

**RESOLUTION NO. 2017-15**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF  
LEMOORE AMENDING EXISTING DEVELOPMENT IMPACT FEES**

**WHEREAS**, with the adoption of Ordinance 92-10 on August 18, 1992, the City Council established development impact fees in accordance with applicable law including without limitation Government Code section 66000, et seq. (the Mitigation Fee Act), and authorized the imposition of development impact fees in amounts to be set by subsequent City Council resolutions; and

**WHEREAS**, the development impact fee amounts have previously been set by Resolution No. 2014-02; Resolution No. 2011-33; and Resolution No. 2010-10, Resolution No. 2008-20, Resolution No. 2006-46, and Resolution No. 2000-21, respectively; and

**WHEREAS**, a report entitled "Impact Fee Study" (the "Nexus Study") has been prepared that establishes the nexus between the imposition of an updated development impact fee program ("Development Impact Fees," or "Fees") and the estimated reasonable cost of providing the services and constructing the public facilities for which the Fees are being charged; and

**WHEREAS**, the Nexus Study identifies the purpose of the Development Impact Fees and the use to which the Fees will be put, and a copy of the Nexus Study is attached as Attachment "A" to this resolution, and incorporated herein by this reference; and

**WHEREAS**, the Nexus Study has been made available for public review and a copy is on file in the City Clerk's office a copy; and

**WHEREAS**, the City Council held and conducted a public hearing on June 6, 2017, in accordance with applicable public notice, to review and consider the Nexus Study and the potential implementation of updated and increased Fees; and

**NOW, THEREFORE**, in accordance with the provisions of Government Code section 66000 et seq. the City Council of the City of Lemoore, after review of the record and consideration of all testimony and evidence presented at the public hearing, hereby finds, declares, and resolves as follows:

1. The City Council of the City of Lemoore, using its independent judgment, has reviewed and hereby approves and adopts the Nexus Study as attached Attachment "A" incorporated by this reference. The Nexus Study identifies the purpose of purposes and uses of the Development Impact Fees.

2. A reasonable relationship exists between the need for City public facilities and the type of development project on which the Development Impact Fees are imposed as indicated by the Nexus Study. Development Impact Fees collected from each new development will generate revenue which is necessary to offset development's impacts to the City's facilities.

3. A reasonable relationship exists between the use of Development Impact Fees and the type of development project on which the fees are imposed as indicated by the Nexus Study. Development Impact Fees collected will be used for the acquisition, installation, and construction of the public facilities identified in the Nexus Study.

4. A reasonable relationship exists between the amount of the Development Impact Fees and the cost of the public facilities attributable to the development on which the Fees are imposed as indicated by the Nexus Study. The method of allocation of the respective Fees to a particular development project bears a fair relationship, and is roughly proportional to, the development project's burden on, and benefits from, public facilities to be funded by the Development Impact Fees.

5. The adoption of this resolution is statutorily exempt, pursuant to Public Resources Code Section 21080(b)(8) and the California Environmental Quality Act ("CEQA") and the CEQA Guidelines under Section 15273(a).

6. The Development Impact Fees collected shall be placed in an individual interest bearing account, or multiple accounts, established for the purpose of tracking the fee revenue and expenses separately.

7. The Development Impact Fees shall be solely used for (i) the purposes described in the Nexus Study; (ii) reimbursing the City for a development project's fair share of those public facilities identified in the Nexus Study and constructed by the City; or (iii) reimbursing developers who construct public facilities identified in the Nexus Study.

9. Schedule of Maximum Supportable Impact Fees.

Effective on and after August 19, 2017, Development Impact Fees shall be imposed according to the following schedule(s) to the following infrastructure categories unless otherwise amended by resolution of the City Council. The following schedule of Development Impact Fees assumes a single citywide service area.

<i>Non-Utility Fee Component</i>	<i>Per Unit</i>		<i>Per 1,000 Sq Ft</i>		
	<i>Single Family</i>	<i>Multi-Family</i>	<i>Industrial</i>	<i>Retail / Restaurant</i>	<i>Office / Institutional</i>
Community/Rec Facility	\$431	\$327			
Fire	\$820	\$622	\$471	\$526	\$873
General Municipal Facilities	\$664	\$504	\$541	\$605	\$1,004
Law Enforcement	\$804	\$610	\$300	\$2,212	\$866
Parks	\$1,803	\$1,368			
Refuse Vehicles & Containers	\$306	Varies	Varies	Varies	Varies
Storm Drainage	\$730	\$574	\$727	\$773	\$727
Streets and Thoroughfares	\$4,897	\$3,589	\$979	\$6,550	\$2,828
<i>Proposed Non-Utility Total</i>	<i>\$10,455</i>	<i>\$7,594</i>	<i>\$3,018</i>	<i>\$10,666</i>	<i>\$6,298</i>
Current Fee	\$10,415	\$7,625	\$2,590	\$7,682	\$3,946
Difference	\$40	-\$31	\$428	\$2,984	\$2,352



<i>Utility Fee Component (up to 1.5" meter)</i>	<i>Per Connection</i>				
	<i>Single Family</i>	<i>Multi-Family</i>	<i>Industrial</i>	<i>Retail / Restaurant</i>	<i>Office / Institutional</i>
Wastewater	\$2,525	\$1,855	\$2,525	\$2,525	\$2,525
Water	\$871	\$631	\$871	\$871	\$871
<i>Proposed Utility Total</i>	<i>\$3,396</i>	<i>\$2,486</i>	<i>\$3,396</i>	<i>\$3,396</i>	<i>\$3,396</i>
Current Fee	\$3,296	\$2,164	\$11,536	\$11,536	\$11,536
Difference	\$100	\$322	-\$8,140	-\$8,140	-\$8,140

A. Development Impact Fees for residential development shall be calculated per housing unit. Development Impact Fees for non-residential units shall be based on the applicable amount per 1,000 square foot described in this Chapter.

C. Development Impact Fees shall be calculated at the time of issuance of the building permit of a building that is triggering their collection and shall be collected prior to the final inspection of said building permit.

D. Development Impact Fees shall be calculated based on the building's use, with a best fit into one of the applicable land use type fee categories identified in the Nexus Study and in instances where a unique use is presented, the City's Planning Department will determine, in its sole discretion, which land use category is most appropriate.

E. Development Impact Fees collected on Single Family and Multi-Family Residential property shall be based on the applicable amount per unit described in this Chapter.

F. Development Impact Fees collected on the reuse of an existing building shall be calculated based upon the current land use category less any previous Development Impact Fee paid to the City. The land owner shall be required to provide evidence of prior payment of the Development Impact Fee.

#### 10. Deposit of fees in trust fund.

The Development Impact Fees received by the City shall be deposited into separate trust funds in a manner to avoid any co-mingling of the fees with other revenues and funds of the City, except for temporary investments, and expended to the City solely for the purposes for which the fees were collected. Any interest income earned by monies in any such trust fund shall also be deposited into such trust fund and the City of Lemoore shall expend such funds for the purposes of providing capital improvements and equipment to serve new development projects.

11. Protests and appeals.

Any landowner, developer, or other aggrieved party may file a protest of the Development Impact Fees in the manner provided and within the times provided for in Sections 66020 and 66021 of the Government Code. For the purposes of determining the applicable time and limitations periods set forth in Government Code Section 66020, the date of the imposition of fees under this Ordinance shall be the date of the earliest legislative approval by the Land Use Authority of the development project upon which the fees are imposed as a condition of approval of the project. Protests shall be made to the Land Use Authority as provided in Section 6.

12. Administration.

- a) *Administrative Fee.* The City shall be responsible for administration of the Development Impact Fee, including the calculation and collection of the fees, tracking of deposits, and preparation of required reports.
- b) *Annual Adjustment.* An annual adjustment to account for cost escalations shall be applied to all Development Impact Fees in this Chapter in the manner and time specified herein:
  - 1. Prior to the end of each fiscal year, the Community Development Department shall report to the Clerk of the City Council his or her finding on the annual escalation of construction costs for the prior twelve (12) months through May and the Development Impact Fees shall be adjusted accordingly.
  - 2. The basis for this annual adjustment shall be the percentage increase in the blended average of the San Francisco-Oakland-San Jose, CA Consumer Price Index ("CPI") and the Los Angeles-Riverside-Orange County, CA CPI, as published by the Bureau of Labor Statistics, for the period ending May of the previous fiscal year. The base month for application of this adjustment shall be May 2017 and the application shall be applied to the amounts shown in Section 3 and applicable on July 1<sup>st</sup> of each fiscal year.
  - 3. The City shall post the annual adjustment in fees as specified in this section.

13. Credits and reimbursements.

(a) Development Impact Fee credits and reimbursements will be available to developers who fund construction of eligible Facilities. The City shall determine which Facilities will be eligible for developers to construct. Facilities must meet City standards for acquisition projects in order to be eligible for Development Impact Fee credits or reimbursements. Developers will be responsible for complying with all applicable laws, codes, and regulations relating to contracting and construction procedures for publicly funded public works projects.

(b) Developers will be eligible for Development Impact Fee credits up to one (100%) percent of the Development Impact Fees. Fee credits/reimbursements will be available for the Facility cost up to the lesser of (1) the cost shown in the Nexus Study and (2) actual construction cost of the eligible Facilities. Development Impact Fee credits/reimbursements will be adjusted annually in the same manner as the Development Impact Fees. Once fee credits have been determined, they will be used at the time the respective fees would be due. The City, in its sole discretion, shall be responsible for determining the fee credit amount.



(c) Once all criteria are met, Development Impact Fee credits may be taken against fees when payable. To obtain fee credits, the Facilities must meet all City standards and criteria. The City maintains the flexibility to allocate fee credits in a manner it chooses.

(d) Reimbursements will be due to developers who finance Facilities in excess of their fair share of the cost of these Facilities. In such a case, developers would first obtain Development Impact Fee credits up to their fair share cost requirement for a Facility and then await reimbursement from Development Impact Fee revenue collections from other fee payers. Reimbursement priority will be determined on a first-in and first-out basis. When funds are available, and no high priority projects need to be financed, reimbursements will be paid to the first (1st) developer waiting for reimbursement. Once that developer is paid in full, the next developer awaiting reimbursement will start to be repaid in full. To obtain reimbursements, developers must enter into a reimbursement agreement with the City. Reimbursements will be paid only after the City's acceptance of the Facilities. Reimbursements are an obligation payable only from the Development Impact Fee program funds and not an obligation of the City's general fund.

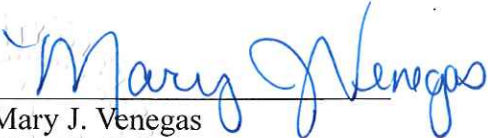
15. The amended development impact fees prescribed by this resolution shall take effect sixty (60) days following adoption of this resolution by the City Council. This resolution shall remain in effect until modified, terminated, or rescinded by subsequent resolution of the City Council. This resolution and the Fees approved herein shall supersede and replace the development impact fee amounts set by previous City Council resolutions, including but not limited to Resolution No. 2010-10, Resolution No. 2008-20, Resolution No. 2006-46, and Resolution No. 2000-21, respectively.

**NOW, THEREFORE, BE IT RESOLVED**, that the City Council hereby approves Amending Existing Development Impact Fees.


**PASSED AND ADOPTED** by the City Council of the City of Lemoore at a Regular Meeting held on 20<sup>th</sup> day of June 2017 by the following vote:

AYES:	Brown, Blair, Chedester, Neal, Madrigal
NOES:	None
ABSENT:	None
ABSTAIN:	None

ATTEST:

  
Mary J. Venegas  
City Clerk

APPROVED:

  
Ray Madrigal  
Mayor

Attachment A: Impact Fee Study, Prepared for: City of Lemoore

# Impact Fee Study

Prepared for:  
**Lemoore, California**

June 6, 2017



4701 Sangamore Road  
Suite S240  
Bethesda, MD  
(301) 320-6900  
[www.TischlerBise.com](http://www.TischlerBise.com)



[PAGE INTENTIONALLY LEFT BLANK]

## TABLE OF CONTENTS

Executive Summary .....	1
Proposed Changes .....	1
Development and Demand Data .....	2
Study Area and Time Frame .....	2
Proposed Fee Methods and Cost Components .....	3
Proposed Impact Fees .....	4
General Legal Framework.....	5
U. S. Constitution .....	5
California Constitution .....	5
The Mitigation Fee Act.....	5
Required Findings .....	6
Identifying the Purpose of the Fees .....	6
Identifying the Use of the Fees.....	7
Reasonable Relationship Requirement .....	7
Demonstrating an Impact.....	7
Demonstrating a Benefit .....	8
Demonstrating Proportionality .....	8
Development Impact Fees for Existing Facilities .....	8
Conceptual Impact Fee Calculation.....	9
Cost Recovery Method.....	9
Incremental Expansion Method .....	9
Plan-Based Method .....	9
Credits .....	9
Community / Rec Facility.....	10
Methodology .....	10
Improvements .....	10
Current Level of Service.....	10
Projected Demand.....	11
Impact Fee Study .....	12
Maximum Supportable Community / Rec Facility Impact Fee.....	13
Projected Fee Revenue .....	14
Fire.....	15
Methodology .....	15
Facilities .....	16
Current Level of Service.....	16
Projected Demand.....	17
Apparatus.....	18
Current Level of Service.....	18
Projected Demand.....	19
Impact Fee Study .....	20
Maximum Supportable Fire Impact Fee.....	21
Projected Fee Revenue .....	22
General Municipal Facilities .....	23
Methodology .....	23



<b>Facilities .....</b>	<b>23</b>
Current Level of Service.....	23
Projected Demand.....	24
<b>Equipment .....</b>	<b>25</b>
Current Level of Service.....	25
Projected Demand.....	26
<b>Development Impact Fee Study .....</b>	<b>27</b>
<b>Maximum Supportable General Municipal Facilities Impact Fee .....</b>	<b>28</b>
<b>Projected Fee Revenue .....</b>	<b>29</b>
<b>Law Enforcement .....</b>	<b>30</b>
Methodology .....	30
Facilities .....	30
Current Level of Service.....	30
Vehicles and Equipment.....	32
Current Level of Service.....	32
Projected Demand.....	33
Impact Fee Study .....	34
Maximum Supportable Law Enforcement Impact Fee .....	35
Projected Fee Revenue .....	36
<b>Parks .....</b>	<b>37</b>
Methodology .....	37
Park Land Acquisition .....	37
Current Level of Service.....	37
Park Improvements .....	38
Current Level of Service.....	38
Projected Demand.....	39
Impact Fee Study .....	40
Maximum Supportable Parks Impact Fee .....	41
Projected Fee Revenue .....	42
<b>Refuse Vehicles &amp; Containers .....</b>	<b>43</b>
Methodology .....	43
Single-Family Residential Cost Components .....	43
Refuse Vehicles.....	43
Refuse Containers .....	43
Residential Input Variables and Maximum Supportable Impact Fee .....	44
Multi-Family and Nonresidential Cost Components .....	44
Refuse Vehicles.....	44
Refuse Containers .....	44
Multi-Family and Nonresidential Input Variables and Maximum Supportable Impact Fee .....	45
<b>Storm Drainage .....</b>	<b>47</b>
Methodology .....	47
Proportionate Share Factors .....	47
Growth-Related Storm Drainage Improvements .....	48
Collection Projects.....	48
Detention Projects.....	48
Other Projects .....	48

Capital Cost per Acre.....	49
Impact Fee Study .....	50
Maximum Supportable Storm Drainage Impact Fee .....	51
<b>Streets and Thoroughfares .....</b>	<b>52</b>
Methodology .....	52
Lemoore Travel Demand .....	52
Arterials.....	53
Cost Factors .....	53
Current Level of Service.....	54
Projected Demand.....	54
Traffic Signals.....	55
Cost Factors .....	55
Current Level of Service.....	55
Projected Demand.....	56
State Route 41 / Bush Street Interchange .....	56
Master Plan .....	57
Impact Fee Study .....	57
Maximum Supportable Streets and Thoroughfares Impact Fee .....	58
Projected Fee Revenue .....	59
<b>Wastewater .....</b>	<b>60</b>
Methodology .....	60
Level of Service Analysis for Wastewater Production .....	60
Projection of Wastewater Production .....	61
Collection .....	62
Treatment.....	62
Wastewater Master Plan .....	63
Impact Fee Study .....	63
<b>Water.....</b>	<b>65</b>
Methodology .....	65
Level of Service Analysis for Water Demand .....	65
Projection of Water System Demand .....	66
Wells .....	67
Transmission Lines.....	67
Water Master Plan.....	68
Impact Fee Study .....	68
Maximum Supportable Water Impact Fee.....	69
<b>Appendix.....</b>	<b>70</b>
Population and Housing Characteristics .....	70
Current Housing Units.....	71
Current Population Estimate .....	71
Residential Development Projections .....	72
Nonresidential Development Estimates and Projections .....	73
Nonresidential Floor Area .....	73
Employment and Floor Area Estimates .....	74
Nonresidential Development Projections.....	74
Average Daily Vehicle Trips .....	76



Trip Rate Adjustments .....	76
Adjustment for Journey-To-Work Commuting.....	76
Adjustment for Pass-By Trips .....	77
Estimated Vehicle Trips .....	78
<b>Functional Population.....</b>	<b>79</b>
<b>Development Projections.....</b>	<b>80</b>

## EXECUTIVE SUMMARY

The City of Lemoore retained TischlerBise to analyze the impacts of development on the city's capital facilities and to calculate impact fees based on that analysis. Through interviews and discussions with city staff, and a work session with the City Council, TischlerBise developed the proposed impact fees discussed in this study.

Impact fees are collected from new construction and used to construct system improvements needed to accommodate new development. An impact fee represents new growth's proportionate share of capital facility needs. Impact fees do have limitations and should not be regarded as the total solution for infrastructure funding. Rather, they are one component of a comprehensive funding strategy to ensure provision of adequate public facilities. Impact fees may only be used for capital improvements or debt service for growth-related infrastructure. In contrast to general taxes, impact fees may not be used for operations, maintenance, replacement of infrastructure, or correcting existing deficiencies.

This report documents the data, methodology, and results of the impact fee study. It is the City of Lemoore's intent to impose impact fees to fund expenditures on capital facilities needed to serve new development. The proposed fees will be adopted at a level no greater than necessary to defray impacts directly related to, and generally applicable to, a broad class of property. The methods used to calculate impact fees in this study are intended to satisfy all legal requirements governing such fees, including provisions of the U. S. Constitution, the California Constitution, and the California Mitigation Fee Act (Government Code Sections 66000 *et seq.*).

## Proposed Changes

Lemoore's current impact fees include two service areas: 1) East Side and 2) West Side. TischlerBise recommends a single, citywide service area. Current impact fees include the following thirteen infrastructure categories: 1) Community / Rec Facility, 2) Fire, 3) General Municipal Facilities, 4) Law Enforcement, 5) Park Land Acquisition, 6) Park Improvements, 7) Refuse Vehicle & Containers, 8) Storm Drainage, 9) Streets and Thoroughfares, 10) Wastewater Treatment / Disposal, 11) Wastewater Collection, 12) Water Supply / Holding, and 13) Water Distribution. Through interviews and meetings with city staff and elected officials, TischlerBise recommends reducing the number of infrastructure categories from thirteen to ten. A comparison of the proposed impact fee categories to the current impact fee categories is shown to the right of this paragraph.

<b>Proposed Fee Categories</b>	<b>Current Fee Categories</b>
Community / Rec Facility	Community / Rec Facility
Fire	Fire
General Municipal Facilities	General Municipal Facilities
Law Enforcement	Law Enforcement
Parks	Park Improvements Park Land Acquisition
Refuse Vehicle & Containers	Refuse Vehicle & Containers
Storm Drainage	Storm Drainage
Streets and Thoroughfares	Streets and Thoroughfares
Wastewater	Wastewater Collection Wastewater Treatment / Disposal
Water	Water Distribution Water Supply / Holding



For nonresidential development, current fees are assessed per acre according to six land use types. The proposed fee schedule for nonresidential development is designed to simplify the administration of nonresidential fees. Proposed nonresidential fees are assessed per 1,000 square feet of floor area for the following three land use types: 1) Industrial, 2) Retail / Restaurant, and 3) Office / Institutional. Figure 1 below includes a comparison of the proposed nonresidential land use types to the current nonresidential land use types.

**Figure 1: Proposed Changes for Nonresidential Land Use Types**

<i>Proposed Land Use Types</i>	<i>Current Land Use Types</i>
Industrial	Industrial
Retail / Restaurant	Neighborhood Commercial Regional Commercial
Office / Institutional	Parks / Open Space Professional Office Public / Institutional

## Development and Demand Data

Both existing and planned development must be addressed as part of the nexus analysis required to support the establishment of impact fees. Land use data included in this study are based on information obtained from the City of Lemoore and the California Department of Finance. Demographic data used in this study are based on information obtained from the 2010 U.S. Census, 2014 American Community Survey 5-Year Estimates, Institute of Transportation Engineers, and the California Department of Transportation. These estimates and projections are discussed further in the Appendix.

## Study Area and Time Frame

The study area for the impact fee analysis is the existing city. Data on future development used in this study represent the amount of additional development expected in the study area through 2031. The impact fees calculated in this study are based on the amount and type of projected development, and the fees are calculated in terms of current dollars. Development may occur sooner or later than projected, but the rate and timing of development will only affect the fee calculations in rare cases where fee revenue will be used to repay debt issued to fund capital facilities. If this situation arises in the study, it will be discussed in the fee analysis for a particular type of facility.

## Proposed Fee Methods and Cost Components

Figure 2 summarizes the methods and cost components used for each infrastructure category in Lemoore's impact fee study. After consideration of input during work sessions and public hearings, the City Council may change the proposed impact fees by eliminating infrastructure types, cost components, and/or specific capital improvements. If changes are made during the adoption process, TischlerBise will update the fee study to be consistent with legislative decisions.

**Figure 2: Proposed Fee Methods and Cost Components**

<i>Fee Type</i>	<i>Service Area</i>	<i>Cost Recovery</i>	<i>Incremental Expansion</i>	<i>Plan-Based</i>	<i>Cost Allocation</i>
Community / Rec Facility	Citywide	N/A	Facility	N/A	Population
Fire	Citywide	N/A	Stations, Apparatus	N/A	Population, Jobs
General Municipal Facilities	Citywide	N/A	Facilities, Equipment	N/A	Population, Jobs
Law Enforcement	Citywide	N/A	Facilities, Vehicles	N/A	Population, Nonresidential Trips
Parks	Citywide	N/A	Land, Improvements	N/A	Population
Refuse Vehicle & Containers	Citywide	N/A	Vehicles, Containers	N/A	Pickups
Storm Drainage	Citywide	N/A	N/A	System Improvements, Master Plan	Acres of Impervious Development
Streets and Thoroughfares	Citywide	N/A	Arterials, Traffic Signals	Interchange, Master Plan	Vehicle Miles of Travel (VMT)
Wastewater	Citywide	N/A	Treatment Plant Upgrade	Collection, Master Plan	Gallons
Water	Citywide	N/A	N/A	Wells, Transmission, Master Plan	Gallons



## Proposed Impact Fees

Figure 3 provides a schedule of the maximum supportable impact fees. **All fees assume a citywide service area** – a departure from the city’s current east side and west side service areas. **Impact fees for residential development are assessed per housing unit, and nonresidential impact fees are assessed per 1,000 square feet of floor area.** Current nonresidential fees are assessed per acre based on the average floor area ratio (FAR) for each land use. The city may adopt fees that are less than the amounts shown; however, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in the city’s LOS standards.

**Figure 3: Schedule of Maximum Supportable Impact Fees**

Non-Utility Fee Component	Per Unit		Per 1,000 Sq Ft		
	Single Family	Multi-Family	Industrial	Retail / Restaurant	Office / Institutional
Community / Rec Facility	\$431	\$327			
Fire	\$820	\$622	\$471	\$526	\$873
General Municipal Facilities	\$664	\$504	\$541	\$605	\$1,004
Law Enforcement	\$804	\$610	\$300	\$2,212	\$866
Parks	\$1,803	\$1,368			
Refuse Vehicles & Containers	\$306	Varies	Varies	Varies	Varies
Storm Drainage	\$730	\$574	\$727	\$773	\$727
Streets and Thoroughfares	\$4,897	\$3,589	\$979	\$6,550	\$2,828
<b>Proposed Non-Utility Total</b>	<b>\$10,455</b>	<b>\$7,594</b>	<b>\$3,018</b>	<b>\$10,666</b>	<b>\$6,298</b>
Current Fee	\$10,415	\$7,625	\$2,590	\$7,682	\$3,946
Difference	\$40	<b>-\$31</b>	\$428	\$2,984	\$2,352

Utility Fee Component (up to 1.5" meter)	Per Connection				
	Single Family	Multi-Family	Industrial	Retail / Restaurant	Office / Institutional
Wastewater	\$2,525	\$1,855	\$2,525	\$2,525	\$2,525
Water	\$871	\$631	\$871	\$871	\$871
<b>Proposed Utility Total</b>	<b>\$3,396</b>	<b>\$2,486</b>	<b>\$3,396</b>	<b>\$3,396</b>	<b>\$3,396</b>
Current Fee	\$3,296	\$2,164	\$11,536	\$11,536	\$11,536
Difference	\$100	\$322	<b>-\$8,140</b>	<b>-\$8,140</b>	<b>-\$8,140</b>

All costs in the impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the recommended annual evaluation and update of impact fees. One approach is to adjust for inflation in construction costs by means of an index like the one published by Engineering News Record (ENR). This index can be applied against the calculated development impact fees. If cost estimates change significantly, the fees should be recalculated.

## GENERAL LEGAL FRAMEWORK

### U. S. Constitution

Like all land use regulations, development exactions, including development impact fees, are subject to the Fifth Amendment prohibition on taking of private property for public use without just compensation. Both state and federal courts have recognized the imposition of impact fees on development as a legitimate form of land use regulation, provided the fees meet standards intended to protect against regulatory takings. To comply with the Fifth Amendment, development regulations must be shown to substantially advance a legitimate governmental interest. In the case of development impact fees, that interest is in the protection of public health, safety, and welfare by ensuring that development is not detrimental to the quality of essential public services.

There is little federal case law specifically dealing with development impact fees, although other rulings on other types of exactions (e.g. land dedication requirements) are relevant. In one of the most important exaction cases, the U. S. Supreme Court found that a government agency imposing exactions on development must demonstrate an "essential nexus" between the exaction and the interest being protected (See *Nollan v. California Coastal Commission*, 1987). In a more recent case (*Dolan v. City of Tigard, OR*, 1994), the Court ruled that an exaction also must be "roughly proportional" to the burden created by development. However, the *Dolan* decision appeared to set a higher standard of review for mandatory dedications of land than for monetary exactions such as development impact fees. Constitutional issues related to development impact fees will be discussed in more detail below.

### California Constitution

The California Constitution grants broad police power to local governments, including the authority to regulate land use and development. That police power is the source of authority for a wide range of regulations, including the authority to impose development impact fees on development to pay for infrastructure and capital facilities. Some development impact fees have been challenged on grounds that they are special taxes imposed without voter approval in violation of Article XIII A, which was added by Proposition 13 in 1978. That objection is valid only if the fees exceed the cost of providing capital facilities needed to serve new development. If that were the case, then the fees would also run afoul of the U. S. Constitution and the Mitigation Fee Act. Articles XIII C and XIII D, added by Proposition 218 in 1996, require voter approval for some "property-related fees," but exempt "the imposition of fees or charges as a condition of property development."

### The Mitigation Fee Act

California's development impact fee statute originated in Assembly Bill 1600 during the 1987 session of the Legislature, and took effect in January of 1989. AB 1600 added several sections to the Government Code, beginning with Section 66000. Since that time the development impact fee statute has been amended from time to time, and in 1997 was officially titled the "Mitigation Fee Act." Unless otherwise noted, code sections referenced in this report are from the Government Code.



The Act does not limit the types of capital improvements for which development impact fees may be charged. It defines public facilities very broadly to include "public improvements, public services and community amenities." Although the issue is not specifically addressed in the Mitigation Fee Act, other provisions of the Government Code (see Section 65913.8) prohibit the use of development impact fees for maintenance or operating costs. Consequently, the fees calculated in this report are based on capital costs only.

The Mitigation Fee Act does not use the term "mitigation fee" except in its official title. Nor does it use the more common term "impact fee." The Act simply uses the word "fee," which is defined as "a monetary exaction, other than a tax or special assessment, ... that is charged by a local agency to the applicant in connection with approval of a development project for the purpose of defraying all or a portion of the cost of public facilities related to the development project ...." To avoid confusion with other types of fees, this report uses the widely-accepted term "impact fee," which should be understood to mean "fee" as defined in the Mitigation Fee Act.

The Mitigation Fee Act contains requirements for establishing, increasing and imposing development impact fees. They are summarized below. It also contains provisions that govern the collection and expenditure of fees, and require annual reports and periodic re-evaluation of development impact fee programs. Those administrative requirements are discussed in the Implementation Chapter of this report. Certain fees or charges related to development are exempted from the requirements of the Mitigation Fee Act. Among them are fees in lieu of park land dedication as authorized by the Quimby Act (Section 66477), fees collected pursuant to a reimbursement agreement or developer agreement, and fees for processing development applications.

## Required Findings

---

Section 66001 requires that an agency establishing, increasing or imposing development impact fees, must make findings to:

1. Identify the purpose of the fee;
2. Identify the use of the fee; and,
3. Determine that there is a reasonable relationship between:
  - a. The use of the fee and the development type on which it is imposed;
  - b. The need for the facility and the type of development on which the fee is imposed; and
  - c. The amount of the fee and the facility cost attributable to the development project  
(Applies only upon imposition of fees).

Each of those requirements is discussed in more detail below.

### Identifying the Purpose of the Fees

The broad purpose of development impact fees is to protect the public health, safety, and general welfare by providing for adequate public facilities. The specific purpose of the fees calculated in this study is to fund the construction and/or purchase of certain capital improvements identified in this report. Those improvements are needed to mitigate the impacts of additional development in the city,

and thereby prevent deterioration in public services that would result from additional development if development impact fee revenues were not available to fund such improvements. Findings with respect to the purpose of a fee should state the purpose of the fees as financing development-related public facilities in a broad category, such as street improvements or water supply system improvements.

### **Identifying the Use of the Fees**

According to Section 66001, if a fee is used to finance public facilities, those facilities must be identified. A capital improvement plan may be used for that purpose, but is not mandatory if the facilities are identified in the General Plan, a Specific Plan, *or in other public documents*. If a capital improvement plan is used to identify the use of the fees, it must be updated annually by resolution of the governing body at a noticed public hearing. Development impact fees calculated in this study are based on specific capital facilities identified in this report. We recommend that this report be designated as the public document identifying the use of the fees.

### **Reasonable Relationship Requirement**

As discussed above, Section 66001 requires that, for fees subject to its provisions, a "reasonable relationship" must be demonstrated between:

1. The use of the fee and the type of development on which it is imposed;
2. The need for a public facility and the type of development on which a fee is imposed; and,
3. The amount of the fee and the facility cost attributable to the development on which the fee is imposed.

These three reasonable relationship requirements, as defined in the statute, are closely related to "rational nexus" or "reasonable relationship" requirements enunciated by a number of state courts. Although the term "dual rational nexus" is often used to characterize the standard by which courts evaluate the validity of development impact fees under the U. S. Constitution, we prefer a formulation that recognizes three elements: "impact or need" "benefit," and "proportionality." The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case.

The reasonable relationship language of the statute is considered less strict than the rational nexus standard used by many courts. Of course, the higher standard controls. We will use the nexus terminology in this report for two reasons: because it is more concise and descriptive, and also to signify that the methods used to calculate impact fees in this study are intended to satisfy the more demanding constitutional standard. Individual elements of the nexus standard are discussed further in the following paragraphs.

### **Demonstrating an Impact**

All new development in a community creates additional demands on some, or all, public facilities provided by local government. If the supply of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Impact fees may be used to recover the cost of development-related facilities, but only to the extent that the



need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to impact fees. In this study, the impact of development on improvement needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards. This report contains all information needed to demonstrate this element of the nexus.

### **Demonstrating a Benefit**

A sufficient benefit relationship requires that impact fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. Nothing in the U.S. Constitution or California law requires that facilities paid for with impact fee revenues be available *exclusively* to development paying the fees.

Procedures for earmarking and expenditure of fee revenues are mandated by the Mitigation Fees Act, as are procedures to ensure that the fees are expended expeditiously or refunded. All of those requirements are intended to ensure that developments benefit from the impact fees they are required to pay. Thus, an adequate showing of benefit must address procedural as well as substantive issues.

### **Demonstrating Proportionality**

The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the *Dolan* case (although the relevance of that decision to impact fees has been debated) and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate impact fees for various types of facilities and categories of development. In this study, the demand for facilities is measured in terms of relevant and measurable attributes of development. For example, the number of vehicle trips generated by development measures the need for road improvements.

In calculating development impact fees, costs for development-related facilities are allocated in proportion to the service needs created by different types and quantities of development. The following section describes methods used to allocate facility costs and calculate impact fees in ways that meet the proportionality standard.

### **Development Impact Fees for Existing Facilities**

It is important to note that development impact fees may be used to pay for existing facilities, provided that those facilities are needed to serve additional development and have the capacity to do so. In other words, such fees must satisfy the same nexus requirements as any other development impact fee.



## CONCEPTUAL IMPACT FEE CALCULATION

Reduced to its simplest terms, the process of calculating impact fees involves only two steps: determining the cost of development-related capital improvements and allocating those costs equitably to various types of development. In practice, though, the calculation of impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities. The following paragraphs discuss three basic methods for calculating impact fees and how those methods can be applied (see Figure 2).

### Cost Recovery Method

---

The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new development will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.

### Incremental Expansion Method

---

The incremental expansion method documents current level-of-service (LOS) standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for infrastructure that will be expanded in regular increments to keep pace with development.

### Plan-Based Method

---

The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: 1) total cost of a public facility can be divided by total demand units (average cost), or 2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost).

### Credits

---

Regardless of the methodology, a consideration of “credits” is integral to the development of a legally defensible impact fee methodology. There are two types of credits with specific characteristics. The first is a revenue credit due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the impact fee. This type of credit is integrated into the impact fee calculation, thus reducing the fee amount. The second is a site-specific credit or developer reimbursement for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the impact fee program.

## COMMUNITY / REC FACILITY

### Methodology

The Community / Rec Facility impact fees use an incremental expansion methodology. Cost components are allocated 100 percent to residential development and include improved recreation center square footage. This methodology will enable Lemoore to maintain the current LOS standard as the city grows. Impact fee revenue collected using this methodology may not be used to replace or rehabilitate existing improvements.

### Improvements

#### Current Level of Service

As shown in Figure 1, Lemoore's current inventory of recreation center includes 41,066 improved square feet. The current level of service is based on the 2016 population of 25,964 with improved square feet allocated per 1,000 persons. Therefore, the current level of service for recreation center improvements is 1,581.65 improved square feet per 1,000 persons (41,066 improved square feet / [25,964 population / 1,000]). With a replacement cost of \$3,670,150, the cost per square foot is \$89.37 (\$3,670,150 replacement cost / 41,066 improved square feet).

Figure 4: Recreation Center Improvements

Improvements	Square Feet	Replacement Cost
Soccer Facility	5,700	\$137,000
Storage	3,462	\$251,125
Playground	990	\$188,825
Dance Studio	2,600	\$348,425
Bathrooms	690	\$181,600
Kitchen	690	\$291,600
Day Camp	1,970	\$499,625
Pal Room	2,295	\$338,450
CrossFit Space	4,028	\$717,500
Gun Range	11,000	\$665,000
Boxing Ring	560	\$6,000
Gymnastics Area	1,681	\$5,000
Basketball Courts	5,400	\$40,000
<b>Total</b>	<b>41,066</b>	<b>\$3,670,150</b>

Level-of-Service (LOS) Standards	
Square Feet of Improvements	41,066
2016 Lemoore Population	25,964
<b>Current LOS: Square Feet per 1,000 Persons</b>	<b>1,581.65</b>

Cost Analysis	
Total Value of Rec. Center Improvements	\$3,670,150
Cost per Square Foot	\$89.37

Source: City of Lemoore, California.

## Projected Demand

Shown in Figure 5, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. When applied to the current LOS, new development will demand 6,736 additional square feet of recreation center improvements over the next ten years (1,581.65 square feet per 1,000 persons X 4,259 population increase / 1,000 = 6,736 square feet). With a cost of \$89.37 per square foot, the growth-related expenditure on recreation center improvements is \$601,996 (6,736 square feet X \$89.37 per square foot). The cost per person to construct recreation center improvements is \$141.35 (6,736 square feet X \$89.37 per square foot / 4,259 population increase).

**Figure 5: Projected Demand for Recreation Center Improvements**

<i>Type of Infrastructure</i>		<i>Level of Service</i>	<i>Demand Unit</i>	<i>Unit Cost</i>
Recreation Center		1,581.65 sq ft	per 1,000 persons	\$89.37

<i>Recreation Center Infrastructure Needed</i>			
	<i>Year</i>	<i>Population</i>	<i>Square Feet</i>
Base	2016	25,964	41,066
1	2017	26,395	41,748
2	2018	26,826	42,429
3	2019	27,257	43,111
4	2020	27,688	43,792
5	2021	28,114	44,466
6	2022	28,540	45,140
7	2023	28,966	45,814
8	2024	29,392	46,487
9	2025	29,819	47,163
10	2026	30,223	47,802
<i>Ten-Yr Increase</i>		4,259	6,736
<i>Projected Expenditure</i>			\$601,996
<i>Cost Allocation</i>			<i>per Person</i>
			\$141.35
<i>Growth-Related Expenditure on Rec. Center Improvements</i>			\$601,996



## Impact Fee Study

Also included in the Community / Rec Facility fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 6, the Community / Rec Facility share of the study is \$7,000. This cost is allocated to new development over the next five years based on population. The cost per person is \$3.26 (\$7,000 study expense / 2,150 population increase).

Figure 6: Impact Fee Study Expense

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential	100%	VMT	425,592	460,750	35,158	\$0.31
		Nonresidential						
Wastewater	\$11,000	Residential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
		Nonresidential						
Water	\$11,000	Residential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
		Nonresidential						
TOTAL	\$75,000							

## Maximum Supportable Community / Rec Facility Impact Fee

Figure 7 provides a summary of the costs per demand unit used to calculate the Community / Rec Facility impact fees. As previously discussed, Community / Rec Facility impact fees are calculated for residential land uses. As shown below, the total cost per person is \$144.61. The proposed fee for a single-family unit is \$431 (\$144.61 per person X 2.98 persons per housing unit) and represents a decrease of \$428 compared to the current fee.

**Figure 7: Community / Rec Facility Impact Fee Schedule**

<i>Fee Component</i>	<i>Cost per Person</i>
Recreation Center	\$141.35
Impact Fee Study	\$3.26
<b>TOTAL</b>	<b>\$144.61</b>

### *Residential (per unit)*

<i>Development Type</i>	<i>Persons per Housing Unit<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Single Family	2.98	<b>\$431</b>	\$859	<b>-\$428</b>
Multi-Unit	2.26	<b>\$327</b>	\$686	<b>-\$359</b>

1. See Figure A1.

## Projected Fee Revenue

Finally, the impact fees shown in Figure 7 can be applied to projected development (see Appendix) to estimate potential revenue generated by those fees. Community / Rec Facility impact fee revenue from future development is expected to total approximately \$608,000 over the next ten years. Over the same time period, the city will spend approximately \$609,000 on growth-related Community / Rec Facility infrastructure.

**Figure 8: Community / Rec Facility Impact Fee Revenue Projection**

### *Community / Rec Facility Infrastructure Cost*

	<b>Growth Cost</b>	<b>Total Cost</b>
Recreation Center	\$601,996	\$601,996
Impact Fee Study	\$7,000	\$7,000
	<b>\$608,996</b>	<b>\$608,996</b>

### *Projected Community / Rec Facility Impact Fee Revenue*

		<b>Residential \$403 per housing unit</b>
<b>Year</b>	<b>Hsg Units</b>	
Base 2016	9,328	
Year 1 2017	9,482	
Year 2 2018	9,636	
Year 3 2019	9,790	
Year 4 2020	9,944	
Year 5 2021	10,097	
Year 6 2022	10,250	
Year 7 2023	10,403	
Year 8 2024	10,556	
Year 9 2025	10,709	
Year 10 2026	10,854	
<i>Ten-Yr Increase</i>		1,526
<b>Total Projected Revenues =&gt;</b>		<b>\$608,093</b>



## FIRE

### Methodology

The Fire impact fees are calculated using an incremental expansion methodology based on demand units. A demand unit represents the impact of a typical development on the demand for services, based on the assumption that the demand for services is reasonably proportional to the presence of people at the site of a land use. The residential component of the demand unit calculation is based on housing unit size (persons per housing unit). For nonresidential development, the demand unit calculation uses jobs per 1,000 square feet of floor area. See the Appendix of this report for the calculation of demand units.

To allocate demand and cost proportionately, Fire impact fees use 2016 fire calls for service – provided by Lemoore’s Fire Department. Shown below in Figure 9, residential development accounts for 83 percent of demand for fire services. Nonresidential development generates the remaining 17 percent of fire calls. Cost components include fire facilities and fire apparatus.

**Figure 9: 2016 Fire Calls for Service**

Land Use Type	Calls	Proportionate Share
Residential	965	83%
Nonresidential	198	17%
<b>Total</b>	<b>1,163</b>	<b>100%</b>

*Source: FY2016 calls for service by land use type, City of Lemoore.*

## Facilities

### Current Level of Service

The Fire impact fee methodology contains a cost component for facilities operated by Lemoore. Since facilities will be constructed over time, an incremental expansion method is utilized. As shown in Figure 10, the city's inventory currently includes 12,614 square feet of fire facilities with a replacement cost of \$500 per square foot (\$6,307,000 replacement cost / 12,614 square feet).

The current level of service is based on 2016 calls for service and demand units – a population of 25,964 for residential development and 5,118 jobs for nonresidential development. Therefore, the current residential level of service is 0.403 square feet per person (12,614 square feet X 83 percent residential share / 25,964 persons) and the nonresidential level of service equals 0.419 square feet per job (12,614 square feet X 17 percent nonresidential share / 5,118 jobs). As the city grows, new development will require approximately 403 square feet of fire facilities for every 1,000 new residents and approximately 419 square feet of fire facilities for every 1,000 new jobs.

Figure 10: Existing Fire Facilities and Cost Factors

Facility	Square Feet	Replacement Cost
Fox Street Fire Station	7,140	\$3,570,000
North Side Fire Station	5,474	\$2,737,000
<b>TOTAL</b>	<b>12,614</b>	<b>\$6,307,000</b>

Cost per Sq Ft	\$500
----------------	-------

Land Use Type	Proportionate Share	2016 Demand Units	Sq Ft per Demand Unit
Residential	83%	25,964 Population	0.403
Nonresidential	17%	5,118 Jobs	0.419

Source: City of Lemoore, California.

## Projected Demand

Shown in Figure 11, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. Similarly, jobs are also projected to total 5,678 jobs in 2026 - an increase of 560 jobs. When applied to the current LOS, new development will demand 1,952 additional square feet of fire facilities  $((0.403 \text{ square feet per person} \times 4,259 \text{ population increase}) + (0.419 \text{ square feet per job} \times 560 \text{ job increase}))$ . With a replacement cost of \$500 per square foot, the growth-related expenditure on fire facilities is \$976,000  $(1,952 \text{ square feet} \times \$500 \text{ per square foot})$ . The cost per person is \$201.58  $(1,717 \text{ square feet} \times \$500 \text{ per square foot} / 4,259 \text{ population increase})$ , and the cost per job is \$209.82  $(235 \text{ square feet} \times \$500 \text{ per square foot} / 560 \text{ job increase})$ .

Figure 11: Projected Demand for Fire Facilities

Type of Infrastructure		Level of Service		Demand Unit	Unit Cost
Fire Facilities	Residential	0.403	Square Feet	per Person	\$500
	Nonresidential	0.419		per Job	

Need for Fire Facilities						
	Year	Population	Jobs	Square Feet Residential	Square Feet Nonresidential	Total
Base	2016	25,964	5,118	10,470	2,144	12,614
Year 1	2017	26,395	5,174	10,643	2,168	12,811
Year 2	2018	26,826	5,230	10,817	2,191	13,009
Year 3	2019	27,257	5,286	10,991	2,215	13,206
Year 4	2020	27,688	5,342	11,165	2,238	13,403
Year 5	2021	28,114	5,398	11,336	2,262	13,598
Year 6	2022	28,540	5,454	11,508	2,285	13,793
Year 7	2023	28,966	5,510	11,680	2,309	13,989
Year 8	2024	29,392	5,566	11,852	2,332	14,184
Year 9	2025	29,819	5,622	12,024	2,356	14,380
Year 10	2026	30,223	5,678	12,187	2,379	14,566
Ten-Yr Increase		4,259	560	1,717	235	1,952
Projected Expenditure				\$858,500	\$117,500	\$976,000
Cost Allocation				per Person	per Job	
				\$201.58	\$209.82	
Growth-Related Expenditure on Fire Facilities						\$976,000



## Apparatus

### Current Level of Service

The Fire impact fee methodology contains a cost component for apparatus operated by Lemoore. Since apparatus will be purchased over time, an incremental expansion method is utilized. As shown in Figure 12, the city's inventory currently includes 8 apparatus with a replacement cost of \$274,345 per apparatus.

The current level of service is based on the functional population and the 2016 demand units – population (25,964) for residential development and jobs (5,118) for nonresidential development. Therefore, the current residential level of service is 0.00026 apparatus per person (8 apparatus X 83 percent residential share / [25,964 population / 1,000 persons]), and the nonresidential level of service equals 0.00027 apparatus per job (8 apparatus X 17 percent nonresidential share / [5,118 jobs / 1,000 jobs]). As the city grows, new development will require approximately 0.26 apparatus for every 1,000 new residents and approximately 0.27 apparatus for every 1,000 new jobs.

**Figure 12: Existing Fire Apparatus and Cost Factors**

Fire Apparatus	Units	Replacement Cost (per Unit)	Total Replacement Cost
Grass Fire Truck	1	\$39,578	\$39,578
Pumper	2	\$276,733	\$553,465
Pumper / Ladder	2	\$498,583	\$997,165
Rescue / Ambulance	1	\$144,293	\$144,293
Ladder	1	\$424,000	\$424,000
Rehabilitation Truck	1	\$36,261	\$36,261
<b>TOTAL</b>	<b>8</b>		<b>\$2,194,761</b>
		<b>Cost Per Unit</b>	<b>\$274,345</b>

Land Use Type	Proportionate Share	2016 Demand Units	Apparatus per Demand Unit
Residential	83%	25,964 Population	0.00026
Nonresidential	17%	5,118 Jobs	0.00027

Source: City of Lemoore, California.

## Projected Demand

Shown in Figure 13, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. Similarly, 2026 projections include 6,476 jobs – an increase of 560 jobs. When applied to the current LOS, new development will demand 1.2 additional fire apparatus over the next ten years  $((0.00026 \text{ apparatus per person} \times 4,259 \text{ population increase}) + (0.00027 \text{ apparatus per job} \times 560 \text{ job increase}))$ . With a cost per apparatus of \$274,345, the growth-related expenditure on fire apparatus is \$329,215  $(1.2 \text{ apparatus} \times \$274,345 \text{ per apparatus})$ . The cost per person is \$70.86  $(1.1 \text{ apparatus} \times \$274,345 \text{ per apparatus} / 4,259 \text{ population increase})$ , and the cost per job is \$48.99  $(0.1 \text{ apparatus} \times \$274,345 \text{ per apparatus} / 560 \text{ job increase})$ .

Figure 13: Projected Demand for Fire Apparatus

Type of Infrastructure		Level of Service		Demand Unit		Unit Cost
Fire Apparatus	Residential	0.00026	Units	per Person		\$274,345
	Nonresidential	0.00027		per Job		

Need for Fire Apparatus						
	Year	Population	Jobs	Units Residential	Units Nonresidential	Total
Base	2016	25,964	5,118	6.6	1.4	8.0
Year 1	2017	26,395	5,174	6.8	1.4	8.1
Year 2	2018	26,826	5,230	6.9	1.4	8.3
Year 3	2019	27,257	5,286	7.0	1.4	8.4
Year 4	2020	27,688	5,342	7.1	1.4	8.5
Year 5	2021	28,114	5,398	7.2	1.4	8.6
Year 6	2022	28,540	5,454	7.3	1.4	8.7
Year 7	2023	28,966	5,510	7.4	1.5	8.9
Year 8	2024	29,392	5,566	7.5	1.5	9.0
Year 9	2025	29,819	5,622	7.6	1.5	9.1
Year 10	2026	30,223	5,678	7.7	1.5	9.2
Ten-Yr Increase		4,259	560	1.1	0.1	1.2
Projected Expenditure				\$301,780	\$27,435	\$329,215
Cost Allocation				per Person	per Job	
				\$70.86	\$48.99	
Growth-Related Expenditure on Fire Apparatus						\$329,215



## Impact Fee Study

Also included in the Fire impact fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 14, the fire share of the study is \$7,000. This cost is allocated to new development over the next five years based on functional population. The residential cost per person is \$2.70 (\$7,000 fire study expense X 83 percent residential share / 2,150 population increase), and the nonresidential cost per job is \$4.25 (\$7,000 fire study expense X 17 percent nonresidential share / 280 job increase).

**Figure 14: Impact Fee Study Expense**

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential	100%	VMT	425,592	460,750	35,158	\$0.31
		Nonresidential						
Wastewater	\$11,000	Residential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
		Nonresidential						
Water	\$11,000	Residential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
		Nonresidential						

TOTAL \$75,000

## Maximum Supportable Fire Impact Fee

Figure 15 provides a summary of costs per demand unit used to calculate the Fire impact fees. As discussed previously, fees are calculated for both residential and nonresidential land uses. As shown below, the total cost per residential demand unit is \$275.14 per person, and the total cost per nonresidential demand unit is \$263.06 per job. The proposed fee for a single-family unit is \$820 (\$275.14 per person X 2.98 persons per housing unit). Similarly, the cost per 1,000 square feet of industrial development is \$471 (\$263.06 per job X 1.79 jobs per 1,000 square feet).

**Figure 15: Fire Impact Fee Schedule**

<i>Fee Component</i>	<i>Cost per Person</i>	<i>Cost per Job</i>
Fire Facilities	\$201.58	\$209.82
Fire Apparatus	\$70.86	\$48.99
Impact Fee Study	\$2.70	\$4.25
<b>TOTAL</b>	<b>\$275.14</b>	<b>\$263.06</b>

### *Residential (per unit)*

<i>Development Type</i>	<i>Persons per Housing Unit<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Single Family	2.98	\$820	\$800	\$20
Multi-Unit	2.26	\$622	\$638	-\$16

1. See Figure A1.

### *Nonresidential (per 1,000 square feet)*

<i>Development Type</i>	<i>Jobs per 1,000 Sq Ft<sup>2</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Industrial	1.79	\$471	\$249	\$222
Retail / Restaurant	2.00	\$526	\$318	\$208
Office / Institutional	3.32	\$873	\$438	\$435

2. See Figure A6.



## Projected Fee Revenue

Finally, the Fire impact fees shown in Figure 15 can be applied to projected development (see Appendix) to estimate potential revenue generated by those fees. Fire impact fee revenue is expected to total approximately \$1.31 million over the next ten years. Over the same time-period, Lemoore will spend approximately \$1.31 million on growth-related fire facilities and apparatus.

**Figure 16: Fire Impact Fee Revenue Projection**

### Fire Infrastructure Cost

	Growth Cost	Total Cost
Fire Facilities	\$976,000	\$976,000
Fire Apparatus	\$329,215	\$329,215
Impact Fee Study	\$7,000	\$7,000
	\$1,312,215	\$1,312,215

### Projected Fire Impact Fee Revenue

		Residential \$762 per housing unit	Industrial \$471 per KSF	Retail / Restaurant \$526 per KSF	Office / Institutional \$873 per KSF
Year		Hsg Units	KSF	KSF	KSF
Base	2016	9,328	1,320	441	563
Year 1	2017	9,482	1,328	452	569
Year 2	2018	9,636	1,336	463	575
Year 3	2019	9,790	1,344	474	581
Year 4	2020	9,944	1,352	485	587
Year 5	2021	10,097	1,360	496	593
Year 6	2022	10,250	1,368	507	599
Year 7	2023	10,403	1,376	518	605
Year 8	2024	10,556	1,384	529	611
Year 9	2025	10,709	1,392	540	617
Year 10	2026	10,854	1,400	551	623
Ten-Yr Increase		1,526	80	110	60
Projected Revenue =>		\$1,162,701	\$37,366	\$57,406	\$51,978
Total Projected Revenues =>					<u>\$1,309,451</u>

## GENERAL MUNICIPAL FACILITIES

### Methodology

The General Municipal Facilities impact fees are calculated using an incremental expansion methodology. A demand unit represents the impact of a typical development on the demand for services, based on the assumption that the demand for services is reasonably proportional to the presence of people at the site of a land use. The residential component of the demand unit calculation is based on housing unit size (persons per housing unit). For nonresidential development, the demand unit calculation is jobs per 1,000 square feet. See the Appendix of this report for the calculation of demand units.

### Facilities

#### Current Level of Service

The General Municipal Facilities impact fee methodology contains a cost component for facilities operated by Lemoore. Since additional facilities will be constructed over time, an incremental expansion method is utilized. As shown in Figure 17, the city's inventory currently includes 39,706 square feet of municipal facilities with a replacement cost of \$175 per square foot (\$6,948,550 replacement cost / 39,706 square feet).

The current level of service is based on the functional population and 2016 demand units – population (25,964) for residential development and jobs (5,118) for nonresidential development. Therefore, the current residential level of service is 1.208 square feet per person (39,706 square feet X 79 percent residential share / 25,964 population), and the nonresidential level of service equals 1.629 square feet per job (39,706 square feet X 21 percent nonresidential share / 5,118 jobs).

**Figure 17: Existing Municipal Facilities and Cost Factors**

Site	Square Feet	Replacement Cost
City Hall	10,528	\$1,842,400
Council Chambers	4,710	\$824,250
Civic Auditorium	6,092	\$1,066,100
Cinnamon Municipal Complex Offices	8,880	\$1,554,000
Veterans Memorial Hall	5,624	\$984,200
Planning Department & Upstairs Offices	3,872	\$677,600
<b>TOTAL</b>	<b>39,706</b>	<b>\$6,948,550</b>

<b>Average Cost per Sq. Ft.</b>	<b>\$175</b>
---------------------------------	--------------

Land Use Type	Proportionate Share	2016 Demand Units	Sq Ft per Demand Unit
Residential	79%	25,964 Population	1.208
Nonresidential	21%	5,118 Jobs	1.629

Source: City of Lemoore, California.

## Projected Demand

Shown in Figure 18, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. Similarly, jobs are also projected to increase to 5,678 jobs in 2026 – an increase of 560 jobs. When applied to the current LOS, new development will demand 6,058 additional square feet of municipal facilities over the next ten years ((1.208 square feet per person X 4,259 population increase) + (1.629 square feet per job X 560 job increase)). With a replacement cost of \$175 per square foot, the growth-related expenditure on municipal facilities is \$1,060,150 (6,058 square feet X \$175 per square foot). The cost per person is \$211.41 (5,145 square feet X \$175 per square foot / 4,259 population increase), and the cost per job is \$285.31 (913 square feet X \$175 per square foot / 560 job increase).

Figure 18: Projected Demand for Facilities

Type of Infrastructure		Level of Service		Demand Unit	Unit Cost
Facilities	Residential	1.208	Square Feet	per Person	\$175
	Nonresidential	1.629		per Job	

Need for Facilities						
	Year	Population	Jobs	Square Feet Residential	Square Feet Nonresidential	Total
Base	2016	25,964	5,118	31,368	8,338	39,706
Year 1	2017	26,395	5,174	31,888	8,429	40,318
Year 2	2018	26,826	5,230	32,409	8,521	40,930
Year 3	2019	27,257	5,286	32,930	8,612	41,542
Year 4	2020	27,688	5,342	33,450	8,703	42,153
Year 5	2021	28,114	5,398	33,965	8,794	42,759
Year 6	2022	28,540	5,454	34,480	8,886	43,365
Year 7	2023	28,966	5,510	34,994	8,977	43,971
Year 8	2024	29,392	5,566	35,509	9,068	44,577
Year 9	2025	29,819	5,622	36,025	9,159	45,184
Year 10	2026	30,223	5,678	36,513	9,251	45,764
Ten-Yr Increase		4,259	560	5,145	913	6,058
Projected Expenditure				\$900,375	\$159,775	\$1,060,150
Cost Allocation				per Person	per Job	
				\$211.41	\$285.31	
Growth-Related Expenditure on Facilities						\$1,060,150



## Equipment

### Current Level of Service

The General Municipal Facilities impact fee methodology also contains a cost component for equipment operated by Lemoore. Since additional equipment will be purchased over time, an incremental expansion method is utilized. As shown in Figure 19, the city's inventory currently includes 31 units of equipment with a replacement cost of \$9,421 per unit.

The current level of service is based on the functional population and the 2016 demand units – population (25,964) for residential development and jobs (5,118) for nonresidential development. Therefore, the current residential level of service is 0.0009 units per person (31 units X 79 percent residential share / 25,964 population), and the nonresidential level of service equals 0.0013 units per job (31 units X 21 percent nonresidential share / 5,118 jobs).

**Figure 19: Existing Equipment and Cost Allocation**

		Equipment	
Existing Units		31	
Total Replacement Value		\$292,044	
Replacement Cost per Unit		\$9,421	
Land Use Type	Proportionate Share	2016 Demand Units	Units per Demand Unit
Residential	79%	25,964 Population	0.0009
Nonresidential	21%	5,118 Jobs	0.0013

Source: City of Lemoore, California.

## Projected Demand

Shown in Figure 20, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. Similarly, jobs are also projected to increase to 5,678 jobs in 2026 – an increase of 560 jobs. When applied to the current LOS, new development will demand 4.7 additional units over the next ten years ((0.00094 units per person X 4,259 population increase) + (0.00127 units per job X 560 job increase)). With a replacement cost of \$9,421 per unit, the growth-related expenditure on equipment is \$44,278 (4.7 units X \$9,421 per unit). The cost per person is \$8.85 (4.0 units X \$9,421 per unit / 4,259 population increase), and the cost per job is \$11.78 (0.7 units X \$9,421 per unit / 560 job increase).

**Figure 20: Projected Demand for Equipment**

Type of Infrastructure	Level of Service		Demand Unit	Unit Cost
Equipment	Residential	0.00094	per Person	\$9,421
	Nonresidential	0.00127	per Job	

Need for Equipment						
	Year	Population	Jobs	Units Residential	Units Nonresidential	Total
Base	2016	25,964	5,118	24.5	6.5	31.0
Year 1	2017	26,395	5,174	24.9	6.6	31.5
Year 2	2018	26,826	5,230	25.3	6.7	32.0
Year 3	2019	27,257	5,286	25.7	6.7	32.4
Year 4	2020	27,688	5,342	26.1	6.8	32.9
Year 5	2021	28,114	5,398	26.5	6.9	33.4
Year 6	2022	28,540	5,454	26.9	6.9	33.9
Year 7	2023	28,966	5,510	27.3	7.0	34.3
Year 8	2024	29,392	5,566	27.7	7.1	34.8
Year 9	2025	29,819	5,622	28.1	7.2	35.3
Year 10	2026	30,223	5,678	28.5	7.2	35.7
Ten-Yr Increase		4,259	560	4.0	0.7	4.7
Projected Expenditure				\$37,683	\$6,595	\$44,278
Cost Allocation				per Person	per Job	
				\$8.85	\$11.78	
Growth-Related Expenditure on Equipment						\$44,278

## Development Impact Fee Study

Also included in the General Municipal Facilities impact fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 21, the General Municipal Facilities share of the study is \$7,000. This cost is allocated to new development over the next five years based on functional population. The residential cost per person is \$2.57 (\$7,000 study expense X 79 percent residential share / 2,150 population increase), and the nonresidential cost per job is \$5.25 (\$7,000 study expense X 21 percent nonresidential share / 280 job increase).

Figure 21: Impact Fee Study Expense

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential	100%	VMT	425,592	460,750	35,158	\$0.31
		Nonresidential						
Wastewater	\$11,000	Residential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
		Nonresidential						
Water	\$11,000	Residential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
		Nonresidential						
TOTAL	\$75,000							



## Maximum Supportable General Municipal Facilities Impact Fee

Figure 22 provides a summary of costs per demand unit used to calculate the General Municipal Facilities impact fees. As discussed previously, the fees are calculated for both residential and nonresidential land uses. As shown below, the total cost per residential demand unit is \$222.83 per person, and the total cost per nonresidential demand unit is \$302.34 per job. The proposed fee for a single-family unit is \$664 (\$222.83 per person X 2.98 persons per housing unit). Similarly, the cost per 1,000 square feet of retail / restaurant development is \$605 (\$302.34 per job X 2.0 jobs per 1,000 square feet).

**Figure 22: General Municipal Facilities Impact Fee Schedule**

<i>Fee Component</i>	<i>Cost per Person</i>	<i>Cost per Job</i>
Facilities	\$211.41	\$285.31
Equipment	\$8.85	\$11.78
Impact Fee Study	\$2.57	\$5.25
<b>TOTAL</b>	<b>\$222.83</b>	<b>\$302.34</b>

### *Residential (per unit)*

<i>Development Type</i>	<i>Persons per Housing Unit<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Single Family	2.98	\$664	\$1,096	-\$432
Multi-Unit	2.26	\$504	\$874	-\$370

1. See Figure A1.

### *Nonresidential (per 1,000 square feet)*

<i>Development Type</i>	<i>Jobs per 1,000 Sq Ft<sup>2</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Industrial	1.79	\$541	\$342	\$199
Retail / Restaurant	2.00	\$605	\$435	\$170
Office / Institutional	3.32	\$1,004	\$601	\$403

2. See Figure A6.

## Projected Fee Revenue

Finally, the development impact fees shown in Figure 22 can be applied to projected development (see Appendix) to estimate potential revenue generated by those fees. General Municipal Facilities impact fee revenue is expected to total approximately \$1.1 million over the next ten years. Over the same time-period, Lemoore will spend approximately \$1.1 million on growth-related infrastructure.

**Figure 23: General Municipal Facilities Impact Fee Revenue Projection**

### General Municipal Facilities Infrastructure Cost

	Growth Cost	Total Cost
Facilities	\$1,060,150	\$1,060,150
Equipment	\$44,278	\$44,278
Impact Fee Study	\$7,000	\$7,000
	\$1,111,428	\$1,111,428

### Projected General Municipal Facilities Impact Fee Revenue

		Residential \$617 per housing unit	Industrial \$541 per KSF	Retail / Restaurant \$605 per KSF	Office / Institutional \$1,004 per KSF
Year		Hsg Units	KSF	KSF	KSF
Base	2016	9,328	1,320	441	563
Year 1	2017	9,482	1,328	452	569
Year 2	2018	9,636	1,336	463	575
Year 3	2019	9,790	1,344	474	581
Year 4	2020	9,944	1,352	485	587
Year 5	2021	10,097	1,360	496	593
Year 6	2022	10,250	1,368	507	599
Year 7	2023	10,403	1,376	518	605
Year 8	2024	10,556	1,384	529	611
Year 9	2025	10,709	1,392	540	617
Year 10	2026	10,854	1,400	551	623
Ten-Yr Increase		1,526	80	110	60
Projected Revenue =>		\$940,839	\$42,919	\$65,937	\$59,703
Total Projected Revenues =>					<u>\$1,109,399</u>

## LAW ENFORCEMENT

### Methodology

The Law Enforcement impact fees are calculated using an incremental expansion methodology. Law Enforcement impact fees are based on demand units that represent the impact of a typical development on the demand for services – based on the assumption that the demand for services is reasonably proportional to the presence of people at the site of a land use. The residential component of the demand unit calculation is based on housing unit size (persons per housing unit). For nonresidential development, the demand unit calculation is vehicle trips per 1,000 square feet. See the Appendix of this report for the calculation of demand units.

### Facilities

#### Current Level of Service

The Law Enforcement impact fee methodology contains a cost component for facilities operated by Lemoore's Police Department. Since facilities will be constructed over time, an incremental expansion method is utilized. As shown in Figure 24, the city's inventory currently includes 8,467 square feet of police facilities. The cost per square foot of \$801 is based on the planned Regional Dispatch Center.

The current level of service is based on the functional population and the 2016 demand units – population (25,964) for residential development and vehicle trips (11,840) for nonresidential development. Therefore, the current residential level of service is 0.2576 square feet per person (8,467 square feet X 79 percent residential share / 25,964 population), and the nonresidential level of service equals 0.1502 square feet per nonresidential vehicle trip (8,467 square feet X 21 percent nonresidential share / 11,840 trips). As the city grows, new development will require approximately 258 square feet of police facilities for every 1,000 new residents and approximately 150 square feet of police facilities for every 1,000 additional vehicle trips.

**Figure 24: Existing Facilities and Cost Allocation**

Facility	Square Feet
Police Station	8,467
Cost per Sq Ft	\$801

Land Use Type	Proportionate Share	2016 Demand Units	Sq Ft per Demand Unit
Residential	79%	25,964 Population	0.2576
Nonresidential	21%	11,840 Nonres. Vehicle Trips	0.1502

Source: City of Lemoore, California.



## Projected Demand

Shown in Figure 30, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. Similarly, nonresidential vehicle trips are projected to equal 13,874 trips by 2026 – an increase of 2,034 trips. When applied to the current LOS, new development will demand 1,403 additional square feet of facilities ((0.2576 square feet per person X 4,259 population increase) + (0.1502 square feet per trip X 2,034 nonresidential vehicle trip increase)). This is approximately equal to Lemoore's share – 1,100 square feet – of the 5,500-square-foot Regional Dispatch Center.

With a cost per square of \$801, the growth-related expenditure on law enforcement facilities is \$1,123,803 (1,403 square feet X \$801 per square foot). The cost per person is \$206.32 (1,097 square feet X \$801 per square foot / 4,259 population increase), and the cost per nonresidential vehicle trip is \$120.50 (306 square feet X \$801 per square foot / 2,034 nonresidential vehicle trip increase).

Figure 30: Projected Demand for Facilities

Type of Infrastructure		Level of Service		Demand Unit	Unit Cost
Facilities	Residential	0.2576	Square Feet	per Person	\$801
	Nonresidential	0.1502		per Nonres. Trip	

Need for Facilities						
	Year	Population	Nonres. Vehicle Trips	Square Feet Residential	Square Feet Nonresidential	Total
Base	2016	25,964	11,840	6,689	1,778	8,467
Year 1	2017	26,395	12,043	6,800	1,809	8,609
Year 2	2018	26,826	12,247	6,911	1,839	8,750
Year 3	2019	27,257	12,450	7,022	1,870	8,892
Year 4	2020	27,688	12,653	7,133	1,900	9,033
Year 5	2021	28,114	12,857	7,243	1,931	9,174
Year 6	2022	28,540	13,060	7,352	1,961	9,314
Year 7	2023	28,966	13,264	7,462	1,992	9,454
Year 8	2024	29,392	13,467	7,572	2,022	9,594
Year 9	2025	29,819	13,671	7,682	2,053	9,735
Year 10	2026	30,223	13,874	7,786	2,084	9,870
Ten-Yr Increase		4,259	2,034	1,097	306	1,403
Projected Expenditure				\$878,697	\$245,106	\$1,123,803
Cost Allocation				per Person	per Nonres. Trip	
				\$206.32	\$120.50	
Growth-Related Expenditure on Facilities						\$1,123,803

## Vehicles and Equipment

### Current Level of Service

The Law Enforcement impact fee methodology contains a cost component for vehicles and equipment operated by Lemoore's Police Department. Since vehicles and equipment will be purchased over time, an incremental expansion method is utilized. As shown in Figure 25, the city's inventory currently includes 48 units with a replacement cost of \$41,933 per unit.

The current level of service is based on the functional population and the 2016 demand units – population (25,964) for residential development and nonresidential vehicle trips (11,840) for nonresidential development. Therefore, the current residential level of service is 0.00146 units per person (48 units X 79 percent residential share / 25,964 population), and the nonresidential level of service equals 0.00085 units per nonresidential vehicle trip (48 units X 21 percent nonresidential share / 11,840 trips). As the city grows, new development will require approximately 1.5 units for every 1,000 new residents and approximately 0.9 units for every 1,000 additional nonresidential vehicle trips.

**Figure 25: Existing Vehicles and Equipment and Cost Allocation**

Vehicle / Equipment Type	Units	Replacement Cost (per Unit)	Total Replacement Cost
Detective/Chief Car	3	\$36,340	\$109,020
Solar Radar Trailer	2	\$14,000	\$28,000
Patrol Car	16	\$49,500	\$792,000
Patrol SUV	2	\$49,500	\$99,000
Special Patrol Car	1	\$55,000	\$55,000
Commander SUV	3	\$42,250	\$126,750
Det. Sgt. SUV	1	\$49,500	\$49,500
Animal Control Truck	1	\$25,000	\$25,000
K9 Patrol Car	2	\$52,250	\$104,500
Evidence Van	1	\$25,000	\$25,000
Training/Patrol Motorcycles	4	\$22,800	\$91,200
Youth Dev. Officer (YDO) Equipment	1	\$10,000	\$10,000
VIP Car	3	\$37,833	\$113,500
YDO Car	2	\$49,500	\$99,000
Training Car	1	\$39,500	\$39,500
HNT Truck	1	\$40,000	\$40,000
CSO	1	\$33,800	\$33,800
Command Post	1	\$90,000	\$90,000
DUI Checkpoint Trailer	1	\$30,000	\$30,000
Diesel Generator	1	\$52,000	\$52,000
<b>Total</b>	<b>48</b>		<b>\$2,012,770</b>
		<b>Cost Per Unit</b>	<b>\$41,933</b>

Land Use Type	Proportionate Share	2016 Demand Units	Vehicle / Equipment per Demand Unit
Residential	79%	25,964 Population	0.00146
Nonresidential	21%	11,840 Nonres. Vehicle Trips	0.00085

Source: City of Lemoore, California.



## Projected Demand

Shown in Figure 26, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. Nonresidential vehicle trips are projected to equal 13,874 trips by 2026 – an increase of 2,034 trips. When applied to the current LOS, new development will demand 7.9 additional units over the next ten years ((0.00146 units per person X 4,259 population increase) + (0.00085 units per nonresidential vehicle trip X 2,034 nonresidential vehicle trip increase)). With a replacement cost of \$41,933 per unit, the growth-related expenditure on vehicles and equipment is \$331,271 (7.9 units X \$41,933 per unit). The cost per person is \$61.05 (6.2 units X \$41,933 per unit / 4,259 population increase), and the cost per nonresidential vehicle trip is \$35.05 (1.7 units X \$41,933 per unit / 2,034 trip increase).

**Figure 26: Projected Demand for Vehicles and Equipment**

Type of Infrastructure		Level of Service		Demand Unit	Unit Cost
Vehicles & Equipment	Residential	0.00146	Vehicles	per Person	\$41,933
	Nonresidential	0.00085		per Nonres. Trip	

Need for Vehicles & Equipment						
	Year	Population	Nonres. Vehicle Trips	Units Residential	Units Nonresidential	Total
Base	2016	25,964	11,840	37.9	10.1	48.0
Year 1	2017	26,395	12,043	38.5	10.3	48.8
Year 2	2018	26,826	12,247	39.2	10.4	49.6
Year 3	2019	27,257	12,450	39.8	10.6	50.4
Year 4	2020	27,688	12,653	40.4	10.8	51.2
Year 5	2021	28,114	12,857	41.1	10.9	52.0
Year 6	2022	28,540	13,060	41.7	11.1	52.8
Year 7	2023	28,966	13,264	42.3	11.3	53.6
Year 8	2024	29,392	13,467	42.9	11.5	54.4
Year 9	2025	29,819	13,671	43.5	11.6	55.2
Year 10	2026	30,223	13,874	44.1	11.8	55.9
Ten-Yr Increase		4,259	2,034	6.2	1.7	7.9
				\$259,985	\$71,286	\$331,271
				per Person	per Nonres. Trip	
				\$61.05	\$35.05	
				Growth-Related Expenditure on Vehicles & Equipment		\$331,271



## Impact Fee Study

Also included in the Law Enforcement impact fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 27, the law enforcement share of the study is \$7,000. This cost is allocated to new development over the next five years based on functional population. The residential cost per person is \$2.57 (\$7,000 study expense X 79 percent residential share / 2,150 population increase), and the nonresidential cost per nonresidential vehicle trip is \$1.45 (\$7,000 study expense X 21 percent nonresidential share / 1,017).

Figure 27: Impact Fee Study Expense

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential	100%	VMT	425,592	460,750	35,158	\$0.31
		Nonresidential						
Wastewater	\$11,000	Residential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
		Nonresidential						
Water	\$11,000	Residential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
		Nonresidential						

TOTAL \$75,000

## Maximum Supportable Law Enforcement Impact Fee

Figure 28 provides a summary of costs per demand unit used to calculate the Law Enforcement impact fees. As discussed previously, these fees are calculated for both residential and nonresidential land uses. As shown below, the total cost per residential demand unit is \$269.94, and the total cost per nonresidential demand unit is \$157.00. The proposed fee for a single-family unit is \$804 (\$269.94 per demand unit X 2.98 persons per housing unit). Similarly, the cost per 1,000 square feet of industrial development is \$300 (\$157.00 per demand unit X 3.82 vehicle trip ends per 1,000 square feet X 50 percent trip rate adjustment).

**Figure 28: Law Enforcement Impact Fee Schedule**

<i>Fee Component</i>	<i>Cost per Person</i>	<i>Cost per Nonres. Trip</i>
Facilities	\$206.32	\$120.50
Vehicles & Equipment	\$61.05	\$35.05
Impact Fee Study	\$2.57	\$1.45
<b>TOTAL</b>	<b>\$269.94</b>	<b>\$157.00</b>

### *Residential (per unit)*

<i>Development Type</i>	<i>Persons per Housing Unit<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Single Family	2.98	\$804	\$277	\$527
Multi-Unit	2.26	\$610	\$331	\$279

1. See Figure A1.

### *Nonresidential (per 1,000 square feet)*

<i>Development Type</i>	<i>Avg Weekday Veh Trip Ends<sup>2</sup></i>	<i>Trip Rate Adjustment</i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Industrial	3.82	50%	\$300	\$17	\$283
Retail / Restaurant	42.70	33%	\$2,212	\$397	\$1,815
Office / Institutional	11.03	50%	\$866	\$366	\$500

2. See Figure A6.

## Projected Fee Revenue

Finally, the impact fees shown in Figure 28 can be applied to projected development (see Appendix) to estimate potential revenue generated by those fees. Law Enforcement impact fee revenue is expected to total approximately \$1.46 million over the next ten years. Over the same time-period, Lemoore will spend approximately \$1.46 million on growth-related infrastructure.

**Figure 29: Law Enforcement Impact Fee Revenue Projection**

### Law Enforcement Infrastructure Cost

	Growth Cost	Total Cost
Facilities	\$1,123,803	\$1,123,803
Vehicles & Equipment	\$331,271	\$331,271
Impact Fee Study	\$7,000	\$7,000
	\$1,462,074	\$1,462,074

### Projected Law Enforcement Impact Fee Revenue

		Residential \$748 per housing unit	Industrial \$300 per KSF	Retail / Restaurant \$2,212 per KSF	Office / Institutional \$866 per KSF
Year		Hsg Units	KSF	KSF	KSF
Base	2016	9,328	1,320	441	563
Year 1	2017	9,482	1,328	452	569
Year 2	2018	9,636	1,336	463	575
Year 3	2019	9,790	1,344	474	581
Year 4	2020	9,944	1,352	485	587
Year 5	2021	10,097	1,360	496	593
Year 6	2022	10,250	1,368	507	599
Year 7	2023	10,403	1,376	518	605
Year 8	2024	10,556	1,384	529	611
Year 9	2025	10,709	1,392	540	617
Year 10	2026	10,854	1,400	551	623
Ten-Yr Increase		1,526	80	110	60
Projected Revenue =>		\$1,140,893	\$23,879	\$242,228	\$51,711
Total Projected Revenues =>					<u>\$1,458,711</u>



## PARKS

### Methodology

The Parks impact fees are derived using an incremental expansion methodology. Cost components are allocated 100 percent to residential development and include acquired park land and developed park land (park improvements). This methodology will enable Lemoore to maintain the current LOS standard as the city grows. Impact fee revenue collected using this methodology may not be used to replace or rehabilitate existing improvements.

### Park Land Acquisition

#### Current Level of Service

The Parks impact fee methodology contains a cost component for park land acquisition. As shown in Figure 30, Lemoore's current inventory of park land includes 71.81 acres. The current level of service is based on the 2016 population of 25,964 with acres allocated per 1,000 persons. Therefore, the current level of service for park land is 2.7658 acres per 1,000 persons (71.81 acres / [25,964 population / 1,000]). Based on data provided by the Kings County Assessor, the cost to acquire park land is \$100,000 per acre.

Figure 30: Existing Park Land and Cost Allocation

Park Site	Total Acres
Bevilaqua Park	10.00
City Park	3.75
East Park Site (D and Bush Streets)	3.65
Heritage Park	25.00
Kings Lions Park	17.74
Lions Park	11.00
Rotary Skate Park	0.67
<b>Total</b>	<b>71.81</b>

Level-of-Service (LOS) Standards	
Acres of Acquired Park Land	71.81
2016 Lemoore Population	25,964
<b>LOS: Acres per 1,000 Persons</b>	<b>2.7658</b>

Cost Analysis	
Acres per 1,000 Persons	2.7658
Land Cost Per Acre <sup>1</sup>	\$100,000

1. Cost per acre provided by the Kings County Assessor.

## Park Improvements

### Current Level of Service

The Parks impact fee methodology also contains a cost component for park improvements. As shown in Figure 31, Lemoore's current inventory of park improvements includes 45.66 developed acres. The current level of service is based on the 2016 population of 25,964 with acres allocated per 1,000 persons. Therefore, the current level of service for park land is 1.7586 acres per 1,000 persons (45.66 acres / [25,964 population / 1,000]). Based on the cost to develop Lion's Park, the cost to improve, or develop, an acre of park land is \$185,000.

**Figure 31: Existing Park Improvements and Cost Allocation**

Park Site	Total Acres	Developed Acres
Bevilaqua Park	10.00	0.00
City Park	3.75	3.75
East Park Site (D and Bush Streets)	3.65	0.00
Heritage Park	25.00	12.50
Kings Lions Park	17.74	17.74
Lions Park	11.00	11.00
Rotary Skate Park	0.67	0.67
<b>Total</b>	<b>71.81</b>	<b>45.66</b>

Level-of-Service (LOS) Standards	
Acres of Developed Park Land	45.66
2016 Lemoore Population	25,964
<b>LOS: Acres per 1,000 Persons</b>	<b>1.7586</b>

Cost Analysis	
Acres per 1,000 Persons	1.7586
Development Cost Per Acre <sup>1</sup>	\$185,000

1. Cost per acre for developing 4 acres at Lion's Park in 2010, City of Lemoore, California.

## Projected Demand

Shown in Figure 32, population is projected to equal 30,223 in 2026 – an increase of 4,259 persons. When applied to the current LOS, new development will demand the acquisition of 11.78 additional acres of land over the next ten years (2.7658 acres per 1,000 persons X 4,259 population increase / 1,000). With an average cost per acre of \$100,000 to acquire park land, the growth-related expenditure on park land is \$1,178,000 (11.78 acres X \$100,000 per acre). The cost per person to acquire park land is \$276.59 (11.78 acres X \$100,000 per acre / 4,259 population increase).

Over the next ten years, new development will demand 7.49 additional acres of park improvements (1.7586 acres per 1,000 persons X 4,259 population increase / 1,000). The average cost to develop an acre of park land has an average cost of \$185,000, and the growth-related expenditure on park improvements is \$1,385,650 (7.49 acres X \$185,000 per acre). The cost per person to develop park land is \$325.35 (7.49 acres X \$185,000 per acre / 4,259 population increase).

**Figure 32: Projected Demand for Park Land and Park Improvements**

		Type of Infrastructure	Level of Service	Demand Unit	Unit Cost
		Park Land (Acquisition)	2.7658 acres	per 1,000 persons	\$100,000
		Park Improvements	1.7586 acres	per 1,000 persons	\$185,000

Park Infrastructure Needed				
	Year	Population	Park Land	Park Improvements
Base	2016	25,964	71.81	45.66
1	2017	26,395	73.00	46.42
2	2018	26,826	74.20	47.18
3	2019	27,257	75.39	47.93
4	2020	27,688	76.58	48.69
5	2021	28,114	77.76	49.44
6	2022	28,540	78.94	50.19
7	2023	28,966	80.11	50.94
8	2024	29,392	81.29	51.69
9	2025	29,819	82.47	52.44
10	2026	30,223	83.59	53.15
Ten-Yr Increase		4,259	11.78	7.49
Projected Expenditure			\$1,178,000	\$1,385,650
			Park Acquisition	Park Development
per Person			\$276.59	\$325.35
Growth-Related Expenditure on Park Infrastructure			\$2,563,650	



## Impact Fee Study

Also included in the Parks impact fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 33, the Parks impact fee share of the study is \$7,000. This cost is allocated to new development over the next five years based on population. The cost per person is \$3.26 (\$7,000 study expense / 2,150 population increase).

**Figure 33: Impact Fee Study Expense**

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential	100%	VMT	425,592	460,750	35,158	\$0.31
		Nonresidential						
Wastewater	\$11,000	Residential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
		Nonresidential						
Water	\$11,000	Residential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
		Nonresidential						
TOTAL		\$75,000						

## Maximum Supportable Parks Impact Fee

Figure 34 provides a summary of the costs per demand unit used to calculate the Parks impact fees. As previously discussed, Parks impact fees are calculated for residential land uses. As shown below, the total cost per residential demand unit is \$605.20. The proposed fee for a single-family unit is \$1,803 (\$605.20 X 2.98 persons per housing unit) and represents a decrease of \$1,585 compared to the current fee.

**Figure 34: Parks Impact Fee Schedule**

<i>Fee Component</i>	<i>Cost per Person</i>
Park Land (Acquisition)	\$276.59
Park Improvements	\$325.35
Impact Fee Study	\$3.26
<b>TOTAL</b>	<b>\$605.20</b>

### *Residential (per unit)*

<i>Development Type</i>	<i>Persons per Housing Unit<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Single Family	2.98	<b>\$1,803</b>	\$3,388	<b>-\$1,585</b>
Multi-Unit	2.26	<b>\$1,368</b>	\$2,703	<b>-\$1,335</b>

1. See Figure A1.

## Projected Fee Revenue

Finally, the development impact fees shown in Figure 34 can be applied to projected development (see Appendix) to estimate potential revenue generated by those fees. Parks impact fee revenue from future development is expected to total approximately \$2.56 million over the next ten years. Over the same time period, the city will spend approximately \$2.57 on growth-related park infrastructure.

**Figure 35: Parks Impact Fee Revenue Projection**

### *Parks Infrastructure Cost*

	<i>Growth Cost</i>	<i>Total Cost</i>
Acquired Park Land	\$1,178,000	\$1,178,000
Developed Park Land	\$1,385,650	\$1,385,650
Impact Fee Study	\$7,000	\$7,000
	<b>\$2,570,650</b>	<b>\$2,570,650</b>

### *Projected Parks Impact Fee Revenue*

		<i>Residential \$1,680 per housing unit</i>
<i>Year</i>		<i>Hsg Units</i>
Base	2016	9,328
Year 1	2017	9,482
Year 2	2018	9,636
Year 3	2019	9,790
Year 4	2020	9,944
Year 5	2021	10,097
Year 6	2022	10,250
Year 7	2023	10,403
Year 8	2024	10,556
Year 9	2025	10,709
Year 10	2026	10,854
<i>Ten-Yr Increase</i>		1,526
<b>Total Projected Revenues =&gt;</b>		<b>\$2,563,128</b>



## REFUSE VEHICLES & CONTAINERS

### Methodology

The Refuse Vehicles & Containers impact fee uses an incremental expansion methodology. Cost components include refuse vehicles and refuse containers used for single-family residential, multi-family, and nonresidential pickups. Due to the nature of refuse and recycling services in Lemoore, with multi-family and nonresidential customers receiving services (i.e., pickups) and capital equipment (i.e., dumpsters) based on amount of trash generation, the Refuse Vehicles & Containers impact fee for multi-family and nonresidential development will be calculated on a case-by-case basis.

### Single-Family Residential Cost Components

To maintain the current single-family residential level of service, Lemoore plans to use an incremental expansion methodology for refuse vehicles and for trash receptacles (residential cans).

#### Refuse Vehicles

The total capital cost per residential truck is \$330,000. According to city staff, residential trucks can handle 4,800 residential pickups per week. Based on this capacity, the cost per pickup equals \$68.75 (\$330,000 truck cost / 4,800 weekly pickups). Because Lemoore offers trash pickups and recycling pickups, residential trucks visit each residential customer two times per week. Since residential truck costs are allocated based on the number of pickups, the cost per customer (residential unit) is \$137.50 (\$68.75 residential truck cost per pickup X 2 pickups per week).

**Figure 36: Residential Truck Cost Factors**

Land Use	Vehicle/Apparatus Type	Unit Cost	Weekly Pickups	Pickup Type	Cost per Pickup
Single Family	Side Loader Automated	\$330,000	4,800	Residential Can	\$68.75

#### Refuse Containers

In addition to truck costs, the residential Refuse Vehicles & Containers impact fee includes the cost for residential refuse and recycling cans. The cost per can is \$56 (\$50 residential can + \$6 delivery) and customers receive three cans – black can, blue can, and green can. The cost per customer is \$168 (\$56 cost per can X 3 cans).

**Figure 37: Residential Container Cost Factors**

Land Use	Type	Unit Cost	Delivery Cost	Total Cost
Single Family	Residential Can	\$50	\$6	\$56

## Residential Input Variables and Maximum Supportable Impact Fee

Figure 38 shows level-of-service standards for the residential Refuse Vehicles & Containers impact fees for the City of Lemoore. Impact fees for Refuse Vehicles & Containers are based on costs per customer for vehicles and refuse containers as described in the previous sections and summarized below. Each cost component of the Refuse Vehicles & Containers impact fee is shown as a cost per customer.

The maximum supportable impact fee is then calculated by summing each fee component – \$138 vehicle cost per customer plus \$168 refuse container cost per customer for a total impact fee per residential customer of \$306. Note that if more than three residential cans are needed, the fee should be calculated accordingly.

**Figure 38: Residential Input Variables and Maximum Supportable Impact Fees**

Refuse Vehicle Cost per Residential Customer	\$138
Residential Container Cost per Can	\$56
Cans per Residential Unit	3
Container Cost per Residential Customer	\$168
<b>Total Cost per Residential Customer</b>	<b>\$306</b>

## Multi-Family and Nonresidential Cost Components

To maintain the current level of service, Lemoore plans to use an incremental expansion methodology for refuse vehicles and for dumpsters. The multi-family and nonresidential Refuse Vehicles & Containers impact fee differs from the single-family residential Refuse Vehicles & Containers fee in that it will be calculated on a case-by-case basis based on the number of pickups and the size of dumpster required for each multi-family and nonresidential customer. Further detail is provided below.

### Refuse Vehicles

The total capital cost per multi-family and nonresidential truck is \$280,000. According to city staff, these trucks can handle 675 multi-family and nonresidential pickups per week. Based on this capacity, the cost per pickup equals \$414.81 (\$280,000 truck cost / 675 weekly pickups).

Land Use	Vehicle/Apparatus Type	Unit Cost	Weekly Pickups	Pickup Type	Cost per Pickup
Multi-Family & Nonresidential	Rear Loader	\$280,000	675	Dumpster	\$414.81

### Refuse Containers

In addition to vehicle costs, the multi-family and nonresidential Refuse Vehicles & Containers impact fee includes the cost for a dumpster. The cost schedule by dumpster size is shown Figure 39.

**Figure 39: Multi-Family and Nonresidential Dumpster Costs**

Land Use	Type	Unit Cost	Delivery Cost	Total Cost
Multi-Family & Nonresidential	1-Yard Dumpster	\$380	\$16	\$396
Multi-Family & Nonresidential	2-Yard Dumpster	\$600	\$16	\$616
Multi-Family & Nonresidential	3-Yard Dumpster	\$780	\$16	\$796

## Multi-Family and Nonresidential Input Variables and Maximum Supportable Impact Fee

The multi-family and nonresidential Refuse Vehicles & Containers impact fee should be calculated based on two factors – required number of weekly pickups and dumpster size. Figure 40 shows level-of-service standards for the multi-family and nonresidential Refuse Vehicles & Containers impact fees for the City of Lemoore. The top portion provides a schedule of vehicle capital costs per customer based on number of weekly pickups per customer and the cost per pickup of \$414.81 as detailed above. The bottom portion of the figure reiterates the dumpster capital costs by size of dumpster, ranging from \$396 for a 1-yard dumpster to \$796 for a 3-yard dumpster.

**Figure 40: Multi-Family and Nonresidential Impact Fee Input Variables**

<i>Capital Cost per Pickup</i>	<i>Weekly Pickups per Customer</i>	<i>Total Vehicle Cost per Customer</i>
\$415	1	\$415
\$415	2	\$830
\$415	3	\$1,244
\$415	4	\$1,659
\$415	5	\$2,074
\$415	6	\$2,489
\$415	7	\$2,904
\$415	8	\$3,319
\$415	9	\$3,733
\$415	10	\$4,148

<i>Dumpster Size</i>	<i>Unit Cost</i>
1-Yard Dumpster	\$396
2-Yard Dumpster	\$616
3-Yard Dumpster	\$796



To calculate the multi-family and nonresidential Refuse Vehicles & Containers impact fee, it must be determined how many weekly pickups and what size dumpster the customer requires. For further detail, an example of the impact fee calculation for a hypothetical business is shown below in Figure 41. In this example, the business requires 2 pickups per week (\$830) and a 2-yard dumpster (\$616).

In this example, the total maximum supportable impact fee for the hypothetical business is then calculated by summing each fee component – \$830 vehicle capital cost plus \$616 container cost for a 2-yard dumpster for a total impact fee for the hypothetical business of \$1,446.

**Figure 41: Hypothetical Multi-Family and Nonresidential Impact Fee Calculation**

Number of Weekly Pickups	2
Refuse Vehicle Cost per Pickup	\$415
Refuse Vehicle Cost per Customer	\$830
Dumpster Requirement	2-Yard
Container Cost per Dumpster	\$616
<b>Total Cost per Nonresidential Customer</b>	<b>\$1,446</b>

## STORM DRAINAGE

### Methodology

The Storm Drainage impact fees are derived using the plan-based methodology. Lemoore staff identified storm drainage system improvements necessary to accommodate future development. The growth-related costs of storm drainage system improvements are allocated to the projected developed acreage based on demographic projections (Appendix A), prevailing dwelling units by acre, floor area ratio (FAR) by land use type, and typical impervious surface percentage. FAR is the ratio of a building's total floor area to the size of the piece of land on which it is situated. For instance, a 5,000-square-foot building on a 20,000-square-foot parcel has a FAR of 0.25.

The capital costs of storm drainage improvements are multiplied by proportionate share factors for each type of land use and divided by the amount of land area by type of land use. Residential fees per housing unit are based on a gross density of 9.5 units per acre for single-family units and 14.5 units per acre for multi-family units, based on densities in the City of Lemoore Zoning Ordinance. The capital cost per acre for nonresidential land uses was converted to a fee per 1,000 square feet (KSF) using an average FAR of 0.35, based on the average of minimum and maximum allowable FARs in the City of Lemoore Zoning Ordinance. It is preferable to base the nonresidential fees on floor area rather than use a per acre basis because the fee will increase or decrease according to the intensity of an individual project.

### Proportionate Share Factors

The capital costs for the storm drainage system are allocated to the land area served by the improvements. In order to determine the land area served by the storm drainage system, TischlerBise applied average residential density and nonresidential FAR factors to projected development through the year 2026 to determine the amount of developed acreage by land use.

**Figure 42: Projected Increase in Acreage by Land Use to 2026**

	2016		10-Year Increase	
	Units	Acreage	Units	Acreage
<b>Residential</b>				
Single Family	6,782	714	1,108	117
Multi-Family	2,546	176	418	29
<b>Nonresidential</b>	<b>Square Feet</b>	<b>Acreage</b>	<b>Square Feet</b>	<b>Acreage</b>
Industrial	2,366,000	155	140,000	9
Retail / Restaurant	882,000	58	220,000	14
Office and Institutional	1,870,000	123	200,000	13
<b>Total</b>		<b>1,225</b>		<b>182</b>
				<b>Growth Share   14.8%</b>

## Growth-Related Storm Drainage Improvements

Figure 43 below lists storm drainage improvements, identified by Lemoore staff, from the city's Capital Improvement Plan. These improvements are organized into three components: 1) collection projects, 2) detention projects, and 3) other projects.

### Collection Projects

Based on developed acreage shown in Figure 42, collection projects included in the impact fee update have a growth share of 14.8 percent. This means future development demands 14.8 percent of planned collection projects and existing development demands the remaining 85.2 percent of planned collection projects. This results in a growth cost of \$170,111 for collection projects (\$1,149,400 X 14.8 percent growth share).

### Detention Projects

The Storm Drainage impact fee includes two storm drainage detention projects. Based on analysis by city staff, future development demands 100 percent of storm drainage detention projects shown in Figure 43. These projects have a growth-related cost of \$1,095,000.

### Other Projects

Lemoore's Capital Improvement Plan also includes a storm drainage master plan. The planned cost of the storm drainage master plan is \$180,000 with 100 percent of the cost attributable to future development.

**Figure 43: Storm Drainage Improvements**

#### Collection Projects

Year	Project	Total Cost	Growth Share	Growth Cost
2021-2022	Bevilaqua Park Improvement	\$640,000	14.8%	\$94,720
2020-2021	Candlewick Storm Drainage	\$509,400	14.8%	\$75,391
Total		\$1,149,400	Growth Cost	\$170,111

#### Detention Projects

Year	Project	Total Cost	Growth Share	Growth Cost
2016-2018	Daphne Storm Drain Basin	\$840,000	100.0%	\$840,000
2019-2021	Lemoore HS Storm Basin	\$255,000	100.0%	\$255,000
Total		\$1,095,000	Growth Cost	\$1,095,000

#### Other Projects

Year	Project	Total Cost	Growth Share	Growth Cost
2016-2018	Storm Drain Master Plan	\$180,000	100.0%	\$180,000
Total		\$180,000	Growth Cost	\$180,000



## Capital Cost per Acre

Based on the projected increase in acreage by land use shown in Figure 43 above, TischlerBise determined proportionate share factors, by land use, using weighting factors that represent the percentage of impervious surface area created in the drainage area by each type of land use. For example, there are approximately 117 acres of land projected for single-family housing development over the next ten years, based on an average density of 9.5 dwellings units per acre (1,108 units / 9.5 dwelling units per acre). The percentage of impervious surface is estimated at 50 percent, based on California Office of Environmental Health Hazard Assessment Impervious Surface Coefficients Study (2008), resulting in 58 impervious acres (117 developed acres X 50 percent). Based on projected development citywide, this represents approximately 55.5 percent of the net increase in citywide impervious acreage over the next ten years (58 impervious acres from single-family development / 105 total impervious acres). This calculation is shown in Figure 44.

Capital costs from the previous section are shown in the top right corner of Figure 44. These capital costs are allocated by land use based on proportionate share of impervious acreage and divided by the ten-year increase in developed acres. For single-family development, the capital cost per acre is \$6,866 (\$1,445,111 capital cost X 55.5 percent proportionate share / 116.8 developed acres). Capital costs per acre, by land use, are included at the bottom of this figure.

**Figure 44: Proportionate Share and Capital Cost per Acre**

System Improvements Sized For Citywide Service				
Growth-Related Capital Costs - Collection				\$170,111
Growth-Related Capital Costs - Detention				\$1,095,000
Growth-Related Capital Costs - Other				\$180,000
<b>Total</b>				<b>\$1,445,111</b>
Type of Development	10-Year Growth in Developed Acres <sup>1</sup>	Percent Impervious <sup>2</sup>	10-Year Growth in Impervious Acres	Proportionate Share
Single Family Residential	116.8	50%	58	55.5%
Multi-Family Residential	28.9	60%	17	16.5%
Retail / Restaurant	14.0	85%	12	11.3%
Office / Institutional	13.0	80%	10	9.9%
Industrial	9.0	80%	7	6.8%
<b>Total</b>	<b>181.7</b>		<b>105</b>	<b>100.0%</b>
<b>Capital Cost per Acre<sup>3</sup></b>				
Single Family Residential	\$6,866			
Multi-Family Residential	\$8,241			
Industrial	\$10,983			
Retail / Restaurant	\$11,674			
Office / Institutional	\$10,983			

1. Land use area calculated by TischlerBise using average density and floor area ratios.

2. Impervious factors based on California Office of Environmental Health Hazard Assessment Impervious Surface Coefficients study (2008).

3. For each type of development, the level of service (expressed in terms of capital cost per acre) is equal to the capital cost multiplied by the proportionate share factor, divided by the acreage to be developed.

## Impact Fee Study

Also included in the Storm Drainage impact fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 47, the Storm Drainage impact fee share of the study is \$7,000. This cost is allocated to new development over the next five years based on impervious acreage. The cost per acre of single-family development is \$66 (\$7,000 study expense X 55.7 percent proportionate share / 58.9 single-family acres). Storm Drainage impact fee study costs per acre, by land use, are included at the bottom of this figure.

**Figure 45: Impact Fee Study Expense**

System Improvements Sized For Citywide Service				
Impact Fee Study				\$7,000
Type of Development	5-Year Growth in Developed Acres <sup>1</sup>	Percent Impervious <sup>2</sup>	5-Year Growth in Impervious Acres	Proportionate Share
Single Family Residential	58.9	50%	29	55.7%
Multi-Family Residential	14.5	60%	9	16.5%
Retail / Restaurant	7.0	85%	6	11.3%
Office / Institutional	6.5	80%	5	9.8%
Industrial	4.5	80%	4	6.8%
	91.4		53	100.0%
<i>Capital Cost per Acre<sup>3</sup></i>				
Single Family Residential	\$66			
Multi-Family Residential	\$79			
Industrial	\$106			
Retail / Restaurant	\$113			
Office / Institutional	\$106			

1. Land use area calculated by TischlerBise using average density and floor area ratios.

2. Impervious factors based on California Office of Environmental Health Hazard Assessment Impervious Surface Coefficients study (2008).

3. For each type of development, the level of service (expressed in terms of capital cost per acre) is equal to the capital cost multiplied by the proportionate share factor, divided by the acreage to be developed.

## Maximum Supportable Storm Drainage Impact Fee

Figure 46 provides a summary of the costs per demand unit used to calculate the Storm Drainage impact fees. As previously discussed, Storm Drainage impact fees are calculated for residential and nonresidential land uses. As shown below, residential land uses include capital costs per acre and units per acre. Nonresidential land uses include capital costs per acre and the floor area ratio (FAR). The proposed fee for a single-family unit is \$730 (\$6,932 single-family capital cost per acre / 9.5 dwelling units per acre) and represents a decrease of \$209 compared to the current fee. For industrial development, the proposed fee is \$727 (\$11,089 industrial capital cost per acre X 0.35 FAR) and represents a decrease of \$360 compared to the current fee.

**Figure 46: Storm Drainage Impact Fee Schedule**

*Residential (per unit)*

<i>Development Type</i>	<i>Capital Cost per Acre</i>	<i>Units per Acre<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Single Family	\$6,932	9.50	\$730	\$939	-\$209
Multi-Family	\$8,320	14.50	\$574	\$533	\$41

*Nonresidential (per 1,000 square feet)*

<i>Development Type</i>	<i>Capital Cost per Acre</i>	<i>FAR<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Industrial	\$11,089	0.35	\$727	\$1,087	-\$360
Retail / Restaurant	\$11,787	0.35	\$773	\$630	\$143
Office / Institutional	\$11,089	0.35	\$727	\$870	-\$143

1. City of Lemoore Zoning Ordinance.



## STREETS AND THOROUGHFARES

### Methodology

The Streets and Thoroughfares impact fees are calculated using an incremental expansion methodology for arterials and traffic signals, and a plan-based methodology for the State Route 41 / Bush Street interchange. Both methodologies use vehicle miles of travel as the demand unit. Each component used to derive vehicle miles of travel is described in the Appendix.

### Lemoore Travel Demand

The relationship between the amount of development in Lemoore and growth-related system improvements is documented below. Figure 47 summarizes the input variables used to determine the average trip length on arterial improvements. In the table below “HU” means housing units, “KSF” means square feet of nonresidential development, in thousands, “ITE” is an abbreviation of Institute of Transportation Engineers, and “VTE” means vehicle trip ends. Trip generation rates by type of housing unit are documented in Figure A10 and related text.

Projected development over the next fifteen years, and the corresponding need for additional lane miles of arterial improvements and traffic signals, is shown in the middle section of Figure 47: Travel Demand and Trip Length Calibration. Trip generation rates and trip adjustment factors convert projected development into average weekday vehicle trips. A typical vehicle trip, such as a person leaving their home and traveling to work, generally begins on a local street that connects to a collector street, which connects to an arterial road and eventually to a state or interstate highway. This progression of travel up and down the functional classification chain limits the average trip length determination, for the purpose of impact fees, to the following question, “What is the average vehicle trip length on development fee system improvements?”

With demand for 12.92 additional arterial lane-miles in the city and a lane capacity standard of 8,000 vehicles per lane, the demand on the future network is approximately 103,361 vehicle miles of travel (i.e., 8,000 vehicles per lane traveling the entire 12.92 lane miles). To derive the average utilization (i.e., average trip length expressed in miles) of growth-related system improvements, divide vehicle miles of travel by the fifteen-year increase in vehicle trips attracted to development in the service area. As shown in the bottom-right corner of the table below, new development produces an increase of 15,322 average weekday vehicle trips over fifteen years. Dividing 103,361 vehicle miles of travel by the fifteen-year increase of 15,322 inbound average weekday vehicle trips yields an un-weighted average trip length of approximately 6.746 miles. However, the calibration of average trip length includes the same adjustment factors used in the impact fee calculations (i.e., journey-to-work commuting, pass-by adjustment, and average trip length adjustment by type of land use). With these adjustments, TischlerBise determined the weighted-average trip length to be 6.046 miles.

Figure 47: Travel Demand and Trip Length Calibration

Development Type	ITE Code	Weekday VTE	Dev Unit	Trip Adj	Trip Length Wt Factor				
Single Family		9.32	HU	63%	122%				
Multi-Family		6.83	HU	63%	122%				
Industrial	140	3.82	KSF	50%	75%				
Retail / Restaurant	820	42.70	KSF	33%	68%				
Office and Institutional	710	11.03	KSF	50%	75%				
Avg Trip Length (miles)		6.046							
Vehicle Capacity Per Lane		8,000							
	2016	2017	2018	2019	2020	2021	2026	2031	15-Year Increase
	Base	1	2	3	4	5	10	15	
Single-Family Housing Units	6,782	6,894	7,006	7,118	7,230	7,341	7,890	8,419	1,637
Multi-Family Housing Units	2,546	2,588	2,630	2,672	2,714	2,756	2,964	3,164	618
Single-Family Trips	39,821	40,479	41,136	41,794	42,452	43,103	46,327	49,433	9,612
Multi-Family Trips	10,955	11,136	11,317	11,497	11,678	11,859	12,754	13,614	2,659
Residential Trips	50,776	51,615	52,453	53,291	54,130	54,962	59,081	63,047	12,271
Industrial KSF	1,320	1,328	1,336	1,344	1,352	1,360	1,400	1,440	120
Retail / Restaurant KSF	441	452	463	474	485	496	551	606	165
Office and Institutional KSF	563	569	575	581	587	593	623	653	90
Industrial Trips	2,521	2,536	2,552	2,567	2,582	2,598	2,674	2,750	229
Retail / Restaurant Trips	6,214	6,369	6,524	6,679	6,834	6,989	7,764	8,539	2,325
Office and Institutional Trips	3,105	3,138	3,171	3,204	3,237	3,270	3,436	3,601	496
Nonresidential Trips	11,840	12,044	12,247	12,450	12,654	12,857	13,874	14,891	3,051
Total Vehicle Trips	62,617	63,658	64,700	65,742	66,783	67,819	72,955	77,938	15,322
Vehicle Miles of Travel (VMT)	425,592	432,633	439,673	446,713	453,753	460,750	495,412	528,953	103,361
Arterial Lane Miles	53.20	54.08	54.96	55.84	56.72	57.59	61.93	66.12	12.92
Traffic Signals	7.0	7.1	7.2	7.3	7.4	7.6	8.1	8.7	1.69
Fifteen-Year VMT Increase =>									19.5%

## Arterials

### Cost Factors

Shown below in Figure 48 are Lemoore's planned arterial projects. Based on these projects, the average cost to construct one arterial lane mile is \$666,700 (\$10,946,725 / 16.42 lane miles). Although Lemoore plans to eventually construct these improvements, their inclusion in this study is strictly for purposes of estimating the average cost to construct a lane mile of arterial improvements.

Figure 48: Arterial Cost Factors

Project	Location	Improvement	Additional Lane Miles	2016 Estimated Project Cost <sup>1</sup>	Growth Share <sup>2</sup>	Growth Cost
Bush St	Marsh to College	Widen to 4 Lanes	0.90	\$1,092,125	100.0%	\$1,092,125
Bush St	College to Semas	Widen to 6 Lanes	2.00	\$931,808	100.0%	\$931,808
College Dr	Pedersen to Bush	Widen/Construct 4 Lanes	0.84	\$488,481	100.0%	\$488,481
Marsh Dr	SR 198 to Pedersen	Construct 4 Lanes	5.20	\$3,234,770	100.0%	\$3,234,770
Marsh Dr	Pedersen to Bush	Construct 4 Lanes	1.68	\$1,159,127	100.0%	\$1,159,127
Pedersen Av	Marsh to Semas	Construct 4 Lanes	3.60	\$2,345,209	100.0%	\$2,345,209
Semas Av	Bush to Pedersen	Construct 4 Lanes	2.20	\$1,695,205	100.0%	\$1,695,205
Total			16.42	\$10,946,725	100.0%	\$10,946,725

Average Cost per Lane Mile | \$666,700



## Current Level of Service

Updated Streets and Thoroughfares impact fees are based on the same level of service provided to existing development. Impact fees will be used to increase capacity through arterial improvements. As shown below in Figure 49, Lemoore's street infrastructure includes 53.2 lane miles of arterials. Based on 2016 vehicle miles of travel of 425,592 and 53.2 lane miles of arterials, the existing level-of-service standard in Lemoore is 1.25 lane miles per 10,000 VMT ( $53.2 \text{ lane miles} / [425,592 \text{ VMT} / 10,000]$ ). Shown above in Figure 48, the average cost per lane mile is approximately \$666,700 ( $\$10,946,725 / 16.42 \text{ lane miles}$ ). Applied to the current level of service, the capital cost of arterial improvements is \$83.34 per VMT ( $1.25 \text{ arterial lane miles per } 10,000 \text{ VMT} / 10,000 \text{ VMT} \times \$666,700 \text{ per lane mile}$ ).

**Figure 49: Existing Arterials**

### Allocation Factors for Arterials

Existing Lane Miles of Arterials	53.2
2016 VMT	425,592

### Level-of-Service (LOS) Standards

LOS: Arterial Lane Miles per 10,000 VMT	1.250
---	-------

### Arterial Improvement Cost Factors

Average Cost per Lane Mile	\$666,700
Capital Cost per VMT	\$83.34

Source: City of Lemoore, California.

As discussed above, maintaining the current level of service requires construction of 12.92 lane miles of arterials over the next ten years, and Figure 48 includes 16.42 lane miles of arterial improvements. Including many projects, and using the average cost of these projects, allows the construction of arterial improvements in areas where growth occurs. Previously, if a large development caused the need for arterial improvements not included in the impact fee study, Lemoore would have been required to update its fee study to include the improvement. This hybrid approach, incremental expansion based on planned projects, gives Lemoore the flexibility to identify a wide range of potential improvements and construct specific improvements in the areas experiencing growth.

## Projected Demand

As shown in Figure 47, projected VMT drives the need for arterial improvements. Over the next fifteen years, Lemoore will need 12.92 additional lane miles of arterials to maintain the current level of service. With an average cost per lane mile of approximately \$666,700, the construction of 12.92 lane miles of arterials will cost approximately \$8.6 million ( $12.92 \text{ lane miles} \times \$666,700 \text{ per lane mile}$ ). The cost per VMT for arterial improvements is \$83.34 ( $\$8,613,764 \text{ total cost} / 103,361 \text{ additional VMT}$ ).



## Traffic Signals

### Cost Factors

Shown below in Figure 50 are Lemoore's planned traffic signals. Based on these projects, the average cost to construct a traffic signal is \$140,100 (\$420,248 / 3 traffic signals). Because city staff identified other funding sources for traffic signals at Bush and Belle Haven and at Bush and 19 1/2 Avenue, the growth costs for those projects reflect the total cost of the traffic signals less other funding sources. Although Lemoore plans to eventually construct these improvements, their inclusion in this study is strictly for purposes of estimating the average cost to construct a traffic signal.

Figure 50: Traffic Signal Cost Factors

Project	Location	Improvement	2016 Estimated Project Cost <sup>1</sup>	Growth Share <sup>2</sup>	Growth Cost
Traffic Signal	Bush / College	Construct New Signal	\$338,910	100.0%	\$338,910
Traffic Signal	Bush / Belle Haven	Construct New Signal	\$338,910	12.0%	\$40,669
Traffic Signal	Bush / 19 1/2 Av	Construct New Signal	\$338,910	12.0%	\$40,669
Total			\$1,016,730	41.3%	\$420,248

Average Cost per Traffic Signal | \$140,100

### Current Level of Service

The Streets and Thoroughfares impact fee methodology contains a cost component for traffic signals. Similar to arterials, level-of-service standards for traffic signals also use vehicle miles of travel. Lemoore's current inventory includes seven city-owned traffic signals, and when allocated per 10,000 VMT, the level of service is 0.164 traffic signals per 10,000 VMT. City staff identified traffic signal improvements, shown above in Figure 50, to determine an average cost per traffic signal of approximately \$140,100. The average cost per VMT is \$2.30 (0.164 traffic signals per 10,000 VMT / 10,000 VMT X \$140,100 cost per traffic signal).

Figure 51: Existing Traffic Signals

#### Allocation Factors for Traffic Signals

Existing Traffic Signals	7
2016 VMT	425,592

#### Level-of-Service (LOS) Standards

LOS: Traffic Signals per 10,000 VMT	0.164
-------------------------------------	-------

#### Traffic Signal Cost Factors

Average Cost per Traffic Signal	\$140,100
Capital Cost per VMT	\$2.30

Source: City of Lemoore, California.

## Projected Demand

As shown in Figure 47, projected VMT drives the need for traffic signals. Over the next fifteen years, Lemoore will need 1.69 additional traffic signals to maintain the current level of service. With an average cost per unit of \$140,100, the additional 1.69 traffic signals will cost \$236,769 (1.69 units X \$140,100 per traffic signal). The cost per VMT for traffic signals is \$2.30 (\$236,769 total cost / 103,361 additional VMT).

## State Route 41 / Bush Street Interchange

Lemoore plans to construct a new interchange where State Route 41 intersects Bush Street. Based on estimates from the City of Lemoore, this planned interchange will cost \$11.0 million. Because existing development will benefit from this interchange, this component of the Streets and Thoroughfares impact fee uses a plan-based methodology to better allocate costs to existing and future development. Based on the 15-year increase in VMT, from the travel demand model in Figure 47, future development will account for 19.5 percent of VMT in 2031. Using the 15-year VMT increase as the growth share, the growth cost of the planned intersection is \$2,145,000 (\$11,000,000 total cost X 19.5 percent growth share). When the growth cost is allocated to the 15-year VMT increase, the cost per VMT is \$20.75 (\$2,145,000 growth cost / 103,361 VMT increase). Existing development's share of the planned interchange is approximately \$8.86 million and will require additional funding.

**Figure 52: State Route 41 / Bush Street Interchange Cost Allocation**

Project	Location	Improvement	2016 Estimated Project Cost <sup>1</sup>	Growth Share <sup>2</sup>	Growth Cost
Interchange	SR 41 / Bush	New Interchange	\$11,000,000	19.5%	\$2,145,000
Existing Development's Share					\$8,855,000
15-Year VMT Increase					103,361
Cost per VMT					\$20.75



## Master Plan

Lemoore's Capital Improvement Plan also includes a Streets and Thoroughfares master plan. The planned cost of the master plan is \$224,000 with 100 percent of the cost attributable to future development over the next five years. The cost per VMT is \$6.37 (\$224,000 master plan / 35,158 VMT increase).

**Figure 53: Streets and Thoroughfares Master Plan**

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Storm Drainage	\$180,000	See Storm Drainage Discussion						
Streets and Thoroughfares	\$224,000	Residential Nonresidential	100%	VMT	425,592	460,750	35,158	\$6.37
Wastewater	\$698,700	Residential Nonresidential	100%	Gallons	1,700,000	1,819,065	119,065	\$5.87
Water	\$299,100	Residential Nonresidential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.72
TOTAL		\$1,401,800						

## Impact Fee Study

Also included in the Streets and Thoroughfares impact fee is a component to reimburse the city for the cost of the development impact fee study. As shown below in, the Streets and Thoroughfares share of the study is \$11,000. This cost is allocated to new development over the next five years based on VMT. The cost per VMT is \$0.31 (\$11,000 study expense / 35,158 VMT increase).

**Figure 54: Impact Fee Study Expense**

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential Nonresidential	100%	VMT	425,592	460,750	35,158	\$0.31
Wastewater	\$11,000	Residential Nonresidential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
Water	\$11,000	Residential Nonresidential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
TOTAL		\$75,000						



## Maximum Supportable Streets and Thoroughfares Impact Fee

Figure 55 provides a summary of costs per demand unit used to calculate the Streets and Thoroughfares impact fees. As discussed previously, Streets and Thoroughfares fees are calculated based on VMT and total \$113.07 per VMT. The proposed fee for a single-family unit is \$4,897 (\$113.07 per VMT X 6.046 miles per trip X 9.32 average weekday vehicle trip ends X 63 percent trip rate adjustment X 122 percent trip length adjustment). Similarly, the cost per 1,000 square feet of industrial development is \$979 (\$113.07 per VMT X 6.046 miles per trips X 3.82 average weekday vehicle trip ends per 1,000 square feet X 50 percent trip rate adjustment X 75 percent trip length adjustment).

**Figure 55: Streets and Thoroughfares Impact Fee Schedule**

Fee Component	Cost per VMT
Arterials	\$83.34
Traffic Signals	\$2.30
Interchange	\$20.75
Streets Master Plan	\$6.37
Impact Fee Study	\$0.31
<b>TOTAL</b>	<b>\$113.07</b>
Average Trip Length	6.046

**Residential (per unit)**

Development Type	Avg Weekday Veh Trip Ends <sup>1</sup>	Trip Rate Adjustment	Trip Length Weight Factor	Proposed Fees	Current Fee	Increase / Decrease
Single Family	9.32	63%	122%	\$4,897	\$2,730	\$2,167
Multi-Unit	6.83	63%	122%	\$3,589	\$1,860	\$1,729

1. See Figure A10.

**Nonresidential (per 1,000 square feet)**

Development Type	Avg Weekday Veh Trip Ends <sup>2</sup>	Trip Rate Adjustment	Trip Length Weight Factor	Proposed Fees	Current Fee	Increase / Decrease
Industrial	3.82	50%	75%	\$979	\$895	\$84
Retail / Restaurant	42.70	33%	68%	\$6,550	\$5,902	\$648
Office / Institutional	11.03	50%	75%	\$2,828	\$1,671	\$1,157

2. See Figure A6.

## Projected Fee Revenue

Finally, the development impact fees shown in Figure 55 can be applied to projected development (see Appendix) to estimate potential revenue generated by those fees. Streets and Thoroughfares impact fee revenue is expected to total approximately \$11.23 million over the next ten years. Over the same time-period, Lemoore will spend approximately \$20.09 million on street improvements. Existing's development share, \$8.85 million, will need additional sources of funding.

**Figure 56: Streets and Thoroughfares Impact Fee Revenue Projection**

### *Streets and Thoroughfares Infrastructure Cost*

	<b>Growth Cost</b>	<b>Total Cost</b>
Arterials	\$8,613,764	\$8,613,764
Traffic Signals	\$236,769	\$236,769
Interchange	\$2,145,000	\$11,000,000
Streets Master Plan	\$224,000	\$224,000
Impact Fee Study	\$11,000	\$11,000
	<b>\$11,230,533</b>	<b>\$20,085,533</b>

### *Projected Streets and Thoroughfares Impact Fee Revenue*

		<b>Residential</b> \$4,362 per housing unit	<b>Industrial</b> \$979 per KSF	<b>Retail / Restaurant</b> \$6,550 per KSF	<b>Office / Institutional</b> \$2,828 per KSF
<b>Year</b>		<b>Hsg Units</b>	<b>KSF</b>	<b>KSF</b>	<b>KSF</b>
Base	2016	9,328	1,320	441	563
Year 1	2017	9,482	1,328	452	569
Year 2	2018	9,636	1,336	463	575
Year 3	2019	9,790	1,344	474	581
Year 4	2020	9,944	1,352	485	587
Year 5	2021	10,097	1,360	496	593
Year 6	2022	10,250	1,368	507	599
Year 7	2023	10,403	1,376	518	605
Year 8	2024	10,556	1,384	529	611
Year 9	2025	10,709	1,392	540	617
Year 10	2026	10,854	1,400	551	623
Year 11	2027	10,999	1,408	562	629
Year 12	2028	11,144	1,416	573	635
Year 13	2029	11,289	1,424	584	641
Year 14	2030	11,433	1,432	595	647
Year 15	2031	11,583	1,440	606	653
<b>15-Yr Increase</b>		<b>2,255</b>	<b>120</b>	<b>165</b>	<b>90</b>
<b>Projected Revenue =&gt;</b>		<b>\$9,835,858</b>	<b>\$112,886</b>	<b>\$1,038,243</b>	<b>\$244,464</b>
<b>Total Projected Revenues =&gt;</b>					<b>\$11,231,451</b>
<b>Total Projected Expenditures =&gt;</b>					<b>\$20,085,533</b>
<b>Revenue Needed from Existing Development =&gt;</b>					<b>\$8,854,082</b>

## WASTEWATER

### Methodology

Wastewater impact fees are derived using a plan-based approach for collection projects and incremental expansion for treatment projects. Residential impact fees are based on the persons per housing unit, the gallons per person per day, and the capital cost per gallon of system capacity. Impact fees paid by nonresidential development are derived from capacity ratios according to the size of the new customer's water meter (up to 3.0 inches). Capacity ratios were obtained from the 2016 City of Lemoore Water Rate Study. Costs per gallon capacity are based on the cost of collection projects, treatment projects, and a wastewater master plan.

### Level of Service Analysis for Wastewater Production

Wastewater production by current customers was determined from the city's utility billing records. The number of utility customers (the city does not differentiate between water and wastewater customers) and use for 2015 is shown in Figure 64. Lemoore has an estimated 6,725 customers with average daily production of 1.70 million gallons per day. This equates to average daily production of 253 gallons per day per connection – including 96 gallons per single-family unit. Per capita gallons per day estimates for residential units are also shown below and total 32 gallons per day for single-family units and 31 gallons per capita for multi-family units.

**Figure 57: Average Day Wastewater Production**

Unit Type	Gallons/Day <sup>1</sup>	Water Demand Breakdown	Connections	Gallons per Connection	Gallons Per Day Per Capita
Single Family	606,341	36%	6,325	96	32
Multi-Family	168,590	10%	219	770	31
Nonresidential	925,069	54%	181	5,111	
Total	1,700,000		6,725	253	

1. Total gallons/day figure provided by Lemoore Public Works; demand is divided among unit type using water demand percentages.



## Projection of Wastewater Production

Annual wastewater production projections are shown in Figure 65. Projected wastewater production is a function of the development projections (see Appendix) and the wastewater production factors shown above in Figure 64. Nonresidential production is projected using an average of jobs per connection calculation. Based on the projected increase in utility customers shown below, wastewater production will be approximately 2.1 million gallons per day (MGD) by 2031.

**Figure 58: Projected Wastewater Production**

Year	Avg. Gallons per Day	Single-Family Customers	Multi-Family Customers	Nonres. Customers	Total Customers	Annual Increase		Cumulative Increase	
						Customers	Avg. Gallons per Day	Customers	Avg. Gallons per Day
Base 2015		6,325	219	181	6,725				
1 2016	1,700,000	6,396	228	182	6,805				
2 2017	1,723,832	6,508	231	184	6,923	118	23,832	118	23,832
3 2018	1,747,664	6,620	235	186	7,041	118	23,832	236	47,664
4 2019	1,771,496	6,732	239	188	7,159	118	23,832	353	71,496
5 2020	1,795,328	6,844	243	190	7,277	118	23,832	471	95,328
6 2021	1,819,065	6,955	247	192	7,393	117	23,736	588	119,065
7 2022	1,842,801	7,066	250	194	7,510	117	23,736	705	142,801
8 2023	1,866,537	7,177	254	196	7,627	117	23,736	821	166,537
9 2024	1,890,273	7,288	258	198	7,744	117	23,736	938	190,273
10 2025	1,914,009	7,399	262	200	7,860	117	23,736	1,055	214,009
11 2026	1,937,032	7,504	265	202	7,971	111	23,022	1,166	237,032
12 2027	1,960,054	7,609	269	204	8,082	111	23,022	1,276	260,054
13 2028	1,983,077	7,714	272	206	8,192	111	23,022	1,387	283,077
14 2029	2,006,099	7,819	276	208	8,303	111	23,022	1,497	306,099
15 2030	2,029,052	7,924	280	210	8,413	111	22,953	1,608	329,052
16 2031	2,052,528	8,033	283	212	8,528	115	23,475	1,723	352,528

Source: TischlerBise analysis and calculation using projected development shown in Figure A13 of Appendix and production factors from previous figure.

## Collection

Figure 66 indicates Lemoore's planned collection project over the next ten years. This project's total cost is \$339,500, as determined by the Capital Improvement Plan. City staff identified a growth cost of 25 percent. The cost per gallon of capacity of \$0.20 was calculated by dividing the growth cost of future collection projects by the anticipated gallons of capacity (\$84,875 growth cost / 432,000 gallons). Based on the projection of future wastewater production (shown above in Figure 65) from the base year (2016) to 2031, TischlerBise estimates the impact fee would raise approximately \$70,506 of revenues (\$0.20 cost per gallon X 352,528 additional gallons), or 83 percent of growth-related collection project costs (\$70,506 impact fee revenue / \$84,875 growth cost).

**Figure 59: Wastewater Improvements – Collection**

Year	Project	Growth Share <sup>1</sup>	Total Project Cost <sup>1</sup>	Growth Cost	Capacity <sup>1</sup> (gallons per day)	Cost per Gallon
2018-2019	Cimarron Park Lift Station	25%	\$339,500	\$84,875	432,000	\$0.20
Total			\$339,500	\$84,875	432,000	\$0.20

1. Public Works Department, City of Lemoore, California.

## Treatment

The City of Lemoore is entering into a Joint Powers Authority relative to domestic groundwater sustainability. This action will have direct groundwater capacity ramifications that will impact Lemoore's ability to accommodate additional growth and economic development. The City of Lemoore plans to upgrade its wastewater treatment facility from secondary treatment to tertiary treatment and to extend a reclaimed water line (purple pipe) and associated lift station(s) to the golf course. By upgrading Lemoore's wastewater treatment protocol from secondary to tertiary, the city will have more options to reuse the treated effluent. The city desires to irrigate the city-owned golf course with treated water instead of domestic/potable water. This improvement will allow the golf course to eliminate its dependence on domestic/potable water and free up additional domestic water capacity.

The total cost of the wastewater treatment plant upgrade, \$50.8 million, is allocated to future development. The cost per gallon of capacity of \$20.32 is calculated by dividing the growth-related cost by the anticipated gallons per day of capacity (\$50.8 million growth cost / 2.5 million gallons of capacity). Based on the projection of future wastewater system production (shown above in Figure 65) from the base year (2016) to 2031, TischlerBise estimates the impact fee will raise approximately \$7.2 million of revenues (\$20.32 per gallon of capacity X 352,528 additional gallons), or 14.1 percent of project costs (\$7,163,369 impact fee revenue / \$50,800,000 growth cost).

**Figure 60: Wastewater Improvements – Treatment**

Year	Project	Growth Share <sup>1</sup>	Total Project Cost <sup>1</sup>	Growth Cost	Capacity <sup>1</sup> (gallons per day)	Cost per Gallon
2016-2019	Wastewater Treatment Plant	100%	\$50,800,000	\$50,800,000	2,500,000	\$20.32
Total			\$50,800,000	\$50,800,000	2,500,000	\$20.32

1. Public Works Department, City of Lemoore, California.



## Wastewater Master Plan

Lemoore's Capital Improvement Plan also includes a wastewater master plan. The planned cost of the wastewater master plan is \$698,700 with 100 percent of the cost attributable to future development over the next five years. The cost per gallon is \$5.87 (\$698,700 wastewater master plan / 119,065 gallon increase).

Figure 61: Wastewater Master Plan

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Storm Drainage	\$180,000	See Storm Drainage Discussion						
Streets and Thoroughfares	\$224,000	Residential Nonresidential	100%	VMT	425,592	460,750	35,158	\$6.37
Wastewater	\$698,700	Residential Nonresidential	100%	Gallons	1,700,000	1,819,065	119,065	\$5.87
Water	\$299,100	Residential Nonresidential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.72
TOTAL \$1,401,800								

## Impact Fee Study

Also included in the Wastewater impact fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 69, the Wastewater impact fee share of the study is \$11,000. This cost is allocated to new development over the next five years based on gallons. The cost per gallon is \$0.09 (\$11,000 study expense / 119,065 gallon increase).

Figure 62: Impact Fee Study Expense

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential Nonresidential	100%	VMT	425,592	460,750	35,158	\$0.31
Wastewater	\$11,000	Residential Nonresidential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
Water	\$11,000	Residential Nonresidential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
TOTAL \$75,000								



## Maximum Supportable Wastewater Impact Fee

Input variables for the Wastewater impact fees are shown in the upper section of Figure 70. Residential fees are calculated by multiplying the number of persons per housing unit, by type of housing unit, by the average number of gallons per person per day for that unit type. The average number of gallons per housing unit is then multiplied by the capital cost per gallon. For example, the fee calculation for a single-family unit is 2.98 persons per housing unit x 32 gallons per person per day x the capital cost per gallon of \$26.48 for a wastewater impact fee of \$2,525.

Nonresidential fees are based on size and type of water meter and their restrictive capacity. The capacity ratios by meter size and type are from the 2016 Lemoore Water Rate Study. The wastewater production of an average single-family unit is used as the basis of the calculation. The fee for a two-inch meter is \$8,080 (32 gallons per day per person X 2.98 persons per single-family unit X \$26.48 capital cost per gallon X 3.2 weighting factor for two-inch meter). For meters greater than three inches, fees are calculated by multiplying the capital cost per gallon by expected demand, since capacity ratios are no longer representative of the true cost of demand as a function of single family demand.

**Figure 63: Wastewater Impact Fees**

<i>Fee Component</i>	<i>Cost per Gallon</i>
Collection	\$0.20
Wastewater Treatment	\$20.32
Master Plan	\$5.87
Impact Fee Study	\$0.09
<b>TOTAL</b>	<b>\$26.48</b>

<i>Gallons per Day per Person</i>	
<i>Single Family</i>	<i>Multi-Family</i>
32	31

### *Residential (per unit)*

<i>Development Type</i>	<i>Persons per Housing Unit<sup>1</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Single Family	2.98	\$2,525	\$726	\$1,799
Multi-Family	2.26	\$1,855	\$570	\$1,285

1. See Figure A1.

### *Nonresidential (per meter)*

<i>Meter Size (inches)<sup>2</sup></i>	<i>Weighting Factor<sup>2</sup></i>	<i>Proposed Fees</i>	<i>Current Fee</i>	<i>Increase / Decrease</i>
Up to 1.5	1.0	\$2,525	\$2,541	-\$16
2.0 and 2.5	3.2	\$8,080	\$2,541	\$5,539
3.0	6.0	\$15,151	\$2,541	\$12,610

2. Water Rate Study for City of Lemoore, IGServe, 2016.

## WATER

### Methodology

Water impact fees are derived using a plan-based approach. Residential impact fees are based on the persons per housing unit, the gallons per person per day, and the capital cost per gallon of system capacity. Impact fees paid by nonresidential development are derived from capacity ratios according to the size of the new customer's water meter (up to 3.0 inches). Capacity ratios were obtained from the 2016 City of Lemoore Water Rate Study. Costs per gallon capacity are based on the cost of wells, transmission line projects, and a water master plan.

### Level of Service Analysis for Water Demand

Water use by current customers was determined from the city's utility billing records. The number of utility customers (the city does not differentiate between water and wastewater customers) and use for 2015 is shown in Figure 64. Lemoore has an estimated 6,725 customers with average daily demand of 5.91 million gallons per day. This equates to average daily demand of 880 gallons per day per connection – including 334 gallons per single-family unit. Per capita gallons per day estimates for residential units are also shown below and total 112 gallons per day for single-family units and 107 gallons per capita for multi-family units.

**Figure 64: Average Day Water System Demand**

Unit Type	Gallons per Day	Connections	Gallons per Connection per Day	Gallons Per Day Per Capita
Single Family	2,110,419	6,325	334	112
Multi-Family	586,792	219	2,679	107
Nonresidential	3,219,776	181	17,789	
Total	5,916,987	6,725	880	

Source: Public Works Department, City of Lemoore, California.

## Projection of Water System Demand

Annual water demand projections are shown in Figure 65. Projected water demand is a function of the development projections (see Appendix) and the water demand factors shown above in Figure 64. Nonresidential demand is projected using an average of jobs per connection calculation. Based on the projected increase in utility customers shown below, water demand will be approximately 7.2 million gallons per day (MGD) by 2031.

**Figure 65: Projected Water System Demand**

Year	Avg. Gallons per Day	Single-Family Customers	Multi-Family Customers	Nonres. Customers	Total Customers	Annual Increase		Cumulative Increase	
						Customers	Avg. Gallons per Day	Customers	Avg. Gallons per Day
Base 2015	5,916,987	6,325	219	181	6,725				
2016	5,978,408	6,396	228	182	6,805	80	61,421		
1 2017	6,061,394	6,508	231	184	6,923	118	82,986	118	82,986
2 2018	6,144,380	6,620	235	186	7,041	118	82,986	236	165,972
3 2019	6,227,366	6,732	239	188	7,159	118	82,986	353	248,958
4 2020	6,310,352	6,844	243	190	7,277	118	82,986	471	331,944
5 2021	6,393,004	6,955	247	192	7,393	117	82,652	588	414,596
6 2022	6,475,656	7,066	250	194	7,510	117	82,652	705	497,248
7 2023	6,558,308	7,177	254	196	7,627	117	82,652	821	579,900
8 2024	6,640,960	7,288	258	198	7,744	117	82,652	938	662,552
9 2025	6,723,612	7,399	262	200	7,860	117	82,652	1,055	745,204
10 2026	6,803,778	7,504	265	202	7,971	111	80,166	1,166	825,370
11 2027	6,883,944	7,609	269	204	8,082	111	80,166	1,276	905,536
12 2028	6,964,109	7,714	272	206	8,192	111	80,166	1,387	985,701
13 2029	7,044,275	7,819	276	208	8,303	111	80,166	1,497	1,065,867
14 2030	7,124,200	7,924	280	210	8,413	111	79,925	1,608	1,145,792
15 2031	7,205,943	8,033	283	212	8,528	115	81,743	1,723	1,227,535

Source: TischlerBise analysis and calculation using projected development shown in Figure A13 of Appendix and demand factors from previous figure.



## Wells

Figure 66 indicates Lemoore's planned well projects over the next ten years. These projects total approximately \$7.60 million, as determined by the Capital Improvement Plan. City staff identified growth costs associated with both planned wells – 30 percent for the southeast well and 100 percent for the northeast well. The cost per gallon of capacity of \$0.89 was calculated by dividing the growth cost of future well projects by the anticipated gallons of capacity added to the system (\$5,113,130 growth cost / 5,760,000 gallons). Capacity estimates were provided by the Public Works Department and derived from the city's water system modeling efforts. Based on the projection of future water system demands (shown above in Figure 65) from the base year (2016) to 2031, TischlerBise estimates the impact fee would raise approximately \$1.1 million of revenues (\$0.89 cost per gallon X 1,227,535 additional gallons), or 21.4 percent of growth-related well project costs (\$1,092,506 impact fee revenue / \$5,113,130 growth cost).

**Figure 66: Water Improvements – Wells**

Year	Project	Growth Share <sup>1</sup>	Total Project Cost <sup>1</sup>	Growth Cost	Capacity <sup>1</sup> (gallons per day)	Cost per Gallon
2016-2018	New Southeast Well	30%	\$3,523,765	\$1,057,130	3,168,000	\$0.33
2017-2019	New Northeast Well	100%	\$4,056,000	\$4,056,000	2,592,000	\$1.56
			\$7,579,765	\$5,113,130	5,760,000	<b>\$0.89</b>

1. Public Works Department, City of Lemoore, California.

## Transmission Lines

Figure 67 indicates Lemoore's plans for transmission projects over the next ten years. A new water line to Lemoore's north field has an estimated cost of \$5,950,000, as determined by the Capital Improvement Plan. This project includes the rehabilitation of the existing water line that will increase the existing water line's capacity by approximately 50 percent. Therefore, 50 percent of the total cost is attributable to future development – the growth share. The total cost is multiplied by the growth share to determine the growth-related cost of approximately \$3.0 million (\$5,950,000 total cost X 50 percent growth share). The cost per gallon of capacity of \$0.97 is calculated by dividing the growth-related cost of future transmission projects by the anticipated gallons per day of capacity (\$2,975,050 growth cost / 3,080,000 gallons of capacity). Based on the projection of future water system demands (shown above in Figure 65) from the base year (2016) to 2031, TischlerBise estimates the impact fee will raise approximately \$1.19 million of revenues (\$0.97 per gallon of capacity X 1,227,535 additional gallons), or 40 percent of total transmission project costs (\$1,190,709 impact fee revenue / \$2,975,050 growth cost).

**Figure 67: Water Improvements – Transmission Lines**

Year	Project	Growth Share <sup>1</sup>	Total Project Cost <sup>1</sup>	Growth Cost	Capacity <sup>1</sup> (gallons per day)	Cost per Gallon
2016-2019	New Water Line N. Field	50%	\$5,950,100	\$2,975,050	3,080,000	\$0.97
			\$5,950,100	\$2,975,050	3,080,000	<b>\$0.97</b>

1. Public Works Department, City of Lemoore, California.

## Water Master Plan

Lemoore's Capital Improvement Plan also includes a water master plan. The planned cost of the water master plan is \$299,100 with 100 percent of the cost attributable to future development over the next five years. The cost per gallon is \$0.72 (\$299,100 water master plan / 414,596 gallon increase).

Figure 68: Water Master Plan

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Storm Drainage	\$180,000	See Storm Drainage Discussion						
Streets and Thoroughfares	\$224,000	Residential Nonresidential	100%	VMT	425,592	460,750	35,158	\$6.37
Wastewater	\$698,700	Residential Nonresidential	100%	Gallons	1,700,000	1,819,065	119,065	\$5.87
Water	\$299,100	Residential Nonresidential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.72
TOTAL \$1,401,800								

## Impact Fee Study

Also included in the Water impact fee is a component to reimburse the city for the cost of the impact fee study. As shown below in Figure 69, the Water impact fee share of the study is \$11,000. This cost is allocated to new development over the next five years based on gallons. The cost per gallon is \$0.03 (\$11,000 study expense / 414,596 gallon increase).

Figure 69: Impact Fee Study Expense

Type of Infrastructure	Cost	Assessed Against	Proportionate Share	Demand Unit	2016	2021	Change	Cost per Demand Unit
Community / Rec Facility	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Fire	\$7,000	Residential	83%	Population	25,964	28,114	2,150	\$2.70
		Nonresidential	17%	Jobs	5,118	5,398	280	\$4.25
General Municipal Facilities	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Jobs	5,118	5,398	280	\$5.25
Law Enforcement	\$7,000	Residential	79%	Population	25,964	28,114	2,150	\$2.57
		Nonresidential	21%	Nonres. Trips	11,840	12,857	1,017	\$1.45
Parks	\$7,000	Residential	100%	Population	25,964	28,114	2,150	\$3.26
Storm Drainage	\$7,000	Residential	72%	Acres	890	963	73	Varies
		Nonresidential	28%	Acres	336	354	18	Varies
Streets and Thoroughfares	\$11,000	Residential Nonresidential	100%	VMT	425,592	460,750	35,158	\$0.31
Wastewater	\$11,000	Residential Nonresidential	100%	Gallons	1,700,000	1,819,065	119,065	\$0.09
Water	\$11,000	Residential Nonresidential	100%	Gallons	5,978,408	6,393,004	414,596	\$0.03
TOTAL \$75,000								



## Maximum Supportable Water Impact Fee

Input variables for the water impact fees are shown in the upper section of Figure 70. Residential fees are calculated by multiplying the number of persons per housing unit, by type of housing unit, by the average number of gallons per person per day for that unit type. The average number of gallons per housing unit is then multiplied by the capital cost per gallon. For example, the fee calculation for a single-family unit is 2.98 persons per housing unit x 112 gallons per person per day = 334 gallons per day per housing unit (rounded). This figure is then multiplied by the capital cost per gallon of \$2.61 for a water impact fee of \$871.

Nonresidential fees are based on size and type of water meter and their restrictive capacity. The capacity ratios by meter size and type are from the 2016 Lemoore Water Rate Study. The water demands of an average single-family unit are used as the basis of the calculation. The fee for a two-inch meter is \$2,788 (112 gallons per day per person X 2.98 persons per single-family unit X \$2.61 capital cost per gallon X 3.2 weighting factor for two-inch meter). For meters greater than three inches, fees are calculated by multiplying the capital cost per gallon by expected demand, since capacity ratios are no longer representative of the true cost of demand as a function of single family demand.

**Figure 70: Water Impact Fees**

Fee Component	Cost per Gallon
Wells	\$0.89
Transmission	\$0.97
Master Plan	\$0.72
Impact Fee Study	\$0.03
<b>TOTAL</b>	<b>\$2.61</b>

Gallons per Day per Person	
Single Family	Multi-Family
112	107

### Residential (per unit)

Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees	Current Fee	Increase / Decrease
Single Family	2.98	\$871	\$2,570	-\$1,699
Multi-Family	2.26	\$631	\$1,594	-\$963

1. See Figure A1.

### Nonresidential (per meter)

Meter Size (inches) <sup>2</sup>	Weighting Factor <sup>2</sup>	Proposed Fees	Current Fee	Increase / Decrease
Up to 1.5	1.0	\$871	\$8,995	-\$8,124
2.0 and 2.5	3.2	\$2,788	\$8,995	-\$6,207
3.0	6.0	\$5,227	\$8,995	-\$3,768

2. Water Rate Study for City of Lemoore, IGServise, 2016.



## APPENDIX

The population, housing unit, and job projections contained in this document provide the foundation for the impact fee study. To evaluate the demand for growth-related infrastructure from various types of development, TischlerBise prepared documentation on jobs and floor area by type of nonresidential development, average weekday vehicle trip generation rates, and demand indicators by type of housing unit. These metrics (explained further below) are the service units and demand indicators used in the impact fee study.

Impact fees are based on the need for growth-related improvements and they must be proportionate by type of land use. The demographic data and development projections are used to demonstrate proportionality and anticipate the need for future infrastructure. Demographic data reported by the U.S. Census Bureau and data provided by Lemoore staff are used to calculate base year estimates and annual projections for a ten-year horizon. Impact fee studies typically look out five to ten years, with the expectation that fees will be periodically updated (every three to five years). Infrastructure standards are calibrated using 2014 data.

### Population and Housing Characteristics

---

According to the U.S. Census Bureau, a household is a housing unit that is occupied by year-round residents. Impact fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When PPHU is used in the fee calculations, infrastructure standards are derived using year-round population. When PPH is used in the fee calculations, the impact fee methodology assumes a higher percentage of housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that impact fees for residential development in Lemoore be imposed according to the number of year-round residents per housing unit. This methodology assumes some portion of the housing stock will be vacant during the course of a year. According to the U.S. Census Bureau American Community Survey, Lemoore's vacancy rate in 2014 was approximately seven percent.

Persons per housing unit (PPHU) calculations require data on population in occupied units and the types of units by structure and bedroom count. The 2010 census did not obtain detailed information using a "long-form" questionnaire. Instead, the U.S. Census Bureau switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which has limitations due to sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses). For impact fees in Lemoore, detached units and attached units (commonly known as townhouses), which share a common sidewall, but are constructed on an individual parcel of land) are included in the "Single Family" category. The second residential category includes duplexes and all other structures with two or more units on an individual parcel of land. This category is referred to as "Multi-Family." (Note: housing unit estimates from ACS will not equal decennial census counts of units. These data are used only to derive the custom PPHU factors for each type of unit).

As shown in the bottom portion of Figure A1, dwellings with a single unit per structure (detached, attached, and mobile homes) averaged 2.98 persons per unit. Dwellings in structures with multiple units averaged 2.26 year-round residents per unit.

**Figure A1: Persons per Housing Unit, 2014**

Type of Housing	Persons	House-holds	Persons per Household	Housing Units	Persons Per Housing Unit	Housing Mix	Vacancy Rate
Single Family	19,512	6,065	3.22	6,557	2.98	74%	8%
Multi-Family	5,264	2,246	2.34	2,334	2.26	26%	4%
Total	24,776	8,311	2.98	8,891	2.79		7%

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-year Estimates.

## Current Housing Units

Shown below, Figure A2 indicates the number of housing units, by type, added annually in Lemoore. Based on estimates from the U.S. Census Bureau, Lemoore's housing stock included 8,632 housing units in April 2010. Using Lemoore's building permit data from April 2010 to July 2016, TischlerBise estimates a July 2016 inventory of 9,328 housing units.

**Figure A2: Residential Construction, 2010-2016**

	April 1, 2010 Housing Units <sup>1</sup>	Residential Construction <sup>2</sup>							Total Units Added	July 1, 2016 Housing Units <sup>3</sup>
		2010	2011	2012	2013	2014	2015	2016		
Single Family	6,366	4	18	70	95	96	62	71	416	6,782
Multi-Family	2,266	0	0	80	0	88	16	96	280	2,546
Total	8,632	4	18	150	95	184	78	167	696	9,328

1. U.S. Census Bureau, 2010 Decennial Census.

2. Department of Development Services, City of Lemoore, California.

3. TischlerBise analysis and calculation.

## Current Population Estimate

TischlerBise estimates Lemoore's July 2016 population is 25,964. This estimate is based on the number and type of residential permits issued for new construction since the 2010 Census and persons per housing unit by type of housing unit. Detail is provided below in Figure A3.

**Figure A3: Population Estimate, July 2016**

	July 1, 2016 Housing Units <sup>1</sup>	Persons Per Housing Unit <sup>2</sup>	July 1, 2016 Population <sup>3</sup>
Single Family	6,782	2.98	20,210
Multi-Family	2,546	2.26	5,754
Total	9,328		25,964

1. See Figure A2.

2. See Figure A1.

3. TischlerBise analysis and calculation.



## Residential Development Projections

To determine population growth projections for Lemoore, TischlerBise used comparison projections for Kings County. The State of California Department of Finance projects the presence of 205,206 persons in Kings County by 2035. Figure A4 indicates Lemoore's estimated share of countywide population in 2015 at 17 percent. Using this assumption, Lemoore's population is projected to reach 33,928 by 2035.

**Figure A4: Population Share**

	2000	2010	2015	2020	2025	2030	2035
Kings County <sup>1</sup>	129,461	152,892	155,122	167,465	180,355	192,562	205,206
Lemoore <sup>2</sup>	19,712	24,531	25,647	27,688	29,819	31,837	33,928
Lemoore Share	13%	16%	17%	17%	17%	17%	17%

1. 2000-2010: U.S. Census Bureau; 2015-2035: California Department of Finance, December 2014 Estimates and Projections.

2. 2000-2015: U.S. Census Bureau; 2015 from Figure A3; 2020-2035: calculated as a constant percentage of projected county population.

Using the population projections in Figure A4, TischlerBise calculated future housing unit growth at an average rate of approximately 150 units per year. Despite modest housing unit growth since 2010—an average of 100 units annually—Lemoore permitted an average of 143 units per annum from 2014 through 2016.

Population increases are dependent upon housing mix, or the share of multi-family and single-family units in a market. Maintaining the 2016 housing unit mix, single-family units account for 73 percent of the total housing stock and multi-family units account for the remaining 27 percent. Residential development projections are shown in Figure A5.

**Figure A5: Residential Development Projections**

	2016	2017	2018	2019	2020	2021	2026	2031	15-Year
	Base Yr	1	2	3	4	5	10	15	Increase
Population	25,964	26,395	26,826	27,257	27,688	28,114	30,223	32,255	6,291
Single-Family Units	6,782	6,894	7,006	7,118	7,230	7,341	7,890	8,419	1,637
Multi-Family Units	2,546	2,588	2,630	2,672	2,714	2,756	2,964	3,164	618
Total Housing Units	9,328	9,482	9,636	9,790	9,944	10,097	10,854	11,583	2,255



## Nonresidential Development Estimates and Projections

In addition to data on residential development, the calculation of impact fees requires data on nonresidential development. TischlerBise uses the term “jobs” to refer to employment by place of work.

### Nonresidential Floor Area

To convert jobs to floor area of nonresidential development, TischlerBise uses average square feet per employee multipliers, shown in Figure A6. The employee and building area ratios are derived using national data published by the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI). In the development impact fee study, vehicle trips per demand unit (i.e., one thousand square feet of floor area, beds, students, or rooms) will be used to differentiate fees by type of nonresidential development. In the table below, gray shading indicates three nonresidential development prototypes used by TischlerBise to calculate vehicle trips and potential impact fee revenue. The prototype for industrial development is manufacturing (ITE 140). The prototype for retail / restaurant development is an average-size shopping center (ITE 820), and office / institutional development uses the average-sized general office building (ITE 710) prototype.

**Figure A6: Employee and Building Area Ratios**

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit <sup>1</sup>	Wkdy Trip Ends Per Employee <sup>1</sup>	Emp Per Dmd Unit	Sq Ft Per Emp
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433
130	Industrial Park	1,000 Sq Ft	6.83	3.34	2.04	489
<b>140</b>	<b>Manufacturing</b>	<b>1,000 Sq Ft</b>	<b>3.82</b>	<b>2.13</b>	<b>1.79</b>	<b>558</b>
150	Warehousing	1,000 Sq Ft	3.56	3.89	0.92	1,093
254	Assisted Living	bed	2.66	3.93	0.68	na
320	Motel	room	5.63	12.81	0.44	na
520	Elementary School	1,000 Sq Ft	15.43	15.71	0.98	1,018
530	High School	1,000 Sq Ft	12.89	19.74	0.65	1,531
540	Community College	student	1.23	15.55	0.08	na
550	University/College	student	1.71	8.96	0.19	na
565	Day Care	student	4.38	26.73	0.16	na
610	Hospital	1,000 Sq Ft	13.22	4.50	2.94	340
620	Nursing Home	1,000 Sq Ft	7.60	3.26	2.33	429
<b>710</b>	<b>General Office (avg size)</b>	<b>1,000 Sq Ft</b>	<b>11.03</b>	<b>3.32</b>	<b>3.32</b>	<b>301</b>
760	Research & Dev Center	1,000 Sq Ft	8.11	2.77	2.93	342
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
<b>820</b>	<b>Shopping Center (avg size)</b>	<b>1,000 Sq Ft</b>	<b>42.70</b>	<b>na</b>	<b>2.00</b>	<b>500</b>

1. *Trip Generation*, Institute of Transportation Engineers, 9th Edition (2012).

## Employment and Floor Area Estimates

To determine current employment and nonresidential floor area in Lemoore, TischlerBise obtained 2014 job estimates from OnTheMap, the U.S. Census Bureau's web application. To estimate jobs in 2016, TischlerBise used nonresidential permitting data to determine additional built square footage in 2015 and 2016. According to city records, 2015 permits included 7,000 square feet of retail development and 3,706 square feet of office development, and 2016 permits included 12,600 square feet of industrial development. To convert floor area estimates to employees, TischlerBise divided total square footage by the average square feet per employee factor from Figure A6. This resulted in a 2016 employment estimate of 5,118 jobs and a nonresidential floor area estimate of approximately 2.3 million square feet.

**Figure A7: Employment and Floor Area Estimates**

Type of Development	2014 All Jobs <sup>1</sup>	2014 Breakdown	Sq Ft per Job <sup>2</sup>	2014 Floor Area <sup>3</sup>	2015 Jobs <sup>4</sup>	2015 Floor Area <sup>3</sup>	2016 Jobs <sup>4</sup>	2016 Floor Area <sup>3</sup>
Industrial	2,343	46%	558	1,307,394	2,343	1,307,394	2,366	1,319,994
Retail / Restaurant	868	17%	500	434,000	882	441,000	882	441,000
Office / Institutional	1,858	37%	301	559,258	1,870	562,964	1,870	562,964
<b>TOTAL</b>	<b>5,069</b>	<b>100%</b>		<b>2,300,652</b>	<b>5,095</b>	<b>2,311,358</b>	<b>5,118</b>	<b>2,323,958</b>

1. U.S. Census Bureau, OnTheMap web application, 2014 all jobs.

2. Trip Generation, Institute of Transportation Engineers (ITE), 9th Edition, 2012.

3. TischlerBise analysis and calculation using building permit records.

4. TischlerBise analysis and calculation using ITE employee and building area ratios and nonresidential floor area.

## Nonresidential Development Projections

City staff expects greater growth over the next fifteen years in the retail / restaurant and office / institutional sectors than in the industrial sector. While industrial jobs account for the greatest share of Lemoore's employment, national and local trends show increased demand for retail and service jobs. During the fifteen-year study period, projected industrial development accounts for approximately 30 percent of future nonresidential development. This results in a need for approximately 80,000 square feet of new industrial development over the next fifteen years. Given staff's expectation of a moderate amount of retail /restaurant development in the near future, TischlerBise projects the addition of approximately 165,000 additional square feet over the next fifteen years – approximately 45 percent of future nonresidential development. Finally, future office / institutional development was projected at approximately 25 percent of future nonresidential development. This yields a total increase of approximately 250,000 square feet over the next fifteen years, or 25,000 square feet annually. The additional square footages for each category are well within the buildout estimates included in Lemoore's 2030 General Plan Land Use Element.

Nonresidential floor area is converted to jobs by dividing floor area projections by the corresponding ITE multiplier shown in Figure A7. TischlerBise uses a three-step process to calculate projections for each year past the base year. First, nonresidential floor area is projected annually for each nonresidential prototype. Next, the annual increase in floor area by type of development is determined. Finally, TischlerBise divides the additional floor area, by type of development, by the corresponding ITE multiplier to project new jobs for each type of development. Results are shown in Figure A8.



**Figure A8: Nonresidential Development Projections**

	2016	2017	2018	2019	2020	2021	2026	2031	15-Year
	Base Yr	1	2	3	4	5	10	15	Increase
<u>Jobs</u>									
Industrial	2,366	2,380	2,394	2,408	2,422	2,436	2,506	2,576	210
Retail / Restaurant	882	904	926	948	970	992	1,102	1,212	330
Office / Institutional	1,870	1,890	1,910	1,930	1,950	1,970	2,070	2,170	300
Total Jobs	5,118	5,174	5,230	5,286	5,342	5,398	5,678	5,958	840
<u>Nonres Sq Ft in thousands (KSF)</u>									
Industrial	1,320	1,328	1,336	1,344	1,352	1,360	1,400	1,440	120
Retail / Restaurant	441	452	463	474	485	496	551	606	165
Office / Institutional	563	569	575	581	587	593	623	653	90
Total KSF	2,324	2,349	2,374	2,399	2,424	2,449	2,574	2,699	375



## Average Daily Vehicle Trips

Average Daily Vehicle Trips are used as a measure of demand by land use. Vehicle trips are estimated using average weekday vehicle trip ends from the reference book, *Trip Generation, 9<sup>th</sup> Edition*, published by the Institute of Transportation Engineers (ITE) in 2012. A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway).

### Trip Rate Adjustments

Trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent. As discussed further below, the impact fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

### Adjustment for Journey-To-Work Commuting

Residential development has a larger trip adjustment factor of 63 percent to account for commuters leaving Lemoore for work. According to the 2009 National Household Travel Survey, weekday work trips are typically 30.99 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure A9, the Census Bureau's web application, OnTheMap, indicates that 83 percent of resident workers traveled outside Lemoore for work in 2014. In combination, these factors ( $0.3099 \times 0.50 \times 0.83 = 0.13$ ) support the additional 13 percent allocation of trips to residential development.

Figure A9: Adjustment for Journey-to-Work Commuting

<i>Trip Adjustment Factor for Commuters<sup>1</sup></i>	
Employed Lemoore Residents	8,452
Lemoore Residents Working in Lemoore	1,475
Lemoore Residents Commuting Outside Lemoore for Work	6,977
<b>Percent Commuting out of Lemoore</b>	<b>83%</b>
Additional Production Trips <sup>2</sup>	13%
<b>Residential Trip Adjustment Factor</b>	<b>63%</b>

1. U.S. Census, OnTheMap Application and Longitudinal-Employer Household Dynamics (LEHD) Program.

2. According to the National Household Travel Survey (2009), home-based work trips are typically 31 percent of "production" trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, the U.S. Census Bureau's web application, OnTheMap, indicates that 83 percent of Lemoore's workers travel outside the city for work. In combination, these factors ( $0.31 \times 0.50 \times 0.83 = 0.13$ ) account for 13 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (13 percent of production trips) for a total of 63 percent.

## Adjustment for Pass-By Trips

For retail / restaurant development, the trip adjustment factor is less than 50 percent because this type of development attracts vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, ITE data indicate 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66 percent multiplied by 50 percent, or approximately 33 percent of the trip ends.

## Residential Vehicle Trip Rates

As an alternative to simply using the national average trip generation rate for residential development, the Institute of Transportation Engineers (ITE) publishes regression curve formulas that may be used to derive custom trip generation rates, using local demographic data. Key independent variables needed for the analysis (i.e. vehicles available, housing units, households and persons) are available from American Community Survey data for Lemoore. Customized average weekday trip generation rates by type of housing are shown in Figure A10. A vehicle trip end represents a vehicle either entering or exiting a development, as if a traffic counter were placed across a driveway. The custom trip generation rates for Lemoore vary slightly from the national averages. For example, single-family residential development is expected to produce 9.32 average weekday vehicle trip ends per dwelling, which is lower than the national average of 9.52 (see ITE code 210). Similarly, multi-family residential development is expected to produce 6.83 average weekday vehicle trip ends per dwelling, which is higher than the national average of 6.65.

**Figure A10: Average Weekday Vehicle Trip Ends by Housing Type**

	Households <sup>2</sup>				Vehicles per Household by Tenure
	Vehicles Available <sup>1</sup>	Single-Family Units <sup>3</sup>	Multi-Family Units	Total	
Owner-occupied	9,984	4,403	34	4,437	2.25
Renter-occupied	5,821	1,662	2,212	3,874	1.50
TOTAL	15,805	6,065	2,246	8,311	1.90

	Persons <sup>4</sup>	Trip Ends <sup>5</sup>	Vehicles by Type of Housing	Trip Ends <sup>6</sup>	Average Trip Ends	Trip Ends per Housing Unit
Single-Family Units	19,512	50,497	12,405	71,703	61,100	9.32
Multi-Family Units	5,264	18,202	3,400	13,690	15,946	6.83
TOTAL	24,776	68,699	15,805	85,394	77,046	8.67

1. Vehicles available by tenure from Table B25046, American Community Survey, 2014.

2. Households by tenure and units in structure from Table B25032, American Community Survey, 2014.

3. Single Family units include detached homes, attached homes and mobile homes.

4. Persons by units in structure from Table B25033, American Community Survey, 2014.

5. Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2012). For single-family housing (ITE 210), the fitted curve equation is  $EXP(0.91 \cdot \ln(\text{persons}) + 1.52)$ . To approximate the average population of the ITE studies, persons were divided by 35 and the equation result multiplied by 35.

6. For multi-family housing (ITE 220), the fitted curve equation is  $(3.47 \cdot \text{persons}) - 64.48$ .

6. Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2012). For single-family housing (ITE 210), the fitted curve equation is  $EXP(0.99 \cdot \ln(\text{vehicles}) + 1.81)$ . To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 48 and the equation result multiplied by 48. For multi-family housing (ITE 220), the fitted curve equation is  $(3.94 \cdot \text{vehicles}) + 293.58$ .



## Estimated Vehicle Trips

Figure A11 details the calculations used to determine that existing development in Lemoore generates an average of 62,616 inbound vehicle trips on a typical weekday. Residential development is estimated to generate 50,776 inbound trips (81 percent) compared to 11,840 inbound trips (19 percent) generated by nonresidential development. An example of the calculation for single-family units is as follows: 6,782 single-family units x 9.32 vehicle trips ends per day per unit x 63 percent adjustment factor = 39,821 total inbound vehicle trips per day from single-family units in Lemoore. The same calculation is performed for each land use type.

Figure A11: Average Daily Trips from Existing Development

Residential Vehicle Trips on an Average Weekday			2016
<b>Residential Units</b>		<b>Assumptions</b>	
Single Family		6,782	
Multi-Family		2,546	
<b>Average Weekday Vehicle Trip Ends per Unit<sup>1</sup></b>		<b>Trip Rate</b>	<b>Trip Factor</b>
Single Family		9.32	63%
Multi-Family		6.83	63%
<b>Residential Vehicle Trip Ends of an Average Weekday</b>			
Single Family	39,821		
Multi-Family	10,955		% of total
<b>Total Inbound Residential Trips</b>	<b>50,776</b>		<b>81%</b>
Nonresidential Vehicle Trips on an Average Weekday			2016
<b>Nonresidential Gross Floor Area (1,000 sq. ft.)</b>		<b>Assumptions</b>	
Industrial		1,320	
Retail / Restaurant		441	
Office / Institutional		563	
<b>Average Weekday Vehicle Trips Ends per 1,000 Sq. Ft.<sup>2</sup></b>		<b>Trip Rate</b>	<b>Trip Factor</b>
Industrial		3.82	50%
Retail / Restaurant		42.70	33%
Office / Institutional		11.03	50%
<b>Nonresidential Vehicle Trips on an Average Weekday</b>			
Industrial	2,521		
Retail / Restaurant	6,214		
Office / Institutional	3,105		% of total
<b>Total Inbound Nonresidential Trips</b>	<b>11,840</b>		<b>19%</b>
<b>TOTAL INBOUND TRIPS</b>	<b>62,616</b>		<b>100%</b>

1. Trip rates are customized for the City of Lemoore. See accompanying tables and discussion.

2. Trip rates are from the Institute of Transportation Engineers (ITE), Trip Generation Manual (2012).



## Functional Population

For certain infrastructure facilities TischlerBise often uses “functional population” to establish the relative demand for infrastructure from both residential and nonresidential development. As shown in Figure A12, functional population accounts for people living and working in a jurisdiction. Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in Lemoore are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside Lemoore are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2014 functional population data, the resulting proportionate share is 79 percent from residential development and 21 percent from nonresidential development.

Figure A12: Functional Population

	Demand Units in 2014	Demand Hours/Day	Person Hours	Proportionate Share
<b>Residential</b>				
Estimated Residents	24,924			
Residents Not Working	16,472	20	329,440	
Workers Living in Lemoore	8,452			
Residents Working in Lemoore	1,475	14	20,650	
Residents Working outside Lemoore	6,977	14	97,678	
<b>Residential Subtotal</b>			<b>447,768</b>	<b>79%</b>
<b>Nonresidential</b>				
Residents Not Working	16,472	4	65,888	
Jobs Located in Lemoore	5,069			
Residents Working in Lemoore	1,475	10	14,750	
Non-Resident Workers (Inflow Commuters)	3,594	10	35,940	
<b>Nonresidential Subtotal</b>			<b>116,578</b>	<b>21%</b>
<b>TOTAL</b>			<b>564,346</b>	<b>100%</b>

Source: U.S. Census Bureau, OnTheMap Web Application and LEHD Origin-Destination Employment Statistics, 2014.

## Development Projections

Provided below is a summary of cumulative and annual demographic and development projections to be used for the impact fee study. Base year estimates for 2016 are used in the impact fee calculations. Development projections are used to illustrate a possible future pace of demand for service units and cash flows resulting from revenues and expenditures associated with those demands.

Figure A13: Development Projections Summary

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2031	15-Year Increase
<i>Base Yr</i>	1	2	3	4	5	6	7	8	9	10	15		
<b>Population</b>	<b>25,964</b>	<b>26,395</b>	<b>26,826</b>	<b>27,257</b>	<b>27,688</b>	<b>28,114</b>	<b>28,540</b>	<b>28,966</b>	<b>29,392</b>	<b>29,819</b>	<b>30,223</b>	<b>32,255</b>	<b>6,291</b>
Single-Family Units	6,782	6,894	7,006	7,118	7,230	7,341	7,452	7,563	7,674	7,785	7,890	8,419	1,637
Multi-Family Units	2,546	2,588	2,630	2,672	2,714	2,756	2,798	2,840	2,882	2,924	2,964	3,164	618
<b>Total Housing Units</b>	<b>9,328</b>	<b>9,482</b>	<b>9,636</b>	<b>9,790</b>	<b>9,944</b>	<b>10,097</b>	<b>10,250</b>	<b>10,403</b>	<b>10,556</b>	<b>10,709</b>	<b>10,854</b>	<b>11,583</b>	<b>2,255</b>
<i>Jobs</i>													
Industrial	2,366	2,380	2,394	2,408	2,422	2,436	2,450	2,464	2,478	2,492	2,506	2,576	210
Retail / Restaurant	882	904	926	948	970	992	1,014	1,036	1,058	1,080	1,102	1,212	330
Office / Institutional	1,870	1,890	1,910	1,930	1,950	1,970	1,990	2,010	2,030	2,050	2,070	2,170	300
<b>Total Jobs</b>	<b>5,118</b>	<b>5,174</b>	<b>5,230</b>	<b>5,286</b>	<b>5,342</b>	<b>5,398</b>	<b>5,454</b>	<b>5,510</b>	<b>5,566</b>	<b>5,622</b>	<b>5,678</b>	<b>5,958</b>	<b>840</b>
<i>Nonres Sq Ft in thousands (KSF)</i>													
Industrial	1,320	1,328	1,336	1,344	1,352	1,360	1,368	1,376	1,384	1,392	1,400	1,440	120
Retail / Restaurant	441	452	463	474	485	496	507	518	529	540	551	606	165
Office / Institutional	563	569	575	581	587	593	599	605	611	617	623	653	90
<b>Total KSF</b>	<b>2,324</b>	<b>2,349</b>	<b>2,374</b>	<b>2,399</b>	<b>2,424</b>	<b>2,449</b>	<b>2,474</b>	<b>2,499</b>	<b>2,524</b>	<b>2,549</b>	<b>2,574</b>	<b>2,699</b>	<b>375</b>