Final Report

East Tuolumne Master Plan Development Impact Fee Nexus Study Update

Prepared for:

City of Turlock

Prepared by:

Economic & Planning Systems, Inc. (EPS)

September 30, 2019

EPS #182145

The Economics of Land Use

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1. INTRODUCTION AND EXECUTIVE SUMMARY

Introduction

The City of Turlock (City) retained Economic & Planning Systems, Inc. (EPS) to prepare this 2019 East Tuolumne Master Plan (ETMP) Development Impact Fee Nexus Study Update (2019 Nexus Study Update) that will serve as the basis for updating the ETMP development impact fees (ETMP Fees). These fees are charged on new development in the ETMP area to fund the following backbone infrastructure improvements needed to serve the ETMP area:

- Transportation facilities
- Sanitary sewer facilities
- Potable water facilities

In 2006, the ETMP area was annexed into the City, and the ETMP Development Impact Fee Program (ETMP Fee Program) was established with the adoption of the ETMP Development Fee Nexus Study prepared by EPS. In 2015, the City adopted the ETMP Development Impact Fee Nexus Study Update (2015 Nexus Study Update), also prepared by EPS. Since the 2015 Nexus Study Update was prepared, the City and the developers have agreed that the storm drainage facilities are project specific and will be funded by the developers and removed from the ETMP Fee Program. In addition, construction of the backbone infrastructure is underway. The ETMP area continues to be planned for very low density (VLDR) and low density (LDR) residential dwelling units only, and the development projections remain unchanged from the projections in the 2015 Nexus Study Update. Residential construction to date has consisted of the construction of four model homes only. The ETMP Fees on those four units have been deferred pending adoption of this 2019 ETMP Nexus Study Update and updated ETMP Fees.

This study is being prepared to update the ETMP Fee Program to reflect updated backbone infrastructure requirements and costs. This report details the ETMP development projections, the updated backbone infrastructure requirements and costs, the updated cost allocation to the different land uses, and the proposed ETMP Fees by land use.

Purpose

The purpose of this study is to update the nexus between new development in the ETMP area and the transportation, sanitary sewer, and potable water facilities required to serve that development. This nexus will serve as the basis for updating the ETMP Fees under Assembly Bill (AB) 1600 legislation, as codified by California Government Code Section 66000 et. seq. This code section sets forth the procedural requirements for establishing and collecting development impact fees. These procedures require that "a reasonable relationship, or nexus, must exist between a governmental exaction and the purpose of the condition." Specifically, each local agency imposing a fee must perform the following tasks:

- Identify the purpose of the fee.
- Identify how the fee is to be used.
- Determine how a reasonable relationship exists between the fee's use and the type of development project on which the fee is imposed.
- Determine how a reasonable relationship exists between the need for the public facility and the type of development project on which the fee is imposed.
- Determine a reasonable relationship between the amount of the fee and the cost of public facility or portion of public facility attributable to development on which the fee is imposed.

The ETMP area currently is planned for the development of VLDR and LDR dwelling units only. To account for the possibility of future zoning changes, however, the ETMP Fees to be collected are calculated for all residential land uses designated in the City General Plan. The estimated fees for each land use are based on the land uses' relative demand for each facility type as compared to the demand generated by a VLDR dwelling unit. The result of these fee calculations is to establish ETMP transportation, sanitary sewer, and potable water development impact fees by residential land use. The ETMP Fees do not pay for site-specific infrastructure, which is the responsibility of the developer.

Existing Citywide Fees

The City currently requires payment of citywide fees for all new development within the City boundaries. Thus, development in the ETMP area must pay the citywide fees in addition to the ETMP Fees. The following fees are included in the citywide fee programs:

- **Capital Facility Fees (CFF)** fund capital facilities for roadways, police, fire, and general City government.
- **Wastewater Plant Capacity Fees** fund sewer treatment plant expansions needed to accommodate added sewer flow resulting from new development.
- **Sewer Trunk Capacity Fees** fund construction of citywide sewer trunk lines or the oversizing of normal-sized sewer lines to become sewer trunk lines.
- **Master Storm Drainage Fees** fund the improvement of citywide drainage facilities, including master storm drains and master detention basins.
- **Water Capital Facilities Fees (Water Grid Fees)** fund the improvement of major water supply, transmission, and storage facilities.
- **Additional Fees—**In addition to the major fees listed above, the City charges some additional fees on new development:
  - **Street Light Development Fees.**
  - **Sewer and Water Connection Fees.**

- **Sewer and Water Frontage Fees.**
- **Water Meter Fees.**

Proposed ETMP Fees

The ETMP Fees are based on the estimated benefit received by development in the ETMP area for planned ETMP backbone improvements. The total proposed transportation, sanitary sewer, and potable water fees for each residential land use are shown in **Table 1**. The fees will be charged per dwelling unit. Note that only VLDR and LDR dwelling units are planned in the ETMP area, but fees have been calculated for other residential uses, as well, in case of a zoning change.

Table 2 compares the proposed VLDR and LDR fees with the current ETMP Fees charged by the City. The transportation fees will decrease slightly, while the total sanitary sewer and water fees will increase slightly, with the decreases and increases nearly equivalent. Since the storm drainage fees are being eliminated, however, the overall ETMP Fees will decrease substantially. For VLDR uses, the decrease will be approximately $21,300 per dwelling unit, and for LDR uses, the decrease will be approximately $18,800 per dwelling unit.

Report Organization

This report is divided into five chapters:

- **Chapter 1** includes this executive summary.
- **Chapter 2** describes the ETMP development and facility needs and costs.
- **Chapter 3** details the improvements cost allocation and ETMP Fees calculation.
- **Chapter 4** describes how the fees will be implemented and updated.
- **Chapter 5** provides the nexus findings for the ETMP Fees.

Table 1
East Tuolumne Master Plan Fee Nexus Study
ETMP Development Impact Fee Summary

Land Use	ETMP Fee per Dwelling Unit					
	Transportation	Sanitary Sewer	Potable Water	Subtotal	Administration	Total
					5%	
Residential						
Very Low Density Residential	$11,102	$3,397	$3,079	**$17,578**	$879	**$18,457**
Low Density Residential	$11,102	$3,397	$2,405	**$16,904**	$845	**$17,749**
Low-Medium Density Residential	$11,102	$3,397	$1,026	**$15,525**	$776	**$16,301**
Medium Density Residential	$11,102	$2,703	$700	**$14,505**	$725	**$15,230**
High Density Residential	$7,755	$2,254	$843	**$10,852**	$543	**$11,395**
						fee sum

Source: City of Turlock; EPS

Table 2
East Tuolumne Master Plan Fee Nexus Study
ETMP Development Impact Fee Comparison

Plan Area Fee	ETMP Fee per Dwelling Unit					
	Very Low Density Residential			*Low Density Residential*		
	Current [1]	Proposed [2]	Difference	Current [1]	Proposed [2]	Difference
Transportation	$11,379	$11,102	($277)	$11,379	$11,102	($277)
Sanitary Sewer	$3,171	$3,397	$226	$3,171	$3,397	$226
Potable Water	$3,071	$3,079	$8	$2,384	$2,405	$21
Storm Drainage [2]	$20,948	$0	($20,948)	$18,582	$0	($18,582)
Subtotal	**$38,569**	**$17,578**	**($20,991)**	**$35,516**	**$16,904**	**($18,612)**
Administration (5%) [3]	$1,157	$879	($278)	$1,065	$845	($220)
Total	**$39,726**	**$18,457**	**($21,269)**	**$36,581**	**$17,749**	**($18,832)**

fee comp

Source: City of Turlock; EPS

[1] East Tuolumne Master Plan fees effective through September 30, 2019.
[2] Storm drainage improvements removed from ETMP Fee Program for proposed fees.
[3] Administration fee component increased from 3% to 5% for proposed fees.

2. DEVELOPMENT AND FACILITY COSTS

This chapter describes the amount of development planned to occur in the ETMP area, the public facility improvements necessary to provide adequate services to this new development, and the estimated costs of those improvements.

Land Use

In total, the ETMP area encompasses approximately 101 acres of land along East Tuolumne Road between North Quincy and North Waring Roads. Approximately 6 acres are composed of existing ranchettes, and 95 acres remain to develop. **Map 1** shows the location of the ETMP area, as well as the zoning of the different parcels. The developable land in the ETMP area consists entirely of land zoned for VLDR and LDR uses.

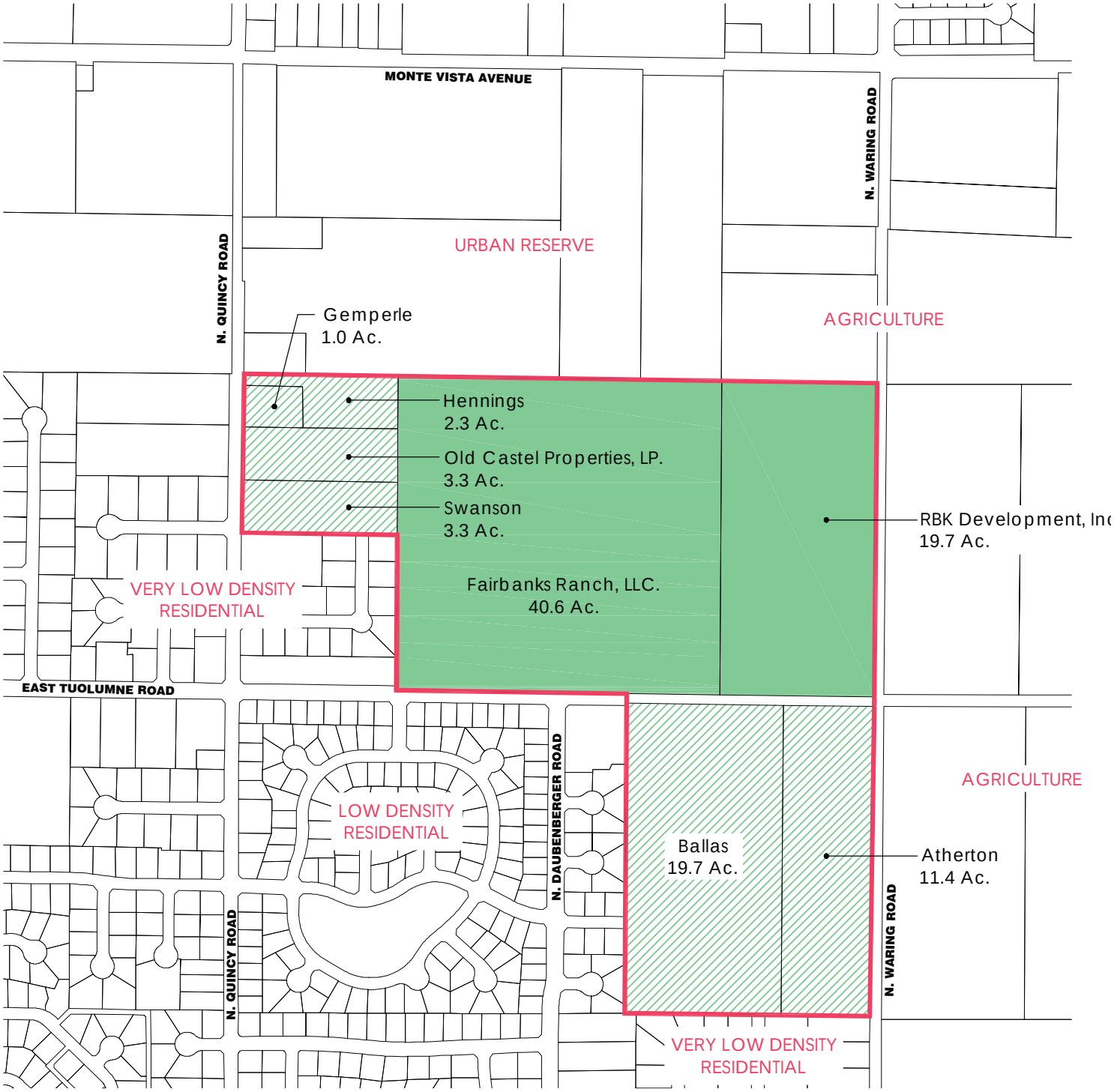
Table 3 provides a summary of the remaining developable land in the ETMP area. The land use designations and estimated acres and dwelling units by land use are based on information provided by the City. This planned development also is discussed in the 2005 ETMP and the October 2014 amendment to the ETMP. The land use classifications are more specifically described in the City's General Plan.

Infrastructure Requirements

Infrastructure upgrades are necessary in the ETMP area to support the planned residential development. The ETMP Fees cover the costs of improvements not covered by the existing citywide fee programs. The ETMP Fees include funding for transportation, sanitary sewer, and potable water facilities.

The ETMP Fee funded transportation, sanitary sewer, and potable water facility requirements that the City provided for the 2015 Nexus Study Update remain unchanged for this 2019 Nexus Study Update. Many of the improvements have been constructed since the 2015 Nexus Study Update was prepared. For those improvements that have already been constructed, the cost estimates have been updated to reflect actual costs. Comparison of the actual costs with the previously estimated costs did not result in appreciable differences. Consequently, the 2015 cost estimates have been retained for the improvements still to be constructed.

Table 4 summarizes the transportation, sanitary sewer, and potable water improvement costs to be funded by the ETMP Fee Program. The estimates are reduced by the City share of the potable water costs for improvements needed to serve development outside the ETMP area. Infrastructure requirements and estimated costs are detailed for the respective infrastructure items in **Tables 5** through **7**.



LAND USE CATEGORY

- Low Density Residential
- Very Low Density Residential
- Planning Area Boundary

101.3 Total Acres

Map 1
ETMP Land Use Map

Table 3
East Tuolumne Master Plan Fee Nexus Study
Land Use Summary

Land Use Category	Gross Acres [1]	Dwelling Units	Units per Acre [2]
Residential			
Very Low Density Residential			
Ballas & Atherton	29.1	72	2.5
Hennings, Old Castle & Swanson	5.7	14	2.5
Subtotal Very Low Density Residential	**34.8**	**86**	**2.5**
Low Density Residential			
Fairbanks Ranch & Les Chateaux	**60.3**	**192**	3.2
Low-Medium Density Residential	0.0	0	7.5
Medium Density Residential	0.0	0	11.0
High Density Residential	0.0	0	22.5
Total	**95.1**	**278**	

lu

Source: GDR Engineering; City of Turlock

[1] Gross acres were determined by identifying developable area excluding existing development.
[2] Units per acre for Very Low Density Residential and Low Density Residential development provided by the ETMP land use plan (rounded). Low-Medium, Medium, and High Density Residential dwelling units per acre provided by the City of Turlock Housing Element.

Table 4
East Tuolumne Master Plan Fee Nexus Study
Summary of Backbone Infrastructure Costs (2019$)

Item	Estimated Costs			
	Transportation	Sanitary Sewer	Potable Water	Total
Total Construction Cost	$3,086,464	$950,984	$839,506	**$4,876,954**
Less City Share Balance	$0	$0	($107,734)	**($107,734)**
Total Cost	**$3,086,464**	**$950,984**	**$731,772**	**$4,769,220**

cost sum

Source: City of Turlock

Table 5
East Tuolumne Master Plan Fee Nexus Study
Estimated Transportation Facility Costs (2019$)

Backbone Infrastructure Costs
Transportation

Project	Construction Cost	Contingency	Subtotal	Engineering, Bonding & Project Mgmt..	Plan Check & Inspection [1]	Total
Formula	*a*	*b = a * 10%*	*c = a + b*	*d = c * 10%*	*e = c * 8%*	*c + d + e*
Percent		*10.00%*		*10.00%*	*8.00%*	
Transportation Project						
Actual Costs						
Tuolumne Rd Improvements from West Master Plan line to Waring			*N/A - Actual Cost*			**$678,072**
Waring Rd Improvements from Tuolumne Rd to Monte Vista			*N/A - Actual Cost*			**$686,867**
TID Irrigation Improvements on Tuolumne Rd from West Master Plan line to Waring			*N/A - Actual Cost*			**$443,040**
TID Irrigation Improvements on Waring North of Tuolumne			*N/A - Actual Cost*			**$317,844**
Subtotal Actual Costs						**$2,125,822**
Estimated Costs						
Quincy Rd Improvements from Tuolumne to Monte Vista	$187,296	$18,730	**$206,026**	$20,603	$16,482	**$243,110**
Waring Rd Improvements from Tuolumne Rd to Wyndfair #3	$203,998	$20,400	**$224,398**	$22,440	$17,952	**$264,789**
TID Electrical Undergrounding on Tuolumne Rd from West Master Plan line to Waring	$140,000	$14,000	**$154,000**	$15,400	$12,320	**$181,720**
TID Electrical Undergrounding on Waring North of Tuolumne	$102,400	$10,240	**$112,640**	$11,264	$9,011	**$132,915**
TID Electrical Undergrounding on Waring South of Tuolumne	$106,400	$10,640	**$117,040**	$11,704	$9,363	**$138,107**
Subtotal Estimated Costs	**$740,094**	**$74,009**	**$814,103**	**$81,410**	**$65,128**	**$960,642**
Total Transportation Facility Cost						**$3,086,464**

trans cost

Source: City of Turlock

[1] Value paid to the City of Turlock Engineering for Plan Check and Inspection at time encroachment permit is procured.

Table 6
East Tuolumne Master Plan Fee Nexus Study
Estimated Sanitary Sewer Facility Costs (2019$)

Backbone Infrastructure Costs
Sanitary Sewer

Project	Construction Cost	Contingency	Subtotal	Engineering, Bonding & Project Mgmt..	Plan Check & Inspection [1]	Total
Formula	*a*	*b = a * 10%*	*c = a + b*	*d = c * 10%*	*e = c * 8%*	*c + d + e*
Percent		*10.00%*		*10.00%*	*8.00%*	
Sanitary Sewer Project						
Actual Costs						
Pump Station at Storm Basin #1			*N/A - Actual Cost*			**$293,125**
Sewer Force Main in Lafitte Rothchild Dr. (6")			*N/A - Actual Cost*			**$7,571**
Sewer Force Main in Tuolumne Rd (6")			*N/A - Actual Cost*			**$57,861**
Sewer Force Main in Waring south (6")			*N/A - Actual Cost*			**$290,975**
Sewer Force Main in Hawkeye (6")			*N/A - Actual Cost*			**$148,709**
Sewer Main in Tuolumne Rd (8")			*N/A - Actual Cost*			**$138,141**
Subtotal Actual Costs						**$936,381**
Estimated Costs						
Sewer Main in Lafitte Rothchild Tuolumne to Pump Station (8" & 10")	**$11,250**	**$1,125**	**$12,375**	**$1,238**	**$990**	**$14,603**
Total Sanitary Sewer Facility Cost						**$950,984**

ss cost

Source: City of Turlock

[1] Value paid to the City of Turlock Engineering for Plan Check and Inspection at time encroachment permit is procured.

Table 7
East Tuolumne Master Plan Fee Nexus Study
Estimated Potable Water Facility Costs (2019$)

Backbone Infrastructure Costs
Potable Water

Project	Construction Cost	Contingency	Subtotal	Engineering, Bonding & Project Mgmt..	Plan Check & Inspection [1]	Total
Formula	*a*	*b = a * 10%*	*c = a + b*	*d = c * 10%*	*e = c * 8%*	*c + d + e*
Percent		*10.00%*		*10.00%*	*8.00%*	
Potable Water Project						
Actual Costs						
Water Line in Tuolumne (10")			*N/A - Actual Cost*			**$82,676**
Water Line in Waring Road North of Tuolumne Road (12")			*N/A - Actual Cost*			**$168,950**
Water Line in Waring Road South of Tuolumne Road (12")			*N/A - Actual Cost*			**$168,950**
Subtotal Actual Costs						**$420,576**
Estimated Costs						
Water Line in Monte Vista Ave (24")	$79,750	$7,975	**$87,725**	$8,773	$7,018	**$103,516**
Water Line in Quincy Road (16")	$243,000	$24,300	**$267,300**	$26,730	$21,384	**$315,414**
Subtotal	**$322,750**	**$32,275**	**$355,025**	**$35,503**	**$28,402**	**$418,930**
Total Actual and Estimated Costs						**$839,506**
Less City Share						
Less City share for increased size on Quincy (Surface Water Infrastructure)	($29,000)	($2,900)	**($31,900)**	($3,190)	($2,552)	**($37,642)**
Less City share for increased size on Monte Vista (Surface Water Infrastructure)	($54,000)	($5,400)	**($59,400)**	($5,940)	($4,752)	**($70,092)**
Subtotal	**($83,000)**	**($8,300)**	**($91,300)**	**($9,130)**	**($7,304)**	**($107,734)**
Total Potable Water Facility Cost						**$731,772**

water cost

Source: City of Turlock

[1] Value paid to the City of Turlock Engineering for Plan Check and Inspection at time encroachment permit is procured.

Transportation Improvements

The ETMP Fees will fund transportation improvements needed by the ETMP area. These improvements include road improvements, irrigation improvements, and underground electrical improvements to roads that border the ETMP area. The transportation facilities cost to be funded by the ETMP Fees totals approximately $3.1 million.

Note: Proposed ETMP transportation facilities do not include any facilities proposed in the citywide transportation improvements.

Sanitary Sewer Improvements

The ETMP Fees will fund sanitary sewer improvements needed by the ETMP area. These improvements include a pump station and a series of sewer mains. The sanitary sewer facilities cost to be funded by the ETMP Fees totals approximately $951,000.

Note: Proposed ETMP sanitary sewer facilities do not include any facilities proposed in the citywide sanitary sewer improvements.

Potable Water Improvements

The ETMP Fees will fund potable water improvements needed by the ETMP area. These water improvements include a series of water lines. The total water improvement costs are reduced by the City share of cost for improvements needed to serve other City areas outside the ETMP area. The net potable water facilities cost to be funded by the ETMP Fee totals approximately $732,000.

Note: Proposed ETMP potable water facilities do not include any facilities proposed in the citywide potable water improvements.

3. COST ALLOCATION AND ETMP FEES

Introduction

For each facility type, the ETMP Fees are estimated by allocating the improvement costs (detailed in the previous chapter) to the various land uses, based on each land use's relative demand for the facility type. The ETMP Fees are calculated on a per-dwelling-unit basis, and the City charges an additional 5 percent to administer the fee program. The ETMP Fees were summarized in **Table 1** in the first chapter.

The specific steps in allocating the costs and estimating the fees for each facility type are outlined below:

1. Determine the improvement costs benefiting the ETMP area. These improvement costs were detailed in the previous chapter.

2. Determine the use factor, or level of demand, for each land use. This use factor is either expressed per dwelling unit or per acre.

3. Multiply the use factor by the projected amount of development (dwelling units or acres, depending on whether the use factor is expressed per dwelling unit or per acre) to derive the facility demand for each land use category. Use these demand estimates to calculate the percentage distribution of total demand across land uses.

4. Allocate the net improvement costs from step 1 to the various land uses based on each land use's percentage of total facility demand.

5. For each ETMP land use (VLDR and LDR), divide the allocated cost by the number of dwelling units to determine the fee per dwelling unit.

6. Although only VLDR and LDR development is included in the ETMP, a fee also is established for the other City General Plan residential uses to address the possibility of zoning changes. Each of these fees is calculated as the use factor for the particular land use divided by the VLDR use factor multiplied by the VLDR fee. In other words, the fee is estimated as the facility demand for the particular land use as a percentage of the VLDR demand multiplied by the VLDR fee.

Transportation Facility Cost Allocation

Table 8 details the transportation facility cost allocation and fee estimate. Transportation facility costs are allocated to the various land uses based on the estimated daily trips per dwelling unit by land use. The estimated daily trips per dwelling unit were obtained from the Institute of Transportation Engineers' Trip Generation Handbook, 9th Edition. These factors are used to estimate the number of new trip miles generated for each land use. The transportation facility costs are allocated to the ETMP land uses based on the distribution of new trip miles generated by future development. The fee per dwelling unit for each land use is estimated as the allocated cost divided by the number of dwelling units for that use.

Table 8
East Tuolumne Master Plan Fee Nexus Study
Transportation Projects Cost Allocation

Cost Allocation
Transportation

Land Use	Dwelling Units	Cost Allocation Basis: Daily Trips per DU	Average Trip Length	Trip End-to-End Reduction Factor	VMT per DU	DUE Factor	New Trip Miles Generated	Distribution of Trip Miles Generated	Cost Allocation: Assigned Cost	Per Dwelling Unit [1]
Formula	*a*	*b*	*c*	*d*	*e = b*c*d*	*f = e / VLDR e*	*g = a * e*	*h = g / total g*	*i = h * total h*	
Residential										
Very Low Density Residential (VLDR)	86	9.52	9.7	70%	65	1.00	5,559	31%	$954,805	**$11,102**
Low Density Residential (LDR)	192	9.52	9.7	70%	65	1.00	12,411	69%	$2,131,659	**$11,102**
Low-Medium Density Residential	0	9.52	9.7	70%	65	1.00	0	0%	$0	**$11,102**
Medium Density Residential	0	9.52	9.7	70%	65	1.00	0	0%	$0	**$11,102**
High Density Residential	0	6.65	9.7	70%	45	0.70	0	0%	$0	**$7,755**
Total	**278**						**17,970**	**100%**	**$3,086,464**	

trans alloc

Source: Institute of Transportation Engineers, Trip Generation Handbook, 9th Edition; City of Turlock; EPS.

[1] Although all proposed development is currently zoned VLDR and LDR, a cost DU is estimated for all residential land uses to account for the possibility of a zoning change. VLDR and LDR cost per DU = assigned cost/DU. For all other land uses, cost per DU = DUE factor * VLDR cost per DU.

Note that a fee per dwelling unit also is calculated for residential uses that are not planned for the ETMP area to address the possibility of zoning changes. The methodology for calculating these fees was described previously in this chapter and is further detailed in ***Table 8****.*

Sanitary Sewer Cost Allocation

Table 9 details the sanitary sewer cost allocation and fee estimate. Sanitary sewer costs are allocated to the ETMP land uses based on the estimated wastewater treatment flow by land use, expressed in gallons per day (GPD) per acre. The estimated GPD per acre factors were obtained from the City Sewer System Master Plan (2013), with the adjustment to the LDR factor noted in **Table 9**. The adjustment was made to be consistent with the factors used to establish the Sewer Trunk Capacity Fee. These factors are used to estimate each land use's relative sanitary sewer facility demand. The sanitary sewer costs are allocated to the ETMP land uses based on the demand distribution among the land uses. The fee per dwelling unit for each land use is estimated as the allocated cost divided by the number of dwelling units for that land use.

Note that a fee per dwelling unit also is calculated for residential uses that are not planned for the ETMP area to address the possibility of zoning changes. The methodology for calculating these fees was described previously in this chapter and is further detailed in ***Table 9****.*

Potable Water Cost Allocation

Table 10 details the potable water cost allocation and fee estimate. Potable water costs are allocated to the various ETMP land uses based on the estimated water demand by land use, expressed in gallons per minute (GPM) per acre. The estimated GPM per acre factors were obtained from the City Water Master Plan Update (May 2009). These factors are used to estimate each land uses' relative potable water facility demand. The potable water costs are allocated to the ETMP land uses based on the water demand distribution among the land uses. The fee per dwelling unit for each land use is estimated as the allocated cost divided by the number of dwelling units for that land use.

Note that a fee per dwelling unit also is calculated for residential uses that are not planned for the ETMP area to address the possibility of zoning changes. The methodology for calculating these fees was described previously in this chapter and is further detailed in ***Table 10****.*

Table 9
East Tuolumne Master Plan Fee Nexus Study
Sanitary Sewer Cost Allocation

Cost Allocation
Sanitary Sewer

Land Use	Development			Cost Allocation Basis				Cost Allocation		
	Acres	Dwelling Units	Dwelling Units Per Acre	GPD Per Acre [1] [2] [3]	DUE Factor Per Acre	Sewer Demand (GPD)	Distribution of Sewer Demand	Assigned Cost	Per Acre [4]	Per Dwelling Unit
Formula	*a*	*b*	*c*	*d*	*e = d / VLDR d*	*f = a * d*	*g = f / total f*	*h = total cost * g*	*i*	*i / c*
Residential										
Very Low Density Residential (VLDR)	34.8	86	2.5	600	1.00	20,868	31.1%	$295,409	$8,494	**$3,397**
Low Density Residential (LDR)	60.3	192	3.2	768	1.28	46,310	68.9%	$655,574	$10,872	**$3,397**
Low-Medium Density Residential	0.0	0	7.5	1,800	3.00	0	0.0%	$0	$25,481	**$3,397**
Medium Density Residential	0.0	0	11.0	2,100	3.50	0	0.0%	$0	$29,728	**$2,703**
High Density Residential	0.0	0	22.5	3,583	5.97	0	0.0%	$0	$50,726	**$2,254**
Total	**95.1**	**278**				**67,178**	**100.0%**	**$950,984**		

ss alloc

Source: Turlock Sewer System Master Plan (Carollo, October 2013); City of Turlock; EPS.

[1] The Sewer System Master Plan includes a VLDR factor of 384 GPD per acre. This factor is based on an average density of 1.6 VLDR units per acre. Since the ETMP has an average density of 2.5 units per acre for VLDR use, the VLDR GPD per Acre factor is adjusted as follows: 348 * 2.5 / 1.6 = 600 GPD per acre.

[2] The Sewer System Master Plan includes a LDR factor of 1,350 GPD per acre, which is based on an average density of 5 LDR units per acre. This factor was adjusted to 1,200 GPD to be consistent with the Sewer Trunk Capacity Fee Nexus Study. In addition, since the ETMP has an average density of 3.2 units per acre for LDR use, the 1,200 GPD assumption is adjusted as follows: 1,200 * 3.2 / 5 = 768 GPD per Acre.

[3] The Sewer System Master Plan includes a HDR factor of 4,300 GPD per acre. This factor is based on an average density of 27 HDR units per acre. Since this model assumes an average density of 22.5 units per acre for HDR uses, the HDR GPD per acre factor is adjusted as follows: 4,300 * 27 / 22.5 = 3,583 GPD per Acre.

[4] Although all proposed development is currently zoned VLDR and LDR, a cost per acre is estimated for all residential land uses to account for the possibility of a zoning change. VLDR and LDR cost per acre = assigned cost/acres. For all other land uses, cost per acre = DUE factor * VLDR cost per acre.

Table 10
East Tuolumne Master Plan Fee Nexus Study
Potable Water Facilities Cost Allocation

Cost Allocation
Potable Water

Land Use	Development			Cost Allocation Basis					Cost Allocation		
	Acres	Dwelling Units	Dwelling Units Per Acre	GPM Per Acre [1]	GPD Per Acre	DUE Factor	Water Demand (GPD)	Distribution of Water Demand	Assigned Cost	Per Acre [2]	Per Dwelling Unit
Formula	*a*	*b*	*c*	*d*	*e = c * 60 min/hr * 24 hr/day*	*f = d / VLDR d*	*g = a * e*	*h = g / total g*	*i = h * total h*	*j*	*j / c*
Residential											
Very Low Density Residential (VLDR)	34.8	86	2.5	2.3	3,312	1.00	115,191	36.6%	$ 267,680	$ 7,696	**$ 3,079**
Low Density Residential (LDR)	60.3	192	3.2	2.3	3,312	1.00	199,714	63.4%	$ 464,092	$ 7,696	**$ 2,405**
Low-Medium Density Residential	0.0	0	7.5	2.3	3,312	1.00	0	0.0%	$ 0	$ 7,696	**$ 1,026**
Medium Density Residential	0.0	0	11.0	2.3	3,312	1.00	0	0.0%	$ 0	$ 7,696	**$ 700**
High Density Residential	0.0	0	22.5	5.7	8,160	2.46	0	0.0%	$ 0	$ 18,962	**$ 843**
Total	**95.1**	**278**					**314,905**	**100.0%**	**$ 731,772**		

water alloc

Source: Turlock Water Master Plan (Carollo, 2009); City of Turlock; EPS.

[1] The Water Master Plan Update includes a HDR factor of 6.8 GPM per Acre. EPS assumes this factor is based on an average density of 27 HDR units per acre, consistent with the density assumptions in the Storm Water Master Plan and the Sewer System Master Plan. Since this study assumes an average density of 22.5 units per acre for HDR uses, the HDR GPM per acre factor is adjusted as follows:
6.8 * 22.5 / 27 = 5.7 GPM per acre.

[2] Although all proposed development is currently zoned VLDR and LDR, a cost per acre is estimated for all residential land uses to account for the possibility of a zoning change. VLDR and LDR cost per acre = assigned cost/acres. For all other land uses, cost per acre = DUE factor * VLDR cost per acre.

Administration

In addition to the transportation, sanitary sewer, and potable water fees, the City charges a fee to administer the ETMP Fee program. As with the facilities fees, the administration fee is charged per dwelling unit for residential uses. For each land use, it is calculated as 5 percent of the sum of the facilities fees.

4. IMPLEMENTATION AND UPDATE

Fee Adoption and Administration

The proposed updated ETMP Fees will need to be adopted by City Resolution as enabled by the current City code, which is articulated in Chapter 8-11 of the City's municipal code. This chapter was updated in 2013 and is referred to as the Capital Facilities Fees Law of the City of Turlock (CFF Law). The CFF Law allows the City Council to adopt, by resolution, a fee schedule consistent with supporting technical analysis and findings provided in this report. The resolution approach to setting the fee allows periodic adjustments of the fee amount that may be necessary over time, without amending the enabling ordinance.

The CFF Law includes a section (8-11-11) stating that the specifications of this law shall apply not only to the CFF, but also to Master Plan fee programs. The CFF Law addresses the primary implementation and administrative issues and procedures associated with the CFF and Master Plan fees. A brief summary of the key implementation and administrative elements is provided below.

Applicable Land Uses

All new development that occurs in the ETMP, except as specifically exempted by the CFF Law, will pay the ETMP Fee. While the maximum fee amount will be determined by this Nexus Study Update, the City may elect to charge less for a variety of reasons and under certain circumstances, as described in the CFF Law. In any case, the applicable fees will be published in a Fee Schedule made available by the City and updated periodically. The amount will vary by land use, as summarized in **Table 1** of this report.

It is possible that certain projects may not fit neatly into the categories defined in **Table 1**. In cases where such ambiguity exists, the City Engineer and City Manager will need to make a determination as to the applicable fees. The CFF Law articulates guidelines for resolving discrepancies or disputes.

Fee Escalation

The CFF Law allows for an automatic adjustment of the ETMP Fees to keep pace with inflation-adjusted increases in construction costs. This allows the fee level to keep pace with inflation without requiring an annual approval process. This adjustment is based on the San Francisco Construction Cost Index (CCI) published by the Engineering News Record (ENR), a source widely used in the construction industry and by many jurisdictions as a basis for making annual inflation adjustments to their development impact fees. The San Francisco CCI has been published consistently every month since 1967. As such, it is one of the most reliable and consistent indices that track trends in construction costs. Currently, the City adjusts the ETMP fees at the start of each quarter by the percentage change in the San Francisco CCI from the last month of one quarter to the last month of the next quarter. For example, in July of a given year, the fees are adjusted by the percentage change in the San Francisco CCI from March to June.

Timing and Manner of Payment

The CFF Law addresses issues related to the timing and manner of payment for the ETMP Fees, including the potential for fee deferrals, payment plans, credits and reimbursements, exemptions, and related adjustments.

Annual Review, Accounting, and Updates

Annual Review

This report and the technical information it contains should be maintained and reviewed periodically by the City as necessary to ensure the accuracy of the estimated ETMP Fees and to enable the adequate programming of funding sources. To the extent that improvement requirements, costs, or development potential changes over time, the ETMP Fee Program will need to be updated. Specifically, AB 1600 (at Gov. C. §§ 66001(c), 66006(b)(1)) stipulates each local agency that requires payment of a fee make specific information available to the public annually, within 180 days of the last day of the fiscal year, including the following information:

- A description of the type of fee in the account.
- The amount of the fee.
- The beginning and ending balance of the fund.
- The amount of fees collected and interest earned.
- Identification of the improvements constructed.
- The total cost of the improvements constructed.
- The fees expended to construct the improvement.
- The percentage of total costs funded by the fee.

If sufficient fees have been collected to fund construction of an improvement, the agency must specify the approximate date for construction of that improvement. Because of the dynamic nature of growth and infrastructure requirements, the City should monitor development activity, the need for infrastructure improvements, and the adequacy of the fee revenues and other available funding. Formal annual review of the ETMP Fee Program should occur, at which time, necessary adjustments should be made to the fee program. The fee program includes an administrative component that funds the costs associated with this monitoring and updating effort.

Surplus Funds

AB 1600 also requires that if any portion of a fee remains unexpended or uncommitted in an account for 5 years or more after deposit of the fee, the City Council shall make these findings once each year: (1) identify the purpose to which the fee is to be put, (2) demonstrate a reasonable relationship between the fee and the purpose for which it was charged, (3) identify all sources and amounts of funding anticipated to complete financing of incomplete improvements, and (4) designate the approximate dates on which the funding identified in (3) is expected to be deposited into the appropriate fund.

If adequate funding has been collected for a certain improvement, an approximate date must be specified as to when construction on the improvement will begin. If the findings show no need for the unspent funds or if the conditions discussed above are not met, and the administrative

costs of the refund do not exceed the refund itself, the local agency that has collected the funds must refund them.

Internal Loaning of Funds

Loans between the ETMP Fee funds may be used from time to time to facilitate construction of ETMP facilities and assure adequate cash flow. Any such loan shall be made in accordance with applicable law, as interpreted by the City Attorney, and all funds shall be placed in separate accounts on either a facility or geographic basis. The additional following requirements also are placed on loans between ETMP Fee funds:

1. Funds may be transferred between accounts to expedite construction of critical projects and facilities.
2. A mechanism to repay accounts shall be established.
3. Interest charged on each loan shall be based on the Local Agency Investment Fund rate in effect at the time of the loan and shall be deposited into the account providing the loan.
4. Inter-fund loan repayments shall take precedence over reimbursements to developers.

Five-Year Update

Fees will be collected from new development in the City immediately; however, use of these funds may need to wait until a sufficient fund balance can be accrued. According to Government Code Section 66006, the City is required to deposit, invest, account for, and expend the fees in a prescribed manner. The fifth fiscal year following the first deposit into the fee account or fund, and every 5 years thereafter, the City is required to make all of the following findings with respect to that portion of the account or fund remaining unexpended:

- Identify the purpose for which the fee is to be put.
- Demonstrate a reasonable relationship between the fee and the purpose for which it is charged.
- Identify all sources and amounts of funding anticipated to complete financing in incomplete improvements.
- Designate the approximate dates the funding referred to in the above paragraph is expected to be deposited in the appropriate account or fund.

Once sufficient funds have been collected to complete the specified projects, the City must commence construction within 180 days. If it fails to do this, the City is required to refund the unexpended portion of the fee and any accrued interest to the then-current owners.

Supplemental Funding

Although the ETMP Fees are intended to fully fund the identified ETMP facilities, it is possible the City may use supplemental funds for future facilities. Supplemental funding may include the following sources:

- **General Fund Revenues**—In any given year, the City could allocate a portion of its General Fund revenues for discretionary expenditures. Depending on the revenues generated relative to costs and City priorities, the City may allocate General Fund revenues to fund ETMP facilities costs not covered by the ETMP Fee Program or other funding sources.

- **Assessments and Special Taxes**—The City could fund a portion of facilities costs using assessments and special taxes. For example, establishing a Mello-Roos Community Facilities District would allow the City to levy a special tax to pay debt service on bonds sold to fund construction of capital facilities or to fund capital facilities directly.

- **State or Federal Funds**—The City might seek and obtain grants of matching funds from State and Federal sources to help offset the costs of required facilities and improvements. As part of its funding effort, the City should research and monitor these outside revenue sources and apply for funds as appropriate.

It should be noted that during the past few decades, there has been an increasing shift of infrastructure financing responsibilities from State and federal government to the local level. This shift, combined with the effects of the Great Recession (i.e., reduced property values), has left cities with very limited resources, and competition for General Fund revenues is high. In addition, many grant programs that once funded major highway improvements and water and sewer infrastructure improvements were long-ago abandoned. As the economy improves, assessments and special districts, which require voter approval, may become more feasible, but at this time, development impact fees are one of the few funding sources that Turlock's City Council can control.

5. AB 1600 NEXUS FINDINGS

Authority

This report has been prepared to update development impact fees for the ETMP area in the City in accordance with the procedural guidelines established in AB 1600, which are codified in California Government Code Section 66000 et. seq. These code sections set forth the procedural requirements for establishing and collecting development impact fees. These procedures require that "a reasonable relationship or nexus must exist between a governmental exaction and the purpose of the condition."[1]

Specifically, each local agency imposing a fee must perform the following tasks:

- Identify the purpose of the fee.
- Identify how the fee is to be used.
- Determine how a reasonable relationship exists between the fee's use and the type of development project on which the fee is imposed.
- Determine how a reasonable relationship exists between the need for the public facility and the type of development project on which the fee is imposed.
- Demonstrate a reasonable relationship between the amount of the fee and the cost of public facility or portion of public facility attributable to development on which the fee is imposed.

Purpose of Fees

New development in the ETMP area will increase the demand for transportation, sanitary sewer, and potable water facilities. Funding by the ETMP Fees will provide for these needed infrastructure improvements as summarized below:

- **Transportation Improvements**—The transportation fees will provide funding for the transportation infrastructure required for development to occur in the ETMP area.
- **Sanitary Sewer Improvements**—The sanitary sewer fees will provide funding for the sanitary sewer infrastructure required for development to occur in the ETMP area.
- **Potable Water Improvements**—The potable water fees will provide funding for the water system infrastructure required for development to occur in the ETMP area.

The transportation, sanitary sewer, and potable water improvements are described in more detail in **Chapter 2**.

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[1] *Public Needs & Private Dollars*; William Abbott, Marian E. Moe, and Marilee Hanson, page 109.

Use of Fees

ETMP area fees from new development will be used to fund the following improvements:

- **Transportation Improvements**—ETMP Fees will fund new transportation infrastructure needed to construct the roads in the ETMP and to improve the roads bordering the ETMP area. Required new transportation facilities include road improvements, irrigation improvements, and underground electrical improvements.
- **Sanitary Sewer Improvements**—ETMP Fees will fund new sanitary sewer infrastructure needed to convey sewage from planned new development into the citywide sewer system. Required new sanitary sewer facilities include a new pump station and a series of sewer mains.
- **Potable Water Improvements**—ETMP Fees will fund potable water facilities needed to accommodate increased water usage by new development. Required new water facilities include a series of water lines throughout the ETMP area.

Relationship between Use of Fees and Type of Development

The ETMP Fees will fund transportation, sanitary sewer, and potable water facilities needed to serve new development in the ETMP Area, as summarized below:

- **Transportation Improvements**—New residential development will generate new vehicular trips in the ETMP area. Roadway improvements will accommodate the demands of future development. A reasonable relationship exists between the use of the transportation fees and the residential development on which the fees are imposed because the fees will be used to improve and expand the transportation system, which will be utilized by the new residents generated by the new residential dwelling units.
- **Sanitary Sewer Improvements**—New residential development will create sewer flow in the ETMP area. An additional pump station and new sewer mains will create capacity for the sewage system to accommodate the demands of future development. A reasonable relationship exists between the use of the sanitary sewer fees and the residential development on which the fees are imposed because the fees will be used to improve and expand the sanitary sewer system, which will be utilized by the new residents generated by the new residential dwelling units.
- **Potable Water Improvements**—New residential development will create demand for additional potable water in the ETMP area. Construction of a series of water lines in the ETMP area will create capacity for the water system to accommodate the demands of future development. A reasonable relationship exists between the use of the potable water fees and the residential development on which the fees are imposed because the fees will be used to improve and expand the potable water system, which will be utilized by the new residents generated by the new residential dwelling units.

Relationship between Need for Facility and Type of Project

- **Transportation Improvements**—Infrastructure upgrades are necessary to ensure adequate transportation facilities to serve future residential development in the ETMP area. For new development to occur, road improvements, irrigation improvements, and underground electrical improvements are needed to accommodate future use of roads bordering the ETMP area. A reasonable relationship exists between the need for transportation improvements and the type of new residential development projects because the capacity of the transportation system must be expanded to accommodate the new residential development that will place an increased demand on the transportation system.

- **Sanitary Sewer Improvements**—Infrastructure upgrades are necessary to ensure adequate sanitary sewer facilities to serve future residential development in the ETMP area. For new development to occur in the ETMP area, a new pump station and new sewer mains are needed. A reasonable relationship exists between the need for sanitary sewer improvements and the type of new residential development projects because the capacity of the sanitary sewer system must be expanded to accommodate the new residential development that will place an increased demand on the sanitary sewer system.

- **Potable Water Improvements**—Potable water improvements are necessary to ensure adequate water capacity to serve future residential development in the ETMP area. For new development to occur, additional water lines in the ETMP area are needed. A reasonable relationship exists between the need for potable water improvements and the type of new residential development projects because the capacity of the potable water system must be expanded to accommodate the new residential development that will place an increased demand on the sanitary sewer system.

Relationship between Amount of Fees and Cost of or Portion of Facility Attributed to Development on which Fee is Imposed

All costs of the local ETMP area infrastructure improvements are allocated to new development in the ETMP area, which will receive benefit from ETMP area infrastructure. As a result, development impact fees will support all costs associated with these infrastructure improvements. The infrastructure costs are allocated to the land uses based on each land use's relative demand for the improvements, as described below:

- **Transportation Improvements**—Costs are allocated to the land uses based on each land use's estimated demand for transportation facilities, as measured by daily new trip miles generated. The cost allocation is the basis for the fee estimates by land use. A reasonable relationship exists between the amount of the transportation fees and the costs of the transportation facilities attributed to the residential development upon which the fees are imposed because the fees are derived using cost allocation factors that identify the relative demand generated by each residential development type.

- **Sanitary Sewer Improvements—**Costs are allocated to the land uses based on each land use's estimated demand for sanitary sewer facilities, as measured by wastewater treatment flow factors by land use, expressed in GPD per acre. The cost allocation is the basis for the fee estimates by land use. A reasonable relationship exists between the amount of the sanitary sewer fees and the costs of the sanitary sewer facilities attributed to the residential development upon which the fees are imposed because the fees are derived using cost allocation factors that identify the relative demand generated by each residential development type.

- **Potable Water Improvements—**Costs are allocated to the land uses based on each land use's estimated demand for potable water facilities, as measured by water demand by land use factors, expressed in GPM per acre. The cost allocation is the basis for the fee estimates by land use. A reasonable relationship exists between the amount of the potable water fees and the costs of the potable water facilities attributed to the residential development upon which the fees are imposed because the fees are derived using cost allocation factors that identify the relative demand generated by each residential development type.