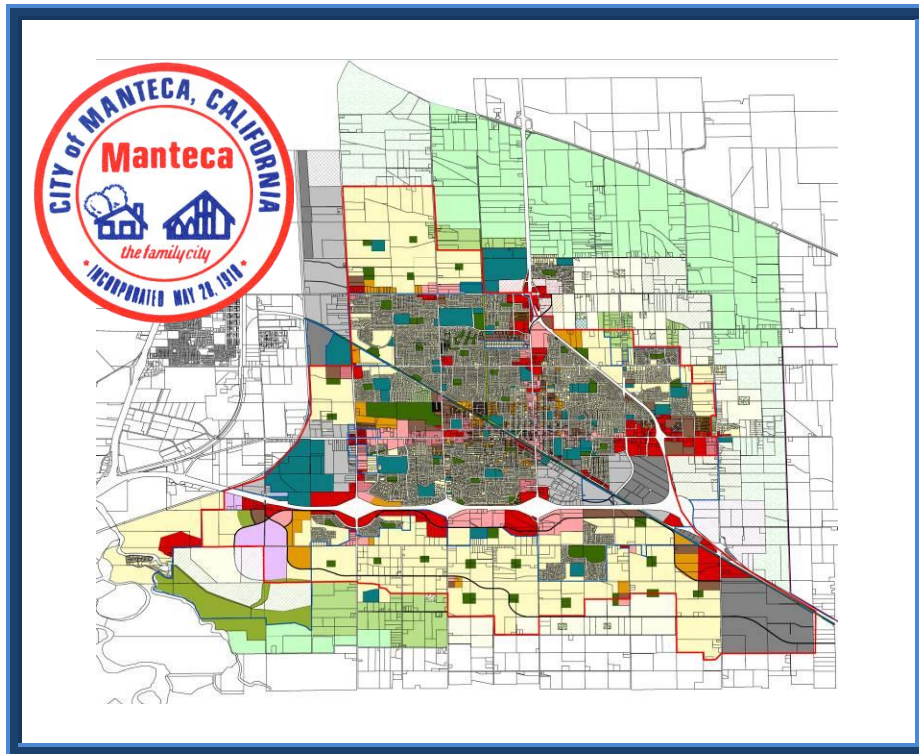


CITY OF MANTECA

2013 PUBLIC FACILITIES IMPLEMENTATION PLAN UPDATE



INITIAL ADMINISTRATIVE DRAFT

January 31, 2013

CITY OF MANTECA

**2012 PUBLIC FACILITIES
IMPLEMENTATION PLAN UPDATE**

SEALS – **CHECK IT OUT !!!**

INITIAL ADMINISTRATIVE DRAFT

January 31, 2013

Prepared by:

**City of Manteca
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Manteca, CA 95337**

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1. INTRODUCTION AND EXECUTIVE SUMMARY

The City of Manteca (City) developed the Public Facilities Implementation Plan (PFIP) as the implementing program for specific public infrastructure policies identified in the City of Manteca General Plan 2023 Policy Document (General Plan) [1]. Originally adopted in 1993, the purpose of the PFIP is to ensure that certain public infrastructure needed for growth – namely water, wastewater, storm drainage, and transportation facilities – were adequate as the City grew and developed in accordance with its General Plan. Another purpose of the PFIP was to ensure that infrastructure was constructed in a timely manner and financed in a way that equitably divided financial responsibility in proportion to the demands placed on the new facilities.

The PFIP was originally developed as a reimbursement model program that utilized developers' resources to fund and construct improvements. Developers were reimbursed either in fee credits or with funds as they were accumulated from the imposed fees. This method was successful in some aspects, but often required that developers fund substantial improvements with limited assurance of timely repayment. This situation ultimately presented significant barriers to growth.

The City desires to update the PFIP such that these barriers are reduced. To do so, the PFIP will be revised to utilize a development impact fee model wherein the City assumes some responsibility for funding and constructing major facilities, while the developers – in most cases – simply pay their proportionate share to reimburse the City for the cost to finance and construct the infrastructure.

Only water, storm drainage, and sewer collection facilities and their respective fees are updated in this 2013 Public Facilities Implementation Plan Update (2013 PFIP). Additional time is needed to prepare the transportation program element due to the complexity of the transportation facilities. The program and fees for transportation adopted previously remain in effect until updated in the future.

A. PURPOSE OF THE PFIP

The City's purpose of the PFIP is to:

- 1) Develop impact fees that are cost-competitive within the region.
- 2) Promote orderly growth in accordance with the General Plan.
- 3) Develop and maintain an impact fee program that is flexible and responsive to changing market conditions.

B. SUMMARY OF FEES

PFIP Water Fees were originally charged on a per unit basis for residential users and on a net acreage basis for other commercial and industrial users. For the 2013 PFIP, Water Fees are all based on the size of meter installed, regardless of development type, and are consistent

throughout the entire City. PFIP Water Fees are comprised of a Groundwater Supply Fee, a Peaking Facility Fee, and a Distribution System Fee. Table E-1 summarizes all three fees together. Chapter 5 provides details on each individual fee.

**Table E-1
Summary of PFIP Water Fees, \$/Meter Size**

Meter Size, in	PFIP Water Fee, \$
5/8	3,097
1	5,172
1½	10,313
2	16,508
3	30,971
4	51,629
6	103,226
8	165,169

PFIP fees for storm drainage are based on the land use type and the zone in which the parcel is located. This is the same methodology utilized in the original PFIP. However, for the 2013 PFIP, some of the original zones which are largely built out have been consolidated to simplify accounting and administration.

**Table E-2
Summary of PFIP Residential Storm Drainage Fees**

Land Use	Fee Per Dwelling Unit, \$				
	Zone 30	Zone 32	Zone 34	Zone 36	Zone 39
VLDR	122	1,466	922	2,247	927
LDR	49	587	369	899	371

**Table E-3
Summary of PFIP Non-Residential Storm Drainage Fees**

Land Use	Fee Per Acre, \$				
	Zone 30	Zone 32	Zone 34	Zone 36	Zone 39
MDR	406	4,888	3,073	7,490	3,089
HDR	528	6,354	3,995	9,737	4,016
BP	731	8,798	5,531	13,482	5,560
CMU	731	8,798	5,531	13,482	5,560
GC	731	8,798	5,531	13,482	5,560
NC	731	8,798	5,531	13,482	5,560
HI	568	6,843	4,302	10,486	4,324
LI	568	6,843	4,302	10,486	4,324
BIP	568	6,843	4,302	10,486	4,324

PFIP Sewer Fees recover the cost of providing the collection system to convey sewer generated in the City to the City’s treatment plant. The original PFIP broke the City into five financing zones, and charged per unit for residential users and per 1,000 square feet (sf) for non-residential users. In addition, some infrastructure that was amended into the PFIP was charged as a separate overlaying zone. In the 2012 PFIP, some of these financing zones have been consolidated. In addition, the basis for sewer fees has been changed. The 2013 PFIP will charge per unit for residential users but non-residential users will be charged upon usage, which will be estimated based on each development’s characteristics. This is expected to more accurately relate the cost of infrastructure to the actual demand.

**Table E-4
Summary of PFIP Residential Sewer Collection System Fees**

Land Use	Fee Per Dwelling Unit, \$				
	Zone 21	Zone 22	Zone 24	Zone 25	Zone 26
VLDR	284	1,733	1,321	317	1,081
LDR	248	1,733	1,321	317	1,081
MDR	208	1,268	966	232	791
HDR	208	1,268	966	232	791

Table E-5
Summary of PFIP Non-Residential Sewer Collection System Fees

Land Use	\$ per Gallon per Day				
	Zone 21	Zone 22	Zone 24	Zone 25	Zone 26
All Non-Residential	1.77	10.83	8.26	1.98	6.76

2. PROGRAM METHODOLOGY

A. IMPACT FEE MODEL

The PFIP has been revised to use a development impact fee model approach wherein the City assumes some responsibility for funding and constructing major facilities, while the developers – in most cases – simply pay their proportionate share to reimburse the City for the cost to finance and construct the infrastructure.

B. PROGRAM GOALS

The City's primary goals for the PFIP programs are to:

- 1) Develop impact fees that are cost-competitive within the region.
- 2) Promote orderly growth in accordance with the General Plan.
- 3) Develop and maintain an impact fee program that is flexible and responsive to changing market conditions.

C. PROGRAM FINANCING

Development impact fees are one source of financing that is within the control of the City to provide facilities to serve new development. The City also intends to participate aggressively in Regional, State, and Federal programs that may become available to finance public improvements. However, the City is not prepared to depend on these sources to pay for public improvement projects that are essential to growth and development. Thus to fund the required infrastructure, the City may utilize other sources.

D. FACILITY IMPLEMENTATION

The sequence of implementing projects for increased capacity and expanded public water, sewer, and storm improvements in the City is as follows:

- General Plan and accompanying growth management policies and ordinances are adopted.
- Facilities master plans are prepared or updated and conceptual engineering is developed to identify the new facilities/capacity that will be needed to serve the expected growth.
- These new facilities are then programmed into the City's Capital Improvement Program (CIP), which is updated annually and approved by the City Council at time of fiscal year budget adoption.

E. PROGRAM ADMINISTRATION

1. Department Responsibilities

Finance Department

- A. Administer fund accounting and monitor financial status of all PFIP funds
- B. Document, track and provide annual reporting on all loans and reimbursement obligations
- C. Calculate annual fee updates based upon ENR 20 Cities Construction Price Index
- D. Prepare Annual AB1600 Fee Mitigation Report
- E. Determine when funds are available for reimbursement and issue reimbursements

Community Development Department

- A. Condition projects
- B. Determine fee credits to be issued, and track disposition of fee credits
- C. Collect fees as described below

Public Works

- A. Update Master Plans as scheduled
- B. Program PFIP projects in City CIP
- C. Manage PFIP Capital projects through planning, design, and construction.
- D. Provide technical assistance to Finance and Community Development as needed

2. Payment of Fees

Payment of PFIP fees is due at the time of issuance of building permit. Payment of PFIP fees at occupancy of a residential or commercial facility is allowed only with City Council approval.

Fees are collected by the Community Development Department. An individual acting under the supervision of the Community Development Director accomplishes all of the following:

- Classifies the building permit application in terms of the development impact fee zone or zones that are applicable.
- Selects the development impact fee rates that are applicable.
- Calculates the total development impact fee that is due with the building permit application.
- Collects the land use description and other utility data for this particular application to monitor land use data within the City.
- Transmits the fee information to the Finance Department and the utility data to Public Works for appropriate accounting.

Receipts and disbursements of the proceeds of development impact fees are managed in accordance with the normal system of accounting and financial controls. In addition, the Community Development Director or his/her designee has a responsibility to verify that the appropriate development impact fee account has been identified when funds for each development project are encumbered. This review responsibility is particularly important in those instances where fees at different levels are collected in different geographic financing zones. Accounts are maintained contemporaneously on a transaction-by-transaction basis to assure that a proper accounting can be made and that there is a visible, understandable audit trail for the use of all development impact fees.

3. Expenditures and Reimbursements

Funds will be used to pay PFIP costs in the following priority:

1. City administration costs
2. New capital projects
3. Repayment of existing liabilities

To insure that the program has sufficient funds to be maintained appropriately, each fund will maintain a minimum balance of \$200,000. No expenditures will be made or programed when the fund balance is below that amount. Costs of City administration for the program will be deducted from the funds annually. Project-specific costs will be charged to the individual projects, which are programed and budgeted in the CIP.

When funds exceed the reserve amount, priority will be given to capital projects needed to provide facilities included in the master plans and CIP.

If no projects are currently planned, any funding in excess of the designated reserves shall be used to repay existing liabilities. Reimbursement shall be prioritized based upon: 1) date of acceptance, 2) inter-fund debt and 3) other developer liabilities.

Reimbursement for improvements will be based upon actual project costs which shall be set by publicly opened, sealed bids. Sealed bids shall be submitted to and opened by the City Clerk or their designee. In the absence of public bids, the cost may be determined by the City Engineer, but in those cases, the cost for reimbursement shall be limited to the amount programed within the PFIP at the time the project is constructed.

4. Fee Adjustments

The City will review the PFIP and each development impact fee resolution annually. Any material change in development impact fees as a result of the monitoring and review of the program would be implemented as soon as feasible. The PFIP is subject to revision due to several factors. These factors include the difficulty of forecasting the rate and location of development in the City, variations in the cost of construction of public improvements, and variation in the standards that may be applicable in the future to the design of public improvements.

Annual fee and reimbursement rate adjustments will be calculated in October of each year and will take effect in January of the following year for every year. The automatic inflation adjustment to the fees will be based upon the preceding July 20-Cities Engineering News Record Construction Cost Index (ENRCCI). Should the ENRCCI be revised or discontinued, the Director of Finance will use the revised index or a comparable index, as approved by the City Council, for determining fluctuations in the cost of development. The statute requires 60 days after adoption before fees become effective. Therefore, staff will need to process fee increases as early as possible to ensure new fees will be effective the following year.

5. Program Updates

The City intends to assure that the General Plan and the various master plans remain responsive to City policy and changing development conditions. The City intends to review both the General Plan and the facility master plans on a ten-year cycle. Policies in an amended General Plan will be incorporated into all of the City facilities master plans and into each impact fee Ordinance and Resolution.

Information about changes in the availability of Regional/State/Federal grants (principal forgiveness) and loans or other sources of revenue will be incorporated into the fee programs during the annual review.

F. NEXUS REQUIREMENTS

The PFIP incorporates CIPs and/or utilities master plans for water, sewer, and storm drainage as defined in Government Code §66002. The basis for determination of costs and fees that are provided in this document are based, in part, upon findings and conclusions provided in the utilities master plans. This PFIP document and the various utility master plans jointly identify the use to which the fee will be put and determine the reasonable relationship between a benefit, the fee's use, and the type of development project on which the fee is imposed.

G. OTHER POLICIES

1. Construction Timing

Facilities will be constructed as demand occurs and are not rigidly tied to the calendar. Thus, growth forecasts are not needed nor used in the PFIP. Accordingly, the timing of facility construction in this program is self-correcting in that:

- A slowdown in development produces a slower rate at which additional capacity will be demanded, as well as a slower rate at which development impact fees will be collected. Consequently, the construction of facilities would slow down.
- As development increases, then development impact fees will be available sooner to construct improvements for which demand has occurred sooner than expected. An excessive rate of development that is beyond that which could be accommodated because of lead time required to construct projects is unlikely because at some point, the limitations in the City Growth Management Ordinance would become effective.

2. Out-of-Sequence Construction

In some cases, development projects maybe proposed that are not proximate to existing infrastructure. In such cases, developers may advance the construction of needed PFIP infrastructure at their cost. Infrastructure included in the PFIP that is installed by developers will be eligible for reimbursement as outlined in Section 3 above. Fee credits for advance construction will only be allowed for the specific type of infrastructure constructed. For example, if a sewer facility is built, only PFIP sewer credits will be allowed, no water or storm drain fees will be credited. Interfund transfers of fee credits will not be allowed.

3. Upsizing

Sewer facilities are sized to provide adequate capacity for each of the zones. The facilities will efficiently serve development beyond 2023. Financing for oversizing of sewers will be accomplished through the utilization of business license fees collected by the City. These funds will be used exclusively for construction (no reimbursements).

4. Existing Deficiencies

If a facility improvement will remedy an existing deficiency and provide new capacity, then the cost of that facility will be allocated between new development and other financing sources as follows:

- The least-costly improvement to remedy the existing deficiency, in the absence of further growth, is identified. This cost is assumed to be the responsibility of existing funding sources and is not financed from development impact fees. The least costly improvement must be feasible and realistic.
- The cost to provide capacity for additional growth (i.e., the difference between the full cost of the improvement and the cost of the least costly improvement to remedy existing deficiencies) is financed from development impact fees.

3. DEVELOPMENT ASSUMPTIONS

A. POPULATION

Since incorporating in 1918, Manteca has been a rapidly growing city. The City experienced its highest average annual growth rate (AAGR) between 1950 and 1960 when the population grew at an AAGR of 8.04 percent. The population continued to grow at an average rate between 5 and 6 percent over the following decades (1960 to 1990) [2]. The population growth slowed slightly between 1990 and 2000, and then increased through [REDACTED]. With the recent economic downturn, population growth again slowed; but unlike other communities in the area, development in the City continued at a greater rate than surrounding cities. As of [REDACTED] the City has a population of [REDACTED].

The total land use proposed in the City General Plan will accommodate a population of 94,000 to 144,000[2]. This projection is derived through assumptions relating to residential density, the average density, the efficiency of the land use, vacancy factors, and a market reserve for each residential land use type.

Through the Growth Management Ordinance (Chapter 18.04 of the City Municipal Code) the City regulates the number of housing units approved each year according to a growth management system that reflects the availability of infrastructure, the City's ability to provide public services, housing needs, and employment growth. The Growth Management Ordinance limits population growth to 3.9 percent and development allocations are determined on a point rating system.

B. LAND USE CATEGORIES AND DENSITY ASSUMPTIONS

The land use categories are tailored to meet the specific needs of the City. Economic development opportunities, housing needs, and environmental characteristics are among the factors that determine the appropriate land use categories. The land use categories are implemented through the Manteca Municipal Code, Zoning Ordinance.

The following are abbreviated descriptions of the various land use categories and include a description of the density assumption for each category along with the floor area ratio (FAR) as outlined in the General Plan. In case of conflict, the descriptions contained in the adopted General Plan shall prevail.

Very Low Density Residential (VLDR) – less than 2 dwelling units per gross acre. The VLDR land use category provides for residences on larger lots and small, quasi-agricultural activities, including raising and boarding livestock.

Low Density Residential (LDR) – 2.1 to 8.0 dwelling units per gross acre. The LDR land use will establish a mix of dwelling unit types and character determined by the individual site and market conditions. The density range allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs.

Medium Density Residential (MDR) – 8.1 to 15 dwelling units per gross acre. The MDR use includes single family homes, smaller scale multi-family developments, including garden apartments, townhouses, and cluster housing.

High Density Residential (HDR) – 15.1 to 25 dwelling units per acre. The HDR use includes multi-family apartment style housing.

Commercial Mixed Use (CMU) – 15.1 to 25 dwelling units per acre; FAR 1.0; maximum site coverage 50%. The CMU designation accommodates a variety of purposes including high density residential, employment centers, retail commercial, and professional offices. The mixed use concept would integrate a mix of compatible uses on a single site.

Business Industrial Park (BIP) – FAR 1.0; maximum site coverage 50%. The BIP designation is intended to provide sites for large uses in an office park environment that would include multi-tenant buildings.

Business Professional (BP) – FAR 1.5; maximum site coverage 50%. The BP land use is intended primarily for office and related uses in a landscaped site. The use category is specifically intended for the frontage along State Route (SR) 120 and along other major roads and in the Central Business District (CBD). This designation provides for professional and administrative offices, medical and dental clinics, laboratories, financial institutions, public and quasi-public uses, and similar and compatible uses.

Neighborhood Commercial (NC) – FAR 2.0 in the CBD and 0.6 outside the CBD. This designation provides for locally oriented retail and service uses; offices, restaurants, and service stations; public and quasi-public uses; and similar and compatible uses.

General Commercial (GC) – FAR 0.6; maximum site coverage 40%. The GC category provides for wholesale, warehousing, and heavy commercial uses; highway oriented commercial retail; public and quasi-public uses; and similar and compatible uses. The designation is also intended to accommodate visitor commercial, lodging, commercial recreation and public gathering facilities, such as amphitheaters, or public gardens.

Light Industrial (LI) – FAR 0.7; maximum site coverage 60%. The LI designation provides for industrial parks, warehouses, distribution centers, light manufacturing, public and quasi-public uses and similar and compatible uses.

Heavy Industrial (HI) – FAR 0.5; maximum site coverage 40%. The HI designation provides for manufacturing, processing, assembling, research, wholesale, and storage uses; trucking terminals, railroad and freight stations; and similar activities that require separation from residential uses due to noise, vibration, or other characteristics incompatible with residential use.

Agriculture (AG) – The AG designation provides for agricultural uses (such as vineyards, orchards, and row crops), single family homes directly related to the agricultural use of the property, limited industrial uses directly related to agriculture, and similar and compatible uses.

Open Space (OS) – The OS category encompasses habitat, open space, natural areas, lands of special status species, wetlands, and riparian areas. These areas are set aside as permanent open space preserves to protect environmentally sensitive areas.

Park (P) – This designation provides for neighborhood, community, and regional parks; golf courses; and other outdoor recreational facilities within urban development.

Public/Quasi-Public (P/QP) – This designation provides for government-owned facilities, public and private schools, institutions, civic uses and public utilities, and quasi-public uses such as hospitals and churches.

Urban Reserve (UR) – UR is applied to many properties around the perimeter of the City. In most instances the UR category overlies another land use category. In these instances the underlying land use is the intended use when the land is ultimately annexed to the City. UR with no underlying land use indicates that the City intends to expand in the time horizon beyond the current General Plan and that it is premature to indicate a specific future land use in this area.

Floor Area Ratio (FAR): ratio of building square footage to the site area.

C. VACANT LAND INVENTORY

The City calculated the amount of vacant land remaining within the General Plan boundary and the results are summarized in Table 3-1. Plate A-1 in Appendix A provides a graphic depiction.

**Table 3-1
Summary of Undeveloped Acreage
within the City of Manteca**

Land Use Type	Undeveloped Acreage
AG	3,688.21
BIP	179.98
BP	1.00
CMU	318.69
GC	464.12
HDR	147.57
HI	738.92
LDR	3,674.98
LI	750.38
MDR	237.56
NC	56.10
OS	444.35
P	161.23
PQP	242.22
UR	1,709.09
UR-AG	1,611.85
UR-BIP	408.70
UR-CMU	435.63
UR-GC	40.43
UR-LDR	1,381.35
UR-LI	114.45
UR-MDR	19.74
UR-P	67.52
UR-PQP	11.65
UR-VLDR	627.30
VLDR	659.53
Total	18,192.57

4. PFIP FEE METHODOLOGY

A. DWELLING UNIT EQUIVALENT (DUE) FACTORS

DUEs are units of measure that standardize land use categories (residential, commercial, industrial, etc.). A low-density, single-family residential unit has a DUE factor of 1.0. The DUE factor for other land use types is developed based on the anticipated demand for each land use category relative to the demand for a low-density, single-family residential unit.

DUEs are commonly utilized to calculate the probable demand that a user places on facilities by assignment of an equivalency factor. DUEs are measured differently for each component in the PFIP. The term DUE may be used interchangeably with EDU, equivalent dwelling unit.

B. COST ESTIMATES

The facility master plans identify the public facilities to serve the forecasted development. Results of the master plan studies specify the sizes of facilities to serve the demand and represent a preliminary design level of accuracy. Opinions of probable construction cost are conceptual and are based upon information available at the time of preparation.

Appurtenant facilities have been accounted for within the unit prices. Opinions of probable cost are based upon current cost data for similar construction in the region, contractors, and suppliers. Opinions of cost are referenced to **one ENRCCI (need index number) as of _____, 2012.** Costs will be adjusted for inflation based on changes in the ENRCCI.

Estimates of environmental review cost have been included in the cost of administering the PFIP.

C. MARK-UP ASSUMPTIONS

Contingency factors have been applied to the opinions of probable construction cost. They represent a combination of factors allowing for additional costs associated with unknown site conditions, extra quantities of materials, etc. Ancillary project costs include: Design engineering including surveying, geotechnical, and other specialties; plan check; construction management; surveying; and inspection have also been estimated and are set in correlation with the anticipated level of complexity of the different types of projects.

Design services would typically include preliminary studies; plans, specifications, and estimates; and construction consultation. Based on industry accepted standards of practice and cost estimating guides, these percentages are reasonable for the type and magnitude of projects in the PFIP and are consistent with engineering practice.

D. LAND ACQUISITION ASSUMPTIONS

For the purposes of preparing the financial plan, land will be assumed to be either dedicated or purchased in accordance with Table 4-1. Generally, the land for any facility that serves an area-wide purpose will be purchased.

**Table 4-1
Land Acquisition by Dedication or Purchase**

Infrastructure Category	Facilities for Which Lands are to be Dedicated	Facilities for Which Lands are to be Purchased
Water	<ul style="list-style-type: none"> • Pipelines • Well sites (within parks) 	<ul style="list-style-type: none"> • Treatment plant • Storage tank sites • Well sites (not in parks)
Storm Drainage	<ul style="list-style-type: none"> • Detention basins serving individual and combined projects • Easements serving individual projects • Pipelines • Canals serving individual projects 	
Sewer	<ul style="list-style-type: none"> • Pipelines • Trunks 	<ul style="list-style-type: none"> • Treatment plant and disposal areas • Lift Stations

E. FEE METHODOLOGY

Development impact fees are the primary source of financing that is within the control of the City to provide facilities to serve new development. When needed, the City may pursue other funding options including private and public funding programs. However, to fund the required infrastructure, the City plans to utilize the following sources:

- Development Impact Fees paid pursuant to the PFIP will be used to finance the expansion of facilities that are necessary to accommodate the demand for new capacity.
- Inter-Account Borrowing, such as borrowing between PFIP accounts when practical or employing other comparable devices, may be used if development impact fees, considered alone, are insufficient to build public improvements when required.
- Outside Financing, such as bonds or other public financing instruments may be utilized to fund larger facilities in advance of the fees that will retire any such accumulated debt. Any such funding will require participation by the specific beneficiaries in the form of land or other source of security to insure repayment.

F. EXISTING LIABILITIES

As a result of development activity over the years, the various PFIP funds have accumulated cash balances, inter-fund borrowing obligations, and other liabilities. The PFIP fund balances as of July 1, 2012, will be used as the starting point for each zone’s initial fund balance and initial obligations. The cash balances carried over into the PFIP will be used for PFIP projects, and the obligations (liabilities) carried over into the PFIP will be retired from future fee collections under the program.

5. WATER

This chapter provides PFIP information as it pertains to the City water system. A summary of the information is as follows: 1) background; 2) facilities and costs; 3) dwelling unit equivalents; 4) fee methodology; 5) fee schedule; and 6) construction responsibilities.

A. BACKGROUND

The *City of Manteca 2005 Water Master Plan* (2005 WMP) presents the results of an evaluation of the water supply and distribution system. The planning document provides a tool for addressing changing regulations, aging infrastructure, and anticipated growth in planning future improvements to its water system through the year 2035. The purpose of the 2005 WMP is to provide a comprehensive planning document to guide improvement and expansion of the City water system to meet current and future needs for a safe, reliable water supply and distribution system.

Key objectives of the 2005 WMP affecting future development projects include the following:

- Provide a strategic approach to comply with the new maximum contaminant level (MCL) for arsenic, which took effect in January 2006, through the addition of a combination of treatment and storage facilities.
- Evaluate alternatives and plan water system improvements to facilitate delivery of the South San Joaquin Irrigation District (SSJID) surface water supply. Alternatives addressed a groundwater supply and storage plan to meet a conjunctive groundwater/surface water use approach by the City without exceeding the aquifer's safe yield.
- Update the City's existing water distribution system hydraulic model and conduct hydraulic modeling to determine distribution system expansion requirements.
- Prepare a CIP for the water system that identifies projects for completion by the City. This CIP included improvements needed for the existing system (funded by ratepayers) and growth driven improvements funded by this program.

The 2005 WMP reviews water demand required to provide for the 2023 General Plan lands within the Primary Urban Service Area (PUSA) through build out. Historically, the City has utilized separate planning documents for Zone 11 (2002 Water Master Plan) and Zone 12 (1993 PFIP) to define the required capital improvements. The earlier area contained in Zone 11 included the existing developed portions of Manteca with growth generally limited to infill development and redevelopment. The earlier area contained in Zone 12 included the lightly developed lands that could be characterized as agricultural areas with significant urban development potential. However, because the City water system operates as a single system, the City uses one planning document for all areas, which have been merged into a single zone designated as Zone 12. See Plate B-1 in Appendix B for a depiction of Zone 12.

B. FACILITIES AND COSTS

New water supply comes from groundwater and surface water. Groundwater supply is limited to safe yield limits and surface water supply is limited to capacity available at the South San Joaquin Irrigation District (SSJID) water plant. Service is provided by a network of water wells, storage tanks, and distribution pipelines. The water system for current and future users will be operated as a single pressure zone.

1. Groundwater Supply Facilities

New wells will be located as needed to supplement existing groundwater and surface water supplies, optimize distribution, and maintain minimum pressures during peak conditions throughout the system.

2. Water Treatment Facilities

With the increase in regulations, treatment of groundwater has become a standard expense, even on newer wells. The City anticipates having to provide treatment for a significant portion of new wells. Currently the City provides treatment on 76 percent of the City wells for arsenic, volatile organic compounds, or other constituents. The hope or expectation that new wells would require less treatment is offset by the potential for additional regulation that could increase water treatment requirements. Hence, for planning purposes, the PFIP anticipates funding treatment at the same ratio.

3. Costs

Costs for major water infrastructure (wells and tanks) are based upon the capacity provided by each water facility, the users' anticipated demand determined by the size of meter, and current engineer's opinion of probable costs. The need for water mains is based upon the pipe system outlined in the 2005 WMP and updated as needed to serve the areas included in the City General Plan.

C. DWELLING UNIT EQUIVALENTS

All PFIP water fees will be charged based upon the meter size installed. A 5/8-inch water meter is the standard meter for a single family residence or single equivalent dwelling unit (EDU) and is considered an EDU factor of 1.0. Larger meters and their respective hydraulic capacity/EDU factor are shown in Table 5-1.

**Table 5-1
Water Meter Hydraulic Capacity/EDU Factors**

Meter Size, in	Hydraulic Capacity/ EDU Factor
5/8	1.00
1	1.67
1½	3.33
2	5.33
3	10.00
4	16.67
6	33.33
8	53.33

D. FEE METHODOLOGY

The City has established a fee structure that allocates costs to construct water infrastructure related to new development. There are two types of fees assessed, non-PFIP fees which have been adopted by separate City resolutions, and PFIP fees which are adopted by this document. Brief descriptions of what are included in the fees are provided. Descriptions of the non-PFIP fees are provided for informational purposes only. Because these fees are adopted by separate City resolution, policies related to these fees including fee adjustments are identified in other City documents.

1. Non-PFIP Fees

Meter Installation Fee: The Meter Installation Fee recovers the City’s cost to install new water meters. The fee includes the cost of the meter, meter box, pipe fittings, labor, and equipment charges.

Surface Water Debt Fee: The Surface Water Debt Fee is development’s proportionate share of the capitalized costs of the surface water treatment system and transmission system.

Surface Water Capital Fee: The Surface Water Capital Fee is development’s proportionate share of ongoing capital improvement projects to improve, upgrade, and rehabilitate the surface water treatment system and transmission system.

2. PFIP Fees

Groundwater Supply Fee: The Groundwater Supply Fee recovers the cost of new well construction required to supply water to new development. The costs include: environmental fees; test wells; well drilling, casing and development; consulting services; electrical service charges; and water treatment systems.

Peaking Facility Fee: The Peaking Facility Fee recovers the cost to construct water storage and booster pumping facilities to provide peaking demand and fire flows for new development. The costs include: environmental fees; site acquisition; consulting services; electrical service charges; and construction of tanks and booster pumping facilities.

Distribution System Fee: The Distribution System Fee will reimburse developers for the cost of oversizing public water mains installed in the public right of way.

E. FEE SCHEDULE

The PFIP fees described above combine to establish the PFIP Water Fee. Table 5-2 summarizes the fees by meter size. The tables in Appendix B identify the costs and calculations associated with the PFIP fees.

**Table 5-2
Summary of PFIP Water Fees by Meter Size**

Meter Size, in	Groundwater Supply Fee, \$	Peaking Facility Fee, \$	Distribution System Fee, \$	PFIP Water Fee, \$
5/8	968	1,489	640	3,097
1	1,616	2,487	1,069	5,172
1½	3,223	4,958	2,132	10,313
2	5,159	7,936	3,412	16,508
3	9,680	14,890	6,402	30,971
4	16,136	24,822	10,671	51,629
6	32,262	49,628	21,336	103,226
8	51,621	79,408	34,139	165,169

For informational purposes only, Table 5-3 provides a summary of the current non-PFIP fees by meter size.

Table 5-3
Summary of Non-PFIP Water Fees by Meter Size

Meter Size, in	Non-PFIP Fees, \$
5/8	3,563
1	5,885
1½	11,647
2	18,381
3	36,482
4	59,312
6	121,919
8	191,550

F. CONSTRUCTION RESPONSIBILITIES

The City and developer have responsibilities for construction of water facilities as follows:

1. City Responsibilities

The City will construct all wells and storage tanks. The City may also install some water transmission and/or distribution mains needed for looping or redundancy.

2. Developer Responsibilities

The developer will be responsible for construction of the distribution system and dedication of well and tank sites as described below.

a) Distribution System

Water mains will be installed by developers as outlined in the 2005 WMP on a typical one-half mile grid spacing. All development projects that construct streets on this grid will be responsible for installing a minimum 12-inch water main with associated appurtenances (valves, hydrants, etc.).

Developers that install water mains on the main grid and/or oversize water mains on the interior grid may be entitled to reimbursement at the rate provided in Appendix B.

Reimbursements are contingent on the availability of funds for such purpose, based on order of project acceptance by the City in the following order of priority:

- All water mains on the one-mile grid or “Main Grid” will be subject to reimbursement for oversizing for the amount per foot shown in Table B-7 in Appendix B.

- Larger water mains (16-inch to 18-inch diameter) shall be installed at locations on the Main Grid as needed to provide efficient movement and distribution of water through the City system and will be subject to reimbursement for the amount per foot shown in Table B-7 in Appendix B. Actual location of large mains shall be as directed by the City.
- All in-tract water mains on the “Interior Grid,” which are spaced roughly on the half mile grid, shall be 12-inch diameter and will be reimbursed based upon the “oversizing” of water mains from an 8-inch to 12-inch.

b) Well and Tank Sites

To provide sufficient opportunity for placement of productive groundwater facilities or wells, the City will require the dedication of a suitable well site within every quarter section. All projects that include the development of more than 80 acres within any given quarter section shall offer for dedication a suitable well site for exclusive use of the installation of a water well and any needed treatment facilities.

Prior to the dedication of the well site, the developer shall provide access and permission to the City to complete an exploratory well or test well. If the test well is successful, the offer of dedication will be accepted. If the test well is not successful, the developer shall provide an alternate site at an agreed upon location for a second test well.

A suitable well site shall be at least 5,000 sf and shall be fenced appropriately.

Developers that dedicate a well site may be entitled to a reduction in the Groundwater Supply Fee. Should the cost of the dedicated site exceed the Groundwater Supply Fee obligation, the City will enter into an agreement with the developer to reimburse the developer for the cost of the dedicated site, including an amount attributable to interest. The fee reduction and/or reimbursement amount for the well site is provided in Appendix B. Reimbursements are contingent on the availability of funds for such purpose. Funding for well site reimbursement will come solely from the Groundwater Supply Fee Fund.

Tank sites will be dedicated as needed to support development. Developers that dedicate tank sites may be entitled to a reduction in the amount of the Peaking Facility Fee. Should the cost of the dedicated site exceed the Peaking Facility Fee obligation, the City will enter into an agreement with the developer to reimburse the developer for the cost of the dedicated site, including an amount attributable to interest. The fee reduction and/or reimbursement amount for the tank site is provided in Appendix B. Reimbursements are contingent on the availability of funds for such purpose.

Reimbursement for dedicated tank sites will only be made after the tanks are installed and functional. Other tank sites may be acquired by the City or may be a consideration of project approval. Funding for tank site reimbursement will come solely from the Peaking Facility Fee Fund.

All well and tank sites shall be as approved by the Director of Public Works and may be combined with other public facility sites such as parks or landscape strips where feasible.

3. Construction Sequencing

While pressurized systems can be installed virtually anywhere, the City generally plans to install new supply and peaking facilities in a concentric manner starting at the perimeter of the existing water system. This is to provide for redundancy and to ensure that fire flow demands are met for additions to the water system.

6. STORM DRAINAGE

This chapter provides PFIP information as it pertains to the City storm drainage system. A summary of the information is as follows: 1) background; 2) facilities and costs; 3) dwelling unit equivalents; 4) fee methodology; 5) fee schedule; and 6) construction responsibilities.

A. BACKGROUND

The *Storm Drain Master Plan 2012* (2012 SDMP) provides a comprehensive planning document to guide improvement and expansion of the City's storm drainage system to meet current and future needs in a safe and reliable manner while maintaining compliance with all applicable regulations.

Key objectives of the 2012 SDMP affecting future development include the following:

- Compliance with the provisions of the SSJID/City Master Drainage Agreement.
- Compliance with stormwater quality provisions in the State Water Resources Control Board's stormwater NPDES permit for Phase II cities.
- Adherence to the drainage methodology.

The 2012 SDMP evaluates drainage from the 2023 General Plan lands within the PUSA through build out. Five planning zones have been identified to define the capital improvements needed to serve future growth: Zones 30, 32, 34, 36 and 39. With the exception of drainage Zone 39, all drainage zones are located in the SSJID service area. See Plate C-1 in Appendix C for a depiction of the drainage zones.

B. FACILITIES AND COSTS

Stormwater control is essential to protect the City from flooding during storm events. This protection is provided through a series of storm drains, detention basins, and pumping facilities. For zones within the SSJID service area, the City has an agreement with SSJID to allow discharge into the SSJID facilities. SSJID facilities then convey the runoff to the San Joaquin River. While areas of the City currently are allowed to have direct discharge to SSJID facilities, new development cannot discharge direct to the SSJID facilities and attenuation facilities must be installed to control the runoff. For development in Zone 39, which is outside the SSJID service area, separate facilities will be constructed to convey the runoff to one regional pump station that will discharge into Walthall Slough.

Development is required to install attenuation facilities for control of storm runoff within their area of influence. Through the collection of PFIP fees, the City will construct the necessary pipelines and pump stations to convey stormwater to the appropriate discharge points.

The total storm drainage CIP construction cost is approximately \$17,530,000 of which \$2,612,500 is the responsibility of SSJID and not included in the PFIP fee calculation.

C. DWELLING UNIT EQUIVALENTS

Allocation of costs is based on run-off coefficients (“C” factor). Table 6-1 provides a summary of the C factor and EDU factor by land use type.

**Table 6-1
Storm Drainage C Factors and EDU Factors**

Land Use	C Factor per EDU	EDU Factor
VLDR	0.1500	2.50
LDR	0.0600	1.00
MDR	0.0556	0.93
HDR	0.0382	0.64
AG	0.0600	1.00
BP	0.9000	15.00
CMU	0.9000	15.00
GC	0.9000	15.00
NC	0.9000	15.00
HI	0.7000	11.67
LI	0.7000	11.67
BIP	0.7000	11.67

D. FEE METHODOLOGY

Allocation of costs is based on run-off coefficients utilized per land use.

E. FEE SCHEDULE

The costs of facilities and the division of construction costs among the fee zones are summarized in Table 6-2. Table C-4 in Appendix C provides a breakdown of the projects and an allocation of projects costs to the individual zones.

Table 6-2
Projected Storm Drainage Project Costs by Zone

Parameter	Cost, \$
Zone 30	348,984
Zone 32	2,219,860
Zone 34	1,465,928
Zone 36	7,282,301
Zone 39	1,540,000
SSJID Costs ^a	2,612,500
Total Project Costs	15,469,573

^a Portion of project costs to be paid by SSJID based on the SSJID/City drainage agreement.

The PFIP Storm Drainage Fees are provided in Table 6-3 for residential land uses and Table 6-4 for non-residential land uses.

Table 6-3
Summary of PFIP Residential Storm Drainage Fees

Land Use	Fee Per Dwelling Unit, \$				
	Zone 30	Zone 32	Zone 34	Zone 36	Zone 39
VLDR	122	1,466	922	2,247	927
LDR	49	587	369	899	371

Table 6-4
Summary of PFIP Non-Residential Storm Drainage Fees

Land Use	Fee Per Acre, \$				
	Zone 30	Zone 32	Zone 34	Zone 36	Zone 39
MDR	406	4,888	3,073	7,490	3,089
HDR	528	6,354	3,995	9,737	4,016
BP	731	8,798	5,531	13,482	5,560
CMU	731	8,798	5,531	13,482	5,560
GC	731	8,798	5,531	13,482	5,560
NC	731	8,798	5,531	13,482	5,560
HI	568	6,843	4,302	10,486	4,324
LI	568	6,843	4,302	10,486	4,324
BIP	568	6,843	4,302	10,486	4,324

F. CONSTRUCTION RESPONSIBILITIES

The City and developer have responsibilities for construction of storm drainage facilities as follows:

1. City Responsibilities

SSJID Drain Improvements: Per the 2013 SDMP, the City will construct a new pipeline to increase the capacity of Drain 5 to accommodate future flows. The Drain 5 improvement costs are included in the Zone 34 PFIP fee structure.

Zone 32 Conveyance Improvements: The City will construct a new pipeline to connect Lateral Rga to Drain 3 per the 2012 SDMP. The cost of this connector pipe is included in the Zone 32 PFIP fee structure.

Zone 36 Improvements: The City will construct a drainage pipeline in Woodward Avenue – known as the South Drain – to serve as the main stormwater conveyance facility for Zone 36. The City will also construct a pump station and force main – called the South Drain Pump Station and Force Main – to convey storm water from the South Drain Pipeline to the French Camp Outlet Canal (FCOC). In addition, the City will construct several junction structures to divert water from the dual use laterals to the South Drain. The cost of the South Drain, South Drain Pump Station and Force Main, and the junction structures are included in the Zone 36 PFIP fee structure.

Water Level Monitoring Stations: The City will construct water level monitoring facilities in the various PFIP zones and in the FCOC to monitor water elevations in real-time to prevent flooding caused by additional drainage flows. Each zone's proportionate share of the water level monitoring stations is included the various PFIP zone fees.

FCOC Culvert Crossing Improvements: As identified in the 2013 SDMP, several existing culvert crossings in the FCOC need improvement to accommodate additional drainage flows. The existing SSJID/City drainage agreement contains cost-sharing provisions regarding these culvert crossing improvements wherein both parties share equally in the costs. The City or SSJID will construct the culvert crossing improvements, and the City's 50 percent cost share for all FCOC improvements needed for growth is included in the PFIP fee structure. The FCOC culvert crossing improvement costs are spread proportionately among the PFIP zones based upon the contribution of each zone.

2. Developer Responsibilities

Local Drainage Management Facilities: Developers will install, at their expense, local drainage collection, attenuation, pumping, and conveyance facilities necessary to serve their development. This includes facilities needed to convey stormwater from development projects to the nearest SSJID dual-use lateral. It is also the responsibility of the developer to collect and convey drainage from arterial streets adjacent to their projects to the local attenuation facility.

While the City encourages regionalization of attenuation facilities, this effort is left to the developers to make arrangements amongst themselves. Should developers reach an arrangement for a regional attenuation facility, the City will support this effort by establishing and administering an area of benefit (AOB) for the regional facility. Costs for local collection facilities and local/regional attenuation facilities are not included in the PFIP program.

SSJID Lateral Improvements: SSJID laterals will be used to convey stormwater from the local/regional attenuation facilities to SSJID drains or the South Drain. While laterals are important conveyance facilities, all costs to replace and/or upsize the existing laterals are not included in the PFIP for the reasons described below.

SSJID laterals are found throughout the existing and undeveloped areas of the City; and virtually all existing laterals in the PFIP planning area are 42-inch diameter in size, which is the size needed to convey build-out storm flows at the 96-hour drainage rate. Also, SSJID requires new development projects that disturb their laterals to remove, realign, and replace the laterals, at the developer's expense, with at least the same diameter pipe as the existing lateral. Moreover, SSJID requires an increase in pipe diameter to the next standard pipe size (or more) to account for additional headloss created by any pipeline realignments. Because these are SSJID requirements, there are no replacement and/or upsizing costs in the PFIP.

The City does acknowledge the possibility that an existing SSJID lateral in the PFIP planning area may be less than 42-inch diameter. In the event that a lateral is found to be less than 42-inch diameter and should SSJID not require the replacement pipe to be at least a 42-inch pipe, the City will require the developer to upsize the pipe to 42-inch diameter. Should this situation occur, the developer will be reimbursed the incremental cost increase of a 42-inch pipe per the reimbursement policies in Chapter 2

Zone 39 Improvements: Zone 39 is outside of the SSJID service area, and therefore SSJID facilities cannot be used to convey runoff from this area. As a result, the 2013 SDMP identifies a conveyance and disposal system separate from SSJID facilities for this zone. The storm infrastructure needed for Zone 39 will be funded and constructed by the developer to first develop in this zone. Because this infrastructure will be sized to serve all of Zone 39, the developer will be reimbursed the cost of these facilities, less their proportionate share, in accordance with the reimbursement policies in Chapter 2.

7. SEWER COLLECTION

This chapter provides PFIP information as it pertains to the City sewer collection system. A summary of the information is as follows: 1) background; 2) facilities and costs; 3) dwelling unit equivalents; 4) fee methodology; 5) fee schedule; and 6) construction responsibilities.

A. BACKGROUND

The 2012 Wastewater Collection System Master Plan Update (2012 WWCSMP) has been developed to ensure that the City's trunk sewer system can cost-effectively meet the demands of development goals adopted in the General Plan with appropriate consideration of construction costs and operation and maintenance issues.

As part of the 2012 WWCSMP, residential wastewater generation factors (WGFs) for future development were reduced to reflect upcoming water conservation legislation for residential development based on a generation factors study. The study also focused on reductions of industrial and general commercial WGFs to reflect historical water use data from local businesses.

The 2012 WWCSMP evaluates wastewater conveyance requirements through buildout based on the 2023 General Plan for lands within the PUSA. Five planning zones have been delineated to define the capital improvements need to serve future growth: Zones 21, 22, 24, 25, and 26. See Plate D-1 in Appendix D for a depiction of the sewer zones.

B. FACILITIES AND COSTS

The overall collection sewer strategy consists of a combination trunk sewer gravity collection system with pump or lift stations located along the alignment to convey wastewater to an influent pump station located at the City Wastewater Quality Control Facility (WQCF). The North Manteca Collection Strategy (NMCS) and South Manteca Collection Strategy (SMCS) will collect flow from areas where future growth is expected. The Central Manteca Collection Strategy (CMCS) will connect the existing collection system to the NMCS.

Construction of the NMCS, SMCS, and CMCS were grouped into potential projects for implementation in the future as part of the City CIP. The total wastewater collection system CIP construction cost is approximately \$54,936,000 of which \$5,940,000 is related to existing development and not included in the PFIP fee calculations.

C. DWELLING UNIT EQUIVALENTS

Wastewater generation factors (WGF) are utilized to calculate the anticipated wastewater flows generated by residential, commercial, and industrial development. The 2012 WWCSMP utilizes updated wastewater generation factors for future residential, commercial, and industrial land uses based on water conservation legislation for residential development and historical water use data from local businesses [3].

1. Residential

California approved the 2010 California Green Building Standards Code (CALGreen 2010) which requires new buildings in California to become more efficient by mandating new construction to meet minimum standards. CALGreen 2010 requires a 20 percent reduction in indoor water use from the 2008 Title 24 baseline. Other legislation and water conservation programs include the 20x2020 Water Conservation Plan, LEED, Senate Bill (SB) 407, and EPA WaterSense® Program, each of which have similar goals in water use reduction and efficiency to CALGreen.

With the new CALGreen legislation and other water conservation programs, indoor water use (and wastewater flows) is expected to decrease significantly for new residential development.

2. Commercial

WGFs for general commercial land uses in the City were updated in the 2012 WWCSMP after reviewing historical water usage data from existing commercial developments at Spreckels Park and Big League Dreams.

3. Industrial

WGFs for heavy and light industrial land uses in the City were updated in the 2012 WWCSMP after reviewing historical water usage data from existing industrial developments.

4. Equivalent Dwelling Units

Based on the WGFs by land use type, Table 7-1 provides the per unit EDU factor for each land use.

**Table 7-1
Summary of Wastewater EDU Factors**

Land Use	EDU Factor
VLDR	1.00
LDR	1.00
MDR	0.73
HDR	0.73
BIP	7.50
CMU	15.46
GC	4.69
HI	6.25
LI	6.25
NC	7.00
P	2.50
PQP	2.66

D. FEE METHODOLOGY

This section describes the non-PFIP and PFIP fees and also briefly summarizes how project costs are developed.

1. Non-PFIP and PFIP Fees

The City has established a fee structure that allocates costs to construct sewer infrastructure related to new development. There are two types of fees assessed, non-PFIP fees which have been adopted by separate City resolutions and PFIP fees which are adopted by this document. Brief descriptions of what are included in the fees are also provided. Descriptions of the Non-PFIP fees are provided for informational purposes only. Because these fees are adopted by separate City resolution, policies related to these fees including fee adjustments are identified in other City documents.

a) Non-PFIP Fees

Wastewater Connection Fee: The WQCF Phase III Expansion Project corrected a number of existing deficiencies at the plant and thus benefited current rate payers. Based on an analysis of project costs and proposed improvements, the expansion costs were allocated between rate payers and new development.

The Wastewater Connection Fee was imposed in 2003 on new development during the Phase III Expansion in lieu of development impact fees. The Wastewater Connection Fee varies based on the timing of the development in relation to the Expansion Schedule(s) under construction. For reference, these fees are **outlined in Appendix D, Table D-X.**

WQCF Phase 3 Completion Fee: As part of a sewer rate study in 2007-2008, the connection fee schedule was re-evaluated to account for actual project costs. The study found that the Wastewater Connection Fee for the Phase III Expansion Project needed to be increased to repay the interfund loan obligations and the additional debt needed to complete the project. To comply with bonding requirements, a separate fee, called the WQCF Phase 3 Completion Fee, was implemented. For reference, these fees are **outlined in Appendix D, Table D-X.**

b) PFIP Fees

The Sewer Collection System Fee will fund the installation of pipelines and pump stations needed to serve future growth. The fee will also finance administration of the fund and advance planning for system and processing expansion.

2. Facility Costs

Facilities are sized to accommodate the projected flows along the route. The following method was used to estimate wastewater flow:

- Establish sewer shed boundaries to assign areas which will contribute flow to the trunk sewer.
- Obtain land use information for each shed from the General Plan land use diagram.
- Multiply land use areas within each shed by the corresponding WGF to obtain the projected average dry weather flow (ADWF) for each shed.
- Estimate peak wet weather flow (PWWF) by multiplying the projected ADWF with the peaking factor (PF). PWWF is the flow used to size trunk sewers, pump/lift stations, and force mains.

Unit costs were developed in the 2012 WWCSMP for sewers, manholes, isolation gates, and other elements identified as recommended improvements. Construction costs for the NMCS, SMCS, and CMCS were divided by fee zone for each link or element, where applicable. Costs for the zones contributing to each link were calculated based on ADWF.

E. FEE SCHEDULE

The costs of all the facilities included in the NMCS, SMCS, CMCS and the division of construction costs among the fee zones is summarized in Table 7-2. Table D-X in Appendix D provides a breakdown of the projects and an allocation of projects costs to the individual zones.

**Table 7-2
Projected Sewer Project Costs by Zone**

Parameter	Cost, \$
Zone 21	2,252,164
Zone 22	18,520,410
Zone 24	27,860,746
Zone 25	2,902,369
Zone 26	1,766,925
City Costs ^a	6,425,266
Total Project Costs	59,727,880

^a Portion of project costs to be paid by the City to alleviate existing deficiencies.

The PFIP Sewer Collection System Fees for residential land uses are provided in Table 7-3. The fees for non-residential land uses are provided in Table 7-4

**Table 7-3
Summary of PFIP Residential Sewer Collection System Fees**

Land Use	Fee Per Dwelling Unit, \$				
	Zone 21	Zone 22	Zone 24	Zone 25	Zone 26
VLDR	284	1,733	1,321	317	1,081
LDR	248	1,733	1,321	317	1,081
MDR	208	1,268	966	232	791
HDR	208	1,268	966	232	791

**Table 7-4
Summary of PFIP Non-Residential Sewer Collection System Fees**

Land Use	\$ per Gallon per Day				
	Zone 21	Zone 22	Zone 24	Zone 25	Zone 26
All Non-Residential	1.77	10.83	8.26	1.98	6.76

F. CONSTRUCTION RESPONSIBILITIES

The City and developer have responsibilities for construction of sewer facilities as follows:

1. City Responsibilities

As funds are available, the City will construct the major sewer facilities as shown in the 2012 WWCSMP. If insufficient funds are available, developers may advance construction by

providing funding following City approval. In such an event, developers shall be entitled to reimbursement for costs in accordance with the PFIP reimbursement policy.

2. Developer Responsibilities

Developers will install, at their expense, local collection and conveyance facilities necessary to serve their development.

3. Construction Sequencing

The gravity-based sewer systems will be constructed concentrically outward beginning with the infrastructure with the lowest invert elevations and advancing in sequence to the infrastructure with the highest invert elevations. This approach will be used to ensure that newly installed facilities can be put into service immediately. For sewer facilities, the lowest elevation is the influent pump station wet well at the WQCF.

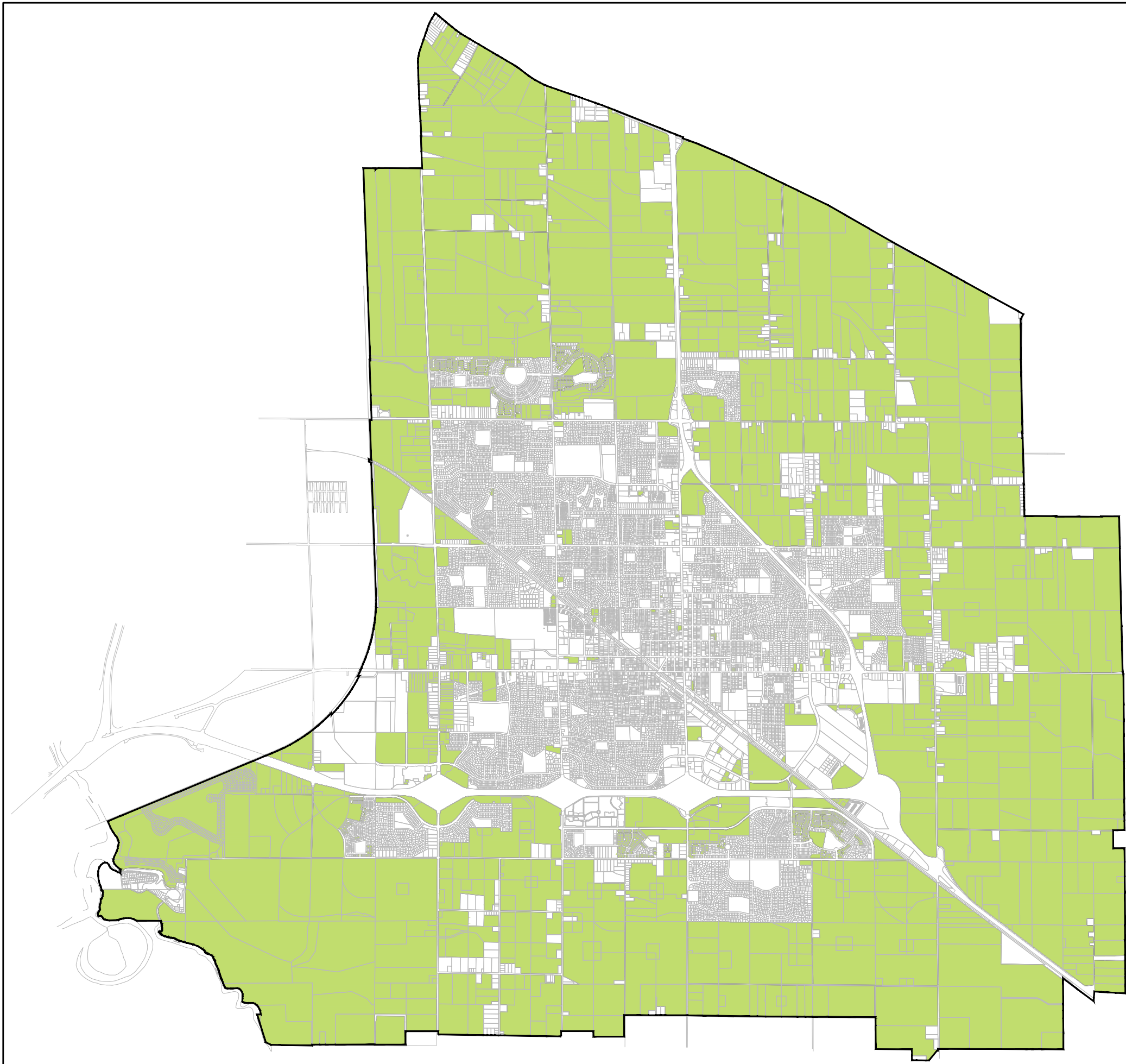
8. TRANSPORTATION

This section will be added by addendum when complete.


9. REFERENCES

- [1] *City of Manteca General Plan 2023 Policy Document*, Adopted October 6, 2003; Housing Element Amended June 15, 2010; Circulation Element Amended April 5, 2011
- [2] *Manteca General Plan Housing Element*, Mintier Harnish Planning Consultants, Adopted June 15, 2010
- [3] *Wastewater Generation Factors, Technical Memorandum – Draft*, Nolte Associates, Inc., November 2010.

Appendix A
Vacant Land Inventory



LEGEND

 VACANT PARCEL

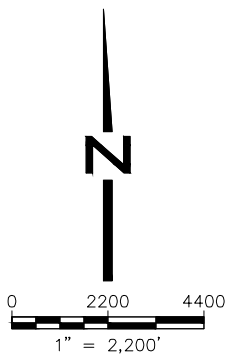


PLATE A-1

**CITY OF MANTECA 2012 PUBLIC FACILITIES
IMPLEMENTATION PLAN UPDATE**

VACANT LAND



Appendix B
Water Data

**Table B-1
City of Manteca
PFIP Water Fee
Summary of PFIP Fees**

Meter Size	Hydraulic Capacity Factor	PFF Fees			
		Groundwater Supply Fee	Peaking Facility Fee	Distribution System Fee	Total
5/8"	1.00	\$968	\$1,489	\$640	\$3,097
1"	1.67	\$1,616	\$2,487	\$1,069	\$5,172
1 1/2"	3.33	\$3,223	\$4,958	\$2,132	\$10,313
2"	5.33	\$5,159	\$7,936	\$3,412	\$16,508
3"	10.00	\$9,680	\$14,890	\$6,402	\$30,971
4"	16.67	\$16,136	\$24,822	\$10,671	\$51,629
6"	33.33	\$32,262	\$49,628	\$21,336	\$103,226
8"	53.33	\$51,621	\$79,408	\$34,139	\$165,169

Table B-1.1
City of Manteca
PFIP Water Fee
Water Fee Calculation Summary

Internal Working Draft - v10 2/1/2013

Description	Groundwater Supply Fee	Peaking Facility Fee	Distribution System Fee	XXXXX XXXXX XXXXX	Totals	Source/ Notes
PROJECT CONSTRUCTION COSTS						
Capital Improvements Plan						
Current Projects	-	-	-	-	-	
Future Projects	1,950,000	2,478,000	20,889,000	-	25,317,000	
Total Master Plan CIP (July 2010 \$)	1,950,000	2,478,000	20,889,000	-	25,317,000	
Soft Costs	293,000	273,000	-	-	566,000	See Note (4)
Soft Cost % of Construction Costs	15%	11%	0%	0%	2%	
Inflation Adjustment to 2012 \$	121,737	149,308	1,133,731	-	1,404,776	See Note (12)
Total PFF CIP	2,364,737	2,900,308	22,022,731	-	27,287,776	
% of PFF CIP	8.7%	10.6%	80.7%	0.0%	100.0%	
FINANCING COSTS						
Total PFF CIP	802,823	984,648	1,869,166	-	3,656,637	See Note (3)
Total Estimated Financing Costs	802,823	984,648	1,869,166	-	3,656,637	
Finance Cost % of CIP	33.9%	33.9%	8.5%	0.0%	13.4%	
PFF ADMINISTRATION COSTS						
Program Updates and On-Going Admin	-	-	3,862,500	-	3,862,500	
City Administrative Costs - Variable	-	-	-	-	-	See Note (5),(6)
Total PFF Admin Costs	-	-	3,862,500	-	3,862,500	
FUND BALANCES						
Net Fund Balance (Deficit)	(413,862)	(507,595)	(3,854,287)	-	(4,775,743)	6/30/12 Balance - Note (11)
Fees From Remaining PFIP Development	-	-	-	-	-	
Total Fund Balances	(413,862)	(507,595)	(3,854,287)	-	(4,775,743)	
Net Costs Funded From PFF Fee	3,581,421	4,392,550	31,608,684	-	39,582,656	
Total EDUs Served	3,700	2,950	49,377	-		
Fee Per EDU	\$ 968	\$ 1,489	\$ 640	\$ -		See Table A-1 for Fees Per Meter
	Note (1)		Note (6)			

Notes:

- (1) Groundwater fee based on the per EDU cost of one well.
- (2) Assumes entire cost of current projects funded by 30 year debt service with 2.0% interest.
- (3) Assumes 100% of PFIP CIP costs are financed for Supply and Peaking, 25% for Distribution, see Table 6 for financing assumptions.
- (4) Soft cost estimates shown in Tables A2-A8.
- (5) City Administrative Costs - Variable assumed to be 0% of PFF CIP costs.
- (6) Distribution System Fee based on estimate of the cost of infrastructure to serve buildout.
- (7) EDU = 660 gpd (200 per capita x 3.3 persons per household)
- (8) Groundwater supply costs detailed in Table A-2.
- (9) Peaking facility costs detailed in Table A-6.
- (10) Distribution facility costs detailed in Table A-7 and A-8.
- (11) Water fund balance spread to water fees based on CIP costs.
- (12) CIP costs based on July 2010 ENR (8844) were adjusted to July 2012 ENR (9324).

Table B-2
City of Manteca
PFIP Water Fee
Groundwater Supply Fee

Source

Well Capacity, gpm	2,000
Dwelling Unit Use, gpm	0.237
Max Day Peak Factor	2.00
Redundancy Factor	1.15
Dwelling Units Served	3,700

CONSTRUCTION COSTS

Well Drilling and Development	\$	281,000	Table A-3
Water Treatment	\$	900,000	Table A-4
Well Improvements	\$	<u>765,000</u>	Table A-5

Subtotal Construction Costs	\$	1,950,000
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SOFT COSTS

Environmental / Planning	2.0%	\$39,000
Design	9.0%	\$175,500
Construction Management/Engineering	4.0%	<u>\$78,000</u>

Subtotal Soft Costs	<u>\$293,000</u>
---------------------	------------------

TOTAL COSTS	<u><u>\$2,240,000</u></u>
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Source: City of Manteca.

Table B-3
City of Manteca
PFIP Water Fee
Groundwater Supply
Opinion of Probable Cost

Well Drilling and Development

TEST WELL		
Drill and develop		\$40,000
Sampling		\$8,000
Abandonment		<u>\$8,000</u>
Subtotal		\$56,000
Contingency	100%	<u>\$56,000</u>
Subtotal Test Well		\$112,000
PRODUCTION WELL		
Drill Case and Develop		\$145,000
Sampling		<u>\$2,000</u>
Subtotal		\$147,000
Contingency	15%	<u>\$22,050</u>
Subtotal Production Well		<u>\$169,050</u>
TOTAL WELL DRILLING AND DEVELOPMENT COST		<u><u>\$281,000</u></u>

Source: City of Manteca.

Table B-4
City of Manteca
PFIP Water Fee
Groundwater Supply
Opinion of Probable Cost

Well Improvements

Earthwork		\$23,200
Paving		\$34,800
Fencing		\$11,800
Precast Vaults		\$18,750
Pump Pedestal		\$3,300
Reinforcing Steel		\$8,600
Well Building		\$26,700
CMU		\$33,000
Metal Fabrications		\$5,700
Carpentry		\$24,800
Roof		\$7,500
Flashing & Painting		\$4,000
Skylight		\$4,000
Doors & Hardware		\$6,200
Coating and Painting		\$17,700
Building Specialties		\$4,300
Louvers		\$3,900
Ventilation		\$3,700
Main Switchboard		\$288,300
Main Switchboard Inst.		\$10,000
Underground Rough-in		\$22,000
Under Slab Rough-in		\$9,000
Conduit & Fitting		\$32,000
Wire & Cables		\$15,000
Engine Generator		\$117,000
Generator Slab		\$8,300
Above Ground Fuel Tank		\$20,500
Subtotal		<u>\$764,050</u>
Contingency	10%	\$76,405
Mobilization	5%	\$38,203
Site Acquisition (5,000 SF)	\$4/SF	\$20,000
TOTAL WELL IMPROVEMENTS COST		<u>\$900,000</u>

Source: City of Manteca.

Table B-5
City of Manteca
PFIP Water Fee
Groundwater Supply
Opinion of Probable Cost

Water Treatment

Treatment Cost		\$ 870,000
Contingency	15%	<u>\$ 130,500</u>
Total Water Treatment		<u>\$ 1,000,000</u>
TOTAL WATER TREATMENT COST (See (1))	76.5%	\$ 765,000

(1) Based upon current ratio (13/17) of City wells requiring some form of treatment

Source: City of Manteca.

**Table B-6
City of Manteca
PFIP Water Fee
Peaking Costs & Summary**

1.0 mg Storage Tank and Booster Pump

Peaking Capacity, GPM	5,000
EDU Served at 0.474 gpm, 2.8 PF, 15% Redundancy	3,280
1.0 mg Storage Tank and Booster Pump Cost	\$ 2,751,000

CONSTRUCTION COST

Site Prep. Clearing and Grubbing		\$5,000
Excavation, Shoring, Import and Earthwork		\$50,000
Paving and Site Work		\$200,000
Yard Piping and Appurtenances		\$150,000
Booster Pump and Control Building		\$200,000
Booster Pump Electrical		\$100,000
Standby Generator		\$120,000
SCADA		\$25,000
Tank		<u>\$1,000,000</u>
Subtotal		\$1,850,000

Site Acquisition		\$350,000
2 Acres @ 4\$/SF		
Mobilization	5%	\$92,500
Contingency	10%	<u>\$185,000</u>
Total Construction Cost		\$2,478,000

SOFT COSTS

Environmental/Planning	2%	\$49,560
Design	5%	\$123,900
Construction Management/Engineering	4%	<u>\$99,120</u>
Subtotal Soft Costs		<u>\$273,000</u>

TOTAL TANK AND BOOSTER PUMP \$2,751,000

Source: City of Manteca.

Table B-7
City of Manteca
PFIP Water Fee
Distribution System Summary

Item	Length	Reimbursement Rate (\$/LF)	Total Cost
12" pipe - Main Grid	270,000	\$ 58.65	\$15,835,500
16"-18" pipe - Main Grid	30,000	\$ 82.20	\$2,466,000
12" Pipe - interior	150,000	\$ 17.25	\$2,587,500
Sub total Distribution System			\$20,889,000
Administrative Costs			0.0% \$0
TOTAL DISTRIBUTION SYSTEM COST			\$20,889,000
Total number of EDUs supported (Total Sewer EDUs)			49,377

Source: City of Manteca.

Table B-8
City of Manteca
PFIP Water Fee
Distribution System Costs

Concept:

		LF	Miles
Total Future Pipe to be Installed		450,000	85
Main - one mile grid - for oversizing only, same as internal grid	67%	300,000	57
Interior grid - oversize reimbursement only	33%	150,000	28

Typical Costs to Install 8" Water Main

	Amount	Unit Price (\$/unit)	\$
8" PVC Pipe - complete in place	1,000	18	\$ 18,000
Gate Valves	3	1,500	\$ 4,500
Hydrant Assembly	3	3,500	\$ 10,500
Air Release Valves	1	3,000	\$ 3,000
			\$ 36,000
<i>Cost / LF with 5% contingency & 10% soft costs</i>			\$ 41.40

Typical Costs to Install 12" Water Main

	Amount	Unit Price (\$/unit)	\$
12" PVC Pipe - complete in place	1,000	30	\$ 30,000
Gate Valves	3	2,500	\$ 7,500
Hydrant Assembly	3	3,500	\$ 10,500
Air Release Valves	1	3,000	\$ 3,000
			\$ 51,000
<i>Cost / LF with 5% contingency & 10% soft costs</i>			\$ 58.65

Typical Costs to Install 16" or 18" Water Main

	Amount	Unit Price (\$/unit)	\$
16" PVC Pipe - complete in place	1,000	46	\$ 46,000
Butterfly Valves	3	3,000	\$ 9,000
Hydrant Assembly	3	3,500	\$ 10,500
Air Release Valves	1	3,000	\$ 3,000
			\$ 68,500
<i>Cost / LF with 10% contingency & 10% soft costs</i>			\$ 82.20

SOFT COSTS - Water Line only

Environmental - 2%, Design - 4%, Construction Management - 4% 10%

**Table B-9
 City of Manteca
 PFIP Water Fee
 Financing Assumptions**

Internal Working Draft - v10 2/1/2013

Description	Amount
Annual Interest Rate	2.00%
Term - Years	30
Payments per year	1
Loan Constant - Annual Debt Service (per \$1,000)	\$44.65
Annual Finance Cost (per \$1,000)	\$11.32

Source: City of Manteca.


Notes: Annual Finance Cost (per \$1,000) = Loan constant at 2% - Loan Constant at 0%

**Table B-10
City of Manteca
PFIP Water Fee**

Internal Working Draft - v10 2/1/2013

FORTHCOMING

LEGEND

 WATER FEE ZONE 12

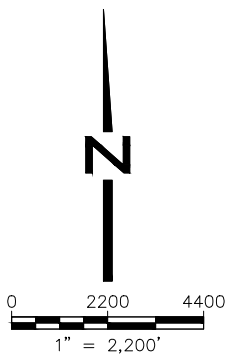
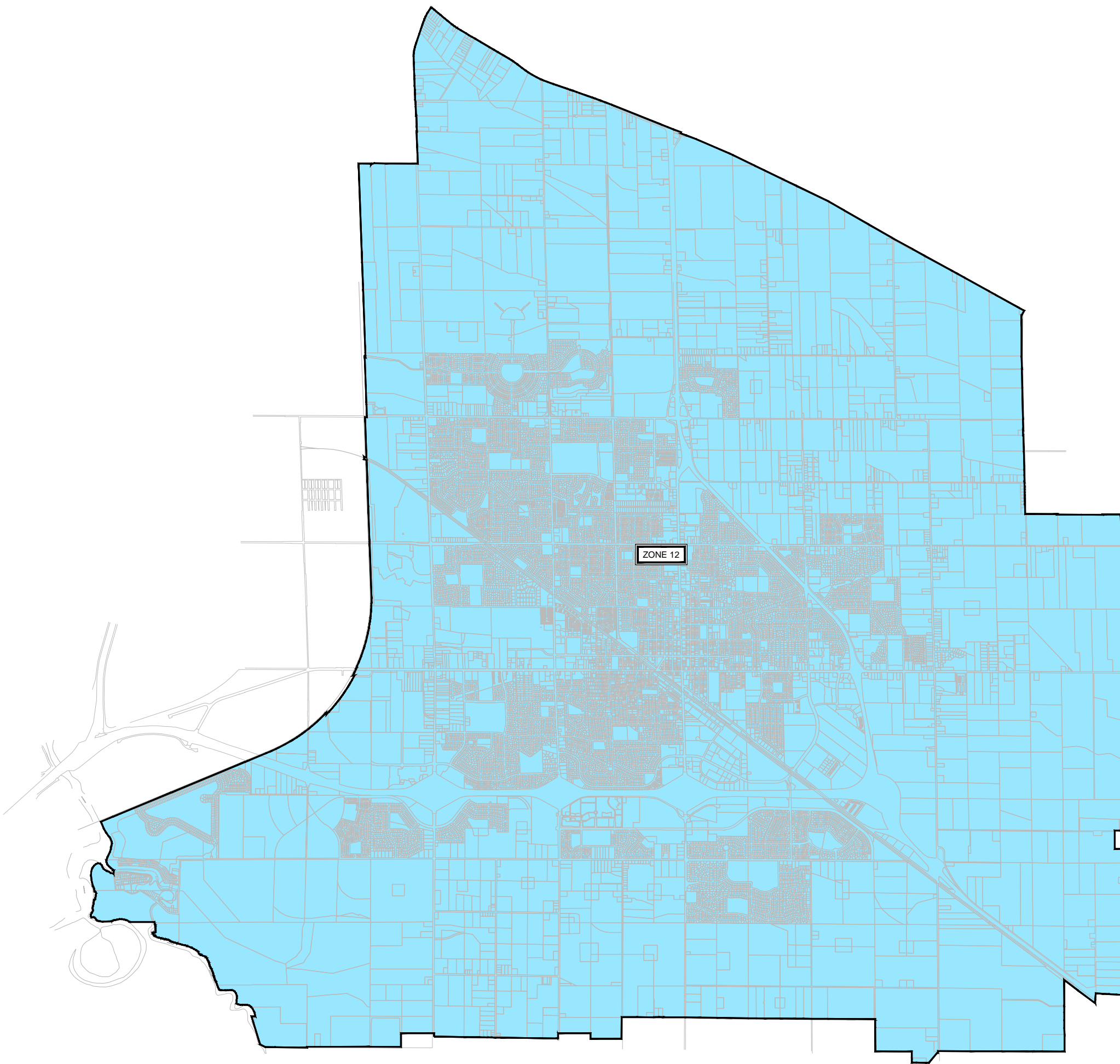


PLATE B-1

**CITY OF MANTECA 2012 PUBLIC FACILITIES
IMPLEMENTATION PLAN UPDATE**

WATER FINANCING ZONE



Appendix C
Storm Drainage Data

Table C-1
City of Manteca
PFIP Storm Drainage Collection Fee
Storm Drainage Fee Calculation Summary

Internal Working Draft - v10 2/1/2013

Description	Zone 30 Cost Estimate	Zone 31+32 Cost Estimate	Zone 33+34+35 Cost Estimate	Zone 36 Cost Estimate	Zone 39 Cost Estimate	Totals	Source/ Notes
<u>PROJECT CONSTRUCTION COSTS</u>							
Capital Improvements Plan							
Current Projects	-	-	-	-	-	-	
Future Projects	348,984	2,219,860	1,465,928	7,282,301	1,540,000	12,857,074	Table 4
Total Master Plan CIP (July 2010 \$)	348,984	2,219,860	1,465,928	7,282,301	1,540,000	12,857,074	
Soft Costs (12% of Construction Costs)	41,878	266,383	175,911	873,876	184,800	1,542,849	See Note (4)
Inflation Adjustment to 2012 \$	21,214	134,939	89,109	442,669	93,612	781,543	See Note (1)
Total PFIP CIP	412,076	2,621,182	1,730,949	8,598,847	1,818,412	15,181,465	
% of PFIP CIP	2.7%	17.3%	11.4%	56.6%	12.0%	100.0%	
<u>FINANCING COSTS</u>							
Total PFIP CIP	139,899	889,885	587,653	2,919,288	617,347	5,154,072	See Note (3)
Total Estimated Financing Costs	139,899	889,885	587,653	2,919,288	617,347	5,154,072	
Finance Cost % of CIP	33.9%	33.9%	33.9%	33.9%	33.9%	33.9%	
<u>PFIP ADMINISTRATION COSTS</u>							
Program Updates and On-Going Admin	94,662	602,140	397,635	1,975,335	417,727	3,487,500	See General Section
City Administrative Costs - Variable	-	-	-	-	-	-	See Note (5)
Total PFIP Admin Costs	94,662	602,140	397,635	1,975,335	417,727	3,487,500	
<u>FUND BALANCES</u>							
Net Fund Balance (Deficit)	-	(678,937)	(486,480)	(2,236,041)	-	(3,401,458)	June 30, 2012 Balance
Fees From Remaining PFIP Development	-	-	-	-	-	-	
Total Fund Balances	-	(678,937)	(486,480)	(2,236,041)	-	(3,401,458)	
Net Costs Funded From PFIP Fee	646,637	4,792,144	3,202,717	15,729,511	2,853,486	27,224,495	
Total Development Units (Acres x C)	796	490	521	1,050	462	3,320	
Fee Per Development Unit (\$/Acres x C)	\$ 812	\$ 9,775	\$ 6,146	\$ 14,980	\$ 6,178		

Notes:

- (1) CIP costs based on July 2010 ENR (8844) were adjusted to July 2012 ENR (9324).
- (2) Assumes entire cost of current projects funded by 30 year debt service with 2.0% interest.
- (3) Assumes 100% of PFIP CIP costs are financed, see Table 6 for financing assumptions.
- (4) Contingency estimate of 10% included in construction cost estimates, 12% soft cost estimate from City of Manteca.
- (5) City Administrative Costs - Variable assumed to be 0.0% of PFIP CIP costs.

Table C-3
City of Manteca
Storm Drainage Collection Fee
EDU Calculation

Internal Working Draft - v10 2/1/2013

Land Use	EDU Factor Per Acre			EDU Factor Per Unit			
	Units	C per Gross Acre	EDU Factor Per Unit	Units	Units Per Acre	C per unit	EDU Factor Per Unit
VLDR	Acre	0.3000	1.00	Dwelling Unit	2.00	0.1500	2.50
LDR	Acre	0.3000	1.00	Dwelling Unit	5.00	0.0600	1.00
MDR	Acre	0.5000	1.67	Dwelling Unit	9.00	0.0556	0.93
HDR	Acre	0.6500	2.17	Dwelling Unit	17.00	0.0382	0.64
OS	Acre	0.1000	-	Acre	1.00	0.1000	-
P	Acre	0.1000	-	Acre	1.00	0.1000	-
PQP	Acre	0.1000	-	Acre	1.00	0.1000	-
AG (LDR)	Acre	0.3000	1.00	Dwelling Unit	5.00	0.0600	1.00
BP	Acre	0.9000	3.00	Acre	1.00	0.9000	15.00
CMU	Acre	0.9000	3.00	Acre	1.00	0.9000	15.00
GC	Acre	0.9000	3.00	Acre	1.00	0.9000	15.00
NC	Acre	0.9000	3.00	Acre	1.00	0.9000	15.00
HI	Acre	0.7000	2.33	Acre	1.00	0.7000	11.67
LI	Acre	0.7000	2.33	Acre	1.00	0.7000	11.67
BIP	Acre	0.7000	2.33	Acre	1.00	0.7000	11.67
UR	Acre	0.3000	1.00	Dwelling Unit	5.00	0.0600	1.00
UR-VLDR	Acre	0.3000	1.00	Dwelling Unit	2.00	0.1500	2.50
UR-LDR	Acre	0.3000	1.00	Dwelling Unit	5.00	0.0600	1.00
UR-MDR	Acre	0.5000	1.67	Dwelling Unit	9.00	0.0556	0.93
UR-P	Acre	0.1000	-	Acre	1.00	0.1000	-
UR-PQP	Acre	0.1000	-	Acre	1.00	0.1000	-
UR-AG (LDR)	Acre	0.3000	1.00	Dwelling Unit	5.00	0.0600	1.00
UR-BIP	Acre	0.7000	2.33	Acre	1.00	0.7000	11.67
UR-CMU	Acre	0.9000	3.00	Acre	1.00	0.9000	15.00
UR-GC	Acre	0.9000	3.00	Acre	1.00	0.9000	15.00
UR-LI	Acre	0.7000	2.33	Acre	1.00	0.7000	11.67

Source: City of Manteca.

Table C-4
City of Manteca
Storm Drainage Collection Fee
Project Cost Summary

Internal
Working Draft - v10
2/1/2013

		Expected Development (EDUs)									
Project Number	Project Name	Zone 30	Zone 31	Zone 32	Zone 33	Zone 34	Zone 35	Zone 36	Zone 39	Totals	Source / Notes
Total Development EDUs Developed in Each Zone		13,271.5	3,089.3	5,081.1	2,349.3	2,344.6	3,991.8	17,501.1	7,698.2	55,326.9	Table 5
FCOC 1	French Camp Road Crossing	13,271.5	3,089.3	5,081.1	2,349.3	2,344.6	3,991.8	17,501.1		47,628.7	
FCOC 2	Roth Road Crossing		3,089.3	5,081.1	2,349.3	2,344.6	3,991.8	17,501.1		34,357.2	
FCOC 3	Union Pacific Railroad Crossing				2,349.3	2,344.6	3,991.8	17,501.1		26,186.8	
FCOC 4	Farm Road Crossing (4x8' Box Culvert)						3,991.8	17,501.1		21,493.0	
Drain 3A	Connect DR3A to Lat Rga (48" & 2,000')		3,089.3							3,089.3	
Drain 3	Monterey Place Improvement			5,081.1						5,081.1	
Drain 5	Interceptor, Upstream of Golf Course					2,344.6				2,344.6	
South PS	South Drain Pump Station							17,501.1		17,501.1	
Austin PS	Austin Road Pump Station (to Lat Y)							17,501.1		17,501.1	
Force Main	48" Force Main (1,400')							17,501.1		17,501.1	
66" RCP1	Bella Vista to South Pump Station							17,501.1		17,501.1	
Lat Ya	Dual-Use Drain at Woodward (60" RCP)							17,501.1		17,501.1	
66" RCP2	Woodward - Union to Main St							17,501.1		17,501.1	
42" RCP	Lat Tbb to Austin Rd End							17,501.1		17,501.1	
Jux Box	Two Junction Boxes at Woodward-Ya							17,501.1		17,501.1	
Lat X	Connect Woodward to Lateral X							17,501.1		17,501.1	
Trails of Manteca									7,698.2	7,698.2	
	South Pump Station										

		Percentage Allocation of Manteca Cost Share to Drainage Zones									
Project Number	Project Name	Zone 30	Zone 31	Zone 32	Zone 33	Zone 34	Zone 35	Zone 36	Zone 39	Totals	
FCOC 1	French Camp Road Crossing	28%	6%	11%	5%	5%	8%	37%		100%	
FCOC 2	Roth Road Crossing	-	9%	15%	7%	7%	12%	51%		100%	
FCOC 3	Union Pacific Railroad Crossing	-	-	-	9%	9%	15%	67%		100%	
FCOC 4	Farm Road Crossing (4x8' Box Culvert)	-	-	-	-	-	19%	81%		100%	
Drain 3A	Connect DR3A to Lat Rga (48" & 2,000')	-	100%	-	-	-	-	-		100%	
Drain 3	Monterey Place Improvement	-	-	100%	-	-	-	-		100%	
Drain 5	Interceptor, Upstream of Golf Course	-	-	-	-	100%	-	-		100%	
South PS	South Drain Pump Station	-	-	-	-	-	-	100%		100%	
Austin PS	Austin Road Pump Station (to Lat Y)	-	-	-	-	-	-	100%		100%	
Force Main	48" Force Main (1,400')	-	-	-	-	-	-	100%		100%	
66" RCP1	Bella Vista to South Pump Station	-	-	-	-	-	-	100%		100%	
Lat Ya	Dual-Use Drain at Woodward (60" RCP)	-	-	-	-	-	-	100%		100%	
66" RCP2	Woodward - Union to Main St	-	-	-	-	-	-	100%		100%	
42" RCP	Lat Tbb to Austin Rd End	-	-	-	-	-	-	100%		100%	
Jux Box	Two Junction Boxes at Woodward-Ya	-	-	-	-	-	-	100%		100%	
Lat X	Connect Woodward to Lateral X	-	-	-	-	-	-	100%		100%	
Trails of Manteca									100%	100%	
	South Pump Station										

		Cost Allocation of Manteca Cost Share to Drainage Zones														
Project Number	Project Name	Project Cost	SSJID Share	City Of Manteca PFF Cost	Zone 30	Zone 31	Zone 32	Zone 33	Zone 34	Zone 35	Zone 36	Zone 39	Totals			
Crossings																
FCOC 1	French Camp Road Crossing	\$ 1,500,000	\$ 750,000	\$ 750,000	\$ 208,984	\$ 48,646	\$ 80,011	\$ 36,994	\$ 36,919	\$ 62,859	\$ 275,587	\$ -	\$ 750,000	Future Improve		
FCOC 2	Roth Road Crossing	\$ 1,000,000	\$ 500,000	\$ 500,000	\$ -	\$ 44,958	\$ 73,945	\$ 34,189	\$ 34,120	\$ 58,093	\$ 254,694	\$ -	\$ 500,000	Future Improve		
FCOC 3	Union Pacific Railroad Crossing	\$ 850,000	\$ 425,000	\$ 425,000	\$ -	\$ -	\$ 38,128	\$ 38,051	\$ 64,786	\$ 284,035	\$ -	\$ -	\$ 425,000	Future Improve		
FCOC 4	Farm Road Crossing (4x8' Box Culvert)	\$ 450,000	\$ 225,000	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 41,789	\$ 183,211	\$ -	\$ 225,000	Future Improve		
Drain 3A	Connect DR3A to Lat Rga (48" & 2,000')	\$ 600,000	\$ 300,000	\$ 300,000	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000	Future Improve		
Drain 3	Monterey Place Improvement	\$ 400,000	\$ -	\$ 400,000	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,000	Future Improve		
Drain 5	Interceptor, Upstream of Golf Course	\$ 700,000	\$ -	\$ 700,000	\$ -	\$ -	\$ -	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ 700,000	Future Improve		
		\$ 5,500,000	\$ 2,200,000	\$ 3,300,000	\$ 208,984	\$ 393,604	\$ 553,956	\$ 109,311	\$ 809,090	\$ 227,527	\$ 997,528	\$ -	\$ 3,300,000			
Pump Stations - South Levee																
South PS	South Drain Pump Station	\$ 1,250,000	\$ -	\$ 1,250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000	\$ -	\$ 1,250,000	South & Levee		
Austin PS	Austin Road Pump Station (to Lat Y)	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000	South & Levee		
	Total Pump Stations	\$ 1,750,000	\$ -	\$ 1,750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,750,000	\$ -	\$ 1,750,000			
New Pipes - South & Levee																
Force Main	48" Force Main (1,400')	\$ 408,000	\$ -	\$ 408,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 408,000	\$ -	\$ 408,000	Future Improve		
66" RCP1	Bella Vista to South Pump Station	\$ 724,500	\$ -	\$ 724,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 724,500	\$ -	\$ 724,500	Future Improve		
Lat Ya	Dual-Use Drain at Woodward (60" RCP)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Future Improve		
66" RCP2	Woodward - Union to Main St	\$ 1,459,774	\$ -	\$ 1,459,774	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,459,774	\$ -	\$ 1,459,774	Future Improve		
42" RCP	Lat Tbb to Austin Rd End	\$ 1,160,000	\$ -	\$ 1,160,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,160,000	\$ -	\$ 1,160,000	Future Improve		
Jux Box	Two Junction Boxes at Woodward-Ya	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	Future Improve		
Lat X	Connect Woodward to Lateral X	\$ 825,000	\$ 412,500	\$ 412,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412,500	\$ -	\$ 412,500	Future Improve		
	Total New Pipes	\$ 4,727,274	\$ 412,500	\$ 4,314,774	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,314,774	\$ -	\$ 4,314,774			
Monitoring Wells																
Monitor	20 Monitoring Wells (Zone 35 does not tie)	\$ 800,000	\$ -	\$ 800,000	\$ 80,000	\$ 80,000	\$ 120,000	\$ 80,000	\$ 80,000	\$ 160,000	\$ 160,000	\$ 40,000	\$ 800,000	Levee & Monitor		
Sub-Total		\$ 12,777,274	\$ 2,612,500	\$ 10,164,774	\$ 288,984	\$ 473,604	\$ 673,956	\$ 189,311	\$ 889,090	\$ 387,527	\$ 7,222,301	\$ 40,000	\$ 10,164,774			
Trails of Manteca																
	South Pump Station	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000	Trails		
Sub-Total		\$ 1,500,000	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000			
North Drainage System																
Phase I	Lateral Rga C to D	\$ 1,012,300	\$ -	\$ 1,012,300	\$ -	\$ 1,012,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,012,300	North		
Sub-Total		\$ 1,012,300	\$ -	\$ 1,012,300	\$ -	\$ 1,012,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,012,300			
	Oversizing Reimbursement (Note (2))	\$ 180,000	\$ -	\$ 180,000	\$ 60,000	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 60,000	\$ -	\$ 180,000			
Total		\$ 15,469,574	\$ 2,612,500	\$ 12,857,074	\$ 348,984	\$ 1,485,904	\$ 733,956	\$ 189,311	\$ 889,090	\$ 387,527	\$ 7,282,301	\$ 1,540,000	\$ 12,857,074			

Notes:
(1) For the monitoring wells zone 35 includes costs for zone 37 + 38
(2) Reimbursement for upsizing from 36" to 42" based on 3,000 ft. at \$20 lf.

Table C-5
 City of Manteca
 PFF Storm Drainage Collection Fee
 Development Summary

Internal
 Working Draft - v10
 2/1/2013

Zone	Zone	Zone	Zone	Zone	Zone	Zone	Zone	Zone	Zone	Zone
30	31	32	33	34	35	36	37	38	39	

Land Use	C	Land Developed (Acres) x C									
AG (LDR)	0.3000	417.34	14.23	-	-	-	-	14.85	-	-	24.41
BIP	0.7000	-	-	-	-	-	-	-	-	-	107.09
BP	0.9000	-	-	-	-	0.77	-	-	-	-	-
CMU	0.9000	-	13.93	40.58	0.64	25.78	40.84	35.84	-	-	17.91
GC	0.9000	-	13.02	17.64	0.68	13.41	29.56	69.40	-	-	79.32
HDR	0.6500	-	-	22.00	-	11.46	-	25.33	-	-	11.52
HI	0.7000	56.84	-	-	43.25	-	15.51	172.98	-	-	-
LDR	0.3000	113.02	27.76	108.63	5.48	46.94	2.92	423.19	-	-	139.42
LI	0.7000	134.03	-	82.07	82.94	2.71	142.38	2.34	-	-	-
MDR	0.5000	-	-	3.52	6.99	21.79	-	32.42	-	-	28.22
NC	0.9000	-	-	8.34	0.98	17.82	8.30	7.53	-	-	-
OS	-	-	-	-	-	-	-	-	-	-	-
P	-	-	-	-	-	-	-	-	-	-	-
PQP	-	-	-	-	-	-	-	-	-	-	-
UR	0.3000	-	20.45	14.26	-	-	-	67.84	-	-	-
UR-AG (LDR)	0.3000	51.10	15.32	2.85	-	-	-	27.55	-	-	-
UR-BIP	0.7000	-	-	-	-	-	-	47.42	-	-	9.80
UR-CMU	0.9000	-	7.75	-	-	-	-	49.19	-	-	17.79
UR-GC	0.9000	-	7.28	-	-	-	-	-	-	-	-
UR-LDR	0.3000	-	40.54	4.72	-	-	-	28.89	-	-	8.73
UR-LI	0.7000	16.02	-	-	-	-	-	-	-	-	-
UR-MDR	0.5000	-	1.97	-	-	-	-	-	-	-	-
UR-P	-	-	-	-	-	-	-	-	-	-	-
UR-PQP	-	-	-	-	-	-	-	-	-	-	-
UR-VLDR	0.3000	-	21.16	-	-	-	-	5.95	-	-	17.69
VLDR	0.3000	7.93	1.94	0.24	-	-	-	39.36	-	-	-

Total		796.29	185.36	304.87	140.96	140.67	239.51	1,050.07	-	-	461.89
		24%	6%	9%	4%	4%	7%	32%	0%	0%	14%
		3,319.61									

Table C-6
City of Manteca
PFF Storm Drainage Collection Fee
Financing Assumpitons

Internal
Working Draft - v10
2/1/2013

<u>Description</u>	<u>Amount</u>
Annual Interest Rate	2.00%
Term - Years	30
Payments per year	1
Loan Constant - Annual Debt Service (per \$1,000)	\$44.65
Annual Finance Cost (per \$1,000)	\$11.32

Source: City of Manteca.

Notes: Annual Finance Cost (per \$1,000) = Loan constant at 2% - Loan Constant at 0%

Table C-7
City of Manteca
PFF Storm Drainage Collection Fee
Beginning Fund Balance

Internal
Working Draft - v10
2/1/2013

Forthcoming

LEGEND

- STORM DRAINAGE FEE ZONE 30
- STORM DRAINAGE FEE ZONE 32
- STORM DRAINAGE FEE ZONE 34
- STORM DRAINAGE FEE ZONE 36
- STORM DRAINAGE FEE ZONE 39

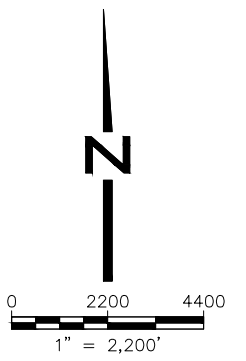
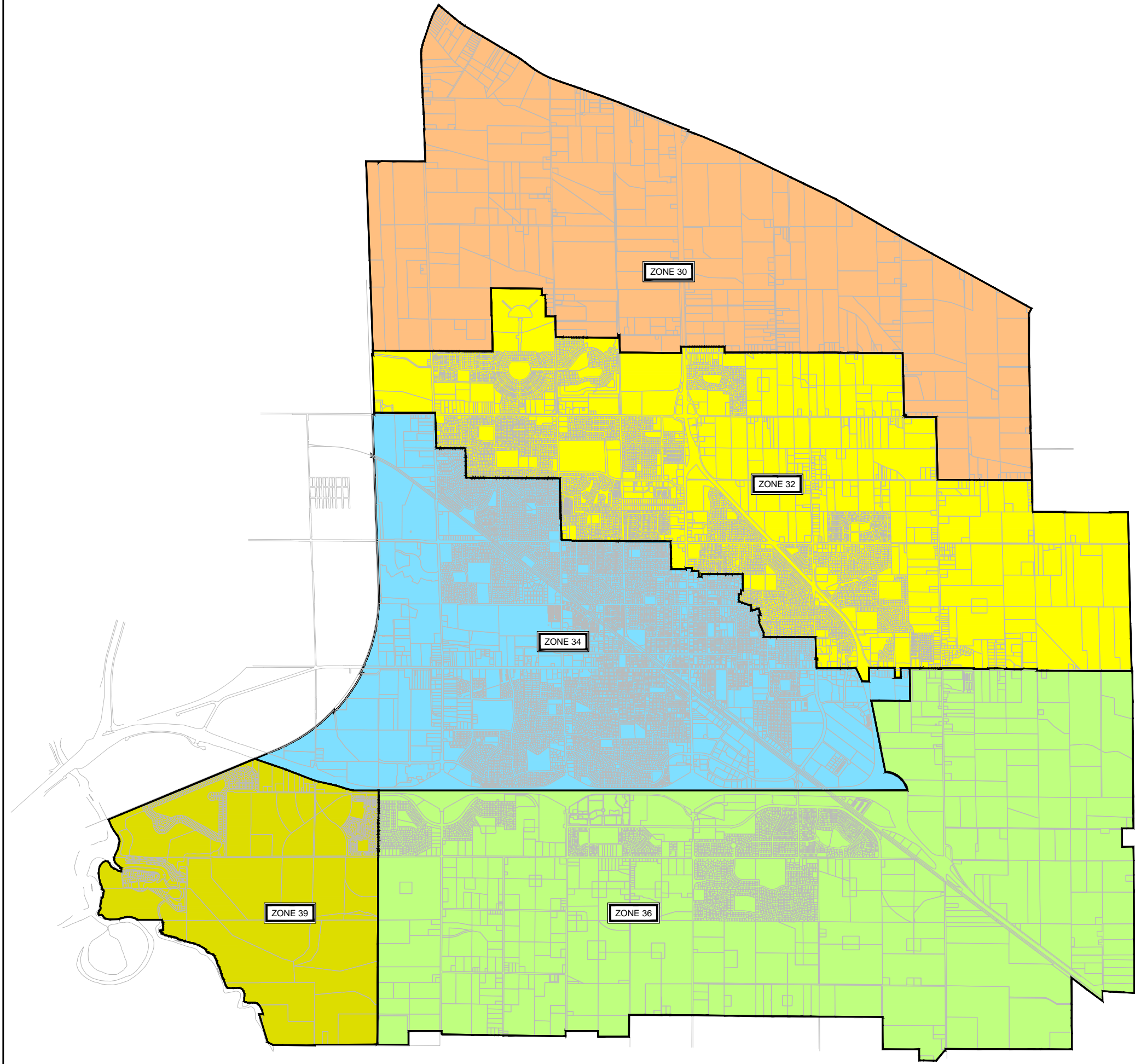


PLATE C-1

**CITY OF MANTECA 2012 PUBLIC FACILITIES
IMPLEMENTATION PLAN UPDATE**

**STORM DRAINAGE
FINANCING ZONES**



Appendix D
Sewer Collection Data

**Table D-1
City of Manteca
PFIP Sewer Collection Fee
Sewer Fee Calculation Summary**

Internal Working Draft - v10 2/1/2013

Description	Zone 21 Cost Estimate	Zone 22 Cost Estimate	Zone 24 Cost Estimate	Zone 25 Cost Estimate	Zone 26 Cost Estimate	Totals	Source/ Notes
PROJECT CONSTRUCTION COSTS							
Capital Improvements Plan							
Current Projects	-	-	-	-	-	-	
Future Projects	2,085,337	17,048,343	25,602,950	2,643,490	1,606,560	48,986,680	See Table 2 for details
Total Master Plan CIP (July 2010 \$)	2,085,337	17,048,343	25,602,950	2,643,490	1,606,560	48,986,680	
Soft Costs	166,827	1,472,067	2,257,796	258,879	160,365	4,315,934	See Table 2 for details
Inflation Adjustment to 2012 \$	122,234	1,005,178	1,512,116	157,523	95,898	2,892,951	See Note (9)
Total PFIP CIP	2,374,398	19,525,589	29,372,862	3,059,893	1,862,823	56,195,565	
% of PFIP CIP	4.2%	34.7%	52.3%	5.4%	3.3%	100.0%	
FINANCING COSTS COSTS							
Total PFIP CIP							
Total Estimated Financing Costs	707,967	5,787,873	8,692,142	897,459	545,423	16,630,864	See Note (2)
Finance Cost % of CIP	33.9%	33.9%	33.9%	33.9%	33.9%		
PFIP ADMINISTRATION COSTS							
Program Updates and On-Going Admin	171,122	1,407,204	2,116,895	220,526	134,253	4,050,000	See Note (6)
City Administrative Costs - Variable	-	-	-	-	-	-	See Note (5)
Total PFIP Admin Costs	171,122	1,407,204	2,116,895	220,526	134,253	4,050,000	
FUND BALANCES							
Net Fund Balance (Deficit)	48,081	(1,832,534)	(3,758,396)	(8,920)	-	(5,551,769)	Updated 6/30/2012 Balance
Fees From Remaining PFIP Development	-	-	-	-	-	-	
Total Fund Balances	48,081	(1,832,534)	(3,758,396)	(8,920)	-	(5,551,769)	
Net Costs Funded From PFIP Fee	3,205,406	28,553,200	43,940,295	4,186,797	2,542,500	82,428,197	
Capacity Provided (GPD)	698,810	2,092,410	3,969,703	873,716	265,667	7,900,305	
Fee Per Gallon	\$ 4.59	\$ 13.65	\$ 11.07	\$ 4.79	\$ 9.57		
Oversizing Offset (Per Gallon)	\$ (2.81)	\$ (2.81)	\$ (2.81)	\$ (2.81)	\$ (2.81)		See Note (7)
Net Sewer Fee Per Gallon After Offset	\$ 1.77	\$ 10.83	\$ 8.26	\$ 1.98	\$ 6.76		
Capacity Provided (EDUs = DU Basis)	4,368	13,078	24,811	5,461	1,660	49,377	
Fee EDU (Units)	\$ 734	\$ 2,183	\$ 1,771	\$ 767	\$ 1,531		
Oversizing Offset (Per EDU)	\$ (450)	\$ (450)	\$ (450)	\$ (450)	\$ (450)		See Note (8)
Net Sewer Fee Per EDU After Offset	\$ 284	\$ 1,733	\$ 1,321	\$ 317	\$ 1,081		

Notes:

- (1) Woodward Park project completed and reflected in beginning fund balances.
- (2) Assumes entire cost of current projects funded by 30 year debt service with 2.0% interest, see Table 5 for calculation details.
- (3) Assumes 100% of PFIP CIP costs are financed, see Table 6 for financing assumptions.
- (4) Contingency estimate of 10% built into the construction costs, soft costs detailed in Table 2.
- (5) City Administrative Costs - Variable assumed to be 0.0% of PFIP CIP costs.
- (6) For details of Program Updates and On-Going Admin see Tables 1-3 in General section.
- (7) 50% of oversizing charge offset Sewer Fee (\$900 * 50%) / 160 gpd = \$2.81 offset per gallon
- (8) 50% of oversizing charge offset Sewer Fee (\$900 * 50%) = \$450 offset per EDU
- (9) CIP costs based on July 2010 ENR (8844) were adjusted to July 2012 ENR (9324).

**Table D-1.1
City of Manteca
PFIP Sewer Collection Fee
EDU Factors**

Internal
Working Draft - v10
2/1/2013

Land Use	Units	GPD (per acre)	Fee Per Acre					Units	Units Per Acre	Fee Per Unit				
			Zone 21	Zone 22	Zone 24	Zone 25	Zone 26			Zone 21	Zone 22	Zone 24	Zone 25	Zone 26
Fee Per Gallon:			\$ 1.77	\$ 10.83	\$ 8.26	\$ 1.98	\$ 6.76							
AG	Acre	-	-	-	-	-	-	Acre	-	-	-	-	-	-
BIP	Acre	1,200	2,129	13,000	9,908	2,375	8,109	Acre	1.00	2,129	13,000	9,908	2,375	8,109
CMU	Acre	2,473	4,388	26,791	20,418	4,895	16,712	Acre	1.00	4,388	26,791	20,418	4,895	16,712
GC	Acre	750	1,331	8,125	6,192	1,485	5,068	Acre	1.00	1,331	8,125	6,192	1,485	5,068
HDR	Acre	2,337	4,147	25,318	19,295	4,626	15,793	Dwelling Unit	19.97	208	1,268	966	232	791
HI	Acre	1,000	1,774	10,834	8,256	1,979	6,758	Acre	1.00	1,774	10,834	8,256	1,979	6,758
LDR	Acre	808	1,434	8,754	6,671	1,599	5,460	Dwelling Unit	5.05	284	1,733	1,321	317	1,081
LI	Acre	1,000	1,774	10,834	8,256	1,979	6,758	Acre	1.00	1,774	10,834	8,256	1,979	6,758
MDR	Acre	1,346	2,388	14,582	11,113	2,664	9,096	Dwelling Unit	11.50	208	1,268	966	232	791
NC	Acre	1,120	1,987	12,134	9,247	2,217	7,569	Acre	1.00	1,987	12,134	9,247	2,217	7,569
OS	Acre	-	-	-	-	-	-	Acre	1.00	-	-	-	-	-
P	Acre	400	710	4,333	3,303	792	2,703	Acre	1.00	710	4,333	3,303	792	2,703
PQP	Acre	425	754	4,604	3,509	841	2,872	Acre	1.00	754	4,604	3,509	841	2,872
UR	Acre	320	568	3,467	2,642	633	2,162	Acre	1.00	568	3,467	2,642	633	2,162
UR-AG	Acre	-	-	-	-	-	-	Acre	-	-	-	-	-	-
UR-BIP	Acre	1,200	2,129	13,000	9,908	2,375	8,109	Acre	1.00	2,129	13,000	9,908	2,375	8,109
UR-CMU	Acre	2,473	4,388	26,791	20,418	4,895	16,712	Acre	1.00	4,388	26,791	20,418	4,895	16,712
UR-GC	Acre	750	1,331	8,125	6,192	1,485	5,068	Acre	1.00	1,331	8,125	6,192	1,485	5,068
UR-LDR	Acre	808	1,434	8,754	6,671	1,599	5,460	Dwelling Unit	5.05	284	1,733	1,321	317	1,081
UR-LI	Acre	600	1,065	6,500	4,954	1,188	4,055	Acre	1.00	1,065	6,500	4,954	1,188	4,055
UR-MDR	Acre	1,346	2,388	14,582	11,113	2,664	9,096	Dwelling Unit	11.50	208	1,268	966	232	791
UR-P	Acre	400	710	4,333	3,303	792	2,703	Acre	1.00	710	4,333	3,303	792	2,703
UR-PQP	Acre	425	754	4,604	3,509	841	2,872	Acre	1.00	754	4,604	3,509	841	2,872
UR-VLDR	Acre	320	568	3,467	2,642	633	2,162	Dwelling Unit	2.00	284	1,733	1,321	317	1,081
VLDR	Acre	320	568	3,467	2,642	633	2,162	Dwelling Unit	2.00	284	1,733	1,321	317	1,081

Notes: _____

Table D-1.2
City of Manteca
PFIP Sewer Collection Fee
EDU Factors

Internal Working Draft - v10 2/1/2013

Land Use	Units	Wastewater Generation		Units	Wastewater Generation		
		Factor (WGF) (gpd/acre) (b)	EDU Factor (per acre)		Units Per Acre	Factor (WGF) Per Unit	EDU Factor (per unit)
AG	Acre	-	-	Acre		0	-
BIP	Acre	1,200	1.49	Acre	1.00	1,200	7.50
CMU	Acre	2,473	3.06	Acre	1.00	2,473	15.46
GC	Acre	750	0.93	Acre	1.00	750	4.69
HDR	Acre	2,337	2.89	Dwelling Unit	19.97	117	0.73
HI	Acre	1,000	1.24	Acre	1.00	1,000	6.25
LDR	Acre	808	1.00	Dwelling Unit	5.05	160	1.00
LI	Acre	1,000	1.24	Acre	1.00	1,000	6.25
MDR	Acre	1,346	1.67	Dwelling Unit	11.50	117	0.73
NC	Acre	1,120	1.39	Acre	1.00	1,120	7.00
OS	Acre	-	-	Acre	1.00	0	-
P	Acre	400	0.50	Acre	1.00	400	2.50
PQP	Acre	425	0.53	Acre	1.00	425	2.66
UR	Acre	320	0.40	Acre	1.00	320	2.00
UR-AG	Acre	-	-	Acre		0	-
UR-BIP	Acre	1,200	1.49	Acre	1.00	1,200	7.50
UR-CMU	Acre	2,473	3.06	Acre	1.00	2,473	15.46
UR-GC	Acre	750	0.93	Acre	1.00	750	4.69
UR-LDR	Acre	808	1.00	Dwelling Unit	5.05	160	1.00
UR-LI	Acre	600	0.74	Acre	1.00	600	3.75
UR-MDR	Acre	1,346	1.67	Dwelling Unit	11.50	117	0.73
UR-P	Acre	400	0.50	Acre	1.00	400	2.50
UR-PQP	Acre	425	0.53	Acre	1.00	425	2.66
UR-VLDR	Acre	320	0.40	Dwelling Unit	2.00	160	1.00
VLDR	Acre	320	0.40	Dwelling Unit	2.00	160	1.00

Notes:

(b) per Nolte master plan

Table D-1.3
City of Manteca
PFIP Sewer Collection Fee
New Development - Total EDUs Developed

Internal
Working Draft - v10
2/1/2013

Sewer Zone	Land Use	Undeveloped Acres (a)	Percentage Developed	Expected Developed Acres (a)	GPD (per acre)		
					Units	Total GPD	
ZONE 21 (includes old Zone 23)							
	CMU	127	100%	127	Acre	2,473	313,184
	GC	47	100%	47	Acre	750	35,015
	HDR	35	100%	35	Acre	2,337	81,590
	LDR	162	100%	162	Acre	808	130,976
	LI	43	100%	43	Acre	1,000	42,512
	MDR	56	100%	56	Acre	1,346	75,262
	NC	13	100%	13	Acre	1,120	14,663
	P	9	100%	9	Acre	400	3,443
	VLDR	7	100%	7	Acre	320	2,165
Total Zone 21		497		497.23			698,810
GPD per EDU							
Estimated GPD							
ZONE 22							
	AG	3,385	100%	3,385	Acre	-	-
	CMU	29	100%	29	Acre	2,473	72,440
	GC	19	100%	19	Acre	750	14,071
	HDR	26	100%	26	Acre	2,337	59,982
	HI	175	100%	175	Acre	1,000	175,128
	LDR	1,033	100%	1,033	Acre	808	834,691
	LI	528	100%	528	Acre	1,000	527,842
	MDR	19	100%	19	Acre	1,346	25,705
	NC	22	100%	22	Acre	1,120	25,184
	OS	15	100%	15	Acre	-	-
	P	44	100%	44	Acre	400	17,708
	POP	157	100%	157	Acre	425	66,800
	UR	579	20%	116	Acre	320	37,026
	UR-AG	1,153	20%	231	Acre	-	-
	UR-CMU	43	20%	9	Acre	2,473	21,296
	UR-GC	40	20%	8	Acre	750	6,065
	UR-LDR	754	20%	151	Acre	808	121,907
	UR-LI	114	20%	23	Acre	600	13,734
	UR-MDR	20	20%	4	Acre	1,346	5,313
	UR-P	38	20%	8	Acre	400	3,005
	UR-POP	12	20%	2	Acre	425	990
	UR-VLDR	353	20%	71	Acre	320	22,566
	VLDR	128	100%	128	Acre	320	40,956
Total Zone 22		8,686		6,202.42			2,092,410
GPD per EDU				2484.0421			
Estimated GPD				-0.2860			
ZONE 24							
	AG	111	100%	111	Acre	-	-
	BIP	45	100%	45	Acre	1,200	53,592
	CMU	163	100%	163	Acre	2,473	402,487
	GC	320	100%	320	Acre	750	240,082
	HDR	68	100%	68	Acre	2,337	159,555
	HI	564	100%	564	Acre	1,000	563,792
	LDR	1,934	100%	1,934	Acre	808	1,562,720
	LI	180	100%	180	Acre	1,000	180,021
	MDR	114	100%	114	Acre	1,346	152,874
	NC	21	100%	21	Acre	1,120	22,988
	P	108	100%	108	Acre	400	43,341
	POP	85	100%	85	Acre	425	36,143
	UR	1,131	20%	226	Acre	320	72,355
	UR-AG	459	20%	92	Acre	-	-
	UR-BIP	339	20%	68	Acre	1,200	81,288
	UR-CMU	294	20%	59	Acre	2,473	145,295
	UR-LDR	481	20%	96	Acre	808	77,804
	UR-P	30	20%	6	Acre	400	2,397
	UR-VLDR	79	20%	16	Acre	320	5,039
	VLDR	525	100%	525	Acre	320	167,930
Total Zone 24		7,050		4,800			3,969,703
GPD per EDU				2249.8935			
Estimated GPD				-0.3191			
ZONE 25							
	AG	191	100%	191	Acre	-	-
	BIP	135	100%	135	Acre	1,200	162,389
	GC	79	100%	79	Acre	750	58,923
	HDR	19	100%	19	Acre	2,337	43,753
	LDR	546	100%	546	Acre	808	440,998
	MDR	49	100%	49	Acre	1,346	65,921
	OS	429	100%	429	Acre	-	-
	UR-BIP	70	20%	14	Acre	1,200	16,801
	UR-CMU	99	20%	20	Acre	2,473	48,871
	UR-LDR	146	20%	29	Acre	808	23,516
	UR-VLDR	196	20%	39	Acre	320	12,542
Total Zone 25		1,958		1,550			873,716
GPD per EDU							
Estimated GPD							
ZONE 26							
	GC	58	100%	58	Acre	750	43,410
	LDR	275	100%	275	Acre	808	222,257
Total Zone 26		333		333			265,667
GPD per EDU							
Estimated GPD							
TOTAL	TOTAL	18,525		13,382			7,900,305
GPD per EDU							
Estimated GPD							

Notes:

(a) Source: Per City GIS analysis

**Table D-2
City of Manteca
PFIP Sewer Collection Fee
Sewer Capital Improvements Program**

Internal Working Draft - v10 2/1/2013

Project Description	Total Project Cost	Existing Development Share	Zone 21 Cost Estimate	Zone 22 Cost Estimate	Zone 23 Cost Estimate	Zone 24 Cost Estimate	Zone 25 Cost Estimate	Zone 26 Cost Estimate	Zone 41 Cost Estimate	Total PFF Share	Totals	Check
Forced Pipelines												
Force Main OSFM	276,000							276,000		276,000	276,000	-
Force Main 27N	263,000					263,000				263,000	263,000	-
Force Main 27S	165,000					165,000				165,000	165,000	-
Force Main 28	292,000					292,000				292,000	292,000	-
Force Main 36	1,565,000					1,565,000				1,565,000	1,565,000	-
Force Main FMN-01	336,000			336,000						336,000	336,000	-
<hr/>												
Subtotal Forced Pipelines Constructive	2,897,000	-	-	336,000	-	2,285,000	-	276,000	-	2,897,000	2,897,000	-
Soft Costs (8.0%)	231,760	-	-	26,880	-	182,800	-	22,080	-	231,760	231,760	-
<hr/>												
Total Forced Pipelines	3,128,760	-	-	362,880	-	2,467,800	-	298,080	-	3,128,760	3,128,760	-
<hr/>												
Gravity Pipelines												
Link 1	1,135,000					964,750	124,850	45,400		1,135,000	1,135,000	-
Link 100	539,000	485,100	53,900							53,900	539,000	-
Link 10S	1,359,000					1,359,000				1,359,000	1,359,000	-
Link 14A	63,000					63,000				63,000	63,000	-
Link 2	770,000					654,500	84,700	30,800		770,000	770,000	-
Link 22S1	2,011,000					2,011,000				2,011,000	2,011,000	-
Link 22	3,633,000					3,633,000				3,633,000	3,633,000	-
Link 22S2	1,016,000					1,016,000				1,016,000	1,016,000	-
Link 22S	800,000					800,000				800,000	800,000	-
Link 25	736,000					736,000				736,000	736,000	-
Link 3	1,471,000					1,250,350	161,810	58,840		1,471,000	1,471,000	-
Link 33	924,000						674,520	249,480		924,000	924,000	-
Link 4	764,000					649,400	84,040	30,560		764,000	764,000	-
Link 5	2,987,000					2,538,950	328,570	119,480		2,987,000	2,987,000	-
Link 51	1,038,000	508,620	301,747	227,633						529,380	1,038,000	-
Link 52	749,000			161,035						374,500	749,000	-
Link 53	1,227,000	613,500	349,695	263,805						613,500	1,227,000	-
Link 54	1,353,000			1,353,000						1,353,000	1,353,000	-
Link 56	58,000			58,000						58,000	58,000	-
Link 66S2	838,000			838,000						838,000	838,000	-
Link 66S3	833,000			833,000						833,000	833,000	-
Link 66S4	129,000			129,000						129,000	129,000	-
Link 69S1	1,647,000			1,647,000						1,647,000	1,647,000	-
Link 69S2	362,000			362,000						362,000	362,000	-
Link 71	142,000			142,000						142,000	142,000	-
Link 72	363,000			363,000						363,000	363,000	-
Link 72A	1,774,000			1,774,000						1,774,000	1,774,000	-
Link 73	720,000			720,000						720,000	720,000	-
Link 73B	147,000			147,000						147,000	147,000	-
Link 74	289,000			289,000						289,000	289,000	-
Link 75	552,000			552,000						552,000	552,000	-
Link 76	418,000			418,000						418,000	418,000	-
Link 77	410,000			410,000						410,000	410,000	-
Link 79	1,231,000			1,231,000						1,231,000	1,231,000	-
Link 80	392,000			392,000						392,000	392,000	-
Link 81	1,220,000			1,220,000						1,220,000	1,220,000	-
Link 8S	1,346,000					1,346,000				1,346,000	1,346,000	-
Link 90	1,464,000	732,000	417,240	314,760						732,000	1,464,000	-
Link 91	754,000			377,000	214,890					377,000	754,000	-
Link 92	620,000	545,600	74,400	162,110						74,400	620,000	-
Link 93	319,000	280,720	38,280							38,280	319,000	-
Link 93SI	304,000	97,280	206,720							206,720	304,000	-
Link 94	319,000	287,100	31,900							31,900	319,000	-
Link 95	309,000	278,100	30,900							30,900	309,000	-
Link 96	441,000	396,900	44,100							44,100	441,000	-
Link 97	341,000	306,900	34,100							34,100	341,000	-
Link 98	371,000	333,900	37,100							37,100	371,000	-
Link 99	369,000	332,100	36,900							36,900	369,000	-
Link 9S	1,057,000					1,057,000				1,057,000	1,057,000	-

**Table D-2
City of Manteca
PFIP Sewer Collection Fee
Sewer Capital Improvements Program**

Internal Working Draft - v10 2/1/2013

Project Description	Total Project Cost	Existing Development Share	Zone 21 Cost Estimate	Zone 22 Cost Estimate	Zone 23 Cost Estimate	Zone 24 Cost Estimate	Zone 25 Cost Estimate	Zone 26 Cost Estimate	Zone 41 Cost Estimate	Total PFF Share	Totals	Check
Subtotal Gravity Pipelines	42,114,000	5,949,320	2,085,337	14,007,343	-	18,078,950	1,458,490	534,560	-	36,164,680	42,114,000	-
Soft Costs (8.0%)	3,369,120	475,946	166,827	1,120,587	-	1,446,316	116,679	42,765	-	2,893,174	3,369,120	-
Total Gravity Pipelines	45,483,120	6,425,266	2,252,164	15,127,930	-	19,525,266	1,575,169	577,325	-	39,057,854	45,483,120	-
Pump/Lift Stations												
South Main Lift Station	1,145,000					1,145,000				1,145,000	1,145,000	-
South Union Lift Station	780,000					780,000				780,000	780,000	-
SR-99 Lift Station	1,145,000			1,145,000						1,145,000	1,145,000	-
Trails of Manteca Lift Station	1,145,000						1,145,000			1,145,000	1,145,000	-
Yosemite Square Pump Station	1,145,000					1,145,000				1,145,000	1,145,000	-
Austin Business Pump Station	1,145,000					1,145,000				1,145,000	1,145,000	-
Chadwick Pump Station	780,000			780,000						780,000	780,000	-
Tara Park, Stage 1 Updgrade	100,000					72,000	20,000	8,000		100,000	100,000	-
Tara Park, Stage 2 Updgrade	100,000					72,000	20,000	8,000		100,000	100,000	-
Woodward Park, Stage 1 Updgrade	100,000					100,000				100,000	100,000	-
Louise Avenue Lift Station	780,000			780,000						780,000	780,000	-
Oakwood Shores Pump Station	780,000							780,000		780,000	780,000	-
South Airport Lift Station	780,000					780,000				780,000	780,000	-
Subtotal Pump/Lift Stations	9,925,000	-	-	2,705,000	-	5,239,000	1,185,000	796,000	-	9,925,000	9,925,000	-
Soft Costs (12.0%)	1,191,000			324,600		628,680	142,200	95,520		1,191,000	1,191,000	
Total Pump/Lift Stations	11,116,000	-	-	3,029,600	-	5,867,680	1,327,200	891,520	-	11,116,000	11,116,000	-
Reclaimed Water												
Subtotal Reclaimed Water	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal - Construction Costs	54,936,000	5,949,320	2,085,337	17,048,343	-	25,602,950	2,643,490	1,606,560	-	48,986,680	54,936,000	-
Subtotal - Soft Costs	4,791,880	475,946	166,827	1,472,067	-	2,257,796	258,879	160,365	-	4,315,934	4,791,880	-
Total Costs	59,727,880	6,425,266	2,252,164	18,520,410	-	27,860,746	2,902,369	1,766,925	-	53,302,614	59,727,880	-

Source: City of Manteca.

Table D-3
City of Manteca
PFIP Sewer Collection Fee
Beginning Fund Balance - Sewer Funds

Internal Working Draft - v10 2/1/2013

FORTHCOMING

Table D-4
City of Manteca
PFIP Sewer Collection Fee
Undeveloped Acreage - Sewer Zones

SEWER ZONE	LAND USE	UNDEVELOPED ACRES
ZONE 21	BP	1.0000
	CMU	76.1844
	GC	36.6312
	HDR	34.9124
	LDR	155.2875
	LI	7.9108
	MDR	55.9150
	NC	13.0917
	P	8.6079
	VLDR	6.7650
ZONE 22	AG	3385.3007
	CMU	29.2923
	GC	18.7611
	HDR	25.6662
	HI	175.1279
	LDR	1033.0335
	LI	527.8424
	MDR	19.0973
	NC	22.4860
	OS	15.3685
	P	44.2700
	PQP	157.1758
	UR	578.5375
	UR-AG	1152.6551
	UR-CMU	43.0578
	UR-GC	40.4348
	UR-LDR	754.3747
	UR-LI	114.4495
	UR-MDR	19.7362
	UR-P	37.5610
UR-PQP	11.6529	
UR-VLDR	352.5933	
VLDR	127.9861	
ZONE 23	CMU	50.4571
	GC	10.0556
	LDR	6.8119
	LI	34.6008
ZONE 24	AG	111.4787
	BIP	44.6599
	CMU	162.7524
	GC	320.1093
	HDR	68.2732
	HI	563.7922
	LDR	1934.0595
	LI	180.0213
	MDR	113.5767
	NC	20.5254
	P	108.3517
	PQP	85.0424
	UR	1130.5528
	UR-AG	459.1962
	UR-BIP	338.6979
	UR-CMU	293.7625
UR-LDR	481.4602	
UR-P	29.9604	
UR-VLDR	78.7369	
VLDR	524.7825	
ZONE 25	AG	191.4289
	BIP	135.3244
	GC	78.5645
	HDR	18.7220
	LDR	545.7898
	MDR	48.9758
	OS	428.9815
	UR-BIP	70.0028
	UR-CMU	98.8098
UR-LDR	145.5194	
UR-VLDR	195.9684	

TOTAL 18192.5709

Table D-5
City of Manteca
PFIP Sewer Collection Fee
Financing Assumptions

Internal Working Draft - v10 2/1/2013

<u>Description</u>	<u>Amount</u>
Annual Interest Rate	2.00%
Term - Years	30
Payments per year	1
Loan Constant - Annual Debt Service (per \$1,000)	\$44.65
Annual Finance Cost (per \$1,000)	\$11.32

LEGEND

- WASTEWATER COLLECTION FEE ZONE 21
- WASTEWATER COLLECTION FEE ZONE 22
- WASTEWATER COLLECTION FEE ZONE 24
- WASTEWATER COLLECTION FEE ZONE 25
- WASTEWATER COLLECTION FEE ZONE 26

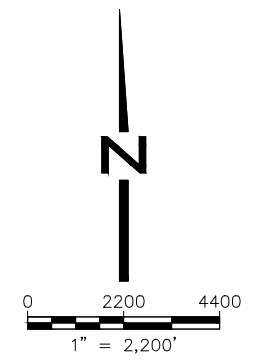
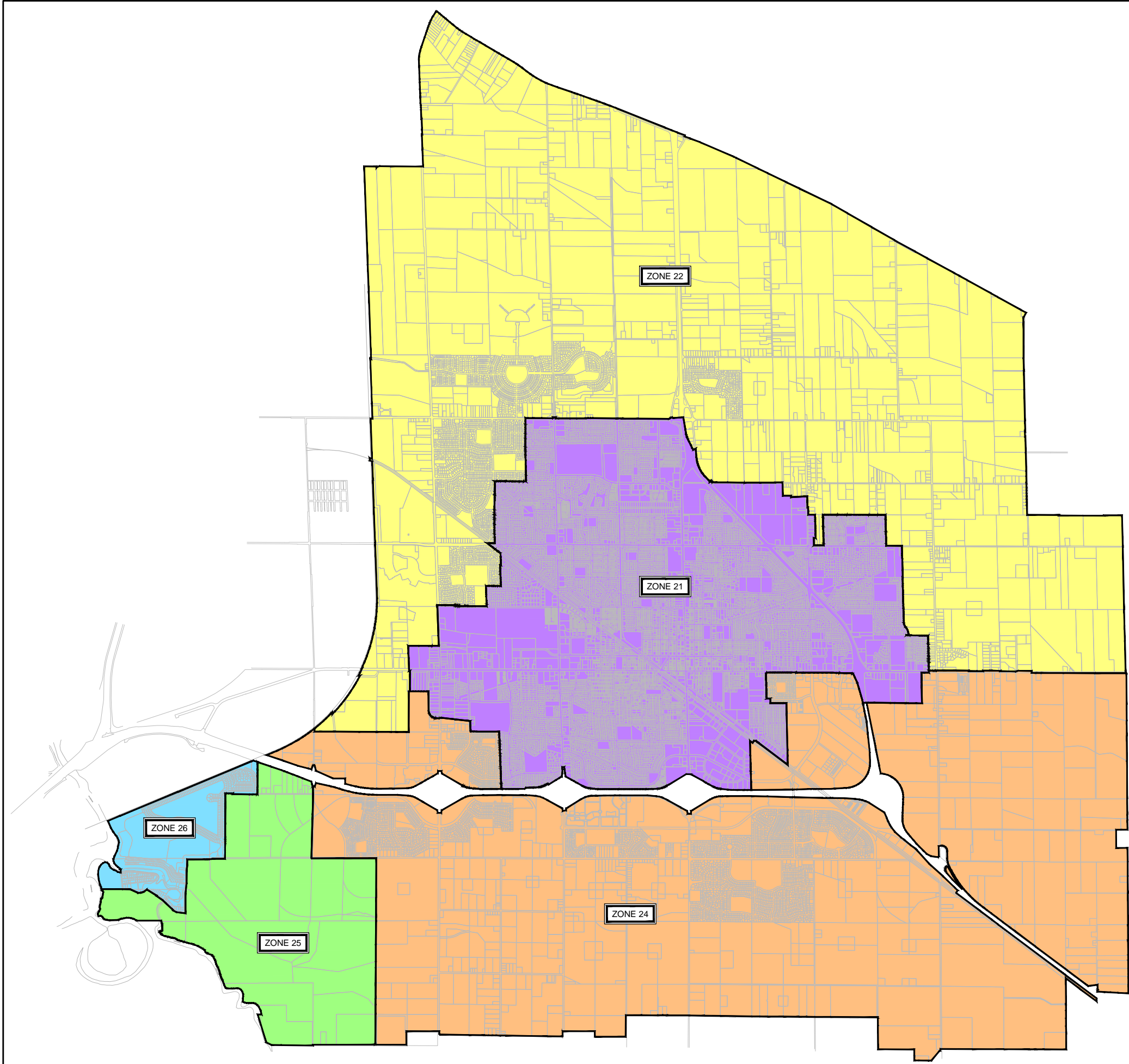


PLATE D-1

**CITY OF MANTECA 2012 PUBLIC FACILITIES
IMPLEMENTATION PLAN UPDATE**

**WASTEWATER COLLECTION
FINANCING ZONES**



Appendix E
Transportation Data

- To be added in future.-