3,540											
1	6683.013	WTP4 Raw Water Pump Station Excavation and Stormwater Facilities	50 MGD	Plant 4 Service	2012	3,435	3,654											
1	6683.014	Water Treatment Plant No. 4 Raw Water Pump Station Facility	50 MGD	Plant 4 Service	2014	7,243	7,706											
1	6683.018	Value Engineering	50 MGD	Plant 4 Service	2011		574	610										
1	6683.019	Water Treatment Plant #4 - Construction Manager at Risk	50 MGD	Plant 4 Service	2015	289,433	279,812											
1	6683.020	WTP4 Bullick Hollow Roadway Improvements	50 MGD	Plant 4 Service	2011	1,081	1,150											
		Facility Size That Determines Capacity	50 MGD			410,019	405,930	815,949	96,661	4.24	8.44	See Notes 1 and 2		37,739	160,081	318,565		See Note 3
1	8702.003	Shaw Lane Sludge Facility Improvements	616,000 CY	Entire System	2017	5,428	5,775		See Note 5									
		Facility Size That Determines Capacity				5,428	5,775	11,202	502,439	0.01	0.02	393,263	492,514	99,251	1,072	2,213	0	See Note 5
						TOTAL		2,243,339										
Service Unit and System-wide Impact Cost Totals														99,251	313,502	629,496		
Calculated rate revenue credit per state law (See Appendix A)																-157,854		
Resultant amount to be used for calculating maximum allowable impact fee																471,642		
Maximum Allowable Impact Fee (\$471,642,000 / 99,251 service units)																\$ 4,752		

Notes and Plant Flow Distribution

Note 1 Davis WTP is assumed to serve the same number of service units in 2015 and 2025 - the decreasing gallons per service unit per day from 303 to 295 makes demand lower for same number of service units.

Note 2 It is assumed that existing and new growth units in the North/NW pressure zones are assigned to WTP4, that Davis WTP will serve existing units in the Central/North zones, and that Ullrich will serve existing and new growth units in the Central/South/SW zones.

Note 3 Recognizing that the flow per service unit may continue to change over time, the 2025 system remaining capacity is 84.5 mgd and 166,074 service units in the present analysis.

Note 4 Capacity of the Jollyville and Martin Hill TMs is calculated based on the maximum day peaking factor in the same manner as for plants, since these major TMs operate in the same flow regime as the plant the feeds them.

Note 5 The Shaw Lane Sludge Facility began utilizing the Far West Pit in 2016. This pit's volume is 616,000 cubic yards. 2015-2025 water demand estimates were used to calculate the sludge volume. It is estimated that the cumulative sludge volume will reach the capacity of the pit in 2026. Therefore, the facility design capacity (Column J) for Shaw Lane is the system-wide number of service units served in year 2026.

Plant Flow Distribution (Maximum Day)

Plant	Plant Capacity	2015 Max Day Demand (Avg of Top 5)		2025 Max Day Demand		10-Year Area Growth		
		(MGD)	(SU)	(MGD)	(SU)	(MGD)	(SU)	
WTP4	50	31.9	60,558	50.0	98,297	18.1	37,739	Note 2
Davis	118	91.4	173,701	88.4	173,701		0	Notes 1 and 2
Ullrich	167	83.7	159,004	112.2	220,516	28.5	61,512	Note 2
System	335	207.0	393,263	250.5	492,514	46.6	99,251	

Table 9 Wastewater Impact Fee Calculation by Collection Drainage Areas

(All costs in 1000s of dollars unless preceded by "\$")																		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Ref. Table	Project Id/Map ID	Project Description	Size	Drainage Basin Facility Area	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Existing Users SU	2025 Excess SU After 10 years
										G/J	I/J			N-M	KxO	LxO		J-R-O
2	3212.057	TxDOT Utility Relocation: FM 973 @ Colorado River	10" FM	Colorado River	2017	1,557	1,656											
		Facility Size that Defines Capacity Addition	10" FM	973 @ Colorado River		1557	1,656	3,213	1,774	0.88	1.81	43	150	106	93	193	43	1,625
2	3168.139	Travis Country Lift Station Improvement - Pump Installation	2400 gpm	Barton	2017	0	0											
2	3353.006	Travis Country Service Extension	21"	Williamson	1997	41	43											
		Facility Size that Defines Capacity Addition	2800gpm	Barton to Williamson		41	43	84	3,383	0.01	0.02	2,831	3,251	421	5	10	2,831	131
2	3351.001	Cullen/Southland Acquisition	12"FM/18"	Bear/Slaughter	1997	761	0											
2	3353.054	Marbridge Farms Wastewater	350 gpm LS	Bear	2007	217	231											
2	3168.109	Marbridge Lift Station Improvements	430 gpm	Bear	2016	27	0											
2	6943.055	Southland Oaks Wastewater Improvements	30"	Slaughter	2019	1,027	1,093											
2	3168.138	Southland Oaks Wet Well Conversion	2100 gpm	Bear	2018	100	0											
		Facility Size that Defines Capacity Addition	30"	Bear/Slaughter		2,132	1,324	3,457	5,771	0.37	0.60	1,533	1,911	378	140	226	1,533	3,860
2	3168.043	Boggy Creek LS Upgrade	25 MGD	Lower Boggy	2016	4,048	4,307											
2	6943.034	Carson Creek Basin Wastewater Line Improvements	18"/24"	Carson	2019	2,558	2,722											
2	3168.077	Gonzales Lift Station Abandonment	18"	Lower Boggy	2018	739	0											
2	3168.054	Govalle Wastewater Flow Diversion	36" FM	Colorado River	2020	2,917	0											
2	6943.025	Hergotz-Lockheed Wastewater Improvements	48"	Carson	2020	2,662	2,832											
2	3353.013	Metro Center Services Extension (#1537)	24"	Carson	2000	151	0											
2	3212.136	TxDOT Utility Relocation: US 183 Bergstrom Exprwy (US 290 to SH 71)	24"/30"	Lower Boggy/Colorado/Carso	2019	5,260	5,597											
		Facility Size that Defines Capacity Addition	48"	Lockheed		18,335	15,459	33,794	31,040	0.59	1.09	14,106	17,864	3,758	2,220	4,091	14,106	13,176
2	7265.040	Brushy Creek Regional Wastewater Treatment Plant Expansion Participation	3 mgd exp	Brushy Creek	2023	20,700	22,025											
2	6943.033	Brushy Creek WW Improvements-Southwest Interceptor/Lake Creek Interceptor	36"	Brushy Creek	2016	998	1,062											
		Facility Size that Defines Capacity Addition	3 mgd exp	Brushy Creek to Brushy WWTP		21,698	23,087	44,784	10,067	2.16	4.45	3,732	8,973	5,240	11,294	23,311	0	4,827
2	3168.024	Balcones LS Relief - Phase I & 3A	8"	Bull	2005	612	651											
		Facility Size that Defines Capacity Addition	8" @ 0.28%	Bull/Balcones		612	651	1,263	295	2.08	4.29	246	301	54	113	233	246	Note 1
2	6943.041	Barrington Oaks Downstream Gravity Improvements Phase 2	15"	Bull	2024	4,020	4,277											
2	6943.029	Barrington Way Forcemain Reroute and Gravity System Upgrade	15"	Bull	2017	2,616	0											
		Facility Size that Defines Capacity Addition	15" @ 0.63%	Bull/Barrington		6,636	4,277	10,914	2,363	2.81	4.62	1,209	1,347	138	388	639	1,209	1,016
2	6943.022	Canyon Creek Interceptor - Upsize	18"/24"	Bull	2019	105	0											
		Facility Size that Defines Capacity Addition	18" @ 0.9%	Bull/Canyon Creek		105	0	105	4,322	0.02	0.02	1,028	1,095	67	2	2	1,028	3,227
2	6943.032	Four Points Center Forcemain Improvements	12" FM	Bull	2018	665	708											
		Facility Size that Defines Capacity Addition	12" FM	Bull/Four Points Center		665	708	1,373	2,555	0.26	0.54	535	607	72	19	39	535	1,948
2	3168.085	Northwest Lift Station Improvements: Boulder Lane Lift Station	14"FM/1950gpmLS	Bull	2023	1,434	0											
2	3168.057	Rock Harbour Lift Station Improvements	6200 gpm	Bull	2021	2,628	2,796											
		Facility Size that Defines Capacity Addition	6200 gpm LS	Bull/Rock Harbour		4,062	2,796	6,858	7,490	0.54	0.92	2,098	2,363	265	144	243	2,098	5,127

(All costs in 1000s of dollars unless preceded by "\$")																		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Ref. Table	Project Id/ Map ID	Project Description	Size	Drainage Basin Facility Area	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Existing Users SU	2025 Excess SU After 10 years
2	3353.101	Bellingham Meadows/Wm. Wallace Way Lift Station Wastewater Relief Main	15"/18"	Gilleland	2017	2,339	2,489											
2	4769.010	Harris Branch Interceptor Lower A	12"/30"/36"	Harris Branch	2018	7,280	7,746											
2	4769.018	Harris Branch Interceptor Lower B	36"	Harris Branch/Gilleland	2016	872	927											
2	4769.018	Harris Branch Interceptor Lower B	36"	Harris Branch/Gilleland	2016	5,533	0											
2	4769.002	NE AREA INTERIM WWTP	20"FM30"gravity/0.75 MGD plant	Gilleland	2008	8,752	9,312											
2	4769.006	Northeast Service Area North Interceptor (Wildhorse North Interceptor)	8"/18"/36"	Gilleland	2005	2,329	2,478											
2	7265.004	Northeast WWTP Expansion to 1.5 MGD	0.75 mgd exp	Gilleland	2021	7,705	8,199											
2	3353.077	Scots Glen	18"	Gilleland	2009	1	1											
2	3353.077	Scots Glen	18"	Gilleland	2009	844	0											
2	3353.028	Wild Horse Ranch	8"/12"/18"/21"/24"/27"/36"	Decker/Gilleland	2018	4,076	4,337											
2	3353.076	Wildhorse Addition	12"/18"	Gilleland	2009	793	843											
2	4769.015	Wildhorse North Interceptor Ext No. of 290	42"	Gilleland	2015	3,593	3,823											
2	4769.008	Wildhorse Northwest Interceptor Phase 2	12"/18"/21"/24"/27"/30"	Decker/Gilleland	2013	2,548	0											
		Facility Size that Defines Capacity Addition	30" @ 0.27% / 36" @ 0.09%	is/Branch/Gilleland to Wildhorse WWTP		46,664	40,154	86,819	17,924	2.60	4.84	2,153	4,462	2,310	6,013	11,187	2,153	13,462
2	3353.105	Finspeed 30-Inch Offsite Wastewater Line	30"	Dry South	2018	303	322											
2	3353.096	Formula One United States	30"	Dry South	2016	6,267	0											
2	3353.103	Moore's Crossing MUD Lift Station Interceptor WW Service Extension Plan	21"	Dry South	2017	75	80											
2	3168.037	Pearce Lane Lift Station Upgrade (900 to 1800 gpm)	900 gpm exp	Dry South	2014	54	0											
2	3168.059	South Area Lift Station Improvements: Pearce Lane Upgrade & New Force Main	4500 gpm	Dry South	2021	2,970	3,160											
		Facility Size that Defines Capacity Addition	30" @ 0.06%	Dry South		9,669	3,562	13,232	4,358	2.22	3.04	1,375	2,729	1,353	3,002	4,109	1,375	1,629
2	3353.067	Austin Blue Sky Investments, Inc. SER 2271 (Quickstream Lift Station)	12"Gravity/12"FM/1000gpmLS	Elm Creek	2006	680	724											
		Facility Size that Defines Capacity Addition	1000 gpm	Elm		680	724	1,404	1,208	0.56	1.16	534	549	15	9	18	534	659
2	6943.035	FM 973 Wastewater Line Improvements	15"/18"	Onion	2018	4,463	0											
		Facility Size that Defines Capacity Addition	18" @ 0.21%	FM 973		4,463	0	4,463	2,088	2.14	2.14	0	275	275	588	588	0	1,813
2	3353.095	Whisper Valley Public Improvement District	30"Gravity/LS/0.1 mgd TP	Gilleland	2024	2,611	2,778											
		Facility Size that Defines Capacity Addition	30" @ 0.2%	illeland to Taylor Lane WWTP		2,611	2,778	5,389	7,957	0.33	0.68	0	1,015	1,015	333	687	0	6,942
2	5481.001	Downtown Wastewater Tunnel	42"/48"/54"/78"/90"	Govalle/SAR	2015	49,474	52,640											
2	5481.001	Downtown Wastewater Tunnel	42"/48"/54"/78"/90"	Govalle/SAR	2015	8,205	0											
		Facility Size that Defines Capacity Addition	90" @ 0.05%	DTT		57,679	52,640	110,319	74,480	0.77	1.48	33,616	42,076	8,460	6,552	12,531	33,616	32,404
2	6943.043	Harpers Branch Creek Interceptor	15" or 18" depending on slope	Harpers Branch	2019	2,596	0											
		Facility Size that Defines Capacity Addition	18"	Harpers Branch		2,596	0	2,596	1,691	1.54	1.54	1,046	1,413	368	565	565	1,046	278
2	7265.014	Dessau WWTP Expansion to 0.99 MGD	.49 mgd EXP	Harris Branch	2021	5,345	5,687											
2	3353.102	Fort Dessau	18"/24"/FM/750gpmLS	Harris Branch	2016	1,417	1,508											
2	7265.002	Purchase of Dessau Utilities	plant/4100 gpm LS/16" FM/284 gpm l	Harris Branch	2006	2,061	0											
		Facility Size that Defines Capacity Addition	0.99 mgd	arris Branch to Dessau WWTP		8,823	7,195	16,017	3,322	2.66	4.82	1,272	2,159	887	2,357	4,279	1,272	1,163
2	3168.024	Balcones LS Relief - Phase I & 3A	8"/12"/18"/24"	Lake Creek	2005	414	440											
2	3168.024	Balcones LS Relief - Phase I & 3A	8"/12"/18"/24"	Lake Creek	2005	749	0											
2	3168.029	Balcones LS Relief - Phase IIIC	18"/24"	Lake Creek	2002	1,577	1,678											
2	3041.001	Davis Springs Reimbursement	21"Gravity/16"FM/3600gpmLS #1	Lake Creek	1996	1,476	0											
2	3041.001	Davis Springs Reimbursement	21"Gravity/16"FM/3600gpmLS #1	Lake Creek	1996	566	603											
2	27.7669	Lake Creek Wastewater System Improvements Contracts 1&2 (LS at capacity)	30"/36"/42"/48"	Lake Creek	1989	3,627	3,859											
2	3353.093	Lakeline Condos-Gencap Partners SER 2846	8"/15" gravity/10"FM/1100gpmLS	Lake Creek	2014	1,341	1,427											
2	6943.004	Parmer Lane Interceptor	42"	Lake Creek/Rattan	2020	32,531	34,613											
2	6943.004	Parmer Lane Interceptor	42"	Lake Creek/Rattan	2020	1,679	0											
2	3353.091	Pearson Avery Ranch	12/24/FW/1100gpmLS	Lake Creek	2016	2,827	3,008											
		Facility Size that Defines Capacity Addition	42" @ 0.16%	Lake Creek/Rattan		46,787	45,627	92,415	17,456	2.68	5.29	17,000	21,619	4,620	12,382	24,457	17,000	Note 1

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Ref. Table	Project Id/ Map ID	Project Description	Size	Drainage Basin Facility Area	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Existing Users SU	2025 Excess SU After 10 years
2	4926.028	ACWP - Little Walnut/Buttermilk - South	8"/42"/60"	Little Walnut	2009	11,069	11,778											
2	4926.028	ACWP - Little Walnut/Buttermilk - South	8"/42"/60"	Little Walnut	2009	5,753	0											
2	4926.021	ACWP - Little Walnut/Buttermilk @ 290 & 183	42"	Little Walnut	2010	1,931	2,054											
2	4926.023	ACWP-Little Walnut/Buttermilk @ Centre Creek	42"	Little Walnut	2009	4,732	5,035											
2	3212.151	TxDOT IH 35 Waterline Relocation: Rundberg To 290 East Segment	8"/12"/18"	Buttermilk	2019	310	0											
		Facility Size that Defines Capacity Addition	60" @ 0.35%	Little Walnut/Buttermilk		23,794	18,867	42,661	66,835	0.36	0.64	34,266	39,854	5,588	1,989	3,567	34,266	26,981
2	5028.005	RMMA Redevelopment South WW Improvements (SER 2281)	15"	Lower Tannehill	2008	1,301	1,385											
		Facility Size that Defines Capacity Addition	15" @ 0.65%	Lower Tannehill		1,301	1,385	2,686	2,400	0.54	1.12	318	538	220	119	246	318	1,862
2	3353.049	Robertson Hill Development	12"	Lower Waller	2008	693	738											
		Facility Size that Defines Capacity Addition	12" @ 0.36%	Lower Waller		693	738	1,431	985	0.70	1.45	322	478	157	110	228	322	507
	87.0704	Onion Creek Int Phase 3 (Slaught. To Boggy) SO-MUD	54"	Onion	1988	2,935	3,123											
2	4292.001	ONION CK INTER EXIST-BOGGY CK	54"	Onion	1989	2,351	2,501											
2	4197.001	ONION CRK INTRCPTR	54"	Onion	1988	1,965	2,090											
2	6937.026	S I-35, Onion Creek Golf Course WW Int - I 35 to Rinard (South Tunnel)	42"	Onion	2016	10,849	11,544											
2	6937.025	S I-35, Onion Creek Wastewater Interceptor - Rinard to Slaughter (N Tunnel)	54"	Onion	2017	13,501	14,366											
2	6937.027	S I-35, Onion Creek Wastewater Tie-in Line - Phase 1	24"	Onion	2012	2,409	2,564											
2	6937.003	So. IH35 W/WW Infrastructure Improvs PMC	PMC	Onion	2013	3,752	3,992											
2	6937.003	So. IH35 W/WW Infrastructure Improvs PMC	PMC	Onion	2013	644	0											
		Facility Size that Defines Capacity Addition	54" @ 0.12%	Onion		38,407	40,180	78,586	29,549	1.30	2.66	27,099	33,562	6,464	8,401	17,190	27,099	Note 1
2	3212.137	TxDOT Utility Relocation:SH 71: East of US 183 to Onion Crk-Toll Road	15"	Onion	2018	1,584	1,685											
		Facility Size that Defines Capacity Addition	15" @ 0.1%	Onion at SH 71		1,584	1,685	3,269	941	1.68	3.47	0	216	216	363	750	0	726
2	4926.097	ACWP Pedernales (Line Y only)	36"	Pedernales	2012	4,846	5,156											
		Facility Size that Defines Capacity Addition	36" @ 0.30%	Pedernales		4,846	5,156	10,001	15,846	0.31	0.63	3,260	4,092	832	255	525	3,260	11,754
2	3353.071	Rancho Alto Ventures	481 gpm LS, FM	Bear	2008	442	470											
		Facility Size that Defines Capacity Addition	481 gpm LS, FM	Rancho Alto		442	470	912	581	0.76	1.57	297	486	189	144	297	297	95
2	3353.084	Legends Way	30"	Rinard	2016	1,905	2,027											
2	3353.062	Zachary Scott Tract SER (both city const. and dev design)	36"	Rinard	2012	5,937	6,317											
2	3353.062	Zachary Scott Tract SER (both city const. and dev design)	36"	Rinard	2012	2,310	0											

(All costs in 1000s of dollars unless preceded by "\$")																		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Ref. Table	Project Id/ Map ID	Project Description	Size	Drainage Basin Facility Area	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Existing Users SU	2025 Excess SU After 10 years
2	3333.001	Facility Size that Defines Capacity Addition SAR Expansion & Improvements Project (50 to 75 mgd)	36" @ 0.12%	Rinard		10,152	8,344	18,496	10,022	1.01	1.85	357	484	126	128	233	357	9,538
2	3333.005	SAR Lift Station Interconnect Tunnel	25 mgd exp	SAR WWTP	2006	19,067	20,287											
2	3333.008	SAR New Electrical Substation and Miscellaneous Areas	25 mgd exp	SAR WWTP	2007	13,238	14,085											
2	3333.007	SAR Train C North	25 mgd exp	SAR WWTP	2006	25,606	27,244											
2	3333.007	SAR Train C North	25 mgd exp	SAR WWTP	2006	2,826	0											
2	3333.006	SAR Train C South	25 mgd exp	SAR WWTP	2006	23,217	24,703											
2	3333.006	SAR Train C South	25 mgd exp	SAR WWTP	2006	6,170	0											
2	3353.016	Facility Size that Defines Capacity Addition Akin High School Reimbursement	25 mgd exp	SAR WWTP		94,064	90,513	184,577	83,893	1.12	2.20	185,276	231,306	46,030	51,611	101,273	0	37,863
2	8223.131	North Bank Upper Slaughter Cr.Int. A&B CC#3 MUD	18"	Slaughter	2000	459	0											
2	8223.131	North Bank Upper Slaughter Cr.Int. A&B CC#3 MUD	36"	Slaughter	1988	1,650	1,756											
2	8223.132	Slaughter Creek Interceptor Phases 1, 2A & 2B CC#3 MUD	48"/54"	Slaughter	1990	9,280	9,874											
2	8223.132	Slaughter Creek Interceptor 1 & 2 SO-MUD	48"	Slaughter	1990	701	746											
2	8223.134	Slaughter North Branch Interceptor SO-MUD	30"	Slaughter	1990	1,595	1,697											
2	8223.135	Slaughter Tunnel SO-MUD	54"	Slaughter	1988	3,442	3,662											
2	89.0506	South Branch Interceptor and Extension CC#4 MUD	21"/30"	Slaughter	1988	1,295	1,378											
		Facility Size that Defines Capacity Addition	54" @ 0.68%	Slaughter		18,422	19,113	37,534	70,340	0.26	0.53	19,872	23,201	3,329	872	1,776	19,872	47,140
2	6943.045	Upper Boggy Creek Wastewater Line Improvements	18"	Upper Boggy	2022	1,400	0											
		Facility Size that Defines Capacity Addition	18" @ 0.47%	Upper Boggy		1,400	0	1,400	3,124	0.45	0.45	2,158	2,830	672	301	301	2,158	293
2	5028.003	RMMA-Airport Rd WW Improvs Phase Two (SER 2279)	15"/18"/24"	Upper Boggy	2009	2,011	2,140											
2	5028.007	RMMA Redevelopment Catellus SER #2263	12"/15"	Upper Boggy	2012	447	476											
		Facility Size that Defines Capacity Addition	24" @ 0.54%	Upper Boggy/Mueller		2,458	2,616	5,074	7,211	0.34	0.70	1,111	2,214	1,103	376	776	1,111	4,997
2	4926.037	ACWP - Shoal Creek WW Improvements / 29th to 34th St.	8"/12"/66"	Upper Shoal	2006	12,270	13,055											
2	6943.053	Burrell Drive Wastewater Improvements	12"	Upper Shoal	2020	1,148	1,222											
		Facility Size that Defines Capacity Addition	66" @ 0.33%	Upper Shoal		13,418	14,277	27,695	83,678	0.16	0.33	25,114	31,388	6,273	1,006	2,076	25,114	52,290
2	3212.116	Hwy 290 & Airport Blvd WWL Relocation	15"	Upper Tannehill	2014	390	415											
		Facility Size that Defines Capacity Addition	15" @ 0.68%	Upper Tannehill		390	415	806	2,455	0.16	0.33	1,472	2,345	873	139	286	1,472	110
2	5028.007	RMMA SE WW Improvements (SER 2282)	15"/30"	Upper Tannehill	2012	2,539	0											
2	5028.007	RMMA SE WW Improvements (SER 2282)	15"/30"	Upper Tannehill	2012	3,091	3,289											
		Facility Size that Defines Capacity Addition	15" @ 1.10%	Upper Tannehill/Mueller		5,630	3,289	8,918	3,122	1.80	2.86	65	925	860	1,551	2,457	65	2,197
2	3023.003	Walnut Creek WWTP	15 mgd exp	Walnut WWTP	2004	20,474	21,784											
2	3023.017	Walnut Creek WWTP 75 MGD Upgrade	15 mgd exp	Walnut WWTP	2004	10,002	0											
2	3023.017	Walnut Creek WWTP 75 MGD Upgrade	15 mgd exp	Walnut WWTP	2004	17,609	18,735											
2	4579.001	WALNUT CREEK WWTP, PH III	15 mgd exp	Walnut WWTP	2004	15,483	16,474											
		Facility Size that Defines Capacity Addition	15 mgd	Walnut WWTP		63,567	56,993	120,560	50,336	1.26	2.40	184,597	228,147	43,550	54,998	104,309	6,946	Note 1

(All costs in 1000s of dollars unless preceded by "\$")																		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Ref. Table	Project Id/ Map ID	Project Description	Size	Drainage Basin Facility Area	Completion Date	Cost to Build	Interest Cost	Total Cost to Build	Facility Design Capacity SU	Cost to Build per SU	Cost to Build per SU w/Interest	2015 Land Use Assumptions SU	2025 Land Use Assumptions SU	10-Year Growth Users SU	Impact Cost without Interest	Impact Cost with Interest	2015 Existing Users SU	2025 Excess SU After 10 years
2	23.7642	Upper Walnut Creek Int Phases 3A,3B,4&5 NCAGC-MUD	12"/16"/30"/36"/42"/48"	Walnut	1987	6,253	6,653											
2	3168.039	Waters Park Wastewater Relief Main	36"	Walnut	2018	7,228	7,690											
		Facility Size that Defines Capacity Addition	48" @ 0.5%	Walnut		13,481	14,343	27,824	44,058	0.31	0.63	41,241	50,856	9,615	2,942	6,072	41,241	Note 1
2	3353.011	Dell 18	18"	Walnut	2000	652	0											
		Facility Size that Defines Capacity Addition	18" @ 0.5%	Walnut/Dell		652	0	652	3,222	0.20	0.20	2,098	3,200	1,102	223	223	2,098	22
2	3353.007	Jourdan's Crossing Service Extension (Samsung)	12"/18"/36"/48"	Walnut	1998	2,406	0											
		Facility Size that Defines Capacity Addition	48" @ 0.074%	Walnut/Samsung		2,406	0	2,406	16,950	0.14	0.14	360	455	94	13	13	360	16,495
2	6943.026	Barton Creek Plaza Lift Station Downstream Improvements	15"	West Bouldin	2019	3,199	0											
2	3353.112	Del Curto Road Wastewater Improvements (SER-3486R2)	15"	West Bouldin	2017	0	0											
2	3168.076	South Area Lift Station Improvements: Barton Creek Plaza	1MGD	Barton	2019	1,125	0											
		Facility Size that Defines Capacity Addition	15" @ 1.0%	West Bouldin		4,325	0	4,325	2,977	1.45	1.45	1,731	2,539	808	1,173	1,173	1,731	439
2	88.0553	North Williamson Creek Int & Easements WVO MUD	42"	Williamson	1989	3,097	3,295											
2	4534.001	OAK HILL BR. OF WMSON.CRK.INTER	30"	Williamson	1989	1,533	1,631											
2	85.0836	South Williamson Trunk Phases 1 and 2 WVO-MUD	15"/24"	Williamson	1989	919	978											
2	85.0777	Williamson Creek 30" WW Interceptor MR-MUD	30"	Williamson	1989	500	532											
2	4221.001	WILLIAMSON CREEK INT PH II	42"	Williamson	1989	820	872											
2	6943.031	Williamson Creek Wastewater Interceptor	66"/72"	Williamson	2023	42,341	45,051											
		Facility Size that Defines Capacity Addition	72"	Williamson		49,210	52,360	101,570	98,154	0.50	1.03	41,287	47,676	6,388	3,203	6,611	41,287	50,479
TOTAL											1,119,882							
Service Unit and System-wide Impact Cost Totals														99,819	176,135	337,790		
Calculated rate revenue credit per state law (See Appendix B)																-81,050		
Resultant amount to be used for calculating maximum allowable Impact Fee																256,740		
Maximum Allowable Impact Fee (\$256,740,000 / 99,819 service units)																\$ 2,572		

Note 1 The main interceptor in this group will reach capacity in the 10-year planning period according to the standard criteria. By allowing the pipe to go beyond 80% full, it will provide capacity for growth during the remaining few years of the financing period, after which time it will move off the Impact Fee.

VII. MAXIMUM ALLOWABLE FEE CALCULATION AND RATE REVENUE CREDIT

Once the portion of facilities cost associated with the 10-year growth users is calculated for pressure zone and drainage basin analysis areas, the next step is summing these area costs to produce the total system growth cost -- the impact cost total. Then, in compliance with Section 395.014 (a) (7) of the law, a credit must be applied to take into account the contributions growth users will pay in rate payments that go towards financing the CIP growth projects listed on the tables.

In this update, the Austin-specific rate revenue credits are calculated for water and wastewater, based on the idea that in any future year the study period growth users make rate payments in proportion to their number as a percent of total rate payers. And by extension, the growth user contribution to any particular component of the rate requirements (in this case the set of growth projects) can be estimated using this percentage. Applying the year by year percentage of new growth users to the total amortized cost by year with defeasance savings of the growth projects each year, and then summing all years gives the rate revenue credit for the new users' share of the growth project rate payments. Note that the rate revenue credit calculation uses the same interest cost basis (30-year financing and 5.5% interest rate) that yields the individual project interest costs presented in Tables 1 and 2. The rate revenue credit spreadsheets are shown in Appendix A for water and in Appendix B for wastewater.

Using this method, the rate revenue credit for water is \$157,854,000 and for wastewater it is \$81,050,000. To complete the maximum allowable fee calculation, the rate revenue credits are subtracted from the impact cost totals and the result is divided by the total number of 10-year growth service units to arrive at system wide maximum allowable fees. As shown on Table 8, the water maximum allowable fee is \$4,752 per service unit. As shown on Table 9, the wastewater maximum allowable fee is \$2,572 per service unit.

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Appendix A

Water Rate Revenue Credit Calculation

Method

Section 395.014 (a)(7) of the Impact Fee law requires that calculation of the maximum allowable fee include a rate revenue credit to account for the money new growth users will pay in rate payments that go towards financing the CIP growth projects. Utilities can calculate this credit and apply it to the calculated fee or, alternatively, can forgo the credit calculation by opting to use the statutory credit equal to 50% of the calculated impact fee. AW opted to calculate the credit.

The calculation method is based on the idea that in any future year the study period growth users make rate payments in proportion to their number as a percent of total rate payers. And by extension, the growth user contribution to any particular component of the rate requirements (the set of impact fee projects in this case) can be estimated using this percentage. Applying the year by year percentage of new growth users to the total amortized cost by year with defeasance savings of the growth projects each year, and then summing all years gives the rate revenue credit for the new users' share of the growth project rate payments.

Beginning in 2016, AW began using impact fee collections to defease outstanding debt to reduce scheduled debt service requirements as authorized by Local Government Code Chapter 395. These fees paid by the developers can only be used to pay the direct costs or the principal and interest on bonds issued for constructing capital improvements or facility expansions identified in the growth-related capital improvement plan. A defeasance is a method of using available cash to pay off outstanding debt early. The utility plans to continue annual defeasance transactions using impact fee collections to manage debt service requirements. As such, the rate revenue credit calculation includes a reduction of the total amortized cost for projected defeasance savings. As a result, these savings lower annual debt service requirements attributable to the use of impact fee collections to defease debt.

The rate revenue credit calculation is employed in developing the accompanying table. The three basic steps are:

1. Estimate the total cost of growth projects being financed each year during the financing life of the projects.

This is done in the top part of the table. Yearly totals are arrived at by adding together the amortized cost of the individual projects, beginning from the completion date of the earliest-built water project (1987) and carrying out to the end of the financing period for last-built project (2054). The amortization uses the same financing basis for project interest costs presented in CIP Tables 1 and 2 (30-year financing period and 5.5% interest rate). The resulting cost totals are shown in the row labeled Amortized Cost by Year with Defeasance Savings. These totals estimate the rate revenue requirements for the impact fee growth projects for each year. Only the amortized cost totals for year 2018 and beyond are shown for clarity since these are the only years during which the study period new growth users will make rate payments.

2. Determine the percentage that the new growth users are of the total rate payers for each year in the future.

As shown in the lower part of the table, the study period new growth users (expressed in service units from the Land Use Assumptions) begin arriving in 2017 and are tallied by year as they come on line. At the end of the 10-year planning period, year 2027, the results row labeled Study Period Total Service Units shows the same 99,251 cumulative total of 10-year new growth water service units used in calculating the project impact costs in Table 8. Beyond 2027 the number of new growth service units that are the subject of the rate revenue credit for the 10-year planning period remains constant, but their percentage of total service units continues to change.

The total system service units are tallied by year starting with the existing 2017 water service unit total (413,113) adding in the subject 10-year new growth users for the planning period of 2017 – 2027 as they come on line, and then continuing to the end of the financing period in 2054 with the addition of future growth projected to occur in the period beyond 2027. The resulting year by year number of total system service units is shown in the table in the row labeled Total Service Units. The percentage that the study period new growth users are of the total service units for each year in the future is readily calculated by dividing the Study Period Total Service Units by the Total Service Units. The resulting percentages are shown in the row labeled Growth Percent of Total Service Units. The study period growth users as a percent of total users rises to a maximum of 19% in 2027 and then declines to 13% at the end of the financing period of the last project in 2054.

3. Calculate the amount the new growth users will pay towards the growth projects for each year. The sum of all years is the rate revenue credit.

Applying the Growth Percent of Total Service Units to the Amortized Cost by Year with Defeasance Savings gives the results labeled New Service Units Amount of Amortized Cost for each year (bottom row of table). Summing across for all years gives the Rate Revenue Credit amount shown at the lower right-hand corner of the table.

Using this method, the water rate revenue credit is \$157,854,000. It is subtracted from the water impact project cost of \$629,515,000 developed in Table 8 in calculating the water maximum allowable fee. Note that the calculated rate revenue credit equates to 25% of the water impact project cost which compares to 36% used previously. It may be said that of the \$630 M in impact project costs (including interest), that are associated with serving new growth users in the 10-year planning period, \$158 M of that amount will come from new growth user rate payments, so only the remainder, \$472 M, goes into calculating the maximum allowable fee.

Cost by Year		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1987 Total	\$36,142																			
1988 Total	\$70,838																			
1989 Total	\$66,937	\$2,231																		
1990 Total	\$10,935	\$364	\$364																	
1992 Total	\$26,680	\$889	\$889	\$889	\$889															
1993 Total	\$7,237	\$241	\$241	\$241	\$241	\$241														
1996 Total	\$2,369	\$79	\$79	\$79	\$79	\$79	\$79	\$79	\$79											
1997 Total	\$14,681	\$458	\$458	\$458	\$458	\$458	\$458	\$458	\$458	\$458										
1998 Total	\$14,397	\$421	\$421	\$421	\$421	\$421	\$421	\$421	\$421	\$421	\$421									
1999 Total	\$4,499	\$150	\$150	\$150	\$150	\$150	\$150	\$150	\$150	\$150	\$150	\$150								
2000 Total	\$78,491	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566							
2001 Total	\$57,430	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843	\$1,843						
2002 Total	\$7,663	\$136	\$136	\$136	\$136	\$136	\$136	\$136	\$136	\$136	\$136	\$136	\$136	\$136	\$136					
2003 Total	\$3,468	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116	\$116				
2004 Total	\$7,929	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264	\$264			
2005 Total	\$2,375	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52		
2006 Total	\$18,077	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	\$597	
2007 Total	\$17,969	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408	\$408
2008 Total	\$1,328	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44	\$44
2009 Total	\$28,327	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944	\$944
2010 Total	\$3,502	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117	\$117
2011 Total	\$256,031	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534	\$8,534
2012 Total	\$39,296	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310
2013 Total	\$39,557	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294
2014 Total	\$25,225	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841	\$841
2015 Total	\$840,181	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999
2016 Total	\$129,195	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306
2017 Total	\$322,588	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612
2018 Total	\$13,901	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463
2019 Total	\$28,133		\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705
2020 Total	\$3,197			\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82
2021 Total	\$16,391				\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546
2024 Total	\$4,712							\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157
2025 Total	\$44,479								\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483
Total Cost of Growth Project	\$2,244,157																			
Total Amortization Cost	\$2,182,971	\$66,282	\$64,755	\$64,473	\$65,019	\$64,130	\$63,888	\$64,045	\$65,528	\$65,449	\$64,991	\$64,570	\$64,420	\$61,854	\$60,011	\$59,875	\$59,760	\$59,496	\$59,443	\$58,846
Defeasance Savings	(\$83,084)	(23,199)	(22,664)	(22,565)	(22,757)	(22,445)	(22,361)	(22,416)	(22,935)	(22,907)	(22,747)	(22,600)	(22,547)	(21,649)	(21,004)	(20,956)	(20,916)	(20,823)	(20,805)	(20,596)
Amortized Costs by Year with Defeasance Savings	\$1,599,888	\$43,083	\$42,091	\$41,907	\$42,262	\$41,684	\$41,527	\$41,630	\$42,593	\$42,542	\$42,244	\$41,971	\$41,873	\$40,205	\$39,007	\$38,919	\$38,844	\$38,672	\$38,638	\$38,250
2017 Forward Cumulative Total		\$111,209	\$153,300	\$195,207	\$237,469	\$279,154	\$320,681	\$362,310	\$404,904	\$447,446	\$489,690	\$531,660	\$573,534	\$613,739	\$652,746	\$691,665	\$730,509	\$769,181	\$807,819	\$846,069
1987 Forward Cumulative Total		\$560,102	\$602,193	\$644,100	\$686,362	\$728,047	\$769,574	\$811,203	\$853,797	\$896,339	\$938,583	\$980,553	\$1,022,427	\$1,062,632	\$1,101,639	\$1,140,558	\$1,179,402	\$1,218,074	\$1,256,712	\$1,294,962
2017 Existing Service Units		413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113
2018 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2019 New Service Units			9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2020 New Service Units				9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2021 New Service Units					9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2022 New Service Units						9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2023 New Service Units							9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2024 New Service Units								9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2025 New Service Units									9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2026 New Service Units										9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2027 New Service Units											9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
Study Period Total Service Units		9,925	19,850	29,775	39,700	49,626	59,551	69,476	79,401	89,326	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251
Total Service Units		423,038	432,963	442,888	452,814	462,739	472,664	482,589	492,514	502,439	512,364	522,014	531,663	541,313	550,962	560,612	570,262	579,911	589,561	599,210
Growth Percent of Total Service Units		2.3%	4.6%	6.7%	8.8%	10.7%	12.6%	14.4%	16.1%	17.8%	19.4%	19.0%	18.7%	18.3%	18.0%	17.7%	17.4%	17.1%	16.8%	16.6%
New Service Units Amount of Amortized Cost		\$1,011	\$1,930	\$2,817	\$3,705	\$4,470	\$5,232	\$5,993	\$6,867	\$7,563	\$8,183	\$7,980	\$7,817	\$7,372	\$7,027	\$6,890	\$6,761	\$6,619	\$6,505	\$6,336

Cost by Year		2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
1987 Total	\$36,142																		
1988 Total	\$70,838																		
1989 Total	\$66,937																		
1990 Total	\$10,935																		
1992 Total	\$26,680																		
1993 Total	\$7,237																		
1996 Total	\$2,369																		
1997 Total	\$14,681																		
1998 Total	\$14,397																		
1999 Total	\$4,499																		
2000 Total	\$78,491																		
2001 Total	\$57,430																		
2002 Total	\$7,663																		
2003 Total	\$3,468																		
2004 Total	\$7,929																		
2005 Total	\$2,375																		
2006 Total	\$17,258																		
2007 Total	\$17,969																		
2008 Total	\$1,328	\$44																	
2009 Total	\$28,327	\$944	\$944																
2010 Total	\$3,502	\$117	\$117	\$117															
2011 Total	\$256,031	\$8,534	\$8,534	\$8,534	\$8,534														
2012 Total	\$39,296	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310													
2013 Total	\$39,557	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294	\$1,294												
2014 Total	\$25,225	\$841	\$841	\$841	\$841	\$841	\$841	\$841											
2015 Total	\$840,181	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999	\$26,999										
2016 Total	\$129,195	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306	\$4,306									
2017 Total	\$322,588	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612	\$10,612								
2018 Total	\$13,901	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463							
2019 Total	\$28,133	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705	\$705						
2020 Total	\$3,197	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82	\$82					
2021 Total	\$16,391	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546	\$546				
2024 Total	\$4,712	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	
2025 Total	\$44,479	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483
Total Cost of Growth Project	\$2,243,339																		
Cash	\$61,155																		
Total Amortization Cost	\$2,182,184	\$58,438	\$58,394	\$57,450	\$57,333	\$48,799	\$47,489	\$46,195	\$45,354	\$18,355	\$14,048	\$3,436	\$2,972	\$2,268	\$2,186	\$1,640	\$1,640	\$1,640	\$1,483
Defeasance Savings	(582,918)	(20,453)	(20,438)	(20,107)	(20,067)	(17,080)	(16,621)	(16,168)	(15,874)	(6,424)	(4,917)	(1,202)	(1,040)	(794)	(765)	(574)	(574)	(574)	(519)
Amortized Costs by Year																			
with Defeasance Savings	\$1,599,266	\$37,985	\$37,956	\$37,342	\$37,266	\$31,719	\$30,868	\$30,026	\$29,480	\$11,930	\$9,131	\$2,233	\$1,932	\$1,474	\$1,421	\$1,066	\$1,066	\$1,066	\$964
2017 Forward Cumulative Total		\$883,721	\$921,677	\$959,019	\$996,286	\$1,028,005	\$1,058,872	\$1,088,899	\$1,118,379	\$1,130,309	\$1,139,440	\$1,141,674	\$1,143,606	\$1,145,080	\$1,146,500	\$1,147,566	\$1,148,632	\$1,149,698	\$1,150,662
1987 Forward Cumulative Total		\$1,332,325	\$1,370,281	\$1,407,624	\$1,444,890	\$1,476,609	\$1,507,477	\$1,537,503	\$1,566,983	\$1,578,914	\$1,588,045	\$1,590,278	\$1,592,210	\$1,593,684	\$1,595,105	\$1,596,171	\$1,597,237	\$1,598,302	\$1,599,266
2017 Existing Service Units		413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113	413,113
2018 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2019 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2020 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2021 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2022 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2023 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2024 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2025 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2026 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
2027 New Service Units		9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925	9,925
Study Period Total Service Units		99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251	99,251
Total Service Units		608,860	618,509	628,159	637,808	647,739	657,671	667,602	677,533	687,464	697,395	707,327	717,258	727,189	737,120	747,051	756,982	766,914	776,845
Growth Percent of Total Service Units		16.3%	16.0%	15.8%	15.6%	15.3%	15.1%	14.9%	14.6%	14.4%	14.2%	14.0%	13.8%	13.6%	13.5%	13.3%	13.1%	12.9%	12.8%
New Service Units Amount of Amortized Cost		\$6,192	\$6,091	\$5,900	\$5,799	\$4,860	\$4,658	\$4,464	\$4,318	\$1,722	\$1,300	\$313	\$267	\$201	\$191	\$142	\$140	\$138	\$123
Rate Revenue Credit																			\$157,854

Appendix B

Wastewater Rate Revenue Credit Calculation

Method

Section 395.014 (a)(7) of the Impact Fee law requires that calculation of the maximum allowable fee include a rate revenue credit to account for the money new growth users will pay in rate payments that go towards financing the CIP growth projects. Utilities can calculate this credit and apply it to the calculated fee or, alternatively, can forgo the credit calculation by opting to use the statutory credit equal to 50% of the calculated impact fee. AW opted to calculate the credit.

The calculation method is based on the idea that in any future year the study period growth users make rate payments in proportion to their number as a percent of total rate payers. And by extension, the growth user contribution to any particular component of the rate requirements (the set of impact fee projects in this case) can be estimated using this percentage. Applying the year by year percentage of new growth users to the total amortized cost by year with defeasance savings of the growth projects each year, and then summing all years gives the rate revenue credit for the new users' share of the growth project rate payments.

Beginning in 2016, AW began using impact fee collections to defease outstanding debt to reduce scheduled debt service requirements as authorized by Local Government Code Chapter 395. These fees paid by the developers can only be used to pay the direct costs or the principal and interest on bonds issued for constructing capital improvements or facility expansions identified in the growth-related capital improvement plan. A defeasance is a method of using available cash to pay off outstanding debt early. The utility plans to continue annual defeasance transactions using impact fee collections to manage debt service requirements. As such, the rate revenue credit calculation includes a reduction of the total amortized cost for projected defeasance savings. As a result, these savings lower annual debt service requirements attributable to the use of impact fee collections to defease debt.

The rate revenue credit calculation is employed in developing the accompanying table. The three basic steps are:

1. Estimate the total cost of growth projects being financed each year during the financing life of the projects.

This is done in the top part of the table. Yearly totals are arrived at by adding together the amortized cost of the individual projects, beginning from the completion date of the earliest-built wastewater project (1987) and carrying out to the end of the financing period for last-built project (2053). The amortization uses the same financing basis for project interest costs presented in CIP Tables 1 and 2 (30-year financing period and 5.5% interest rate). The resulting cost totals are shown in the row labeled Amortized Cost by Year with Defeasance Savings. These totals estimate the rate revenue requirements for the impact fee growth projects for each year. Only the amortized cost totals for year 2018 and beyond are shown for clarity since these are the only years during which the study period new growth users will make rate payments.

2. Determine the percentage that the new growth users are of the total rate payers for each year in the future.

As shown in the lower part of the table, the study period new growth users (expressed in service units from the Land Use Assumptions) begin arriving in 2017 and are tallied by year as they come on line. At the end of the 10-year planning period, year 2027, the results row labeled Study Period Total Service Units shows the same 99,819 cumulative total of 10-year new growth wastewater service units used in calculating the project impact costs in Table 9. Beyond 2027 the number of new growth service units that are the subject of the rate revenue credit for the 10-year planning period remains constant, but their percentage of total service units continues to change.

The total system service units are tallied by year starting with the existing 2017 wastewater service unit total (399,204) adding in the subject 10-year new growth users for the planning period of 2017 – 2027 as they come on line, and then continuing to the end of the financing period in 2053 with the addition of future growth projected to occur in the period beyond 2027. The resulting year by year number of total system service units are shown in the table in the row labeled Total Service Units. The percentage that the study period new growth users are of the total service units for each year in the future is readily calculated by dividing the Study Period Total Service Units by the Total Service Units. The resulting percentages are shown in the row labeled Growth Percent of Total Service Units. The study period growth users as a percent of total users rises to a maximum of 20% in 2027 and then declines to 13% at the end of the financing period of the last project in 2053.

3. Calculate the amount the new growth users will pay towards the growth projects for each year. The sum of all years is the rate revenue credit.

Applying the Growth Percent of Total Service Units to the Amortized Cost by Year with Defeasance Savings gives the results labeled New Service Units Amount of Amortized Cost for each year (bottom row of table). Summing across for all years gives the Rate Revenue Credit amount shown at the lower right-hand corner of the table.

Using this method, the wastewater rate revenue credit is \$81,050,000. It is subtracted from the wastewater impact project cost of \$337,790,000 developed in Table 9 in calculating the wastewater maximum allowable fee. Note that the calculated rate revenue credit equates to 24% of the wastewater impact project cost which compares to 35% used previously. It may be said that of the \$338 M in impact project costs (including interest), that are associated with serving new growth users in the 10-year planning period, \$81 M of that amount will come from new growth user rate payments, so only the remainder, \$257 M, goes into calculating the maximum allowable fee.

Cost by Year		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
1987 Total	\$12,906																		
1988 Total	\$23,296																		
1989 Total	\$26,516	\$884																	
1990 Total	\$23,893	\$796	\$796																
1996 Total	\$2,645	\$39	\$39	\$39	\$39	\$39	\$39	\$39	\$39										
1997 Total	\$846	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3									
1998 Total	\$2,406	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0								
2000 Total	\$1,262	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0						
2002 Total	\$3,255	\$108	\$108	\$108	\$108	\$108	\$108	\$108	\$108	\$108	\$108	\$108	\$108	\$108	\$108				
2004 Total	\$120,560	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685	\$3,685		
2005 Total	\$7,674	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231	\$231
2006 Total	\$186,045	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833	\$5,833
2007 Total	\$27,772	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926	\$926
2008 Total	\$23,093	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770	\$770
2009 Total	\$44,998	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280
2010 Total	\$3,985	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133	\$133
2012 Total	\$39,379	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151	\$1,151
2013 Total	\$10,936	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258	\$258
2014 Total	\$3,628	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119	\$119
2015 Total	\$117,734	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651	\$3,651
2016 Total	\$59,127	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577	\$1,577
2017 Total	\$38,680	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202	\$1,202
2018 Total	\$48,924	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454	\$1,454
2019 Total	\$25,593		\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609	\$609
2020 Total	\$79,604			\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
2021 Total	\$38,489				\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283	\$1,283
2022 Total	\$1,400					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2023 Total	\$131,552						\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337	\$4,337
2024 Total	\$13,686							\$456	\$456	\$456	\$456	\$456	\$456	\$456	\$456	\$456	\$456	\$456	\$456
Total Cost of Growth Projects	\$1,119,882 \$85,119																		
Total Amortization Cost	\$1,034,763	\$24,100	\$23,825	\$25,529	\$26,812	\$26,812	\$31,149	\$31,605	\$31,605	\$31,566	\$31,563	\$31,563	\$31,563	\$31,563	\$31,563	\$31,455	\$31,455	\$27,770	\$27,539
Deafesance Savings	(238,372)	(7,471)	(7,386)	(7,914)	(8,312)	(8,312)	(9,656)	(9,798)	(9,798)	(9,785)	(9,785)	(9,785)	(9,785)	(9,785)	(9,785)	(9,751)	(9,751)	(8,609)	(8,537)
Amortized Cost by Year with Deafesance Savings	\$796,391	\$16,629	\$16,439	\$17,615	\$18,500	\$18,500	\$21,493	\$21,808	\$21,808	\$21,781	\$21,779	\$21,779	\$21,779	\$21,779	\$21,779	\$21,704	\$21,704	\$19,161	\$19,002
2017 Forward Cumulative Total		\$40,052	\$56,491	\$74,105	\$92,606	\$111,106	\$132,598	\$154,406	\$176,213	\$197,994	\$219,773	\$241,551	\$263,330	\$285,109	\$306,887	\$328,591	\$350,295	\$369,456	\$388,458
1987 Forward Cumulative Total		\$282,450	\$298,889	\$316,504	\$335,004	\$353,504	\$374,997	\$396,804	\$418,612	\$440,393	\$462,171	\$483,950	\$505,729	\$527,507	\$549,286	\$570,990	\$592,694	\$611,855	\$630,856
2017 Existing Service Units		399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204	399,204
2018 New Service Units		9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2019 New Service Units			9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2020 New Service Units				9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2021 New Service Units					9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2022 New Service Units						9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2023 New Service Units							9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2024 New Service Units								9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2025 New Service Units									9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2026 New Service Units										9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
2027 New Service Units											9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982	9,982
Study Period Total Service Units		9,982	19,963	29,945	39,927	49,909	59,891	69,873	79,855	89,837	99,819	99,819	99,819	99,819	99,819	99,819	99,819	99,819	99,819
Total Service Units		409,185	419,167	429,149	439,131	449,113	459,095	469,077	479,059	489,040	499,022	508,672	518,321	527,971	537,620	547,270	556,920	566,569	576,219
Growth Percent of Total Service Units																			
Units		2.4%	4.8%	7.0%	9.1%	11.1%	13.0%	14.9%	16.7%	18.4%	20.0%	19.6%	19.3%	18.9%	18.6%	18.2%	17.9%	17.6%	17.3%
New Service Units Amount of Amortized Cost		\$406	\$783	\$1,229	\$1,682	\$2,056	\$2,804	\$3,248	\$3,635	\$4,001	\$4,356	\$4,274	\$4,194	\$4,117	\$4,044	\$3,959	\$3,890	\$3,376	\$3,292

Appendix C

CIP Projects Targeted to Meet Existing Needs 2018-2022—Wastewater

DEPT	SubprojectID	SubprojectName	Appropriation	Expenditures
2307	1255.021	Blocks 2 & 4 Odor Abatement - Wastewater Collection System	\$485,355	\$86,349
2307	2231.065	Misc WW Rehabilitation projects	\$801,847	\$656,877
2307	2231.104	Annual Contracts for Lines Relay & Spot Rep	\$18,925,819	\$18,920,624
2307	2231.134	Palma Plaza Reroute	\$0	\$0
2307	2231.183	South Austin SSO	\$1,832,340	\$1,793,536
2307	2231.211	Real Estate Svcs-Existing WW Pipelines	\$129,800	\$44,735
2307	2231.212	Wastewater Manhole Rehab	\$4,319,100	\$4,198,798
2307	2231.213	In-Situ Rehab & Replacement - cash funded	\$10,284,046	\$10,284,046
2307	2231.221	Future Wastewater Pipeline Replace/Rehab	\$0	\$0
2307	2231.223	Future Ww Pipeline Replace/Rehab-Awu Crews	\$0	\$0
2307	2231.226	Rehabilitation of WW lines-EPA SAAP Grant	\$5,645,689	\$3,058,148
2307	2231.231	WW Manhole Rehab ID/IQ	\$1,156,373	\$323,467
2307	2231.24	Old Enfield - Niles And Newfield Area Neighbrhd Ww	\$261,700	\$81,185
2307	2231.263	Rehabilitation of Walnut Creek 72" Siphon Box	\$0	\$0
2307	2231.264	WW-Rehab CIPP High Priority 1 Projects Group A	\$1,600,446	\$1,174,834
2307	2231.265	Wastewater Collection System Replacement Lines Group A	\$738,942	\$507,477
2307	2231.266	Wastewater Collection System Replacement Lines Group B	\$945,878	\$677,569
2307	2231.268	Large Wastewater Interceptors - Assess and Rehab	\$844,843	\$466,444
2307	2231.274	Schulle Branch Creek Aerial Wastewater Pipeline Crossing Ren	\$258,665	\$71,312
2307	2231.275	WW Relay and Spot Repair Service Contract IDIQ.(2017-2019)	\$6,000,181	\$3,770,379
2307	2231.276	Wastewater Renewal Program-Pipelines (Idiq)	\$0	\$0
2307	2231.28	Targeted Wastewater Line Improvements - Town Lake Basin	\$115,314	\$74,551
2307	2231.301	WW Line Renewal And Spot Rehab IDIQ	\$100,000	\$4,947
2307	2231.305	Fort Upper Basin Wastewater Pipeline Renewal	\$125,314	\$74,594
2307	2231.306	In Situ Wastewater Pipeline Renewal Group B	\$3,593,377	\$512,426
2307	2231.308	Wastewater Pipeline Replacement Program: Group C	\$90,103	\$75,930
2307	2231.314	In Situ Wastewater Line Renewal Program (2018 to 2020)	\$1,084,767	\$47,300
2307	2231.319	Targeted Ww Line Improvements - Town Lake Basin Group B	\$0	\$0
2307	2231.32	Targeted Wastewater Line Improvements - South Boggy Basin	\$0	\$0
2307	2231.321	Targeted Wastewater Line Improvements - Buttermilk Basin	\$0	\$0
2307	2231.322	Targeted Wastewater Line Improvements - Lake Austin Basin	\$0	\$0
2307	2231.323	Targeted Wastewater Line Improvements - Boggy Lower Basin	\$0	\$0
2307	2231.324	Targeted Wastewater Line Improvements - County Club Basin	\$0	\$0
2307	2231.325	Targeted Wastewater Line Improvements - Little Walnut Basin	\$0	\$0
2307	2231.326	Targeted Wastewater Line Improvements - Williamson Basin	\$0	\$0
2307	2231.327	Targeted Wastewater Line Improvements - Bull Creek Basin	\$550,000	\$430
2307	2231.328	Targeted Wastewater Line Improvements - Dapz	\$0	\$0
2307	2231.329	Targeted Ww Line Improvements - Red River 12th To 6th St	\$0	\$0
2307	2231.33	Targeted Ww Line Improv - Red River 6th St To Cesar Chavez	\$0	\$0
2307	2231.343	Renewal Of Critical Wastewater Assets – Walnut Basins	\$0	\$0
2307	3023.019	Walnut Creek Wwtp Headworks Improvements	\$0	\$0
2307	3023.021	Walnut Creek WWTP Plant Control System Upgrade	\$231,622	\$230,811
2307	3023.022	Walnut creek Pumping System Improvements	\$1,919,578	\$1,220,813
2307	3023.023	Walnut Creek Ventilation/Odor Control	\$0	\$0
2307	3023.025	Walnut Creek WWTP Tertiary Filter Rehabilitation	\$34,786,162	\$10,811,756
2307	3023.026	Walnut Crk WWTP Outfall Bank Erosion Ph 2	\$1,823,818	\$1,815,085
2307	3023.03	Wc Electrical Loop Switched Ph3	\$0	\$0
2307	3023.033	Walnut Creek WWTP Sludge Trf Line	\$30,000	\$1,113
2307	3023.035	Walnut Creek WWTP Thickener Building Rehab	\$1,472,116	\$635,349
2307	3023.036	Walnut Crk Prim. & Sec. Clarifier Rehab	\$0	\$0
2307	3023.039	Walnut Creek WWTP Stormwater Improvements	\$2,626,924	\$2,193,460
2307	3023.04	Walnut Creek Influent Bank Stabilization	\$1,652,240	\$1,629,508
2307	3023.041	Wc Wwtp Lab & Adm Bldg Hvac-P1	\$3,027,464	\$1,337,215
2307	3023.042	Wc Wwtp Lab & Adm Bldg Hvac-P2	\$0	\$0
2307	3023.046	Wcwwtp 100 Mgd Expansion	\$0	\$0
2307	3023.051	Walnut Creek Wwtp Disinfection System Improvements	\$0	\$0
2307	3023.057	Walnut Creek Wwtp Scada Update	\$0	\$0
2307	3023.058	ADP - Walnut Creek Facilities Improvements	\$315,000	\$263,847
2307	3023.059	Walnut Creek Wwtp Influent Lift Station	\$0	\$0
2307	3023.06	Walnut Creek WWTP Safety and Process Impr Project-ADP (IDIQ)	\$119,598	\$119,598
2307	3023.061	Walnut Creek Wwtp Pumping Systems Improvements - Phase II	\$0	\$0
2307	3023.062	Walnut Creek Wastewater Plant Elevator Replacement	\$188,228	\$188,228
2307	3023.063	Walnut Creek WWTP Radio Antennae Improvements	\$623,660	\$588,826
2307	3023.064	Walnut Creek WWTP Bar Rack Replacement	\$155,000	\$0
2307	3023.065	Walnut Creek WWTP Settled Wastewater Pump Replacement	\$350,000	\$0
2307	3023.066	Walnut Creek WWTP Scrubber Rehabilitation	\$467,256	\$143,233
2307	3023.067	Walnut Creek WWTP Optimization And Facility Plan	\$2,065,570	\$601,286
2307	3023.068	Walnut Creek WWTP Process Area Door Replacements	\$0	\$0
2307	3023.069	Walnut Creek WWTP Maintenance Storage Building Replacement	\$75,000	\$69,589
2307	3023.07	Walnut Creek WWTP Septic Hauler Prescreening Facility	\$0	\$0

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2307	3023.071	Walnut Creek WWTP Non-Penetrating Safety Railing for Skyligh	\$30,025	\$30,025
2307	3023.073	Walnut Creek Wwtp Instal CI Solution Lines & Jib Cranes	\$63,289	\$63,289
2307	3023.075	Walnut Creek Wastewater Treatment Plant Sample Receiving Lab	\$0	\$0
2307	3023.076	Walnut Creek Wastewater Treatment Plant Garage Door Replacem	\$0	\$0
2307	3023.077	Walnut WWTP Maintenance Shop Chiller, Air Handler	\$0	\$0
2307	3164.038	HB Digester Cleaning	\$33,531,881	\$33,531,881
2307	3164.041	Hornsby Bend Biogas Energy Project	\$5,038,456	\$5,038,456
2307	3164.047	Hornsby Bend Electrical Controls	\$2,363	\$2,363
2307	3164.048	Hornsby Bend SSTP Relief	\$1,198,996	\$1,042,060
2307	3164.052	Hornsby Bend Odor Control	\$0	\$0
2307	3164.054	Hornsby Bend Scada Control Room	\$0	\$0
2307	3164.059	Hornsby Bend Plant Rd Repairs	\$120,000	\$62,849
2307	3164.06	HB Alternate Delivery Projects	\$0	\$0
2307	3164.062	Hornsby Bend Thickener Complex Rehab	\$1,488,076	\$1,329,811
2307	3164.065	Hb Wwtp Lab & Adm Bldg Hvac-P1	\$0	\$0
2307	3164.066	Hb Wwtp Lab & Adm Bldg Hvac-P2	\$0	\$0
2307	3164.069	HB Digester Electrical Breaker Replacement	\$188,528	\$188,528
2307	3164.07	Hornsby Bend Irrigation System Improvements	\$2,199,451	\$769,406
2307	3164.071	Hornsby Bend Pond Remediation	\$0	\$0
2307	3164.072	HB Process Ammonia Removal System	\$534,836	\$233,427
2307	3164.073	Hornsby Bend Groundwater Monitoring Wells	\$49,428	\$49,428
2307	3164.074	Hornsby Bend Integration System Services	\$125,000	\$125,000
2307	3164.075	Hornsby Bend Influent Screen Improvements	\$0	\$0
2307	3164.076	Hornsby Bend Dewatering Belt Press	\$0	\$0
2307	3164.077	Hornsby Bend Centrifuge Improvements	\$0	\$0
2307	3164.078	Hornsby Bend Electrical Substation Improvements	\$0	\$0
2307	3164.08	Hornsby Bend Influent Screen Replacement	\$0	\$0
2307	3164.082	ADP-Hornsby Bend Struvite Removal System	\$37,114	\$37,113
2307	3164.083	IDIQ-Hornsby Nemd Project Improvements	\$333,997	\$333,997
2307	3164.084	Hornsby Bend BMP Tree Mitigation Plan	\$403,348	\$252,820
2307	3164.086	Hornsby Bend BMP Sulfatreat Tank	\$260,000	\$1,577
2307	3164.087	Hornsby Bend BMP Anammox Pilot Study	\$105,000	\$14,564
2307	3164.088	Hornsby Bend Field Irrigation Improvements	\$0	\$0
2307	3164.089	Hornsby Building Envelope Reseal Administration	\$45,000	\$0
2307	3164.09	Hornsby Bend Biosolids Demolish Abandoned Asbestos	\$0	\$0
2307	3164.091	Hornsby HVAC Controls Replacement	\$0	\$0
2307	3164.092	Hornsby Replace Chiller and Air Handlers in Maintenance Shop	\$0	\$0
2307	3164.093	Hornsby Bend - Replace Inoperable Doors	\$20,000	\$0
2307	3164.094	Hornsby Bend Drainage Improvements	\$0	\$0
2307	3164.095	Hornsby Bend Gas Detection System	\$0	\$0
2307	3164.096	Hornsby Bend Boiler Replacements	\$0	\$0
2307	3164.097	Hornsby Bend Building Improvements	\$0	\$0
2307	3164.098	Hornsby Bend Dewatering Facility Polymer Storage Tank	\$0	\$0
2307	3168.014	L.S. & Fm Rehab & Relief	\$770,361	\$769,600
2307	3168.033	Bluffington #1 Force Main Replacement	\$0	\$0
2307	3168.052	West Bank Lift Station Rehab & FM	\$2,242,842	\$2,048,761
2307	3168.055	Lake Creek Lift Station Force Main Rehabilitation	\$346,598	\$331,598
2307	3168.056	Barrington Oaks Ls Improvements	\$0	\$0
2307	3168.06	New Pearce Ln Lift Station Facilities And Fm	\$0	\$0
2307	3168.062	Lindshire Lift Station Relief	\$412,460	\$412,460
2307	3168.063	Lockheed LS Relief	\$858,101	\$852,414
2307	3168.064	Northwest Lift Station Improvements	\$0	\$0
2307	3168.065	West Bank Ls Redundant Forcemain	\$0	\$0
2307	3168.067	Developer Lift Station Inspection Services	\$0	\$0
2307	3168.07	Springfield Force Main Replacement	\$0	\$0
2307	3168.072	Zilker Lift Station Demolition	\$14,751	\$14,751
2307	3168.074	Four Pts #2 Ls Electrical Improvements	\$0	\$0
2307	3168.075	Great Hills Lift Station Improvements	\$0	\$0
2307	3168.078	Great Hills Lift Station Evaluation	\$0	\$0
2307	3168.08	First Round Omni-Site Installation	\$332,510	\$332,510
2307	3168.081	Thousand Oaks Lift Station Access improvements	\$156,014	\$133,114
2307	3168.086	Spring Lake #2 Lift Station Improvements	\$0	\$0
2307	3168.087	Travis Country Lift Station Improvements	\$0	\$0
2307	3168.089	Mcneil Lift Station Improvements	\$0	\$0
2307	3168.09	Davenport Limited Lift Station Improvements	\$0	\$0
2307	3168.091	Loop 360 Lift Station Improvements	\$0	\$0
2307	3168.092	Old Lampasas Lift Station Improvements	\$0	\$0
2307	3168.093	Bee Cave Woods LS Rehab & Upgrade	\$0	\$0
2307	3168.095	Improvements at Scotland Well Lift Station	\$82,850	\$82,850
2307	3168.098	Springlake Lift Station Valve Replacement	\$6,480	\$6,480
2307	3168.103	Old Lampasas Lift Station Pump Around Vault	\$5,000	\$0
2307	3168.104	IDIQ-Valve Replacement at Boston Lane Lift Station	\$429	\$429

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2307	3168.107	IDIQ-Gonzales Lift Station Pump Replacement	\$90,097	\$90,097
2307	3168.108	Walnut Creek Business Park Lift Station Rehabilitation	\$559,638	\$485,695
2307	3168.11	IDIQ-Brittlyns Court Lift Station Improvements	\$13,198	\$13,198
2307	3168.112	IDIQ-Westview at Lake Austin Lift Station Improvements	\$59,998	\$59,998
2307	3168.114	Improvements at Spicewood Parkway Lift Station	\$500,000	\$439,028
2307	3168.115	Coomer Path Lift Station Pump Upgrades	\$0	\$0
2307	3168.116	Kale Lift Station Improvements	\$0	\$0
2307	3168.117	Walsh Tract Lift Station Improvements	\$0	\$0
2307	3168.118	Northwest Lift Station Improvements Phase 2	\$0	\$0
2307	3168.119	Bull Creek Area Lift Station Improvements	\$0	\$0
2307	3168.12	Developer Lift Station Inspector Services - Hills Bear Creek	\$32,316	\$32,316
2307	3168.121	Developer Lift Station Inspector Services - Pilot Knob Commo	\$39,614	\$39,614
2307	3168.122	Developer Lift Station Inspector Services - Bayshore Bend	\$41,026	\$41,026
2307	3168.123	Developer Lift Station Inspector Services - Harris Ridge	\$33,575	\$33,575
2307	3168.124	Davis Springs #2 Lift Station Demolition	\$0	\$0
2307	3168.125	Fema Springfield Mitigation	\$163	\$163
2307	3168.126	William Wallace Way Lift Station Demolition	\$50,000	\$0
2307	3168.127	Nuckols Crossing Lift Station Demolition	\$0	\$0
2307	3168.128	Bradshaw Crossing Lift Station Demolition	\$0	\$0
2307	3168.129	Circle C #1 Lift Station Demolition	\$0	\$0
2307	3168.13	Developer Lift Station Inspector Services-Taylor Lane WWTP	\$34,372	\$34,372
2307	3168.131	Hidden Bluff Lift Station Demolition	\$0	\$0
2307	3168.132	Scotland Well Lift Station Wet Well Cleaning (IDIQ)	\$100,000	\$95,705
2307	3168.134	Developer LS Inspector Services - Pearce Ln Influent Lift St	\$35,317	\$35,317
2307	3168.135	Fort Dessau Lift Station Jib Crane Installation	\$3,953	\$3,953
2307	3168.136	Hills of Bear Creek Lift Station Jib Crane Installation	\$25,000	\$0
2307	3168.137	Rock Harbor Lift Station Wet Well Rehab	\$33,812	\$33,812
2307	3168.14	Southland Oaks Lift Station Flood Rehabilitation	\$543,000	\$514,757
2307	3168.141	Boggy Creek East Lift Station Pump Study	\$0	\$0
2307	3168.143	Rock Harbor Lift Station Emergency	\$21,158	\$21,158
2307	3212.125	Future Ww Pipeline Relocation-External	\$0	\$0
2307	3212.138	Upper Brushy Creek WCID WWL Relo at Dam 7	\$3,872,444	\$3,340,111
2307	3333.01	SAR WWTP Plant Control System Upgrade	\$166,000	\$81,608
2307	3333.015	SAR Tertiary Filters	\$29,501,386	\$25,200,680
2307	3333.016	SAR Thickener Improvements	\$9,241,660	\$6,088,751
2307	3333.017	SAR Replace Drives on A & B Clarifiers	\$8,954,364	\$2,283,382
2307	3333.021	Sar Expansion To 100 Mgd	\$0	\$0
2307	3333.027	Sar Oil Storage Facilities	\$0	\$0
2307	3333.028	SAR Replace Trains A & B Blowers	\$28,754,772	\$23,596,107
2307	3333.029	Sar 500-Yr Storm Berm Improvement	\$0	\$0
2307	3333.03	Sar Replace Sulfinator & Evaporator	\$0	\$0
2307	3333.032	SAR Electrical Sub-station 1 Replacement	\$3,325,811	\$2,160,181
2307	3333.034	SAR LS2 Debris Removal	\$410,454	\$410,454
2307	3333.041	SAR Chlorine Release Recovery Project	\$1,642,379	\$1,616,937
2307	3333.044	Sar Train A/B 2nd Trtmnt/Disinfect	\$0	\$0
2307	3333.045	ADP-SAR Train A/B Aeration Basin Crack Repair	\$35,154	\$35,154
2307	3333.047	SAR Trains A, B and C Flow Equalization Basins (FEB) - Rehab	\$0	\$0
2307	3333.049	Sar Plant Modifications For Biological Nutrient Removal (Bnr	\$0	\$0
2307	3333.05	SAR Valve and Gate Replacement - Phase 2	\$0	\$0
2307	3333.052	SAR Blower Valve Rehabilitation	\$93,281	\$88,569
2307	3333.053	Sar Thickener Improvements - Phase 2	\$0	\$0
2307	3333.054	Sar Influent Flow Split (lfs) Grit Removal	\$0	\$0
2307	3333.058	Flood Control Drainage Bank	\$63,264	\$63,264

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2307	3333.06	SAR DO/Ammonia Process Control	\$0	\$0
2307	3333.062	SAR Alkalinity Feed	\$0	\$0
2307	3333.066	South Austin Regional WWTP Reuse And Yard Piping Improvement	\$207,082	\$206,014
2307	3333.067	South Austin Regional WWTP Blower Air Piping Connection	\$115,000	\$105,751
2307	3333.068	South Austin Regional WWTP Outfall Repair	\$5,948	\$5,948
2307	3333.069	South Austin Regional WWTP Train A&B Return Activated Sludge	\$545,695	\$545,695
2307	3333.07	South Austin Regional WWTP Gas Meter and Sensor Replacement	\$75,681	\$75,681
2307	3333.073	South Austin Regional WWTP Scrubber Rehabilitation	\$512,819	\$141,899
2307	3333.075	SAR Train Bb Clarifier Conduit Rehabilitation	\$92,110	\$92,110
2307	3333.076	Sar Train A & B Yard Lighting Improvements	\$61,182	\$61,182
2307	3333.077	South Austin Regional WWTP Restroom Rehabilitation	\$0	\$0
2307	3333.078	South Austin Regional WWTP Abandoned House Demolition	\$0	\$0
2307	3333.081	Sar Installation Of Fire Alarm System - Admin Bldg	\$0	\$0
2307	3333.082	South Austin Regional Administration Building HVAC Controls	\$0	\$0
2307	3333.083	SAR Treatment Plant Lighting Rehabilitation and Retrofit	\$0	\$0
2307	3353.098	Block 18 Alley Wastewater Relocation	\$506,000	\$102,131
2307	3353.107	18-Inch Wastewater Main Easement Acquisition	\$3,232,083	\$0
2307	3353.11	William Cannon Developer Improv - Construction Inspection	\$14,075	\$14,075
2307	4598.006	Annexed Area 4480 Parent	\$198,999,606	\$0
2307	4598.007	Annexed Area 4570 Parent	\$219,174,869	\$0
2307	4598.012	Texas Water Development Board	\$270,883	\$0
2307	4716.002	ROCIP V Program	\$0	\$171,393
2307	4716.003	Rocip VI Program	\$2,000,000	\$1,335,375
2307	4769.011	Upper Harris Br Ww Interceptor	\$766,702	\$619,140
2307	4769.017	Upper Gillieland Interceptor-18 inch	\$99,410	\$99,409
2307	4769.019	Upper Gillieland Interceptor-24 inch	\$78,421	\$78,420
2307	4769.021	Northeast Regional WWTP	\$257	\$257
2307	4857.019	STAA-Springwoods Non-MUD (WW)	\$1,492,374	\$1,492,011
2307	4857.026	North Acres-Wastewater Tunnel	\$5,838,782	\$5,838,782
2307	4927.007	Canterbury, Hwy, Bergstrom Shafts and Lateral Rehab	\$5,596,186	\$5,596,185
2307	4927.008	Canterbury LS Demol	\$1,637,547	\$1,636,612
2307	4927.015	Lockheed Shaft Rehabilitation	\$4,547,191	\$4,526,656
2307	4954.007	Bluffington LS #2, #3, & #4 Upgrades	\$1,567,813	\$1,567,813
2307	5217.018	Town Lake Metro Park	\$2,500	\$2,500
2307	5873.01	Wm Cannon Railroad Overpass	\$9,266	\$9,265
2307	5873.036	Wickersham Bridge Protection of 24" Wastewater Line	\$37,000	\$37,000
2307	6621.007	Walnut Crk Wwtp Security Improvs	\$1,018,793	\$0
2307	6621.008	Hornsby Bend Security Access System Upgrade	\$884,000	\$882,686
2307	6621.009	SAR Security Phase II	\$800,000	\$297,127
2307	6621.014	Govalle Security Access System Upgrade	\$32,239	\$32,239
2307	6943.002	Onion Interceptor Upgrade-Slaughter to Tunnel	\$0	\$0
2307	6943.003	Lower Tannehill Interceptor	\$0	\$0
2307	6943.005	Rinard Creek Interceptor	\$0	\$0
2307	6943.006	Sunchase Creek Crossing	\$0	\$0
2307	6943.007	Rinard To Onion	\$0	\$0
2307	6943.008	Onion Interceptor (Bear Creek to IH 35)	\$0	\$0
2307	6943.009	Garland Park (Interim)	\$0	\$0
2307	6943.01	Dry Creek Upper Forks Trib	\$0	\$0
2307	6943.011	Dry Creek Upper	\$0	\$0
2307	6943.012	Dry Creek Lower Trib - Conceptual	\$0	\$0
2307	6943.014	Wolf Ranch Segment 1	\$0	\$0

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2307	6943.015	Stonelake Upper Segment 1	\$0	\$0
2307	6943.016	WW system Flow Monitoring and Analysis	\$0	\$0
2307	6943.017	Parmer and Hwy 290	\$0	\$0
2307	6943.018	Mueller West Branch	\$0	\$0
2307	6943.019	Mueller Airport Redevelopment	\$0	\$0
2307	6943.02	Walnut Creek WWTP to SAR WWTP Flow Transfer	\$68,660	\$47,960
2307	6943.021	Equivest North	\$0	\$0
2307	6943.023	Onion Interceptor Segment 2-Etj To Bear	\$0	\$0
2307	6943.024	Robinson Ranch Walnut Interceptor	\$0	\$0
2307	6943.027	Walnut Creek Siphon Odor Control	\$303,896	\$170,242
2307	6943.028	Onion Creek Tunnel Odor/Corrosion Control Improvements	\$0	\$0
2307	6943.03	Crosstn, Big&Little Walnt, On Crk Tunnel Ventilation Study	\$305,751	\$305,751
2307	6943.037	Waller Upper Basin Wastewater Improvements	\$0	\$0
2307	6943.038	Shoal Upper Basin South Wastewater Improvements	\$0	\$0
2307	6943.039	Shoal Upper Basin North Wastewater Improvements	\$0	\$0
2307	6943.04	Wastewater Collection Systems Improvements Future Program	\$0	\$0
2307	6943.042	Sanitary Sewer Evaluation Targeted Studies CT-17 and GT-31	\$1,442,995	\$555,161
2307	6943.044	Sanitary Sewer Evaluation Study - Onion Tunnel Areas	\$0	\$0
2307	6943.046	Sanitary Sewer Eval Study - Walnut And Little Walnut Basins	\$847,500	\$12,701
2307	6943.047	Review Of Collection System Odor & Corrosion Control Systems	\$363,040	\$12,117
2307	6943.048	Canterbury Lines	\$0	\$0
2307	6943.049	Thousand Oaks Interceptor	\$0	\$0
2307	6943.05	Onion Creek Odor Control Facility Stream Bank Stabilization	\$422,826	\$114,211
2307	6943.051	Walnut Interceptor Odor And Corrosion Improvements	\$898,050	\$446
2307	6943.052	Boggy Lower Basin Inflow And Infiltration Study	\$358,596	\$55,644
2307	7235.001	New Central Library Wastewater Service	\$243,526	\$240,171
2307	7265.005	Pkg WWTP Rehab	\$326,803	\$326,802
2307	7265.007	Onion Creek WWTP Demolition	\$1,241,985	\$1,157,560
2307	7265.009	Lost Creek Pkg Plant Rehab	\$1,219,031	\$953,355
2307	7265.012	Harris Branch WWTP Decommissioning	\$598,267	\$507,481
2307	7265.015	Wildhorse Wwtp Expansion To 2.25 Mgd	\$0	\$0
2307	7265.016	Anderson Mill WWTP Relief	\$483,000	\$216,493
2307	7265.019	Pearce Lane Wwtp Expansion	\$0	\$0
2307	7265.02	Taylor Lane Wwtp Expansion	\$0	\$0
2307	7265.021	North East Package Plant Rehab	\$299,093	\$299,093
2307	7265.025	IDIQ-Dessau WWTP Generator Standby Installation	\$64,948	\$59,130
2307	7265.026	IDIQ-NE WWTP Generator Standby Installation	\$70,696	\$65,806
2307	7265.027	Dessau WWTP Expansion to 1.5 MGD	\$0	\$0
2307	7265.029	Lost Creek WWTP Electric Duct Bank Installation	\$389,355	\$366,261
2307	7265.03	Thoroughbred Farms WWTP Disinfection and Lift Station Improv	\$292,788	\$292,787
2307	7265.033	Dessau WWTP Clarifier Drive Replacement	\$204,432	\$203,010
2307	7265.035	Balcones WWTP Effluent Box Replacement (IDIQ)	\$162,055	\$162,055
2307	7265.036	Dessau Wastewater Treatment additional Headworks Box	\$0	\$0
2307	7265.038	Thoroughbred Farms Memorial Day 2016 Flood Recovery	\$85,632	\$85,632
2307	7265.039	Thoroughbred Farms WWTP Hypochlorite Improvements	\$95,000	\$43,244
2307	7265.041	Decentralized Treatment Reuse Pilot	\$0	\$0

Appendix D

CIP Projects Targeted to Meet Existing Needs 2018-2022—Water

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2207	757.007	Waller Crk Ctr-Improvmnts Misc	\$1,235,288	\$1,235,287
2207	757.008	Webberville - Chiller - Refrigerant Monitor	\$1,467,002	\$1,467,000
2207	757.028	Facility Master Plan Study - Water	\$800,000	\$67,726
2207	757.029	Waller Creek Center - Tenth Floor Renovation	\$0	\$0
2207	757.03	GBSC-Radio Console & Modular Sys Replmt	\$729,465	\$717,031
2207	757.034	Glen Bell Service Center - Fire System Upgrade	\$178,654	\$178,653
2207	757.036	Waller Creek Center - Fire Monitoring Workstation	\$72,922	\$72,922
2207	757.037	Waller Creek Center - Curtain Wall	\$204,545	\$51,023
2207	757.039	Webberville Service Center-Tech Shop Replacement	\$0	\$0
2207	757.041	Waller Creek Center Parking Garage improvements	\$157,874	\$157,874
2207	757.042	Glen Bell Service Center HVAC Replacement	\$240,572	\$240,572
2207	757.045	Waller Creek Center Controls - Water	\$494,478	\$494,477
2207	757.046	Waller Creek Center Plumbing Code Compliance	\$17,897	\$17,897
2207	757.047	Webberville Improvements-Water	\$0	\$0
2207	757.048	Glen Bell Service Center Improvements Program	\$0	\$0
2207	757.049	ESC Misc Improvements	\$0	\$0
2207	757.05	North Service Center Improvements Program	\$0	\$0
2207	757.051	South Service Center Future Program	\$0	\$0
2207	757.052	Summit Lab Fire Alarm System Replacement - Water	\$30,912	\$30,912
2207	757.053	Waller Creek Center - 9th Floor Renovation	\$320,000	\$49,780
2207	2006.001	Pump Station Improvements Real	\$245,491	\$245,490
2207	2006.004	Ullrich Pump Station- West Rim	\$0	\$0
2207	2006.007	retired Facility Decommissioning -PS	\$556,885	\$556,884
2207	2006.013	Far South Zone Pump Station	\$0	\$0
2207	2006.014	Spicewood Sprgs PS 24 inch TM	\$4,569,087	\$4,410,099
2207	2006.018	Retired Facility Decommissioning Phase B	\$1,811,624	\$1,714,140
2207	2006.019	Pressure Point Improvements	\$544,239	\$305,319
2207	2006.02	Lookout Pump Station Improvements	\$594,196	\$342,040
2207	2006.021	Davis Lane Cooling Towers	\$691,800	\$562,937
2207	2006.022	East Austin Pump Station Improvements	\$1,258,051	\$1,113,956
2207	2006.023	Guilford Cove Pump Station Improvements	\$70,293	\$70,231
2207	2006.024	Glenlake Pump Station Decommissioning	\$386,944	\$266,351
2207	2006.026	IDIQ-Howard Lane Pump Station Improvements	\$434,705	\$368,622
2207	2006.028	South Service Center Uninterrupted Power Supply Replacement	\$95,000	\$16,041
2207	2006.029	Jollyville Pump Station I and C Improvements	\$110,467	\$110,467
2207	2006.03	South Service Center HVAC Rehab	\$454,538	\$454,538
2207	2006.031	Martin Hill Pump Station	\$0	\$0
2207	2006.033	Mt. Larson Hydro Tank Replacements	\$180,334	\$135,230
2207	2006.034	Leuthan Lane Pump Station Improvements	\$50,000	\$3,752
2207	2006.035	Davis Lane Pump Station I&C And Scada Improvements	\$220,000	\$171,507
2207	2006.036	Spicewood Springs Pump Station Mechanical And I&C Improv	\$0	\$0
2207	2006.037	Jollyville Pump Station Hydraulic And I&C Improvements	\$0	\$0
2207	2006.038	East Austin Pump Station Hydraulic And I&C Improvements	\$0	\$0
2207	2006.039	River Place Water Treatment Plant Decommissioning	\$0	\$0
2207	2009.011	Green WTP Decomm TM Relocation	\$1,645,002	\$1,645,002
2207	2009.012	Green WTP Environmental Decomission	\$2,733,824	\$2,733,824
2207	2015.006	Davis WTP Power Distrib Upgrade	\$33,924,296	\$12,816,839
2207	2015.017	Davis/Ullrich LSPS Intake, Wetwell Hydraulics Rehab	\$2,163,479	\$1,562,631
2207	2015.019	Davis SCADA System	\$257,000	\$214,587
2207	2015.025	Davis Wtp Power Dist Upgrade Phase B	\$0	\$0
2207	2015.026	Davis WTP Main Power Feed Replacement	\$4,659,976	\$4,659,976
2207	2015.027	Davis Wtp Non-Gas Chlorine Systems	\$0	\$0
2207	2015.028	Davis Wtp Sludge Disposal Improvs	\$3,149,706	\$3,128,293
2207	2015.03	Davis Chemical Feed Pumps	\$1,758,486	\$1,747,022
2207	2015.04	Davis - Alternate Delivery Projects	\$0	\$0
2207	2015.041	Davis WTP-TWD-Med Svc PS	\$50,860,298	\$16,023,890
2207	2015.048	Davis Chemical Feed System Improvements Pkg 3	\$38,254	\$37,710
2207	2015.051	Davis WTP CO2 Tanks, Guard Station, and Misc Facility Impr	\$550,489	\$526,612
2207	2015.052	Emergency Davis WTP Chemical Bldg Transformer Replacement	\$175,754	\$166,139
2207	2015.053	Davis Rapid Mix Improvements (IDIQ)	\$1,579,360	\$1,579,360
2207	2015.055	Davis Water Treatment Plant - High Service Pump Station Powe	\$406,530	\$406,530
2207	2015.056	Davis WTP Lubricant Storage Shed and Handling Equipment	\$50,000	\$0
2207	2015.057	Davis WTP Surge Vault Improvements	\$91,923	\$31,559
2207	2015.058	Davis Wtp Chemical Bldg Chlorine & Ammonia Leak Detection	\$134,000	\$0
2207	2015.059	Davis Wtp Co2 Tanks Pressure Relief Valve Improvements	\$32,419	\$0
2207	2015.06	Davis Water Treatment Plant Calgon Pump Improvements	\$160,261	\$0
2207	2015.061	Davis Wtp-Recycle Pump Station Discharge Solid Grit Remova	\$0	\$0
2207	2015.062	Davis Water Treatment Plant Filter Media Tank Improvements	\$0	\$0
2207	2015.064	Davis Water Treatment Plant Clarifier #3 Improvements	\$0	\$0
2207	2015.065	Davis Wtp - Iron And Fluoride Flow Meters	\$0	\$0
2207	2015.066	Davis Water Treatment Clearwell No.4 Improvement	\$0	\$0
2207	2015.067	Davis Wtp High Service Pump Station Discharge Piping And Valve Improvements	\$0	\$0
2207	2015.068	Davis Water Treatment Plant Recycle Pump Replacement	\$0	\$0

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2207	2015.069	Davis Raw Water Efficiency Low Service Pump Station Improvem	\$0	\$0
2207	2015.07	Davis WTP - Low Service Building HVAC Replacement	\$90,000	\$85,474
2207	2015.071	Davis Water Treatment Plant - Filter Gallery Hallway Heaters	\$10,000	\$0
2207	2015.072	Davis Water Treatment Plant-Recycle Building No.2 Water	\$0	\$0
2207	2015.074	Davis Water Treatment Plan Admin Building Roof Top Unit	\$0	\$0
2207	2015.075	Davis WTP Replacement of Inoperable Doors	\$0	\$0
2207	2015.076	Davis Water Treatment Plant - Scada Room Floor Replacement	\$0	\$0
2207	2015.077	Davis Water Treatment Plant Rehab of Maintenance Shop	\$0	\$0
2207	2015.078	Davis WTP Maintenance Shop - Replace Shop Heaters	\$24,000	\$8,785
2207	2015.079	Davis Water Treatment Plant High Service Replace Air Hand	\$0	\$0
2207	2015.08	Davis Water Treatment Plant Chemical Building Remodel	\$0	\$0
2207	2056.004	Water Distribution Scada -Energy & Water Quality Mgt Phase I	\$686,744	\$453,916
2207	2056.005	Wdcs/Scada Ph 2 (Priority 2&3)	\$0	\$0
2207	2056.006	Water Dist Control Sys Replace	\$5,874,143	\$3,623,579
2207	2056.007	Water Distr/Lift Station Scada Control Impr-Ph II	\$1,040,000	\$18,395
2207	2056.008	Annexation Telemetry River Place MUD and Lost Creek MUD	\$825,117	\$655,043
2207	2056.009	SCADA Cyber Security Remediation	\$1,312,758	\$1,033,458
2207	2056.01	SCADA - Water Treatment Plants	\$770,000	\$190,243
2207	2056.011	SCADA	\$1,445,575	\$1,209,507
2207	2056.012	Awu Telecommunications System Upgrade Study	\$0	\$0
2207	2056.013	Scada Data Mart And Data Warehouse Replacement	\$200,000	\$0
2207	2127.001	Reservoir Improvements	\$1,366,190	\$1,366,189
2207	2127.003	Forest Ridge Reservoir Access	\$3,000	\$3,000
2207	2127.012	North Austin Reservoir and Pump Station Improv	\$4,848,372	\$2,474,567
2207	2127.016	Southwest Parkway Swb Elevated Reservoir	\$0	\$0
2207	2127.017	Elevated Tank-Loop 360 Area - Lost Creek	\$0	\$0
2207	2127.019	Pilot Knob Reservoir Improvements	\$2,107,930	\$2,107,930
2207	2127.021	Spicewood Springs Reservoir Improvements	\$47,335	\$47,335
2207	2127.022	Far South Zone Reservoir	\$0	\$0
2207	2127.023	Reservoir Evaluations	\$624,697	\$564,479
2207	2127.025	Anderson Mill Reservoir Improvs	\$2,323,817	\$2,311,937
2207	2127.026	Jollyville Reservoir Improvements	\$3,099,441	\$3,048,897
2207	2127.027	Howard Lane Reservoir #1 Improvements	\$2,605,933	\$2,546,500
2207	2127.028	Reservoir Improvements Consultant	\$16,722	\$0
2207	2127.029	River Place Water System Improvements	\$566,287	\$506,085
2207	2127.03	Lost Creek Reservoirs Improvements	\$2,511,937	\$2,450,482
2207	2127.031	Martin Hill Elevated Reservoir	\$0	\$0
2207	2127.032	Martin Hill Reservoir Mixing Improvements	\$205,000	\$85,811
2207	2127.033	IH 35 South Reservoir	\$117,493	\$117,493
2207	2127.034	Four Points Elevated Tank Improvements	\$3,771,065	\$3,651,313
2207	2127.035	Leuthan Lane Tank Improvements	\$608,362	\$215,573
2207	2127.036	Aquifer Storage & Recovery (ASR) Pilot	\$0	\$0
2207	2127.037	Lcra Tom Miller Dam Gate Improvements	\$4,996	\$206
2207	2127.038	Longhorn Dam Transition Improvements	\$34,455	\$34,455
2207	2127.039	Forest Ridge Reservoir Improvements	\$271,800	\$78,109
2207	2127.04	Lookout Lane/Neverbend Reservoir Improvements	\$0	\$0
2207	2127.041	Mt. Larson/Westlake Reservoir Improvements	\$0	\$0
2207	2127.042	Slaughter Lane Reservoir Improvements	\$0	\$0
2207	2231.093	Southwest Allandale Neighborhood Water System Upgrades	\$0	\$0
2207	2231.094	RA-Austin Hts Neighborhood WSU	\$2,783,005	\$2,749,861
2207	2231.109	RA - East Allandale White Rock Neighborhood Water System Upg	\$990,884	\$565,490
2207	2231.122	Airport at Chesterfield Water Improvements	\$10,348,470	\$10,348,255
2207	2231.126	Future Large Diameter Waterline On-Call ID/IQ	\$6,529,365	\$6,386,023
2207	2231.146	Pemberton Hts Water Rehab Ph 3	\$9,382,271	\$9,354,430

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2207	2231.159	Plaza Saltillo Ph 1 Water Ln Replace Rehab	\$713,189	\$533,767
2207	2231.162	RA-NW Brentwood Nghbrhd WSU	\$3,457,490	\$3,426,557
2207	2231.164	Polygon 337-except 32nd Duval to Red River	\$4,512,869	\$4,469,688
2207	2231.176	Service Contract for Large Dia. WL	\$6,365,234	\$6,365,233
2207	2231.178	Misc Water Rehab 2009-10 Ph 2	\$2,800,689	\$2,800,689
2207	2231.179	Misc Water Rehab 2009-10 Ph 3	\$1,238,762	\$1,238,761
2207	2231.181	Haylawn Dr-WL Replacement Rehab	\$3,731,328	\$707,006
2207	2231.185	Plaza Saltillo Ph 2 Water Ln Replace Rehab	\$1,040,623	\$631,001
2207	2231.188	CBD Alley W. Lines 2010 Ph 1-4th to 10th & San Antonio	\$2,552,147	\$2,549,224
2207	2231.192	RA-SE Allandale Nghbrhd WSU	\$5,782,164	\$5,465,070
2207	2231.197	Nueces Water Rehab - 8th to MLK	\$3,572,010	\$647,403
2207	2231.203	Fm 812 (Elroy Loop)	\$0	\$0
2207	2231.207	Misc Water Rehab 2010-11 Ph A Improvs	\$1,160,308	\$1,160,308
2207	2231.216	Nelray & Evans Util Improvs-Water	\$4,508,931	\$4,508,931
2207	2231.217	University Avenue Alley Water Pipeline Improvements	\$75,500	\$57,227
2207	2231.218	Future Water Pipeline Replace/Rehab	\$0	\$0
2207	2231.22	Future Water Pipeline Replace/Rehab-Awu Crews	\$0	\$0
2207	2231.233	Ra - Ne Brentwood / Arcadia Street Neighborhood Water System	\$1,010,841	\$400,825
2207	2231.234	Ra - North Rosedale / Lawnmont Neighborhood Water System Upg	\$905,715	\$190,588
2207	2231.235	Brentwood Water Pipeline Renewal: Houston Street Area	\$0	\$0
2207	2231.236	Morrow and Gault Water and Wastewater Rehab	\$1,012,753	\$761,064
2207	2231.237	RA - Exposition Blvd WL Rehab - W. 35th to Enfield	\$833,331	\$628,622
2207	2231.238	Bryker Woods Water Pipeline Renewal	\$1,179,211	\$575,554
2207	2231.239	Ra - Tarrytnw/Hillview & Clearview Area Neighbd Ws	\$0	\$0
2207	2231.241	RA - Prado Water Line Replacement	\$510,175	\$346,836
2207	2231.242	RA - Allen Street Water Line Replacement	\$568,306	\$404,503
2207	2231.243	RA - Bengston and Kay Water Line Replacement	\$691,042	\$482,533
2207	2231.244	RA - Cherico/Sellers Water Line Replacements	\$419,170	\$269,482
2207	2231.245	Rosewood Avenue (Navasota to Hargrave) Water Pipeline Renewal	\$0	\$0
2207	2231.246	Ra-Kellam Rd Wl	\$0	\$0
2207	2231.248	RA - Garwood Street Water Line Replacement	\$676,025	\$490,663
2207	2231.249	5th-6th and Chalmers-Comal Alley Water line	\$9,913,633	\$9,689,773
2207	2231.25	RA - Marathon Blvd - 42nd to 45th - Water Line Repl	\$761,022	\$722,612
2207	2231.252	RA - Thames Drive Water Line Upgrade	\$548,464	\$511,122
2207	2231.253	Meter Upgrades-3-in diameter and larger	\$1,576,263	\$960,006
2207	2231.255	Oakmont Blvd WL Imprvoements - CRS	\$819,757	\$654,479
2207	2231.256	Arroyo Seco WL Improvements - CRS	\$211,560	\$162,760
2207	2231.258	Hartford Rd. WL Improvements CRS	\$429,747	\$428,433
2207	2231.259	Delwood Dr WL Improvements CRS	\$419,360	\$89,565
2207	2231.26	Jim Hogg Ave to Arroyo Secon-CRS	\$109,906	\$109,906
2207	2231.269	Sunset Lane Water Line Extension CRS	\$81,868	\$81,867
2207	2231.27	Turnabout Lane Relocation(CRS)	\$158,636	\$158,636
2207	2231.271	Suburban Dr. Water Service Line (WSL) Relays	\$165,651	\$165,651
2207	2231.273	RA-West Allandale and Trailridge Drive	\$1,196,409	\$1,036,424
2207	2231.277	Oakhurst Avenue Waterline Rehabilitation	\$67,184	\$67,184
2207	2231.279	Waterline On-Call Services Future Program	\$0	\$0
2207	2231.281	Hyde Park Water System Upgrades	\$1,251,653	\$6,284
2207	2231.282	Deteriorated Asbestos Cement Waterline Replacement	\$0	\$0
2207	2231.284	Gillis Street Water Line Replacement - Renewing Austin	\$102,485	\$55,472
2207	2231.285	Asbestos Cement Water Pipe Line Replacement (Northeast)	\$611,289	\$48,639
2207	2231.286	Cruz Street Water Lines Replacement - Renewing Austin	\$4,998	\$4,998
2207	2231.287	Galindo Street Water Line Replacement - Renewing Austin	\$90,000	\$7,319

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2207	2231.288	Northumberland Road Waterline Replacement - Renewing Austin	\$90,000	\$30,144
2207	2231.29	Zilker Water Pipeline Renewal: Hether St Area	\$0	\$0
2207	2231.291	Zilker Water Pipeline Renewal: Treadwell St Area	\$741,301	\$9,102
2207	2231.292	Bouldin Water Pipeline Renewal: Post Oak Street Area	\$0	\$0
2207	2231.293	Arapahoe Trail Area Water Pipeline Renewal	\$0	\$0
2207	2231.294	Barton Hills Water Pipeline Renewal: Horseshoe Bend Area	\$0	\$0
2207	2231.295	Belford Drive Area Water Pipeline Renewal	\$0	\$0
2207	2231.296	Barbara Street Area Water Pipeline Renewal	\$0	\$0
2207	2231.297	Gloucester Lane Area Water Pipeline Renewal	\$0	\$0
2207	2231.298	Harmon Avenue Area Water Renewal	\$491,312	\$3,243
2207	2231.299	W. 9th Street Alley 2" Abandonment/WSL's Relays	\$44,656	\$43,407
2207	2231.3	Abingdon Waterline Replacement - Renew Austin	\$296,000	\$308,288
2207	2231.302	Academy Road Waterline Replacement - Renew Austin	\$191,560	\$76,048
2207	2231.303	La Casa Drive Waterline Replacement - Renew Austin	\$80,749	\$22,646
2207	2231.304	Beverly Road Waterline Replacement - Renew Austin	\$88,716	\$40,130
2207	2231.307	North Rosedale Phase II Neighborhood Water Sy	\$0	\$0
2207	2231.309	Martin Luther King Jr. West Water Pipeline Renewal	\$0	\$0
2207	2231.31	Greater South River City North Water Pipeline Renewal	\$0	\$0
2207	2231.311	Wilshire Blvd Area Water Pipeline Renewal	\$0	\$0
2207	2231.312	Stonegate Water Pipeline Renewal	\$0	\$0
2207	2231.313	Truman Heights Water Pipeline Renewal	\$0	\$0
2207	2231.316	Tejas Trail Waterline Replacement - Renew Austin	\$240,000	\$264,709
2207	2231.317	Periwinkle Path Waterline Replacement - Renew Austin	\$150,000	\$246,296
2207	2231.318	Brentwood Water Pipeline Renewal: Arcadia Avenue Phase 2	\$0	\$0
2207	2231.331	Sunny Lane Waterline Replacement - Renew Austin	\$5,000	\$1,351
2207	2231.332	Robbins Place and West 21st Street Waterline Replacement - R	\$0	\$0
2207	2231.333	Zilker Water Pipeline Renewal Phase I I	\$0	\$0
2207	2231.334	Bryker Road Water Replacement	\$111,160	\$24,122
2207	2231.335	Creedmoor Drive Water Pipeline Replacement	\$200,000	\$109,114
2207	2231.336	West Avenue Waterline Replacement - Renew Austin	\$0	\$0
2207	2231.337	Vanderbilt Lane Waterline Replacement - Renewing Austin	\$0	\$0
2207	2231.338	West 12th St. and Maufrais Street Waterline Replacement	\$0	\$0
2207	2231.339	West 9th Street Water Replacement	\$205,736	\$95,020
2207	2231.34	Plaza Saltillo Ph2 Water Ln Replacement - Cfa	\$250,000	\$0
2207	2231.341	Wishire Area Water Pipeline Renewal - Phase 2	\$0	\$0
2207	2231.342	Garden Villa Lane Waterline Replacement - Renewing Austin	\$0	\$0
2207	2981.001	Subdiv Engineering & Inspection	\$28,653,880	\$28,653,879
2207	2982.001	Water Services & Meters	\$13,347,204	\$12,936,320
2207	3156.003	Water Resource Planning Study	\$900,020	\$898,282
2207	3159.003	Laboratory Info Mgmt System	\$1,439,277	\$1,270,344
2207	3159.01	Infor Public Works (Hansen)	\$3,070,238	\$2,481,911
2207	3159.011	Infor EAM Datastream	\$711,710	\$548,856
2207	3159.012	GIS	\$1,435,433	\$1,004,434
2207	3159.013	Data Mgmt/Integration Tool	\$2,405,022	\$2,252,771
2207	3159.016	SAN & Server Replacement	\$5,131,197	\$4,728,129
2207	3159.017	Router, Switch Replace/DR	\$2,267,629	\$1,949,785
2207	3159.021	Mobile Workforce	\$2,039,234	\$1,906,352
2207	3159.025	Collaboration Software Implementation	\$100,000	\$27,079
2207	3159.026	Permitting Software Upgrade (AMANDA)	\$300,000	\$0
2207	3185.002	Capital Equipment- Vehicles	\$43,444,310	\$41,241,560
2207	3185.005	Miscellaneous Capital Equipment-W	\$531,067	\$93,140
2207	3185.006	Capital Equipment - Radios	\$0	\$0
2207	3185.007	Capital Equipment - Vehicles FY17	\$6,671,308	\$3,718,880

DEPT	SubprojectID	SubprojectName	Appropriation	Expenditures
2207	3212.006	Miscellaneous Paving Improv	\$1,361,361	\$1,316,105
2207	3212.081	FM 973 From Pearce Ln to FM 812	\$493,805	\$493,805
2207	3212.12	SH 71 (W) WL Reloc:Arroyo Canyon to S. of SW Pkwy	\$606,271	\$602,413
2207	3212.122	SH 71 @ Riverside	\$2,340,853	\$2,333,230
2207	3212.124	Future Water Pipeline Relocations-External	\$0	\$0
2207	3212.126	Future Water Pipeline Relocations-Internal	\$0	\$0
2207	3212.128	SH 71 (W): SW Parkway to US 290	\$6,233,627	\$6,116,553
2207	3212.131	Frate Barker Brodie Ln to Manchaca	\$1,503,296	\$1,470,602
2207	3212.132	So. Congress Ave North Bluff to Foremost Dr.	\$775,371	\$741,798
2207	3212.135	TXDOT-MoPac 42-Inch Water TM Relocation	\$2,245,640	\$2,238,143
2207	3212.139	Txdot-Manchaca Road Improvements	\$0	\$0
2207	3212.14	IH 35 W Line Betterment-Ben White To William Cannon Segment	\$2,515,573	\$2,382,814
2207	3212.141	TxDOT Loop1 Water Line Relocation	\$2,921,659	\$2,404,381
2207	3212.143	Readjustment of Water Line Appurtenances On Slaughter Lane	\$56,588	\$52,537
2207	3212.144	Relocation of Neenah Road Water Line and Appurtenances	\$160,175	\$65,410
2207	3212.146	Pearson Ranch Road	\$1,875,093	\$1,471,950
2207	3212.147	Forest North Phase 2 Water Line Relocation	\$1,239,547	\$151,659
2207	3212.148	Pond Springs Road Water Line Relocation	\$61,375	\$0
2207	3212.149	Anderson Mill Zone Water Line Relocation	\$241,480	\$46,154
2207	3212.15	Travis County Wcid No. 10 Inspection Services	\$172,353	\$10,213
2207	3212.152	IH 35 W Line Relo - Riverside Segment	\$58,817	\$15,077
2207	3212.153	TXDOT FM 734 (Parmer Lane) WL Relocation - Harris Branch to	\$1,215,000	\$0
2207	3212.154	TX DOT SH 71 Water Line Relocation - SH71 @ US 183 Interchan	\$1,170,000	\$0
2207	3212.155	TXDOT - IH 35 Water Line Relocation at Parmer Lane Segment	\$860,000	\$3,120
2207	3212.156	TXDOT IH 35 WL Relocation: SH 45 SE to Onion Creek Pkwy (Est	\$40,000	\$0
2207	3212.157	TxDOT Fm 2222 Water Ln Relo: W Of Parker Ctr To Loop 360	\$885,000	\$14,674
2207	3212.158	TXDOT US 183/SH 71 Relocation: S of Thompson Ln/SW of Airport Commerce Dr	\$0	\$0
2207	3212.159	TXDOT FM 1826 Water Line Relo: Slaughter Lane to US 290	\$0	\$0
2207	3212.16	TxDOT IH 35 WI Relocation-Riverside Drive To Sh 45 Se	\$50,000	\$0
2207	3212.161	TxDOT Fm 2222 WI Relocation: Bonaventure Drive To Ribelin	\$4,165,000	\$272,600
2207	3212.162	TxDOT IH 35 Central WI Relocation-Us 183 To Riverside Drive	\$30,000	\$0
2207	3212.163	TxDOT IH 35 North (16) Project WI Reloc: Sh 45 N. To Us 290	\$20,000	\$0
2207	3212.164	4th Street Water Main Relocation and Improvements	\$0	\$0
2207	3257.001	Davis Lab/Admin Renovation	\$539,549	\$539,549
2207	3353.053	Colton Bluff Subdivision-Water	\$781,000	\$0
2207	3353.06	Pioneer Crossing Amended Pud N	\$5,238,000	\$0
2207	3353.068	Circle C CCR 103 Water Line Improvements	\$1,473,195	\$1,455,564
2207	3353.073	Watersedge Pud	\$8,164,832	\$68,068
2207	3353.083	The Vistas- W	\$4,239,000	\$0
2207	3353.104	The Terrace 16-Inch Offsite Water Line	\$215,783	\$4,082
2207	3353.109	Bull Creek Tract 24-Inch Water Line Improvements	\$1,304,894	\$4,081
2207	3353.113	West 5th Street Self-Storage	\$116,409	\$3,332
2207	4598.001	Accumulated Balance	\$17,568,492	(\$1)
2207	4598.004	Citywide Water Improvements-Cash	\$89,335,012	\$0
2207	4598.005	Citywide Water Improvements-Debt	\$220,573,500	\$0
2207	4598.011	Texas Water Development Board	\$80,195,000	\$0
2207	4716.001	Rocip Program	\$0	\$0
2207	4857.016	Anderson Mill MUD	\$2,392,177	\$2,392,177
2207	4857.024	North Acres-Water Improvements-North	\$3,363,867	\$3,362,770
2207	4857.025	North Acres-W Final Conveyance in the Creek	\$5,658,254	\$5,592,526
2207	4857.027	North Acres-Water Improvements-South	\$6,053,139	\$6,053,139
2207	4857.03	Shady Hollow Annexation	\$0	\$0
2207	4857.031	Annexation Projects Future Program	\$0	\$0
2207	4953.003	Property Improvements for New Bond Lands	\$997,011	\$997,010
2207	4953.015	Water Quality Protection Land Fencing Improvements	\$457,075	\$446,493
2207	4953.02	Rutherford Ranch Road	\$380,000	\$24,573
2207	4953.021	TFAD-Trail for a Day	\$145,352	\$95,352
2207	4953.023	Balcones Canyonlands Preserve (BCP) Property Improvements	\$166,974	\$158,858
2207	4953.025	BCP Shop and Barn	\$526,130	\$520,420
2207	4953.028	Tabor Dam Removal	\$75,000	\$16,535
2207	5267.013	Smith Road Extension	\$4,357,621	\$4,356,939
2207	5267.016	Future Tank Site Purchases	\$2,053	\$2,053
2207	5267.027	WCWWTP WRI Tank Assess.& Repair/HSPS	\$7,565,518	\$7,561,097
2207	5267.035	Future Tank-Montopolis Tank	\$14,702,557	\$8,081,686
2207	5267.037	Cemetery Water Line	\$1,080,000	\$301,284
2207	5309.005	Barton Hills Water Services Replacement	\$601,501	\$601,501
2207	5309.006	Water Services Replacement Contract IDIQ (2017 to 2021)	\$2,206,000	\$915,206
2207	5335.003	Ullrich Wtp Contract Ii Raw Water Pipeline	\$0	\$0
2207	5335.005	Ullrich DACS Obsolescence	\$3,678,560	\$816,287
2207	5335.008	Ullrich WTP Conversion to On-Site Generation of Sodium Hypoc	\$3,365,624	\$891,174
2207	5335.01	Ullrich WTP New Generator Installation	\$161,609	\$161,609
2207	5335.012	Ullrich Basin Structural Repairs	\$927,398	\$927,398
2207	5335.016	Ullrich WTP SWGR 15KVA Switch Replacement	\$1,584,423	\$200,518
2207	5335.017	Air Handler Replacement-Ullrich	\$0	\$0

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2207	5335.019	Maintenance Shop A/C Replacement	\$45,000	\$32,996
2207	5335.021	Ullrich Alternate Delivery Projects	\$0	\$0
2207	5335.027	Ullrich Hydraulic & Energy Efficiency Improv.	\$9,975,584	\$7,446,374
2207	5335.031	ADP-Ullrich Concrete Rehabilitation	\$227,550	\$227,550
2207	5335.032	ADP-Ullrich WTP Protective Coating System Rehabilitation	\$150,000	\$109,846
2207	5335.033	Ullrich-Data Acquisition And Control System Rehab.-Phase1	\$40,000	\$9,309
2207	5335.035	Infrastructure Replacement	\$0	\$0
2207	5335.037	ADP - Replacement of Filter basin Basement Dehumidifiers	\$355,699	\$355,699
2207	5335.039	Ullrich WTP Powered Activated carbon (PAC) system Rehabilitate	\$1,250,000	\$1,161,289
2207	5335.042	Ullrich Basin #2 Structural Analysis And Repair Of Clarifier	\$149,218	\$149,218
2207	5335.043	Ullrich Wtp Chlorine Pipes And Valves Rehabilitation	\$173,315	\$173,315
2207	5335.044	Replacement of Ullrich fluoride storage tanks	\$35,537	\$35,537
2207	5335.045	Ullrich Wtp Medium/High Service Chiller And Air Handler	\$375,000	\$0
2207	5335.046	Ullrich Oil Storage Location/Store Room Improvements	\$0	\$0
2207	5335.047	Ullrich Truck Scale System Rehabilitation	\$0	\$0
2207	5335.048	Ullrich Filter Basins 1-18 Stairway Rehabilitation	\$29,848	\$0
2207	5335.05	Ullrich Lime Blower Pump Rehabilitation	\$0	\$0
2207	5335.051	Ullrich Clarifier Basin Valve Extension	\$0	\$0
2207	5335.052	Ullrich Electrical System Replacement Study	\$0	\$0
2207	5335.053	Ullrich Clarifier Basin Recoating	\$0	\$0
2207	5335.055	Ullrich Clarifier No. 2 and 5 Rehabilitation	\$0	\$0
2207	5335.056	Ullrich Project Trailer Replacement	\$0	\$0
2207	5335.058	Low Water Pump #3 Rehabilitation	\$0	\$0
2207	5335.06	Ullrich Clear Well #2 Rehabilitation	\$0	\$0
2207	5335.061	Ullrich Electrical Upgrade and Pump Rehabilitation	\$0	\$0
2207	5335.062	Ullrich Private Automated Branch Exchange Room Relocation	\$0	\$0
2207	5335.063	Ullrich Centrifuges 1&3 Replacement	\$40,000	\$3,944
2207	5335.064	Ullrich Dehumidifier Basins #4-8 Replacement	\$0	\$0
2207	5335.065	Ullrich WTP Service Water System Pump Replacement	\$50,000	\$4,077
2207	5335.066	Ullrich Water Treatment Plant - Admin Building Lab HVAC	\$0	\$0
2207	5335.068	Ullrich Water Treatment Plant Roof Repair	\$0	\$0
2207	5335.07	Ullrich WTP Lime Feed Loop	\$1,070,947	\$374,728
2207	5335.071	Ullrich Water Treatment Plant Lime Building Condeser Replace	\$0	\$0
2207	5335.072	Ullrich Water Treatment Plant Admin and Control Room Rehab	\$0	\$0
2207	5335.073	Ullrich Water Treatment Plant Low Service Chiller Controls	\$0	\$0
2207	5335.074	Ullrich Water Treatment Plant Centrifuge Building HVAC	\$0	\$0
2207	5385.002	Davis Ln/ Leo St- Huebiger Dr	\$385,265	\$385,265
2207	5385.003	Davis/Deer Lane Improvement-Water	\$33,787	\$33,787
2207	5403.003	Rio Grande from 24th to 29th St. Recon & Util Adj	\$1,240,000	\$1,196,445
2207	5645.003	Davis & Ullrich O & M Manual Digital Archive	\$543,409	\$543,409
2207	5754.086	Little Walnut Creek 8-Inch Water Main	\$636,454	\$434,550
2207	5789.022	Shoal Crk Ridgelea Storm Drain-Water	\$975,254	\$975,253
2207	5873.012	Redbud Trail - Water	\$334,598	\$165,444
2207	5873.031	Barton Spring Road Bridge Over Barton Creek	\$25,000	\$0
2207	6000.103	GIS eALP (ABIA Utility Location)	\$50,000	\$50,000
2207	6031.005	Howard Lane at Cameron Road to Gregg Lane	\$750,419	\$750,419
2207	6055.007	So. Congress Ave Town Lake to Oltorf	\$45,000	\$42,750
2207	6066.043	Zilker Metro Park - Water Line Extension	\$150,000	\$0
2207	6319.007	Fallwell Lane Approach 16-Inch Water Line	\$233,320	\$24,534
2207	6598.037	US290 Intersect@1826 & Convict Hill	\$1,469,560	\$1,469,560
2207	6598.039	US290 Intersect at SH71, Wm Cannon, Joe Tanner	\$1,779,684	\$1,717,854
2207	6621.006	Davis WTP Security Access System Upgrade	\$1,391,995	\$1,052,955
2207	6621.012	Water Distribution Security System Replacement	\$1,175,000	\$885,392
2207	6621.013	Ullrich WTP Security Access System Upgrade	\$1,060,479	\$775,328

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2207	6621.017	Waller: Security Operation Center's Build-Out	\$97,555	\$97,554
2207	6621.018	Webberville Stores Security Upgrade	\$120,000	\$113,406
2207	6621.019	Waller Creek Security Enhancements	\$266,138	\$266,138
2207	6621.02	Water Treatment Plant 4 Security Guard Station Setup	\$35,648	\$35,648
2207	6621.021	Glen Bell Service Center Stores Security Upgrade	\$75,000	\$0
2207	6621.022	WTP4 Site Security Enhancements	\$0	\$0
2207	6621.023	Glen Bell Service Center Security Conversion to Genetec	\$0	\$0
2207	6621.025	Wtp4 Site Security System Conversion	\$0	\$0
2207	6621.026	Security Operations Center (SOC) Expansion	\$0	\$0
2207	6621.027	Waller Creek Center security system conversion	\$0	\$0
2207	6621.029	North Service Center Security System Upgrade	\$125,000	\$0
2207	6621.03	Tim Louviere Service Center Security System Upgrade	\$0	\$0
2207	6621.031	Davis Water Treatment Plant Security System Upgrade	\$0	\$0
2207	6621.033	Pump Station Security Access System Upgrade	\$0	\$0
2207	6621.034	Ullrich Water Treatment Plant Security System Upgrade	\$0	\$0
2207	6621.035	Summit Water Quality Lab Security Access Upgrade	\$0	\$0
2207	6621.036	Webberville Service Center Security System Upgrade	\$0	\$0
2207	6621.037	Longhorn Dam Security Monitoring And Access Control	\$0	\$0
2207	6659.002	Cost of Service Study 2007 - Water	\$1,887,479	\$1,217,691
2207	6659.004	Facility Condition Assessment	\$1,821,030	\$1,821,030
2207	6683.022	WTP4 SCADA Programming, Pump, and Other Betterments	\$1,067,758	\$962,051
2207	6683.023	Wtp4 Process Reliability Improvements	\$0	\$0
2207	6683.024	WTP4 Security Guard House and Improvements	\$217,685	\$193,413
2207	6683.025	WTP4 Supervisory Control and Data Acquisition	\$351,128	\$0
2207	6683.026	Water Treatment Plant 4 Lime Building Elevator	\$0	\$0
2207	6683.027	Water Treatment Plant 4 Centrifuge Building Elevator	\$0	\$0
2207	6683.029	Water Treatment Plant 4 Low Service Pump Station	\$0	\$0
2207	6683.03	Wtp4 Low Service Pump Station And Raw Water Pipe Gallery Com	\$405,043	\$0
2207	6683.031	Water Treatment Plant 4 Process Buildings HVAC	\$0	\$0
2207	6683.032	Water Treatment Plant 4 Filter Backwash Pump Station	\$0	\$0
2207	6755.002	Todd Ln/ Ben White- St. Elmo	\$906,805	\$906,805
2207	6935.001	Davis Medium Service Tm (Ph 1 & 2)	\$0	\$0
2207	6935.005	Springdale/183/71 Tm	\$0	\$0
2207	6935.006	Spicewood Springs Tm 48-Inch Upgrade	\$0	\$0
2207	6935.013	Forest Ridge/NWA TM	\$1,051,769	\$1,051,769
2207	6935.015	Hwy 183 - Pilot Knob Supply Main	\$0	\$0
2207	6935.017	Wonsley Dr & Gessner Dr (Georgian)	\$0	\$0
2207	6935.018	FM 969 Trans. Line-Decker Ln to SH 130	\$1,099	\$1,099
2207	6935.024	Eaps To Cameron Tm	\$0	\$0
2207	6935.025	SW Pkwy Tm (Swb) Old Bee Caves Travis Cook Ext.	\$0	\$0
2207	6935.026	Moore Rd Tm	\$0	\$0
2207	6935.028	Lost Creek Improvements	\$0	\$0
2207	6935.029	Fm 812 Tm	\$0	\$0
2207	6935.03	Harris Branch Pkwy/Cameron Rd 24" TM	\$98,824	\$98,824
2207	6935.032	Tanglebriar System Improvements	\$1,380,079	\$992,540
2207	6935.037	Highland Park Improvements	\$1,643,853	\$761,996
2207	6935.04	Westlake/West Rim Wtr Sys Imp	\$0	\$0
2207	6935.041	Motorola/Oakhill Conversion	\$0	\$0
2207	6935.042	Loop 360 Westlake To Waymaker	\$20,000	\$0
2207	6935.043	Future System Improvements To Meet Minimum Standards	\$0	\$0
2207	6935.045	Northwest A & B Zone Boundary Project	\$680,735	\$387,460
2207	6935.046	Hwy 290 / 183 Low Pressure Project	\$0	\$0

DEPT	Subproject ID	Subproject Name	Appropriation	Expenditures
2207	6935.047	Interstate 35 - Oltorf Low Pressure Project	\$385,000	\$82,257
2207	6935.048	Interstate 35 Water Line Extension	\$25,935	\$24,466
2207	6935.049	Travis Co Water Line Constr - FM 1626 from Manchaca to Brodi	\$582,642	\$100,469
2207	6935.05	Integrated Water Management Plan	\$1,000,000	\$614,435
2207	6935.051	Hearn Street and W. 7th Waterline Improvements	\$287,510	\$202,279
2207	6935.053	Feasibility and Engineering Analyses (FEA) for Supply-side	\$729,755	\$716,619
2207	6935.054	ASR Preliminary Investigation and Feasibility Analysis	\$144,165	\$131,036
2207	6935.055	East Austin Transmission Line	\$90,785	\$90,785
2207	6935.056	Seaholm 30-Inch Water Main Abandonment And Interconnect	\$0	\$0
2207	6935.057	Advanced Metering Infrastructure Consultant	\$2,400,000	\$80,554
2207	6935.06	Lift Staions Water Service Lines Install	\$0	\$0
2207	6935.062	W. 35th/W. 38th Water System Improvements	\$164,180	\$78,756
2207	7328.013	WRI Seaholm District Reclaimed Water Mains	\$246,310	\$244,369
2207	7328.015	Block 24/ECC Redevelopment	\$0	\$0
2207	7678.001	Justin Lane from Burnet to Lamar	\$1,857,110	\$1,499,995
2207	8158.004	3rd St. Reconstruction Phase 4 - Guadalupe St. to Nueces St.	\$276,446	\$268,481
2207	8198.001	Pond Springs Rd/Interlocal, Water	\$231,167	\$231,166
2207	8598.006	Plaza Saltillo POD	\$69,952	\$69,952
2207	8702.004	Alternative Process Evaluation for Austin Water Trtmt Plants	\$199,624	\$199,624
2207	8702.005	Lime Residual Disposal Master Plan	\$0	\$0
2207	8702.006	Austin Water Energy Projects Analysis	\$0	\$0
2207	9083.006	Waller Creek District - Sabine St Promenade Water Line	\$615,303	\$28,830
2207	9084.001	Water Facility IDIQ FY 14-17	\$2,856,206	\$2,632,743
2207	10998.002	Harold Court Slope Failure Assessment and Response	\$0	\$0

Appendix E

Descriptions of the Zones for the Current Fees

Descriptions of the zones for the current fees are found in the Land Development Code Chapter 25-1-21(26) and (30), Chapter 25-8-2(D), Chapter 25-2-311, and Ordinance 990805-31 excerpted below. The boundaries are subject to change based on field work and plan review by Watershed Management Department.

Land Development Code Chapter 25-1-21 (30) DRINKING WATER PROTECTION ZONE means the areas within the Barton Springs Zone, the Barton Creek watershed, all water supply rural watersheds, and all water supply suburban watersheds, as described in Section 25-8-2 (Descriptions Of Regulated Areas) that are in the planning jurisdiction.

LDC 25-8-2(D): BARTON SPRINGS ZONE means all watersheds that contribute recharge to Barton Springs, including those portions of the Barton, Williamson, Slaughter, Onion, Bear and Little Bear Creek watershed located in the Edwards Aquifer recharge or contributing zones.

BARTON CREEK WATERSHED means the land area that drains to Barton Creek.

EDWARDS AQUIFER is the water-bearing substrata also known as the Edwards and Associated Limestones Aquifer and includes the stratigraphic rock units known as the Edwards Formation and Georgetown Formation.

EDWARDS AQUIFER CONTRIBUTING ZONE means all land generally to the west and upstream of the Edwards Aquifer recharge zone that provides drainage into the Edwards Aquifer recharge zone.

EDWARDS AQUIFER RECHARGE ZONE means all land over the Edwards Aquifer that recharges the aquifer, as determined by the surface exposure of the geologic units comprising the Edwards Aquifer, including the areas overlain with quaternary terrace deposits.

SOUTH EDWARDS AQUIFER RECHARGE ZONE means the portion of the Edwards Aquifer recharge zone that is located south of the Colorado River and north of the Blanco River.

WATER SUPPLY RURAL WATERSHEDS include the Lake Travis watershed and Lake Austin watershed, excluding the Bull Creek watershed and the area to the south of Bull Creek and the east of Lake Austin.

WATER SUPPLY SUBURBAN WATERSHEDS include: the Bull, Eanes, Dry Creek North, Taylor Slough North, Taylor Slough South, and West Bull creek watersheds; the Town Lake watershed on the south side of Town Lake from Barton Creek to Tom Miller Dam; the Town Lake watershed on the north side of Town Lake from Johnson Creek to Tom Miller Dam; and the Town Lake watershed on the east side of Lake Austin from Tom Miller Dam to Bull Creek.

Land Development Code Chapter 25-1-21 (26) DESIRED DEVELOPMENT ZONE means the area not within the drinking water protection zone.

LDC 25-8-2(D): SUBURBAN WATERSHEDS include all watersheds not otherwise classified as urban, water supply suburban, or water supply rural watersheds, and include: the Brushy, Carson, Cedar, Cottonmouth, Country Club East, Country Club West, Decker, Dry Creek NE, Dry Creek East, Elm Creek, Elm Creek South, Gilleland, Harris Branch, Lake, Maha, Marble, North Fork, Plum Creek, Rattan, Rinard, South Boggy, Walnut, and Wilbarger creek watersheds; the Colorado River watershed downstream of U.S. 183; and; those portions of the Onion, Bear, Little Bear, Slaughter, and Williamson creek watersheds not located in the Edwards Aquifer recharge or contributing zones.

LDC 25-8-2(D): URBAN WATERSHEDS include: the Blunn, Buttermilk, East Boggy, East Bouldin, Fort, Harper Branch, Johnson, Little Walnut, Shoal, Tannehill, Waller, and West Bouldin creek watersheds; the north side of the Colorado River watershed from Johnson Creek to U.S. 183; and; the south side of the Colorado River watershed from Barton Creek to U.S. 183.