Final Report

City of Merced
Municipal Service Review

The Economics of Land Use

Prepared for:

Merced County Local Agency Formation Commission

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1. INTRODUCTION

This Report updates the Municipal Service Review (MSR) prepared for the City of Merced in 2004.[1] The MSR presents revised findings and conclusions along with updated research. This MSR addresses the City of Merced, including the required data and analysis linked to organizational issues facing the City in consideration of the City's 2012 General Plan update. In general, issues involved in this MSR include the City's proposed annexation of unincorporated territory into the City, and the City's ability to provide adequate and efficient governmental services for existing and future residents.

In addition to adverse economic and real estate conditions, the City of Merced is facing a number of other governance issues, including:

- Opening and expansion of the University of California at Merced (UCM) – UCM is within the proposed SOI, and represents a potentially significant area of growth and expansion; however, a number of issues, including the sharing of taxes, represent obstacles to future orderly annexation and extension of urban services.

- Disadvantaged unincorporated communities (DUCs)[2] in Merced's Sphere of Influence (SOI) – Recent State legislation prohibits LAFCO from approving annexations greater than 10 acres where a DUC is contiguous unless an application to annex the DUC is also filed (unless LAFCO can show there is no support within the DUC for annexation). This MSR provides a preliminary map prepared by EPS of potential DUCs, based on census data; the current lack of detailed household income data at a neighborhood level limits the precision of this map at this time. State law requires cities to review and update their general plans to analyze the service needs of DUCs within or adjacent to their spheres of influence. It is anticipated that detailed analysis of DUCs will be conducted by the City as it updates its Housing Element targeted for 2015, and as it submits annexation applications.

Background and Purpose

In 1997, the State Legislature convened a special commission to study and make recommendations about how to accommodate California's rapidly accelerating growth. The Commission on Local Governance for the 21st Century focused on empowering the already existing County LAFCOs governed by the Cortese-Knox Local Government Reorganization Act of 1985. The Commission's final report, *Growth within Bounds*, recommended various changes to local land use laws and LAFCO statutes to allow LAFCOs more influence in shaping California's growth. Assembly Speaker Robert Hertzberg encompassed the recommendations of the Commission in Assembly Bill 2838, which passed into the Cortese-Knox-Hertzberg Local

[1] Final Report, City of Merced Municipal Service Review, Prepared for Merced County LAFCO by Economic and Planning Systems, approved by LAFCO July 22, 2004

[2] DUCs are defined as inhabited territory that constitutes all or a portion of a community with an annual median household income that is less than 80 percent of the statewide annual median household income (MHI).

Government Reorganization Act of 2000. The law endows LAFCO with both more responsibilities and more influence to direct growth in California.

One of LAFCO's responsibilities requires regional studies of municipal services (or MSRs) every five years, in conjunction with reviews of city and district spheres of influence (SOIs). Government Code Section 56425 directs LAFCOs to review and update agencies' SOIs, as necessary, every five years. Section 56430 requires MSRs to be conducted before or in conjunction with the sphere updates. The Local Government Reorganization Act requires that this MSR address the following factors:

1. Growth and population projections for the affected area
2. The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence
3. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies
4. Financial ability of agencies to provide services
5. Status of, and opportunities for, shared facilities
6. Accountability for community service needs, including governmental structure and operational efficiencies
7. Any other matter related to effective service delivery, as required by commission policy

Approach and Methodology

Economic & Planning Systems, Inc. (EPS) has been retained by LAFCO to update the MSR for the City of Merced in Merced County. EPS reviewed the various plan documents provided by LAFCO and City staff, the City's current budget, the prior MSR document, and other readily available information to prepare this Report. The Report was reviewed by the City and subsequently published for public comment before adoption by the Commission. The Report presents a summary of service issues and trends, and provides details of each service in subsequent sections of the report. The seven State-mandated issue areas are reviewed for each service category examined in the Report.

City of Merced Governance

The City of Merced, incorporated in 1889, is a charter city that operates under the Council-Manager form of government. The City Council consists of a mayor and six council members elected from the City at large. The mayor serves for a term of two years and council members for terms of four years, each limited to two terms. The City Council appoints the City Manager, the City Clerk, the City Attorney, and the Finance Officer who may be removed with at least four votes of the City Council (five votes for the City Manager). All other officers and department heads of the City are appointed by the city manager. The City Council meets regularly twice a month and more frequently as needed.

The City of Merced provides a full range of municipal services, including water, sewer, and storm drainage systems as well as police, fire, and general government services. The City of Merced is the largest city in Merced County and serves as the administrative center for the County government. The City government consists of the following departments:

- Finance
- City Attorney
- Development Services (includes Engineering, Inspection Services, Planning, Permitting and Code Enforcement)
- Fire
- Information Services
- Public Works--Water Resources & Reclamation
- Police
- Public Works/Operations
- Economic Development (includes Housing)
- Support Services

The City also operates a municipal airport. The Airport Superintendent reports to the Director of Public Works-–Water Resources & Reclamation.

The City also provides certain services to areas outside of its city limits pursuant to LAFCO-approved extraterritorial service agreements; these services are noted in subsequent sections. The Report focuses on the critical services provided by the City and therefore does not include all City services.[3]

City General Plan and Sphere of Influence Expansion

An update to the General Plan for the City of Merced, adopted in January 2012, proposes changes to the City's Specific Urban Development Plan (SUDP) and Sphere of Influence (SOI). **Figure 1** shows the proposed SOI compared to the existing SOI. Adoption of the revised MSR is required before LAFCO approval of the modified SOI. The City's SOI proposed in the *Merced Vision 2030 General Plan* is 5,124 acres smaller than in the *Merced Vision 2015 General Plan*, adopted in 1997. The revised SOI totals approximately 28,576 acres. The reduction in SOI in the current proposal is a result of updated growth projections as well as the relocation of the UC Merced campus and University Community, which resulted in over 7,000 acres northeast of Lake Yosemite (Smith Trust lands) that were shown the 1997 SOI subsequently being removed from the updated SOI.

In addition, the current SUDP and SOI are proposed to be coterminous, combining both an increase in the SUDP (from 20,711 acres in the Merced Vision 2015 General Plan to the 28,576 acres proposed in the Merced Vision 2030 General Plan) but decrease, as discussed above, in the SOI. The LAFCO Commission will analyze this decrease in the Sphere in accordance with Section 56425 of the Cortese/Knox/Hertzberg Act.

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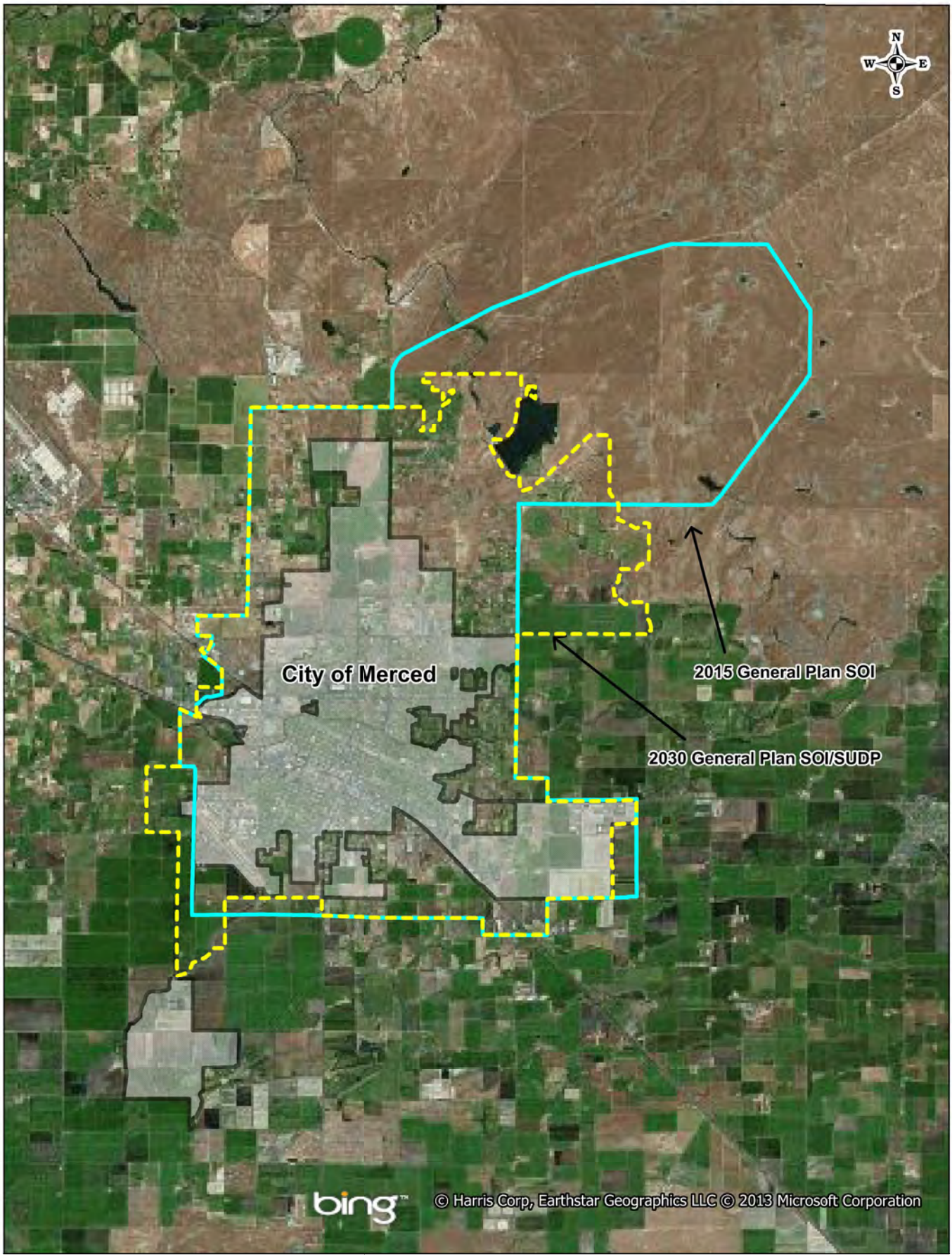
[3] In the current report, for example, parks and recreation services and refuse services are not examined. These services are typically paid for by fees and the level of service is calibrated to those fees.

Figure 1:
Existing and Proposed Sphere of Influence



One factor influencing the boundaries of the City's SOI and future annexations is the existence of disadvantaged urban communities (DUCs). State legislation in 2011 (SB 244) requires cities and counties to review and update the land use elements of their general plans to map and analyze the service needs of DUCs within or adjacent to their spheres of influence. SB 244 limits a city's ability to annex territory because it prohibits LAFCOs from approving an annexation of territory greater than 10 acres (or as determined by commission policy) where a DUC is contiguous unless an application to annex the DUC is also filed. There are exceptions where LAFCO can show there is no support in the DUC for annexation. The current lack of detailed household income data at a neighborhood level limits the precision of this map at this time. It is anticipated that detailed analysis of DUCs will be conducted by the City as it updates its Housing Element targeted for 2015, and as it submits annexation applications.

Figure 2 broadly illustrates potential DUCs that are within or adjacent to the City's proposed SOI. The areas identified are preliminary, and based on census block groups with median household incomes less than 80 percent of the statewide average and at least 12 registered voters.

A more detailed review may alter the areas shown, since the census data is at a fairly gross level and does not necessarily accurately depict specific communities of concern. It has been LAFCO's practice, as it receives annexation applications, to review those applications for potential DUCs that should be considered as part of the annexation; this level of scrutiny helps to further identify and address concerns regarding DUCs as expressed by State law. It is anticipated that detailed analysis of DUCs will be conducted by the City as it updates its Housing Element, and as it submits annexation applications.

Figure 3 shows the adopted *Merced Vision 2030 General Plan* land use map, which also includes the current city limits and proposed SOI/SUDP.

Impact of the Great Recession

The Great Recession has had a profound impact on the San Joaquin Valley; most of the Valley's counties have been affected substantially worse than the national or State average in terms of employment losses, reductions in growth and development, and general weakening of the local economy. Merced County has been one of the hardest hit counties and this has affected the City's economic and growth rates. The City's rate of growth has slowed substantially and housing prices have fallen by 50 percent or more. Meanwhile a very large percentage of existing homeowners are "upside down", owing more on their homes that they are currently worth in the marketplace. While conditions have stabilized somewhat during 2012, housing supply and demand relationships remain weak and pricing is such that little to no new development can occur. This extended period of economic weakness and related very limited housing development will certainly extend buildout of the SOI anticipated in the *Merced Vision 2030 General Plan* despite its reduced size. These market conditions may also have other effects on the development of the City including changes in the mix and relationships of land use types (e.g. demand for retail sites) and the alteration of housing market preferences.

Figure 2:
Disadvantaged Unincorporated Communities

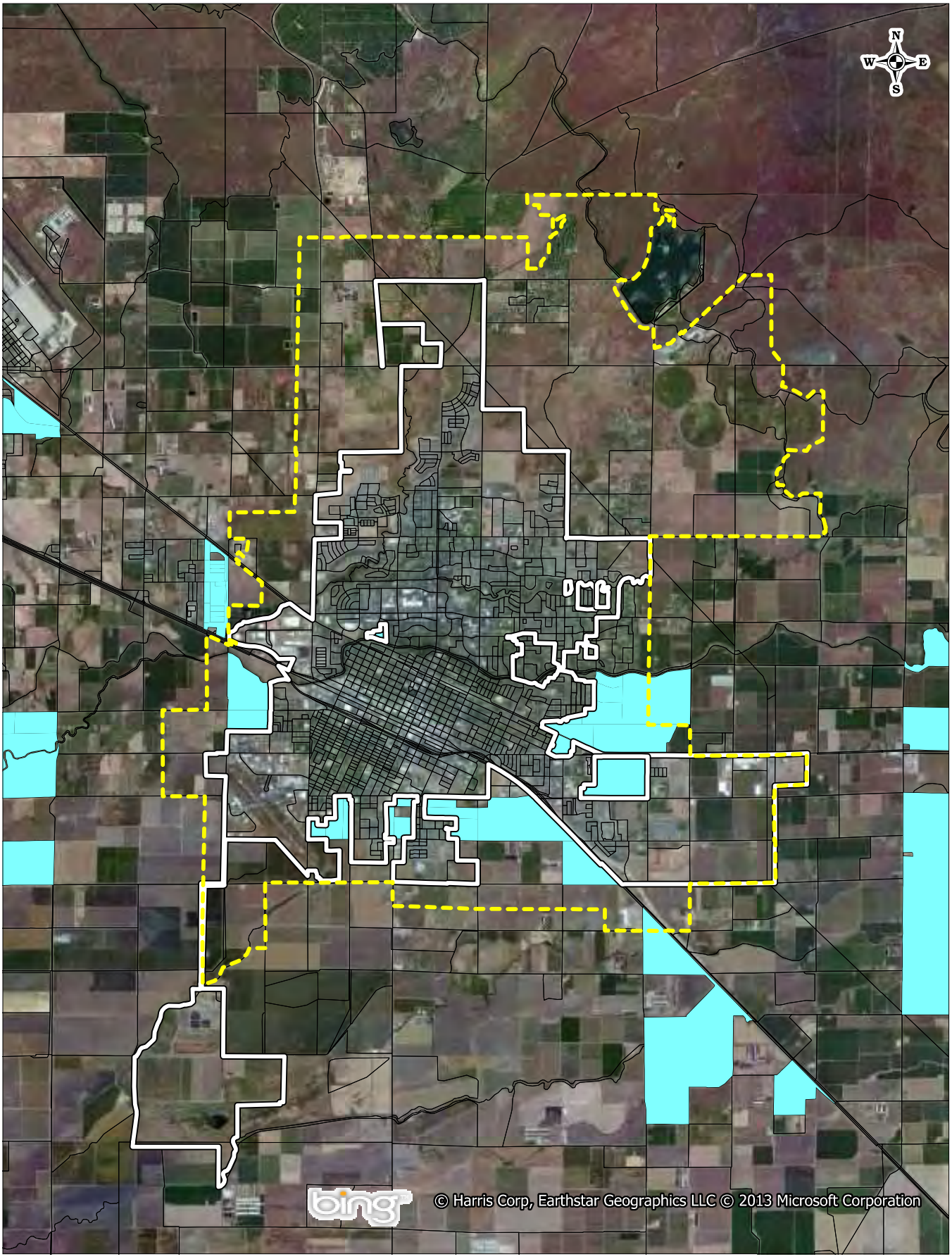
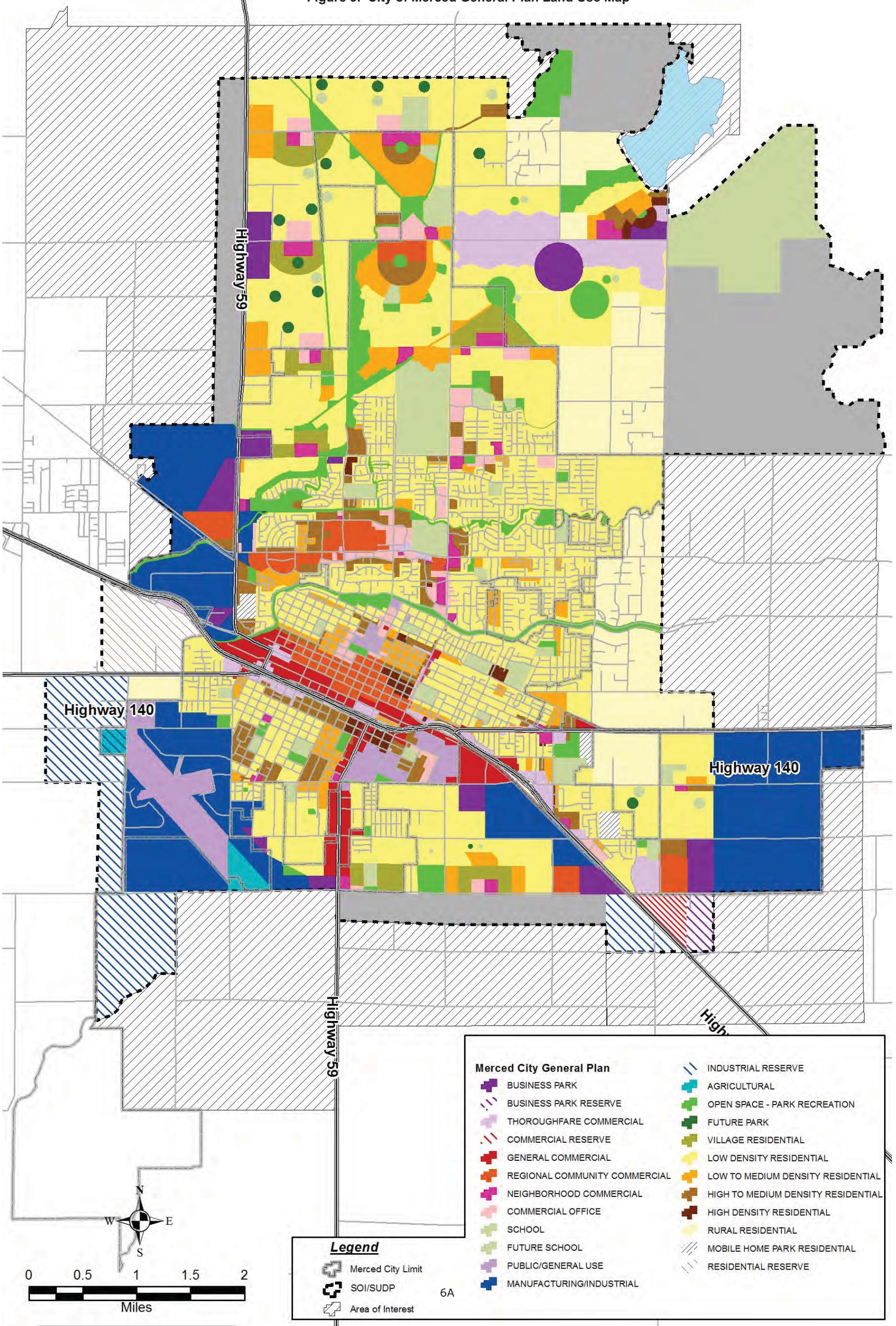


Figure 3. City of Merced General Plan Land Use Map



Projected Growth and Development

Growth projections used in the preparation of the *Merced Vision 2030 General Plan* remain optimistic in order assure adequate infrastructure can be planned for build out. Preparation of the *Merced Vision 2030 General Plan* includes a number of growth assumptions including the continued development of the 10th University of California campus (UCM) southeast of Lake Yosemite on the northeastern edge of the Merced SUDP/SOI, that the population within the Merced SUDP/SOI area will approach 155,000 by the year 2030, and that the average household size in the SUDP is anticipated to be approximately 3.20 people per dwelling unit[4].

In addition, the *General Plan* assumes regional urban development (residential, commercial and industrial) will be focused within the Merced City's SUDP/SOI and not in the unincorporated areas surrounding the City in order to accommodate efficient levels of service delivery.

As stated above, the *Merced Vision 2030 General Plan* assumes future population in the Merced growth area (current SOI/SUDP), which includes the UCM campus, will approach 159,900 by 2030[5]. To meet these projections, the combined average growth rate of the City and Campus would need to be approximately 4.9 percent per year, as shown in **Table 1**.

Assuming an average household of size of 3.2 persons per dwelling unit, Merced will need to accommodate roughly 43,000 new housing units (compared to 27,400 in 2010) and 35,000 new employment opportunities (compared to approximately 22,000 in 2010) by 2030.[6] However, these projections may be revised due to the uncertainty that remains regarding local housing and job markets. A combination of high foreclosure rates[7] and high unemployment rates in Merced continues to affect growth. Currently, home pricing remains below construction costs for most product types, resulting in homebuilders being unable to compete with existing re-sale properties. Based upon the latest economic reports, the City anticipates an economic rebound for the Valley economy (and for the City of Merced) in the next two to three years.[8]

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[4] The *2012 Public Facilities Financing Plan* estimates single family dwelling units to have roughly 3.2 persons per household and multifamily dwelling units to have 2.8 persons per household. Currently, single-family units represent the majority of units in Merced, which is the basis for the Plan's forecasts.

[5] Housing unit figure is derived from persons per dwelling unit in the *2012 Public Facilities Financing Plan.* Employment projections are from the Merced Vision 2030 General Plan, p. 1-13.

[6] Merced Vision 2030 General Plan, p. 1-13

[7] According to U.S. News, in April of 2010, of the top 10 Underwater Housing Markets in the US, Merced, CA was ranked number 2. The article states that Merced Area home prices jumped nearly 129 percent from 2002 to 2006 and then proceeded to decrease more than 72 percent through the third quarter of 2009. This rapid deflation dragged about 64 percent of single-family home mortgages underwater by the fourth quarter of 2009.

[8] City of Merced 2012-2013 Proposed Budget, p. 1

Table 1
City of Merced Projected Population Growth
Merced Service Review; EPS #121026

Year	Population			
	City of Merced [1]	**UC Merced/University Community**	**Merced + UC Merced/University Community**	**Merced + UC Merced/University Community Growth**
2010	81,500	1,900	83,400	
2015	91,500	4,700	96,200	15%
2020	107,600	9,400	117,000	22%
2025	121,800	15,600	137,400	17%
2030	137,400	22,500	159,900	16%
Annual Average	**2,795**	**1,030**	**3,825**	**4.6%**

[1] Population esimates are from Merced County Association of Governments (MCAG).

Sources: Merced County Association of Governments; Economic & Planning Systems, Inc.

Merced and its environs have historically been an agricultural community, with the City of Merced providing a variety of services for the agricultural economy surrounding it. In the past few decades, however, the economy of Merced has diversified and now covers the full range of economic activities, from light manufacturing to services. As of 2010, agriculture, forestry, fishing and hunting jobs employed only 2.1 percent of Merced's workforce compared to 18.5 percent for educational services and 13.3 percent for health care and social assistance.[9]

Population Growth

Merced currently has a population of 79,328 and 27,412 households.[10] A large number of new housing developments were built in the City during the economic boom of the mid-2000s. Since the onset of the national economic recession, development and annexation activity, which was significant during the preparation of the 2004 MSR, is largely on hold.

The *Merced Vision 2030 General Plan* projects a City population of approximately 137,400 by 2030, an increase of 58,442, or 74 percent. In addition, the growth projections assume a UC Merced population of 22,500 by 2030, which would total 159,900 by 2030 for the City and UC Merced combined.[11] The population of the City will continue to be largely influenced by the growth of the University of California at Merced, which, since its opening in 2005,[12] has steadily increased its student body, faculty and staff. Aside from the new UC Merced community, in the short term, the population growth will consist mainly of planned subdivisions on the edges of the current City, especially to the northeast. In the long-term, the General Plan looks to focus growth to the north and northeast of the City, with only minor extensions to the west and southwest. Office and retail development will likely accompany this growth. **Figure 1** on a prior page shows the City's General Plan Map and SOI.

Employment Growth

As of 2010, the City of Merced had 22,458 jobs and a 13.1 percent unemployment rate, which remains far higher than California as a whole at 10.7 percent unemployed.[13]

Most existing employment opportunities in Merced are located Downtown and south of Highway 99.[14] The four largest employment categories are educational services (18.5 percent), retail trade (12.9 percent), health care and social assistance (13.3 percent) and public administration (11.3 percent). The City of Merced maintains a healthy worker-flow balance, as roughly 14,000 persons who live outside of the City work in the City and roughly 14,000

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[9] 2010 US Census

[10] California Department of Finance Demographic Research Unit, May 2012

[11] Merced County Association of Governments, July 2010

[12] The UC Merced Campus matriculated its first graduate students in 2004, but began its undergraduate program in 2005.

[13] US Census, 2010

[14] Merced Vision 2030 General Plan Draft Program EIR

residents of Merced commute outside of the City for work (roughly 8,000 Merced residents work within the City limits).[15]

UC Merced

The largest change to the City of Merced since the 2004 MSR has been the opening of the new University of California campus on September 5th, 2005. The Campus is located northeast of the City, approximately two miles east of the current City limits. For the fall of 2012, UC Merced will matriculate 5,600 undergraduate and graduate students. Planning is underway to facilitate further campus development to accommodate 10,000 students by 2020 and 25,000 students by 2035.[16] Approximately 800 acres of the campus is planned for classrooms, laboratories, offices, libraries, performing arts, athletic and recreation facilities, student services and a student center, food services, support services and parking. Planning for the UC Merced Campus has also included an adjoining "University Community" area, lying immediately south of the Campus. The University Community has been approved by Merced County in the University Community Plan (2004). The Community Plan envisioned development under County jurisdiction but also contemplated possible annexation to the City of Merced.

In total the UC Merced Campus and university community are expected to occupy 3,100 acres.[17]

At its ultimate size UC Merced is expected to employ 9,200 people. Employment at UC Merced currently stands at more than 850. Employment is expected to continue to grow to over 2000 by the 2013-2014 academic year and reaching a total of 6600 faculty and staff once the campus reaches full build out. In addition, the operation of UC Merced would create a number of indirect jobs, totaling 4,000 by the 2025-2026 academic year.[18] As such, it will continue to be a major driver of the Merced County economy, both in terms of direct employment and local expenditures but also the various expected "spin off" activities commonly associated with a major college campus.

At the present time, Phase I of the UC Merced campus is provided water and sewer service through an extra-territorial service agreement with the City of Merced. Under the current agreement, the University Community is not provided services by the City.

While the UC Merced and the University Community will remain in the City's SUDP there are a number of major issues that will impede annexation of the area. These include:

- The Bellevue Corridor area that lies between the Campus and current city limits of Merced has been incorporated into the SOI/SUDP. Land uses in this area have been updated to accommodate housing and a "technology park." This area will need to be annexed but the

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[15] US Census, 2010

[16] "*University of California, Merced: Growing the 21st-Century Sustainable Campus*" (An Urban Land Institute Advisory Services Panel Report, 2012)

[17] Merced Vision 2030 General Plan, p.2-33

[18] UC Merced Long Range Development Plan (LRDP) Draft EIR

actual development designations await completion of an Area Plan being prepared by the City. In addition to the spatial issues, it is likely that this new development area will compete directly with the development of the University Community Plan area.

- A range of major infrastructure improvements are required for the area to develop. Notably, there are two new arterial roadways planned to provide access to UC Merced and University Community to accommodate demand for east-west and north-south traffic flow: the Campus Parkway to the east of the Campus and the Atwater-Merced Expressway on the west side. No financing plan has emerged to fund these costly improvements. The City and the County have a "master property tax exchange agreement" in place that may constrain annexation because under the agreement the County retains its share of property taxes following annexation. Under these circumstances it is more challenging for the City to fund needed municipal services to the annexed area. It is likely that some revision of this agreement will be necessary before substantial annexations within the SUDP/SOI will occur.

High Speed Rail

In November 2008, California voters approved Proposition 1A authorizing $9.95 billion in bonds for the High Speed Rail System. The rail system will connect San Francisco to Los Angeles, with a large portion of the system running through the Central Valley. Merced has been suggested as a key city for a station and in 2010, AECOM, Inc. was hired as a consultant to design station plans for the City. The construction of the proposed High Speed Rail system would provide new jobs for Merced residents and help connect Merced to large population and job centers throughout the State.

Fiscal Conditions

Like other cities in the state of California and across the country, Merced has faced a challenging fiscal environment in recent years. The economic downturn has been especially severe for Merced's housing market. Nationally, Merced has continually ranked in the top 10 for the areas with the highest rate of foreclosures. The extensive decline in home values has a direct effect on property tax revenues. In addition, struggling real estate and construction markets, coupled with continued job losses, have resulted in a consistent decline in sales tax revenue. In 2010, sales tax and property tax decreased by 7 percent and 17 percent respectively.

The City has taken a number of steps recently to ensure that sufficient revenue will be available to provide essential services to residents. Due to the continued decline in revenue, the City has implemented a five-year financial plan (FY 2009/20010 through FY 2013/2014) in order to trim expenditures and utilize General Fund reserves to maintain core services.[19] In addition, as the City's growth has stagnated over the past few years, there has been limited increase in demand for essential services.

The implementation by the City of a Community Facilities District to provide funds for services for new development, including police, fire, parks and community services continues to provide essential funding for the City.

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[19] City of Merced, California *Comprehensive Annual Financial Report* (2010)

2. POLICE DEPARTMENT

After a period of rapid increase in the 1990s and early 2000s, the growth of the Merced Police Department has stalled over the past few years due to budgetary constraints and a slowed rate of population growth.

Description

In 2009, the Merced Police Department (MPD) had 111 sworn officers serving three districts. Central Station and South Station[20] serve Merced's residents at a ratio of 1.32 officers per 1,000 citizens, a favorable comparison to ratios used elsewhere.[21] However, the 2012-2013 Adopted Budget allocates funds for only 95.47 sworn and non-sworn positions, which constitute a 24 percent decrease in personnel since the 2006-2007 fiscal year. In order to maintain current levels of service, the Police Department will continue efforts to maximize efficiency and retain personnel. Police officers serve on one of many divisions: patrol, investigations, traffic and parking, crime scene response, street crime, gang suppression, SWAT, hostage negotiations, bicycle patrol, canine unit, mounted patrol, animal control, school resource, gang intervention, bomb unit, and color guard. The Department also sponsors various community involvement programs such as the Volunteers In Police Service (VIPS) and the Explorers Scouts, which allows youth to assist with special projects and community events.

The City of Merced's population in the seven years from 2004 to 2010 grew by roughly 11,000. In that time, the Police Department experienced roughly a 35 percent drop in major crimes. Incidents of vehicle theft (-53 percent), homicide (-42 percent), theft (-39 percent) and assaults (-28 percent) all experienced significant decreases in this time period.[22] Relative to statewide statistics, the City of Merced experienced a more significant drop in crime in every category except robbery and arson.[23]

Much of the continued drop in crime is attributed to having more experienced officers since the voter approval of Measure C in 2005, which raises money for public safety improvements. In 2006, the first year when Measure C took effect, MPD grew from 87 officers to 111. However, since the economic downturn, there has been a hiring freeze and layoffs as is reflected in personnel levels over the past few years.

Patrol Officers are assigned to one of the three patrol areas in order to know their patrol area more intimately and to familiarize themselves with the area's residents. Officers in the patrol division are assigned to one of two watch shifts and rotate every six months. Each officer in the Investigation Unit is responsible for 500 to 600 cases per year, ranging from homicides to auto

[20] North Police Sub-Station on Longhborough Drive was closed due to budget cuts in 2011.

[21] Merced Vision 2030 General Plan, p.11-27

[22] Merced Police Department Major Crime Statistics 2001-2011.

[23] State of California Department of Justice Statewide Crime Statistics

burglaries. Dispatch received and handled over 70,000 calls for service in 2012, including calls to 911, police, fire, and ambulance requests[24].

Determinations

1. Growth and population projections for the affected area

The City of Merced's 2009-2013 Public Facilities Financing Plan details the future needs for Police service, which will be generated exclusively by new growth. The Police Department aims to maintain a service level of 1.37 sworn officers per 1,000 Merced residents.[25]

2. The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence

The current lack of detailed household income data at a neighborhood level limits the ability to identify DUCs at this time. It is anticipated that detailed analysis of DUCs will be conducted by the City as it updates its Housing Element targeted for 2015, and as it submits annexation applications.

3. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies

According to the City's adopted Capital improvement Program, future expansion will require the acquisition or construction of at least one new police station. The estimated cost for the full expansion is $8,925,000, all of which is estimated to be spent beyond FY 2012-2013. In addition, the current Central Station will be relocated to a site in North Merced near Mansionette Drive and Yosemite Avenue in the future in order to better serve the population trends in Merced. In the adopted Merced Vision 2030 General Plan, due to population projections, the City estimates an increase in officer responses to incidents from nearly 65,000 in 2009 to over 135,000 annually by 2030. In order to accommodate such increases, additional officers, equipment and facilities will need to be added.

4. Financial ability of agencies to provide services

The Police Department receives its funding from the General Fund, Measure C Fund and the Community Facilities Districts. The majority of the Police Department's FY 2012-2013 $16,889,194 budget is from the City's General Fund. Parking enforcement revenues are expected to amount to $330,000 in FY 2012-2013. The majority of operating expenditures is spent on personnel, supplies and services.

Financing sources for future Police department capital improvements are expected to come primarily from Public Facilities Impact Fees, which were originally scheduled to undergo a rate increase in November 2013. However, following a recent ordinance adopted by the City Council on November 19, 2012, a new fee schedule will go into effect February 1, 2012 that includes a decrease in overall fee levels by approximately 55 percent compared to previously scheduled

[24] Information provided by Lt. Lance Eber on January 9, 2013.

[25] 2012 Public Facilities Financing Plan

rates. While these rate reductions would be seen primarily in non-police project categories, police fees would be reduced by roughly 10 percent.

Under the updated fee schedule, Public Facilities Impact Fees for Police will become $572 for single-family homes, $500 for multifamily homes, $510 for institutional facilities, $447 for retail/commercial space, $510 for office space, and $198 for industrial development[26].

In addition, the City of Merced Sphere of Influence Public Facility Fee, established in 2000, provides funds to the City of Merced to fund capital facilities needed to support new development including police facilities, fire stations and other public facilities.[27]

5. Status of, and opportunities for, shared facilities

Many police activities overlap with fire activities, including radio needs, the dispatch center, and emergency notification capability. The police dispatchers receive and direct calls from multiple sources, including 911, police, fire and ambulance calls.

When economically viable, the City provides parking citation processing and administrative adjudication services to other agencies.

6. Accountability for community service needs, including governmental structure and operational efficiencies

The Police Department currently serves the entire City of Merced, and will serve areas that are annexed into the City. The City has not indicated that any police services are provided outside City limits.

Current management efficiencies appear reasonable, despite recent decreases in personnel. The police department appears reasonably accountable and no changes to governance are pending or proposed at this time.

7. Any other matter related to effective service delivery, as required by commission policy

No other matters have been identified at this time.

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[26] City of Merced Public Facilities Impact Fees, adopted by the City Council in November of 2012, will go into effect February 1, 2013.

[27] This fee was established in June 2000 through Resolution 2000-118 to finance needed capital facilities (arterials, traffic signals, bridges, railroad crossings, fire stations, police facilities, community bikeways and other public facilities) generated by new development occurring in the unincorporated portion of the City of Merced Sphere of Influence.

3. FIRE DEPARTMENT

After rapid expansion in the mid-2000s, the Merced Fire Department has been forced to alter its day-to-day operations as well as its short and long-term planning following the economic downturn in 2008. The MFD Strategic Plan, released in 2011, describes significant changes in the MFD including the retirement of a 28-year tenured Fire Chief, overall younger personnel than the MFD has had in the past, and an increased emphasis on education within the Department.

The rate of new station development and other capital improvements has also slowed over the past few years as population growth has not reached levels previously expected. In the prior MSR (2004), the Merced Fire Department had plans for four new fire stations within the following five to ten years to provide for planned growth. Of those planned stations, Fire Station #55 in northeast Merced at the intersection of Parsons and Silverado has been completed.

Due to recent decreases in population and fiscal resources following the economic downturn, expansion of services will likely be more limited than they have been in the past few decades.

For instance, due to recent growth trends, the development of three new stations, originally planned to be built on the western and northern edges of Merced's SOI/SUDP, are currently at a standstill.[28]

Description

Fire protection, rescue and emergency medical are provided to the citizens of the City of Merced by the Merced Fire Department (MFD). MFD consists of a staff of 64.5 full time equivalent positions of which 61 are sworn positions.[29] The Department operates five stations dispersed throughout the City, serving residential, commercial and industrial structures.[30]

MFD responds to emergency situations including structural fires, wildfires, medical emergencies and hazardous materials incidents. MFD is regularly evaluated by the Insurance Services Organization (ISO) which utilizes the Fire Protection Rating System (FPRS) to assess the Department. At the time of the *Merced Vision 2030 General Plan* adoption, the Department was rated a 2 on a 10 scale with a rating of 1 representing the best level of protection. MFD strives to reach calls in four to six minutes citywide. Current data shows the MFD response time of less than 6 minutes over 98 percent of the time.[31]

Although new station development, remodeling and relocation are described in various budget and planning documents, all station construction is currently at a standstill.

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[28] Michael W. McLaughlin, Fire Chief, City of Merced Fire Department

[29] Introduction. City of Merced, California Proposed 2012-2013 Budget. p.8

[30] Section 5.2.1 Fire Protection. Merced Vision 2030 General Plan. p.5-2

[31] Section 5.2.1 Fire Protection. Merced Vision 2030 General Plan. P.5-2. Statistics Provided by Merced Fire Department in September of 2012.

However, as the City's population continues to grow and expand its urban area, there will surely be a potential need to relocate existing facilities, and add new fire stations, equipment, and staff to serve projected growth.[32] In addition, water service in new areas will have to be designed to accommodate "fire flow," an estimation of demand on the water system to fight fires. To date the City of Merced has included this requirement in its water system designs.

Determinations

1. Growth and population projections for the affected area

According to the Merced County Association of Government's 2010 projections, the population of Merced is expected to exceed 90,000 by the year 2015 and 137,000 by the year 2030.[33] As these projections are far lower than envisioned before the economic downturn, the Merced Fire Department has been forced to adjust their plans for station development and personnel needs.

2. The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence

The current lack of detailed household income data at a neighborhood level limits the ability to identify DUCs at this time. It is anticipated that detailed analysis of DUCs will be conducted by the City as it updates its Housing Element targeted for 2015, and as it submits annexation applications.

3. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies

Three new fire stations are proposed in the City's 2009-2013 Capital Improvement Budget. The estimated 20-year cost for these improvements is $9,660,000. Of this amount, $520,000 will come from the sale of existing assets and $9,140,000 from the City's impact development fees.[34] In addition, Station #56, located at Merced College on Bellevue and M Street is under consideration to be sold. Under this scenario, a new station north of the existing site would be developed.[35]

Fire Station # 53, originally planned (as noted in 2004 MSR) to be relocated within six to ten years to a site near Highway 59 and Olive to serve new development in the western central part of the City, is instead slated to undergo a significant remodel at its existing location, revising costs from an estimated $3,200,000 to $1,000,000.

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[32] Section 5.2.1 Fire Protection. Merced Vision 2030 General Plan. p.5-4

[33] Projections made by the Merced County Association of Governments in July 2010, which can be found in the *Merced Vision 2030 General Plan*, p. 2-7.

[34] City of Merced Capital Improvement Program 2009-2013, p. 3. A 2012 update to the cost estimates for capital improvements reduces the Fire Protection total to $9.1 million from the roughly $9.7 million put forth in the CIP.

[35] 2012 Public Facilities Financing Plan

Fire Station #57 is to be built on Bellevue Avenue between G and Golf and its estimated cost is $3,220,000, to be paid for primarily through the sale of existing assets and Development Impact Fees. Fire Station #57 is planned to help serve the UC Merced Community as it continues to develop. It should be noted that the MFD has updated the location of Station #57 to be further east to accommodate UC Merced and associated development's growth patterns.

Fire Station #58 was originally planned to be built at the corner of R and Bellevue at an estimated cost of $3,220,000, to be paid for through Development Impact Fees. However, the most recent capital improvement schedule does not include Station #58 as it has been designated not to be needed in the next 20 years and therefore has been proposed to be deleted from the list of capital improvement projects.

Current construction plans for fire stations and other facilities appear to meet the needs of planned growth.

4. Financial ability of agencies to provide services

MFD's operating revenue sources for FY 2012-2013 include general revenue of $8,716,640 (including $188,115 in federal grants and $7,711,872 from the City's General Fund), Measure C funds of $2,119,976, Community Facilities District funds of $304,225, and $950,021 in Capital Improvement Funds, for a total of $12,090,862.[36]

Measure C is a half-cent sales tax approved by voters in 2006. The funds from the tax can be used for increased services in public safety, transportation and other vital municipal improvements with the tax expected to generate up to $160 million over 20 years.[37]

Much of the revenue for MFD's Capital Improvement Program will come from Public Facilities Impact Fees. Beginning in November 2013, Public Facilities Impact Fees were scheduled to increase substantially for all project categories inside the current "infill zone" and for retail/commercial City-wide.[38] Fire fees alone were scheduled to become $1,444 for single-family homes, $1,264 for multifamily homes, $1,289 for institutional facilities, $1,128 for retail/commercial space, $1,289 for office space, and $501 for industrial development.

However, on November 19, 2012, an update to the Public Impact Fees was passed by the City Council, decreasing overall fee levels by approximately 55 percent compared to the previously scheduled rates as referenced above. Under the adopted fee schedule, Fire fees will be roughly 70 percent lower than the November 2013 levels. MFD's allocation will be $427 for single-family, $374 for multifamily, $382 for institutional, between $334 and $382 for commercial, and $148 for industrial. The City feels this revision in impact fees will provide a more competitive

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[36] City of Merced 2012-2013 Adopted Budget, p. 10-7

[37] City of Merced

[38] Project categories include 1) Roadways, Bridges and Railroad Crossings, 2) Traffic Signals, 3) Fire, 4) Police, and 5) Parks, Recreation and Bikeways. The November 2013 fee levels will be consistent to the current "other" fee levels for residential, institutional, office and industrial sub-categories but will increase retail/commercial fee levels by 33 percent.

development environment with nearby cities such as Atwater, Turlock and Modesto. The updated fee schedule went into effect on February 1, 2013[39].

In addition, the City of Merced Sphere of Influence Public Facility Fee, established in 2000, provides funds to the City of Merced to fund capital facilities needed to support new development including police facilities, fire stations and other public facilities.[40]

State and Federal grants are being pursued with greater frequency by MFD personnel due to the increasingly difficult fiscal environment for the City. The 2011 MFD Strategic Plan suggested that MFD personnel be provided educational opportunities to improve competitiveness for grants. The Strategic Plan also calls for a member of the MFD to be designated to seek grants and federal funding including AFG, SAFER, OTS and Fire Prevention funding.

In the Strategic Plan, the MFD reiterated its continued efforts to pursue cost-sharing agreements with other organizations, though none specifically have been defined.[41] The fire department does not charge customers for services other than special services, such as weed and lot cleaning and fire prevention charges.

No further cost avoidance opportunities have been identified at this time.

5. Status of, and opportunities for, shared facilities

MFD is part of a County-wide agreement to cooperate in regional emergencies as part of the Merced County Mutual Aid Plan and the California Master Mutual Aid Plan.

Many fire activities overlap with police activities, including radio needs, the dispatch center, and emergency notification capability.

Also, changes in the County's Fire Department and the continued development of UC Merced and adjacent community may require special contracting of MFD services. Currently, the City of Merced provides backup and mutual aid to the County, who provide service to the UC campus and University Community.

6. Accountability for community service needs, including governmental structure and operational efficiencies

Operating expenditures in FY 2011-2012 were $8,374,861 in general operations, $1,193,499 in Measure C funds, $259,529 in Community Facilities District funds, and $950,021 in Capital Improvement funds (which have been carried over to FY 2012-2013). The majority of all operating expenditures went to personnel expenses.

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[39] The City of Merced Public Facilities Impact Fees were adopted by the City Council in November of 2012 and went into effect February 1, 2013.

[40] This fee was established in June 2000 through Resolution 2000-118 to finance needed capital facilities (arterials, traffic signals, bridges, railroad crossings, fire stations, police facilities, community bikeways and other public facilities) generated by new development occurring in the unincorporated portion of the City of Merced Sphere of Influence.

[41] MFD Strategic Plan 2011-2016 (2011) pp. 16, 22

There are no new funds to be contributed to Capital Improvements in FY 2012-2013 (only those carried over from FY 2011-2012 as noted above).

MFD publishes a Strategic Plan every five years. The last was published in 2011, and describes ongoing objectives and one-year, two-year, two-to-five-year, and five-plus-year objectives. However, any item that requires longer than five-years is to be broken down into smaller items as to lead the Department to its final outcome. The fire department appears reasonably accountable and no changes to governance are pending or proposed at this time.

Stemming from the MFD's work producing the Strategic Plan, and specifically assessments calculating response times and distance using GIS mapping data, the Department has refined its response districts to more efficiently utilize existing resources.

No changes to government structure have been identified at this time.

7. Any other matter related to effective or efficient service delivery, as required by commission policy

No other matters have been identified at this time.

4. STORM DRAINAGE

In November 1990, the Environmental Protection Agency (EPA) published regulations (referred to as Phase I) requiring National Pollutant Discharge Elimination System (NPDES) permits for municipal and industrial stormwater discharge for urban areas exceeding 100,000 persons. In 1999, the EPA updated its stormwater permitting regulations (Phase II or NPDES General Permit for Small MS4s) to include all municipalities of population between 50,000 and 100,000 persons to develop stormwater management programs.

Description

Storm Water Quality is regulated by Phase I of the US EPA Program and by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act. Phase II of NPDES, described above, requires public education and outreach regarding storm water impacts, public participation and involvement in the preparation of the Storm Water Management Plan, detection and elimination of illegal discharge, construction of storm water runoff control for sites one acre or larger, post-construction storm water management for new development and redevelopment, and pollution prevention for municipal operations. The Merced Streams Group Project, a collaborative effort with the County and US Army Corps of Engineers, addresses regional flooding.

The Storm Drainage Master Plan (2002) does not address regional flood control issues such as Bear Creek and Black Rascal Creek and tributaries, which run through the City of Merced, or storm drainage requirements of the UC Merced campus. However, the City's Flood Damage Prevention Ordinance does address mitigation of potential flood impacts by restricting development in flood-prone areas.

In addition, while the *Storm Drainage Master Plan (2002)* identifies the improvements needed to accommodate expected runoff at build out of the *Merced Vision* 2015 (1997), the SDMP will need to be revised to address the proposed SOI/SUDP.[42] It should be noted that other than maintenance districts, community facility districts and developer-funded construction, the City has not enacted a fee program to fund storm drain improvements.

Currently, the City of Merced has been involved a in a Storm Water Management Program (SWMP) to meet discharge requirements in accordance with the Federal Clean Water Act. The cities of Merced and Atwater, in addition to Merced County and Merced Irrigation District (MID), have created a coalition called the Merced Storm Water Group (MSWG), which is charged with implementing the SWMP to limit pollutant discharge from storm water systems.[43]

[42] *Merced Vision 2030 General Plan* p. 5-9.

[43] *Merced Vision 2030 General Plan* p. 5-10.

The SWMP will include the implementation of six minimum control measures addressing Public Education and Outreach, Public Involvement, Illicit Discharge and Elimination, Construction Site Storm Water Runoff Control, Post-Construction Storm Water Management in New Development and Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations.

The City of Merced consists of 11 primary local watersheds, labeled A-K in the SDMP. These watersheds are located within the City's Specific Urban Development Plan (SUDP) area of approximately 45 square miles.[44]

Existing city drainage facilities include 112 miles of underground storm drain lines, detention ponds, underground storage pipes,[45] 56 storm pump stations, basins and associated storm inlets and discharge lines. These channels are both natural channels and various Merced Irrigation District (MID) canals and laterals. There are seven natural channels that pass through the City. They are Fahrens Creek, Cottonwood Creek, Black Rascal Creek, Bear Creek, Hartley Slough, Miles Creek and Owens Creek. The Merced Streams Group, which consists of the City, Merced County and Merced Irrigation District maintain Bear Creek and portions of Fahrens Creek. Some of the Creek channels are not maintained. Lacking a funding program, the City provides limited maintenance of the remaining creek banks outside of the creek channel proper. The systems within the downtown area have less capacity than the remaining systems.[46]

Currently the City of Merced contains six discharge points. One is located on the southeastern edge of the City while the other five are located across the western edge of the City's current SUDP.[47]

The City plans to hydro-flush and clean the storm drain systems including all catch basins by June 2013.[48]

Determinations

1. Growth and population projections for the affected area

According to the Merced County Association of Governments 2010 projections, the population of Merced is expected to exceed 90,000 by the year 2015 and 137,000 by the year 2030.[49] Although the City currently complies with federal mandates to plan drainage for a "100-Year Storm", the State of California has enacted recent legislation requiring communities to prepare

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[44] *Merced Vision 2030 General Plan* p. 3-5.

[45] 2004 MSR

[46] 2004 MSR

[47] *Storm Water Management Program (2007)*, p. 53

[48] City of Merced 2012-2013 Adopted Budget, p. 11-63, 11-64

[49] Projections made by the Merced County Association of Governments in July 2010, which can be found in the *Merced Vision 2030 General Plan*, p. 2-7.

for flood damage control based upon a 200-year event. Such changes may require the City to update this ordinance for various portions of the City.

2. The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence

The current lack of detailed household income data at a neighborhood level limits the ability to identify DUCs at this time. It is anticipated that detailed analysis of DUCs will be conducted by the City as it updates its Housing Element targeted for 2015, and as it submits annexation applications.

3. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies

The 2012-2013 Budget identifies $606,140 for storm drain capital improvement projects, which includes a carryover balance of $196,040 from previous budgets.[50]

As the City is required by new state regulation provide drainage for a 200-year event, as indicated in the *Merced Vision 2030 General Plan*, expansion of the current system of lines, basins and treatment facilities will be necessary.

4. Financial ability of agencies to provide services

The City's storm drain system requires a total of one 30 percent time employee. However, the Public Works Department has indicated that 4 to 5 100 percent employees are ideally needed to continue to remain in compliance with the NPDES multi-sector storm water permit[51].

Revenue in FY 2012-2013 will be from the Refuse Enterprise Fund ($1,225,854), PERS-EE Share ($1,362) and an unclassified source ($500), totaling $1,227,815 in FY 2012-2013.

Expenses in FY2012-2013 include $39,134 for personnel, $566,442 for supplies and services in addition to $606,140 for capital improvements.[52]

Due to budget constraints, providing service for Community Facility Districts that are not fully built out remains a challenge for the City. Although pumps will be maintained on schedule, limited weed abatement at certain storm drain facilities will be necessary. Only excessive growth that may increase fire hazard will be removed to allow the free flow of storm water.

5. Status of, and opportunities for, shared facilities

As reported in the 2004 MSR, the City of Merced's storm drainage system incorporates the use of various MID canals and laterals, including the El Capitan Lateral; the Zentner Lateral, which discharges into Harley Slough; the Hartley Lateral, which discharges into Miles Creek near Tyler

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[50] City of Merced 2012-2013 Summary of Capital Improvements, p. 15-7.

[51] This need is based on, as of November 19, 2012, over $83,892 of interdepartmental services that have been charged to the Refuse/Storm Drain Fund for the use of Sewer Division personnel for storm drain maintenance labor only (not including parts and materials).

[52] City of Merced 2012-2013 Adopted Budget, 11-66

Road and Vassar Avenue; the Doane Lateral, which collects runoff from largely agricultural land and discharges into Miles Creek south of Vassar Avenue and Highway 99; and the Farmdale Lateral near Mission Avenue and Alfarata Blvd.[53]

In addition, as discussed, the City of Merced is engaged in a coalition of municipalities (the Merced Storm Water Group or MSWG) responsible for implementing the Storm Water Master Plan (SWMP) to limit the discharge of pollutants from storm water systems.

6. Accountability for community service needs, including governmental structure and operational efficiencies

Previous storm drainage studies include: 1956 Storm Drain Plan, 1983 Merced County Critical Area Flooding and Drainage Plan, 2000 City of Merced Airport Storm Drainage Master Plan, and 2001 City of Merced Storm Drain Master Plan, Prototype Watershed Study. Although no new storm drainage plan has been released since 2002, the City is currently involved in developing a Storm Water Management Plan (SWMP) in conjunction with local municipalities.

The storm drainage system appears reasonably accountable and no changes to governance are pending or proposed at this time. No changes to the government structure of Merced's storm drainage system are pending or proposed.

7. Any other matter related to effective or efficient service delivery, as required by commission policy

No other matters have been identified at this time.

[53] City of Merced Storm Drain Master Plan, April 19, 2002. P. 6-9, 17.

5. WASTEWATER

The City of Merced Wastewater Treatment Facility (WWTF) is owned and operated by the City of Merced as part of a domestic wastewater collection, treatment, and disposal system. The WWTF is designed to treat an average annual flow of 12 million gallons per day. Treated effluent is discharged into the Hartley Slough lateral and, depending on the season and irrigation requirements, to the off-site Wildlife Management Area (WMA) and Land Application Area (LAA). Additionally, effluent is used as plant water for various processes at the WWTF and landscaping.

Wastewater capacity in Merced has grown consistently since major portions of the wastewater treatment facility (WWTF) were constructed in 1977. Since then, a number of improvements have been made to the facility.

In spring 2009 construction broke ground on a 37 million dollar project to increase the capacity to treat and dispose up to 12 million gallons of tertiary treated wastewater per day. These improvements resulted in treated wastewater that meets Title 22 drinking water standards established by the California Code of Regulations. This project included site access improvements and security, new preliminary headworks treatment (screens, grit removal and pumping), construction of a tertiary pump station, flocculation basin with coagulant feed, tertiary filtration system and ultraviolet disinfection (UV) system. This project was completed and placed in service April 2011.

Currently, the facility is in the final phase of the solids handling upgrade project that began in May 2011 and is scheduled for completion by the end of January 2013. Completion of these upgrades will implement best practicable treatment and control for solids handling systems at the WWTF. These improvements include solids treatment using centrifuges to dewater the sludge, active solar driers (glass greenhouses) to dry and stabilize the biosolids, modify existing digesters with improved heating and mixing capabilities and a new boiler capable of running off of waste gas created from the digestion process. A third primary clarifier will be constructed to improve primary removal efficiencies.

Prosper Merced (2006) acknowledges the need for expanding current wastewater capacity and outlined an initial expansion of the City's wastewater treatment plan in 2008 from 10 million gallons per day (MGD) to 12 MGD. In addition, the City plans to expand to 16 mgd and 20 mgd as growth demands in the future. Total capacity of the proposed expansion would be used to serve new demand from both the City of Merced and the adjacent UC Merced Campus.[54]

It should be noted that at the time of the original *Prosper Merced* report, UC Merced was not included in the City's SUDP. However, as of the *Vision 2030 General* Plan, UC Merced will be included in the City's SUDP. Full expansion of the SUDP, along with total build out of the UC Merced Campus is expected to require a combined demand volume of 19.35 MGD by 2025.[55]

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[54] Effective March 17, 2003, the City of Merced entered into a service contract to provide water and wastewater services to the University of California.

[55] City of Merced Wastewater Treatment Plant Expansion Project EIR, p. ES-5

In 1994, the City prepared an EIR addressing construction and operation of the wastewater treatment plant (WWTP) and expansion of capacity. The 1994 EIR analyzed the effects of 20 million gallons per day (mgd) and found significant, but unavoidable, loss to agricultural land.

Description

The City of Merced collects and treats wastewater at its Wastewater Treatment Facility (WWTF), which is City-owned and operated and located two miles south of the Merced Regional Airport. The discharge is governed by Waste Discharge Requirements Order No. R5-2008 (NPDES Permit No. CA 0079219) last revised in 2008.

The City of Merced owns, operates and maintains the wastewater system that serves the City of Merced and Phase I of the UC Merced Campus (by agreement[56]). The City also provides sewer service to approximately 40 dwellings and businesses in a small unincorporated community known as "Celeste" located on the north side of State Highway 140 and west of Kibby Road. The sewer system consists of gravity sewers up to 54 inches in diameter, force mains and lift stations that convey wastewater to The City's WWTF through over 300 miles of collection pipelines. The City collects, treats and recycles both process and municipal wastewater, which is generated from a combination of residential commercial and industrial sources.

Water quality is governed by the California Water Code, which requires the City to prepare and adopt *Urban Water Management Plans (UWMPs)* for submission to the California Department of Water Resources (DWR) every five years. All UWMPs must satisfy the Urban Management Planning Act (UMWPA) of 1983 and amendments. The purpose of UWMPs is to ensure efficient water use of, promote conservation and ensure future water supplies are sufficient for growth.

The 2010 UWMP focuses on resource maximization, especially the recycling and reuse of water and wastewater. The City of Merced continues to encourage the reuse of wastewater where practicable (e.g., crop irrigation, landscape irrigation, and wetland restoration), and due to current (as well as planned) improvements to the City's WWTF and associated increases in water treated to secondary and tertiary standards, a greater percentage of wastewater can be reused and recycled.

The WWTF has a current design capacity of 12 mgd, or about 12,880 acre-feet per year (AFY), and treats water to tertiary standards. The design capacity can support a population of approximately 150,000. The AFY for Merced's SUDP, which includes UC Merced, is estimated to grow to 14,542 (roughly 13 mgd) by 2025 and 16,430 (roughly 14.7 mgd) by 2030.[57]

The WWTP discharges its combined industrial and domestic treated wastewater into Hartley Slough, The Bio-solids Land Application Area (LAA), and a wildlife management wetland for reuse. Treated tertiary wastewater discharges into Hartley Slough, located three-fourths of a mile south of the facility then enters Owens Creek, which eventually joins the San Joaquin River. As part of the recent upgrades the City abandoned discharging into a 1.6 mile unlined ditch and now discharges directly into Hartley Slough. The City owns and operates a Bio-solids Land

[56] This agreement does not currently include the University Community.

[57] UWMP 2010, p. 4-15

Application Area (LAA) where stabilized Bio-solids are incorporated into the soil. Forage crops are grown and harvested in the LAA in order to remove the nitrogen contained in the Bio-solids. Tertiary treated effluent is recycled as a source for irrigation needs of all forage crops grown in the LAA. [58]

Determinations

1. Growth and population projections for the affected area

Beginning in the 1980s, the City of Merced has explored alternative methods of providing connections to the northeast portions of the SUDP/SOI in order to accommodate growth of the UC Merced Campus and the University Community. Since the construction of the UC Campus, Merced has extended sewer service to accommodate the opening and expansion of the UC Merced Campus area. Currently, the City only provides wastewater service to Phase I of the UC Campus (by agreement[59]).

Per the agreement made between the City and UC Merced, a 27 inch sewage line, originally terminating at North G and Cormorant Drive, was extended along Bellevue Road to a connection point at the intersection with Lake Road.[60]

The agreement that UC Merced made with the City of Merced required the UC to pre-treat substances, such as those from UC laboratories that might negatively affect water quality, before such wastewater reaches the City's treatment facilities.

Full buildout of Merced's SUDP, which includes UC Merced, is estimated to grow to roughly 13 mgd by 2025 and roughly 14.7 mgd by 2030.[61] The UC Campus anticipates a demand of 1.13 mgd at full buildout.

After all three phases of the expansion are completed (scheduled to be completed by January of 2013), the WWTP's treatment capacity will be 12 mgd. A capacity of 20 mgd would be able to serve a population of approximately 174,000, which is more than 12 percent higher than the 2030 projected population within the proposed SUDP/SOI of 155,000 (which includes UC Merced and the University Community).[62]

2. The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence

The current lack of detailed household income data at a neighborhood level limits the ability to identify DUCs at this time. It is anticipated that detailed analysis of DUCs will be conducted by

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[58] UWMP 2010, p. 4-14

[59] This agreement does not currently include the University Community.

[60] *Contract for Water and Sewer Services Between The City of Merced and The Regents of the University of California*, p. 5.

[61] UWMP 2010, p. 4-15

[62] Merced Vision 2030 General Plan Draft EIR, August 2010. P. 3.16-8

the City as it updates its Housing Element targeted for 2015, and as it submits annexation applications.

3. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies

The City completed construction Phases I and II of the WWTF in 2010, and are scheduled to compete Phase III in 2013, which will increase capacity to 12 mgd. In addition, treated effluent will continue to be used for agricultural irrigation and discharged to wildlife management areas. After completion of Phase III, there are no new capital improvements planned.

4. Financial ability of agencies to provide services

Total revenue from the Wastewater System Fund expected in FY 2012-2013 is $19.8 million. In 2010, the City of Merced approved a rate decrease for sewer service. For single-family homes, this decrease amounted to about $5.64 per utility bill.[63] Despite the approved rate decrease, revenue is expected to provide stable funding through FY 2015.[64]

To provide adequate funding for increased wastewater and sewer capacity infrastructure, a number of funding sources have been implemented. These include a Wastewater Treatment Lines Component Improvement Fund, which is expected to total roughly $3.3 million in FY 2012-2013, a University Capital Charge Fund totaling $432,554, and a Wastewater Treatment Plant Component Improvement Fund totaling roughly $4.2 million.

A Wastewater Revolving Fund was set up to provide financing for single-family homeowners to connect sewer lines. Income limits dictating eligibility are established by the U.S. Department of Housing and Urban Development (HUD). This fund is estimated to total $84,966 in FY2012-2013.[65]

Additionally, the City has four assessment districts, Fahren's Park, 16th Street, Liberty Park, and North Merced Sewer Improvement Districts.

5. Status of, and opportunities for, shared facilities

There have been some discussions with stakeholders for the possibilities of shared facilities. One opportunity would be to receive and treat wastewater from the town of Winton. Another possibility would be a water exchange with Merced Irrigation District (M.I.D.). This conceptual approach would seek to trade reclaimed wastewater with M.I.D. for City park irrigation water.

6. Accountability for community service needs, including governmental structure and operational efficiencies

The wastewater system has been extensively studied and documented in preparation for the UC Merced initial development and build out. The Urban Water Management Plan was prepared in

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[63] City of Merced Department of Public Works

[64] City of Merced 2012-2013 Adopted Budget. P. 11-55

[65] City of Merced FY 2012-2013 Budget, P. 11-96

2010, providing a plan to meet Merced's wastewater treatment requirements through 2030. Using much of the findings from the UWMP, the *Vision 2030 General Plan* outlines growth and expansion for the City and its sewage system.

The sewer system appears reasonably accountable and no changes to governance are pending or proposed at this time.

No changes to the City's government structure are pending or proposed.

7. Any other matter related to effective or efficient service delivery, as required by commission policy

No other matters have been identified at this time.

6. WATER

With 100 percent of its potable water coming from groundwater extraction, Merced has been required to address groundwater contamination and recharge issues as established under the Federal Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (Porter-Cologne).

Description

The California Water Code requires all urban water suppliers throughout the state to produce, adopt and submit Urban Water Management Plans (UWMPs) to the California Department of Water Resources (DWR) every five years. The purpose of UWMPs is to maintain efficient water usage, promote conservation, ensure future supply and provide a safeguard during drought conditions.

In 2010, the City of Merced prepared and adopted the 2010 Urban Water Management Plan, which outlines programs used by the City and the other members of the Merced Area Groundwater Pool Interest (MAGPI).

The City of Merced pumps, treats, and delivers potable groundwater to city residents, while the Merced Irrigation District (MID) provides irrigation water from surface and groundwater sources to a large portion of eastern Merced County south of the Merced River. The City water system also serves numerous unincorporated residential neighborhoods on the fringe of the City to the south and east which are within the current sphere of influence, and the community of "Celeste" which has approximately 50 connections located north of State Highway 140 and west of Kibby Road which is outside the present sphere.

The City's water supply is exclusively groundwater from the Merced Groundwater Basin, which lies within the larger San Joaquin Hydrologic Basin. The City currently utilizes 17 active well sites, with one additional under construction, 23 deep-well pumps and approximately 500 miles of distribution pipeline. Groundwater supplies the full capacity of 57,800 gallons per minute (gpm), or 83 million gallons a day (mgd). The City also maintains all fire hydrants, water meters, valves, fluoridation and chlorination injection systems, pump motors, electrical systems and two-300,000, one-400,000 and one-500,000 gallon above ground water storage tank. The Water Department has 29.4 full-time City staff. [66]

The City is currently in discussion with the MID regarding water transfers, which could potentially reduce groundwater pumping and help the City achieve its conservation target. Water transfers would be sourced from MID's surface water holdings and would be used for landscape irrigation. The 2010 UWMP assumes transfers steadily increasing starting in from 58 acre-feet per year (AFY) in 2015 to 200 AFY in 2030.

In 2009, the City supplied 7.6 billion gallons of water (23,306 AFY) or 20.8 million gallons per day (mgd) to approximately 86,000 residents. Water demands are primarily residential (roughly

[66] City of Merced Adopted Budget FY 2012-2013, p. 11-41

64 percent of total usage) with commercial/institutional and landscape irrigation comprising the remaining demand (roughly 36 percent of total usage). However, despite the continued increase in total demand, per capita water demand has steadily decreased since 1979, likely due to the City's conservation efforts.

As of 2009, the City served 20,562 connections, of which only 9,787 metered connections. Of these metered connections, 6,797 were single-family residential, 1,519 were multifamily residential, 1,144 were commercial/institutional, 34 were industrial and 293 were landscape irrigation. The City now requires metering for all multifamily dwellings and public parks, and since 2005, for all single-family dwellings built after 1992. The City continues working to convert unmetered connections to metered connections and has increased the percentage of metered single-family dwelling units from 31 percent found in the 2005 UWMP to 48 percent in 2010.[67]

Long-term hydrographs in the Merced subbasin show that most groundwater levels are declining over time. Since 1980, average groundwater levels have decreased by 14 feet. The Merced subbasin has consistently been characterized as being in a general overdraft condition and in 2010, declared itself in the emergency stage due to the overdraft condition of groundwater basin. [68] Groundwater is recharged by a combination of deep percolation of agriculture irrigation, seepage from MID canals, and precipitation. As agriculture irrigation demands decrease, the amount of water through MID's canals will decrease. This will decrease the amount of water that seeps out of the canals and recharges the groundwater supply. This seepage accounts for a large part of the Basin's groundwater recharge, and with less seepage, groundwater recharge will occur even more slowly.

The quality and extraction of the potable water supplied by the City is regulated by the state's Department of Water Resources, the California Department of Public Health, the U.S. EPA, the Safe Drinking Water Act, and the California Water Code. Water quality continues to be a concern as more water contaminants are identified and more water quality regulations are set. Of major concern in the Central Valley Region are nitrate levels from man-made sources, which is a pervasive issue throughout the San Joaquin Valley. However, as indicated in the City's 2010 Water Quality Report, due to blending, the City maintains a 15.5 ppm Nitrate level (in 2008), well below the MCL for nitrate in public drinking water of 45 mg/L.

Climate change may prove to add additional challenges as weather could significantly affect water supply.

According to the 2010 Urban Water Management Plan, there are no opportunities for desalination at this time.

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[67] 2010 Urban Water Management Plan, p. 5-4, 3-1, 3-4, 3-5

[68] 2010 Urban Water Management Plan, p. 3-1 through 4-6, 5-14

Determinations

1. Growth and population projections for the affected area

The *Merced Vision 2030 General Plan* describes growth area boundaries, alternately known as the specific urban development plan (SUDP) boundary and the urban expansion area. The City's growth and its future provision of water service are confined within these bounds.

According to the *2010 Urban Water Management Plan*, water demand for 2010 was 23,661 AFY. Water demand for both the City of Merced and the UC Community is expected to increase to 30,064 AFY by 2015 and roughly 44,420 AFY by 2030.[69] Assuming this growth rate, total water use in Merced will increase by 188 percent by 2030.[70]

Although the City's groundwater supply consistently remains in an overdraft condition, the *Merced Groundwater Basin Groundwater Management Plan Update*, produced in 2008 for the Merced Area Groundwater Pool Interests (MAGPI), identifies a number of programs that continue to be implemented by the Merced Irrigation District (MID) to help recharge the Merced subbasin aquifer system. However, despite these efforts, the overall Merced groundwater basin remains in a state of mild long-term groundwater decline. To avoid negative impacts on long-term groundwater level decline, new recharge methods need to be identified and implemented. Restrictions on pumping should not be relied upon but rather a conjunctive use program, which would utilize above average surface water reserves to intentionally recharge the groundwater basin so groundwater may be extracted in below average precipitation years.[71]

While urban water demands will rise over the next 20 years, the increase in groundwater needs for agricultural users is expected to be limited due in part to the increased supply of secondary and tertiary treatment of wastewater, which can be used for some agricultural use.[72]

2. The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence

The current lack of detailed household income data at a neighborhood level limits the ability to identify DUCs at this time. It is anticipated that detailed analysis of DUCs will be conducted by the City as it updates its Housing Element targeted for 2015, and as it submits annexation applications.

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[69] 2010 Urban Water Management Plan p. 3-15

[70] Figures based upon projected population of 159,900 as opposed to 155,000 used in 2030 General Plan.

[71] *2008 Merced Groundwater Basin Groundwater Management Plan Update*, pp. 25-33

[72] 2010 Urban Water Management Plan p. 4-16

3. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies

One new well (#19) has recently been completed. Additional water wells will be needed to serve future areas of development at about the rate of one new well per one square mile.[73]

Infrastructure work is required on existing wells or well sites, where PCE contamination or inadequate capacity for fire or emergency needs exists. Additional ongoing projects include the expansion of an automated meter-reading program and repairing, replacing or recalibrating commercial water meters as needed. Various water mains will be repaired or replaced.

The 2004 Merced MSR reported that according to the City Engineer, the total number of new wells required to serve projected growth into 2030 is no more than 15 new wells.[74] The estimated cost of each well is $950,000, based on the City's experience. More stringent water quality regulations will most likely mandate radon and arsenic removing equipment, raising the capital cost of each well by more than $2 million.[75] Addition of interconnecting pipelines would cost $1.4 million per well.[76]

Altogether, the City's FY 2012-2013 proposed budget for water system capital improvements includes $25.4 million for the Restricted Water Wells Fund, $4.7 million for the Restricted Water Mains Fund and $1.1 million for the Water System Fund. Significant projects to be funded included $6.4 million for water meter installation, $4.5 million for wellhead treatment, and roughly $14 million for projects to be determined. [77]

4. Financial ability of agencies to provide services

Merced's water system has an approved FY 2012-2013 budget of $12.3 million, which includes $1.1 million for capital improvements.[78] The majority of this year's funds come from the Water System Enterprise Fund.

As of 2010, of Merced's 17,533 single-family homes, 10,736 have unmetered connections. Water conservation efforts are impossible without a measure of how much water is currently being used. Metering all of Merced's household connections would allow for a more effective water conservation campaign. Merced is in the process of metering all single-family residences, and has made significant gains, but still remains far from that end (48 percent of single-family residences were metered in 2010).

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[73] City of Merced Capital improvement Plan, p. 26.

[74] Information from former James Marshall, Merced City Manager.

[75] Merced Water Supply Plan, August 1995, CH2MHill, p. 6-4

[76] Merced Water Supply Plan, August 1995, CH2MHill, p 6-5

[77] City of Merced Summary of Capital Improvements p. 15-6, 15-7

[78] City of Merced Adopted Budget FY 2012-2013 p 11-43.

Based upon the existing Water System Rate Study, no service reductions will be possible for FY 2012-2013[79].

5. Status of, and opportunities for, shared facilities

The Urban Water Management Plan outlines providing surface water from MID for landscape irrigation rather than utilizing the City's domestic supply.

6. Accountability for community service needs, including governmental structure and operational efficiencies

No changes to the government structure of Merced's water department are pending or proposed.

With $12.3 million in operating costs for FY 2012-2013 (including Capital Improvement costs)[80] and 20,534 connections, the City of Merced provides water at a cost of $526 per connection.

The 2010 Urban Water Management Plan fulfills the requirement of the California Water Code's Urban Water Management Planning Act, serving as a long-term water supply plan for the City.

Merced's water provision service appears reasonable. No changes to governance are pending or proposed.

7. Any other matter related to effective or efficient service delivery, as required by commission policy

No other matters have been identified at this time.

[79] City of Merced Adopted Budget FY 2012-2013 p 11-42

[80] City of Merced Adopted Budget FY 2012-2013 p 11-43