



NOTICE OF PREPARATION

DRAFT ENVIRONMENTAL IMPACT REPORT

TO: REVIEWING AGENCIES

**FROM: CITY OF MANTECA
Public Works Department
1001 W. Center Street
Manteca, CA 95337**

Subject: Notice of Preparation of a Draft Environmental Impact Report

The City of Manteca will be the Lead Agency and will prepare an environmental impact report (EIR) for the project identified below. We need to know your views as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities or your interests in connection with the proposed project. Your agency will need to use the EIR when considering City permits or other project approvals.

The project description, location, and a summary of the environmental issues to be evaluated in the EIR are contained in the attached materials.

Because of the time limits mandated by State law, your responses must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to **Phil Govea, Senior Engineer**, at the address shown above. We will need the name for a contact person in your agency.

Project Title: Manteca Wastewater Quality Control Facility Master Plan and Collection System Master Plan 2005 Update

Project Applicant: City of Manteca

SCOPING MEETING: Date & Time: June 14, 2006 at 5 p.m.

Location: COUNCIL CHAMBERS
CITY OF MANTECA
1001 W. CENTER STREET
MANTECA, CA 95337

Date 5/22/06 Signature Phil Govea

Title: Senior Engineer
Telephone: (209) 239-8463
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1 INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, the City of Manteca (as lead agency) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the proposed Manteca Wastewater Quality Control Facility (WQCF) 2005 Master Plan Update and the 2005 Collection System Master Plan Update project (together known as the proposed project). The proposed project would: incrementally increase the treatment capacity of the WQCF from 9.87 million gallons per day (mgd) to 27 mgd average dry weather flow (ADWF), increase wastewater effluent discharges to the San Joaquin River, result in discharge of wastewater effluent on urban and agricultural lands, result in minor improvements to existing sewer lines, and result in construction of three new trunk sewers measuring a total of approximately 21 miles. The EIR will identify any significant environmental impacts of the project and recommend mitigation measures to reduce the project's environmental impacts where feasible.

In accordance with Section 15082 of the CEQA Guidelines, the City of Manteca has prepared this Notice of Preparation to provide responsible and trustee agencies and other interested parties with information describing the project and the issue areas that will be evaluated in the EIR.

2 PROJECT LOCATION AND BACKGROUND

2.1 LOCATION

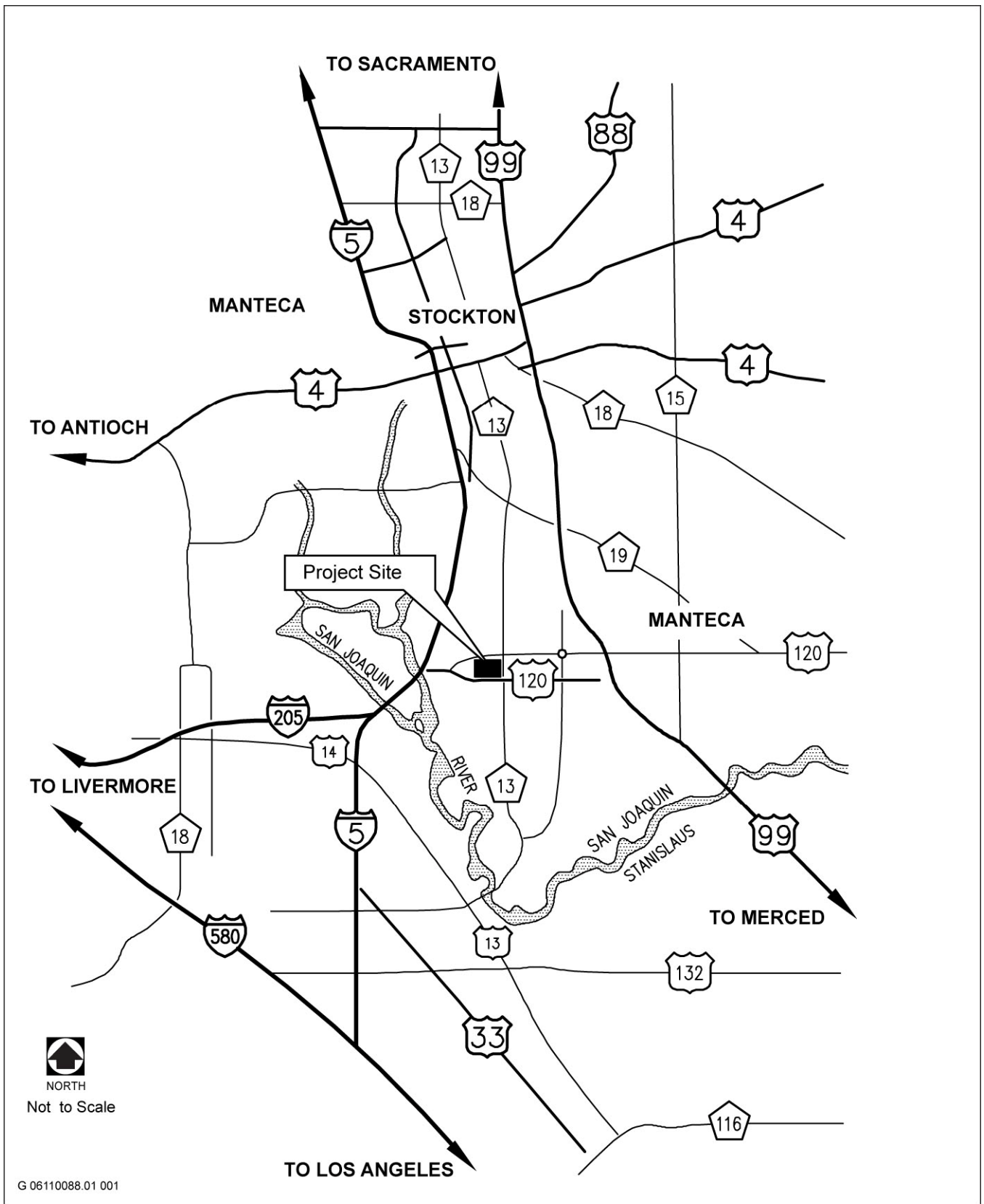
The project would result in the construct of wastewater treatment facilities on City-owned property near downtown Manteca, and wastewater conveyance infrastructure in and around the City. Manteca is located at the northern end of the San Joaquin Valley of central California, at the junction of State Route (SR) 99 and SR 120, approximately 75 miles east of San Francisco and 55 miles south of Sacramento. The WQCF is located approximately 1.5 miles west of the City of Manteca in southern San Joaquin County. Exhibit 1 shows the project's regional location.

Proposed wastewater conveyance infrastructure would be located along the SR 120 and SR 99 corridors and other roads surrounding the City. Regional access to the project is provided by Interstate 5 (I-5) to the west, SR 120 to the south, and SR 99 to the east. The street address for the WQCF is 2450 West Yosemite Avenue, and it includes Assessor Parcel Numbers 241-300-47, 48, 49, & 50 and 241-310-16, 18, 32, 44, 48, 52, 53, 57, & 58. Local roadways near the WQCF include Yosemite Avenue, Woodward Avenue, McKinley Avenue, Airport Way, and Union Road as shown in Exhibit 2. Local roadways in the vicinity of the proposed trunk sewers include Woodward Avenue, Lathrop Road, and Airport Way.

2.2 WQCF EXPANSION HISTORY

The Manteca WQCF has expanded several times since operations began in 1959. From 1986-1988, a major expansion to the plant known as Phase I was constructed. The Phase I expansion project included the construction of secondary treatment facilities, anaerobic sludge digesters, sludge drying beds, a chlorine disinfection system, and an outfall to the San Joaquin River. Design capacity of the plant following the Phase I project was 5.45 mgd (ADWF). The Phase II expansion project constructed in 1992 and 1993 added a primary sedimentation basin, a secondary clarifier, and four sludge drying beds, increasing capacity to 6.95 mgd ADWF.

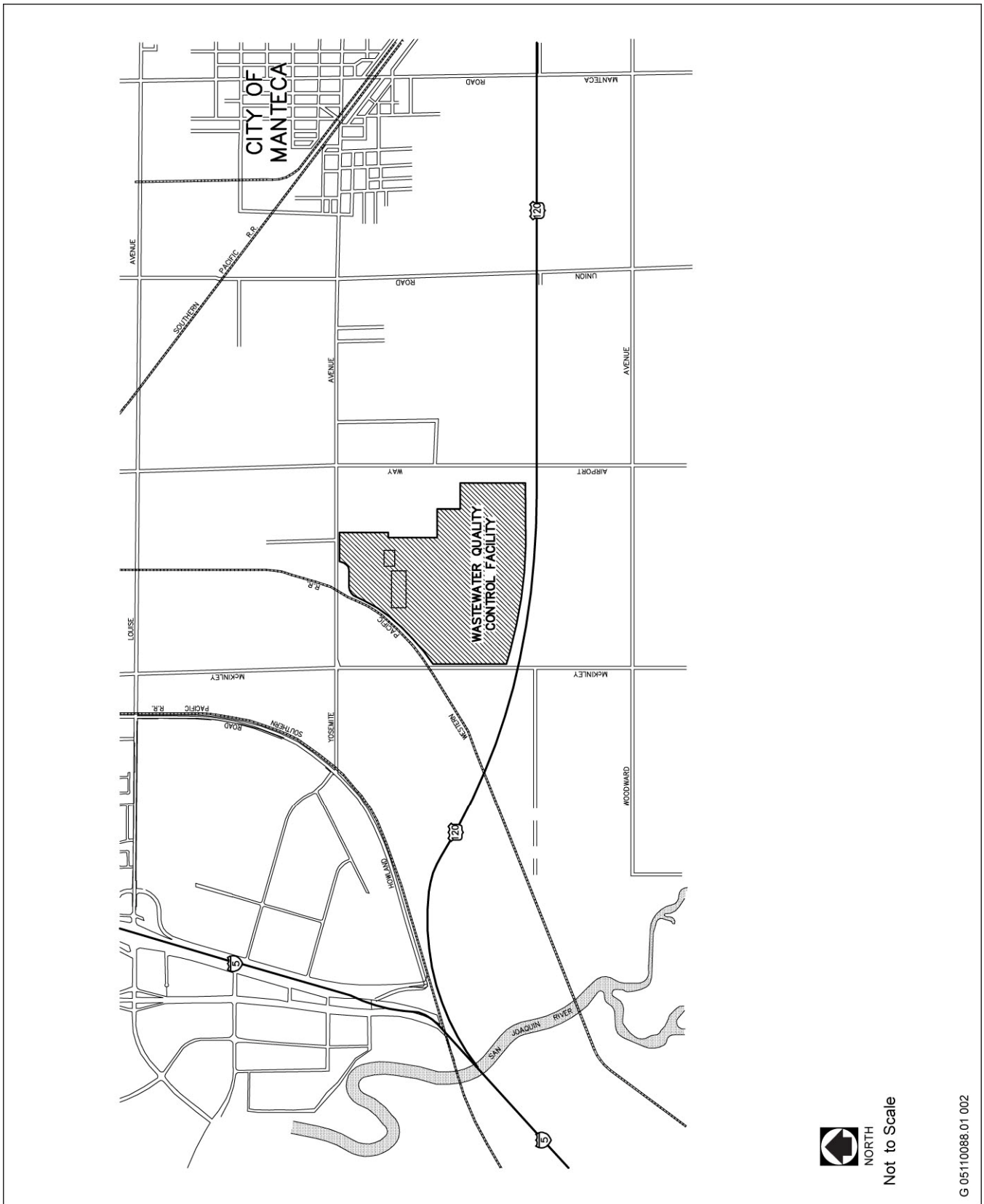
The City's *Wastewater Quality Control Facility Master Plan* adopted August 21, 1995, identified Phase III improvements which included the construction of nitrification facilities (increasing plant capacity from 6.95 to 7.5 mgd ADWF), improved primary and secondary treatment facilities (increasing capacity from 7.5 to 9.87 mgd ADWF), and solids handling and tertiary filtration and ultraviolet (UV) disinfection facilities. The City has divided Phase III improvements into four schedules: A, B, C, and D.



Source: Nolte and Associates, Inc., 2005

Regional Location Map

Exhibit 1



Source: Nolte and Associates, Inc. 2005


 NORTH
 Not to Scale
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WQCF Location Map

Exhibit 2

Schedule A and B improvements have been completed. Schedule A improvements included two new aeration basins, three modified secondary clarifier sludge collection mechanisms, two new centrifugal blowers, and a skid-mounted centrifugal dewatering system. Schedule B improvements included a new influent pump station, two aerated grit tanks, three primary sedimentation basins, five aeration basins, two secondary clarifiers, an odor control biofilter, and an expanded laboratory and administration building.

Schedule D improvements are currently being constructed at the WQCF. Schedule D improvements include a secondary effluent equalization pond, a filter feed pump station, coagulation and flocculation facilities, tertiary filters, a chemical storage and handling facility, a UV disinfection system, an effluent pumping station, two odor control biofilters, recycled water pumping stations, a groundwater well, and a construction truck recycled water filling station. Schedule D improvements will allow for the off-line storage and timed discharge of treated effluent to the San Joaquin River. Schedule C improvements, which are scheduled to begin construction in February 2007, include a sludge control building, a mechanical dewatering facility, and a shop maintenance building. Schedule D improvements are anticipated to be constructed and operational by March 2007 while Schedule C improvements are anticipated to be constructed and operational by July 2008. It is anticipated that Phase III improvements would satisfy the City's wastewater treatment capacity demands for the next 5-10 years depending on the buildout rate of proposed development.

Beyond the Phase III expansion, the City has identified the need to program future facilities to accommodate growth planned for in its General Plan. As such, the City has prepared its 2005 WQCF Master Plan. This master plan contemplates providing the necessary treatment facilities to accommodate up to 27 mgd ADWF.

2.3 COLLECTION SYSTEM PLANNING HISTORY

In 1989, the City developed the *City of Manteca Sewer System Master Plan* to address the 10-year planning period from 1989 to 1999 using information from the City's 1988 General Plan. A 1993 master plan, *Sewer Master Plan for the City of Manteca Public Facilities Implementation Plan*, addressed the 21-year planning period from 1993 to 2014 and focused on future growth areas. The 1993 Master Plan proposed construction of north and south trunk sewers to accommodate new service areas, with central and southwest sewers connecting the two.

On October 6, 2003, the City adopted a new General Plan (*City of Manteca General Plan 2023 Policy Document*) which identified areas to be developed within the City to the year 2023. The new General Plan expanded the collection system service areas (to be served by the north and south trunk sewers) beyond the service areas identified in the 1993 Master Plan. As a result, the north and south trunk sewers would need to be enlarged to accommodate increased wastewater flows. To ensure that the City's collection system can adequately meet the development goals adopted in the new General Plan, the City developed the *City of Manteca Wastewater Collection System Master Plan Update* in July 2005 (subject of this NOP).

2.4 EXISTING FACILITIES

The Manteca WQCF and collection system serves commercial and residential uses within the City of Manteca, a portion of the City of Lathrop, and one frozen food packager (Eckert Cold Storage). The WQCF is permitted for treatment and discharge of 9.87 mgd ADWF of wastewater, with 8.42 mgd (or 85.3%) capacity allocated to the City of Manteca and 1.45 mgd (or 14.7%) allocated to the City of Lathrop.

The existing wastewater collection system consists of 6- to 36-inch diameter gravity flow pipes, 6- to 18-inch diameter force mains, and 11 wastewater pump stations. The majority of the collection system serves the core of the City (i.e., the central trunk sewer shed), which is approximately bound by SR 120 to the south, Austin Road to the east, Lathrop Road to the north, and Airport Way to the west. Several residential subdivisions located on the perimeter of the City or beyond the central trunk sewer shed have installed temporary wastewater pump stations and facilities to connect to the central trunk shed. The majority of the collection system within the central trunk sewer shed flows by gravity to the Union Road pump station (located at the intersection of Union Road and Center Street). Downstream of the Union Road pump station, wastewater flows to the WQCF by gravity via a 36-inch diameter sewer.

The current WQCF is a combined biofilter-activated sludge plant which treats wastewater by mechanical screening, primary treatment, and secondary aeration and settling. Solids are thickened and biologically decomposed, and then trucked to a landfill. Within the cities of Manteca and Lathrop, wastewater is collected in buried pipelines and conveyed to the WQCF for treatment and disposal. Flows enter the plant at the influent pump station, pass through two mechanical screens to separate out large debris, and then move to the grit structures for primary treatment.

PRIMARY TREATMENT

Once screened for large debris, the influent enters aerated grit tanks where air is injected into the influent wastewater to separate solids from liquid. The purpose of the grit tanks is to remove relatively high-density inorganic particles from the wastewater stream. Flows from the grit chambers then enter the primary sedimentation basins to remove settleable solids and floatable scum such as oil and grease. Here, remaining solids are allowed to settle to the bottom of the basin where they are collected and then pumped to the digesters.

SECONDARY TREATMENT

Primary effluent is then sent through a biofilter feed pump station and two biotowers with high-rate plastic media. The plastic media serves as a base for fixed-film treatment that removes solids and organics from the wastewater. From the biotowers, wastewater flows into five fine-bubble activated sludge aeration basins where the effluent is infused with oxygen to provide a food source for microscopic organisms (which break down the effluent). Oxygen helps to speed up natural processes and causes the organisms to multiply, enlarge, and settle more quickly. From the activated sludge basins, flows are conveyed to three secondary clarifiers where suspended matter is removed by gravity while the effluent becomes clearer. Solids removed from the clarifiers are returned to the aeration basins or wasted to the solids handling facilities.

DISINFECTION AND DISCHARGE

Following secondary treatment, undisinfected secondary effluent is used to irrigate approximately 190 acres of City-owned cropland surrounding the WQCF. Effluent not used to irrigate cropland is directed to on-site chlorination and dechlorination facilities, and is subsequently discharged to the San Joaquin River via an existing side bank outfall.

As a result of the Phase III Schedule B improvements (discussed above), effluent is nitrified and denitrified to address low dissolved oxygen concentration concerns. Ammonia generated by the digestion process reduces dissolved oxygen in water, which leads to aquatic toxicity problems. To reduce ammonia, nitrification, or the process of converting nitrogen compounds (primarily ammonia) to nitrates and nitrites (from NH_3 to NO or NO_2), is utilized. To control nitrates, denitrification, or the process of converting the nitrate/nitrite to free nitrogen (nitrogen gas) is utilized. Although not normally harmful, the nitrate/nitrite compounds can be harmful to fish in high concentrations. By decreasing effluent ammonia levels, nitrification-denitrification thus increases dissolved oxygen concentrations in receiving waters to non-toxic levels. The specific process currently employed at the WQCF should allow the plant to avoid future ammonia toxicity problems.

Secondary effluent discharged to the San Joaquin River is only allowed when the river has a certain downstream flow condition. To address this operational constraint, Schedule D disinfected effluent off-line storage improvements will allow the WQCF to store effluent during certain river flow conditions. River flow data from an existing real time in-stream flow meter located at the Mossdale Bridge monitors the flow within the river.

SOLIDS HANDLING

Sludge removed in the secondary treatment process is thickened in two dissolved air flotation units, where air is injected into the activated sludge to separate the solids from the liquid. The sludge is then sent to two anaerobic digesters where organic constituents within the solids are broken down (“digested”) in the absence of oxygen

(anaerobic). A high-solids sludge centrifuge is then used to dewater the sludge, where it is subsequently taken to a local landfill for disposal.

3 PROJECT CHARACTERISTICS

The proposed project would expand WQCF capacity from 9.87 to 27 mgd ADWF and construct new trunk sewers to accommodate growth planned for in the City's General Plan (2003). The project includes treatment plant improvements for both river and land-based wastewater effluent disposal based on current and future probable water quality discharge requirements and projected flows.

The proposed project would construct treatment facilities to achieve compliance with water quality limitations including rapid mixing and flocculation tanks to address turbidity requirements, and a tertiary ultraviolet light disinfection treatment system to address wastewater reuse requirements. The proposed project would reach buildout via a two-phase, incremental expansion, with capacity increasing from 9.87 to 17.5 mgd (ADWF) in the first phase (Phase IV) and then from 17.5 to 27 mgd in the second phase (Phase V). The proposed increase in capacity would be accommodated using the City's long-term effluent disposal strategy of on-site land application, urban landscape irrigation, and river discharge.

The proposed project would also involve the incremental construction of three new trunk sewers and improvements to the existing collection system. These elements are described in greater detail below.

3.1 PROPOSED TREATMENT PLANT IMPROVEMENTS

The proposed project considers increasing the capacity of the WQCF by 17.13 mgd ADWF. This increase would provide an additional allocation of 2.52 mgd for the City of Lathrop and 14.61 mgd for the City of Manteca. This proposed expansion is consistent with adopted growth projections and adopted land use plans including the *City of Manteca General Plan 2023*. To achieve this proposed increase in WQCF capacity, the following physical improvements are proposed for the WQCF. All improvements, with the exception of the parallel 48-inch outfall pipe, would be located on-site, within the existing WQCF boundaries.

Proposed improvements include:

- ▶ expanded influent pump station;
- ▶ one mechanical screen;
- ▶ seven aerated grit removal tanks;
- ▶ ten primary sedimentation basins;
- ▶ seven aeration basins;
- ▶ seven secondary clarifiers;
- ▶ nine secondary effluent filters (for tertiary treatment);
- ▶ two rapid mixing tanks and six flocculation tanks;
- ▶ UV disinfection facility including four UV channels and effluent pumps;
- ▶ new equalization pond for off-line storage and timed discharge;
- ▶ seven new dissolved air flotation units for waste activated sludge thickening;
- ▶ four new anaerobic sludge digesters, and sludge heating and cogeneration facilities;
- ▶ one new sludge dewatering centrifuge;
- ▶ odor control facilities;
- ▶ one new 48-inch outfall pipe; and
- ▶ a side bank outfall structure.

3.2 WASTEWATER EFFLUENT DISPOSAL OPTIONS

The WQCF currently disposes of treated effluent through land application to City-owned property surrounding the WQCF or discharge to the San Joaquin River. At plant buildout, the City proposes to discharge treated effluent through a combination of on-site land application, urban landscape irrigation, and discharge to the San

Joaquin River. On-site land application would involve the disposal of approximately 0.73 mgd of wastewater on 190 acres of City-owned land. Urban landscape irrigation would involve the discharge of approximately 3.28 mgd of wastewater to 817 acres of irrigable City-owned urban land including parks, schools, cemeteries, and golf courses. All other treated effluent (22.99 mgd) would be pumped through the existing outfall pipe and a newly constructed outfall pipe to the San Joaquin River. Table 1 summarizes proposed treated effluent disposal methods for the WQCF at plant buildout:

Table 1 Treated Effluent Disposal Methods at Buildout		
Disposal Option	Average Discharge Rate, mgd	Percentage of Total Discharge
On-Site Land Application	0.73	3%
San Joaquin River Discharge	22.99	85%
Urban Landscape Irrigation	3.28	12%
Total	27.00	100%
Source: Nolte Associates, Inc. 2005.		

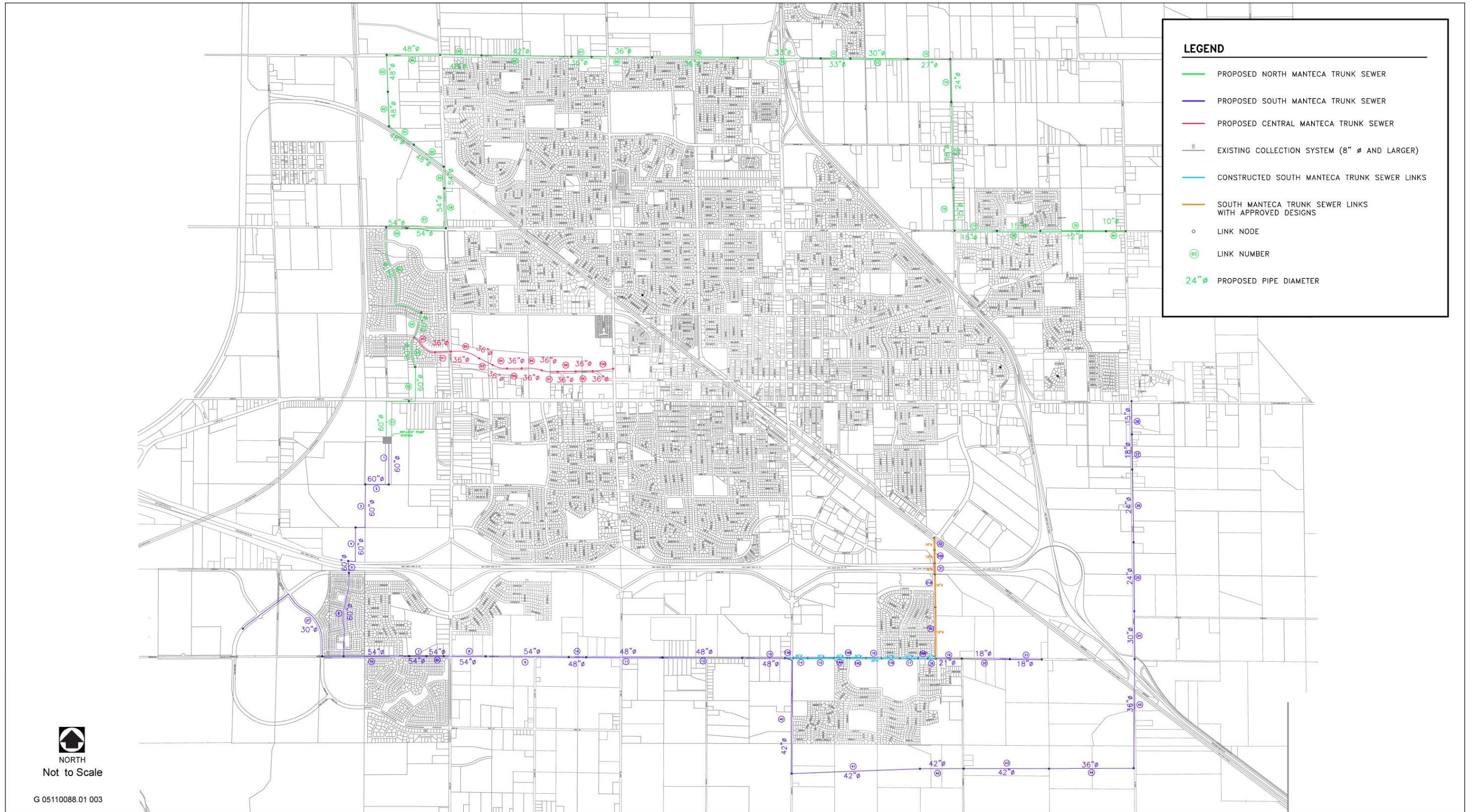
3.3 PROPOSED TRUNK SEWERS

The proposed project would incrementally add new trunk sewer segments to meet the development goals adopted in the *City of Manteca General Plan 2023*. Building upon the existing collection system, a gravity trunk sewer collection system would convey wastewater to an influent pump station located at the WQCF. As shown on Exhibit 3, the proposed project would construct three large diameter trunk sewers to collect wastewater from the north, central, and south sections of the City. The north and south trunk sewers would collect flow from areas where future growth is expected, while the central trunk sewer would connect the existing collection system to the north trunk sewer.

The proposed north trunk sewer would include thirty 10- to 60-inch diameter sewer segments measuring 44,219 feet (approximately 8.4 miles), while the south trunk sewer would include forty-six 15- to 60-inch diameter sewer segments measuring 63,561 feet (approximately 12 miles). Measuring 4,522 feet (approximately 0.9 mile), the central trunk sewer would include twelve 36-inch diameter sewer segments, and would eliminate the need for the existing Union Road pump station.

3.4 EXISTING COLLECTION SYSTEM IMPROVEMENTS

The proposed project also includes several minor improvements to existing sewer lines. Hydraulic modeling and a review of historical records found no major deficiencies in the existing collection system; however, several minor problems were identified including pipeline obstructions and miscellaneous flow problems. To address these problems, the proposed project includes a total of 11 collection system improvement projects such as manhole rehabilitations and eliminating pipeline sags throughout the City. These improvements would generally be located within the existing collection system network.



LEGEND

- PROPOSED NORTH MANTECA TRUNK SEWER
- PROPOSED SOUTH MANTECA TRUNK SEWER
- PROPOSED CENTRAL MANTECA TRUNK SEWER
- EXISTING COLLECTION SYSTEM (8" Ø AND LARGER)
- CONSTRUCTED SOUTH MANTECA TRUNK SEWER LINKS
- SOUTH MANTECA TRUNK SEWER LINKS WITH APPROVED DESIGNS
- LINK NODE
- Ⓢ LINK NUMBER
- 24" Ø PROPOSED PIPE DIAMETER



NORTH
Not to Scale

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Source: Nolte Associates, Inc. 2005.

Proposed Trunk Sewer Alignments

Exhibit 3

4 REQUIRED APPROVALS AND PERMITS

Implementation of the project would require approval by the Manteca City Council as the Lead Agency. Other permitting agencies with permitting approval or review authority over portions of the project may include:

- ▶ Regional Water Quality Control Board (RWQCB) – National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit, General Order for Dewatering, NPDES Waste Discharge Permit.
- ▶ San Joaquin Valley Air Pollution Control District – Authority to Construct and Permit to Operate.
- ▶ California Department of Health Services rules concerning the use of wastewater effluent for urban irrigation purposes.

5 POTENTIAL ENVIRONMENTAL EFFECTS

Proposed wastewater treatment facility construction would occur within the existing WQCF boundaries, while construction of new trunk sewers would occur in several areas throughout the City primarily within existing roadway alignments. The proposed 48-inch effluent outfall would be constructed alongside the existing outfall in the east bank of the San Joaquin River.

The EIR will identify and describe the potential environmental impacts associated with implementation of the proposed project. Mitigation measures will be recommended where appropriate to reduce potentially significant and significant impacts. The following issues are proposed for analysis.

5.1 AESTHETICS

The proposed project would increase the size of the existing WQCF and involve the construction of pipelines and pump stations in area roadways. The potential visual impacts from construction of new wastewater treatment facilities and trunk sewers, and operation of the proposed wastewater treatment plant will be evaluated through the use of ground-level site photographs from sensitive viewpoints near the project site. The EIR will evaluate the extent of visibility of the project from surrounding, sensitive, public viewpoints.

5.2 AIR QUALITY

The proposed project would involve both construction and operational air quality impacts. The EIR will describe regional and local air quality in the vicinity of the project site and evaluate construction and operational impacts to air quality. The project's estimated air emissions will be quantified and compared to emissions thresholds of the San Joaquin Valley Air Pollution Control District (SJVAPCD). A list of mitigation measures will be prepared for any impacts found to be significant or potentially significant.

5.3 BIOLOGICAL RESOURCES

The proposed project has the potential to affect several special status species including Swainson's hawk, valley elderberry longhorn beetle, California tiger salamander, and San Joaquin kit fox. Of particular concern is the impact of effluent discharge on the thermal conditions of the river and corresponding migratory fish patterns. The EIR will assess all potentially significant direct and indirect impacts on biological resources posed by the project. Feasible and practical mitigation measures that would minimize or eliminate potential adverse impacts on biological resources will be recommended, including parameters for protection/enhancement of environmentally sensitive habitat. Increased wastewater discharges also have the potential to affect fisheries resources in the San Joaquin River. The EIR will assess all potentially significant direct and indirect impacts (including thermal

impacts) on fisheries and aquatic resources resulting from the proposed project. The impact analysis will focus on evaluating the effects of increased effluent discharge on aquatic life in the San Joaquin River and its tributaries. Mitigation measures to minimize or avoid potential adverse affects will be recommended where appropriate.

5.4 CULTURAL RESOURCES

The EIR will include recommendations for the management or treatment of significant and potentially significant archaeological and historical resources, as necessary, with a focus on mitigation measures that may be needed to avoid or substantially lessen potentially significant impacts.

5.5 GEOLOGY, SOILS, AND SEISMICITY

The proposed project would require grading, trenching, and other earthwork to upgrade and expand the City's WQCF and wastewater collection system. The EIR will evaluate potential geologic hazards related to soil erosion, strong ground shaking, subsidence, and liquefaction. Recommendations will be made to mitigate significant adverse impacts where feasible.

5.6 HAZARDS AND HAZARDOUS MATERIALS

The proposed project could expose humans to hazardous materials or hazardous waste. The analysis presented in the EIR will qualitatively evaluate the potential for human and environmental exposure to any pre-existing hazardous materials/waste in the project area. The EIR will identify mitigation measures to ensure that any significant potential for exposure to hazardous materials/waste is avoided.

5.7 HYDROLOGY AND WATER QUALITY

The proposed project would increase treated effluent discharges, and has the potential to adversely affect water quality in the San Joaquin River. The EIR will include a hydrology and water quality impact assessment that is focused on short-term temporary construction-related effects, long-term operations-related water quality impacts, and cumulative onsite and offsite hydrology and water quality impacts. The EIR will analyze impacts related to changes in the water quality of San Joaquin River and downstream surface water bodies caused by proposed changes in treated effluent discharges.

5.8 LAND USE

The proposed project would include direct land use effects associated with WQCF and trunk sewer construction, and indirect land use effects of providing wastewater capacity to serve future growth areas of the City. To the degree that analysis of growth-related effects provided in the City's General Plan (2003) and other relevant environmental documents is applicable to the project, it will be summarized in the EIR where appropriate. The compatibility of project facilities with existing and planned land uses will be evaluated. Mitigation measures will be recommended if land use issues contribute to significant physical environmental impacts.

5.9 NOISE

The EIR will describe the project's construction and operational noise impacts including noise generated from existing and proposed traffic and will compare these impacts to applicable noise thresholds.

5.10 PUBLIC SERVICES

The WQCF and collection system master plan project is a wastewater collection, treatment, and disposal project, and environmental impacts associated with construction of these facilities will be addressed throughout the EIR.

The EIR will analyze the additional capacity required to meet projected needs, and if significant effects to public services are identified, they will be discussed in the EIR.

5.11 TRANSPORTATION AND TRAFFIC

The EIR will analyze the project's construction-related and operations-related vehicle trips and their impacts to local roadways within the project area. The analysis will identify the maximum construction at any one time, truck haul routes, employee and truck trips, staging areas, emergency access, increases in roadway hazards, and increased congestion during construction. The EIR will also address operational traffic impacts associated with operation of the expanded wastewater treatment plant.

5.12 UTILITIES AND SERVICE SYSTEMS

The WQCF and collection system master plan project is a wastewater collection, treatment, and disposal project, and environmental impacts associated with construction of these facilities will be addressed throughout the EIR. The EIR will analyze the additional capacity required to meet projected needs, and if significant effects to public services are identified, they will be discussed in the EIR.