DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

WATER AND SEWER MASTER PLAN UPDATES

State Clearinghouse No. 2008082114

December 17, 2009

CITY OF MILPITAS
WATER AND SEWER MASTER PLAN UPDATES

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Prepared by:

RMC
Water and Environment

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List of Abbreviations

AADT	Annual average daily traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACE	Altamont Commuter Express
AFY	acre-feet per year
ASTM	American Society of Testing and Materials
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BART	Bay Area Rapid Transit
bgs	below the ground surface
BMPs	best management practices
BWF	base wastewater flow
CCR	California Code of Regulations
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service Company
Cal OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CBC	California Building Code
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CGS	California Geological Survey
CHLs	California Historical Landmarks
CIP	capital improvement projects
CIWMB	California Integrated Waste Management Board
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society's
CO	carbon monoxide

CO2	carbon dioxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CTS	California Tiger Salamander
CWA	Federal Clean Water Act
CWHR	California Wildlife Habitat Relationships
dBA	decibels
DDT	dichlorodiphenyltrichloroethane
DHS	Department of Environmental Health
DNL	Day-Night average sound level
DOT	U.S. Department of Transportation
DPH	Department of Health Services
DPM	Diesel particulate matter
DSOD	Division of Safety of Dams
DTSC	Department of Toxics Substances Control
DWR	Department of Water Resources
ECP	erosion control plan
ECRMP	El Camino Real Master Plan
EIR	Environmental Impact Report
EMF	electric and magnetic fields
EMFAC	Motor Vehicle Emission Factor Model, 2007
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHRZ	Fault Hazard Rupture Zone
FIRM	Flood Insurance Rate Map
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
gpd	Gallons per day
gpm	Gallons per minute
GWI	groundwater infiltration
HAPs	hazardous air pollutants
HCP	Habitat Conservation Plan
HDD	horizontal directional drilling
HOV	High Occupancy Vehicle
HSWA	Hazardous and Solid Waste Act
HWCL	Hazardous Waste Control Law
HWMP	Hazardous Waste Management Program
ICBO	International Conference of Building Officials
I/I	infiltration/inflow

IOUs	Investor-Owned Utilities
IPCC	International Panel on Climate Change
ISA	International Society of Arboriculture Standards
kV	kilovolts
Leq	Equivalent Sound Level
LF	linear feet
LOS	Level of Service
LRT	light-rail transit
LUP	linear underground/overhead projects
LUSTs	leaking underground storage tanks
LWUs	large water users
MEI	Maximally Exposed Individual
MG	million gallons
mgd	Million gallons per day
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
msl	mean sea level
MTC	Metropolitan Transportation Commission
N2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NCCP	Natural Communities Conservation Plan
ND's	negative declarations
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NIH	National Institute of Health
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NO2	nitrogen dioxide
NOC	Notice of Completion
NOx	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPS	Non-point source
NRC	Nuclear Regulatory Commission
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OEHHA	Office of Environmental Health Hazard Assessment

OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OPR	State Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated biphenyls
PG&E	Pacific Gas & Electric
PGA	peak ground acceleration
Pb	lead
PM	particulate matter
PPV	peak particle velocity
PSHA	probabilistic seismic hazard assessment
PWWF	Peak wet weather flow
QSP	Qualified SWPPP Preparer
RCRA	Resource Conservation and Recovery Act
RDI/I	rainfall-dependent infiltration/inflow
ROG	reactive organic gases
ROW	Rights-of-Way
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SAFE	Strategic Action for Emergencies
SBWRP	South Bay Water Recycling Program
SCVURPP	Santa Clara Valley Urban Runoff Prevention Program
SCVWD	Santa Clara Valley Water District
SDWA	Safe Drinking Water Act
SFPUC	San Francisco Public Utilities Commission
SHMA	Seismic Hazards Mapping Act
SHPO	State Historic Preservation Office
SIPs	State Implementation Plans
SMAQMD	Sacramento Metropolitan Air Quality Management District's
SO2	sulfur dioxide
SPCCP	Spill Prevention, Control, and Countermeasure Program
SR	State Route
SSO	Sanitary sewer overflows
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TASP	Transit Area Specific Plan
TIA	transportation impact analysis
TMDL	Total Maximum Daily Loads

TSM	Transportation Systems Management
U.S. EPA	U.S. Environmental Protection Agency
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UGB	Urban Growth Boundary
URBEMIS	Urban Emissions Model, 2007
USA	underground services alert
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VTA	Valley Transportation Authority
VTP	Valley Transportation Plan
WDR	Waste discharge requirement(s)
WPCP	Water Pollution Control Plant

Executive Summary

This Draft Environmental Impact Report (EIR) was prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the City of Milpitas's (City) 2009 Water and Sewer Master Plan Updates (Master Plan Updates). This document was prepared in conformance with CEQA (California Public Resources Code, Section 21000 et seq.), the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.), and City rules and regulations. This EIR is intended to serve as an informational document for public agency decision-makers and the public regarding the potential environmental effect of implementing the Master Plan Updates.

ES.1 Purpose and Use of the EIR

This Draft EIR provides a program-level analysis of the potential environmental effects of the Master Plan Updates. This document addresses the potentially significant adverse environmental impacts that may be associated with the planning, construction, or operation of the individual improvements associated with the Master Plan Updates. It also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to reduce or avoid significant impacts.

ES.2 Project Overview

The City's 2009 Water and Sewer Master Plans comprise a re-evaluation of the City's water and sewer system capacity based on updated land use projections from several near- and long-term development projects currently in the planning process. The 2002 Water Master Plan and 2004 Sewer Master Plan defined the water supply and sanitary sewer system improvements necessary to accommodate the City's projected build-out based on the (1998) General Plan. The 2009 Water and Sewer Master Plans incorporate additional land use changes that have occurred in the Midtown and Transit Area Specific Plan areas along with other miscellaneous land use changes throughout the City.

Regional Setting and Location

The Master Plan Updates include incorporated areas within the City of Milpitas in northern Santa Clara County, California (refer to Figure 2-1: Regional Map in *Chapter 2, Project Description*). The Master Plan Study Area (Study Area) for the purposes of this EIR analysis includes much of the current city limits (refer to Figure 2-2: Master Plan Study Area in *Chapter 2, Project Description*). As shown, the Study Area encompasses areas of the City east of Coyote Creek, south of the Santa Clara-Alameda County line, west of Piedmont Road, and north of Montague Expressway, Trade Zone Boulevard, and Landess Avenue.

Objectives of the Master Plan Updates

The specific objectives of the City's Water and Sewer Master Plan Updates include the following:

- Identify water and sewer pipe and storage deficiencies caused by projected changes in water and wastewater demand, and implement corrective projects to relieve these deficiencies.
- Implement recycled water infrastructure improvements for the Transit Area Specific Plan (TASP).

Description of the Master Plan Updates

The City intends to formally adopt the 2009 Master Plan Updates, which outline specific CIP improvements for the City's water and sanitary sewer systems based on modeled deficiencies in response to planned growth. As part of the master planning process, the City developed three new land use buildout scenarios. This EIR analyzes the City's preferred land use buildout scenario, which is identified as Scenario 3 in the Master Plan Updates. Scenario 3 includes improvements necessary to accommodate

several near- and long-term development projects currently in the planning process, buildout of the TASP, and modifications to the City's list of large water users (LWUs).

Given that the City is a wholesale water customer to the San Francisco Public Utilities Commission (SFPUC) and Santa Clara Valley Water District (SCVWD), the facility improvements recommended in the Water Master Plan Update are generally conveyance-related. Conveyance improvements include those necessary to correct low-pressures within the system, insufficient fire flow, and head loss, which results from friction and/or changes in elevation within the pipe network. In conjunction with the conveyance improvements recommended, the City expects that additional storage and pumping capacity will be required within the SCVWD zone.

Similar to the City's water supply infrastructure, the City conveys all of its wastewater to the San Jose San Jose/Santa Clara Water Pollution Control Plant (WPCP) for treatment and disposal. For this reason, improvements recommended in the City's Sewer Master Plan Update are also focused on conveyance. Conveyance improvements are generally aimed at removing existing or model-projected hydraulic restrictions within the City's existing collection system to prevent overflows. In this context, the conveyance improvements associated with the Sewer Master Plan Update are intended to remove bottlenecks (e.g. pipes too small to convey flow located between adequately sized pipes) within existing residential, commercial, and industrial areas.

Documents Incorporated by Reference

This EIR incorporates by reference two previously prepared environmental documents. The documents are include an EIR prepared for the City's Transit Area Specific Plan (TASP) and an Initial Study and Mitigated Negative Declaration (IS/MND) prepared by the State Water Resources Control Board for the General Waste Discharge Requirements For Landscape Irrigation Uses Of Municipal Recycled Water. A more detailed description of these documents and their relationship to this EIR are provided in Chapter 1, Introduction.

ES.3 Environmental Impacts

Areas of Known Controversy

In accordance with Sections 15082(a), 15103, and 15375 of the CEQA Guidelines, the City prepared and circulated a Notice of Preparation (NOP) of a Draft EIR for a 30-day comment period between August 27, 2008 and September 30, 2008. The scope of this EIR includes the areas of controversy identified by the NOP, as well as issues raised by agencies and the public in response to the NOP. Areas of known controversy may include:

- Direct and indirect impacts to biological resources
- Potential alteration to drainage facilities resulting in water quality impacts
- Air quality impacts (construction-related), including greenhouse gas (GHG) emissions and/or expanded carbon footprint
- Noise and nuisance effects on adjacent residential areas
- Temporary disruptions to traffic, including State highway facilities in Santa Clara County
- Potential impacts of construction on transit operations
- Potential indirect and secondary impacts as a result of the Project's removal of an obstacle to growth (e. g. potable water storage and conveyance capacity).
- Potential impacts to archeological resources
- Potential impacts on gas and electrical utilities, including relocation and expansion of existing facilities
- Potential impacts to existing and proposed trails routes and recreational opportunities

- Cumulative effects and the secondary effects of growth

Impacts Not Considered in This EIR

Based on comments received during the NOP circulation period (see Appendix A) and the professional judgment of City staff, a number of issues are not expected to have any significant program-level or cumulative impacts when compared to existing conditions, and do not require further analysis. These resource areas include:

- Agricultural Resources
- Mineral Resources
- Public Services
- Recreation

Further discussion for each of the above resources areas is provided in *Section 3.0, Introduction to Environmental Analysis* to convey the City's supporting rationale as to why effects to these resources would not be significant with the implementation of the proposed improvements. Issues related to indirect impacts of the Master Plan Update improvements and the secondary effects of growth are addressed in *Chapter 5, Other CEQA Considerations* under the topic of growth inducement.

Impacts of the Master Plan Updates

Potential environmental impacts that could result from the construction and/or operation of the Master Plan Updates, based on actions described in *Chapter 2, Project Description*, are described in *Chapter 3, Environmental Analysis.* Table ES-1, at the end of this Executive Summary, identifies the impact statements within each environmental analysis section, the significance determinations for impact, and the associated mitigation measure, if required. Environmental factors potentially affected by the proposed Master Plan Updates include:

- Aesthetics
- Air Quality and Climate Change
- Biological Resources
- Cultural Resources
- Geology and Soils
- Public Health and Hazards
- Hydrology and Water Quality
- Planning and Land Use
- Noise
- Transportation
- Utilities and Service Systems

Significant Unavoidable Impacts

Two unavoidable adverse impacts would result from construction of the Master Plan Updates. As described in *Sections 3.10, Noise* and *3.11, Transportation*, construction-related activities would result in significant and unavoidable increases in ambient noise levels and intersection traffic delays. The City will be required to adopt Findings and prepare a Statement of Overriding Considerations for these unavoidable, adverse impacts as part of its approval of the EIR.

Cumulative Impacts

As discussed in *Chapter 3, Environmental Analysis*, a majority of the potentially significant environmental affects associated with the Master Plan Updates are related to facility construction as opposed to long-term operation. In particular, construction of the Master Plan Updates could have effects on noise, air quality, transportation, biological resources, and water quality that are potentially significant and directly or indirectly affect the environment. However, a majority of these effects would be mitigated by the design of the Master Plan improvements and by the mitigation measures described in *Chapter 3, Environmental Analysis*.

The resources most likely to be cumulatively affected by the Master Plan Updates would be the ambient noise environment from construction traffic, degradation of air quality, and reduced roadway and intersection level of service (LOS). Based on the analysis provided in this EIR, these impacts could serve as significant contributions to a cumulative condition.

ES.4 Alternatives

In selecting the range of alternatives for the Master Plan Updates, the City applied specific criteria against which potential alternatives were evaluated. Failure of a potential alternative to substantially achieve one or more of the specific criteria resulted in elimination of the alternative from detailed consideration in this EIR. The specific criteria used in the screening evaluation were:

- The extent to which the alternative would accomplish most of the basic goals and objectives of the project.
- The extent to which the alternative would avoid or lessen one or more of the identified significant environmental effects of the project.
- The potential feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, General Plan consistency, and consistency with other applicable plans and regulatory limitations.
- The requirement of the CEQA Guidelines to consider a “no project” alternative and to identify, under specific criteria, an “environmentally superior” alternative in addition to the “no project” alternative (CEQA Guidelines, section 15126.6[e]).

Alternatives Eliminated from Further Consideration

Several alternatives were considered, but eliminated from detailed consideration in this EIR because of their cost-ineffectiveness, limited reliability, and potential to result in more significant and/or new environmental effects. Therefore, the following alternatives described in Chapter 4, Alternatives Analysis are not considered to be feasible or provides no or minimal benefit in terms of avoiding or minimizing significant environmental impact caused by the proposed Master Plans:

- **Scenario 1 Improvements Only.** This alternative was eliminated since it would result in projected deficiencies in both water and sewer service if existing patterns of development continue within the City; insufficient storage capacity with the City’s SCVWD Zone and a corresponding reduction in water pressure within this zone; and no substantial reduction in construction-related impacts.
- **Scenario 2 Improvements Only.** This alternative was eliminated since it would result in projected deficiencies in both water and sewer service if existing patterns of development continue within the City; and no substantial reduction in construction-related impacts.
- **Scenario 3 Improvements, SCVWD Wells Only.** The main reason for eliminating this alternative was the availability of groundwater within the vicinity of the TASP. Further, the quality of the local groundwater within the TASP is also in question and the treatment requirements for any well-head treatment facilities could be cost-prohibitive. Based on these

factors, well facilities proposed under Master Plan updates are considered infeasible and could result in more significant groundwater impacts when compared to the proposed Master Plans.

- **Adoption of 2002 Water and 2004 Sewer Master Plans.** This alternative was eliminated because it does not address any of the system deficiencies identified as part of the 2009 Master Plan Update. Without the proposed improvements, portions of the City would have insufficient water pressure and an increased potential for sanitary sewer overflows.

No Project Alternative

Based on the recognized constraints, the only alternative being carried forward for detailed consideration in this document is the No Project Alternative.

The No Project Alternative would preclude the construction of the individual improvement project proposed in the Water and Sewer Master Plan Updates. Under this alternative, the physical area within the Master Plan Study Area would not be disturbed and would likely remain the same until City's existing facilities need to be replaced or rehabilitated. No additional changes in current City water delivery and sewer collection operations would occur under this alternative.

Environmentally Superior Alternative

Of the Alternatives described in *Chapter 4, Alternatives Analysis*, the No Project Alternative is considered environmentally superior due to its reduced construction-related impacts as compared to the preferred project. However, because CEQA requires the selection of another environmentally superior alternative if the No Project Alternative is initially selected, the Master Plan Updates was identified as environmentally superior due longer-term benefits that would otherwise not be realized under the No Project Alternative. More specifically, the Master Plan Updates would meet the stated goals and objectives of the City and prevent projected deficiencies in both water and sewer service due to planned development. The Master Plan Updates would mitigate potential environmental impacts related to aesthetics, air quality, biological resources, cultural resources, hydrology and water quality, public health and hazards, land use and planning, noise, transportation, and utilities and service systems.

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Table ES-1: Summary of Impacts and Mitigation Measures

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
3.2 Aesthetics			
Impact AES-1: Implementation of the Master Plan improvements could result in temporary and permanent changes to the visual character of the Study Area. The proposed program would involve the installation of new or replacement of existing buried water and wastewater pipelines, installation of valves and turnouts, and construction of a new storage tank and pump station or groundwater well. Construction activities would occur primarily within the disturbed, urban setting, along existing ROW. Activities would consist of surface preparation (i.e., removal of vegetation as needed and grading), excavation, installation of structures, and surface restoration, as described in Chapter 2, Project Description. Construction activities would be scattered throughout the City and vary in duration, but would cease upon completion of each individual project. Individual improvement projects would be short-term in nature, and implemented on different schedules within the planning horizon, occurring between 2009 and sometime after 2020. Construction activities would alter temporarily the visual character of the affected sites due to the presence of heavy-duty equipment (e.g., excavators, cranes, trucks, pavers, loaders, etc.) and changes in terrain (i.e., presence of pits, trenches, and stockpiles of material and soils). Visual alterations would be visible mainly to people in the immediate vicinity (short-range views), including motorists, residents, and/or employees where commercial / industrial uses are present. Construction activities are considered temporary in nature. To ensure that short-term visual effects of construction activities do not become permanent effects, Mitigation Measure AES-1 would be implemented to limit construction activities and promote restoration of disturbed areas to preconstruction conditions.	Potentially Significant	Mitigation Measure AES-1: Screen Staging Areas and Restore Affected Construction Areas. The City will require the construction contractor to site staging areas to minimize visual disturbance to surrounding residential and commercial parcels and confine construction-related activities to the designated ROW. Prior to and during use of construction staging areas for equipment, vehicle parking, and material storage, screening or vegetation will be installed as appropriate for the zoning at the site. To the extent feasible, all disturbed areas (e.g., roadway trenches and staging areas) will be returned to their preconstruction condition. All existing landscaping that is removed or damaged during construction will be replaced, along with irrigation hardware. These requirements will be reflected in contract documents. To the extent feasible, the City will require the contractor for Project W-MP-5 to contain construction staging areas to the project site.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact AES-2: New Master Plan improvements could result in the degradation of the existing visual character of the Study Area through the installation of new sources of light and glare. Visual alterations associated with the construction of the various Master Plan improvements would be visible to people in the immediate vicinity (short-range views), including motorists, residents, and/or employees. Upon completion of construction activities, all pipelines, turnouts, and valves would be buried underground within existing roadway ROWs and out of sight from public view. As such, no long-term impacts associated with degradation of the existing visual character or quality of the Study Area and surroundings would occur from implementation of typical Master Plan-related improvements. The southwestern portion of the Study Area contains regional commercial and industrial facilities at a relatively large scale, including broad windowless buildings and expansive parking lots. Visual unity (i.e., architectural themes, patterns) and vividness (i.e., distinctive or memorable structures) within this portion of the Study Area both lack; however, the long-term implementation of the TASP is expected to gradually improve the area's appearance and uniformity. Construction of the proposed 6.6 MG storage tank and pump station would result in minor alteration of the existing visual character of the TASP area through the placement of an additional large, permanent structure. For the purposes of analysis, the City anticipates that the proposed storage tank, pump station, and paved areas would have a collective footprint of approximately 3 acres and be less than 30 feet in height. Viewer sensitivity to these new structures would likely be low due to the existing marginal, visual quality of the surrounding area and, therefore, the construction of a storage tank and pump station would not substantially degrade the character of the Study Area. However, to ensure that the new storage facilities blend with development planned for the TASP, the implementation of Mitigation Measure AES-2a would be required. Nighttime lighting would also be required along the perimeter of the above-ground structures to provide security and safety for maintenance workers. The storage facilities would generate new sources of night lighting and glare within an area where these sources already exist. However, the introduction of a new lighting source would could disrupt nearby residences and/or vehicle traffic within the Study Area. To reduce potential long-term light-and-glare impacts to a less than significant level, implementation of Mitigation Measure AES-2b would be required.	Potentially Significant	Mitigation Measure AES-2a: Incorporate Design Elements to Integrate Proposed Above-Ground Surfaces to Their Surroundings. The City will use design elements to enhance visual integration of above-ground facilities with their surroundings. These elements may include, but are not limited to, the following: • painting (with earth-colored tones) of structural façades to blend with surrounding land uses, • use of fencing or structural materials similar to those used by nearby land uses, and • installation of berms and/or landscaping around the facility. Mitigation Measure AES-2b: Implement Lighting and Material to Reduce Light and Glare. The City will reduce light and glare on surrounding land uses by shielding permanent exterior lighting, orienting all exterior lighting downward, or installing lights activated only by sensors. In order to minimize incidental light, the lights will be cutoff-type fixtures that cast low-angle illumination. All lights will provide natural color rendering and light qualities. In addition, the City will limit the use of highly reflective building materials and/or finishes in the design of its proposed above-ground structures.	Less Than Significant
3.3 Air Quality			

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact AQ-1: Implementation of the Master Plan Updates could contribute to an existing or projected air quality violation. Construction Emissions. The implementation of Master Plan-related construction activities would occur in two distinct phases: Phase I involves site preparation, trenching, and other earthmoving activities, while Phase II involves installing facilities equipment, concrete, and structural improvements. Site preparation includes activities such as general land clearing grubbing, pavement removal, or vegetation removal, in limited instances. Earthmoving and trenching activities include cut and fill operations, , soil compaction, and grading. These general construction activities would be utilized throughout the implementation of the Master Plan Updates for improvements such as pipelines, roadway surfaces, pump structures, structural foundations, and storage facilities. The emissions generated from these common construction activities include: • Dust (including PM10 and PM2.5) primarily from fugitive sources such as soil disturbance and vehicle travel over unpaved surfaces; • Combustion emissions of criteria air pollutants (including ROG, NOx, PM10, and PM2.5) primarily from operation of heavy equipment construction machinery (primarily diesel operated), portable auxiliary equipment and construction worker automobile trips (primarily gasoline operated); and, • Evaporative emissions (ROG) from asphalt paving and architectural coating applications. Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity and local weather conditions. In the absence of mitigation, construction activities may generate significant quantities of dust, and as a result, local visibility may be adversely affected and concentrations of PM10 and PM2.5 could increase locally. In addition, the fugitive dust generated by construction would include not only PM10 and PM2.5, but also larger particles, which would fall out of the atmosphere within several hundred feet of the construction area and could result in nuisance-type impacts. Construction activities would also result in the emission of pollutants of concern, including ROG, NOx, PM10, and PM2.5, from construction equipment exhaust and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operating schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NOx from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project construction.	Less Than Significant (Mitigation Recommended)	Mitigation Measure AQ-1: Mitigation Measure AQ-1: Implement Dust Control Measures. The City shall require the construction contractor to implement BAAQMD's basic and enhanced dust control procedures for all construction projects, as applicable. This requirement shall be reflected in contract documents. Dust control measures include: Basic Control Measures: The following basic control measures shall be implemented at all construction sites. • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave and apply water three times daily or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. • Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. Enhanced Control Measures: The following enhanced control measures shall be implemented at construction sites greater than four acres in area. • All basic control measures listed above. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more). • Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). • Limit traffic speeds on unpaved roads to 15 miles per hour. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
For the worst-case day construction scenario, it was assumed that multiple Master Plan improvements (e.g. sewer and water conveyance improvements) would occur simultaneously. Estimated construction-related fugitive dust emissions, as well as exhaust emissions from construction equipment and worker trips are shown in Table 3.3-2. As shown in the table, emissions of NOx, ROG, PM10, and PM2.5 in 2010 would not exceed the 54 pounds per day (lbs/day) significance threshold for NOx, ROG, and PM-2.5 or the 82 lbs/day significance threshold for PM-10 as specified by the BAAQMD and, therefore, the associated impact would be less than significant. Project Operations. Following installation, the Master Plan-related improvements would require maintenance activities that would generally be comparable to existing conditions. Pump operations would be driven by electricity and would not generate local emissions directly, but would result in emissions at a power plant within or outside of the Bay Area Air Basin. Power plant emissions, if located in California, are subject to the Rules and Regulations of the air district in which they are located and have been subject to their own regulatory review. Emissions from power generation to supply pumps would occur anywhere in the western U.S. power grid and emissions from motors to service the pumps would be regional. Energy would be supplied by permitted power sources, such as sources permitted by the California Energy Commission's Application for Certification (CEQA equivalent) process. Any new electrical loads from pumping facilities would necessitate the installation of a new emergency engine-generator. New emergency generators would consist of diesel-fueled, 4-cycle engines rated for standby duty and designed to meet the Tier 2 or 3 requirements of the BAAQMD. The generators would not be operated under normal conditions, but would likely be run for up to one hour per week for testing. Further, the standby generator will be subject to operating requirements and emission standards for new and in-use stationary diesel-fueled engines that have a rated brake horsepower of greater than 50 (>50 bhp) per the requirements of Section 93115, Title 17, of the California Code of Regulations. Compliance with these applicable regulatory requirements would ensure a less than significant air quality impact from the standby generator. Traffic generation during the long-term operation of the Master Plan improvements would average less than 10 one way passenger vehicle trips per day; comparable to existing conditions. Operational emissions were estimated for the well or storage tanks facilities using the URBEMIS 2007 model, version 9.2.4, based on the light industrial land use category and a maximum building envelop of 3 acres. As provided in Table 3.3-3, the URBEMIS outputs indicate that operational emissions for these facilities would be minor and would not exceed BAAQMD thresholds.			

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
The BAAQMD CEQA Guidelines (BAAQMD 2009) recommends estimating carbon monoxide concentrations for projects where project traffic would affect signalized intersections or roadway links operating at Level of Service (LOS) D, E, or F or would cause LOS to decline to D, E, or F. According to Section 3.11, Transportation, temporary construction-related traffic would exacerbate LOS F conditions at three signalized intersections. However, operational traffic associated with the Master Plan Updates would be minor in duration and would not contribute to a long-term degradation of LOS on City roadways and intersections. Therefore, the BAAQMD threshold trigger level for estimating carbon monoxide for project operation would not be activated. Based on the discussion presented above, construction and operational emissions associated with Master Plan Update implementation concentrations would be less than significant.			
Impact AQ-2: Construction of Master Plan improvements could expose sensitive receptors to substantial pollutant concentrations. Construction Emissions. Construction of the Master Plan Updates would not emit any hazardous air pollutants (HAPs) in any significant quantity other than from large, heavy-duty, diesel-powered equipment exhaust. OEHHA currently describes the health risk from diesel exhaust entirely in terms of the amount of particulate, or PM-10, that is emitted. Currently, the health risk associated with diesel exhaust PM-10 or diesel particular matter (DPM) only has a carcinogenic and chronic effect; whereas no short-term acute effect is currently recognized. Construction of the individual Master Plan improvements would be limited in duration, lasting less than 20 years total and relatively distributed throughout the Master Plan Study Area, and therefore, no long term, chronic impact at any one particular receptor location would be expected. In recognition of these circumstances, and combined with dust control mitigation prescribed in Mitigation Measure 3.2-1, it is reasonable to conclude that Master Plan-related construction would not expose sensitive receptors to substantial pollutant concentrations over the long-term. The impact would be considered less than significant with mitigation. Project Operations. Over the longer term, operational emissions associated with the proposed wells and/or storage tank pump(s) would operate by electricity with an emergency, back-up diesel generator. The proposed storage tank pump(s) would operate year-round (24-hours a day, seven days a week) and the backup generator(s) would operate under certain situations, during emergencies. Increased operation of diesel engines to pump groundwater and treated water supplies would contribute to increased air emissions in the areas where these facilities are proposed. A recently completed health risk assessment of comparable sources and receptors assessed the potential impact of diesel sources operating within	Potentially Significant	Mitigation Measure AQ-1: Implement Dust Control Measures. Mitigation Measure AQ-2a: Buffers for Pump Siting. The City will locate all new pump stations powered by diesel fuel more than 200 feet away from sensitive receptors, if feasible. Electrically-powered pumps shall be used to power new pumps, to the extent practicable. Mitigation Measure AQ-2b: Project-Level DPM Screening for Engine Siting. The City will require screening-level DPM assessments to be conducted for diesel–powered pump operations proposed within 500 feet of residences or other sensitive receptors. These analyses should include exact distances between the receptors and operations, as well as the actual DPM emissions for the engines proposed. If the analysis shows an annual average DPM concentration from project operations at residences within 500 feet of the DPM source to be greater than 0.024 ug/m3, the engine location shall be moved to a location where the annual average DPM concentration from individual project emissions is less than 0.024 ug/m3. The acceptable concentration of 0.024 ug/m3 was determined using the current OEHHA cancer potency factor and methodology for diesel exhaust (OEHHA 2003). If diesel exhaust concentrations at the affected receptor would be below 0.024 ug/m3, then the cancer health risk would be less than 9.9 cancers in a million population.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
200 feet of nearby residences on a year-round basis (Environmental Science Associates, 2006). The study concluded that the impact of the DPM emissions would be less than significant because they resulted in a cancer risk of less than 10 cases in a million population. However, without a precise facility location for the proposed storage tank pump station, the City is unable to confirm that these facilities would be located outside a 200-foot buffer and whether DPM emissions would pose conditions that exceed the previously studied impacts. For this reason, the implementation of Mitigation Measures AQ-1 (above) and Mitigation Measures AQ-2a and AQ-2b would be required to reduce the impact to a less than significant level.			
Impact AQ-3: Operation of Master Plan improvements would not create new sources of objectionable odors. The types of land use development that pose potential odor problems include agriculture, wastewater treatment plants, food processing and rendering facilities, chemical plants, composting facilities, landfills, transfer stations and dairies. The Master Plan improvements do not involve the construction or operation of any of these uses nor would it involve the placement of sensitive receptors in close proximity to the one of these odor-generating uses. Operation of pumping facilities would involve use of vehicles and/or maintenance equipment when necessary; however, these activities are not expected to generate objectionable odors. Further, pumping operations would be within fully enclosed structures and due to their nature would not result in odor generation. All sewer pipes replaced as part of the Sewer Master Plan Update would be buried underground and, as indicated in the City's adopted Odor Control Action Plan, are typically not associated with the generation of significant odors. Additionally, no new lift stations, above-ground temporary storage facilities, or treatment facilities are proposed as part of the Master Plan Updates. For these reasons, this impact is considered less than significant.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact AQ-4: The Master Plan improvements would contribute to increases in the generation of GHG emissions, thereby contributing to global climate change. Effects of GHG emissions on global climate change are an emerging issue that warrants discussion under CEQA. Unlike the criteria pollutants discussed previously that may have local and regional effects, GHG emissions contribute to global changes in the environment. GHG emissions do not directly produce a localized impact, but may cause an indirect impact if the local climate is adversely changed by its cumulative contribution. Individual infrastructure projects contribute relatively small amounts of GHG that when added to all other GHG-producing activities around the world result in increases in these emissions that have led many to conclude that these collective emissions are contributing to changes in the global climate. In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. The impacts of global climate change described in AB 32 include changing sea levels, changes in snow pack and availability of potable water, changes in storm flows and flood inundation zones, and other impacts. The list of impacts included in AB 32 is considered substantial evidence of the potential environmental impacts that could result as a consequence of continued GHG outputs. At minimum, the Master Plan Update improvements will be required to comply with Title 24 energy efficiency standards, to the extent applicable; however, the extent to which these standards would help the individual projects in achieving the goals outlined above is unknown. In response to this uncertainty and to provide clarification to lead agencies for assessing GHG impacts, BAAQMD has developed thresholds of significance for common project types that, collectively, are responsible for substantial GHG emissions. In applying these thresholds, BAAQMD developed a threshold of 10,000 MTCO2e/yr for stationary sources and 1,100 MTCO2e/yr for projects other than stationary sources (e.g. mobile sources). However, this applies to only operations and not construction. BAAQMD has not established thresholds for construction; however, CARB is considering mandatory performance standards. Quantification of GHG for the Master Plan Updates was based on the CO2 outputs generated during Master Plan operations using the URBEMIS 2007 model, shown in Table 3.2-3, combined with new electrical loads required for the operation of the pumping facilities for Project W-MP-5. At the highest level of operation in 2012 and beyond, GHG emissions generated by the pumping facilities are conservatively estimated at 3,158 MTCO2e/yr and other operational emissions (e..g mobile trips) are estimated at 399 MTCO2e/yr . These estimates are overly conservative in that they assume peak operation of the pumping facilities, 24-hours a day, seven days a week annually, which is not expected to occur under normal operating conditions. Nevertheless,	Potentially Significant	Mitigation Measure AQ-4: GHG Reduction Measures for Construction. The City and/or Developer shall require its construction contractor to comply with the City's Clean Air Action Plan, once adopted. In conjunction with compliance with the City's Clean Air Action Plan, the City and/or Developer shall incorporate the following measures, to the extent they are applicable and feasible, into individual Master Plan Update improvements: a. incorporate the use of recycled or local-origin construction materials; and/or b. maximize recycling of construction/demolition waste materials.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
even when applying these conservative assumptions, the calculated estimate remains less than the applied threshold and, therefore, operational-related GHG emissions are considered less than significant. Based on CARB's currently proposed approach to construction activities, construction GHG emissions would require performance based control measures, which are currently not included as part of the Master Plans. With the inclusion of the prescribed mitigation measures to reduce construction-related GHG emissions, the residual impact would be less than significant.			
3.4 Biological Resources			
Impact BIO-1: Construction of the Master Plan improvements could result in the potential disturbance or loss of special-status plant populations. Construction and improvement activities associated with the proposed Master Plan Updates may result in direct or indirect impacts to special-status plant species: Congdon's tarplant, alkali milk-vetch, and robust spineflower. Congdon's tarplant and robust spineflower are classified as 'possibly extirpated,' however, their status affords them special protections should they be found within the improvement sites. Although the Master Plan pipeline alignments will be constructed within roadway ROWs and therefore avoid direct impacts to special status plants, the storage tank and pump station facilities may result in direct or indirect impacts to suitable habitats for special-status plants. Direct impacts may result from grading, site preparation, and construction of the storage tank and pump station facilities. Vibration, dust, and human trampling associated with the construction activity may also indirectly disturb special plant status species. This could result in a reduction in local population size, lowered reproductive success, or habitat fragmentation. Potential loss or disturbance of special status plant species is considered a potentially significant impact.	Potentially Significant	Mitigation Measure BIO-1a: Document Special-Status Plant Populations for Individual Improvements Constructed Outside Existing Roadway ROW. Prior to design or construction of improvements outside of existing roadway ROW, the City will retain a qualified botanist to document the presence or absence of special-status plants on or near to the individual improvements before implementation. To document plant populations, the following steps will be undertaken: 1) review existing information to develop a list of special-status plants that could grow on the site; 2) coordinate with the appropriate agencies (CDFG and USFWS) to discuss botanical resource issues and determine the appropriate level of surveys necessary to document special-status plants; and 3) conduct a botanical survey of appropriate detail dependant on species richness, habitat type and quality, and the probability of special status species occurring in a particular habitat type. The botanical survey may include a habitat assessment, a species-focused survey, or a floristic protocol-level survey per CNPS Botanical Survey Guidelines (CNPS 2001). Special-status plant populations identified during the field surveys will be mapped and documented. The City shall implement Mitigation Measure BIO-2 to avoid or minimize significant impacts on identified special-status plants. Mitigation Measure BIO-1b: Avoid or Minimize Impacts on Special-Status Plants by Protecting Special-Status Plant Populations. If construction of the individual improvements has the potential to result in direct loss or indirect disturbance to special-status plants, the City will protect special-status plants by installing environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant populations. The environmentally sensitive area fencing will be installed at least 20 feet from the edge of the population. The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.	
Impact BIO-2: Construction of the Master Plan improvements could result in potential disturbance or loss of special-status wildlife species and their associated habitats. Construction and improvement activities associated with the Master Plan Updates could result in the direct loss or indirect disturbance of special-status wildlife. As provided in Table 3.4-1, the Study Area provides potentially suitable habitat for several threatened and endangered wildlife species, including Salt marsh harvest mouse and California tiger salamander (CTS). The Study Area also provides habitat for several species of concern, which include northwestern and southwestern pond turtle, white-tailed kite, burrowing owl, pallid bat, yuma myotis, and great blue heron. Specific impacts to special-status wildlife species are addressed below. California tiger salamander, Southwestern Pond Turtle, and Northwestern Pond Turtle. Drainage ways, wetlands, and swales may occur within the Study Area, providing habitat for special-status amphibians such as CTS and pond turtles. North and southwestern pond turtles may occur in drainage ditches, sloughs, and other aquatic features within the Study Area that may serve as suitable habitat. As shown in Figure 3.4-2, the nearest known occurrences of north and southwestern pond turtle to the Study Area is less than ¼ mile. In addition, there are also known occurrences of CTS within the Study Area, although this species is believed to be extirpated from the Study Area due to a lack of recent sightings. Direct impacts to drainage channels and wetland habitats may result from excavation and trenching which will be used to install pipeline across smaller ditches (less than 10 feet in width). Some direct impacts will be minimized by constructing primarily along and within existing roadways and by using trenchless construction techniques to cross larger water bodies. Temporary dewatering activities during construction could also cause mortality of wetland species, CTS, and Northwestern pond turtle eggs, larvae, and juveniles. Construction activities associated with the Master Plan improvements could potentially result in significant impacts to these species, and may also lead to a cumulative decline of the species over time. Indirect impacts may include the temporary degradation of water quality during construction. To minimize potential direct or indirect effects of Project implementation on CTS and western pond turtle, Mitigation Measures BIO-2a, BIO-2b and BIO-2c would be implemented. Burrowing owl. As shown in Figure 3.4-2, there are several occurrences of burrowing owl within the Study Area. The TASP EIR reports that during	Potentially Significant	Mitigation Measure BIO-2a: Document Special-Status Wildlife Species and Their Habitats for Individual Improvements Constructed Outside Existing Roadway ROW. Prior to construction of the storage tank and pump station on undisturbed lands, the City will document special status wildlife species and their habitats. The City will retain a qualified wildlife biologist to document the presence or absence of special-status wildlife before implementation. To document special-status wildlife, the wildlife biologist will 1) review existing information to confirm the list of special-status wildlife species that could occur in the project area; 2) coordinate with the appropriate agencies (CDFG or USFWS) to discuss wildlife resource issues in the region and determine the appropriate level of surveys necessary to document special-status wildlife and their habitats; and 3) conduct a field survey of an appropriate detail dependant on species richness, habitat type and quality, and the probability of special status species occurring in a particular habitat type. The wildlife biologist shall consider the CDFG Staff Report on Burrowing Owl Mitigation (CDFG 1995), which includes survey guidelines for burrowing owl. Special-status wildlife or suitable habitat identified during the field surveys will be mapped and documented. At any point during implementation of this mitigation measure, the City may choose to redesign or modify the program element(s) to avoid direct and indirect impacts on special-status wildlife, and will not need to complete the remaining steps identified in this measure. Mitigation Measure BIO-2b: Avoid and Minimize Impacts to Special-Status Wildlife Species During Construction. The City shall attempt to avoid and minimize direct and indirect effects on special-status wildlife. The City will require the construction contractor to protect special-status wildlife and their habitats near the project site by installing environmentally sensitive area fencing around habitat features, such as seasonal wetlands, burrows, and nest trees. The environmentally sensitive area fencing or staking will be installed at a minimum distance from the edge of the resource as determined through coordination with state and federal agency biologists (CDFG and USFWS). The wildlife biologist shall consider the CDFG Staff Report on Burrowing Owl Mitigation (CDFG 1995), which includes measures for minimizing impacts to burrowing owl. The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
burrowing owl surveys conducted in July 2003 for the Elmwood Residential and Commercial Development Project EIR, twelve burrowing owls and six nesting burrows were identified in the Elmwood project area on vacant lots (City of Milpitas 2007). Burrowing owls often occur along the edges of croplands and along drainage ditches and levees where suitable habitat (burrows) occurs. Burrowing owls require short grasslands and open habitats for nesting and foraging. Construction of the Master Plan improvements may temporarily and permanently disturb the nesting of burrowing owl due to construction noise and disturbance, as well as permanent and temporary disturbance of foraging habitat. CDFG generally considers all disturbance within a 50 meters (160 feet) of an active nest to be a potential impact to burrowing owl. Construction may also affect foraging habitat for burrowing owl in the Study Area. Direct impacts may be minimized by constructing primarily along and within existing roadways, although burrows are often located along roadway embankments and on edges of drainage channels. Construction activities associated with new conveyance pipelines could potentially result in significant impacts to these species, and may also lead to a cumulative decline of the species over time. These impacts would be reduced to less than significant with the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-2c. White-tailed Kite, Pallid bat, Yuma myotis, and Great blue heron. White-tailed kite and Great blue heron nest in moderate to tall trees, typically in riparian or woodland habitats. White-tailed kite forages mainly in open habitats such as grassland and cropland. The Great blue heron may nest in dense foliage of trees and shrubs, which in the Study Area are riparian habitats; and they may forage in open habitats, similar to foraging habitat for white tailed kite. In addition, special-status bat species have a moderate potential of occurring in the Study Area. In particular, the Pallid bat and Yuma myotis could potentially roost in riparian and ornamental trees in the Study Area. In addition, these species could roost under bridges and older buildings. Given programmatic nature of this analysis, the City is unable to confirm whether individual Master Plan improvements would require the removal of trees, which could in turn result in direct impacts to special status raptor and bat species in the forma of next removal or abandonment. Construction may also permanently and temporarily affect foraging habitat for these species in the Study Area. CDFG generally considers disturbance within 500 feet of a nesting raptor to be an impact to that species. These potential impacts would be reduced to a less than significant level with the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-2c. Salt marsh harvest mouse. Salt marsh harvest mouse is a Federally and State Endangered species and is found only in saline emergent wetlands of		Mitigation Measure BIO-2c: Coordinate with Resource Agencies and Develop Appropriate Compensation Plans for Potentially Impacted State- and Federally Listed Wildlife Species. In the event that, despite implementation of Mitigation Measure BIO-2b, construction activities would result in significant impacts on state- or federally listed wildlife species, the City will develop a compensation plan in coordination with the appropriate resource agency (CDFG or USFWS), and/or follow their established compensation guidelines. Compensation guidelines have been identified for several special-status wildlife species, including burrowing owl (CDFG 1995). The amount of compensation will vary depending on the amount of habitat loss or degree of habitat disturbance anticipated. The compensation plan would involve identifying an agency-approved mitigation bank or site (on- or off-site); re-creating (burrows) or preserving habitat for special status wildlife species; monitoring the mitigation site; or funding the management of the mitigation site.	

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
San Francisco Bay and its tributaries. Pickleweed saline emergent wetland is its preferred habitat, though grasslands adjacent to pickleweed marsh are also used where new grass growth affords suitable cover in spring and summer months. There are two occurrences of salt marsh harvest mouse within the Study Area boundaries as documented in the CNDDB. With the close proximity of known occurrences and the availability of suitable habitat nearby, Master Plan related improvements within the northwestern portions of the Study Area has the potential for indirect impacts to salt marsh harvest mouse. These potential impacts would be reduced to a less than significant level with the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-2c.			
Impact BIO-3: Construction of the Master Plan improvements carries the potential to introduce or spread noxious weeds. Construction activities associated with project elements could introduce or spread noxious weeds into currently uninfested areas, possibly resulting in the degradation of habitat for special-status wildlife. Plants or seeds may be dispersed on construction equipment if the appropriate measures are not implemented. This impact is considered significant because the introduction or spread of noxious weeds could result in a substantial reduction or elimination of species diversity or abundance. Implementation of the following mitigation measures would reduce this impact to a less-than-significant level.	Potentially Significant	Mitigation Measure BIO-3a: Avoid the Dispersal of Noxious Weeds into Uninfested Areas. To avoid the introduction or spread of noxious weeds into uninfested areas, the City will incorporate the following measures into construction project plans and specifications: • Use certified, weed-free, imported erosion-control materials (or rice straw in upland areas). • Coordinate with the County Agricultural Commissioner and land management agencies to ensure that the appropriate best management practices (BMPs) are implemented. • Educate construction supervisors and managers about weed identification and the importance of controlling and preventing the spread of noxious weeds. • Clean equipment at designated wash stations after leaving noxious weed infestation areas. The noxious weed avoidance measures will be reflected in contract documents and implemented by the construction contractor.	Less Than Significant
Impact BIO-4: Implementation of the Master Plan improvements could result in the loss or disturbance of waters of the United States or State and associated riparian habitats. Construction activities associated with Master Plan Updates could potentially result in the disturbance or loss of waters of the United States. The proposed conveyance pipelines would primarily be installed within existing roadway ROWs within the Master Plan Study Area. However, several of these proposed alignments cross over or directly adjacent to creeks and drainage channels, all of which are tributary to Coyote Creek. • The proposed recycled water improvements (W-MP-6; refer to Figure 2-6) are located directly adjacent to Berryessa Creek. • Several Sewer Master Plan improvements (S-MP-1 and S-MP-11D;	Potentially Significant	Mitigation Measure BIO-4a: If Necessary, Prepare a Wetland Delineation and Obtain Clean Water Act Permits. Prior to construction of individual Master Plan improvements located adjacent to a creek or drainage channel, the City shall determine if a wetland delineation report is necessary. If determined, the City shall prepare and submit for approval a formal wetland delineation report for verification through the USACE. The City shall obtain a Section 404 permit for impacts to jurisdictional wetlands from the USACE and/or a Section 401 permit from the RWQCB and shall comply with all conditions of permits received. In association with either or both permits, compensatory mitigation for impacts to jurisdictional wetlands may be required. Mitigation Measure BIO-4b: Compensate for the Loss of Wetlands or	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
refer to Figure 2-7) are located adjacent to Penitencia Creek. • One Water Master Plan improvement (W-MP-2; refer to Figure 2-5) is located in close proximity to Penitencia Creek. Excavation, trenching, and related construction techniques would be used to install the proposed water and sewer conveyance pipelines and associated facilities. Trenchless construction techniques would be used for any creek crossings. Dewatering of trenches or smaller ditches, however, could temporarily affect riparian vegetation, depending on the length of time necessary to install the pipeline and the season of construction. This impact is considered significant because it could result in long-term degradation of a sensitive plant community, fragmentation or isolation of an important wildlife habitat, and disruption of natural wildlife movement corridors.		Riparian Habitat. If wetlands or riparian habitat is removed as part of the Master Plan Updates, the City will compensate for the loss of riparian vegetation to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (including CDFG, USFWS, USACE, and NOAA Fisheries). Compensation will be provided at a minimum 1:1 ratio (1 acre restored or created for every 1 acre removed) and may be a combination of on-site restoration/creation, off-site restoration, and mitigation credits. The City will develop and implement a restoration and monitoring plan that describes how wetlands or riparian habitat will be enhanced or re-created and monitored over a minimum period of time, as determined by the appropriate state and federal agencies. Mitigation Measure BIO-4c: Return Master Plan Improvement Sites to Pre-Construction Conditions. For open trench construction crossings across minor ditches and drainage channels (less than 15 feet in width), the following measures shall be implemented: • Implement compliance measures, described in Section 3.8, Hydrology and Water Quality for Impact HWQ-1a, to reduce indirect impacts to wetlands and other waters during open trench construction; • Conduct trenching and construction activities across drainages during low-flow (e.g. <1 to 2 cfs) or dry periods as feasible; • If working in active channels, install cofferdam upstream and downstream of stream crossing to separate construction area from flowing waterway; • Place sediment curtains upstream and downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone; • Locate spoil sites such that they do not drain directly into the drainages and/or seasonal wetlands; • Store equipment and materials away from the drainages and wetland areas. No debris will be deposited within 250 feet of the drainages and wetland areas; • Prepare and implement a revegetation plan to restore vegetation in all temporarily disturbed wetlands and other waters using native species seed mixes and container plant material that are appropriate for existing hydrological conditions. All disturbed drainages will be restored to pre-construction conditions.	

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact BIO-5: Implementation of the Master Plan improvements could conflict with local policies or ordinances adopted for the purpose of protecting biological resources. Construction activities associated with project elements could potentially result in conflicts with local policies or ordinances (listed above under Regulatory Context) that protect locally significant biological resources. However, when Master Plan Update improvements are implemented, the City would also implement Mitigation Measures BIO-1a, 1b, 2a, 2b, 2c, 3a, 4a, 4b and 4a to avoid or minimize potential impacts from construction and operation activities. Consequently, this impact is considered less than significant.	Less Than Significant	No mitigation measures are required.	Less Than Significant
3.5 Cultural Resources			
Impact CR-1: Implementation of the Master Plan improvements would not result in the disturbance or destruction of documented historical and archaeological resources. No pedestrian surveys were conducted to identify cultural resources as part of this EIR. The records search conducted for the TASP EIR indicated only one historic property with the Study Area: 459 Great Mall Drive (FCC060215F), the Great Mall of the Bay Area Building, formerly the Old Ford Motor Assembly Plant. The City has also identified 13 cultural resources sites which could potentially be affected directly or indirectly by the construction of water and sewer facilities. Construction of Master Plan Update improvements would include ground-disturbing activities, such as excavation, clearing, and grading. These ground-disturbing activities may result in direct impacts to historical resources if they are present. However, due to their construction within previously-disturbed roadway ROWs, construction of the proposed pipelines are unlikely to affect existing cultural resources. Additionally, selection of the exact site for the proposed storage tank and pump station would exempt any cultural resource site from consideration. Construction of the Master Plan Update improvements would not directly or indirectly impact any known cultural or historical resource site within the Study Area. This impact is considered less-than-significant. No mitigation is required.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact CR-2: Construction of the Master Plan improvements could result in potential impacts to undocumented archeological and paleontological resources or human remains. Although no documented cultural resources are identified adjacent to the Master Plan improvements, it is possible that buried archaeological or paleontological materials are present. Disturbance or destruction of these resources may result from ground-disturbing activities associated with construction of any one of the Master Plan improvements. Likewise, undocumented human remains or burial sites could be encountered during individual project construction. This impact could be potentially significant, however, with the implementation of the following mitigation, this impact would be reduced to a less-than-significant level.	Potentially Significant	Mitigation Measure CR-2: Stop Work in Case of Accidental Discovery of Buried Archeological or Paleontological Resources. If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, human bone, or fossils, are inadvertently discovered during ground-disturbing activities, the program contractors will stop work within 100 feet of the find until a qualified archaeologist and/or paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City and other appropriate agencies. If human remains of Native American origin are discovered during project construction, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Pub. Res. Code Sec. 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, the program contractors will conduct no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: • the coroner of the county has been informed and has determined that no investigation of the cause of death is required; and • if the remains are of Native American origin, o the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or o the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission. According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. The above provisions will be included in contract documents.	Less Than Significant
3.6 Geology And Soils			

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact GS-1: The Master Plan Update improvements could be subjected to hazards associated with earthquakes and the secondary effects of ground motion. Pipelines, above-ground facilities, and associated facilities constructed in conjunction with the Master Plan improvement projects could be subjected to significant ground motion associated with at least one major earthquake throughout their operational life. Ground failure or differential settlement along pipeline alignments could cause misalignment of the pipeline and result in failure of a coupling joint. The disruption of water supply service through a pipeline breakage, a critical public infrastructure facility, would represent a potentially significant impact. Likewise, the disruption of sanitary sewer facilities through a pipeline breakage could result in the discharge of untreated, wastewater into local drainage facilities and creeks. These types of impacts would generally be mitigated through the use of densification techniques, such as dynamic compaction or through the use of stone columns, vertical anchors (tension piles), sub-surfacing in a shallow trench, or thick-walled ductile-steel pipe during construction. However, without site-specific geotechnical information and interpretation, the City is unable to accurately pinpoint where these types of techniques would be required. As a result, the implementation of Mitigation Measure 3.5-1 would be required to minimize the risks associated with strong ground motion and secondary geologic hazards to a less than significant level. In addition to the water and sewer pipelines, the proposed storage tank could experience at least one major earthquake during the operational life of the facility. Ground failure due to ground motion could result in damage to below- and above-ground storage structures, thereby potentially disrupting water services to portions of the City. Seismic design consistent with current professional engineering and industry standards would be used in construction for resistance to strong ground motion, especially for lateral forces. The implementation of the seismic design criteria as required by the CBC and City's Municipal Code would reduce the potential for structural failure, major structural damage, and reduce the primary effects of ground motion on structures, and infrastructures to an acceptable level of risk. Additional requirements, recommended by a Certified Engineering Geologist or Geotechnical Engineer, would also be incorporated into the storage tank's design. Accurate prediction of seismic events is not possible, nor can site-specific design entirely eliminate the potential for injury and damage that could occur during a seismic event. Nonetheless, conformance with City geotechnical and building code requirements and incorporation of Mitigation Measures GS-1a and GS-1b would reduce potential impacts related to regional seismicity and secondary geologic hazards to a less than significant level.	Potentially Significant	Mitigation Measure GS-1a: Prepare Geotechnical Report(s) for Individual Water and Sewer Master Plan Improvement Projects. The City or Developer shall require that facility design for all Water and Sewer Master Plan facilities comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer. These recommendations will be based on the anticipated PGA for each project-improvement identified in the Water and Sewer Master Plans In instances where conflicting PGA values are obtained, the City will apply the greater of the two values to ensure maximum structural integrity. Design recommendations provided in the geotechnical report will demonstrate compliance with applicable 2000 UBC and 2001 CBC requirements for structures located in seismic risk zone 4. Mitigation Measure GS-1b: Incorporate Pipeline Failure Contingency Measures. The City or Devloper shall require that isolation valves or similar devices be incorporated into all pipeline facilities to prevent significant losses of potable water and/or untreated-wastewater in event of pipeline rupture. The specifications of the isolation valves will conform to the UBC, AWWA, and City standards.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact GS-2: Construction of the Master Plan improvements could result in substantial soil erosion and loss of topsoil. Construction of the various Master Plan improvements could expose bare soil to precipitation and wind erosion, thereby potentially resulting in increased sedimentation of local waterways. Ground-disturbing activities, including removal of vegetation, could cause increased water runoff rates and concentrated flows, thereby potentially leading to accelerated erosion. In addition, by virtue that the City is crossed by several creeks, construction activities could occur in close-proximity to local waterways and result in adverse effects to water quality and aquatic habitat if proper erosion control measures are not implemented. Dewatering operations utilized during pipeline installation and the installation of sub-grade structures associated with the storage tank(s) also carries the potential for increased sedimentation of local waterways. This impact is considered potentially significant without mitigation.	Potentially Significant	Mitigation Measure HWQ-1a: Implement NPDES Permit Measures, including Development and Implementation of a SWPPP Mitigation Measure HWQ-1b: Provisions for Dewatering and Hydrostatic Test Water Mitigation Measure HWQ-2b: Dry-Season Construction	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact GS-3: The Master Plan improvements could be located on an instable geologic unit, thereby subjecting new facilities to potential geologic hazards. Based on the discussions provided for geologic hazards above, the primary local geologic hazards are related to the secondary effects of earthquakes and include seismically-induced ground failure, such as liquefaction, and differential settlement. Water and sewer pipelines may be underlain by loose alluvium, especially those in close proximity to creeks and areas underlain by recent alluvium. The potential for collapse of the underlying materials under seismic conditions or gradual settlement under non-seismic conditions is possible, given the potential for shallow groundwater and varying distribution of alluvial material. Settlement could potentially occur from the placement of new static loads with possibly half of the settlement taking place during construction or shortly thereafter. Differential settlement could occur between foundation blocks and/or slabs due to variability in underlying soil conditions. Total and differential settlement could therefore damage proposed foundations, structures, and pipelines. The implementation of Mitigation Measures GS-1a and GS-1b would reduce this impact to less than significant.	Potentially Significant	Mitigation Measure GS-1a: Prepare Geotechnical Report(s) for Individual Water and Sewer Master Plan Improvement Projects Mitigation Measure GS-1b: Incorporate Pipeline Failure Contingency Measures	Less Than Significant
Impact GS-4: Construction of the Master Plan improvements could encounter expansive and/or corrosive soil materials, thereby subjecting new facilities to risks of structural failure. Soils with high potential for shrink swell may be found at various locations throughout the City. Unless properly mitigated, shrink-swell soils could exert additional pressure on buried pipelines producing shrinkage cracks that would allow water infiltration and compromise the integrity of backfill material. Depending on the depth of the buried pipeline, soil expansion or contraction could lead to undue lateral pipeline stress and stress of structural joints. Over time, lateral stresses could lead to pipeline rupture or leaks in the coupling joints. However, standard engineering practices dictate that expansive soil materials would be identified and replaced by non-expansive engineered fill material. These practices would be conducted under the supervision of a licensed geotechnical or civil engineer. As indicated above, soil materials encountered within the Study Area may have high electrical conductivities, thereby introducing the potential for corrosion. Corrosive soil materials could lead to pipe corrosion, potentially resulting in pipe failure and localized surface flooding of water or wastewater, and/or localized settlement of surface soils in the location of the failure. This impact would be reduced to a less than significant level with the implementation of Mitigation Measure GS-4.	Potentially Significant	Mitigation Measure GS-4: Install Corrosion Protection Measures. As appropriate, the City shall install a cathodic protection system for all underground metallic fittings, appurtenances, and piping to protect these facilities from corrosion. The cathodic protection system shall be designed consistent with City standards.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
3.7 Public Health And Hazards			
Impact HAZ-1: Construction of the Master Plan improvements could result in significant hazards to the public or environment through the accidents involving the release of hazardous materials and/or substances. Proposed facilities developed as part of the Master Plan Updates include buried pipelines, turnouts, valves, and an above-ground storage tank and pump station. Potentially toxic substances such as fuels, oils, and lubricants would be used during construction of proposed facilities. These materials would generally be used for excavation equipment, generators, and other construction equipment and would be contained within vessels engineered for safe storage. These materials could be stored at the construction site for the storage tank and pump station; however, for pipeline construction, storage of significant quantities of these materials at the construction sites is not expected given the continual shifting of trenching activities. Instead, support vehicles would most likely provide fuel and lubricant to construction equipment on a daily basis and would be mobilized from an offsite location. Accidental releases of these substances, such as spills during onsite fueling of equipment or an upset condition associated with puncture of a fuel tank through operator error, have the potential to expose workers and the public to contamination. In addition, where construction activities are adjacent to a waterway, accidental release of these materials could degrade water quality. Operation of the underground components of the Master Plan Updates (i.e., pipelines, valves, and turnouts) would not require the use of any hazardous materials. The proposed storage tank and pump station, however, would be equipped with emergency standby generators. Diesel, contained within vessels engineered for safe storage, would be required for operation of the generators. Because the generators would be operated for short periods during weekly testing and during emergencies, only minor amounts of hazardous materials would likely be stored onsite. Additionally, because these generators would be operated for a shortly duration during regular testing, high-frequency, routine transport or use of this material would not be required. The potential for exposure of workers and the public to hazardous materials from accidental spills would be temporary, lasting through the construction period only. To ensure that potential impacts would be reduced to less than significant levels from accidental events, Mitigation Measure HAZ-1 would be required.	Potentially Significant	Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities. The City's or Developer's construction contractor will develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities. The SPCCP will be prepared consistent with the requirements of the City's NPDES Permit and Hazardous Materials program before any construction activities begin. If a spill of petroleum products is reportable (per 40 CFR 110), the contractor's superintendent will notify the City and take action to contact the appropriate safety and cleanup crews to implement the SPCCP. A written description of reportable releases must be submitted to the San Francisco Bay RWQCB. The program contractor will select and implement measures to control contamination, with a performance standard that surface and/or groundwater quality must be returned to baseline conditions. These measures will be subject to review by the City. The City will review the SPCCP before onset of construction activities as required. The City will routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The City will notify its contractors immediately if there is a noncompliance issue and will require compliance.	Less Than Significant
Impact HAZ-2: Construction of the Master Plan improvements could expose workers and the public to hazards associated with the accidental	Potentially Significant	Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
discovery of undocumented soil and/or groundwater contamination. Proposed Master Plan Update projects would occur at or near commercial and industrial sites or other uses where chemicals have been used or released. Sites with historical or current contamination are identified in Appendix C. Construction of proposed conveyance and above-ground facilities would involve excavation and grading activities, which could encounter documented and unreported contaminated soils and groundwater during excavation activities. Encountered, contaminated materials may be classified as a hazardous waste, a designated waste, or a special waste, depending on the type and degree of contamination. If hazardous substances were encountered during construction of the proposed project and if materials were improperly managed or disposed, workers and the public would be potentially exposed to contaminated materials. The degree of any public health impact associated with the hazardous substances would depend on the nature and extent of any hazardous substances encountered and the subsequent handling and management of those materials. To reduce potential safety hazards to workers and the public to a less-than-significant level, Mitigation Measures HAZ-1, HAZ-2a, and HAZ-2b would be implemented.		See above. Mitigation Measure HAZ-2a: Conduct Phase 1 Site Assessment(s) for Master Plan Improvements that Deviate from Existing Roadway ROW. Prior to construction, the City may conduct a Phase 1 Environmental Site Assessment according to ASTM protocol for portions of individual Master Plan improvements that deviate from existing roadway ROW, as warranted. If any hazardous materials or waste sites are identified during the Phase 1, the City shall implement Mitigation Measure HAZ-2b. Mitigation Measures HAZ-2b: Develop Remediation Plan(s), As Necessary. If determined necessary, to mitigate for potential hazards resulting from disturbance of existing contaminated areas, the extent of contamination from hazardous materials sites within or adjacent to individual Master Plan improvements shall be delineated during final design. Disturbance to contaminated areas during individual project construction shall be avoided, or any work done within contaminated areas shall be undertaken in compliance with standards approved by the DTSC or the County DEH to ensure that hazardous materials will not be released as a result of the ground disturbance. Additionally, if unidentified contaminated soil and/or groundwater are encountered, or if suspected contamination is encountered during any construction activities, work shall be halted in the area of potential exposure, and the type and extent of contamination shall be identified. A qualified professional, in consultation with appropriate regulatory agencies, will then develop and implement a plan to remediate the contamination and properly dispose of the contaminated material.	
Impact HAZ-3: Construction of the Master Plan improvements could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The City maintains a Multi-Hazard Emergency Plan to deal with natural or man-made disasters. Conveyance improvements along public ROWs could potentially interfere with implementation of the Emergency Plan. The restriction of road width may slow down emergency response service providers. However, in most instances, construction equipment could be moved relatively quickly to facilitate the necessary emergency vehicle movements. Additionally, horizontal drilling or jack-and-bore methods would be implemented at busy intersections, thereby reducing potential impacts associated with interference with emergency response. Staging of equipment and soils and construction of the storage tank and pump station or	Potentially Significant	Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
groundwater well would not be expected to interfere with the Emergency Plan as it would occur within private parcels away from public access. Due to the temporary nature of construction activities along ROWs and the continual shifting of such activities, impacts would be reduced. Planning and notification for continual emergency access in Mitigation Measure TR-1 in Section 3.11, Transportation would further reduce the impact to a less-than-significant level. No long-term interference with the City's emergency response plan are expected associated with operation of the proposed facilities, as the underground components would be buried and above-ground surfaces would be located on private parcels away from public access. As such, no impacts on emergency response would occur associated with these components.			
Impact HAZ-4: Construction of the Master Plan improvements could expose people and/or structures to risks involving wildland fires. The majority of the Master Plan Update improvement projects are located within urbanized areas along public ROWs. These areas are generally devoid of the dried vegetation unlike the foothill landscape east of Evans Road / Piedmont Road and, therefore, the corresponding risk of wildland fire is considered low. Given that a majority of the land area within the Study Area is urbanized, the presence of paved surfaces and existing structures substantially reduces the risk of construction equipment accidentally igniting surrounding vegetation. Further, the Master Plan improvements would not result in the placement of new habitable structures within an area at high risk of experiencing wildfires. Based on these considerations, the Master Plan Updates are not expected to substantially increase the threat of wildfire within the Study Area and this impact is considered less than significant.	Less than Significant	No mitigation measures required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact HAZ-5: The Master Plan Updates may result in hazardous emissions or handling of hazardous materials within one-quarter mile of an existing or proposed school. Children are sensitive receptors for inhalation or ingestion of hazardous materials due to their smaller body size and underdeveloped nervous systems. Assessment of the proximity of local schools to the proposed Master Plan Update projects is necessary to ensure that human health risks are not exacerbated in these areas. Several public and private schools are located within one-quarter mile of proposed Master Plan Update projects, as shown in Table 3.7-1 below. Potential for accidental release of hazardous materials or emissions during construction near schools would be reduced through implementation of Mitigation Measure HAZ-1, above. As further described in Impact HAZ-1 above, conveyance improvements would not require the use of any hazardous materials during operational activities. As such, these individual projects would not emit or require the handling of hazardous materials. Operation of the conveyance improvements would not result in any safety impacts to the public at nearby schools. The proposed storage tank and pump station (W-MP-5), however, may be located within one-quarter mile of a school. As described in Impact HAZ-1 above, diesel for operation of the pump station would be used during emergencies only. The City intends to store minor amounts of diesel onsite within vessels engineered for safe storage, and does not expect to engage in routine transport or use of this material. Because of the limited use of diesel, emissions associated with its use would constitute a less than significant impact on school children.	Potentially Significant	**Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities**	Less Than Significant
3.8 Hydrology And Water Quality			
Impact HWQ-1: Runoff generated by Master Plan construction could exceed water quality standards due to erosion, sedimentation, and potential for release of hazardous materials. Construction of the various program facilities would require grading, soil stockpiling, and excavation, along with disturbances of soils and vegetation. Construction would take place periodically and, therefore, has the potential to expose bare soils during the winter rainfall period. Bare soils are much more likely to erode than vegetated areas due to the lack of dispersion, infiltration, and retention created by covering vegetation. The extent of impact is dependent on soil erosion potential, type of construction practice, extent of disturbed area, timing of precipitation events, and topography and proximity to drainage channels. Storm events during construction activities could also cause transport of other construction-related contaminants (e.g., fuels, oil,	Potentially Significant	**Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities .** **Mitigation Measure HWQ-1a: Implement NPDES Permit Measures, including Development and Implementation of a SWPPP.** Prior to the onset of construction activities on sites of one acre or more, the City's or Developer's contractor shall obtain coverage under the NPDES General Construction Permit. The City will be responsible for ensuring that construction activities comply with the conditions in the 2009 Amended General Construction Permit through the preparation of a SWPPP or, if determined appropriate, a Rainfall Erosivity Waiver. Individual improvement projects eligible for a Rainfall Erosivity Waiver must demonstrate that the rainfall erosivity factor will be less than five throughout the duration of construction. Improvement projects qualifying for the Rainfall Erosivity	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
concrete, paint) to nearby receiving waters thereby impairing water quality and potentially affecting aquatic organisms and their associated habitats. Discharge of construction-related dewatering effluent could also result in the release of contaminants to surface water. In addition, short-term water quality impacts are possible, such as local changes in turbidity and possibly changes in dissolved oxygen. Construction-related erosion, sedimentation, and release of hazardous materials are considered potentially significant impacts. Due to the presence of shallow groundwater within the City, trenching and trenchless construction activities associated with pipeline installation could encounter the water table, through which it would immediately and directly become available for contaminants to enter the groundwater system. Similarly, if construction is initiated in an area with direct contact with surface water, then the potential for contaminants to enter the surface water system increases. During trenchless construction, dewatering would be necessary to remove water from tunnel, launching, and receiving pits. It is not known how much water would be withdrawn because the volume would be influenced by the local shallow aquifer character, the depth of excavation, and the duration that subsurface work is conducted. Groundwater withdrawn from the construction areas would be subsequently discharged to local waterways or drainage ditches, or via land application. These discharges may contain sediments, dissolved solids, salts, and other water quality contaminants found in the shallow groundwater, which could degrade the quality of receiving waters. Degradation of local receiving waters from the introduction of shallow groundwater during construction dewatering could result in a significant impact to receiving waters. Trenchless construction activities may require the use a mixture of bentonite (an inert clay) and petroleum as a lubricant for the drilling mechanism. Drilling near the ground surface or close to the bed of a surface water body introduces the potential for an unplanned “frac-out ,” in which the pressure of the bentonite or other drilling lubricant generates a surface rupture, causing a release of bentonite to the ground surface or water column. Although bentonite is not toxic, it can smother aquatic habitat and increase turbidity and suspended sediments in the water column. Water quality degradation due to trenching and excavation activities are considered potentially significant impacts.		Waiver will be required to implement minimum BMPs consistent with City standards. All other Master Plan improvement projects will require the preparation of a SWPPP. At minimum, the SWPPP shall be prepared by a Qualified SWPPP Practitioner (QSP), identify site-appropriate soil stabilization and sediment control BMPs, and include a monitoring component that is consistent with the individual project’s Risk Level or LUP Type. Based on the types of activities anticipated over the duration of the implementation of the Master Plan updates, SWPPPs for individual improvement projects shall include BMPs that cover the following: • ensure implementation of good site management (i.e.,"housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. Special consideration shall be given to vehicle storage and maintenance, landscaping, waste management, and construction materials or equipment that are not designed to be outdoors and exposed to environmental conditions; • provide effective soil cover for inactive construction areas that could contribute sediment to waterways; • enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways; • establish and maintain effective perimeter controls, as needed, to sufficiently control sediment discharges from the site. This will be done by using a combination of one or more of the following: berms, silt fencing, straw bales or wattles, plastic sheeting or geofabric, silt/sediment traps and catch basins, sand bag dikes, temporary vegetation or other groundcover, or other control measures consistent with City standards; • ensure that no earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water; • ensure that dewatering activities shall be conducted according to the provisions of the SWPPP. No dewatered materials shall be placed in local water bodies or in storm drains leading to such bodies without implementation of proper construction water quality control measures; • effectively manage all run-on, all runoff within the site and all runoff that discharges off the site using BMPs consistent with City standards; and • ensure that grass or other vegetative cover will be established on non-paved portions of the construction site as soon as possible after	

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		disturbance. As required by the Amendment General Construction Permit, in situations where the improvements will occur across several properties, the City will be responsible for obtaining coverage under the General Permit. The City shall ensure that a QSP prepares each SWPPP specific to the individual improvements included in the Master Plan Updates as determined necessary by the City. The City shall review and approve the BMPs proposed in the SWPPP to ensure consistency with the City's standards and specifications. The City will ensure that the SWPPP and NOI are filed with the San Francisco Bay RWQCB prior to the start of construction. A QSP with the City or its agent will perform routine inspections of the construction area to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The City or its agent will notify the project contractor(s) if there is a noncompliance issue and will require immediate corrective action. Mitigation Measure HWQ-1b: Implement Provisions for Dewatering and Hydrostatic Test Water. Before discharging any substance that could reach surface waters, the City's or Developer's construction contractor shall develop a plan for the disposal of dewatering or hydrostatic discharge in accordance with the requirements of the City and San Francisco Bay RWQCB. Depending on the volume and characteristics of the discharge, coverage under the RWQCB's General Construction Permit or General Dewatering Permit (R2-2007-0033) is possible. As part of the plan, the contractor will design and implement measures as necessary so that the discharge limits identified in the relevant permit are met. If it is determined that neither of these permits apply, the contractor will be required to implement control measures for conditionally exempt discharges from uncontaminated groundwater pumping as outlined in the SCVURPPP's WUDPPP. A range of potential BMPs is provided in Appendix E. Final selection of water quality control measures will be subject to review by the City of Milpitas. Mitigation Measure HWQ-1c: Use Trenchless Technology. Where conveyance pipelines cross water bodies, the City will require its construction contractor to use trenchless technology (microtunneling or jack-and-bore), where feasible. Frac-out plans as described in Mitigation Measure HWQ-1d shall be implemented as necessary. Mitigation Measure HWQ-1d: Develop and Implement a Frac-Out Contingency Plan for HDD and Jack and Bore Activities. For tunneling activities that use drilling lubricants (e.g., construction of pipelines using jack-and-bore methods), the City's or Developer's construction contractor will prepare and implement a Frac-Out Contingency Plan. The purpose of the plan will be to minimize the potential for a frac-out	

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		associated with tunneling activities, provide for the timely detection of frac-outs, and ensure an organized, timely, and "minimum-impact" response in the event of a frac-out and release of drilling lubricant (i.e., bentonite). Preparation and implementation of a Frac-Out Contingency Plan will be reflected in contract documents. Mitigation Measure HWQ-1e: Dry-Season Construction Where Mitigation Measure HWQ-1c is not feasible, and flows in the water body (or area) are seasonal, construction shall be conducted during the dry season. The program site will be restored prior to the onset of the rainy season to minimize the potential for erosion. This proposed mitigation is subject to additional conditions as a result of negotiations of the required permits from USACE, CDFG, and the San Francisco Bay RWQCB.	
Impact HWQ-2: Process discharge water generated during the operation of conveyance pipelines and storage tank facilities could impact surface waters. Pipelines may include blow-offs and other appurtenances that would result in the periodic release of potable water to surface waters. In addition, discharge of potable water associated with periodic maintenance of conveyance pipelines, storage tank, and pump stations may also be required. Impacts could include reductions in water quality where the water released is of lower quality than ambient conditions. This impact is potentially significant, but implementation of Mitigation Measure HWQ-2 would reduce the impact to a less than significant level.	Potentially Significant	Mitigation Measure HWQ-2: Implement BMPs Contained in the SCVURPPP's Water Utility Operation and Discharge Pollution Prevention Plan. For operational discharges, the City will select and implement appropriate BMPs as identified in the SCVURPPP's WUDPPP. Appendix E of this EIR contains a range of acceptable BMPs for both potable water and sewer collection facilities.	Less Than Significant
Impact HWQ-3: The Master Plan Updates could generate increased surface runoff and associated impacts to water quality, drainage facilities, and groundwater recharge. Due to their location within roadway ROWs, construction of a majority of the Master Plan conveyance pipelines and associated underground facilities would not alter the surface infiltration characteristics of the Study Area. However, the new aboveground facilities (storage tank and pump station) would involve a small amount of new impervious surface, which could increase the amount of surface runoff, convey NPS contaminants to surface waters during storm events, and reduce the ability of precipitation to infiltrate and recharge groundwater. Additional runoff could contribute to localized flooding with local waterways, accelerate soil erosion and stream channel scour, and provide a more lucrative means of transport for pollutants to enter waterways. However, the amount of additional impervious surface is anticipated to be relatively small, less than 3 acres, such that water quality, drainage capacity, and groundwater recharge impacts could be mitigated.	Potentially Significant	Mitigation Measure HWQ-3: Design Drainage Facilities for the Storage Tank and Pump Station In Accordance with City Standards. The City shall design the proposed storage tank and associated facilities in accordance with City design standards and the City's NPDES permit for drainage to maintain runoff during peak conditions to pre-construction discharge levels.	Less Than Significant
Impact HWQ-4: Some Master Plan improvements could involve the placement of structures within a 100-year Flood Hazard Area, which	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
could impede or redirect flood flows. Construction of several of the Master Plan Update improvements would occur within the 100-year Flood Zone and 500-year Flood Zone, as defined by FEMA. Due to their location within roadway ROWs, however, construction of the Master Plan conveyance pipelines and associated underground facilities would not impede or redirect flood flows. Small segments of the new conveyance pipelines may require the crossing of local floodways. These crossings would be completed using in-channel or trenchless construction techniques and would be installed at sufficient depth below existing and/or planned flood control facilities and placed in suitable bedding materials. Additionally, construction of these facilities would generally be restricted to the summer months based on current environmental regulations and be of limited duration, and, therefore unlikely to expose workers to significant risk of injury or death as a result of flooding. In addition to conveyance facilities, the new aboveground facilities (storage tank and pump station) would be located within a Special Flood Hazard Area, thereby creating the potential to contribute to and/or redirect flood flows. However, these facilities would be subject to standards specified in the City of Milpitas Municipal Code (Standards for Utilities, Section XI-15-5.2) and the City's Floodplain Regulations. Compliance with these existing requirements would minimize any related hazard and therefore, this impact is considered less than significant.			
Impact HWQ-5: Effects of global climate change on hydrology and flooding in the Study Area are unknown. Global climate change could result in changes in the timing, amount, and form of precipitation both within the Bay Area and in Sierra Nevada, where SFPUC's Hetch Hetchy System originates. Global climate change could also result in changes in runoff timing and volume from the Sierra snowpack. More intense and/or frequent precipitation in the Bay Area could lead to changes in local reservoir operations in order to prevent flooding hazards. Additionally, global climate change will likely produce a rise in sea level, including high tides in San Francisco Bay. Higher water levels in San Francisco Bay could lead to seiche and other flooding hazards in low-lying areas of the City. High volume flood flows within Coyote Creek and its tributaries could potentially exacerbate existing flooding in the Special Flood Hazard Zones. However, it is not possible to accurately estimate the specific changes to flood flows and the duration over which these changes may occur because of climate change. For this reason, potential impacts are considered speculative and level of significance cannot be determined.	Less Than Significant	No mitigation measures are required.	Less Than Significant
3.9 Planning And Land Use			

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact LU-1: The Master Plan improvements could result in disruptions or division of an established community during construction activities. Construction of Master Plan Update improvements would not physically divide an established community, but would temporarily disrupt existing land uses. Land uses adjacent to the proposed Master Plan improvements include regional commercial, manufacturing and warehousing, single family and multi-family residential, mixed use, and mobile home park. Construction would occur primarily within or adjacent to established roadway ROWs and could temporarily disrupt neighborhood circulation and access. The SCVWD Zone Storage Project (W-MP-5) project would be installed outside of the City ROW; however, an exact location has not been determined at this time and will require additional engineering. Potential direct and indirect impacts on land uses from construction-related traffic delays, public safety hazards, visual disruption, air emissions, and noise are addressed in other chapters of this document. Because construction is a short-term activity, however, disruption of existing neighborhoods and access routes within the City would be temporary during construction of program elements. Additionally, construction activity would move along the pipeline route, therefore shifting short-term disruptions. The range of improvements proposed as part of the Master Plan Updates, including a water storage tank, wastewater collection pipelines, and water distribution pipelines, would represent a minimal change in existing land uses. Surface features that would be visible above grade may include utility boxes, water appurtenances, sewer manholes, water storage tanks, and associated booster pumps. These elements would generally not conflict with the density, scale, and character of the existing land uses currently within the Study Area. Furthermore, the Master Plan Updates would be compatible with the future nearby land uses anticipated under the General Plan and TASP. Construction of the improvements would not preclude the existing land uses on surrounding properties, nor future development of surrounding parcels for urban (re)development. In order to mitigate disruption of existing land uses during the construction period, Mitigation Measure LU-1 shall be implemented. With implementation of public outreach, this impact would be less than significant.	Potentially Significant	Mitigation Measure LU-1: Public Outreach and Advance Construction Noticing. The City or Developer, in cooperation with its construction contractor, shall provide a phone number and community contact for inquiries about the Master Plan Update construction schedule throughout the construction period. This information will be posted in a local newspaper and at City Hall and will be updated on a monthly basis for individual projects. The City or Developer shall also require its construction contractor to provide a minimum 2-week advance notice of the construction activities schedule to the affected community members within 100 feet of construction areas (e.g., residences, property owners, business owners, and public facility operators), including the posting of signs. These conditions shall be included in contract documents.	Less Than Significant
Impact LU-2: The Master Plan improvements could conflict with applicable land use plans, policies, and/or regulations. The Master Plan Update improvements do not conflict with the goals, policies, and objectives of the City's General Plan. The proposed Master Plan Update improvements would ensure construction of adequate wastewater collection, water distribution mains, and water storage tanks to provide consistent and reliable water supply and wastewater collection to the existing community. The Master Plan Updates implement General Plan Policy 2.d-I-2: Periodically	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
update the City's water and sewer master plans. Construction of the Master Plan Update improvements, generally within ROWs, would comply with existing land use designations for the sites; in addition, construction activities would be temporary and the sites would be restored to pre-construction conditions once construction is completed. Construction of Master Plan Update improvements would not require amendments to the General Plan or conflict with policies adopted for the purposes of avoiding and/or mitigating significant environmental effects.			
Impact LU-3: The Master Plan improvements would not impede the achievement of environmental justice for low-income and minority communities. Based on mapping of environmental justice communities within the region conducted by the Metropolitan Transportation Commission (2001), a majority of the proposed Master Plan Update conveyance pipelines and the storage tank are located within "minority population" zones. Analysis of construction and operational impacts in all other disciplines (i.e., air quality, noise, traffic) is presented in the other sections of Chapter 3, Environmental Analysis. Mitigation measures are presented in each section to ensure that construction and operational impacts would be reduced to less than significant levels. In addition, the improvements associated with the Master Plan Updates would typically provide long-term benefits to the areas in which they are located. Therefore, identified minority population zones would not be disproportionately affected in an adverse way by the Master Plan Update improvements and environmental justice related impacts would be less than significant.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
3.10 Noise			
Impact NOI-1: Construction of the Master Plan improvements could result in noise levels in excess of established standards during construction. Construction of the Master Plan Update improvements would occur primarily in roadway ROWs, with the exception of the storage tank site. Construction activities would generally involve excavation, concrete removal, earth movement, stockpiling, trenching activities, and truck hauling. These construction activities would generate temporary and intermittent noise at and near the conveyance pipeline alignments and storage tank site during construction. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. In addition, construction-related material haul trips would raise ambient noise levels along haul routes depending on the number of haul trips and the types of vehicles used. Table 3.10 3 shows typical noise levels produced by various types of construction equipment at a distance of 50 feet. As shown, noise levels from the loudest pieces of construction equipment could approach 89 dBA at distances as short as 50 feet. In addition to pipeline installation, staging areas will be located at various points along the construction route. These areas would be used to store pipe, equipment, and other construction-related material. In some cases, staging areas will be used for the duration of the project construction. In other cases, the area will be moved along the route to minimize the hauling distances and avoid disrupting any one area for an extended period of time. Potential staging areas include vacant private and public land, parking lots, and segments of closed traffic lanes. The City, or its contractor, would make short-term arrangements for the use of staging areas. These staging areas could be considerable sources of noise. Based on the noise levels provided in Table 3.10 3 and assuming a conservative attention rate of 4.5 dBA per doubling distance, noises levels during construction could range from 75.5 to over 80 dBA at 200 feet from the nearest sensitive receptor locations depending on the types of equipment in operation. Sensitive receptors within closer proximity could be subjected to even higher noise levels. Additionally, back-up beepers associated with trucks and equipment used for material loading and unloading at the staging area would generate significantly increased noise levels over the ambient noise environment in order to be discernable and protect construction worker safety as required by OSHA (29 CFR 1926.601 and 29 CFR 1926.602). Because existing daytime noise levels in the vicinity of the conveyance pipeline alignments are assumed to range from 60 to 70 dBA (based on noise	Potentially Significant	Mitigation Measure NOI-1a: Comply with Noise Abatement Ordinance. The City or Developer will require all construction contractors to comply with the City's Noise Abatement Ordinance. Construction shall not be allowed in all zoning districts between 7 PM and 7 AM. Exemptions to these working hours will require the approval of the City engineer and are allowed per Section V-213-3.03(c) of the City's Municipal Code. Mitigation Measure NOI-1b: Employ Noise-Reducing Construction Practices. The City or Developer will require its construction contractor to identify and employ noise-reducing construction practices. This provision will be reflected in contract documents. Measures that may be used to limit noise include, but are not limited to: • locating equipment as far a practical from noise sensitive uses, • using mufflers on all standard equipment, • selecting haul routes that affect the fewest number of people, • using noise-reducing enclosures around noise-generating equipment, • constructing barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (terrain, structures) to block sound transmission, and • enclosing equipment. Mitigation Measure NOI-1c: Disseminate Essential Information to Residences and Implement a Complaint/Response Tracking Program. The City or Developer shall require the construction contractor to notify all residents and businesses within 500 feet of construction areas of the construction schedule in writing a minimum of two weeks prior to ground-breaking. The construction contractor will designate a Noise Complaint Coordinator who will be responsible for responding to complaints regarding construction noise. The Coordinator will determine the cause of the complaint and will ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the Noise Complaint Coordinator will be conspicuously posted on construction site fences or barriers, where possible, and will be included in the written notification of the construction schedule sent to nearby residents. This provision will be reflected in contract documents.	Significant And Unavoidable (Only in limited circumstances)

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
monitoring conducted for the TASP EIR), daytime construction work associated with the Master Plan Updates would significantly affect the noise environment of structures in close proximity to construction activities by increasing ambient noise levels by five dBA or more. Few of the proposed pipeline alignments would affect residential receptors; a majority of the proposed improvements are located along arterial roadways in commercial or industrial areas. However, retired persons, people who work at home, and people caring for their children in their homes could be significantly affected by noise should construction activities occur in the immediate vicinity. The exposure of individual sensitive receptors to elevated noise levels would be contingent on the types of equipment in use and the duration of use. For example, pipeline construction per the Master Plan Updates would progress at rate of 50 to 100 feet a day and, therefore, no one particular receptor along the pipeline would be subjected to elevated noise for more than a couple of days. Construction activities associated with the Master Plan Updates would therefore be temporary in nature and related noise impacts would be short-term. However, in instances where trenchless construction techniques are required, localized activities could last upwards of several weeks. Likewise, the construction of the storage facilities could take several months. Since pipeline and other construction activities could substantially increase ambient noise levels, with potential intermittent noise levels exceeding 80 dBA, construction noise could exceed established thresholds (e. g. greater than 5 dBA) and result in potentially significant impacts to sensitive receptors in close proximity to construction.			
Impact NOI-2: Construction of Master Plan Update improvements could result in the excessive groundborne vibration. Construction activities associated with the Master Plan Updates would result in groundborne vibration, with the primary sources including installation of conveyance pipelines, using open-cut techniques or trenchless construction. In addressing the range of potential issues associated with ground-vibration, there are generally two forms of impacts that should be addressed: (1) annoyance to individuals or the community; and (2) damage to buildings. It is anticipated that installation of conveyance pipelines would require a backhoe or other trenching equipment, while trenchless construction activities would require a trencher and boring machine. Vibration from these typical construction activities is typically below the threshold of perception when the activity is more than about 50 feet from the receiver. Given that construction activities are not expected to encroach within 50 feet of existing structures, the level of annoyance from construction-related vibration at potential receptor locations would be unnoticeable especially in relation to the noise from construction equipment as described in Impact 3.10-1. For this reason, the level of annoyance from construction activities would be less than significant.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
In relation to the potential for structural damage at adjacent residential and commercial structures, peak particle velocity (PPV) is the maximum instantaneous positive or negative peak of the vibration signal, measured as a distance per time (such as millimeters or inches per second). The PPV measurement has been used historically to evaluate shock-wave type vibrations from actions like blasting, pile driving, and mining activities, and their relationship to building damage. As provided in Table 3.10-2, the level of potential impact resulting project construction is generally contingent on the structural composition of the buildings potentially affected. As shown in Table 3.10-2, new residential structures with gypsum board walls/ceilings have a PPV threshold of 1.0 in/sec and would be the types of structures most likely to be impacted by project construction activities. Given that Master Plan-related construction activities would employ the use of equipment similar to those identified in Table 3.10-4, would not involve the use of blasting or pile driving, and would be situated 50 feet or more from existing structures , project construction is unlikely to generate vibration levels in excess of the thresholds identified in Table 3.10-2. Based on these considerations, the Master Plan improvements would result in less than significant impacts from groundborne vibration during construction and no additional mitigation is required.			
Impact NOI-3: Operation of the Master Plan improvements could create a substantial permanent increase in ambient noise levels. Noise-generating operations for the Master Plan Updates mainly include the use of electric pumps to move water throughout the pipeline network, operation of the emergency backup generators, and vehicle trips and equipment used for routine maintenance of facility components. Because routine maintenance is anticipated to be sporadic and short term in nature, it is not anticipated that maintenance activities would result in a significant noise impact. The proposed storage tank pump(s) would operate year-round (24-hours a day, seven days a week) and the backup generator(s) would operate under certain situations, during emergencies. Increased operation of diesel engines to pump treated water supplies would contribute to increased noise in the areas where these facilities are proposed. The pump station could eventually consist of a 1,930 horsepower (hp) vertical turbine pump installed within an enclosed structure, constructed of concrete masonry units or steel. Based on a review of published literature and other EIRs prepared for similar facilities, the typical noise level for water supply pumping facilities ranges from 70 to 76 dBA at 50 feet. Additionally, a standby generator will be installed in an enclosure to operate the entire pump station during a power outage. The typical noise level for a	Potentially Significant	Mitigation Measures NOI-3: Implement Noise Minimization Measures during Operation. The City shall design the proposed storage tank pump station to ensure that operational noise levels at the property line does not exceed the City standards. The City shall implement the following noise minimization measures to the extent they are feasible. • Shielding and other specified measures as deemed appropriate and effective by the design engineer will be incorporated into the design in order to comply with performance standards. • Project equipment shall be outfitted and maintained with noise-reduction devices such as equipment closures, fan silencers, mufflers, acoustical louvers, noise barriers, acoustical panels, etc., to minimize operational noise. • Particularly noisy equipment shall, to the extent feasible, be located a minimum of 200 feet from nearby sensitive receptors. • The orientation of acoustical exits shall always be facing away from nearby sensitive receptors. • Buildings and landscaping shall be incorporated, where possible, to absorb and/or redirect noise away from nearby sensitive receptors.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
generator is approximately 80 dBA at 50 feet. With a surrounding masonry buffer, or with generator placement using other structures as shielding, the effective noise level may be reduced by 10 to 15 dBA at 50 feet. Since emergency generators would only be tested on a weekly basis for a short duration, they are not expected to contribute substantially to the overall average noise exposure outside of the site boundary. However, the combined operation of the pumps and back-up generator, depending on the proximity to the nearest sensitive receptor, could be significant. Without proper design, nearby noise-sensitive land uses could be exposed to significant increases in ambient noise levels. This impact is considered potentially significant.			
3.11 Transportation			
Impact TR-1: The Master Plan improvements could result in short-term increases in traffic volumes, thereby contributing to decreases in roadway and intersection LOS. Construction-Related Effects. Construction-related traffic associated with the Master Plan Updates would result in a temporary and intermittent lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. During construction activities, project traffic would be generated from two sources: truck trips to and from the work sites, and construction work crews and supervisor staff commuting to and from work sites. Construction-related truck trips would include trucks hauling equipment, material, or backfill to the work sites as well as trucks hauling spoils away for disposal or reuse offsite. As described in Chapter 2, Project Description, the peak trips associated with the most intense construction period when multiple water and sewer projects undergo concurrent construction (anticipated in 2010-2011) are estimated to be up to 142 round-trip truck trips per day. In assuming an average crew size of 15, including inspectors, construction activities could generate up to 120 round-trip truck trips per day. In addition, the Project could require up to 20 round-trip concrete delivery and/or soil export truck trips per day. The estimated average general materials delivery is estimated at 1 to 2 round-trips per day. The actual number of construction-related trucks traveling on the City's local transportation network each day would be influenced by the activity occurring at each work site and would generally be less than the peak number of trips as specified above. Construction-related truck trips would be scattered throughout the City, depending on the location of the individual work sites, along existing designated truck haul routes. The TASP EIR identified 14 intersections (Figure 3.3-9 in TASP EIR) that are projected to exceed their LOS standards and operate at unacceptable levels if the TASP is implemented. Because they	Potentially Significant	Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan. • The City will arrange for a licensed traffic engineer to prepare a Traffic Control Plan for roadways and intersections affected by the Master Plan Update improvements. The Traffic Control Plan will comply with the requirements of the agency (e.g., City of Milpitas, City of San Jose, Caltrans) with jurisdiction over project construction. The Traffic Control Plan will include, but not be limited to, the following elements: • Provide street layout showing location of construction activity and surrounding streets to be used as detour routes, including "special signage." Post advance warning of construction activities within affected roadways to allow motorists to select alternative routes. • Restrict delivery of construction materials to non-peak travel periods (9:00am – 3:00pm) as appropriate. Weekend and night work shifts will be allowed in non-residential areas only. • Maintain the maximum travel-lane capacity during non-construction periods and provide flagger-control at construction sites to manage traffic control and flows. • Limit the construction work zone in each block to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone. • Maintain access for driveways and private roads, except for brief periods of construction, in which case property owners will be notified. • Require temporary steel-plate trench crossings, as needed, to maintain reasonable access to homes, businesses, and streets. When required by the applicable encroachment permit, maintain the existing lane configuration during nonworking hours by covering the trench or jack pit with steel plates or by using temporary backfill.	Significant And Unavoidable

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
include pipeline alignments and/or serve as part of designated truck routes, the following intersections would also be temporarily impacted by construction of the Master Plan Update improvements: • Montague Expressway / S. Milpitas Boulevard. Coupled with traffic associated with TASP development, construction of the Master Plan Updates would degrade LOS F conditions during the PM peak hour. No feasible mitigation measures were identified in the TASP EIR. Therefore, this impact is considered significant and unavoidable. • Great Mall Parkway-E. Capitol Avenue / Montague Expressway. Coupled with traffic associated with TASP development, construction of the Master Plan Updates would exacerbate LOS F conditions during the AM and PM peak hours. Although the VTP 2030 includes planned improvements to this interchange, funding has not yet been secured and the improvements cannot be assumed completed. Therefore, construction-related impacts associated with the improvements are considered significant and unavoidable. • Montague Expressway / McCandless Drive-Trade Zone Boulevard. Coupled with traffic associated with TASP development, construction of the Master Plan Updates would exacerbate LOS F conditions during the AM and PM peak hour. The planned improvements (ROW widening) are currently considered infeasible. Therefore, this impact is considered significant and unavoidable. The generation of daily construction-related truck trips by the Master Plan Update sites would be distributed geographically on haul routes, would be temporary (lasting only during the duration of construction at each site), and would shift regularly to accommodate the movement of pipeline installation. However, if all the construction-related truck trips were to occur on segments of busy roadways during the peak AM or PM commute hours, an increase in traffic volumes would impede traffic flows and lead to short-term traffic delays. This impact is considered potentially significant and requires the implementation of the prescribed mitigation. Operational Effects. A small number of vehicle trips would potentially be generated by workers traveling to and from proposed facilities (i.e., conveyance pipelines, valves, storage tank and pump station) for routine operation and maintenance. These trips would not be substantial in relation to the existing traffic load and capacity of the street system or cause long-term increases in traffic delay. For these reasons, the Master Plan Updates would result in less than significant, long-term impacts to the local roadway network.		• Require appropriate warning signage and safety lighting for construction zones. • Access for emergency vehicles shall be maintained at all times. Police, fire, and emergency services shall be notified of the timing, location, and duration of construction activities that could hinder and/or delay emergency access through the construction period. • Coordinate with VTA to plan, as needed, for the temporary relocation of bus stops and/or detour of transit routes on affected pipeline alignments. • Identify detours, where available, for bicyclists and pedestrians in areas potentially affected by project construction. • Provide adequate off-street parking locations for workers' vehicles and construction equipment in those areas where on-street parking availability is insufficient. • Provide written notification to appropriate contractors regarding appropriate routes to and from construction sites and weight and speed limits for local roads used to access construction sites. Submit a copy of all such written notifications to the City. • Repair or restore the roadway ROW to its original condition or better upon completion of the work.	
Impact TR-2: Construction of the Master Plan improvements could increase roadway safety hazards and contribute to disruptions in emergency and/or recreational access.	Potentially Significant	Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
The Master Plan Updates consist of water and wastewater facility improvements throughout the City. With the exception of the proposed storage tank and pump station located within private property, a majority of the other improvements would be installed along public road ROWs. Pipeline installation would occur within roadways in a variety of land uses, including residential, commercial, and industrial uses. These roadways may include bicycle facilities and accommodate transit routes. Bicycle and bus routes that may be impacted by proposed Master Plan Update projects are located along the City's major roadways, including Great Mall Parkway, Montague Expressway, South Main Street, Abel Street, and Milpitas Boulevard. Because pipeline construction would require sufficient space (approximate 60-foot construction zone) to accommodate open trenches/pits and additional room for the placement of material and equipment, the travel width of roadways would be reduced. As such, transportation and circulation patterns in the vicinity of work zones would temporarily be disrupted. Specifically, impacts would include direct disruption of traffic flows and street operations (including the use of bus stops), and restriction of bicycle and pedestrian access to adjacent land uses and streets. Access for emergency vehicles could also be impaired from the reduced roadway widths associated with the construction easement, as well as the increased volume of construction-related traffic on the roads. The Master Plan improvements do not include the installation of any roadway design features (e.g., sharp curves or dangerous intersections) or incompatible uses that would increase safety hazards. However, construction of the individual improvements within public ROWs could increase the interaction of construction-related traffic, vehicles (including buses), bicycles, and pedestrians, thus temporarily increasing potential safety hazards and restricting or delaying access to adjacent land uses. In addition, construction activities could temporarily affect the use of bike lanes/routes and/or existing trail networks throughout the Program Study Area. Mitigation Measure TR-1 would reduce potential safety hazards by providing flagger control in construction zones, maintaining emergency and recreational access using steel trench plates, coordinating with VTA for detour of transit routes, and posting signage warning of construction activities.			
Impact TR-3: Construction of the Master Plan improvements could increase demands for parking. During construction, the Master Plan Update projects would generate a need for parking spaces for construction workers and heavy equipment. Assuming that each worker drives alone to work sites, each crew would require about 15 parking spaces at each work site. For the proposed storage tank and pump station, adequate space would likely be available to accommodate	Potentially Significant	Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
construction and worker vehicles as they would be located on private property. For the proposed pipeline alignments, an inadequate parking supply on the adjacent roadways may result, due to the number of parking spaces required and the potential need to use the adjacent parking lanes to accommodate the 60-foot construction zone. To ensure that the Master Plan Updates would not result in impacts associated with parking capacity, Mitigation Measure TR-1 would require provision of off-street parking for construction workers. Upon completion of construction, all water and sewer facilities would be buried underground and/or located within an acceptable portion of the ROW. No permanent parking would be necessary for pipeline operation and maintenance. The proposed storage tank and pump station would provide sufficient parking onsite for City maintenance staff. As such, the Master Plan Updates would not result in any long-term increases in parking demand that exceeds the existing parking capacity.			
3.12 Utilities And Service Systems			
Impact USS-1: Implementation of the Master Plan Updates would carry the potential for cross-contamination of potable water pipelines. Conveyance improvements proposed as part of the Master Plan Updates would include new recycled water distribution pipelines with the water being provided by the SBWRP. With the extension of recycled water pipelines into other parts the TASP, there is a corresponding potential for cross-contamination of potable water with recycled water pipelines. This could in turn result in reduced potable water quality and potential public health concerns. Cross-contamination of water supply pipelines would be considered a potentially significant impact.	Potentially Significant	Mitigation Measure USS-1: Design Recycled Water Pipelines to Prevent Cross-Contamination. The City or Developer shall require the engineering and/or construction contractors to implement the following measures to avoid the potential for cross-contamination of potable water with recycled water. These measures shall be included in all contract documents. • Incorporate applicable backflow prevention devices, as outlined in CCR Titles 22 and 17, South Bay Water Recycling Guidelines, and City Supplemental Guidelines, into pipeline design. • Incorporate applicable minimum pipeline separation standards for potable and non-potable water pipelines, as outlined in CCR Title 22, Section 64572(a), into pipeline design. • Use purple pipes (or purple tape) for all above or below ground recycled water pipelines, as outlined in Health and Safety Code, Section 116815(a). • Inspect all recycled water sites for possible cross-connections with the potable water system, in accordance with CCR Title 22, Section 60316(a).	Less Than Significant
Impact USS-2: The Master Plan improvements would collectively generate construction wastes that could exceed local landfill capacity and conflict with the State's solid waste diversion requirements. Construction of the Master Plan Updates would generate some construction debris during installation of the conveyance pipeline and structural	Less Than Significant	No mitigation measures are required.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
foundations for above-ground facilities. Some materials excavated during trenching associated with the Master Plan Updates could be used as fill materials at the storage tank site. Non-recyclable construction waste would be hauled off site for disposal at the Newby Island Sanitary Landfill. The Newby Island Sanitary Landfill has adequate remaining capacity to provide solid waste disposal services to the City through 2017. However, by virtue that several of the Master Plan improvements would be constructed after 2017, the City is unable to confirm whether sufficient landfill capacity would be available for construction debris after 2017. In the event Newby Island reaches capacity, it is likely that solid waste would be transported to the next closest landfill, Zanker Road Landfill, which also recycles construction debris onsite.. Given that the City currently exceeds the State's solid waste diversion requirements, as of 2006, and has done so for the past three consecutive years, it is reasonable to conclude that the City will continue to implement its existing solid waste diversion programs during implementation of the Master Plan improvements. The continued implementation of the City's recycling and waste diversion programs and application of these programs to individual Master Plan improvements would ensure compliance with State solid waste diversion requirements and, therefore, the impact is considered less than significant. If construction wastes were determined to be hazardous, as defined by federal and state regulations, the waste would be disposed of at landfill(s) permitted to accept hazardous waste. A discussion of the disposal of hazardous materials is addressed in Section 3.7, Public Health and Hazards.			
Impact USS-3: Master Plan Update construction could result in temporary, planned, and/or accidental disruption to existing utility services. Utility services could be disrupted as a result of Master Plan Update construction. In most cases, impacts to utilities and services involve temporary disruption that would not exceed one day. All utility lines and cables that would be disrupted during program construction would be identified during the design phase for individual Master Plan improvements. Design for each Master Plan Update project would include a detailed engineering and construction plan, which would thoroughly describe construction techniques and protective measures for minimizing impacts to utilities. Reasonable efforts would be made to provide temporary bypass around the affected utilities during construction so interruptions in service are eliminated or minimized. Review of this plan by special service districts and utility providers in the program area would be required; as such, the City and its program contractors	Potentially Significant	Mitigation Measure USS-3: Identify and Relocate Existing Utilities, Where Necessary. The City's or Developer's construction contractor shall identify all underground utilities in the areas of proposed excavations for Master Plan Update improvements. Prior to beginning construction, USA shall be conducted to identify underground utilities. Temporary disruption of service may be required to allow for construction. No service on such lines would be disrupted until prior approval is received from the construction manager and the service provider (e.g., PG&E, AT&T, Comcast). Where possible, design and specifications for Master Plan Update projects shall avoid existing utilities. In instances where utilities cannot be avoided, the City's contractor will relocate existing utilities either before, or during, project construction. These conditions shall be included in contract documents.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
would coordinate with utility owners prior to program construction. Accidental disruption of utilities would be possible in conjunction with any of the Master Plan improvements, most notably along all conveyance pipeline alignments. Temporary and accidental impacts to small utility lines, such as telephone or cable lines, would be considered adverse, but not significant, because the affected area and duration of the impacts would be limited. However, disruptions to major utility lines, such as natural gas or sewer lines, would be considered significant.			
Impact USS-4: Construction and operation of the Master Plan improvements could result in the inefficient consumption of energy. During construction, the Master Plan Updates would consume energy in two general forms: 1) the fuel energy consumed by construction vehicles and equipment; and 2) bound energy used in the manufacturing and processing of construction materials such as steel, concrete, pipes, lumber, and glass. Energy in the form of fuels used for construction vehicles and other equipment would be used during site excavation, grading, and construction. Such fuel energy use would be temporary and not represent a significant or permanent commitment to the use of energy. In addition, contractors have a strong financial incentive to avoid wasteful and inefficient consumption of energy during construction. There would also be some non-renewable petroleum-based fuel savings resulting from mitigation measures in Section 3.3, Air Quality which would prevent the unnecessary idling of vehicles and equipment and require that vehicles and equipment be properly maintained. Substantial reductions in energy inputs for construction materials can be achieved by selecting building and construction materials composed of recycled materials, which require substantially less energy to produce than from non-recycled materials. Compliance with the City's existing solid waste diversion programs would ensure that all recyclable materials from construction and demolition activities are transferred to the City's recycling facility. Implementation of Mitigation Measure AQ-4, would ensure that recycled materials are used during construction of the Master Plan Updates, to the extent feasible. This will minimize the wastage of bound energy used in the original manufacturing and processing of construction materials. Although operation of the underground components of the Master Plan Updates (i.e., pipelines, valves, and turnouts) would not require the use of any additional energy sources, the proposed storage tank and pump station would be equipped with emergency standby generators. Diesel, contained within vessels engineered for safe storage, would be required for operation of the generators. Because the generators would be used only during emergencies, minor amounts of diesel would likely be stored onsite. Due to the limited	Potentially Significant	Mitigation Measure AQ-4: GHG Reduction Measures for Construction. See Section 3.3.	Less Than Significant

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
amount of non-renewable diesel that would be used for operation, potential impacts would be considered less than significant.			
5.2 Growth-Inducing Impacts			
Impact POP-1: Construction of the Master Plan Updates would induce substantial population growth through provision of water supply and sewer capacity. Construction of the Master Plan Updates would not directly induce population growth, as they do not propose any new residential or commercial development projects. The Master Plan Updates would indirectly induce growth by removing or reducing the barriers to growth – namely provision on potable water supply and sewer treatment within the Study Area. However, the infrastructure improvements associated with the Master Plan Updates would support an amount of growth that is consistent with the applicable land use plans already adopted by the City. As described in Chapter 2, Project Description, the Master Plan Updates are designed to project water and sewer capacity needs for the City based on current planning projects, including the near- and long-term developments currently in planning and approval stages, development in accordance with the TASP, and updated demand projections for large water users. As such, the Updates would provide the water and sewer capacity necessary to meet the anticipated demands of the City through build-out of the City's General Plan, as amended through 2008. The Master Plan Updates would consist of individual water and sewer improvements implemented at different stages through the build-out period. Each individual water and sewer project would be constructed as the City's development projects come online. Infrastructure projects would be implemented in line with development to support planned growth; they would not create additional capacity that would induce unplanned growth. Because the Master Plan Updates would not induce unplanned growth through increases in population or employment, they would not overwhelm existing community service facilities (e.g., parks, police, and fire protection stations) and require construction of new facilities beyond those anticipated by the City. Secondary impacts of planned growth, including traffic, air emissions, and noise, are addressed by the environmental documentation associated with the City's land use plans. Additional impacts associated with growth inducement would not occur.	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Chapter 1 – Introduction

Chapter 1 Introduction

1.1 Overview, Purpose, and Authority of the EIR

The California Environmental Quality Act (CEQA) requires that all state and local government agencies consider the environmental consequences of programs and projects over which they have discretionary authority before taking action on them. This Draft Environmental Impact Report (EIR) was prepared in accordance with CEQA to evaluate the potential environmental impacts associated with the implementation of the Water and Sewer Master Plan Updates (State Clearinghouse No. 2008092082). This document was prepared in conformance with CEQA (California Public Resources Code, Section 21000 et seq.), the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.), and City of Milpitas rules and regulations. This EIR is intended to serve as an informational document for public agency decision-makers and the public regarding the Water and Sewer Master Plan Updates (Master Plan Updates).

1.1.1 Overview

The City's 2009 Water and Sewer Master Plans comprise a re-evaluation of the City's water and sewer system capacity based on updated land use projections from several near- and long-term development projects currently in the planning process. The 2009 Master Plan Updates define the water supply and sanitary sewer system improvements necessary to accommodate the City's projected build-out based on the City's General Plan, Midtown and Transit Area Specific Plans, and miscellaneous land use changes throughout the City. *Chapter 2, Project Description* provides a complete description of the Master Plan Updates.

1.1.2 Purpose and Authority

This Draft EIR provides a program-level analysis of the potential environmental effects of the Master Plan Updates. The environmental impacts of the Master Plan Updates are analyzed to the degree of specificity appropriate, in accordance with Section 15146 of the CEQA Guidelines. This document addresses the potentially significant adverse environmental impacts that may be associated with the planning, construction, or operation of the individual improvements associated with the Master Plan Updates. It also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to reduce or avoid significant impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Executive Summary
- Introduction
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found Not To Be Significant
- Areas of Known Controversy

1.1.3 Lead Agency Determination

The City of Milpitas (City) is designated as the lead agency for the purposes of this EIR. CEQA Guidelines Section 15367 defines the lead agency as "…the public agency, which has the principal responsibility for carrying out or approving a project." Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

1.2 Notice of Preparation

In accordance with Sections 15082(a), 15103, and 15375 of the CEQA Guidelines, the City prepared and circulated a Notice of Preparation (NOP) of a Draft EIR for the Project for a 30-day comment period between August 27, 2008 and September 30, 2008. The City also conducted one public scoping meeting on September 9, 2008 at 6:30pm at Milpitas City Hall, 455 E. Calaveras Boulevard, Milpitas, CA to receive public comments on the scope and content of the Draft EIR. Appendix A contains a copy of the NOP along with the comments letters submitted by agencies and the public in response to the NOP.

1.2.1 Areas of Known Controversy

The scope of this EIR includes the areas of controversy identified by the NOP, as well as issues raised by agencies and the public in response to the NOP. Areas of known controversy include:

- Direct and indirect impacts to biological resources
- Potential alteration to drainage facilities resulting in water quality impacts
- Air quality impacts (construction-related), including greenhouse gas (GHG) emissions and/or expanded carbon footprint
- Noise and nuisance effects on adjacent residential areas
- Temporary disruptions to traffic, including State highway facilities in Santa Clara County
- Potential impacts of construction on transit operations
- Potential indirect and secondary impacts as a result of the Project's removal of an obstacle to growth (e. g. potable water storage and conveyance capacity).
- Potential impacts to archeological resources
- Potential impacts on gas and electrical utilities, including relocation and expansion of existing facilities
- Potential impacts to existing and proposed trails routes and recreational opportunities

1.3 Type of EIR

The improvements associated with the Master Plan Updates are analyzed in this EIR at a program level. CEQA (Guidelines, Section 15168) defines a program EIR as one "which may be prepared on a series of actions that can be characterized as one large project and are related either:

- Geographically;
- As logical parts in the chain of contemplated actions;
- In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

Under CEQA, a program EIR assesses and documents the broad environmental impacts of a program with the understanding that a more detailed site-specific review may be required to assess future projects implemented under the program. Subsequent facility improvement projects would be examined in the light of the program EIR to determine whether an additional environmental document must be prepared (CEQA Guidelines Section 15168). A subsequent environmental document may be "tiered" from the program EIR, pursuant to CEQA Guidelines sections 15152 and 15168. "Tiering" refers to the use of analysis from a broader EIR, with later EIRs and negative declarations (NDs) prepared for subsequent projects, concentrating on issues specific to the later projects.

This document constitutes the Draft EIR. The Draft EIR contains a description of the Master Plan Updates and provides a discussion of the environmental setting, project impacts, and measures to be implemented to mitigate impacts found to be significant, as well as an analysis of project alternatives.

As required by CEQA, this Draft EIR focuses on significant or potentially significant environmental effects (CEQA Guidelines Section 15143). As discussed above, a NOP was prepared for the Master Pan Updates to identify issues to be evaluated in this Draft EIR (see Appendix A). Comments received on the NOP helped to further refine the list of environmental issues to be evaluated in this EIR.

All of the impacts analyzed in this EIR, including those determined to be less than significant, are summarized in Table ES-1 in the *Executive Summary* of this document.

1.4 Organization of the EIR

This Draft EIR is organized into the following main chapters:

Executive Summary. This chapter includes a summary of the Master Plan Updates. A brief description of the areas of controversy and issues to be resolved and a table which summarizes the impacts, mitigation measures, and level of significance after mitigation are also included.

Chapter 1: Introduction. This chapter provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.

Chapter 2: Project Description. This chapter includes a detailed description of the proposed Project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the Master Plan Updates are also provided.

Chapter 3: Environmental Analysis. This chapter analyzes the environmental impacts of the proposed Project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation.

Section 3.1: Introduction to Environmental Analysis. This section provides an overview of the environmental analysis and presents the format for each topical section. In addition, this section describes issues that have been determined to have no or less than significant impacts and not carried forward for further analysis. Also, this section identifies a list of past, present, and probable future projects that were considered as part of the cumulative analysis.

Section 3.2: Aesthetics. Evaluates the impacts of project construction on the visual and scenic resources within the Study Area.

Section 3.3: Air Quality and Climate Change. Addresses the local and regional air quality impacts associated with project implementation as well as consistency with the Bay Area Air Quality Management District rules and regulations.

Section 3.4: Biological Resources. Addresses the project's impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.

Section 3.5: Cultural Resources. Addresses the impacts of project development on known historical resources and potential archeological and paleontological resources.

Section 3.6: Geology and Soils. Evaluates the potential for local geologic hazards to impact Program-related facilities.

Section 3.7: Public Health and Hazards. Addresses the likelihood of the presence of hazards and hazardous materials or conditions on the project site and in the project area that may have the potential to impact human health.

Section 3.8: Hydrology and Water Quality. Addresses the impacts of the project on local hydrological conditions, including drainage areas, and changes in water quality.

Section 3.9: Planning and Land Use. Evaluates the compatibility of the Program facilities with existing land use and Program's consistency with applicable local, regional, and State plans and policies.

Section 3.10: Noise. Addresses potential noise impacts during construction and at project build-out from mobile and stationary sources. The section also addresses the impact of noise generation on neighboring uses.

Section 3.11: Transportation. Addresses the impacts of project-related improvements on the local and regional roadway system, public transportation, bicycle, and pedestrian access.

Section 3.12: Utilities and Service Systems. Evaluates the impacts of project construction on water, wastewater, solid waste, and utility systems.

Chapter 4: Alternatives Analysis. This chapter compares the impacts of the Master Plan Updates with other alternatives considered by the City, including the No Project Alternative. An environmentally superior alternative is also identified.

Chapter 5: Other CEQA Considerations. This chapter describes potential growth-inducing impacts associated with the Master Plan Updates, a summary of significant environmental impacts, including unavoidable and cumulative effects, and the project's irreversible and irretrievable commitment of resources. Additionally, this section contains discussion of the topical sections dismissed from analysis.

Chapter 6: Document Preparation and Persons Consulted. This chapter lists the authors that assisted in the preparation of the Draft EIR, by name and company/agency affiliation. Also includes a full list of persons and organizations that were consulted with during the preparation of the EIR.

Chapter 7: References. This chapter contains a full list of references that were used in the preparation of this Draft EIR.

Appendices: This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.5 Review of the Draft EIR

Upon completion of the Draft EIR, the City will file a Notice of Completion (NOC) with the State Office of Planning and Research (OPR) to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties

requesting a copy of the EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR and technical appendices are available for review at the City's main office, located at the location(s) provided below. Agencies, organizations, and interested parties not previously contacted, or who did not respond to the NOP, currently have the opportunity to comment on the Draft EIR during the public review period.

Written comments on this Draft EIR should be addressed to:

City of Milpitas
455 E. Calaveras Blvd.
Milpitas Ca, 95035-5411

Attn: Sheldon S. Ah-Sing
sahsing@ci.milpitas.ca.gov
(408) 586-3278

Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review at least 10 days prior to the public hearing before the City Council on the Master Plan Updates, at which certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

1.6 Documents Incorporated by Reference

This EIR incorporates by reference two previously prepared environmental documents. These documents are identified below along with a brief discussion as to how they relate to the proposed Master Plan Updates.

Transit Area Specific Plan (TASP) EIR (SCH No. 2006032091). The TASP proposes transit-oriented residential and commercial redevelopment on industrial land around existing light rail stations and a future BART station in the City. The TASP is largely within the area of the Midtown Milpitas Specific Plan, adopted by the City in 2002, which provides direction for southern areas of the City in terms of land use, circulation, community design, and utilities and services. Policy 7.5 of the Midtown Milpitas Specific Plan requires the creation of a coordinated development plan for the parcels at and around the proposed BART station.

This document discusses the potential effects of using recycled water facilities, proposed as part of the Master Plan Updates, within the TASP. In addition, this document discusses potential impacts resulting from the exposure of construction workers and/or the public to documented hazardous material sites, including PCBs, lead-based paint, or asbestos, within the TASP.

The draft and final EIR for the TASP may be downloaded for review from the City's web site at: http://www.ci.milpitas.ca.gov/government/planning/environmental.asp

General Waste Discharge Requirements For Landscape Irrigation Uses Of Municipal Recycled Water Initial Study and Mitigated Negative Declaration (IS/MND). California Water Code section 13552.51, requires the State Water Resources Control Board (SWRCB) to adopt a General Permit for landscape irrigation uses of recycled water by July 31, 2009. The intent of the new law is to develop a uniform interpretation of state standards to ensure the safe, reliable use of recycled water for landscape irrigation uses, consistent with state and federal water quality law. The new law is also intended to expedite permitting for use of recycled water for landscape irrigation. The SRWCB released an IS/MND in May of 2009 to disclose the potential environmental impacts of implementing the General Permit.

To comply with the proposed General Permit, both producers and distributors of recycled water are required to use disinfected tertiary recycled water and implement the applicable Title 22 Requirements. The City, by definition, is classified as a distributor and would distribute recycled water treated to disinfected tertiary standards at the South Bay Water Recycling Plant (SBWRP) in conjunction with improvements proposed in the Water Supply Master Plan Update. Based on this connection, the operational effects of using recycled water treated to disinfected tertiary standards are analyzed in the above IS/MND, which is incorporated by reference into this EIR to cover the range of "landscape irrigation" projects that may be implemented in conjunction with the City's recycled water improvements. These may include any of the following:

- Parks, greenbelts, and playgrounds;
- School yards;
- Athletic fields;
- Golf courses;
- Cemeteries;
- Residential landscaping, common areas;
- Commercial landscaping, common except eating areas;
- Industrial landscaping, common except eating areas, and
- Freeway, highway, and street landscaping.

Other potential uses of recycled water, not defined as "landscape irrigation" such as use in cooling towers, other industrial uses, and other uses with unusually complex plumbing schema that could result in a high risk of cross-contamination with potable water supplies, would require additional project-level review in coordination with the California Department of Public Health (CDPH) as part of its review process.

The draft General Permit along with the draft IS/MND may be downloaded for review at: http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/landscape_irrigation_general_permit.shtml

1.7 Terminology Used in the EIR

This Draft EIR uses the following terminology to describe environmental effects of the project.

- **Significance Criteria**. A set of criteria used by the Lead Agency to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this EIR include some that are set forth in the CEQA Guidelines, or can be discerned from the CEQA Guidelines; criteria based on factual or scientific information; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals, and policies identified in and requirements established by the City of Milpitas General Plan, as amended through 2008, and provisions stated in the City's Zoning Ordinance.
- **Less than Significant Impact**. A project impact is considered less than significant when it does not reach the standard of significance and would therefore cause no substantial change in the environment. No mitigation is required for less-than-significant impacts.
- **Potentially Significant Impact**. A potentially significant impact is an environmental effect that may reach the level of significance identified in the EIR; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

- **Significant Impact**. Significant impacts are identified by the evaluation of project effects against the significance criteria identified in the EIR. A project impact is considered significant if it reaches the level of significance identified in the EIR; mitigation measures and/or project alternatives are identified to reduce these effects to the environment.
- **Significant Unavoidable Impact**. A project impact is considered significant and unavoidable if it is significant but cannot be avoided or mitigated to a less than significant level if the project is implemented.
- **Cumulative Significant Impact**. A cumulative impact can result when a change in the environment results from the incremental impact of a project when added to other related past, present, or reasonably foreseeable future projects. Significant cumulative impacts may result from individually minor but collectively significant projects.

The Draft EIR also identifies mitigation measures to reduce or eliminate the potential environmental impacts associated with Project construction and/or implementation. The CEQA Guidelines (Section 15370) defines mitigation as:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

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Chapter 2 – Project Description

Chapter 2 Project Description

2.1 Overview

The City of Milpitas (City) has prepared updates to its Water and Sewer Master Plans. The Water and Sewer Master Plans specifically define the potable water and sewer system improvements necessary to meet the City's current and forecasted demand. The 2009 Water and Sewer Master Plan Updates comprise a re-evaluation of the City's water and sewer system capacity based on updated land use projections from several near- and long-term development projects currently in the planning process. Drafts of the Master Plan Updates are available for review at the City's website (http://www.ci.milpitas.ca.gov/government/pworks/storm.asp).

2.2 Location and Study Area

The Master Plans include incorporated areas within the City of Milpitas in northern Santa Clara County, California (see Figure 2-1: Regional Map). The Master Plan Study Area (Study Area) for the purposes of this EIR analysis includes areas within the current city limits with the exception of some areas to the east of Piedmont Road (see Figure 2-2: Master Plan Study Area). As shown, the Study Area extends between Coyote Creek in the west, the Santa Clara-Alameda County line in the north, Piedmont Road in the east, and Montague Expressway, Trade Zone Boulevard, and Landess Avenue in the south. The Study Area also extends into a portion of San Jose along the southern City limits to include the entire roadway ROW for Montague Expressway.

2.3 Background

The City's Utility Engineering Department is responsible for the planning of the City's potable water delivery and sanitary sewer collection systems. The Master Plan process is designed to project water and sewer capacity needs for the City based on current planning projections. The last Master Plan updates occurred in 2002 for the City's water system and 2004 for the City's sanitary sewer collection system. The purpose of these updates was to define the water and sewer system improvements necessary to meet the City's 2002 and 2004 demands, respectively, and future demand associated with future development in 2008, 2018, and build-out in 2021. The 2002 Water and 2004 Sewer Master Plans were never formally adopted nor did they undergo formal CEQA review.

The Master Plan Updates subject to this EIR come in response to updated land use projections that have resulted from several near- and long-term development projects currently in the planning process. More specifically, the Master Plan Updates respond to the impact of the following planned development projects on the City's existing water and sanitary sewer systems:

1. New near- and long-term developments currently in planning and approval stages throughout the City. These projects mainly include very high-density multi-family housing developments that will require a significant water demand above current land use.
2. The Milpitas Transit Area Specific Plan (TASP), which was recently adopted by the City and outlines a development vision for an area of the City just south of the Great Mall. The TASP area currently consists of light industrial land uses, but is ultimately planned for high density residential, commercial, and mixed-uses over the next 20 years.
3. Updated demand information for large water users (LWUs), which were originally identified in the City's 2002 Water Master Plan and 2004 Sewer Master Plan, but changed since these previous efforts. Since the previous Master Plans, many of the LWUs have changed their water use or relocated to other portions of the City.

The following sub-headings provide a general background of the City's existing water supply, water delivery system, and the sanitary sewer collection and treatment system.

2.3.1 Water Supplies

Source Water Supplies

The City purchases treated water from two sources: the San Francisco Public Utilities Commission (SFPUC), delivered through the Hetch Hetchy Water system; and Santa Clara Valley Water District (SCVWD), delivered through the South Bay Aqueduct. The City's emergency supply consists of one local groundwater well—with a second one under construction—and three emergency interties, one with the San Jose Water Company and two with the Alameda County Water District.

Water from SFPUC's Hetch Hetchy supply in the Sierra Nevada is chloraminated and pH adjusted, prior to its delivery to the City, and local water from SFPUC is treated at its Sunol Valley Filtration Plant. Water delivered by SCVWD is treated at its Penitencia Water Treatment Plant or Santa Teresa Water Treatment Plant before being piped to the City. The SFPUC and SCVWD potable water supply sources are not blended under normal operating conditions due to the different corrosion control methods used for each source (City of Milpitas 2005).

The City currently has a supply assurance amount from the SFPUC of 9.23 million gallons per day (mgd) or 10,340 acre-feet per year[1] (AFY). This allocation is subject to reductions during drought years. In addition, it is anticipated that the incremental cost of water supplied by the SFPUC will become more expensive for the City to purchase should the allocation be increased. For these reasons, the City does not anticipate increasing allocations of SFPUC water as part of the Water Master Plan Update.

Water supplied by SCVWD, in part, comes from executed contracts with the State of California Department of Water Resources (DWR) and the United States Bureau of Reclamation (USBR). The City's contract with SCVWD allows for increases in purchased water to accommodate growth within the City. In accordance with the City's contract, SCVWD provides exact delivery commitments on a three-year delivery schedule based, in part, on projections made by the City (City of Milpitas 2005).

City Water Demands

Water demands within the City are expected to steadily increase from current levels in the future. With the addition of a firm supply of recycled water in the amount of 0.4 mgd, the City's normal projected demand for potable water is expected to reach 17.0 mgd or 19,040 AFY by 2030, with a maximum daily demand[2] of 30.7 mgd and a peak hourly demand[3] of 58.6 mgd. These demands are up from the City's current demand of approximately 11.3 mgd or 12,656 AFY.

Based on available supplies, projected normal year demand is not expected to exceed projected supplies through 2030. However, during dry years the demand is expected to exceed supply as early as 2007, depending on the severity of the drought. Options for alleviating this deficit include imposing allocations within the SFPUC service area, operating supplemental emergency wells, adjusting SFPUC and SCVWD service areas to supplement supplies with more SCVWD water, or a combination of these options (City of Milpitas 2005).

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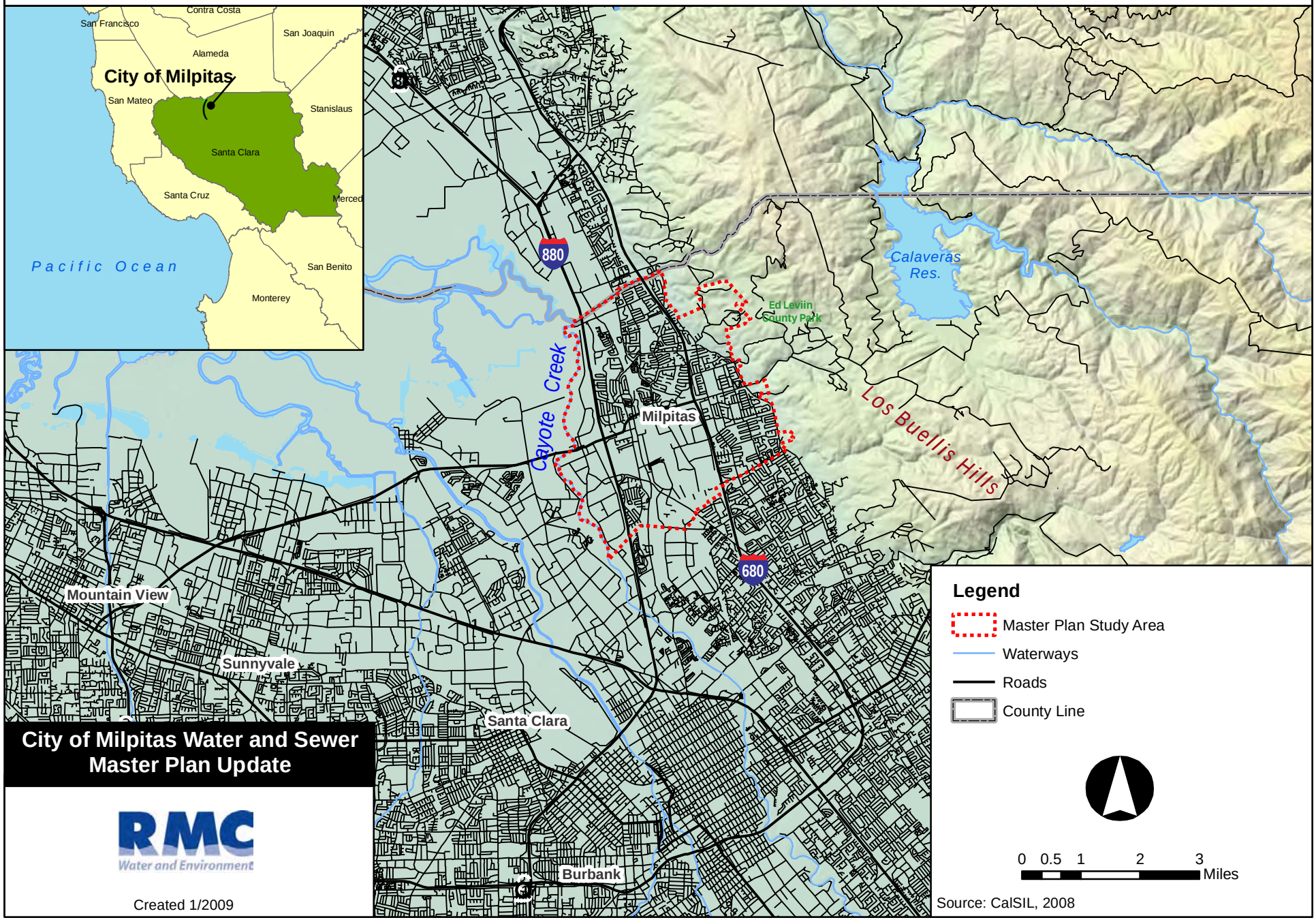
1 An acre-foot of water contains 325,851 gallons; one million gallons is about 3 acre-feet.

2 Maximum day demand" means the amount of water utilized by consumers during the highest day of use (midnight to midnight), excluding fire flow.

3 "Peak hour demand" means the amount of water utilized by consumers during the highest hour of use during the maximum day, excluding fire flow,

Figure 2-1 - Regional Map



City of Milpitas Water and Sewer Master Plan Update

RMC Water and Environment

Created 1/2009

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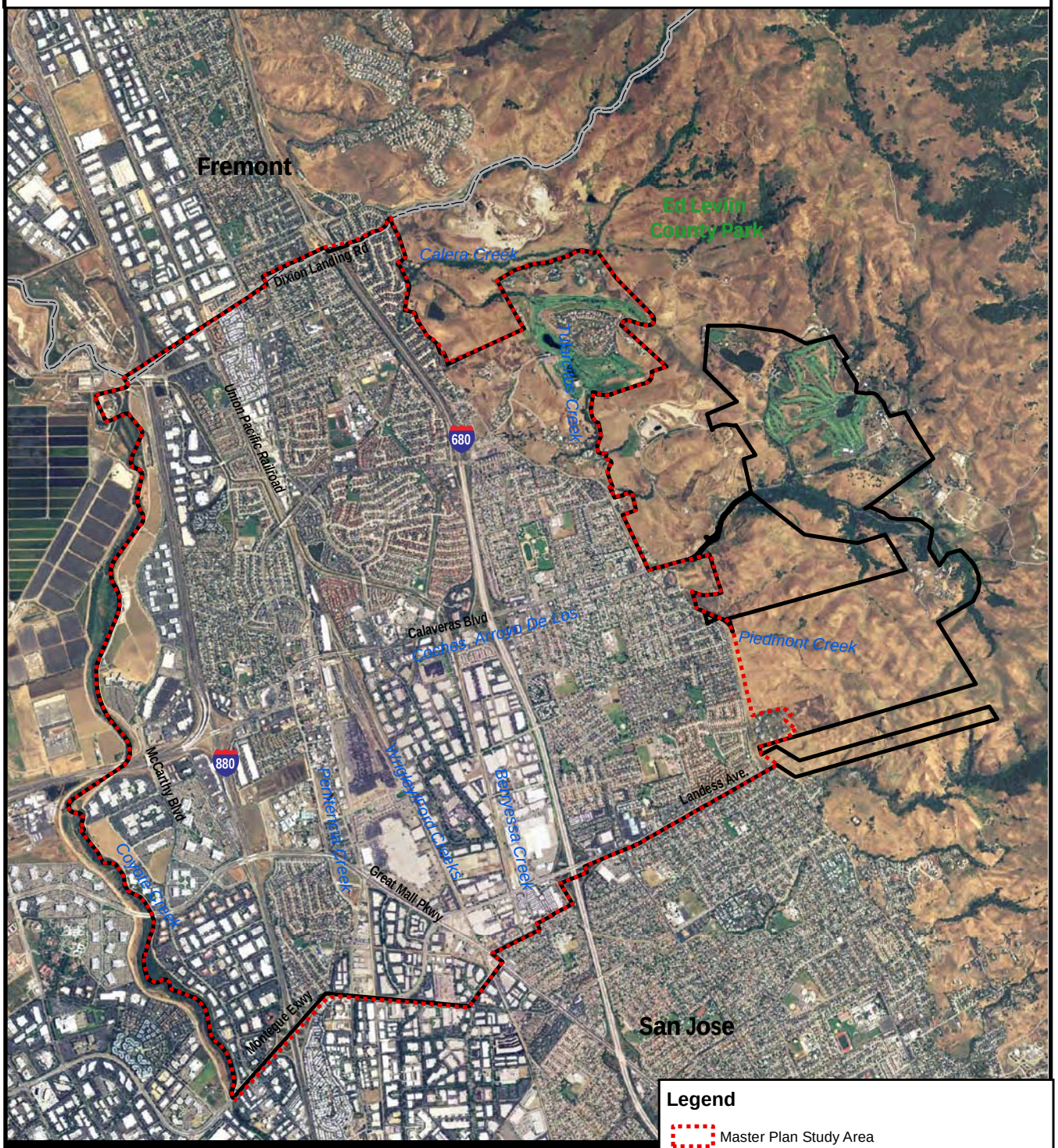
Figure 2-2 - Water and Sewer Master Plan Study Area



City of Milpitas Water and Sewer Master Plan Update

Legend

Master Plan Study Area

Milpitas City Limits

0 2,000 4,000 6,000 Feet

Source: NAIP, 2008; RMC, 2008

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Created: 12/2008

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Existing Potable Water Infrastructure

The City owns and operates the municipal potable water distribution system, which provides potable water to all parts of the City (Figure 2-3: Existing Water Distribution System). The City has a distribution system consisting of five turnouts delivering wholesale water to 203 miles of water mains with approximately 16,000 service connections (City of Milpitas 2005). Other existing facilities include: 5 reservoirs, 5 pump stations, 41 isolation valves, and 16 pressure regulating valves.

The distribution network is divided by elevation with six pressure zones created to allow water to flow from their respective turnout stations and storage reservoirs to their zone of services. The SFPUC supply is distributed to four pressure zones (called "SF" zones) and the SCVWD supply is distributed to two pressure zones (called "SC" zones).

Recycled Water

Recycled water is also currently available in the City to supplement potable water use through the South Bay Water Recycling Program (SBWRP). Under City's Water Efficient Landscape Ordinance No. 238.2, Conservation Ordinance N0. 240.1, and Policies 6.19 and 6.20 in the TASP, new development is required to use recycled water for landscape irrigation if it is available. Additionally, the Midtown Milpitas Specific Plan requires new development in the area to include recycled water lines for irrigation, and for existing irrigation users to convert to recycled water for irrigation as soon as feasible.

Recycled water provided by the SBWRP is delivered through an existing transmission line constructed as part of Phase 1. Recycled water is then distributed through a series of mains that provide landscape irrigation to business/retail areas surrounding McCarthy Ranch and Oak Creek Industrial Park. Phase 2A included the extension of recycled water pipelines northeasterly to Escuela Parkway and Washington Drive, and southerly to McCandless and Centre Pointe Drives. Recycled water use has surpassed 600 AFY since 2000 and is expected to rise to approximately 850 AFY by 2010 (City of Milpitas 2005).

2.3.2 Sanitary Sewage Treatment and Disposal

Sewage Treatment and Disposal

The San Jose/Santa Clara Water Pollution Control Plant (WPCP) provides wastewater treatment for the City as well as for several other cities and sanitary districts in the Santa Clara Valley. The WPCP is a regional facility located in San Jose at 700 Los Esteros Road. The cities of San Jose and Santa Clara jointly own the facility while San Jose operates and maintains the WPCP. The WPCP first began operations in 1956 as a primary treatment facility and was upgraded to a tertiary treatment plant in 1964 and again in 1979. The WPCP's treatment process consists of screening and grit removal, primary sedimentation, secondary (biological nutrient removal) treatment, secondary clarification, filtration, disinfection, and dechlorination.

The WPCP is rated for a treatment capacity of 167 mgd and currently receives an average annual influent of 125 mgd (NPDES Permit No. R2-2003-0085). The overall permitted treatment capacity of the WPCP is allocated between the several cities and sanitary districts which it serves. The cities of San Jose, Santa Clara, and Milpitas are granted the rights to discharge wastewater to the WPCP under the "Master Agreement for Wastewater Treatment." The Master Agreement allows Milpitas to discharge up to an average of 12.5 mgd dry weather peak five-day flow (average dry weather peak week flow). The City of Milpitas' Master Agreement accounts for 7.5 percent of the total average dry weather flow capacity at the WPCP.

Following the completion of the City's 2004 Sewer Master Plan, which facilitates additional growth beyond that contemplated in the 2002 Master Plan, the City purchased an additional one (1) mgd of flow capacity in 2006 from West Valley Sanitation District, increasing the City's limit to 13.5 mgd. Following the adoption of the TASP in 2008, the City purchased an additional 0.75 mgd of sewer treatment plant

capacity from the Cupertino Sanitary District. With the approval of this additional capacity in January 2009. the City's total treatment plant capacity is currently 14.25 mgd.

The City reports its dry weather peak week flow in December of every year. Over the past three years, the City's dry-weather peak week flow was reported at 8.952 mgd in 2008, 10.188 mgd in 2007, and 8.232 in 2006. These flows are currently well below the City's 13.5 mgd inflow limit at the WPCP.

The WPCP discharges treated water to Artesian Slough, a tributary to Coyote Creek and the South San Francisco Bay. The WPCP must meet stringent regulatory disposal requirements, including heavy metal limits and maximum dry weather disposal levels intended to protect sensitive salt marshes. In the dry weather period of May through October, the WPCP is required by the San Francisco Regional Water Quality Control Board (RWQCB) to limit discharge flows from the WPCP to 120 mgd ADWF (average dry weather flows) or to flows that would not further impact rare and endangered species habitat. The WPCP has had programs in place since 1991 to reduce and maintain flows below 120 mgd, and has maintained compliance with this requirement. The average dry weather effluent flow in the last year for which records are available is approximately 100 mgd. Long term plans to remain in compliance with the 120-mgd requirement include on-going water conservation and water recycling.

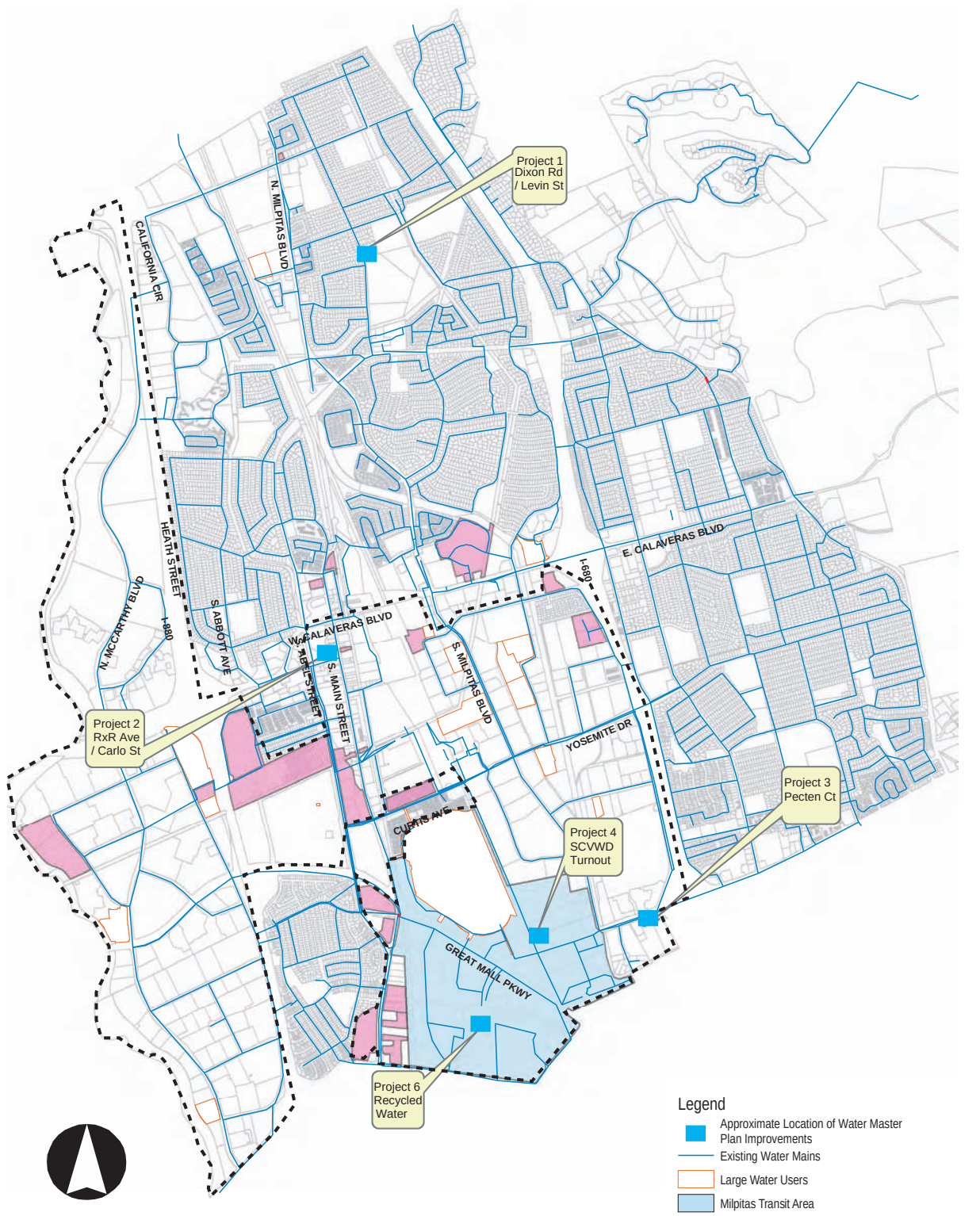
Much of the infrastructure within the WPCP is at or beyond its original design life. The San Jose Environmental Services Department is in the process of determining interim capital improvements at the WPCP that can be implemented over the next 5 to 10 years. The goals for these improvements include: cost effective operations; the anticipation of future needs for capacity treatment and reliability; compliance with federal, state and regional regulatory requirements; providing new opportunities for recycled water utilization; and habitat protection and restoration. Planned improvements to the WPCP and their associated environmental effects are not covered within the scope of this EIR.

Existing Sanitary Sewer Collection Infrastructure

The City's existing sanitary sewer system collects the wastewater flows from approximately 6,000 acres within the City's planning area, serving a population of approximately 69,419 through over 172.5 miles or 860,000 linear feet (LF) of sewer mains. The City's wastewater flows are conveyed mostly by gravity to the Milpitas Main Pump Station, which pumps all the flow to the WPCP through two force mains (see Figure 2-4: Existing Trunk Sewer System). A second pump station, located on Venus Way, connects a low elevation portion of the City to the gravity sewer system. The sewer system includes a number of siphons under the SFPUC Hetch Hetchy water supply pipeline, creeks, and highways.

The City recently completed construction of the Main Sewer Pump Station replacement project, which replaced one of the existing pump stations. The new pump station has a capacity to pump between 39 to 44 mgd. Each force main has approximately 27 mgd of capacity and a total capacity of 54 mgd.

Figure 2-3 - Existing Water System



Legend

- Approximate Location of Water Master Plan Improvements
- Existing Water Mains
- Large Water Users
- Milpitas Transit Area
- Potential Near- and Long-Term Development Projects
- Parcels
- SFPUC Zone [Note: All other areas served by SCVWD.]

Scale: 1 inch equals 3,000 feet

Source: City of Milpitas, 2008; RMC, 2008

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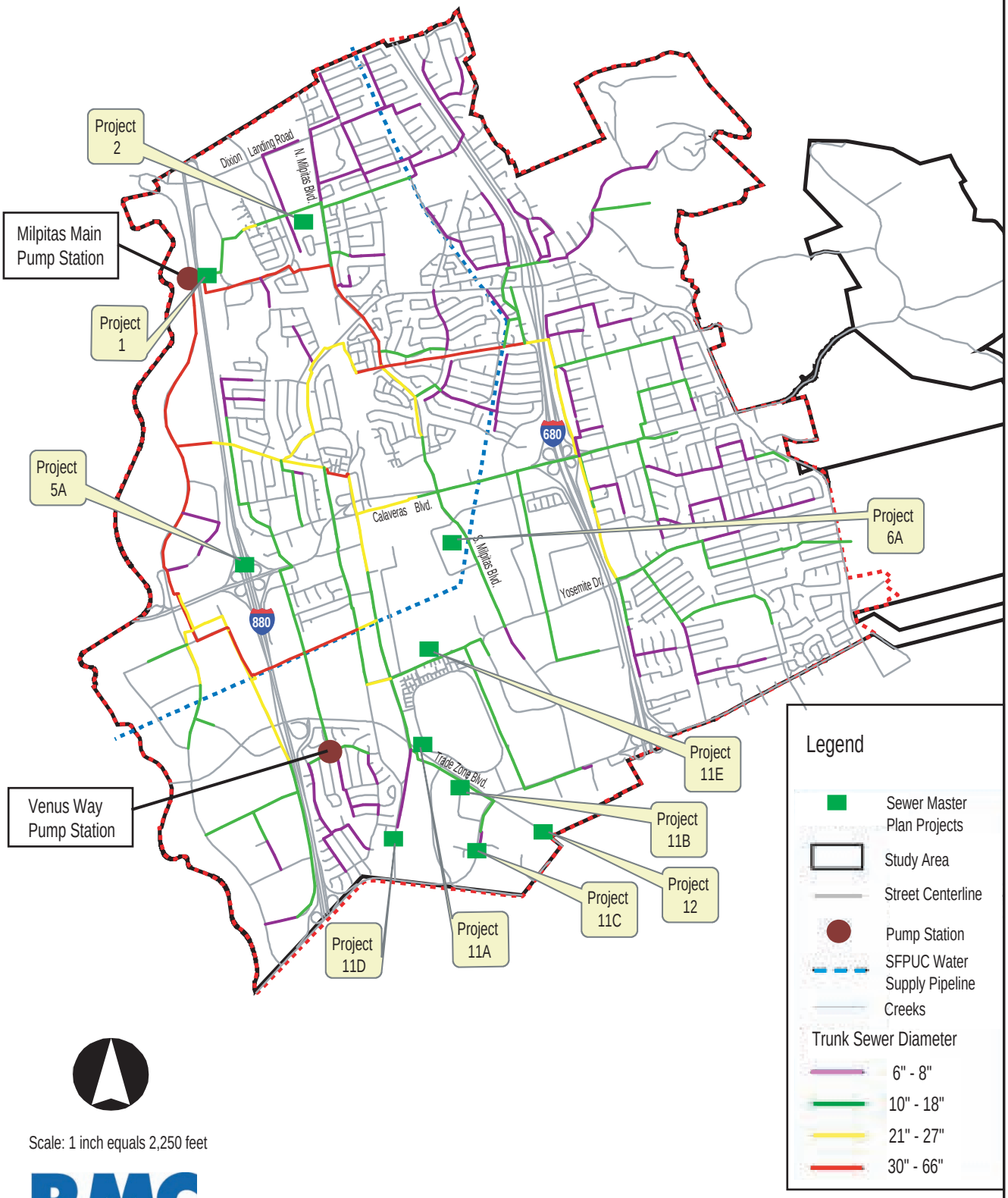
Figure 2-4 - Existing Sanitary Sewer Collection System



Scale: 1 inch equals 2,250 feet

RMC Water and Environment

Source: City of Milpitas, 2008; RMC, 2008

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2.4 Objectives of the Master Plan Updates

The specific objectives of the City's Water and Sewer Master Plan Updates include the following:

- Identify water and sewer pipe and storage deficiencies caused by projected changes in water and wastewater demand, and implement corrective projects to relieve these deficiencies.
- Implement recycled water infrastructure improvements for the TASP.

2.5 Description of the Master Plan Update Improvements

The City intends to formally adopt the 2009 Water and Sewer Master Plan Updates (Master Plan Updates), which outline specific CIP improvements for the City's water and sanitary sewer systems based on modeled deficiencies in response to planned growth. As part of the master planning process, the City developed three new land use buildout scenarios. This EIR analyzes the City's preferred land use buildout scenario, which is identified as Scenario 3 in the Master Plan Updates. Scenario 3 includes improvements necessary to accommodate several near- and long-term development projects currently in the planning process, buildout of the TASP, and modifications to the City's list of LWUs.

Given that the City is a wholesale water customer to the SFPUC and SCVWD, the facility improvements recommended in the Water Master Plan Update are generally conveyance-related. Conveyance improvements include those necessary to correct low-pressures within the system, insufficient fire flow, and head loss, which results from friction and/or changes in elevation within the pipe network. In conjunction with the conveyance improvements recommended, the City expects that additional storage capacity will be necessary within the SCVWD Zone. These improvements are described in detail below.

Similar to the City's water delivery infrastructure, the City conveys all of its wastewater to the San Jose WPCP for treatment and disposal. For this reason, improvements recommended in the City's Sewer Master Plan are also focused on conveyance. Conveyance improvements are generally aimed at removing existing or model-projected hydraulic restrictions within the City's existing collection system to prevent overflows. In this context, the conveyance improvements associated with the Sewer Master Plan are intended to remove bottlenecks (e.g. pipes too small to convey flow located between adequately sized pipes) within existing residential, commercial, and industrial areas. These improvements are described in detail below.

The following sections contain a detailed description of the proposed Master Plan Update improvements.

2.5.1 Water Master Plan Improvements

Water system improvements recommended in the Master Plan Update were derived from updating water demand trends and inputting this data into the City's H2OMap model. The locations of the proposed Water Master Plan improvements are illustrated in Figure 2-5: Proposed Water Master Plan Improvements and described in further detail below.

Dixon Road Valve Installation (W-MP-1). This project will involve the installation of pressure reducing valves and open/close isolation valves near the intersection of Dixon Road and I-680 at approximately 300 existing residences in the Sunnyhills area. These improvements would be installed within pressure zone SF1 to relieve existing low pressure issues within the system. This project is recommended for construction in 2009.

Carlo Street Pipeline (W-MP-2). This project is located in pressure zone SC1 and is in response to existing low pressure for fire flows and water stagnation at the pipeline dead ends. The first part of the project will include the installation of 260 feet of 6-inch pipeline parallel to the existing 8-inch pipeline running between Winsor Street and Railroad Street. The second part of the project includes the

installation of 300 feet of 12-inch pipeline connecting the dead end of the existing 12-inch pipeline running along Abel Avenue to the dead ends of the existing 6-inch and the 12-inch pipelines running along Carlo Street. This project is recommended for construction in 2009 or 2010.

Pecten Court Pipeline (W-MP-3). This project is located in pressure zone SC2 and will consist of installing a 12-inch pipeline connecting an existing dead-end pipeline with a 10-inch pipe at Montague Expressway. This project will require the use of jack and boring construction methods to cross Montague Expressway. The project is proposed in response to existing low pressure and is recommended for construction in 2009 or 2010.

Gibraltar Turnout (W-MP-4). This project involves the construction of the Gibraltar Turnout (or new turnout), which would consist of a new 20-inch turnout facility and a yet-undetermined distance of parallel, 22-inch pipe along Trade Zone Boulevard. This project would also include the upsizing of existing pipe to 26 inches within the vicinity of the new turnout. This project is necessary to address the future excessive velocity and headloss in the pipe network of pressure zone SC2. These improvements are recommended for construction prior to 2020.

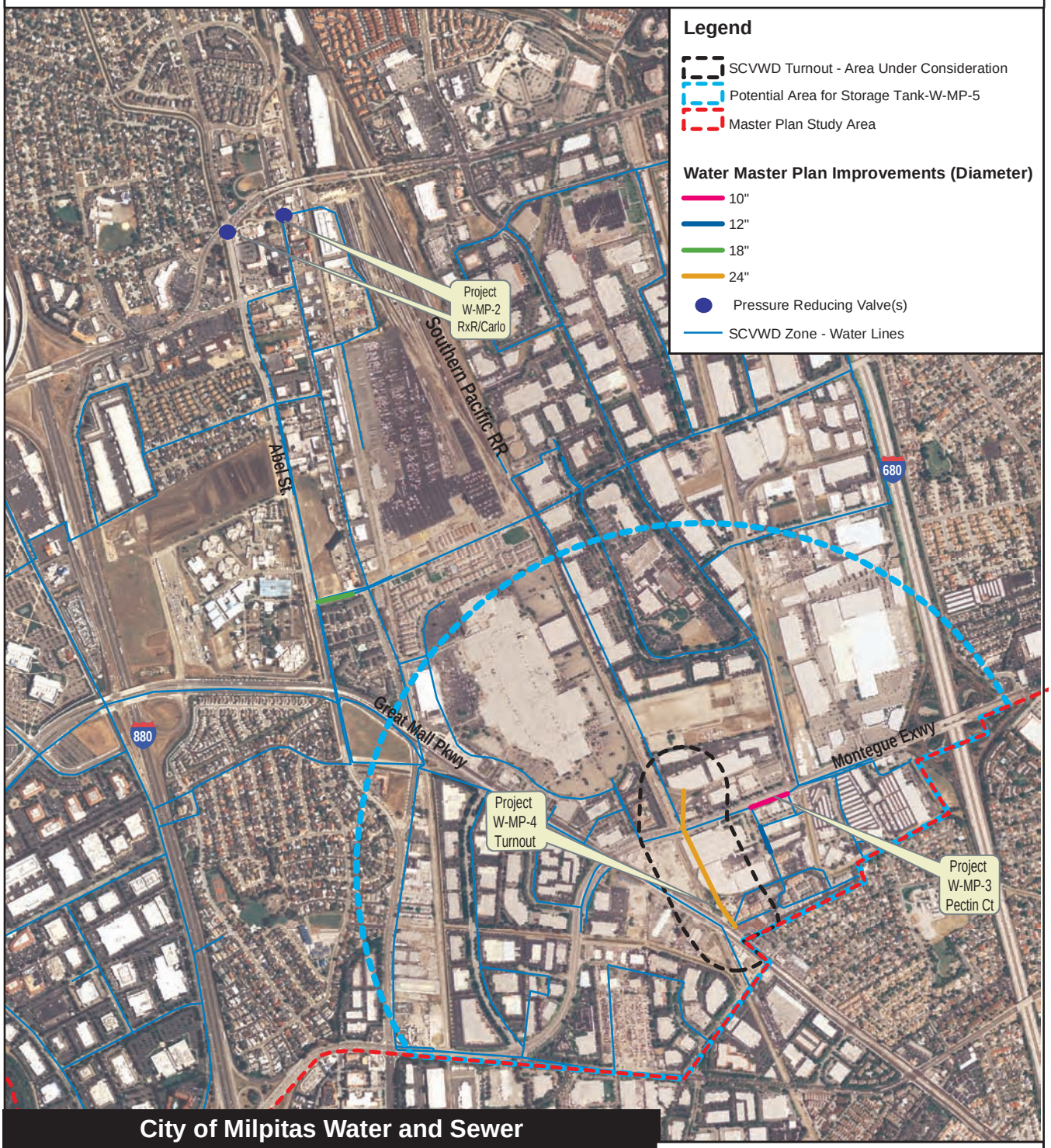
SCVWD Zone Storage Project (W-MP-5). This project is proposed in response to a projected storage shortage in the distribution system of 6.6 million gallons (MG). The projected shortage in storage exists in the SCVWD part of the system; however, since the SCVWD zone is connected to the SFPUC zone, portion of this shortage will be accounted for by extra storage in the SFPUC zone. Currently, the City plans to address the shortage through the construction of a 6.6 MG Tank and Pump Station. Although the additional storage will be added in the SFPUC zone, the City will continue to treat the two distribution systems as completely separate.

The location of these facilities has not been determined at this time and will require additional engineering. However, based on the planned location of SCVWD's turnout facilities, these improvements are anticipated to be constructed within close proximity to the area shown in Figure 2-5. This project would be constructed on approximately 3 acres of land and is recommended for construction prior to 2013. The preliminary capacity of the storage tank's pumping facilities is conservatively estimated at approximately 1,930 horsepower (hp) or 1,440 kilowatts per hour (KWh). This will require the construction of up to (4) four pumps in addition to standby facilities.

Motor control and chemical feed system facilities would be included as part of the storage tank and pump station.

TASP Recycled Water Pipeline Improvements (W-MP-6). The City proposes to construct approximately 14,970 LF of 6 and 8-inch recycled water pipeline within the TASP area. The recycled water pipelines would be constructed along the Montague Expressway, Piper Drive, S. Milpitas Boulevard, Great Mall Parkway, and Trade Zone Boulevard. Total estimated recycled water demand is 162,900 gpd. These improvements are shown in relation to the existing recycled water infrastructure in Figure 2-6.

Figure 2-5 - Water Master Plan - Potable Water Improvements



City of Milpitas Water and Sewer Master Plan Update

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Created: 12/2008

0 500 1,000 2,000 3,000 Feet

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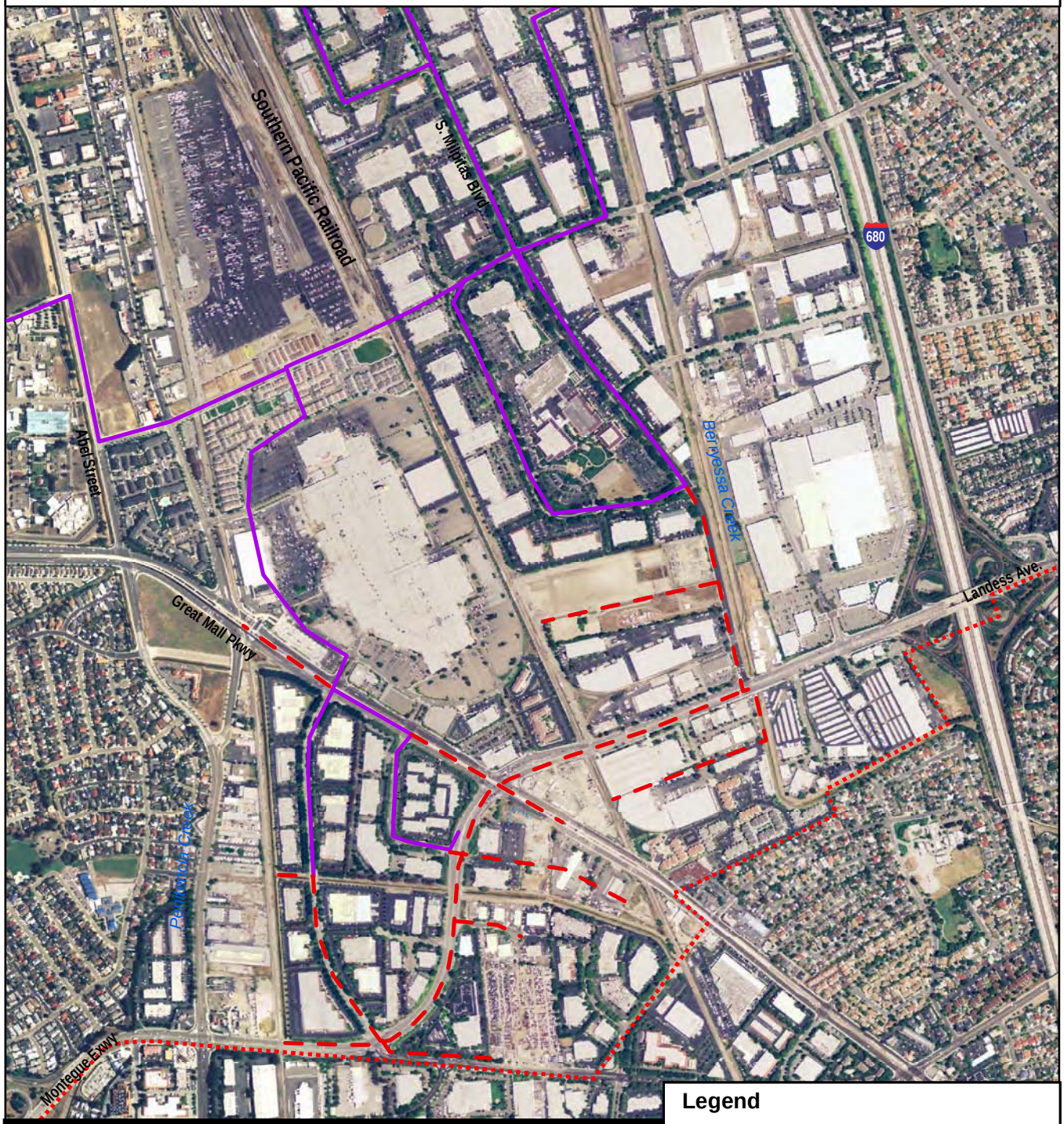
Figure 2-6 - Water Master Plan - Recycled Water Improvements



City of Milpitas Water and Sewer Master Plan Update

RMC Water and Environment

Updated: 6 /2009

Source: City of Milpitas and RMC, 2009

Legend

- Master Plan Improvements - W-MP-6
- Existing Recycled Water Pipelines
- Study Area

0 350 700 1,400 2,100 Feet

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2.5.2 Sewer Master Plan Improvements

Proposed improvements to the City's sanitary sewer collection system were developed based on an analysis using the City's Hydra 6.0 sewer model. Wastewater flows were determined based on three typical flow components: average base wastewater flow (BWF), groundwater infiltration (GWI), and rainfall-dependent infiltration/inflow (RDI/I). BWF represents the sanitary and process flow contributions from residential, commercial, institutional, and industrial users of the system. GWI is groundwater that infiltrates into the sewer through defects in pipes and manholes. GWI is typically seasonal in nature and remains relatively constant during specific periods of the year. RDI/I is storm water inflow and infiltration that enter the system in direct response to rainfall events. RDI/I can occur through direct connections such as holes in manhole covers ,connected roof leaders, or area drains, or through defects in sewer pipes, manholes, and service laterals. RDI/I typically results in short term peak flows that recede quickly after the rainfall ends.

The locations of the recommended Sewer Master Plan improvements are illustrated in Figure 2-7: Proposed Sewer Master Plan Improvements are described in further detail below.

I-880 Sewer Crossing (S-MP-1). This project includes the replacement of 225 LF of 18-inch sewer pipe with 27-inch pipe at an existing I-880 crossing. This project would be constructed using trenchless construction methods, most likely jack and bore. Project S-MP-1 would be constructed in 2020 or later.

North Milpitas Boulevard Sewer Improvements (S-MP-2). This project includes the replacement of 490 LF of 8-inch with 10-inch diameter sewer along North Milpitas Boulevard near Jason Avenue and Homme Way. Project S-MP-2 would be constructed in 2020 or later.

Smithwood Street Sewer Improvements (S-MP-5A). This project includes the replacement of 500 LF of 15-inch sewer pipe with 18-inch pipe and 385 LF of 15-inch sewer pipe with 21-inch pipe along Smithwood Street near Abbott Boulevard. Project construction is recommended for 2020 or later.

South Milpitas Boulevard Sewer Improvements (S-MP-6A). This project includes replacement of existing 12-inch sewer pipe along South Milpitas Boulevard between Calaveras Boulevard and Turquoise with 595 LF of 15-inch pipe and 150 LF of 18-inch diameter sewer pipe. Project construction is recommended for 2020 or later.

South Abel Street Sewer Improvements (S-MP-10B). This project includes the replacement of 1,460 LF of 15-inch sewer pipe with 21-inch pipe along South Abel Street north of East Curtis Avenue to alleviate the potential for upstream overflows in the vicinity of the Great Mall. This project has already been constructed and undergone separate environmental review and, therefore, no additional evaluation of this project under CEQA is necessary.

Great Mall Project A (S-MP-11A). Great Mall Project A is proposed along South Main Street to replace existing 12- and 18-inch pipe with approximately 560 LF of 21-inch pipe and 1,360 LF of 27-inch pipe. This project is proposed to alleviate a bottleneck in downstream pipe that could result in upstream overflows. Currently, the project is recommended for construction in phases over the next five to six years. However, if budget is available, the City proposes construction of the project in a single phase to avoid the extra cost of two separate projects. This project is recommended for construction within the next five years.

Great Mall Project B (S-MP-11B). Great Mall Project B includes various sewer improvements along the Great Mall Parkway between South Main Street and Montague Expressway to replace existing 10- and 15-inch sewer pipe with 360 LF of 15-inch pipe and 2,270 LF of 18-inch pipe. This project is recommended for construction within the next five years.

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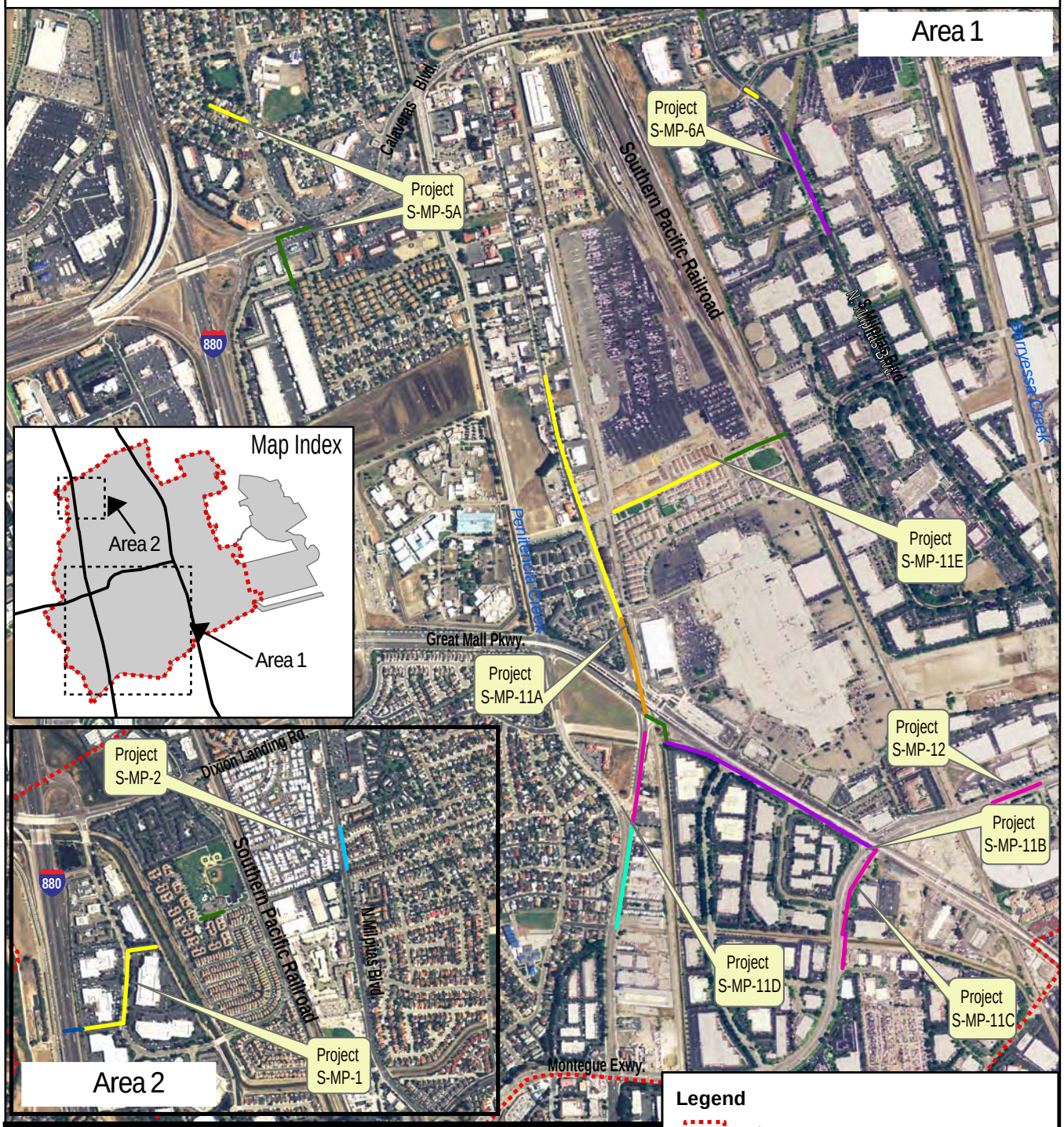
Figure 2-7 - Sewer Master Plan Improvements



City of Milpitas Water and Sewer Master Plan Update

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Created: 12/2008

Legend

Study Area

Sewer Pipe Diameter (inches)

- 10"
- 12"
- 15"
- 18"
- 21"
- 24"
- 27"

0 375 750 1,500 Feet

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Great Mall Project C (S-MP-11C). Great Mall Project C includes various improvements along the Montague Expressway to replace existing 8- and 10-inch sewer pipe with 1,210 LF of 12-inch pipe and 30 LF of 15-inch diameter pipe. These improvements are recommended for construction within the next five years in response to potential overflow concerns.

Great Mall Project D (S-MP-11D). Great Mall Project D includes the replacement of 2,060 LF of 8-inch sewer pipe with 12-inch pipe along South Main Street south of Great Mall Parkway. This project is recommended for construction prior to 2020 and, therefore, the capacity improvements currently proposed will be verified as more specific development plans within the Midtown Specific Plan become available.

Great Mall Project E (S-MP-11E). Great Mall Project E will involve the replacement of over 2,000 LF of sewer pipe along East Curtis Street. More specifically, this project will involve the replacement of 1,415 LF of 18-inch sewer pipe with 21-inch pipe and 690 LF of 15-inch sewer pipe with 18-inch pipe. Construction of this project is recommended for sometime after 2020.

Montague Expressway Sewer Improvements (S-MP-12). This project will involve the replacement of existing 10-inch sewer pipe along Montague Expressway, west of Gladding Avenue, with 12-inch pipes. Construction of these improvements is recommended for sometime after 2020 following buildout.

2.6 Facility Construction Methods

Following certification of the EIR, the City will determine the implementation schedule for the construction of project improvements for the water delivery and sanitary sewer collection systems. Once selected for construction, the City will develop project-specific plans and specifications for each project and file the appropriate documentation for all necessary permits and approvals in advance of awarding a construction contract. In some cases, Developers will be responsible for the full range of project implementation, including plan preparation, project-specific environmental review, permits, and construction. Typical construction methods for water and sanitary sewer conveyance improvements and water storage facilities are described below.

2.6.1 Conveyance Improvements

New conveyance pipelines would be installed in existing and, possibly, newly acquired right-of-ways (ROWs) and would be completely buried. Typical pipeline construction processes are described below:

Staging Areas. At various locations along the construction route(s), staging areas would be required to store pipe, construction equipment, and other construction-related material. Staging areas would be established along the route where space is available, such as vacant lots, roadway turnouts, parking lots, etc. Certain staging areas may be used for the duration of project construction due to their favorable location in terms of short access, lack of sensitive receptors, etc. In other cases, as pipeline construction moves along the route, staging areas may also be moved to minimize hauling distances and avoids disrupting any one area for extended periods of time. Potential staging areas include vacant private and public land, parking lots, and segments of closed traffic lanes. The City, Developer, or its Contractor, would make short-term arrangements for the use of staging areas. Staging areas would not be located in sensitive habitat areas unless the habitat would be permanently lost because of subsequent development or facility siting and all required approvals are in place.

Surface Preparation. Surface preparation involves removing any structures (such as fences), pavement, and/or vegetation from the surface of the trench area. Equipment used for this activity includes jack hammers, pavement saws, graders, bulldozers, loaders, and trucks.

Trench Excavation/Shoring. A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, trenches would have vertical side walls to minimize the amount of soil excavated,

and the area needed for the construction easement. Soils excavated from the trenches, if of suitable quality, would be stockpiled alongside the trench or in staging areas for later reuse in backfilling the trench. If not reusable, the soil would be hauled off-site for disposal. Disposal options include use as cover material at sanitary landfills and use as "clean fill" at other sites. In general, pipe trenches would be 2- to 5-feet wide, and 4- to 10-feet deep.

Pipeline trenches, in any given location, would be open for two to three days on average. During construction, vertical wall trenches would be temporarily "closed" at the end of each work day, by covering with steel plates or backfill material, or installing fences to restrict access.

Trenches would be backfilled with either reused excavated soil or imported material. Dump trucks would be used to deliver imported, engineered backfill material to stockpiles near the trenching operation. Native soil would be reused for backfill to the greatest extent possible; however, the soil may not have the properties necessary for compactibility and stability. In addition, following the installation of the pipe, the City expects that there will be a surplus of native soil material requiring off-site export. For the purposes of this EIR, the City assumes that approximately 130 cubic yards[4] of soil export would be required for each 100-foot segment of pipeline installed.

Surface Restoration. The final step in the installation process would be to restore the ground surface. When the pipe is installed in a paved roadway, repaving would occur after construction. New asphalt or concrete pavement would be placed to match the surrounding road type. For asphalt repaving, a temporary asphalt material may be installed to allow traffic to use the roadway immediately after sewer construction. A repaving crew would follow the pipe installation crew and prepare the road surface for repaving. Final repaving would be done after pipe installation was completed for a whole street, width, lane width, or trench width.

Trenchless Construction Methods. Under certain circumstances, conveyance pipelines would need to be installed without disturbing the ground surface. In these circumstances, a tunneling method(s) referred to has horizontal directional drilling (HDD) or jack and boring methods would be employed. These two methods are described in more detail below:

> ***Jack and Boring.*** Jack and boring employs a non-steerable system that drives an open-ended pipe laterally using a percussive hammer, thereby resulting in the displacement of soil limited to the wall thickness of the pipe. For this construction method, pits would be dug on either side of the surface feature to be avoided (e. g. water crossing or heavily traveled roadway). The pits are typically 10 to 15 feet wide and 50 feet long. The depth would depend on the feature to be avoided. The boring equipment and pipe would be lowered into the pit and aligned at the appropriate depth and angle to achieve the desired exit location. A compressor would supply air to the pneumatic ramming tool to thrust the pipe forward. A cutting shoe may be welded to the front of the lead pipe to help reduce friction and cut through the soil.
>
> Several options are available for ramming various lengths of pipe. An entire length of pipe could be installed at once or, for longer distances, one section at a time could be installed. In that case the ramming tool would be removed after each section is in place and a new section would be welded on to the end of the newly installed section. The ramming machine would be connected to the new section and ramming would continue. In certain installations, a winch could be connected to the lead end of the pipe to assist in pulling it out. This would require installation of a connection via a pilot hole.
>
> Depending on the size of the installation, spoils from inside the pipe would be removed with compressed air, water, a pig system, or a combination of techniques. A seal cap would be installed

[4] Average soil export is based on the removal of 4 cubic feet of soil material per linear foot of construction.

on the starter pit side of the installation and spoil would be discharged into the receiver pit. Using this technique, ground surface disturbance would not occur.

Horizontal Directional Drilling (HDD). HDD crossings are installed by using a drill rig laid on its side, with the top of the drill rig tilted up at to an angle of ten degrees from horizontal. The bore entry holes are drilled from the starting point to the destination point. In preparing the hole, a small diameter (3" wide) pilot hole is first drilled in a gentle arc from the drill rig to the completion hole on the other side of the area to be crossed. This pilot hole can be guided using magnetic readings transmitted from the drill bit back to the drill rig. After the initial hole is drilled, the final bore entry pit, approximately 10 feet square by approximately 8 feet deep, is constructed and is used as the collection point for Bentonite drilling mud and drill spoil. During the directional drill procedure, drilling mud is injected into the drill and recovered from the entry hole until the drill bit surfaces at the exit pit. Once the drill bit surfaces, the drilling mud is recovered at both the entry and exit hole, pumped into tanks and transported back to the rig location for cleaning and eventual reuse.

2.6.2 Structural Facility Construction

Typical construction activities involved in the construction of water pump station and storage sites include the following:

Site Preparation. This phase of construction would involve tree and brush removal and structural demolition, if necessary. Conventional survey techniques would be used to define the land limits of the new storage facility. This phase of construction would also include additional geotechnical exploration to confirm sub-surface geologic conditions prior to facility construction.

Earthwork. After the site is cleared of underbrush and trees, grading would begin. It is expected that the contractor would attempt to balance cut and fill quantities within the construction area to the extent feasible. Material excavated would be used to create screening berms and/or spread across other areas of the site to establish a preliminary grade for forming concrete slabs. All excavated materials would be used on-site. Following rough grading, additional excavation would bring the site to final grade and allow for preparation for underground piping and structural slabs.

Additional site work would include paving, temporary and permanent security fencing, and site lighting. Additional access roads and a staging area would also be provided to accommodate construction, operation, and maintenance.

In certain instances, excavations would require dewatering of shallow groundwater, and potentially the development of surface and/or subsurface drainage systems.

Structural Improvements. Prior to pouring concrete, structural forms, rebar, and conduits would be installed for the storage facility. After the concrete is poured, it would be finished and cured before the forms are removed. After the concrete footing, slab, and walls are poured, the overhead structural steel and roof decking would be erected.

Paving. All parking areas, roads, and designated locations would be paved. Paving would be performed incrementally throughout the site area as large construction and non-rubber tread equipment are removed from the site.

Pumps, Motors, and Back-Up Generators. The power service for the pumping facilities would be upgraded, if necessary, and standby emergency generators would be installed to provide a backup supply.

Electrical/Instrumentation. After the storage structure is erected, electrical equipment (e.g., machinery control consoles, switchboards, lighting, etc.) would be installed. Site work such as installing pull boxes, conduits, and cables would continue. After roofs on the buildings and facilities are secured, flow meters,

level probes, pressure meters, process analyzers, and other instrumentation would be installed. Additionally, water quality adjustment, sampling, and monitoring equipment would be installed.

Startup and Testing. This phase of construction would involve City personnel (i.e., engineers, inspectors, operators, maintenance crews, and instrumentation specialists) working with the equipment vendors to understand how each piece of equipment would operate and function. Under City supervision, the construction contractor would startup and test the equipment on-site to guarantee that pumps, motors, monitoring and communication equipment are functional and able to meet design standards.

2.6.3 Construction Area(s) and Footprint

Prior to the start of pipeline construction, the City would complete easement and permit acquisitions and finalize land surveys to locate the centerline and/or footprint(s) of the facility improvements, which will include temporary use areas (e.g. staging areas). For the purposes of this EIR, the City has applied a standard 60-foot construction ROW or zone of impact to linear projects in addition to determining the area of effect for staging areas, the construction yard, and/or other temporary use areas. These areas will be surveyed and staked, along with existing utility lines and other sensitive resources identified by Federal and State agencies, to prevent accidental damage during pipeline construction.

2.6.4 Trip Generation

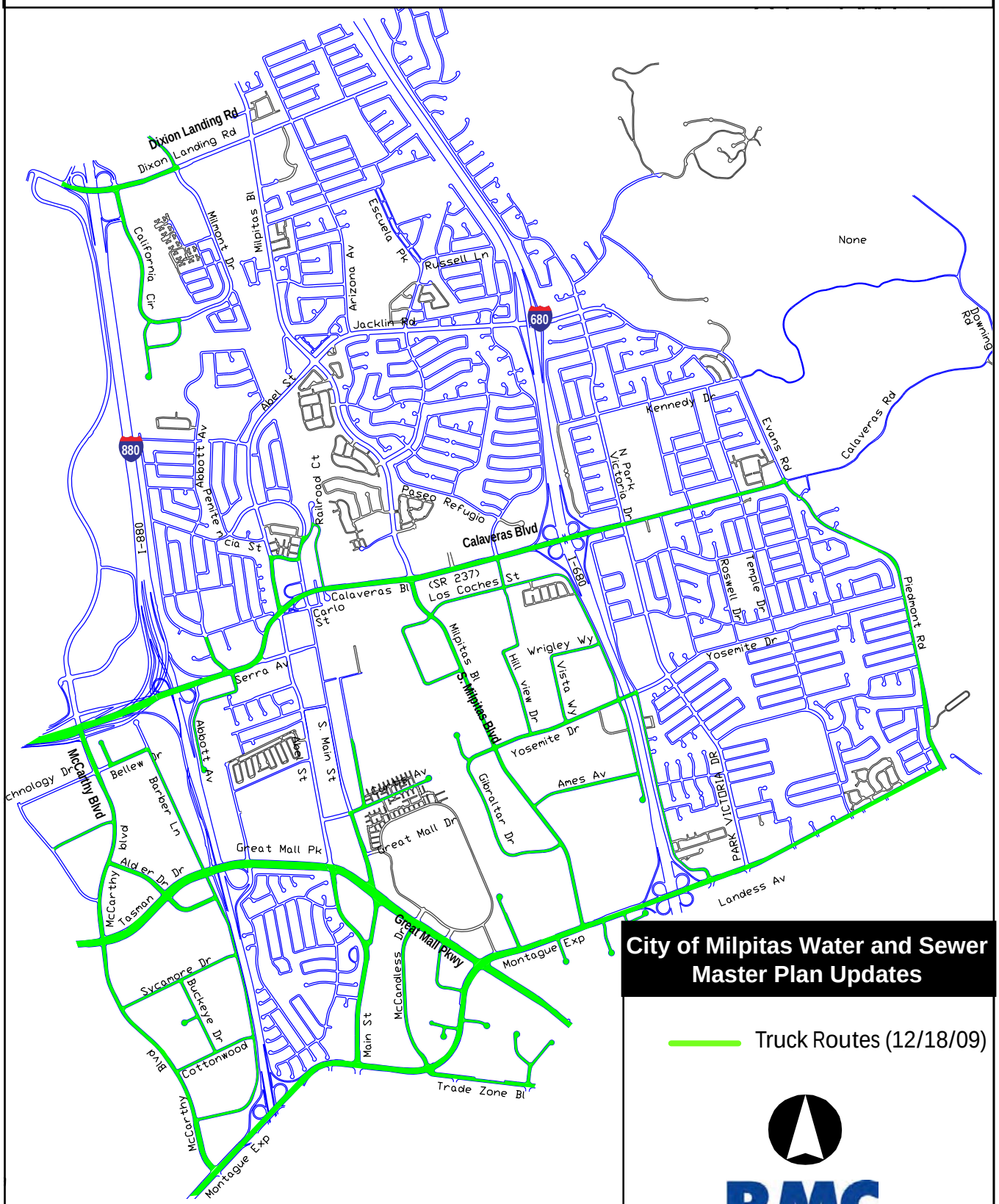
For the purposes of this EIR, the City has estimated a worst-day scenario for Master Plan-related construction impacts. It has been assumed that the most intense construction activities would occur during periods when multiple water and sewer projects are undergoing concurrent construction, which is expected to occur in 2010 and 2011. In order to characterize and analyze potential construction impacts, the City has identified maximum crew size, truck trips, and worker trips, based on expected excavation volumes and quantities of imported materials. To support these activities, the main pieces of equipment that may be used at any one time during construction may include:

- track-mounted excavators
- backhoes
- graders
- crane
- scrapers
- compactors
- end and bottom dump trucks
- front-end loaders
- water trucks
- paver and roller
- flat-bed delivery trucks
- forklifts
- concrete trucks
- compressors/jack hammers

During peak excavation and earthwork activities, the combined water and sewer projects could involve up to four construction crews working simulations. In assuming an average crew size of 15, including inspectors, construction activities could generate up to 120 round-trip truck trips per day. In addition, during peak construction activities, the Project could require up to 20 round-trip concrete delivery and/or soil export truck trips per day. However, average daily delivery truck trips would be less and range from about 4 to 5 round trips per day during much of construction. Other deliveries of materials like process, mechanical, and electrical equipment; filter media; rebar for concrete; structural steel, CMU block, and wood trusses for buildings; and electrical conduit would also occur throughout construction. Estimated average general materials delivery round trips per day are 1 to 2 per day.

As part of construction, the City would use existing designated truck haul routes as shown Figure 2-8. These roadways would include East/West Calaveras Blvd, South Milpitas Blvd, Abbott Ave, South Main St, South Abel Street, Curtis Ave, Great Mall Parkway, and Montague Expressway, South McCarthy Blvd, and Dixon Landing Road, west of North Main Street.

Figure 2-8 - City-Designated Truck Routes



City of Milpitas Water and Sewer Master Plan Updates

Truck Routes (12/18/09)

RMC Water and Environment

Created 12/2008

Source: City of Milpitas Transporation Department, 2008

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Construction-Related Water Use

Water would be required to support Project-related construction for HDD operations, hydro-testing, pipeline disinfection, and dust control. Traditional sources would include:

- Public/Private water system (via fire hydrants).
- Waterways (canals, creeks, or rivers).
- Water brought in by truck or storage tanks.

Following the construction of new pipeline facilities, each segment would undergo hydrostatic testing to City standards, using water from the City's existing distribution system. Any leaks would be repaired and the section retested until specifications are achieved.

Following testing, the pipeline would be disinfected in accordance with City standards. Water utilized in during hydrostatic testing and disinfection procedures would be disposed of in accordance with contract documents and the City's National Pollutant Discharge Elimination System (NPDES) Permit.

Water quality would be measured from the water source prior to use and after use during discharge to assure that water quality is not compromised as a result of the test. All hydrostatic testing water would be discharged using a flow manifold and energy dissipater to control the rate of discharge and to minimize erosion and turbidity to meet the standards set forth under the terms and conditions of the NPDES General Construction permit.

Corrosion Protection and Detection Systems

External corrosion control measures for individual projects will be dependent on localized soil conditions and may include protective coating on the exterior of the pipe and use of cathodic protection systems. These systems are designed to meet the minimum requirements established by the City for protection of metallic facilities from external, internal, and atmospheric corrosion. The location and installation of a rectifier (used for cathodic protection of the pipe) would be determined during final engineering.

Existing Utilities

Prior to construction, the project contractor(s) will implement an underground services alert (USA) to identify existing underground utilities and service connections prior to commencing any excavation work. The exact utility locations would be determined by hand-excavated test pits dug at locations determined and approved by the construction manager (also referred to as "pot-holing"). Temporary disruption of service may be required to allow for construction. Service on such lines would not be disrupted until prior approval is received from the City and the service provider.

2.7 Responsible Agencies, Permits and Approvals

Table 2-1 summarizes the potential permits and/or approvals from other agencies that may be required prior to construction of the individual water and sewer improvements projects. In addition to approvals from these agencies, the City would also conduct a project-level review in accordance with the requirements of CEQA.

Table 2-1: Responsible Agencies and Coordination

Agency	Type of Approval
FEDERAL	
U.S. Fish and Wildlife Service	Federal Endangered Species Act Compliance (Section 7 Consultation)
U. S. Army Corps of Engineers	Clean Water Act, Section 404, Nationwide Permit(s)
STATE	
California Department of Fish & Game (Region 3)	State Endangered Species Act Compliance Section 1600 Streambed Alteration Agreement
San Francisco Regional Water Quality Control Board (Region 2)	National Pollutant Discharge Elimination System, Construction General Permit Clean Water Act, Section 401, Water Quality Certification
California Department of Public Health	Amended Domestic Water Supply Permit
California Department of Transportation	Highway Encroachment Permit
State Historic Preservation Office	Section 106 Consultation in compliance with the National Historic Preservation Act
California Department Of Water Resources, Division Dam of Safety	Approval of Water Storage Tank (> 5 million gallons)
LOCAL	
Bay Area Air Quality Management District	Authority to Construct Authority to Operate
City of Milpitas	Roadway Encroachment Permit Tree Removal Permit Construction Stormwater Pollution Prevention Plan
City of San Jose	Roadway Encroachment Permit Tree Removal Permit (Note: These permits are only required if facilities are constructed within San Jose's jurisdiction.)
Santa Clara Valley Water District	Waterway Encroachment Permit
San Jose Water Pollution Control Plant	Discharge permit(s) for construction-related dewatering and hydrostatics testing and disinfection discharges to sewer
Union Pacific Railroad	Railroad Encroachment Permit
South Bay Water Recycling	Coordination of recycled water pipeline extensions
Santa Clara Valley Transportation Authority	Public Service Utility Easement
San Francisco Public Utilities Commission	Potential Utility Encroachment into Sunnyhills Turnout
Pacific Gas and Electric	Possible Service Extension(s) Potential Utility Encroachment Permit

Chapter 3 – Environmental Analysis

Chapter 3 Environmental Analysis

3.1 Introduction to Environmental Analysis

This Draft EIR provides analysis of impacts for those environmental topics where it was determined through analysis that the Master Plan Updates would result in "potentially significant impacts." Sections 3.1 through 3.11 discuss the environmental impacts that may result with approval and implementation of the Master Plan Updates.

Environmental topics evaluated include: aesthetics; air quality; biological resources; cultural resources; geology and soils; public health and hazards; hydrology and water quality; planning and land use; noise; transportation; and utilities and service systems. Each environmental issue area that follows contains a description of:

1. The environmental setting as it relates to the specific resource topic;
2. The regulatory framework governing that issue;
3. The methodology used in identifying the issues;
4. The significance criteria;
5. An evaluation of the program-specific impacts and identification of mitigation measures;
6. A determination of the level of significance after mitigation measures are implemented; and
7. An analysis of potential cumulative effects.

3.1.1 Impact Mechanisms

During analysis of potential environmental impacts, the following elements of the Master Plan Updates were evaluated for their potential to result in changes in resource areas:

- Construction activities, including ground disturbance, grading and excavation, vegetation removal, trench excavation, tunneling, and surface restoration;
- Operation and maintenance of water conveyance, storage, and pumping facilities; and
- Operation and maintenance of wastewater collection facilities.

3.1.2 Determination of Impact Significance

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. According to the CEQA Guidelines Section 15382, a significant effect on the environment means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" For each category of physical condition evaluated in this EIR, thresholds of significance have been developed: (1) using criteria discussed in the CEQA Guidelines; (2) criteria based on factual or scientific information; (3) criteria based on regulatory standards of local, state, and/or federal agencies; and/or (4) criteria based on goals, objectives, and policies identified in applicable city, county, and regional plans.

Mitigation measures identified in this report are characterized in one of three categories: (1) measures necessary to reduce the identified impact below a level of significance; (2) measures recommended to reduce the magnitude of a significant impact, but not below a level of significance; and (3) measures recommended to reduce the magnitude of a less than significant impact. Where implementation of more than one mitigation measure is needed to reduce an impact below a level of significance, this is noted.

3.1.3 Issues Determined to Have Less Than Significant or No Impacts

Based on comments received during the NOP circulation period (see Appendix B) and the professional judgment of City staff, a number of issues are not expected to have any significant program-level or

cumulative impacts when compared to existing conditions, and do not require further analysis. These resource areas include:

- Agricultural Resources
- Mineral Resources
- Public Services
- Recreation

Further discussion for each of the above resources areas is provided below to convey the City's supporting rationale as to why program-level and cumulative effects to these resources would not be significant with the implementation of the proposed improvements. Issues related to indirect impacts of the Master Plan Update improvements and the secondary effects of growth are addressed in *Chapter 5, Other CEQA Considerations* under the topic of growth inducement.

Agriculture Resources

A review of Important Farmland Maps (2006) prepared by the California Department of Conservation classifies a majority of the Study Area as "Urban and Built Up Land" and Grazing Land" (CDC 2006). Although several small parcels within the Study Area are designated as "Prime Farmland," these areas are generally situated along the Coyote Creek, west of N. McCarthy Blvd. and planned for industrial uses under the City's General Plan, as amended through 2008. None of the proposed Master Plan Update improvements are located on or adjacent to these parcels and, therefore, no direct conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur as a result of their implementation. Based on these findings, the Master Plan Updates would not result in the conversion of Important Farmland, as mapped by the State, to non-agricultural use.

The proposed water and sewer facility improvements would be constructed within existing roadway rights-of-way (ROW) and/or on infill lots where acquisition can be achieved. Implementation of the Master Plan Updates would not disrupt existing agriculture operations within or outside the City limits and, as a result, the proposed improvements would not conflict with existing agricultural zoning or an active Williamson Act Contract. In this context, no impact is expected and no mitigation is required.

Mineral Resources

Santa Clara County contains a wide variety of mineral resources. Both the USGS and CGS have evaluated the potential locations and production capacity of various types of extractive resources throughout the county. Several inactive and active quarries are located east of the City within the Los Buellis Hills along Felter Road; however, these resources are located outside of the Study Area. Based on these findings, implementation of the Master Plan Updates would not result in the loss of availability of known mineral resources. Therefore, no impact is expected and no mitigation is required.

Public Services

The Master Plan Updates would not directly generate population growth or require construction and/or expansion of public schools, parks, fire, police, or other public services. The planned developments that these improvements would serve will be conditioned by General Plan policies, as amended through 2008, that support facility construction and operation of public services for new residents, including schools, parks, fire, police, or other public facilities. As a result, the Master Plan Updates would not have any adverse impacts and no mitigation is required.

Recreation

The Master Plan Updates do not include the construction of new or expanded recreational facilities, which could result in adverse physical effects to the environment. Further, implementation of the Master Plan Updates would not directly induce population growth, which could otherwise increase the use of existing

neighborhood and regional parks. Although the Master Plan Update improvements help to serve planned population growth in the City, new development will be conditioned by General Plan policies, as amended through 2008, that support construction of recreational facilities for the new residents. As a result, the Master Plan Updates would not have any adverse impacts and no mitigation is required.

Potential disruptions to existing recreational trails and bike paths within the Study Area are addressed in *Section 3.11, Transportation* in the context of alternative transportation.

3.1.4 Cumulative Analysis

A cumulative impact consists of an environmental impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. CEQA requires that an EIR discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects (CEQA Guidelines 15130(a)). CEQA Guidelines 15130(b) requires that the discussion of cumulative impacts reflect the severity of the impacts and their likelihood of occurrence.

This discussion provides a listing and map identifying other related future projects near the location of the improvements associated with the Master Plan Updates.

Projects Considered in Cumulative Analysis

In identifying projects that may contribute to cumulative impacts, the City identified a list of past, present, and reasonably anticipated future projects that may generate related or cumulative impacts, including those that are outside of the control of the Lead Agency. The projects considered in this cumulative analysis were determined based on the delineation of a Cumulative Study Area, which for the purposes of this EIR, is coterminous with the Study Area as presented in Figure 2-2. The geographic boundaries of the Cumulative Study Area were selected because they represent the area where the effects resulting from the implementation of one or more of the water and sewer improvements could contribute to cumulative environmental impacts, generally in the form of construction-related nuisances. These development and infrastructure projects are illustrated in Figure 3.1-1 and summarized below and are either (a) within the Study Area or (b) immediately adjacent to it. The identified projects are under construction, have been recently approved, or are pending approval.

Freight Railroad Relocation Project [State Clearinghouse (SCH) No. 2007082107]. The Santa Clara Valley Transportation Authority (VTA) is proposing the Freight Railroad Relocation Project in preparation of replacing the existing freight tracks through Milpitas to maintain and enhance functionality for a future extension of the San Francisco Bay Area Rapid Transit (BART) system. This project includes constructing temporary tracks, to facilitate the construction of the multiple cell box culvert for Berryessa Creek, utility relocations, channel reconnection work, retrofitting the Abel Street bridge footings, and seismically retrofitting the Abel Street Bridge.

Silicon Valley Rapid Transit Corridor -- BART Extension to Milpitas, San Jose and Santa Clara (SCH No. 2002022004). The VTA is planning to extend the BART system to Silicon Valley through the City via the Union Pacific Railroad (UPRR) ROW. The project would include the creation of two VTA light-rail transit (LRT) stations and the future Milpitas BART station at Montague Expressway and Piper Drive.

Midtown Milpitas Specific Plan (SCH No. 2000092027). The Midtown Milpitas Specific Plan provides development goals and land use directives for the Midtown area of the City for a 20-year planning horizon. The Specific Plan includes land use designation changes, standards, public and private improvements, and urban design recommendations. In addition, the specific plan proposes the changes to the existing and planned roadway system within the Midtown Area.

McCarthy Ranch Mixed Use Project (SCH No. 2008092082). This project represents final implementation phase of the City-approved McCarthy Ranch Master Plan along the northern reach of McCarthy Boulevard. The project is comprised of three noncontiguous properties totaling approximately 58.5 acres. The project would accommodate up to approximately 1.07 million square feet of office park and approximately 95,000 square feet of community shopping center floor area.

Campus at McCarthy. This project includes new office/commercial development on approximately 9.34 acres of the McCarthy Ranch Master Plan Area. This project is located at the southern end of the McCarthy Ranch Master Plan Area, just north of the intersection of McCarthy Boulevard and SR 237.

Landmark Tower Mixed-Use Development Project (SCH No. 2007062074). This project includes the redevelopment of a three-acre site located at 600 Barber Lane with an 18-story mixed-use building and 8-level parking garage.

City of Milpitas Square General Plan Amendment (GPA) GP07-0002/Zoning Amendment ZA07-0001/S-Zone Review SZ08-0002 (SCH No. 2008022065). This project is intended to allow development of a mixed-use residential and commercial development, consisting of up to 175,000 square feet of commercial space and a maximum of 673 residential units (40 du/acre per gross acre). The project would be constructed in five phases with a total of six structures on the site at buildout of the project.

Sinclair Renaissance. This proposed 80-unit residential development is located along the Sinclair Frontage Road, west of I-680, and situated on 9.65 acres. The project would involve a rezoning from the M2-S zone to R1-3.

Fairfield/Murphy Ranch Residential Development Project (SCH No. 2007022106). This project consists of a 659 unit residential development, including a public park and trail connection located on a 21.73 acre site located west of Murphy Ranch Road, south of Technology Dr., north of Hetch Hetchy pipeline and east of Coyote Creek.

Milpitas Transit Area Specific Plan (SCH No 2006032091). The TASP is a planning document intending to guide redevelopment of older industrial lands in the immediate vicinity of existing light rail stations and a future BART station to create a vibrant, high intensity transit-oriented district. Buildout of the TASP is anticipated to result in construction of approximately 7,100 new residential units, 1 million square feet of new office space, 285,000 square feet of retail space, and 175,000 square feet of hotels.

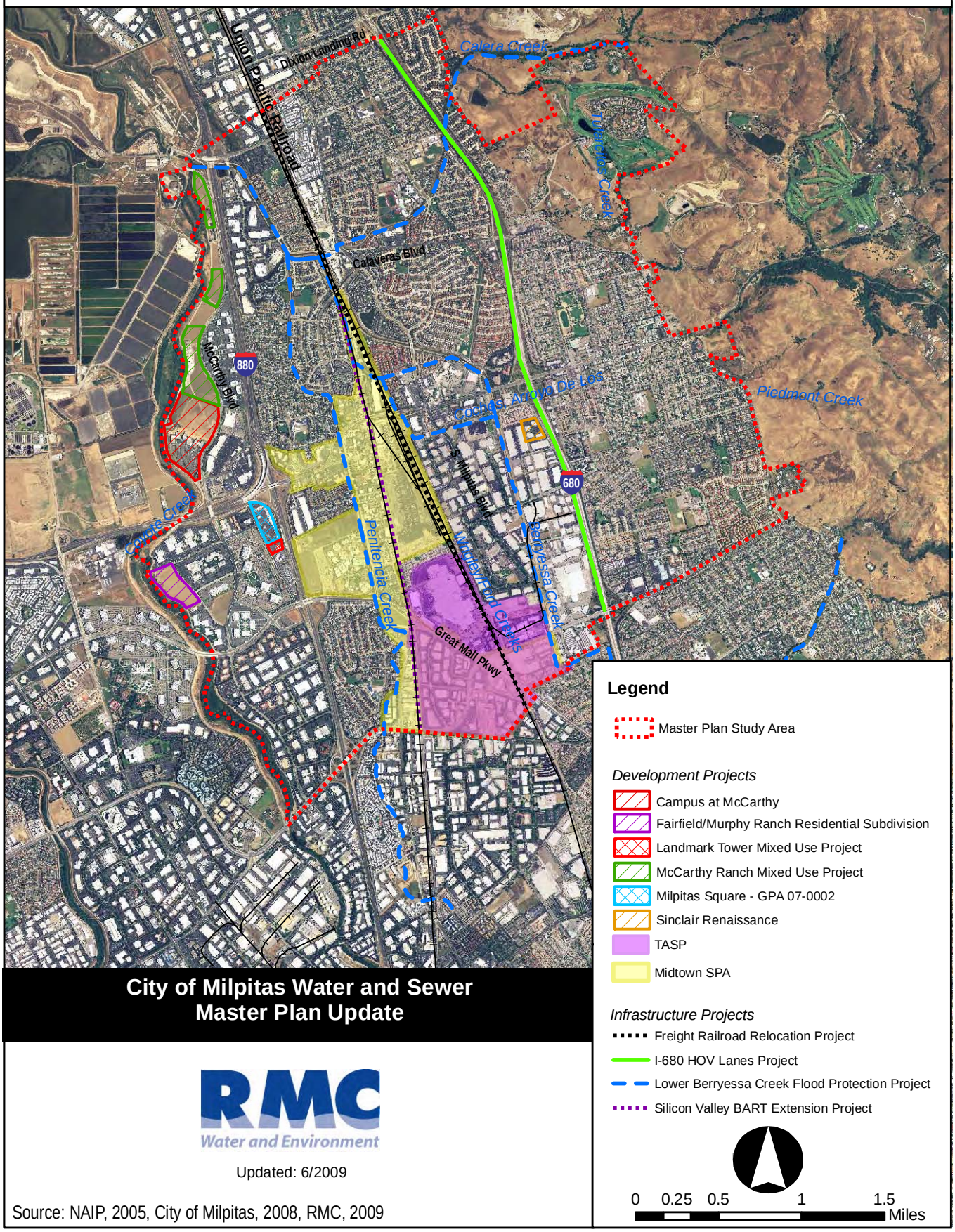
State Highway Improvements. The California Department of Transportation (Caltrans) has identified the following planned improvements for the I-680 and I-880 corridors within the vicinity of Milpitas.

Interstate 680 HOV Lanes Project (SCH No. 1999122004). The I-680 Sunol Grade HOV lane project involves the construction of a southbound HOV lane, auxiliary lane, ramp metering, and related improvements along a 21.7 miles stretch of I-680. This project would extend along I-680 through the City. Construction on the southbound HOV lane is scheduled to begin Fall 2008 and end Fall 2011. The northbound HOV lanes from Calaveras Boulevard (Milpitas) to Stoneridge Drive (Pleasanton) are scheduled to begin Spring 2013 and end Spring 2015.

I-680 and I-880 Sound Walls. Construct sound walls along I-680 and I-880. Scheduled to begin Fall 2011 and end Spring 2013.

Interstate 880 HOV Lanes. Widen I-880 and add HOV lanes. Scheduled to begin Spring 2011 and end Spring 2013.

Figure 3.1-1 - Cumulative Projects Map



City of Milpitas Water and Sewer Master Plan Update

RMC Water and Environment

Updated: 6/2009

Source: NAIP, 2005, City of Milpitas, 2008, RMC, 2009

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Lower Berryessa Creek Flood Protection Project (SCH No. 2007092084). This project includes the construction and maintenance of flood protection improvements to a segment of Berryessa Creek that extends from Lower Penitencia Creek near I-880 to Calaveras Boulevard near I-680. This project also includes improvements to two associated tributaries: Tularcitos and Calera Creeks. This project would be constructed within the City limits.

Santa Clara County Valley Transportation Plan. The Santa Clara County Valley Transportation Plan (VTP) 2035 is the countywide plan for transportation funding and service decisions for the next twenty years. The VTP will include a prioritized list of transportation projects, as well as long-range strategic recommendations for land use and transportation policies. The following projects are included in the VTP 2035 and, therefore, are considered in the cumulative analysis.

Calaveras Boulevard Widening Montague/Great Mall-Capitol Avenue Urban Interchange. The existing two bridges between Milpitas Blvd and Abel Street would be replaced with a six-lane bridge complete with 10' sidewalks and 6' bike lanes. Auxiliary lanes between Abel Street and I-880 and improvements at the Abel Street and Abbott Avenue intersections would be added to insure smooth transitions and continuous bike lanes.

Montague/Great Mall-Capitol Avenue Urban Interchange. This intersection exhibits chronic congestion. A grade separation for Great Mall-Capitol through lanes over Montague Expressway would greatly enhance capacity and maintain compatibility with the existing elevated light rail structure and future BART. The resultant at-grade signalized intersection on Montague Expressway would accommodate a partial frontage road and left turn lanes.

Dixon/Milpitas Intersection Improvements. An additional northbound left turn lane, a southbound right turn lane, and an eastbound right turn lane are proposed.

Dixon Landing Road Widening. This roadway is currently four lanes wide and serves as a secondary commute corridor between the I-680 and I-880 freeways. This project would include the widening of Dixon Landing Road between I-880 to Milpitas Blvd to six lanes with sidewalks and bike lanes.

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3.2 Aesthetics

This section discusses the existing visual resource conditions in the Study Area. Federal, state, and local regulations related to aesthetics that would apply to the Master Plan Updates follow. Descriptions and analysis in this section are based on information contained in existing reports and published literature. Major aesthetics issues addressed in the section include disturbance of existing visual character or quality of program sites or scenic corridors.

3.2.1 Environmental Setting

Visual Quality

Visual quality was evaluated using an approach employing the concepts of vividness, intactness, and unity. These terms are defined below.

- **Vividness** is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.
- **Intactness** is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, as well as in natural settings.
- **Unity** is the visual coherence and compositional harmony of the landscape considered as a whole; unity frequently attests to the careful design of individual components in the landscape (Federal Highway Administration 1983).

Viewer response is the psychological reaction of a person to visible changes in the viewshed, and is based on the sensitivity and exposure of the viewer to a given viewshed. Sensitivity relates to the magnitude of the viewer's concern for a viewshed. Exposure is a function of the number of viewers, the type of view seen, and the distance, perspective, and duration of the view.

Existing Conditions

The City of Milpitas consists of a topographically flat suburban environment adjacent to the foothills of the Mt. Diablo Range. The foothills are characterized by a semi-wilderness rugged terrain, with remote plateaus and distant views. The visual resources of the Study Area consist of its scenic views to nearby foothills and vegetated stream corridors. The Study Area consists of single- and multi-family residential structures scattered throughout the City, and business parks and other commercial uses concentrated west of I-680 corridor and south of Calaveras Boulevard (SR-237).

The City has designated four scenic roadways and the foothills as scenic resources. These routes are afforded special design treatments or special development controls.

- **Scenic Corridors.** Scenic corridors are located along designated streets that pass through an area of scenic value. Scenic corridors include the street rights-of-way and extend 200 feet from the center line of the streets along which they are located. Areas within the corridors are subject to special development controls for the purpose of retaining and enhancing nearby views or maintaining unobstructed distant views. The City has designated Piedmont Road and Calaveras Boulevard (east of I-680) as scenic corridors.
- **Scenic Connectors**. Scenic connectors are designated streets connecting or providing access to scenic corridors or distant views, though they may not directly traverse an area of scenic value. Special design treatment — which may include roadside landscaping, undergrounding of utility lines, and street furnishings — will be carried out to provide a visual continuity with the scenic

corridors. The City has designated I-880, I-680, Piedmont Road, and Calaveras Boulevard (west of I-680) as scenic connectors.

- **Scenic Foothills**. The scenic foothills to the east are available from various vantage points throughout the City, including the major highways. These hills are undeveloped, wide open grasslands areas with sparse oaks, sycamores, and foothill pines.

The Master Plan Update sites are generally located within the Valley Floor area of the City, within or adjacent to redevelopment areas such as the TASP. Existing land uses within those areas are primarily regional commercial, industrial parks, and warehousing, although a few proposed improvements are located within single and multi-family residential areas.

3.2.2 Regulatory Setting

No federal regulations relating to aesthetics are relevant to the Master Plan Updates.

State Policies and Regulations

California State Scenic Highway Program

Many state highways are located in areas of outstanding natural beauty. In 1963, the California legislature created the Scenic Highway Program to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq.

A highway or county road may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. There are no eligible or State-designated scenic highways within the Study Area.

Local Policies and Regulations

City of Milpitas General Plan

The City's General Plan, Open Space and Conservation Element, as amended through 2008, specifies visual resources and scenic routes and gateways in the City. Because they are located within the Valley Floor area, the Master Plan Update improvements would not have to comply with the policies related to scenic corridors.

Guiding Principle 4.g-G-1 Preserve and enhance the natural beauty of the Milpitas area.

Guiding Principle 4.g-G-2 Establish a network of continuous and varied Scenic Routes that provide views of Scenic Resources and access from urban areas and the regular transportation network to parks, open spaces and cultural attractions.

Guiding Principle 4.g-G-7 Exempt all lands within the Valley Floor Planning Area from Scenic Corridor restrictions.

Midtown Milpitas Specific Plan

The Midtown Milpitas Specific Plan, Community Design Chapter, pursues the goals of creating an attractive district that is unique in Milpitas, and improving the character of streets in the Midtown area. In pursuit of these goals, the Specific Plan calls for enhanced building development standards and guidelines, streetscape improvements, open space and parks, and landmarks and community gateways.

Transit Area Specific Plan

The TASP, Development Standards and Design Guidelines chapter, requires the placement of utilities underground or in subsurface conduits.

McCarthy Ranch Design Guidelines and Development Standards

The McCarthy Ranch Design Guidelines and Development Standards were developed for properties within the McCarthy Ranch Master Plan area to supplement existing City zoning controls that ensure visual unity and harmony. The document provides standards and guidelines for general site planning, open space and landscaping, recommended street trees and plant list, and signage and lighting.

Milpitas Streetscape Master Plan

The City adopted a Streetscape Master Plan in September of 2000 to serve as a planning document for major issues related to street trees, landscape treatments, and amenities in the public ROW. The Streetscape Master Plan provides overall guidelines and recommendations for citizens, special interests groups, policy-makers, developers, designers, and city staff to move towards improving the visual and pedestrian quality of local City streets.

The Streetscape Master Plan is intended to provide a framework for streetscape development and maintenance over the next twenty years. The City adopted the Streetscape Master Plan to be used in conjunction with other master plans, such as the Trails Master Plan and Mid Town Specific Plan, and development standards for functional elements such as plantings associated with ROW walls or fences, as well as the irrigation systems and drainage systems used to maintain the streetscape areas.

3.2.3 Impact Analysis

This section describes the CEQA impact analysis relating to aesthetics for the Master Plan Updates. It describes the methods used to determine the Project's impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to aesthetics was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Criteria Requiring No Further Evaluation

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- As indicated in the setting discussion, the Master Plan improvements are generally situated on the Valley floor and within existing urban areas. For this reason, no adverse impacts to scenic vistas would occur.
- As indicated in the setting discussion, no State-scenic highways are designated within the Study Area and, therefore, the Master Plan improvements would not involve the activities that could substantially damage scenic resources within a state scenic highway. No impact would occur.

Impacts and Mitigation Measures

Visual Character

Impact AES-1 Implementation of the Master Plan improvements could result in temporary and permanent changes to the visual character of the Study Area.

The proposed program would involve the installation of new or replacement of existing buried water and wastewater pipelines, installation of valves and turnouts, and construction of a new storage tank and pump station or groundwater well. Construction activities would occur primarily within the disturbed, urban setting, along existing ROW. Activities would consist of surface preparation (i.e., removal of vegetation as needed and grading), excavation, installation of structures, and surface restoration, as described in *Chapter 2, Project Description*. Construction activities would be scattered throughout the City and vary in duration, but would cease upon completion of each individual project. Individual improvement projects would be short-term in nature, and implemented on different schedules within the planning horizon, occurring between 2009 and sometime after 2020.

Construction activities would alter temporarily the visual character of the affected sites due to the presence of heavy-duty equipment (e.g., excavators, cranes, trucks, pavers, loaders, etc.) and changes in terrain (i.e., presence of pits, trenches, and stockpiles of material and soils). Visual alterations would be visible mainly to people in the immediate vicinity (short-range views), including motorists, residents, and/or employees where commercial / industrial uses are present. Construction activities may be visible from mid- to long-range views (e.g., from public roads in the foothills with distance views to the flatlands), but such views would not be expected to dominate the visual field for the viewers because of the distance of activities and other visual elements in the overall landscape. With respect to pipeline installation, because construction would progress daily along proposed pipeline routes, the affected viewshed area would shift on a regular basis.

Construction activities are considered temporary in nature. To ensure that short-term visual effects of construction activities do not become permanent effects, Mitigation Measure AES-1 would be implemented to limit construction activities and promote restoration of disturbed areas to preconstruction conditions.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant aesthetic impacts during construction of new water and wastewater conveyance and storage facilities.

Mitigation Measures

The following mitigation measure is required for all Master Plan improvements.

> Mitigation Measure AES-1: Screen Staging Areas and Restore Affected Construction Areas. The City will require the construction contractor to site staging areas to minimize visual disturbance to surrounding residential and commercial parcels and confine construction-related activities to the designated ROW. Prior to and during use of construction staging areas for equipment, vehicle parking, and material storage, screening or vegetation will be installed as appropriate for the zoning at the site. To the extent feasible, all disturbed areas (e.g., roadway trenches and staging areas) will be returned to their preconstruction condition. All existing landscaping that is removed or damaged during construction will be replaced, along with irrigation hardware. These requirements will be reflected in contract documents.
>
> To the extent feasible, the City will require the contractor for Project W-MP-5 to contain construction staging areas to the project site.

Significance Determination After Mitigation

With the implementation of Mitigation Measure AES-1, potential aesthetic impacts resulting from construction of Master Plan improvements would be reduced to less than significant levels.

Light and Glare

Impact AES-2 New Master Plan improvements could result in the degradation of the existing visual character of the Study Area through the installation of new sources of light and glare.

Visual alterations associated with the construction of the various Master Plan improvements would be visible to people in the immediate vicinity (short-range views), including motorists, residents, and/or employees. Upon completion of construction activities, all pipelines, turnouts, and valves would be buried underground within existing roadway ROWs and out of sight from public view. As such, no long-term impacts associated with degradation of the existing visual character or quality of the Study Area and surroundings would occur from implementation of typical Master Plan-related improvements.

The southwestern portion of the Study Area contains regional commercial and industrial facilities at a relatively large scale, including broad windowless buildings and expansive parking lots. Visual unity (i.e., architectural themes, patterns) and vividness (i.e., distinctive or memorable structures) within this portion of the Study Area both lack; however, the long-term implementation of the TASP is expected to gradually improve the area's appearance and uniformity. Construction of the proposed 6.6 MG storage tank and pump station would result in minor alteration of the existing visual character of the TASP area through the placement of an additional large, permanent structure. For the purposes of analysis, the City anticipates that the proposed storage tank, pump station, and paved areas would have a collective footprint of approximately 3 acres and be less than 30 feet in height.

Viewer sensitivity to these new structures would likely be low due to the existing marginal, visual quality of the surrounding area and, therefore, the construction of a storage tank and pump station would not substantially degrade the character of the Study Area. However, to ensure that the new storage facilities blend with development planned for the TASP, the implementation of Mitigation Measure AES-2a would be required.

Nighttime lighting would also be required along the perimeter of the above-ground structures to provide security and safety for maintenance workers. The storage facilities would generate new sources of night lighting and glare within an area where these sources already exist. However, the introduction of a new lighting source would could disrupt nearby residences and/or vehicle traffic within the Study Area. To reduce potential long-term light-and-glare impacts to a less than significant level, implementation of Mitigation Measure AES-2b would be required.

Significance Determination Before Mitigation

The storage improvements associated with the Master Plan Updates could result in potentially significant aesthetic impacts due to above-ground structures and night lighting.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

Mitigation Measure AES-2a: Incorporate Design Elements to Integrate Proposed Above-Ground Surfaces to Their Surroundings.
The City will use design elements to enhance visual integration of above-ground facilities with their surroundings. These elements may include, but are not limited to, the following:

- painting (with earth-colored tones) of structural façades to blend with surrounding land uses,

- use of fencing or structural materials similar to those used by nearby land uses, and
- installation of berms and/or landscaping around the facility.

Mitigation Measure AES-2b: Implement Lighting and Material to Reduce Light and Glare.
The City will reduce light and glare on surrounding land uses by shielding permanent exterior lighting, orienting all exterior lighting downward, or installing lights activated only by sensors. In order to minimize incidental light, the lights will be cutoff-type fixtures that cast low-angle illumination. All lights will provide natural color rendering and light qualities. In addition, the City will limit the use of highly reflective building materials and/or finishes in the design of its proposed above-ground structures.

Significance Determination After Mitigation

With the implementation of Mitigation Measures AES-2a and AES-2b, potential aesthetic impacts resulting from storage improvements associated with the Master Plan Updates would be reduced to less than significant levels.

3.2.4 Cumulative Analysis

Cumulative projects proposed in the Study Area and identified in Section 3.1.4 would contribute to substantial alterations in the visual quality of the City through the placement of new structures; typically surrounded by lower-density structures. As described in Chapter 2, the vast majority of the projects proposed as part of the Master Plan Updates would be pipeline improvements installed underground and within existing roadway ROW. As described above, construction of these improvements would result in temporary alterations in the visual character and quality of affected sites. Where such potential would occur, mitigation measures prescribed in the Program level analysis set forth design requirements that would reduce the potential for long-term degradation of the aesthetic environment. Based on this circumstance and in the context of the types of visual impacts that could result from individual improvement projects, the Master Plan Update's contribution to significant, cumulative impacts to visual resources within and surrounding the City would be less than considerable.

3.3 Air Quality and Climate Change

This section describes the existing air quality conditions within Master Plan Study Area. Federal, state, and local regulations related to air quality that would apply to the Master Plan Updates follow. Construction and operational effects of implementing the proposed Master Plan Updates on local and regional air quality are analyzed. Issues related to global climate change are also discussed and evaluated.

3.3.1 Environmental Setting

The City is located within the Santa Clara Valley (Valley) climatological subregion of the San Francisco Bay Area Air Basin (Air Basin) (BAAQMD 1999). Santa Clara Valley is bounded by San Francisco Bay to the north and by the Coast Range Mountains to the east, south, and west. In general, temperatures within the Air Basin are warm during the summer and cool during the winter. Large diurnal shifts are common with mean minimum and maximum temperatures ranging from the high-50s to the low-90s in the summer, and from the low-40s to the high-50s in the winter.

Winds in the Valley are greatly influenced by the terrain, resulting in a prevailing flow that roughly parallels the Valley's northwest-southeast axis. Air flow is strongly influenced by a north-northwesterly sea breeze that flows off the Pacific Ocean during the afternoon and early evenings. Wind speeds are greatest in the spring and summer and weakest in the fall and winter; with the exception of strong southerly winds associated with approaching low-pressure systems off the Pacific Ocean. Nighttime and early morning hours frequently have calm winds in all seasons, while summer afternoons and evenings are breezy.

Existing Air Quality

The climatic conditions described above create conditions favorable for the accumulation of air quality pollutants that have been linked to adverse health affects. To begin with, high summer temperatures, stable air, and mountains surrounding the Valley combine to promote ozone formation. At the same time, pollution sources are plentiful in the Valley, with a high concentration of industry at the northern end and the highest mobile source emissions of any subregion in the Bay Area as a result of the Valley's large population and many work-site destinations. In addition, ozone precursors from San Francisco, San Mateo, and Alameda counties are carried by prevailing winds to the Santa Clara Valley. Once in the Valley, the topography tends to channel pollutants to the southeast.

On summer days with low level inversions, ozone can be recirculated by southerly drainage flows in the late evening and early morning and by the prevailing northwesterlies in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of carbon monoxide and particulate matter. This movement of air up and down the Valley increases the impact of pollutants significantly.

Criteria Air Pollutants

Criteria air pollutants of concern in the Study Area include ozone, reactive organic gasses (ROG), and particulate matter (PM). As required by the federal Clean Air Act (CAA), the U. S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS or national standards) to protect public health and welfare from these criteria pollutants. Standards have been established for ozone, carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), lead (Pb), and particulate matter equal to or less than 10 microns (PM10) and less than 2.5 microns (PM2.5). PM10 is also commonly referred to as respirable particulate and PM2.5 is also known as fine particulate.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded, more than once per year. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants with the California Ambient Air Quality Standards (CAAQS or state standards). These standards are described in more detail in the regulatory subsection below.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are pollutants that are associated with acute, chronic, or carcinogenic effects but for which no ambient air quality standard has been established or, in the case of carcinogens, is appropriate. TAC impacts are evaluated by determining if a particular chemical poses a significant risk to human health and, if so, under what circumstances. The ambient background of TACs is the combined result of many diverse human activities, including gasoline stations, refineries, automobiles, industrial operations, and painting operations. In general, mobile sources contribute more significantly to health risks than stationary sources. Diesel PM is responsible for approximately 70 percent of the total toxic risk to Californians from air pollution.

In addition to Diesel PM, emissions from diesel fueled engines include over 40 other cancer causing substances. Because diesel PM consists of more than one compound, monitoring is more difficult than for single TACs. However, based on a limited amount of data, the California Air Resources Board (CARB) has estimated the statewide, ambient, "population-weighted," cancer risk due to essentially all TACs, based on year 2000 emissions, at 758 in 1 million; of this, CARB estimates that 540 in 1 million, or approximately 70 percent, is due to diesel particulate (CARB 2000).

Odors

Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. Odors rarely directly affect health, but they can be very unpleasant and lead to distress and concern over possible health effects among the public, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

The BAAQMD Amended CEQA Guidelines (2009) recommend that odor impacts be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. The BAAQMD Guidelines list the type of operations that are typically associated with odor issues and provides acceptable buffer zones (distance between source and receptor) that would be required to mitigate odor impacts. In general terms, increasing the distance between the receptor and the odor source is the most typical form of mitigating impacts from odors.

The City's Odor Control Action Plan (2008), which is described in further detail in Section 3.3.2, identifies potential odor sources within and adjacent to the City. Within the City, the sewage collection system is the primary source of potential odors, due to the formation of gases as a result of decomposition of organic materials within sewer laterals, truck lines, and pump stations. In particular, the City's Main Sewer Lift Station located at the northwest corner of the City and the Venus Way Sewer Pump Station located near the corner of Capitol Avenue and Venus Way (see Figure 2-4) have been identified as potential odor sources in the past.

The City's Main Sewer Lift Station underwent a total reconstruction in October 2008 and, at that time, a comprehensive odor analysis was conducted that determined that specific odor control was not warranted. For the Venus Way Pump Station, given its relatively small size in conjunction with the submersible pumps being placed within a covered, wet vault, the likelihood for this facility to generate odors was considered relatively low.

Outside of the City, there are also several potential odor sources. These include San Jose/Santa Clara WPCP, Allied Waste's Newby Island Landfill and Compost Facility, and the Zanker Road Landfill/Compost Facility. These facilities and the odor potential that could result from their operation is described further in the City's Odor Control Action Plan.

Naturally Occurring Asbestos

Serpentine rock is documented in portions of Santa Clara County. Certain serpentine formations contain asbestos fibers, which are considered a TAC. As discussed in *Section 3.5, Geology, Soils, and Seismicity*, the nearest mapped serpentine units are located in the coastal mountains surrounding the Santa Clara Valley and outside of the Study Area. Based on this circumstance, the potential for encountering asbestos-containing geologic formations is considered remote.

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses are more susceptible to respiratory distress and other air quality-related health problems. Persons engaged in strenuous work or exercise are also sensitive to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions, and because the presence of pollution detracts from the recreational experience.

Within the Study Area, sensitive receptors consist of low to high-density residential areas, parks, and bike trails, and schools. These types of receptors are situated throughout the City and concentrated within neighborhood areas east of the I-880 corridor, north of Calaveras Boulevard, and east of I-680. In addition, a higher-density residential area is located in the southwest corner of the City, south of the Great Mall Parkway. Several of these residential areas are situated in close proximity, some as close as 50 feet, from improvements proposed in the Master Plan Updates.

Global Climate Change and Greenhouse Gases

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. These layers of gas in the atmosphere can prevent the escape of heat much the same as glass in a greenhouse. Thus, climate change is often referred to as the "greenhouse effect". The gases most responsible for climate change are carbon dioxide (CO2) and methane. Other greenhouse gases (GHG) include, but are not limited to, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons. It is becoming more widely accepted that continued increases in GHG will contribute to climate change, although there is uncertainty concerning the magnitude and timing of the trend.

Energy-related CO2 emissions, resulting from petroleum and natural gas, represent 82 percent of total U.S. human-made GHG emissions. Methane, another GHG which comes from landfills, coal mines, oil and gas operations, and agriculture, represents 9 percent of total emissions. Nitrous oxide (N2O), emitted from burning fossil fuels and through the use of certain fertilizers and industrial processes, totals about 5 percent of U.S. emissions. These gases collectively contribute a project's total CO2 equivalent per year (MTCO2e/yr).

Executive Order S-3-05, adopted in 2005, proposes statewide GHG emission reduction targets. By 2010, the goal is to reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

3.3.2 Regulatory Setting

Regulation of air pollution is achieved through both national and state ambient air quality standards and emissions limits for individual sources of air pollutants.

Federal Policies and Regulations

Federal Clean Air Act (CAA)

As required by the federal CAA, the USEPA has identified criteria pollutants and established NAAQS to protect public health and welfare. National standards have been established for ozone, CO, NO2, SO2, Pb, PM10, and PM2.5. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

Under amendments to the federal CAA, USEPA has classified air basins or portions thereof, as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. The federal CAA requires nonattainment areas to prepare air quality plans that include strategies for achieving attainment. Air quality plans developed to meet federal requirements are referred to as State Implementation Plans (SIPs). USEPA is responsible for implementing the myriad of programs established under the federal CAA, such as establishing and reviewing the NAAQS and judging the adequacy of SIPs, but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

State Policies and Regulations

California Clean Air Act (CAA)

In 1988, the State Legislature passed the California CAA, which is patterned after the federal CAA to the extent that areas are required to be designated as "attainment" or "nonattainment" for the state standards. Thus, areas in California have two sets of attainment / nonattainment designations: one set with respect to the national standards and one set with respect to the state standards. California has also adopted more stringent ambient air quality standards (SAAQS) for most of the criteria air pollutants, including ozone, CO, NO2, SO2, Pb, PM10, and PM2.5.

The Bay Area Air Basin is currently designated "non-attainment" for State and national (1 hour and 8 hour) ozone standards and for the State PM10 and PM2.5 standards. The Bay Area is "attainment" or "unclassified" with respect to the other ambient air quality standards. Table 3.3-1 shows the attainment status of the Master Plan Study Area with respect to the federal and state ambient air quality standards for different criteria pollutants.

California Air Resources Board (CARB)

The CARB is responsible for establishing and reviewing the state standards, compiling the California SIP, securing approval of that plan from USEPA, and identifying toxic air contaminants. CARB also regulates mobile emission sources in California, such as construction equipment, trucks, and automobiles, and oversees the activities of air quality management districts, which are organized at the county or regional level. The county or regional air quality management districts are primarily responsible for regulating stationary sources at industrial and commercial facilities within their geographic areas and for preparing the air quality plans that are required under the federal CAA and California CAA. These regional air quality plans prepared by districts throughout the state are compiled by CARB to form the SIP. The local air districts also have the responsibility and authority to adopt transportation control and emission reduction programs for indirect and area-wide emission sources.

Table 3.3-1: Attainment Status for the State and National Ambient Air Quality Standards

Pollutant	Averaging Time	Attainment Status	
		State Standards[a]	National Standards[b]
Ozone[c]	8 Hour	Nonattainment	Nonattainment-marginal
	1 Hour	Nonattainment	--[c]
Carbon Monoxide	8 Hour	Attainment	Attainment
	1 Hour	Attainment	Attainment
Nitrogen Dioxide	Annual	–	Attainment
	1 Hour	Attainment	–
Sulfur Dioxide	Annual	–	Attainment
	1 Hour	Attainment	–
Respirable Particulate Matter	Annual Arithmetic Mean	Nonattainment	Unclassified
	24 Hour	Nonattainment	Unclassified
Fine Particulate Matter[d]	Annual Arithmetic Mean	Nonattainment	Attainment
	24 Hour	Nonattainment	Nonattainment[e]

Notes:

a California standards for ozone, CO (except Lake Tahoe), SO2 (1-hour and 24-hour), NOx, and PM10 are values that are not to be exceeded.

b National standards other than for ozone and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year.

c The national 1-hour ozone standard was revoked by USEPA in 2005.

d In 1997, EPA established an 8-hour standard for ozone and annual and 24-hour standards for PM2.5.

e U.S EPA lowered the 24-hour PM2.5 standard from 65 µg/m3 to 35 µg/m3 in 2006. EPA issued attainment status designations for the 35 µg/m3 standard on December 22, 2008. EPA has designated the Bay Area as nonattainment for the 35 µg/m3 PM2.5 standard.

Source: BAAQMD 2008.

Assembly Bill 32 and Executive Order S-3-05

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, and Executive Order S-3-05, signed in June 2005, focus on reducing GHG emissions in California. The proposed GHG emissions reductions are consistent with the climate stabilization models produced by the International Panel on Climate Change (IPCC). These climate stabilization models show that if GHG emissions are reduced to the levels shown in Executive Order S-3-05, the climate will stabilize at approximately a 2 degree Celsius rise, averting the worst impacts associated with global climate change. GHG as defined under AB 32 include: CO2, methane, N2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires the CARB to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020.

Local Policies and Regulations

Bay Area Air Quality Management District (BAAQMD)

The BAAQMD is the regional agency with regulatory authority over emission sources in the Bay Area, which includes all of San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Marin, and Napa counties, and portions of Sonoma and Solano counties. BAAQMD prepares air quality planning documents in cooperation of the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). Currently, there are three plans for the Bay Area. These are:

- The San Francisco Bay Ozone Attainment Plan for the 1-Hour National Ozone Standard (BAAQMD 2001) developed to meet Federal ozone air quality planning requirements;

- The Bay Area 2005 Ozone Strategy (BAAQMD 2006) developed to meet planning requirements related to the State ozone standard; and
- The Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas (CARB 2004), developed by the air districts (including BAAQMD) with jurisdiction over ten planning areas to ensure continued attainment of the Federal CO standard. In June 1998, the USEPA approved this plan and designated the ten areas as attainment. The maintenance plan was revised most recently in 2004.

Finally, all odor sources are subject to the requirements of the BAAQMD Regulation 7 – Odorous Substances, which establishes general limitations on odorous substances and specific emission limitations on certain odorous compounds.

City of Milpitas General Plan

The Milpitas General Plan does not directly address air quality. However, several policies in its Circulation Element emphasize Transportation Systems Management (TSM), which is designed to reduce peak-period automobile traffic, enhance mobility through alternative modes of transportation, and meet federal and state air quality standards.

> *Guiding Principal 3.c-G-1* Promote measures that increase transit use and lead to improved utilization of the existing transportation system.
>
> *Guiding Principal 3.c-G-2* Cooperate with other agencies to promote local and regional transit serving Milpitas.
>
> *Policy 3.c-I-1* Actively support regional planning efforts for the development of mass transit facilities generally along either the Union Pacific or Southern Pacific Railroad corridors.

City of Milpitas Odor Control Action Plan - Maintenance-Level Plan

The City Council adopted and has implemented an Odor Control Action Plan since late 2003 to address odor episodes within the City. Due to the effectiveness of the City's odor management program since its adoption in 2003, the City has transitioned to a maintenance-level plan which calls for the ongoing monitoring of odors and provides guidance for responding to excessive odor complaints exceeding baseline benchmarks established during the period of October 2003 to June 2008. The objective of the maintenance plan is to ensure that odor generators continue to maintain their best management practices and controls to keep odor incidents as low as practicable. Components of the Maintenance-Level Odor Control Action Plan (2008) include a Streamlined Complaint Process; Rapid Notification Plan; Triggers for Significant Incident Response Plan; and Significant Incident Response Plan.

3.3.3 Impact Analysis

This section describes the potential impacts to air quality as a result of Master Plan implementation, describes the methods used to determine the level of significance for Master Plan-related impacts, and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Methodology

Master Plan-related air quality impacts fall into two categories: 1) short-term impacts during construction and 2) long-term impacts during operation of the Master Plan improvements. During project construction, construction activities would affect local particulate concentrations primarily because of fugitive dust emissions. Project construction would also result in increased ROG and NOx emissions from construction equipment. During the project operations phase, project-related motor vehicle trips would also increase

emissions. Construction and operation emission modeling methodologies are described in the following discussion. Additional information and model results are presented in Appendix B.

Construction emissions were estimated using the Sacramento Metropolitan Air Quality Management District's roadway construction model (SMAQMD 2007). This model was used at the recommendation of staff with BAAQMD (Greg Tholen, pers comm) and is based on emission factors contained in the CARB Emission Factors (EMFAC) model (2006). The quantification of construction emissions is based on the assumptions contained in *Chapter 2, Project Description* and estimated for the worst-case day under the assumption that up to four construction crews could be working simultaneously. A summary of the construction information used and the roadway construction model outputs are included in Appendix B.

Based on the parameters set in *Chapter 2, Project Description*, the City estimates that the Master Plan Updates would generate up to 20 haul truck trips per day and 60 worker roundtrips – or 120 one-way trips – per day and be dispersed along the roadway network to the improvement sites. Trucks traveling to and from the construction sites would include dump trucks to transport excavated material, flatbed semi trucks, and trailers to transport pipes, concrete ready-mix trucks to transport controlled fill and concrete, and other miscellaneous trucks to support construction activities.

The CARB Urban Emissions (URBEMIS) model, version 9.2.4 (2007), was used to quantify construction and operational emissions associated with proposed storage tank facilities. For the purposes of analysis, the City assumes these facilities could occur up to 3 acres. Consistent with the URBEMIS user's guide, it was assumed that 25 percent of the total acres disturbed for each construction phase would represent the maximum daily acres disturbed. A summary of the URBEMIS outputs are included in Appendix B.

The calculated estimates were then compared to BAAQMD's construction and operational thresholds for NOx, ROG, PM10, and PM-2.5. As mentioned earlier, as the Master Plan Study Area is either attainment or unclassified with respect to CO, SO2, NO2, sulfates, lead and H2S, and as the Master Plan improvements would not generate significant emissions of these pollutants, these pollutants require no further evaluation.

Significance Criteria

For this analysis, an impact pertaining to air quality was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

d) Expose sensitive receptors to substantial pollutant concentrations.

e) Create objectionable odors affecting a substantial number of people.

Toxic Air Contaminant Emissions

California Office of Environmental Health Hazard Assessment (OEHHA) defines a "no significant risk level" to have a potential cancer risk of no more than 10 in 1,000,000 when addressing risks under the Proposition 65 Regulation (OEHHA 2003). The California Air Toxics "Hot Spots" regulation (AB 2588) does not specify a significance threshold, but it requires public notification if the maximum incremental risk from a facility exceeds 10 in 1,000,000. No notification is required if the incremental risk is less than 10 in 1,000,000. This same risk level is also used by the BAAQMD for approval of facilities, with toxic

Best Available Control Technology (BACT) being required for facilities with a cancer risk greater than 1 in 1,000,000. Based on these risk levels, the following thresholds are applied for the evaluation of TACs.

- Probability of contracting cancer for the Maximally Exposed Individual (MEI) equals to 10 in one million or more; or
- Ground-level concentrations of non-carcinogenic TACs would result in a Hazard Index equal to or more for the MEI.

Climate Change

In addition to criteria pollutants and TACs, the construction and operation of the Master Plan Update improvements would generate GHG emissions that contribute to climate change. The largest GHGs constituent would be CO2. A substantial amount of CO2 would be formed as a primary product of fuel combustion from off-road equipment and on-road vehicles.

To facilitate an evaluation of the Master Plan Updates' GHG impacts, this analysis uses criteria developed by BAAQMD. As part of updating its CEQA Guidelines, BAAQMD proposed a threshold of 10,000 metric tons of CO2 equivalent per year (MTCO2e/yr) for operational increases in GHG emissions from stationary sources. A separate threshold of 1,100 MTCO2e/yr is proposed for operational sources other than stationary sources (i.e. mobile vehicle trips).

No construction threshold is currently proposed by BAAQMD; however, at the State-level, CARB is proposing the inclusion of mandatory performance standards for construction-related GHGs.

Criteria Requiring No Further Evaluation

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The proposed Master Plan Update improvements do not propose any substantial change in land use and, therefore, are not expected to conflict with or obstruct implementation of applicable air quality plans. In this context, no impact is expected.

Impacts and Mitigation Measures

Violation of Air Quality Standards

Impact AQ-1 Implementation of the Master Plan Updates could contribute to an existing or projected air quality violation.

Construction Emissions. The implementation of Master Plan-related construction activities would occur in two distinct phases: Phase I involves site preparation, trenching, and other earthmoving activities, while Phase II involves installing facilities equipment, concrete, and structural improvements. Site preparation includes activities such as general land clearing grubbing, pavement removal, or vegetation removal, in limited instances. Earthmoving and trenching activities include cut and fill operations, , soil compaction, and grading. These general construction activities would be utilized throughout the implementation of the Master Plan Updates for improvements such as pipelines, roadway surfaces, pump structures, structural foundations, and storage facilities. The emissions generated from these common construction activities include:

- Dust (including PM10 and PM2.5) primarily from fugitive sources such as soil disturbance and vehicle travel over unpaved surfaces;
- Combustion emissions of criteria air pollutants (including ROG, NOx, PM10, and PM2.5) primarily from operation of heavy equipment construction machinery (primarily diesel operated),

portable auxiliary equipment and construction worker automobile trips (primarily gasoline operated); and,

- Evaporative emissions (ROG) from asphalt paving and architectural coating applications.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity and local weather conditions. In the absence of mitigation, construction activities may generate significant quantities of dust, and as a result, local visibility may be adversely affected and concentrations of PM10 and PM2.5 could increase locally. In addition, the fugitive dust generated by construction would include not only PM10 and PM2.5, but also larger particles, which would fall out of the atmosphere within several hundred feet of the construction area and could result in nuisance-type impacts.

Construction activities would also result in the emission of pollutants of concern, including ROG, NOx, PM10, and PM2.5, from construction equipment exhaust and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operating schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NOx from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project construction.

For the worst-case day construction scenario, it was assumed that multiple Master Plan improvements (e.g. sewer and water conveyance improvements) would occur simultaneously. Estimated construction-related fugitive dust emissions, as well as exhaust emissions from construction equipment and worker trips are shown in Table 3.3-2. As shown in the table, emissions of NOx, ROG, PM10, and PM2.5 in 2010 would not exceed the 54 pounds per day (lbs/day) significance threshold for NOx, ROG, and PM-2.5 or the 82 lbs/day significance threshold for PM-10 as specified by the BAAQMD and, therefore, the associated impact would be less than significant.

Table 3.3-2: Master Plan Construction Emissions[1]

Project Alternative	ROG (lbs/day)	NOx (lbs/day)	PM-10 (lbs/day)	PM-2.5 (lbs/day)
Project Construction – 2010	8.0	45.2	22.6	6.4
Project Construction – 2011	7.8	44.7	22.6	6.4
Significant Emissions	*No*	*No*	*No*	*No*
Emission Thresholds[2]	*54*	*54*	*82*	*54*

Notes:
1 Calculations were completed using SMAQMD's Roadway Construction Model and URBEMIS (2007) and are included in Appendix B. The emissions listed above are for a worse-case day.
2 Thresholds applied by BAAQMD

Sources: SMAQMD 2007; BAAQMD 2009

Project Operations. Following installation, the Master Plan-related improvements would require maintenance activities that would generally be comparable to existing conditions. Pump operations would be driven by electricity and would not generate local emissions directly, but would result in emissions at a power plant within or outside of the Bay Area Air Basin. Power plant emissions, if located in California, are subject to the Rules and Regulations of the air district in which they are located and have been subject to their own regulatory review. Emissions from power generation to supply pumps would occur anywhere in the western U.S. power grid and emissions from motors to service the pumps would be regional. Energy would be supplied by permitted power sources, such as sources permitted by the California Energy Commission's Application for Certification (CEQA equivalent) process.

Any new electrical loads from pumping facilities would necessitate the installation of a new emergency engine-generator. New emergency generators would consist of diesel-fueled, 4-cycle engines rated for standby duty and designed to meet the Tier 2 or 3 requirements of the BAAQMD. The generators would not be operated under normal conditions, but would likely be run for up to one hour per week for testing. Further, the standby generator will be subject to operating requirements and emission standards for new and in-use stationary diesel-fueled engines that have a rated brake horsepower of greater than 50 (>50 bhp) per the requirements of Section 93115, Title 17, of the California Code of Regulations. Compliance with these applicable regulatory requirements would ensure a less than significant air quality impact from the standby generator.

Traffic generation during the long-term operation of the Master Plan improvements would average less than 10 one way passenger vehicle trips per day; comparable to existing conditions. Operational emissions were estimated for the well or storage tanks facilities using the URBEMIS 2007 model, version 9.2.4, based on the light industrial land use category and a maximum building envelop of 3 acres. As provided in Table 3.3-3, the URBEMIS outputs indicate that operational emissions for these facilities would be minor and would not exceed BAAQMD thresholds.

Table 3.3-3: Master Plan Operational Emissions [1]

Project Alternative	ROG (lbs/day)	NOx (lbs/day)	PM-10 (lbs/day)	PM-2.5 (lbs/day)
Project Operations – 2012	1.29	1.85	2.33	0.43
Significant Emissions	*No*	*No*	*No*	*No*
Emission Thresholds [2]	*54*	*54*	*80*	*54*

Note:
1 Calculations were completed using URBEMIS (2007) and are included in Appendix B. The emissions listed above are for a worse-case day.
2 Thresholds applied by BAAQMD

Sources: URBEMIS 2007; BAAQMD 2009

The BAAQMD CEQA Guidelines (BAAQMD 2009) recommends estimating carbon monoxide concentrations for projects where project traffic would affect signalized intersections or roadway links operating at Level of Service (LOS) D, E, or F or would cause LOS to decline to D, E, or F. According to *Section 3.11, Transportation*, temporary construction-related traffic would exacerbate LOS F conditions at three signalized intersections. However, operational traffic associated with the Master Plan Updates would be minor in duration and would not contribute to a long-term degradation of LOS on City roadways and intersections. Therefore, the BAAQMD threshold trigger level for estimating carbon monoxide for project operation would not be activated.

Based on the discussion presented above, construction and operational emissions associated with Master Plan Update implementation concentrations would be less than significant.

Significance Determination Before Mitigation

No mitigation measures are required because the impact is considered less than significant. Master Plan-related construction and operational air quality emissions would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. However, the following mitigation is recommended to help the City further minimize PM-10 and PM-2.5 emissions from dust.

Mitigation Measures

The following mitigation measure is recommended for construction of all Master Plan projects.

Mitigation Measure AQ-1: Implement Dust Control Measures.
The City shall require the construction contractor to implement BAAQMD's basic and enhanced dust control procedures for all construction projects, as applicable. This requirement shall be reflected in contract documents. Dust control measures include:

Basic Control Measures: The following basic control measures shall be implemented at all construction sites.

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave and apply water three times daily or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

Enhanced Control Measures: The following enhanced control measures shall be implemented at construction sites greater than four acres in area.

- All basic control measures listed above.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).
- Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

Significance Determination After Mitigation

Following the application of Mitigation Measure AQ-1, construction and operational impacts to air quality for PM10 and PM2.5 emissions would be further reduced and no significant impacts are expected.

Sensitive Receptors

Impact AQ-2 Construction of Master Plan improvements could expose sensitive receptors to substantial pollutant concentrations.

Construction Emissions. Construction of the Master Plan Updates would not emit any hazardous air pollutants (HAPs) in any significant quantity other than from large, heavy-duty, diesel-powered equipment exhaust. OEHHA currently describes the health risk from diesel exhaust entirely in terms of the amount of particulate, or PM-10, that is emitted. Currently, the health risk associated with diesel exhaust PM-10 or diesel particular matter (DPM) only has a carcinogenic and chronic effect; whereas no short-term acute effect is currently recognized. Construction of the individual Master Plan improvements would be limited in duration, lasting less than 20 years total and relatively distributed throughout the Master Plan Study Area, and therefore, no long term, chronic impact at any one particular receptor location would be expected. In recognition of these circumstances, and combined with dust control mitigation prescribed in Mitigation Measure 3.2-1, it is reasonable to conclude that Master Plan-related

construction would not expose sensitive receptors to substantial pollutant concentrations over the long-term. The impact would be considered less than significant with mitigation.

Project Operations. Over the longer term, operational emissions associated with the proposed wells and/or storage tank pump(s) would operate by electricity with an emergency, back-up diesel generator. The proposed storage tank pump(s) would operate year-round (24-hours a day, seven days a week) and the backup generator(s) would operate under certain situations, during emergencies. Increased operation of diesel engines to pump groundwater and treated water supplies would contribute to increased air emissions in the areas where these facilities are proposed.

A recently completed health risk assessment of comparable sources and receptors assessed the potential impact of diesel sources operating within 200 feet of nearby residences on a year-round basis (Environmental Science Associates, 2006). The study concluded that the impact of the DPM emissions would be less than significant because they resulted in a cancer risk of less than 10 cases in a million population. However, without a precise facility location for the proposed storage tank pump station, the City is unable to confirm that these facilities would be located outside a 200-foot buffer and whether DPM emissions would pose conditions that exceed the previously studied impacts. For this reason, the implementation of Mitigation Measures AQ-1 (above) and Mitigation Measures AQ-2a and AQ-2b would be required to reduce the impact to a less than significant level.

Significance Determination Before Mitigation

Long term operational impacts, in the form of TACs from stationary sources, in conjunction with storage tank pumps could be potentially significant without mitigation. Construction-related impacts could also be potentially significant to nearby sensitive receptors.

Mitigation Measures

The following mitigation measures are required for the groundwater wells and/or storage tank pumps.

> Mitigation Measure AQ-1: Implement Dust Control Measures.
> See above.
>
> Mitigation Measure AQ-2a: Buffers for Pump Siting.
> The City will locate all new pump stations powered by diesel fuel more than 200 feet away from sensitive receptors, if feasible. Electrically-powered pumps shall be used to power new pumps, to the extent practicable.
>
> Mitigation Measure AQ-2b: Project-Level DPM Screening for Engine Siting.
> The City will require screening-level DPM assessments to be conducted for diesel–powered pump operations proposed within 500 feet of residences or other sensitive receptors. These analyses should include exact distances between the receptors and operations, as well as the actual DPM emissions for the engines proposed. If the analysis shows an annual average DPM concentration from project operations at residences within 500 feet of the DPM source to be greater than 0.024 ug/m3, the engine location shall be moved to a location where the annual average DPM concentration from individual project emissions is less than 0.024 ug/m3. The acceptable concentration of 0.024 ug/m3 was determined using the current OEHHA cancer potency factor and methodology for diesel exhaust (OEHHA 2003). If diesel exhaust concentrations at the affected receptor would be below 0.024 ug/m3, then the cancer health risk would be less than 9.9 cancers in a million population.

Significance Determination After Mitigation

With implementation of Mitigation Measures AQ-1, AQ-2a, and AQ-2b, air quality impacts resulting from TACs and DPM to sensitive receptors would be reduced to a less than significant level.

Odors

Impact AQ-3 Operation of Master Plan improvements would not create new sources of objectionable odors.

The types of land use development that pose potential odor problems include agriculture, wastewater treatment plants, food processing and rendering facilities, chemical plants, composting facilities, landfills, transfer stations and dairies. The Master Plan improvements do not involve the construction or operation of any of these uses nor would it involve the placement of sensitive receptors in close proximity to the one of these odor-generating uses.

Operation of pumping facilities would involve use of vehicles and/or maintenance equipment when necessary; however, these activities are not expected to generate objectionable odors. Further, pumping operations would be within fully enclosed structures and due to their nature would not result in odor generation.

All sewer pipes replaced as part of the Sewer Master Plan Update would be buried underground and, as indicated in the City's adopted Odor Control Action Plan, are typically not associated with the generation of significant odors. Additionally, no new lift stations, above-ground temporary storage facilities, or treatment facilities are proposed as part of the Master Plan Updates. For these reasons, this impact is considered less than significant.

Significance Determination Before Mitigation

Impacts related to potential odors for the Master Plan Update projects would be less than significant.

Mitigation Measures

No mitigation measures are required.

Global Climate Change

Impact AQ-4 The Master Plan improvements would contribute to increases in the generation of GHG emissions, thereby contributing to global climate change.

Effects of GHG emissions on global climate change are an emerging issue that warrants discussion under CEQA. Unlike the criteria pollutants discussed previously that may have local and regional effects, GHG emissions contribute to global changes in the environment. GHG emissions do not directly produce a localized impact, but may cause an indirect impact if the local climate is adversely changed by its cumulative contribution. Individual infrastructure projects contribute relatively small amounts of GHG that when added to all other GHG-producing activities around the world result in increases in these emissions that have led many to conclude that these collective emissions are contributing to changes in the global climate.

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. The impacts of global climate change described in AB 32 include changing sea levels, changes in snow pack and availability of potable water, changes in storm flows and flood inundation zones, and other impacts. The list of impacts included in AB 32 is considered substantial evidence of the potential environmental impacts that could result as a consequence of continued GHG outputs.

At minimum, the Master Plan Update improvements will be required to comply with Title 24 energy efficiency standards, to the extent applicable; however, the extent to which these standards would help the individual projects in achieving the goals outlined above is unknown. In response to this uncertainty and to provide clarification to lead agencies for assessing GHG impacts, BAAQMD has developed thresholds

of significance for common project types that, collectively, are responsible for substantial GHG emissions. In applying these thresholds, BAAQMD developed a threshold of 10,000 MTCO2e/yr for stationary sources and 1,100 MTCO2e/yr for projects other than stationary sources (e.g. mobile sources). However, this applies to only operations and not construction. BAAQMD has not established thresholds for construction; however, CARB is considering mandatory performance standards.

Quantification of GHG for the Master Plan Updates was based on the CO2 outputs generated during Master Plan operations using the URBEMIS 2007 model, shown in Table 3.2-3, combined with new electrical loads required for the operation of the pumping facilities for Project W-MP-5. At the highest level of operation in 2012 and beyond, GHG emissions generated by the pumping facilities are conservatively estimated at 3,158 MTCO2e/yr[1] and other operational emissions (e..g mobile trips) are estimated at 399 MTCO2e/yr[2]. These estimates are overly conservative in that they assume peak operation of the pumping facilities, 24-hours a day, seven days a week annually, which is not expected to occur under normal operating conditions. Nevertheless, even when applying these conservative assumptions, the calculated estimate remains less than the applied threshold and, therefore, operational-related GHG emissions are considered less than significant.

Based on CARB's currently proposed approach to construction activities, construction GHG emissions would require performance based control measures, which are currently not included as part of the Master Plans. With the inclusion of the prescribed mitigation measures to reduce construction-related GHG emissions, the residual impact would be less than significant.

Significance Determination Before Mitigation

Operational impacts to global climate change from the Master Plan Updates would be less than significant. However, construction-related releases of GHG emissions are potentially significant and require the application of the prescribed mitigation.

Mitigation Measures

The following mitigation measure(s) are required for all Master Plan projects, as applicable.

> Mitigation Measure AQ-4: GHG Reduction Measures for Construction.
> The City and/or Developer shall require its construction contractor to comply with the City's Clean Air Action Plan, once adopted. In conjunction with compliance with the City's Clean Air Action Plan, the City and/or Developer shall incorporate the following measures, to the extent they are applicable and feasible, into individual Master Plan Update improvements:
>
> a. incorporate the use of recycled or local-origin construction materials; and/or
> b. maximize recycling of construction/demolition waste materials.

Significance Determination After Mitigation

Following the application of the prescribed mitigation measures, construction emissions of GHGs would be reduced to a less than significant level.

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[1] The calculations are based on emission factors derived from the California Climate Action Registry Power/Utility Protocol Public Reports (as of June 2008) and the Emissions from California Air Resources Board, Greenhouse Gas Inventory, 1990 – 2004 (November 17, 2007). The emissions factors are based on PG&E's utility specific verified electricity CO2 Emissions factors for 2004. These calculations, presented in Appendix B, are estimates of expected project emissions from pump station operation and maintenance vehicle trips only, including carbon dioxide and methane generation, the combination of which are representative of GHG emissions.

[2] From URBEMIS (2007)

3.3.4 Cumulative Analysis

During the construction phase, the Master Plan Updates would generate PM-10, PM-2.5, ROG, and NOx emissions during each active day of construction. These emissions would be considerable at times during construction and could represent a significant cumulative air quality impact. The Master Plans' impact could be cumulatively considerable by virtue that 1) portions of the Bay Area Air Basin are nonattainment already, and although mitigated by BAAQMD Regulations, 2) project construction would occur on most days, including days with PM-10 and ozone already in excess of State standards.

Following construction, air emissions generated by the Master Plan Updates would not be cumulatively considerable. With implementation of mitigation prescribed above, the residual impact from construction would be less than significant. Consequently, from a cumulative standpoint, it may be concluded that construction activities associated with the Master Plan improvements would not generate cumulatively considerable levels of PM-10 and ozone precursors (e.g. ROG and NOx).

As provided in the program-level analysis, Master Plan construction and operations would generate less than significant quantities of GHG emissions and, therefore, these emissions would not be cumulatively significant.

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3.4 Biological Resources

This section provides an overview of existing biological resources, which are known to occur within the Study Area and surrounding region based on a review of relevant technical reports, previously documented sightings of "special-status" species in the California Natural Diversity Database (CNDDB), and a general reconnaissance of existing vegetation communities, wildlife habitats and, and local water features.

3.4.1 Environmental Setting

The Master Plan Study Area is located in the southern San Francisco Bay Area, which is characterized by a Mediterranean climate with hot dry summers and cool wet winters. As a result of urbanization over the past several decades within northeastern portions of the Santa Clara Valley now comprising the City, there are few natural vegetation communities within the Study Area. Barren or ruderal communities dominated by disturbance-adapted and non-native plant species have replaced historic vegetation communities. A system of linear drainages runs through and along the study area; these drainages have also been altered from their historical state and are generally channelized and linear for flood control purposes.

Vegetation and Wildlife Habitats

The Study Area is primarily comprised of urbanized land within the City of Milpitas city limits (Figure 3.4-1). The surrounding region offers a wide variety of wildlife habitats, including riparian corridors, marshlands, grasslands, and oak woodlands. While a majority of the Study Area is built out, the riparian, salt marsh, and mudflat habitats adjacent to Coyote Creek in the west and the rolling grasslands in Ed Levin Park and east provide important regional habitats.

A review of the vegetative communities established within the Study Area, as mapped in the California Wildlife Habitat Relationships (CWHR) system (CDFG 2008a) and described in "A Guide to Wildlife Habitats" (Mayer and Laudenslayer 1988), reinforced the urban setting for this Update. The CWHR designated virtually all lands within the Study Area as Urban, with a few small pockets of Annual Grassland along the eastern border. A single pocket identified as Cropland has been developed with a rural residential neighborhood and golf course since the mapping occurred.

Urban or developed environments generally consist of structures, roadways, and other paved areas. These areas provide limited habitat for common wildlife species such as rock pigeon (*Columba livia*), house sparrow (*Passer domesticus*), and American crow (*Corvus brachyrhynchos*). Species occurring within this habitat type are typically common and well-adapted to an urban environment. Paved roadways are included as developed areas and provide minimal habitat for most wildlife species.

Annual Grasslands are open grasslands composed primarily of non-native annual plant species which include wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Lolium multiflorum*), and ripgut brome (*Bromus diandrus*). Annual grassland communities may provide habitat for common species such as rock pigeon, house sparrow, mourning dove (*Zenaida macroura*), and western meadowlark (*Sturnella neglecta*). Raptor species forage in annual grassland as well.

Cropland. Areas classified as cropland are generally planted with one of any variety of crops, including oatgrass, alfalfa, corn, and grapes, are presently grown in the area. Cropland habitat may be used by a variety of common wildlife, such as killdeer (*Charadrius vociferus*), yellow-billed magpie (*Pica nuttalli*), American crow (*Corvus brachyrhynchos*), American pipit, savannah sparrow (*Passerculus sandwichensis*), California ground squirrel (*Spermophilus beecheyi*), and California meadow vole (*Microtus californicus*). Croplands also provide foraging habitat for sensitive wildlife species, including various raptor species and burrowing owls (*Athene cunicularia*).

Riparian/Wetlands. Although not illustrated in Figure 3.4-1, there are small areas along the several creeks that traverse the Study Area that contain riparian vegetation. Channel improvements and regular maintenance activities have cleared most riparian and emergent wetland vegetation in the channels and suppressed re-growth. The surrounding developed land uses have also contributed to the introduction of exotic plant species. However, notwithstanding these habitat changes, portions of these channels may include woody species such as Fremont's cottonwood (*Populus fremontii*), sandbar willow (*Salix interior*), and valley oak (*Quercus lobata*). In unlined portions of the channels, the channel bed is commonly dominated by bulrush (*Scirpus* sp.), cattail (*Typha latifolia* and *T. angustifolia*), common reed (*Phragmites australis*), and Johnsongrass. Common wildlife species may include Pacific tree frog (*Hyla regilla*), western pond turtle (*Emys marmorata*), California ground squirrel, coyote, raccoon, California quail, mourning dove, Nuttall's woodpecker (*Picoides nuttali*), red-shouldered hawk (*Buteo lineatus*), and burrowing owl. The proposed Master Plan Update alignments are generally located within existing roadway ROWs on previously-disturbed soil. All of the proposed improvements are located west of the I-680 on land designated as urban.

Creeks and Drainages

The system of drainage channels throughout the Study Area are located within the Coyote Creek watershed and may be considered jurisdictional by the USACE. This area is drained by eight intermittent creeks, all draining to South San Francisco Bay (see Figure 3.4-1):

- Arroyo de Los Coches
- Berryessa Creek (including Los Buellis branch)
- Calera Creek (North and South branches)
- Coyote Creek
- Lower Penitencia Creek (including East Channel)
- Piedmont Creek
- Tularcitos Creek (North and South branches)
- Wrigley/Ford Creek

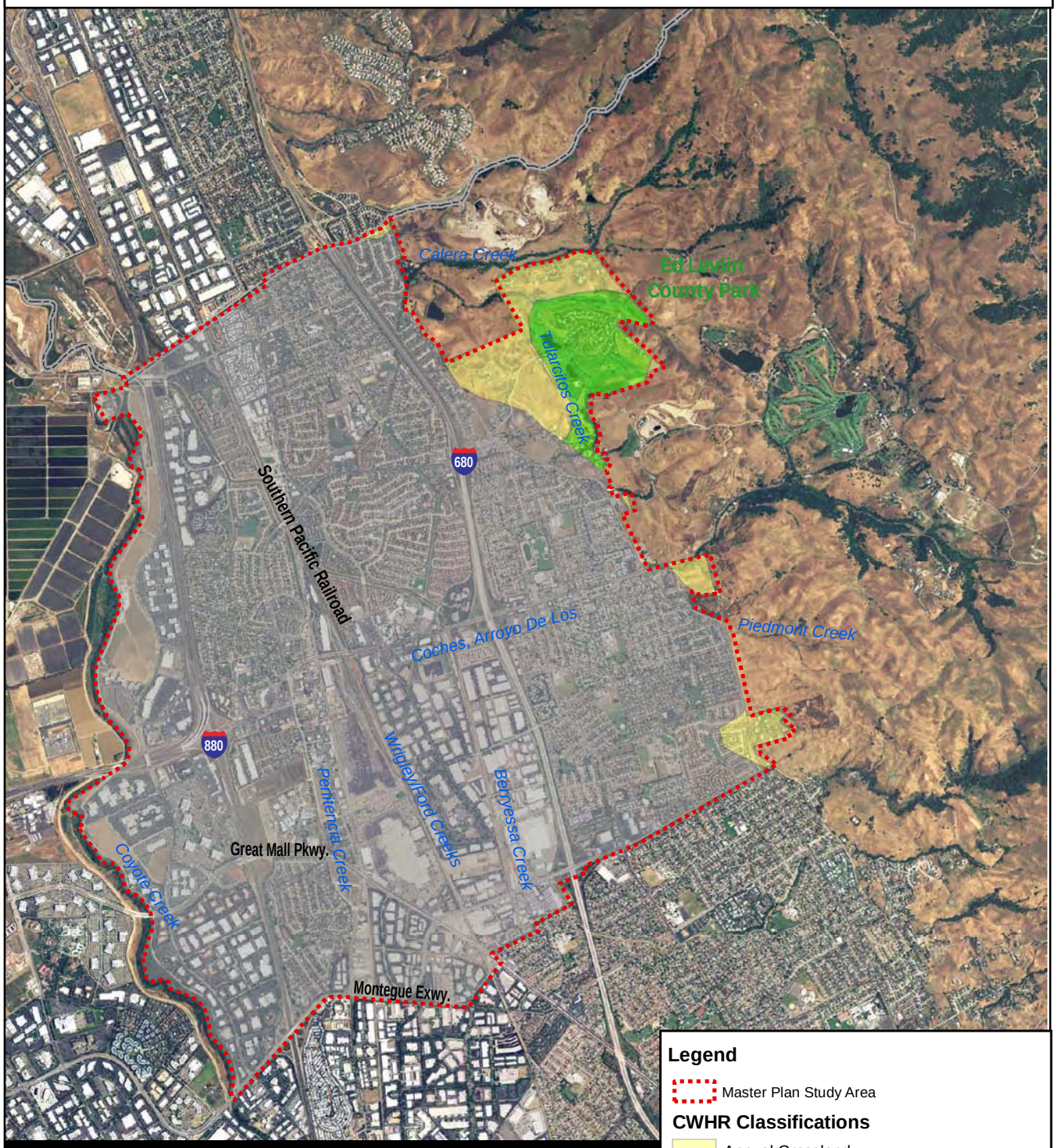
All eight creeks have been altered from their historical state with many segments being directed underground and/or channelized to accommodate development. As a result, the drainages lack high-quality riparian habitat at many locations and have minimal native vegetation. However, as indicated above, sections of each of these channels contain isolated patches of riparian and wetland vegetation.

Special-Status Species

Special-status species are defined as plants and animals that are legally protected under the Endangered Species Act (ESA), California Native Plant Protection Act, California Endangered Species Act (CESA) or other regulations. Special-status species also include those species that are considered sufficiently rare by the scientific community to qualify for such listing. For purposes of this analysis, the term "special-status" includes those species that are:

- plants or animals listed or proposed for listing as threatened or endangered under the federal ESA (50 Code of Federal regulations [CFR] 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]).
- plants or animals that are candidates for possible future listing as threatened or endangered under the federal ESA (61 FR 40, February 28, 1996);
- plants or animals listed or proposed for listing by the State of California as threatened or endangered under the California ESA (14 California Code of Regulations [CCR] 670.5);

Figure 3.4-1 - CWHR Classifications for the Master Plan Study Area



City of Milpitas Water and Sewer Master Plan Update

RMC Water and Environment

Created: 12/2008

Legend

Master Plan Study Area

CWHR Classifications

Annual Grassland

Cropland

Urban

0 2,400 4,800 7,200 Feet

Source: NAIP, 2008; CWHR, 2008; RMC, 2008

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- plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);
- plants that meet the definitions of rare and endangered under CEQA (State CEQA Guidelines, Section 15380);
- plants considered under the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (Lists 1A, 1B, and 2 in CNPS 2001);
- animal species of special concern to CDFG;
- animals fully protected in California (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]); and
- birds of prey protected under the federal Bald and Golden Eagle Protection Act.

A list of special-status plant and animal species that occur in the Study Area was compiled based on the resources described above. For each species, habitat requirements were assessed and compared to vegetation communities/habitats present within the Study Area. Based on this review of habitat requirements, an assessment was made regarding the potential for a species to occur in the project area. Table 3.4-1 is a summary of the regulatory status, general habitat, and potential for occurrence of each species considered. The "Potential for Occurrence" category is defined as follows:

Unlikely: The Study Area and/or immediate vicinity do not provide suitable habitat for a particular species. Study Area is outside of the species known range.

Low Potential: The Study Area and/or immediate vicinity provides only limited habitat for a particular species. The known range for a particular species may be outside of the Study Area.

Moderate Potential: The Study Area and/or immediate vicinity provide suitable habitat for a particular species, though there are no known sightings in the area.

High Potential: The Study Area and/or immediate vicinity provide ideal habitat conditions for a particular species and/or the species is known to occur in the area.

According to the CNDDB (CDFG 2008b), there are documented occurrences for seven special-status species within the Study Area (see Figure 3.4-2). In addition, there are another nine species status species documented within 5-miles of the Study Area. However, most of these records are historical, dating before 1930, and these species are limited to specific vegetation communities (e.g. vernal pools) that no longer exist within the Study Area (City of Milpitas 2007). The long history of development of the Study Area further decreases the habitat value and the potential for these special status species to occur. Table 3.4-1 identifies special status species with a potential to occur within the Study Area. All species documented in the database search occur are listed in Appendix C.

Table 3.4-1: Special Status Species Listed in California Natural Diversity Database

Species	Habitat Association	Federal Listing	State Listing	CNPS	Potential for Occurrence
California tiger salamander (*Ambystoma californiense*)	Annual grasslands, grassy understory of valley-foothill hardwood habitats, and along stream courses in valley-foothill riparian habitats.	Threatened	Species of Special Concern	N/A	Low. Species is documented within Study Area. However, only limited suitable habitat may be available within the Study Area.
Salt marsh harvest mouse (*Reithrodontomys raviventris*)	Found only in saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed saline emergent wetland is preferred habitat.	Endangered	Endangered	N/A	Moderate. This species prefers marsh areas to the northwest of the Study Area. However, this species is documented in the extreme northwestern corner of the Study Area and could be present along local waterways.
Burrowing owl (*Athene cunicularia*)	Open, dry annual or perennial grasslands, deserts, and scrublands with low-growing vegetation. Subterranean nester, dependent on burrowing mammals.	Species of Special Concern	Species of Special Concern	N/A	High. Potentially suitable habitat exists within the Study Area. Numerous occurrences are documented in the southern portion of the Study Area.
Great blue heron (*Ardea Herodias*)	This species is a colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites need to be in close proximity to foraging areas such as lake margins, tidal flats, marshes, rivers, streams, and wet meadows.	--	Species of Special Concern	N/A	Moderate. Suitable habitat for foraging by this species is available locally along creeks and landscape trees along the alignment may provide suitable nesting habitat.
California clapper rail (*Rallus longirostris obsoletus*)	Brackish and coastal salt marshes, nests along tidal sloughs.	Endangered	Endangered	N/A	Low. This species occurs to the west of the Study Area. The immediate Study Area does not provide suitable marsh habitat for this species.
California red legged frog (*Rana aurora draytonii*)	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation (may disperse far during and after periods of rain). Requires 11-20 weeks of permanent water for larval development.	Threatened	--	N/A	Low. Although there are multiple recorded occurrences of CRLF in the CNDDB within a five mile radius of the Study Area. Suitable aquatic habitat for this species is generally absent from the Study Area and, if present, is degraded and likely inhabited by predators.
Yuma myotis (*Myotis yumanensis*)	The Yuma myotis roosts in buildings, mines, caves, or crevices. The species also has been seen roosting in abandoned swallow nests and under bridges.	--	Species of Special Concern	N/A	Moderate. Thus species is documented within 2 miles of the Study Area. Suitable habitat exists within the Study Area for this species.
Pallid bat (*Antrozous pallidus*)	Broadly distributed in California from sea level to over 6,000 feet. Roosts in caves, buildings, rock crevices, and tree hollows. Overwinters in summer habitats at lower elevations	--	Species of Special Concern	N/A	Moderate. Habitat within the Study Area may be suitable for foraging by this species

Table 3.4-1: Special Status Species Listed in California Natural Diversity Database

Species	Habitat Association	Federal Listing	State Listing	CNPS	Potential for Occurrence
Salt-marsh wandering shrew (*Sorex vagrans halicoetes*)	In salt water marshes of San Francisco bay. Requires dense low-lying cover with an abundance of invertebrates and continuous moisture. Most likely to occur at 6–8 feet above sea level, and in lower-lying marsh not regularly inundated. Nests in driftwood or other debris scattered among 1–2 feet high Salicornia.	--	Species of Special Concern	N/A	Low. This species may occur in the northwestern portion of the Study Area, although the immediate vicinity provides limited, degraded habitat within local drainage channels.
Southwestern pond turtle (*Actinemys marmorata Pallida*)	Deep ponds or slow moving streams with aquatic vegetation and sandy upland soil for egglaying. BIRDS	--	Species of Special Concern	N/A	Low. Limited suitable habitat is available within the Study Area.
Northwestern pond turtle (*Actinemys marmorata*)	Found in perennial water bodies, including streams with open banks for basking and sandy soils for laying eggs	--	Species of Special Concern	N/A	Moderate. Suitable habitat exists within seasonal creeks in the Study Area where emergent vegetation os present. Adjacent upland areas may be used for egg laying, but unlikely due to level of disturbance.
White-tailed kite (*Elanus leucurus*)	Year-round resident. Nests or roosts in dense, broadleafed deciduous trees. Forages in herbaceous lowlands with variable tree growth and dense populations of voles.	--	Fully Protected Species	N/A	Moderate. Suitable nesting habitat for this species occurs throughout the Study Area. However, nearest sighting is over 2 miles south of Study Area.
Congdon's tarplant (*Hemizonia parryi* ssp. *Congdonii*)	Valley and foothill grasslands. Blooms June to November, sea level to 230 meters.	Species of Concern	--	Fairly Threatened in California	Low. Although there are multiple occurrences of this species recorded in the CNDDB within five miles of the Study Area, the distributed habitats within the Study Area, which are comprised of predominantely non-native grasses and herbs that generally out compete this species.
Alkali milkvetch (*Astragalus tener*)	Playas, valley, and foothill grasslands with alkaline adobe clay soils, alkaline vernal pools. Blooms March to June, up to 60 meters.	Species of Concern	--	Fairly Threatened in California	Low. Although there are two recorded occurrence of this species in the CNDDB within the Study Area, these occurrences are possibly extirpated. Also, the habitats present within the Study Area are mostly urban and/or ruderal and not suitable for this species.
Robust spineflower (*Chorizanthe robusta*)	Coastal dunes, openings in foothill woodland, northern coastal scrub. Blooms April to September, up to 300 meters.	Endangered	--	Seriously Threatened in California	Low. Suitable habitat for this species may occur in the Study Area; however, the soil substrate may be too clayey.

Source: CNDDB 2009.

3.4.2 Regulatory Setting

Federal Policies and Regulations

Endangered Species Act

The Federal Endangered Species Act (ESA) protects fish and wildlife species and their habitats that have been identified by USFWS or National Marine Fisheries Service (NOAA Fisheries) as threatened or endangered. Endangered refers to species, subspecies, or distinct population segments that are in danger of extinction through all or a significant portion of their range. Threatened refers to species, subspecies, or distinct population segments that are likely to become endangered in the near future.

In general, NOAA Fisheries is responsible for protection of ESA-listed marine species and anadromous fishes, whereas other listed species are under USFWS jurisdiction. Section 9 of the ESA prohibits *take* of threatened or endangered species, including to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Section 7 of the ESA provides a means for authorizing *take* of threatened and endangered species by federal agencies through issuance of a biological opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 U.S. Government Code [USC] 703–711) states that without a permit issued by the U.S. Department of the Interior, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties.

Clean Water Act

Under CWA Section 404, projects that would result in the placement of dredged or fill material into waters of the U.S. require a permit from the USACE. Some classes of fill activities may be authorized under General or Nationwide permits if specific conditions are met. Nationwide permits do not authorize activities that are likely to jeopardize the existence of a threatened or endangered species (listed under the ESA). When a project's activities do not meet the conditions for a Nationwide Permit, an Individual Permit may be issued.

Rivers and Harbors Act

The USACE also regulates activities in navigable waters under Section 10 of the Rivers and Harbors Act. The construction of structures, such as tidegates, bridges, or piers, or work that could interfere with navigation, including dredging or stream channelization, may require a Section 10 permit, in addition to a CWA Section 404 permit if the activity involves the discharge of fill.

Executive Order 11990

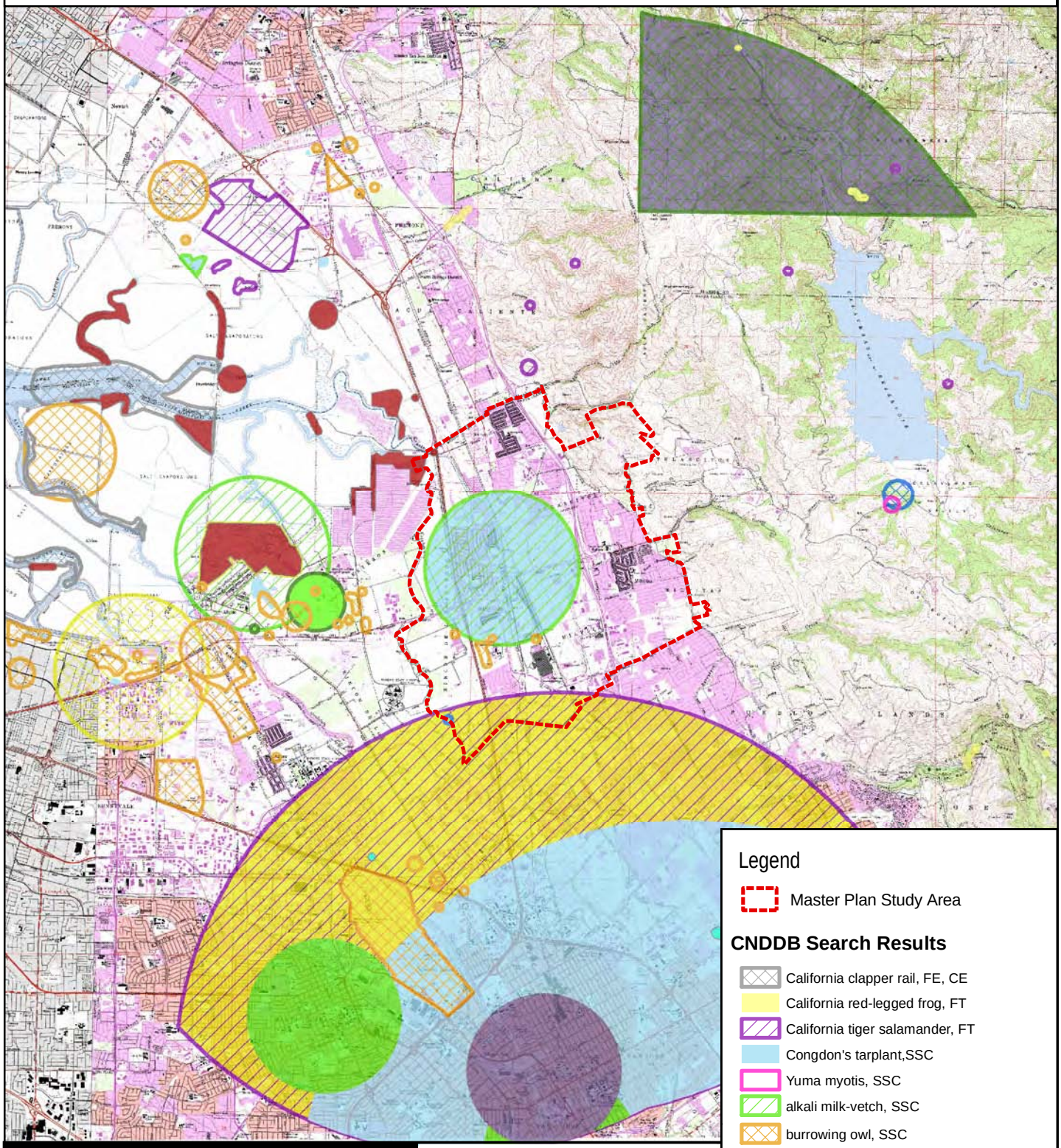
Finally, the federal government also supports a policy of minimizing "the destruction, loss, or degradation of wetlands." Executive Order 11990 requires that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands (May 24, 1977).

State Policies and Regulations

California Endangered Species Act

The California Endangered Species Act (CESA), implemented in 1984, prohibits the take of endangered and threatened species. The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. State threatened and endangered species are fully protected against "take", as defined above.

Figure 3.4-2 CNDDB Search Results



Legend

Master Plan Study Area

CNDDB Search Results

- California clapper rail, FE, CE
- California red-legged frog, FT
- California tiger salamander, FT
- Congdon's tarplant,SSC
- Yuma myotis, SSC
- alkali milk-vetch, SSC
- burrowing owl, SSC
- great blue heron, SSC
- hoary bat, SSC
- pallid bat, SSC
- robust spineflower, FE
- salt-marsh wandering shrew, SSC
- salt-marsh harvest mouse, FE, CE
- southwestern pond turtle, SSC
- western pond turtle, SSC
- white-tailed kite, SSC

City of Milpitas Water and Sewer Master Plan Update

RMC

0 0.5 1 2 Miles

Source: CNDDB, 2009; CalSIL, 2009

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Section 2090 of the CESA requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. The California Department of Fish and Game (CDFG) administers the act and authorizes *take* through Section 2081 agreements (except for species designated as fully protected).

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sec. 1900-1913) prohibits importing, taking, and selling rare and endangered plants. State-listed plants are protected mainly in cases where State agencies are involved in projects under CEQA review.

California Fish and Game Code

Under Section 3503 of the California Fish and Game Code (CFGC), it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the CFGC prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs.

Streambed Alteration Agreements

The CDFG regulates activities that would interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream under the California Fish and Game Code Section 1600. A stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. A project-specific Streambed Alteration Agreement (SAA) contains requirements to protect the integrity of biological resources and water quality. Requirements may include avoidance or minimization of the use of heavy equipment, limitations on work periods to avoid impacts on wildlife and fisheries resources, and measures to restore degraded sites or compensate for permanent habitat losses.

Local Policies and Regulations

City of Milpitas General Plan

The City's General Plan, as amended through 2008, contains the following policies that address biological resources. These principles and policies are provided in the Open Space and Environmental Conservation Element.

> *Guiding Principle 4.b-G-1* Protect and conserve open spaces which are necessary for wildlife habitats and unique ecological patterns.
>
> *Guiding Principle 4.b-G-2* Preserve and protect populations and supporting habitat of special status species within the Planning Area, including species that are state or federally-listed as Rare, Threatened, or Endangered, all federal "candidate" species for listing and other species proposed for listing, and all California Species of Special Concern.

Tree Protection Ordinance

The City of Milpitas adopted a tree protection ordinance to protect significant and heritage trees (Ord. 201.1, Sections X-2-2.10 and X-2-7.01, 3/1/88). The following trees are protected under the City's ordinance:

- Any tree with a 56-inch or greater circumference located on a residential property.
- Any tree with a 37-inch or greater circumference located on developed commercial or industrial property, or a vacant lot, undeveloped, or underdeveloped property.

- Any tree that existed at the time of a zoning or subdivision approval and was a specific subject of such approval.
- Any heritage tree and specimen plantings as defined as a planting of historic value, unique quality, significant girth or height, or a protected species identified in the development process as a City resource, or designated by the City Council to be of historical value or community benefit, or located on the Register of Cultural Resources.

Removal of any street tree, protected tree, or heritage planting requires a permit from the Public Works Maintenance Manager. The Public Works Maintenance Manager may determine that a tree authorized for removal be replaced by the permittee through compensation methods.

Santa Clara Valley Habitat Conservation Plan and Natural Communities Conservation Plan

The Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is a regional partnership between six local entities, including the County of Santa Clara, Santa Clara VTA, SCVWD, and the Cities of San Jose, Gilroy and Morgan Hill, and three regulatory agencies, including CDFG, USFWS, and NMFS. A second administrative draft of the HCP/NCCP was released in August of 2009 and is avaialbe for downloading at: http://www.scv-habitatplan.org/www/default.aspx.

The HCP/NCCP Study Area does not currently include the City and, therefore, would not be applicable to the Master Plan Update improvements.

3.4.3 Impact Analysis

This section describes the CEQA impact analysis relating to biological resources for the proposed Project. It describes the methods used to determine the Project's impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to biological resources was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFG or USFWS?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFG or USFWS?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Criteria Requiring No Further Evaluation

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- No HCP, NCCP, or other approved local, regional, or state habitat conservation plan has been adopted for the Master Plan Study Area. As provided in the setting discussion, the City is not included with the Study Area for the Santa Clara Valley HCP/NCCP and, by consequence, the Master Plan improvements would not be considered covered activities under the Santa Clara Valley HCP/NCCP. As a result, the implementation of the Master Plan improvements would not conflict with plans adopted for the purposes of mitigating impacts to listed species and their associated habitats.

Impacts and Mitigation Measures

Special Status Plants

Impact BIO-1 Construction of the Master Plan improvements could result in the potential disturbance or loss of special-status plant populations.

Construction and improvement activities associated with the proposed Master Plan Updates may result in direct or indirect impacts to special-status plant species: Congdon's tarplant, alkali milk-vetch, and robust spineflower. Congdon's tarplant and robust spineflower are classified as 'possibly extirpated,' however, their status affords them special protections should they be found within the improvement sites. Although the Master Plan pipeline alignments will be constructed within roadway ROWs and therefore avoid direct impacts to special status plants, the storage tank and pump station facilities may result in direct or indirect impacts to suitable habitats for special-status plants. Direct impacts may result from grading, site preparation, and construction of the storage tank and pump station facilities. Vibration, dust, and human trampling associated with the construction activity may also indirectly disturb special plant status species. This could result in a reduction in local population size, lowered reproductive success, or habitat fragmentation. Potential loss or disturbance of special status plant species is considered a potentially significant impact.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts to special status plant species during construction activities.

Mitigation Measures

The following mitigation measures are required for all Master Plan construction projects.

Mitigation Measure BIO-1a: Document Special-Status Plant Populations for Individual Improvements Constructed Outside Existing Roadway ROW.

Prior to design or construction of improvements outside of existing roadway ROW, the City will retain a qualified botanist to document the presence or absence of special-status plants on or near to the individual improvements before implementation. To document plant populations, the following steps will be undertaken: 1) review existing information to develop a list of special-status plants that could grow on the site; 2) coordinate with the appropriate agencies (CDFG and USFWS) to discuss botanical resource issues and determine the appropriate level of surveys necessary to document special-status plants; and 3) conduct a botanical survey of appropriate detail dependant on species richness, habitat type and quality, and the probability of special status species occurring in a particular habitat type. The botanical survey may include a habitat assessment, a species-focused survey, or a floristic protocol-level survey per CNPS Botanical Survey Guidelines (CNPS 2001).

Special-status plant populations identified during the field surveys will be mapped and documented. The City shall implement Mitigation Measure BIO-2 to avoid or minimize significant impacts on identified special-status plants.

Mitigation Measure BIO-1b: Avoid or Minimize Impacts on Special-Status Plants by Protecting Special-Status Plant Populations.
If construction of the individual improvements has the potential to result in direct loss or indirect disturbance to special-status plants, the City will protect special-status plants by installing environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant populations. The environmentally sensitive area fencing will be installed at least 20 feet from the edge of the population. The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.

Significance Determination After Mitigation

With the implementation of Mitigation Measure BIO-1a and BIO-1b, potential impacts to special status plant populations resulting from construction of the storage tank and associated facilities would be reduced to less than significant levels.

Special Status Wildlife

Impact BIO-2 Construction of the Master Plan improvements could result in potential disturbance or loss of special-status wildlife species and their associated habitats.

Construction and improvement activities associated with the Master Plan Updates could result in the direct loss or indirect disturbance of special-status wildlife. As provided in Table 3.4-1, the Study Area provides potentially suitable habitat for several threatened and endangered wildlife species, including Salt marsh harvest mouse and California tiger salamander (CTS). The Study Area also provides habitat for several species of concern, which include northwestern and southwestern pond turtle, white-tailed kite, burrowing owl, pallid bat, yuma myotis, and great blue heron. Specific impacts to special-status wildlife species are addressed below.

California tiger salamander, Southwestern Pond Turtle, and Northwestern Pond Turtle. Drainage ways, wetlands, and swales may occur within the Study Area, providing habitat for special-status amphibians such as CTS and pond turtles. North and southwestern pond turtles may occur in drainage ditches, sloughs, and other aquatic features within the Study Area that may serve as suitable habitat. As shown in Figure 3.4-2, the nearest known occurrences of north and southwestern pond turtle to the Study Area is less than ¼ mile. In addition, there are also known occurrences of CTS within the Study Area, although this species is believed to be extirpated from the Study Area due to a lack of recent sightings.

Direct impacts to drainage channels and wetland habitats may result from excavation and trenching which will be used to install pipeline across smaller ditches (less than 10 feet in width). Some direct impacts will be minimized by constructing primarily along and within existing roadways and by using trenchless construction techniques to cross larger water bodies. Temporary dewatering activities during construction could also cause mortality of wetland species, CTS, and Northwestern pond turtle eggs, larvae, and juveniles.

Construction activities associated with the Master Plan improvements could potentially result in significant impacts to these species, and may also lead to a cumulative decline of the species over time. Indirect impacts may include the temporary degradation of water quality during construction. To

minimize potential direct or indirect effects of Project implementation on CTS and western pond turtle, Mitigation Measures BIO-2a, BIO-2b and BIO-2c would be implemented.

Burrowing owl. As shown in Figure 3.4-2, there are several occurrences of burrowing owl within the Study Area. The TASP EIR reports that during burrowing owl surveys conducted in July 2003 for the Elmwood Residential and Commercial Development Project EIR, twelve burrowing owls and six nesting burrows were identified in the Elmwood project area on vacant lots (City of Milpitas 2007). Burrowing owls often occur along the edges of croplands and along drainage ditches and levees where suitable habitat (burrows) occurs. Burrowing owls require short grasslands and open habitats for nesting and foraging. Construction of the Master Plan improvements may temporarily and permanently disturb the nesting of burrowing owl due to construction noise and disturbance, as well as permanent and temporary disturbance of foraging habitat. CDFG generally considers all disturbance within a 50 meters (160 feet) of an active nest to be a potential impact to burrowing owl. Construction may also affect foraging habitat for burrowing owl in the Study Area.

Direct impacts may be minimized by constructing primarily along and within existing roadways, although burrows are often located along roadway embankments and on edges of drainage channels. Construction activities associated with new conveyance pipelines could potentially result in significant impacts to these species, and may also lead to a cumulative decline of the species over time. These impacts would be reduced to less than significant with the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-2c.

White-tailed Kite, Pallid bat, Yuma myotis, and Great blue heron. White-tailed kite and Great blue heron nest in moderate to tall trees, typically in riparian or woodland habitats. White-tailed kite forages mainly in open habitats such as grassland and cropland. The Great blue heron may nest in dense foliage of trees and shrubs, which in the Study Area are riparian habitats; and they may forage in open habitats, similar to foraging habitat for white tailed kite. In addition, special-status bat species have a moderate potential of occurring in the Study Area. In particular, the Pallid bat and Yuma myotis could potentially roost in riparian and ornamental trees in the Study Area. In addition, these species could roost under bridges and older buildings.

Given programmatic nature of this analysis, the City is unable to confirm whether individual Master Plan improvements would require the removal of trees, which could in turn result in direct impacts to special status raptor and bat species in the forma of next removal or abandonment. Construction may also permanently and temporarily affect foraging habitat for these species in the Study Area. CDFG generally considers disturbance within 500 feet of a nesting raptor to be an impact to that species. These potential impacts would be reduced to a less than significant level with the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-2c.

Salt marsh harvest mouse. Salt marsh harvest mouse is a Federally and State Endangered species and is found only in saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed saline emergent wetland is its preferred habitat, though grasslands adjacent to pickleweed marsh are also used where new grass growth affords suitable cover in spring and summer months. There are two occurrences of salt marsh harvest mouse within the Study Area boundaries as documented in the CNDDB. With the close proximity of known occurrences and the availability of suitable habitat nearby, Master Plan related improvements within the northwestern portions of the Study Area has the potential for indirect impacts to salt marsh harvest mouse. These potential impacts would be reduced to a less than significant level with the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-2c.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts to special status wildlife species during construction activities.

Mitigation Measures

The following mitigation measures are required for all Master Plan construction projects.

Mitigation Measure BIO-2a: Document Special-Status Wildlife Species and Their Habitats for Individual Improvements Constructed Outside Existing Roadway ROW.
Prior to construction of the storage tank and pump station on undisturbed lands, the City will document special status wildlife species and their habitats. The City will retain a qualified wildlife biologist to document the presence or absence of special-status wildlife before implementation. To document special-status wildlife, the wildlife biologist will 1) review existing information to confirm the list of special-status wildlife species that could occur in the project area; 2) coordinate with the appropriate agencies (CDFG or USFWS) to discuss wildlife resource issues in the region and determine the appropriate level of surveys necessary to document special-status wildlife and their habitats; and 3) conduct a field survey of an appropriate detail dependant on species richness, habitat type and quality, and the probability of special status species occurring in a particular habitat type. The wildlife biologist shall consider the CDFG Staff Report on Burrowing Owl Mitigation (CDFG 1995), which includes survey guidelines for burrowing owl. Special-status wildlife or suitable habitat identified during the field surveys will be mapped and documented. At any point during implementation of this mitigation measure, the City may choose to redesign or modify the program element(s) to avoid direct and indirect impacts on special-status wildlife, and will not need to complete the remaining steps identified in this measure.

Mitigation Measure BIO-2b: Avoid and Minimize Impacts to Special-Status Wildlife Species During Construction.
The City shall attempt to avoid and minimize direct and indirect effects on special-status wildlife. The City will require the construction contractor to protect special-status wildlife and their habitats near the project site by installing environmentally sensitive area fencing around habitat features, such as seasonal wetlands, burrows, and nest trees. The environmentally sensitive area fencing or staking will be installed at a minimum distance from the edge of the resource as determined through coordination with state and federal agency biologists (CDFG and USFWS). The wildlife biologist shall consider the CDFG Staff Report on Burrowing Owl Mitigation (CDFG 1995), which includes measures for minimizing impacts to burrowing owl. The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.

Mitigation Measure BIO-2c: Coordinate with Resource Agencies and Develop Appropriate Compensation Plans for Potentially Impacted State- and Federally Listed Wildlife Species.
In the event that, despite implementation of Mitigation Measure BIO-2b, construction activities would result in significant impacts on state- or federally listed wildlife species, the City will develop a compensation plan in coordination with the appropriate resource agency (CDFG or USFWS), and/or follow their established compensation guidelines. Compensation guidelines have been identified for several special-status wildlife species, including burrowing owl (CDFG 1995). The amount of compensation will vary depending on the amount of habitat loss or degree of habitat disturbance anticipated. The compensation plan would involve identifying an agency-approved mitigation bank or site (on- or off-site); re-creating (burrows) or preserving habitat for special status wildlife species; monitoring the mitigation site; or funding the management of the mitigation site.

Significance Determination After Mitigation

With the implementation of Mitigation Measure BIO-2a, BIO-2b, and BIO-2c, potential impacts to special status wildlife resulting from construction of the storage tank and associated facilities would be reduced to less than significant levels.

Noxious Weeds

Impact BIO-3 Construction of the Master Plan improvements carries the potential to introduce or spread noxious weeds.

Construction activities associated with project elements could introduce or spread noxious weeds into currently uninfested areas, possibly resulting in the degradation of habitat for special-status wildlife. Plants or seeds may be dispersed on construction equipment if the appropriate measures are not implemented. This impact is considered significant because the introduction or spread of noxious weeds could result in a substantial reduction or elimination of species diversity or abundance. Implementation of the following mitigation measures would reduce this impact to a less-than-significant level.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts related to the spread of noxious weeds during construction.

Mitigation Measures

The following mitigation measures are required for all above-ground, Master Plan construction projects that occur outside the existing roadway ROW.

Mitigation Measure BIO-3: Avoid the Dispersal of Noxious Weeds into Uninfested Areas.
To avoid the introduction or spread of noxious weeds into uninfested areas, the City will incorporate the following measures into construction project plans and specifications:

- Use certified, weed-free, imported erosion-control materials (or rice straw in upland areas).
- Coordinate with the County Agricultural Commissioner and land management agencies to ensure that the appropriate best management practices (BMPs) are implemented.
- Educate construction supervisors and managers about weed identification and the importance of controlling and preventing the spread of noxious weeds.
- Clean equipment at designated wash stations after leaving noxious weed infestation areas.

The noxious weed avoidance measures will be reflected in contract documents and implemented by the construction contractor.

Significance Determination After Mitigation

With the implementation of Mitigation Measure BIO-3a, potential impacts related to the spread of noxious weeds during construction would be reduced to less than significant levels.

Waters of the U.S. and State

Impact BIO-4 Implementation of the Master Plan improvements could result in the loss or disturbance of waters of the United States or State and associated riparian habitats.

Construction activities associated with Master Plan Updates could potentially result in the disturbance or loss of waters of the United States. The proposed conveyance pipelines would primarily be installed within existing roadway ROWs within the Master Plan Study Area. However, several of these proposed

alignments cross over or directly adjacent to creeks and drainage channels, all of which are tributary to Coyote Creek.

- The proposed recycled water improvements (W-MP-6; refer to Figure 2-6) are located directly adjacent to Berryessa Creek.
- Several Sewer Master Plan improvements (S-MP-1 and S-MP-11D; refer to Figure 2-7) are located adjacent to Penitencia Creek.
- One Water Master Plan improvement (W-MP-2; refer to Figure 2-5) is located in close proximity to Penitencia Creek.

Excavation, trenching, and related construction techniques would be used to install the proposed water and sewer conveyance pipelines and associated facilities. Trenchless construction techniques would be used for any creek crossings. Dewatering of trenches or smaller ditches, however, could temporarily affect riparian vegetation, depending on the length of time necessary to install the pipeline and the season of construction. This impact is considered significant because it could result in long-term degradation of a sensitive plant community, fragmentation or isolation of an important wildlife habitat, and disruption of natural wildlife movement corridors.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts related to the loss or disturbance of waters of the U.S. or State.

Mitigation Measures

The following mitigation measures are required for all Master Plan construction projects.

Mitigation Measure BIO-4a: If Necessary, Prepare a Wetland Delineation and Obtain Clean Water Act Permits.
Prior to construction of individual Master Plan improvements located adjacent to a creek or drainage channel, the City shall determine if a wetland delineation report is necessary. If determined, the City shall prepare and submit for approval a formal wetland delineation report for verification through the USACE. The City shall obtain a Section 404 permit for impacts to jurisdictional wetlands from the USACE and/or a Section 401 permit from the RWQCB and shall comply with all conditions of permits received. In association with either or both permits, compensatory mitigation for impacts to jurisdictional wetlands may be required.

Mitigation Measure BIO-4b: Compensate for the Loss of Wetlands or Riparian Habitat.
If wetlands or riparian habitat is removed as part of the Master Plan Updates, the City will compensate for the loss of riparian vegetation to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (including CDFG, USFWS, USACE, and NOAA Fisheries). Compensation will be provided at a minimum 1:1 ratio (1 acre restored or created for every 1 acre removed) and may be a combination of on-site restoration/creation, off-site restoration, and mitigation credits. The City will develop and implement a restoration and monitoring plan that describes how wetlands or riparian habitat will be enhanced or re-created and monitored over a minimum period of time, as determined by the appropriate state and federal agencies.

Mitigation Measure BIO-4c: Return Master Plan Improvement Sites to Pre-Construction Conditions.

For open trench construction crossings across minor ditches and drainage channels (less than 15 feet in width), the following measures shall be implemented:

- Implement compliance measures, described in *Section 3.8, Hydrology and Water Quality* for Impact HWQ-1a, to reduce indirect impacts to wetlands and other waters during open trench construction;
- Conduct trenching and construction activities across drainages during low-flow (e.g. <1 to 2 cfs) or dry periods as feasible;
- If working in active channels, install cofferdam upstream and downstream of stream crossing to separate construction area from flowing waterway;
- Place sediment curtains upstream and downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone;
- Locate spoil sites such that they do not drain directly into the drainages and/or seasonal wetlands;
- Store equipment and materials away from the drainages and wetland areas. No debris will be deposited within 250 feet of the drainages and wetland areas;
- Prepare and implement a revegetation plan to restore vegetation in all temporarily disturbed wetlands and other waters using native species seed mixes and container plant material that are appropriate for existing hydrological conditions. All disturbed drainages will be restored to pre-construction conditions.

Significance Determination After Mitigation

With the implementation of Mitigation Measure BIO-4a, BIO-4b, and BIO-4c, potential impacts to wetlands and riparian vegetation during construction would be reduced to less than significant levels.

Local Conservation Policies

Impact BIO-5 Implementation of the Master Plan improvements could conflict with local policies or ordinances adopted for the purpose of protecting biological resources.

Construction activities associated with project elements could potentially result in conflicts with local policies or ordinances (listed above under Regulatory Context) that protect locally significant biological resources. However, when Master Plan Update improvements are implemented, the City would also implement Mitigation Measures BIO-1a, 1b, 2a, 2b, 2c, 3a, 4a, 4b and 4a to avoid or minimize potential impacts from construction and operation activities. Consequently, this impact is considered less than significant.

Significance Determination Before Mitigation

The Master Plan improvements would not conflict with local policies or ordinances protecting biological resources, and would therefore be considered less than significant.

Mitigation Measures

No mitigation measures are required.

3.4.4 Cumulative Analysis

Biological resources, including threatened, endangered, and species of special concern, could be temporarily affected by construction activities associated with the Master Plan Updates in conjunction with other development and infrastructure projects as identified in Section 3.1.4. However, the proposed Master Plan Update improvements are primarily located within previously-disturbed ROWs and, therefore, in most cases avoid the potential for impacts to special-status plants or wildlife.

In instances where a potential impact could occur, CDFG and USFWS have promulgated a regulatory scheme that limits impacts to these species. The effects of the Master Plan Update improvements would be rendered less than significant through mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species, as well as waters of the U.S. and State. Other cumulative projects in the Study Area would also be required to avoid impacts to special-status species and/or mitigate to the satisfaction of the CDFG and USFWS for the potential loss of habitat. As these program-level mitigation measures would be imposed at the project-level for individual improvements, such as pre-construction surveys and protective fencing, these measure would ensure that impacts to biological resources are not cumulatively considerable.

3.5 Cultural Resources

This section discusses the existing conditions related to cultural resources in the Study Area. Federal, state, and local regulations related to cultural resources that would apply to the proposed Master Plan Updates follow. Descriptions and analysis in this section are based on information contained in existing reports and published literature. Major cultural resources issues addressed in the section include disturbance of unknown archeological and paleontological resources during construction.

3.5.1 Environmental Setting

Existing Conditions

Existing conditions information was compiled by reviewing relevant technical reports, performing a literature review, and analyzing records searches from previous studies.

Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. The majority of archaeological resource sites in the San Francisco Bay Area region are associated with either Native American or Euroamerican occupation of the area. Historic resources are standing structures of historic or aesthetic significance. To be potentially eligible for listing on the National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR), a building must usually be over 45-50 years old, must have historic significance, and must retain its physical integrity. Paleontological resources are the mineralized (fossilized) remains of prehistoric plant and animal life exclusive of human remains or artifacts. While not categorized as a “cultural resource,” paleontological resources are also evaluated in this section of the EIR.

The TASP EIR, incorporated by reference, contains a detailed discussion of cultural, historic and ethnographic baseline information extracted from an overview document prepared by the Northwest Information Center at Sonoma State University (September 2007) and the City’s Historic Sites Inventory (July 1990). Additional information from the Midtown Milpitas Specific Plan EIR, 2001 was utilized as 30 archaeological investigations were conducted within that planning area.

Prehistoric Context

The Milpitas area was likely settled by Native Americans between 12,000 and 6,000 years ago. The descendants of the native groups who lived between the Carquinez Strait and the Monterey area were the Ohlone (Costanoan). Milpitas is within the ethnographic territory of the Alson tribe of Ohlone, who occupied the area near the mouth of the Coyote Creek (Milliken 1995).

The presence of a deposit of cinnabar (later famous as the mines of New Almaden) within Tamyen territory likely increased traffic through the early Milpitas area. The cinnabar (used as a body paint) stimulated considerable trade. Trade for other items—such as wooden bows, salt, and pine nuts—also brought many visitors to the Tamyen territories. Wooden bows and salt from the bay were traded to the Plains Miwok.

Two notable Ohlone village sites lie within the city limits of Milpitas. One, a huge shell mound near the present-day Elmwood Rehabilitation Center, was discovered in 1949 and dates back to the eighteenth century. The other, on the site of the Alviso Adobe near the corner of Calaveras and Piedmont, is at least 3,000 years old and is one of only a handful of archaeological sites in California with such a long history of continuous occupation (City of Milpitas 1990).

Prehistoric Resource Sites

A review of the Study Area conducted for the TASP EIR revealed that one recorded native American archaeological resource, CA-SCL-593, a habitation site, is within the Study Area (Northwest Information Center 2007). Because a majority of the improvements will be constructed within roadway ROWs, this archaeological resource is unlikely to be disturbed by the Master Plan improvements.

Historic Context

During the Spanish expeditions of the late 1700s, several missions were founded in the San Francisco Bay Area. After the Mexican government distributed the missions lands among the Californios (Mexican pioneers living in California), the brief but lively "rancho" period began. The land in modern-day Milpitas was divided between the 6,353-acre Rancho Rincon de los Esteros, the 4,458-acre Rancho Milpitas, and the 4,394- acre Rancho Tularcitos (Munzel 2007).

In the 1850s, large numbers of Americans from the East, Canadians, Irish, Chileans, British, Germans and more arrived to farm the fertile lands of Milpitas. The early settlers farmed the land and set up many businesses on Mission Road, which by the late 20th century became known as the "Midtown" district. The Midtown area, the oldest part of Milpitas, has few remaining historic residences and was the only commercial district that existed before 1945. In the early 1900s, Milpitas served as a popular rest stop for travelers on the old Oakland–San Jose Highway.

Historic Resources Sites

According to the Northwest Information Center, State and federal inventories list one historic property with the Study Area: 459 Great Mall Drive (FCC060215F), the Great Mall of the Bay Area Building, formerly the Old Ford Motor Assembly Plant. This property currently has a status code of 6Y, meaning it has been determined ineligible for the National Register by consensus through the Section 106 process, but has not been evaluated for the California Register or local listing. While this building is in the Planning Area, construction of the Water and Sewer Master Plan Update improvements would not affect this resource.

The City’s General Plan identifies thirteen cultural resources sites (four of which have no historic structures on them). The Historic Resources Master Plan (1993) identified six cultural resource sites and two historic sites listed in the Historic Sites Inventory as “prime” candidates for preservation. Because a majority of the Master Plan improvements will be constructed within roadway ROWs, these cultural resources are unlikely to be disturbed by the Master Plan improvements.

Paleontological Resources

Paleontological resources (fossil remains) are considered to be important as they provide indicators of the earth’s chronology and history. These resources are afforded protection under CEQA and are considered to be limited and nonrenewable; they provide valuable scientific and educational data. The University of California Museum of Paleontology (UCMP 2007) lists 80 localities where fossils have been found in Santa Clara County. At least eight of these findings are documented to be in Milpitas. The localities contain records for various Mammalia, ranging from Bison (Pleistocene) to Desmostylus hespeus (genetic cousin of the sea cow from the Miocene period). Pleistocene alluvium (deposited sediments) is considered sensitive for vertebrate fossils, which are considered a significant paleontological resource. Because many of the improvements will be constructed within disturbed ROWs, paleontological resources are unlikely to be disturbed by the Master Plan improvements.

3.5.2 Regulatory Setting

Federal Policies and Regulations

National Historic Preservation Act (1966)

The National Historic Preservation Act (NHPA) is the most prominent federal law dealing with historic preservation. The NHPA established guidelines to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The NHPA includes regulations specifically for federal land-holding agencies, but also includes regulations (Section 106) which pertain to all projects that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. All projects that are subject to NEPA are also subject to compliance with Section 106 of the NHPA, and the NEPA requirements concerning cultural resources can be addressed through compliance with Section 106 of the NHPA process.

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the NHPA, properties listed in the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior. There are no sites in the Study Area that are listed on the National Register of Historic Places.

State Policies and Regulations

In the State of California, the process of reviewing projects and decisions that may impact cultural resources, including historic, archaeological, and paleontological resources, is conducted under several different federal, state, and local laws. At the federal level, the Office of Historic Preservation (OHP) carries out reviews under Section 106 of the National Historic Preservation of 1966, as amended. CEQA requires that public agencies consider the effects of their actions on historical resources. Additionally, California Public Resources Code 5024 requires consultation with OHP when a project may impact historical resources located on State-owned land. California State law (SB 18) requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting Traditional Tribal Cultural Places ("cultural places").

California Register of Historic Resources

California State law also provides for the protection of cultural resources by requiring evaluations of the significance of prehistoric and historic resources identified in CEQA documents. Under CEQA, a cultural resource is considered an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. Criteria identified in the CEQA Guidelines are similar to those described under the NHPA. The State Historic Preservation Office (SHPO) maintains the CRHR. Historic properties listed, or formally designated for eligibility to be listed, on The National Register are automatically listed on the CRHR. State Landmarks and Points of Interest are also automatically listed. The CRHR can also include properties designated under local preservation ordinances or identified through local historical resource surveys.

California Historic Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of the criteria listed as follows: the resource also must be approved for designation by the County Board of Supervisors or the City/Town Council in whose jurisdiction it is located; be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. There are no buildings, structures, sites in the Study Area that are listed by SHPO as a California Historical Landmark.

Health and Safety Code, Section 7050.5

Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC). CEQA Guidelines (Public Resources Code Section 5097) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Native American Heritage Commission

The disposition of Native American burial falls within the jurisdiction of the NAHC. The NAHC was contacted in April 2006 and asked to review its sacred lands file and provide a list of Native American representatives potentially interested in the project area. A response was made by the NAHC, which provided a list of Native American contacts and stated that the records search failed to indicate the presence of Native American cultural resources in the Planning Area. Subsequently, letters briefly describing the General Plan update, including a map of the project area, were sent to eight Native American representatives. The letters requested that the representatives provide comments and express any concerns about the project. To date, no written comments or concerns have been received.

Local Policies and Programs

City of Milpitas General Plan

The General Plan, as amended through 2008, states that there are 13 resources (sites and buildings) listed in the City's Register of Cultural Resources. Eight designated Cultural Resources are "prime" candidates for preservation; six of the "prime" candidates include historic buildings. Because a majority of the improvements will be constructed within roadway ROWs, these cultural resources are unlikely to be disturbed by the proposed project.

The City's General Plan contains the following policies that address cultural resources. These principles and policies are provided in the Open Space and Environmental Conservation Element.

> *Policy 4.f-G-1* Preserve existing historical and cultural resources, especially those sites where an Historical Park may prove feasible.
>
> *Policy 4.f-G-2* Undertake efforts that promote Milpitas as a historical community, and undertake efforts to increase public awareness towards preservation.

City of Milpitas Cultural Resources Preservation Program

Procedures to identify and designate cultural resources are outlined in the City's Zoning, Planning, and Annexation Code (MMC XI-4). Cultural resources and historic districts may be recommended for designation by the Parks, Recreation, and Cultural Resources Commission and approved by the City Council. A comprehensive survey of the City's historic sites was completed in 1990.

3.5.3 Impact Analysis

This section describes the CEQA impact analysis relating to cultural resources for the proposed Master Plan Updates. It describes the methods used to determine impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to cultural resources was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

d) Disturb any human remains, including those interred outside of formal cemeteries.

Impacts and Mitigation Measures

Documented Historic and Archaeological Resources

Impact CR-1 Implementation of the Master Plan improvements would not result in the disturbance or destruction of documented historical and archaeological resources.

No pedestrian surveys were conducted to identify cultural resources as part of this EIR. The records search conducted for the TASP EIR indicated only one historic property with the Study Area: 459 Great Mall Drive (FCC060215F), the Great Mall of the Bay Area Building, formerly the Old Ford Motor Assembly Plant. The City has also identified 13 cultural resources sites which could potentially be affected directly or indirectly by the construction of water and sewer facilities.

Construction of Master Plan Update improvements would include ground-disturbing activities, such as excavation, clearing, and grading. These ground-disturbing activities may result in direct impacts to historical resources if they are present. However, due to their construction within previously-disturbed roadway ROWs, construction of the proposed pipelines are unlikely to affect existing cultural resources. Additionally, selection of the exact site for the proposed storage tank and pump station would exempt any cultural resource site from consideration. Construction of the Master Plan Update improvements would not directly or indirectly impact any known cultural or historical resource site within the Study Area. This impact is considered less-than-significant. No mitigation is required.

Significance Determination Before Mitigation

Impacts related to disturbance of cultural resources during construction of the Master Plan Updates would be less than significant.

Mitigation Measures

No mitigation measures are required.

Recovery of Undocumented Cultural Resources

Impact CR-2 Construction of the Master Plan improvements could result in potential impacts to undocumented archeological and paleontological resources or human remains.

Although no documented cultural resources are identified adjacent to the Master Plan improvements, it is possible that buried archaeological or paleontological materials are present. Disturbance or destruction of these resources may result from ground-disturbing activities associated with construction of any one of the Master Plan improvements. Likewise, undocumented human remains or burial sites could be encountered during individual project construction. This impact could be potentially significant, however,

with the implementation of the following mitigation, this impact would be reduced to a less-than-significant level.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant archeological or paleontological impacts during construction of new water and wastewater conveyance and storage facilities.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

Mitigation Measure CR-2: Stop Work in Case of Accidental Discovery of Buried Archeological or Paleontological Resources.
If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, human bone, or fossils, are inadvertently discovered during ground-disturbing activities, the program contractors will stop work within 100 feet of the find until a qualified archaeologist and/or paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City and other appropriate agencies.

If human remains of Native American origin are discovered during project construction, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Pub. Res. Code Sec. 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, the program contractors will conduct no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- the coroner of the county has been informed and has determined that no investigation of the cause of death is required; and
- if the remains are of Native American origin,
    - the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
    - the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. The above provisions will be included in contract documents.

Significance Determination After Mitigation

With the implementation of Mitigation Measure CR-2, potential archeological or paleontological impacts resulting from construction of Master Plan improvements would be reduced to less than significant levels.

3.5.4 Cumulative Analysis

Any cultural resources found during construction or during maintenance in the Study Area could provide information of value in the interpretation of the region's prehistory and history. Because the Master Plan Updates would not directly affect any recorded or significant cultural resource, they would not likely cause significant cumulative impacts. However, if construction operations were to expose a large, stratified, buried prehistoric or historic archaeological site, the possibility of cumulative impacts would arise because such sites are highly significant. Any potential impacts to an unknown archaeological site or burial site would be minimized to less than significant levels through the implementation of the programmatic mitigation measures at the individual project-level.

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3.6 Geology and Soils

This section describes the existing geologic and soil conditions within Master Plan Study Area. Federal, state, and local regulations related to geology and soils that would apply to the Master Plan Updates follow. Descriptions and analysis in this section are based on information contained in existing reports and published literature. Major geologic and soil issues addressed in the section include soil expansion and corrosivity, regional seismicity, and secondary geologic impacts from ground shaking.

3.6.1 Environmental Setting

Regional Topography and Geology

The Study Area is situated along an alluvial plain at the base of the Los Buellis Hills to the east, which are part of the Diablo Mountain Range. The Diablo Range is part of the larger Coast Range geomorphic province, which is characterized by a series of northwest-trending mountain ranges, broad basins, and elongated valleys that run parallel to the San Andreas Fault System. Topographical elevations within the Study Area range from 10 feet above mean sea level (msl) in the northwestern portion of the Study Area to 800 feet msl in the southeastern portion of the Study Area. Areas further east extend up to elevations in excess of 2,000 feet msl. This topographical separation creates a prominent, but gradual, west and northwest-facing slope that on average grades between 2 and 10 percent towards San Francisco Bay.

The Coast Ranges are composed of marine sedimentary rocks and volcanic rocks that form the Franciscan Assemblage. In the valleys and lowland areas such as the Study Area, these older, consolidated rocks are buried beneath younger, unconsolidated alluvial fan and fluvial sediments (CGS, 2002). Within the Study Area, these alluvial sediments include Quaternary-aged (<1.6 million years old) materials that consist of inter-layered, poorly sorted gravel, sand, silt, and clay deposited by Lower Penitencia, Berryessa, and Calera Creeks. Given the depositional nature of these alluvial materials, their composition varies laterally and vertically over small distances and depths. The thickness of the alluvial materials ranges from 1,000 feet at the western edge of the city, along the bay margin, to zero at the base of the foothills of the Diablo Range to the east (City of Milpitas 2002).

Regional Faults and Seismicity

A fault is defined as a "fracture or fracture zone in the earth's crust along which there has been displacement of the sides relative to one another". For the purposes of planning, there are two types of faults, active and inactive. Active faults exhibit evidence of displacement within the last 10,000 years, thereby suggesting that future displacement may be expected. Inactive faults show no evidence of movement in recent geologic time, suggesting that these faults are dormant. Ground-shaking is motion that occurs as a result of energy released during faulting. The damage or collapse of buildings and other structures including utilities, caused by ground-shaking is among the most serious seismic hazards.

The San Francisco Bay Area, including Santa Clara County, is recognized as one of the most active seismic regions in the U.S. Areas within the Bay Area are within Seismic Risk Zone 4 according to the 2000 Uniform Building Code (UBC) and are at the highest risk to experience maximum magnitudes and damage in the event of an earthquake. The procedures and limitations for design of structures in accordance with the California Building Code (CBC) consider seismic zoning, site characteristics, occupancy, configuration, structural system and height.

Several active faults have the potential to cause widespread damage to existing structures within the City. The primary active faults in the region are the Hayward and San Andreas faults. The Hayward Fault trends northwest through the eastern portion of the Study Area and the San Andreas Fault trends northwest through the Santa Cruz Mountains approximately 13 miles to the west. The Hayward Fault is identified in the Uniform California Earthquake Rupture Forecast (2007), developed by the Working

Group on California Earthquake Probabilities, as having a 31 percent chance of experiencing a 6.7 or higher magnitude earthquake by 2032. Also of particular importance to the City is the Calaveras Fault, which trends northwest through Calaveras Reservoir approximately 4 miles east of the Study Area. A summary of major active faults near the City is presented in Table 3.6-1.

Table 3.6-1: Major Active Faults within Close Proximity of the Study Area

Fault	Distance from Study Area	Direction from Project Site	Maximum Credible Earthquake (Richter Magnitude) [1]	Maximum Moment Magnitude (Mw) [2]
Hayward	Crosses	East	7.7	7.1
Calaveras	4 miles	East	7.7	6.8
San Andreas	13 miles	West	8.3	7.9

Notes:

1 Richter Magnitude is calculated from the amplitude of the largest seismic wave recorded for an earthquake and is based on a logarithmic scale (base 10). For each whole number you go up on the Richter scale, the amplitude of the ground motion recorded by a seismograph goes up ten times.

2 Moment magnitude is related to the physical size of a fault rupture, the movement across a fault, and the strength of the rock that is faulted. Earthquakes with magnitudes of 6 or greater are capable of causing widespread damage.

Source: City of Milpitas 2002.

Soil Resources

The Natural Resources Conservation Service (NRCS) has not prepared soil maps for portions of the Santa Clara Valley that include the Study Area. For this reason, soils information referenced throughout this section is largely derived from local geologic maps and a geotechnical investigation preformed by DCM Engineering in January 2006.

In general, soil resources found across the Master Plan Study Area are generally associated with one of two geomorphic surfaces: low-lying Holocene-aged terraces, or alluvial fans, in central and western portions of the City; and intermediate terraces of Pleistocene age in areas along I-680 (USGS 2005). Further west, these formations transition into estuarine deposits that merge and transition with bay mud-tidal flat deposits along southern portions of San Francisco Bay.

Based on local geologic borings within central and southern portions of the Study Area, these alluvial materials generally consist of fine-grained sediments, including clays and clayey sands within the upper five feet (DCM Engineering 2006). These materials grade into courser sands and sandy clays at depth. Borings for the central and southern portions of the Study Area encountered groundwater at depths of between 5 and 10 feet below the ground surface (bgs) (DCM Engineering 2006). However, in some locations, groundwater is encountered at depths below 20 feet bgs.

Geologic and Soil-Related Hazards

Ground Motion and Fault Displacement

Active faults within the Master Plan Study Area in the region include the Hayward, Calaveras, and San Andreas faults zones. Large earthquakes on the Hayward, Calaveras, and San Andreas faults could produce ground shaking sufficient to cause extensive structural damage within the City. The intensity of seismic shaking intensity and associated risk to structures is dependent on the distance from the earthquake epicenter, the magnitude of the earthquake, the underlying geologic, groundwater, and soil conditions, and the type of construction. Ground shaking may affect areas hundreds of miles away from the location at which the earthquake is centered (the epicenter). Historic earthquakes have caused strong

ground shaking and damage in the San Francisco Bay Area, the most recent being the 7.1 (Richter magnitude) Loma Prieta earthquake of 1989 that was responsible for at least 63 deaths; 3,757 injuries; and an estimated $6 billion in property damage (USGS 2003).

The California Geological Survey (CGS) has determined the probability of earthquake occurrences of certain faults and their associated peak ground accelerations throughout the State. The probabilistic seismic hazard assessment (PSHA) determines the earthquake hazard that geologists and seismologists agree could occur in California. PSHA maps are typically expressed in terms of probability of exceeding a certain ground motion. Current maps produced by USGS in cooperation with CGS are based on 10 percent exceedance in 50 years. This probability level allows engineers to design buildings for larger ground motions than those that geologists and seismologists think will occur during a 50-year interval. These levels of ground shaking are used primarily for formulating building codes and for designing buildings and associated infrastructure. The maps can also be used for estimating potential economic losses and preparing for emergency response (Peterson et. al 1999). The peak ground acceleration (PGA) based on a 10 percent exceedance in 50 years within the Master Plan Study Area ranges between 0.67 g[1] to > 1.0 g (ABAG 2003). Based the potential for a high PGA to occur during a seismic event, this issue is discussed further in the impact analysis.

In addition to hazards related to ground motion, the physical displacement of locally actively can also result in surface fault rupture, which can damage or result in collapse of above-ground structures, cause severe damage to roads and other paved areas, and cause failure of overhead and underground utilities. Fault Rupture Hazard Zones (FRHZ), established in accordance with the Alquist-Priolo Earthquake Fault Zoning Act (see *Regulatory Framework*), are regulatory zones around the surface traces of active faults. The FRHZ for the Hayward Fault, the closest Earthquake Fault Zone to the Study Area, borders the eastern perimeter of the Study Area and includes areas within the Study Area east of I-680. However, improvements currently proposed as part of the Master Plan Updates are generally situated in western portion of the City and outside the FRHZ for the Hayward Fault.

Liquefaction

Liquefaction is the sudden temporary loss of shear strength in saturated, loose to medium dense, granular sediments subjected to ground shaking. It generally occurs when seismically-induced ground shaking causes pore water pressure to increase to a point equal to the overburden pressure. Liquefaction can cause foundation failure of buildings and other facilities due to the reduction of foundation bearing strength. Areas at risk due to the effects of liquefaction are typified by a high groundwater table and underlying loose to medium-dense, granular sediments, particularly younger alluvium and artificial fill.

Seismic Hazard Zone maps prepared by CGS for the USGS Milpitas 7.5 minute quadrangle indicate that large portions of the City, including the Study Area, are located within a seismic hazard zone for liquefaction. In accordance with the Seismic Hazard Mapping Act (see *Regulatory Framework*), a site-specific geotechnical investigation must be conducted for sites within a designated seismic hazard zone prior to development (CDC 2004).

Slope Instability and Landslides

The landslide potential for native and engineered slopes depends on the gradient, localized geology and soils, amount of rainfall, amount of excavation, and likelihood for seismic activity. Based on seismic hazards maps produced for the Milpitas and Calaveras 7.5 minute-quadrangles, areas containing steep topography to the east I-680 and Piedmont Road include documented landslide features and are at the

[1] PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. One “g” of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

highest risk for seismically-induced landslides. Areas to the west of I-680, which contains the proposed Master Plan improvements, are characterized by more level topography and a corresponding lower risk of hazards related to slope instability. Based on the level topography in the vicinity of the Master Plan improvements, this issue is not discussed further in this section.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments) due to the rearrangement of soil particles during prolonged ground shaking. Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Typically, areas underlain by artificial fills, unconsolidated alluvial sediments, and slope wash, and areas with improperly engineered construction fills are susceptible to this type of settlement. Due to the variability of underlying geological materials within the Master Plan Study Area, earthquake-induced settlement could present risks to structural improvements proposed as part of the Master Plan Updates.

Subsidence

Subsidence is the gradual sinking of surface materials caused by natural or artificial removal of underlying support, usually occurring in areas with alluvial soil deposits. Subsidence can result from a number of different geologic processes, including compaction of unconsolidated soils by earthquake shaking, compaction by heavy structures, erosion of peat soils, peat oxidation, and fluid (groundwater) withdrawal. Although the majority of the City is underlain by subsurface water, the Master Plan improvements do not include new groundwater pumping facilities that could contribute to additional groundwater pumping. For this reason, this issue is not discussed further in this section.

Volcanic Hazards

The Study Area is located approximately 205 miles from Lassen Peak and approximately 160 miles from Mono Lake/Long Valley volcanic areas. Therefore, the risk to the project area from volcanic hazards is remote. For this reason, this issue is not discussed further in this section.

Problematic Soils

Localized soil conditions can affect above- and underground utilities through several different processes. From an engineering perspective, a soil's expansion potential, corrosivity, and erosivity can greatly impact the life expectancy of new structural facilities.

Expansive soils are largely comprised of clays, which greatly increase in volume when water is absorbed and shrink when dried. This movement may result in the cracking of foundations for above-ground, paved roads, and concrete slabs. Clays and silty-clay soils occur throughout the Master Plan Study Area and are characterized by a moderate to high expansion potential. These clayey materials are generally comprised within the upper five feet of the soil profile. Structural damage to new facilities could occur over time as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Due to the variability of underlying soil materials within the Study Area, issues related to expansive soils are discussed further below.

Corrosive soils can damage underground utilities including pipelines and cables, and can weaken roadway structures. Soils within the Study Area are classified as moderately to highly corrosive to concrete and/or steel.

Erosion is the wearing away of soil and rock by processes such as mechanical or chemical weathering, mass wasting, and the action of waves, wind and underground water. Soils containing high amounts of silt or clay can be easily eroded, while sandy soils are less susceptible. Excessive soil erosion can eventually lead to damage of tank foundation, roadways, and even buried pipeline components. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures or asphalt.

Construction activities within the Study Area would require earthwork and grading activities, which would result in the disturbance of soils and the increased potential for soil erosion and soil loss.

Naturally-Occurring Asbestos

Naturally occurring asbestos has been identified in Santa Clara County in the vicinity of Coyote Peak, south of the City of San Jose (CGS – OFR 2000-019, 2000). The closest outcrop of these asbestos-bearing rocks to the Study Area is located more than 10 miles south. Based on this proximity, hazards related to naturally-occurring asbestos are not applicable to the Master Plan improvements and, therefore, no additional discussion of this topic is necessary.

3.6.2 Regulatory Setting

There are no federal policies and regulations relative to geology and soils.

State Policies and Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zones Act), signed into law in December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to regulate development on or near fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. The Alquist-Priolo Earthquake Fault Zone for the Hayward Fault traverses the eastern perimeter of the Master Plan Study Area.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) enacted by the California Legislature in 1990, was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. SHMA requires the State Geologist to delineate various seismic hazards zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site has to be conducted and appropriate mitigation measures incorporated into the project design. The CGS Special Publication 117, adopted in 1997 by the CGS in accordance with the SHMS and updated in 2007, provides guidelines for evaluating seismic hazards other than surface faulting, and recommends mitigation measures as required by Public Resources Code Section 2695(a).

Seismic hazard maps have been produced for the Milpitas (2004) and Calaveras (2001) 7.5 minute quadrangles, which include portions of the Master Plan Study Area. The primary geologic hazards identified include liquefaction for areas generally west of I-680 and landslides for areas generally east of I-680.

California Building Standards Code

The CBC is another name for the body of regulations found in the California Code of Regulations (CCR), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable.

Published by the International Conference of Building Officials (ICBO), the UBC is a widely adopted model building code in the United States. The California Building Code incorporates by reference the UBC with necessary California amendments. About one-third of the text within the California Building Code has been tailored for California earthquake conditions (ICBO 1997).

As previously indicated, the Master Plan Study Area is located within Seismic Hazard Zone 4. Zone 4 is expected to experience the greatest effects from earthquake ground shaking and, therefore, includes the most stringent requirements for seismic design. Building code standards incorporated into Title 24 apply to all occupied buildings in California except for modifications adopted by state agencies and local governing bodies.

California Division of Safety of Dams

Division 3 of the California Water Code, which is the statute governing dam safety in California, places supervision of the safety of non-federal dams and reservoirs under the jurisdiction of the Department of Water Resources' Division of Safety of Dams (DSOD). The DSOD reviews plans and specifications for the construction of new dams as well as for the enlargement, alteration, repair, or removal of existing dams. The Division must grant written approval before the owner can proceed with construction. The Division's professional engineers and geologists evaluate each project, investigate the proposed sites, and check the available construction materials. In general, water storage facilities under 5 million gallons are not subject to the DSOD's jurisdiction.

Local Policies and Regulations

The City's Fire Department is responsible for the coordination of the City's preparedness efforts to respond to natural disasters. The Fire Department prepares and updates the City's Multi-Hazard Emergency Plan, maintains the Emergency Operations Center in a state of readiness, and organizes disaster recovery and relief efforts in cooperation with the California Office of Emergency Services and the FEMA. The SAFE Program, also implemented by the Milpitas Fire Department OES, is an emergency preparedness program created to generate public awareness of potential threats to the community and to instruct individuals in self-help and mutual aid techniques.

City of Milpitas Grading, Excavation, Paving, and Erosion Control Ordinance

The Grading, Excavation, Paving, and Erosion Control Ordinance, contained in Title II, Chapter 13 of the City's Municipal Code, sets forth rules, regulations, and controls on grading, excavation, paving, and earthwork including cuts, fills, embankments, the cutting and clearing of vegetation, the revegetation of cleared areas, and the management of drainage and measures to protect exposed soil surfaces in order to safeguard waterways. Grading plans must specify: the nature and extent of the work proposed; the quantity of soil or earth materials, in cubic yards, to be excavated, filled, stored, or otherwise utilized on-site; pre- and post-development topographic contours; identification of all existing and proposed drainage facilities; and the location of known soil or geologic hazard areas. Grading plans must be accompanied by an erosion control plan (ECP) and include relevant documentation such as a soil engineering report and engineering geology report. ECPs must fully indicate necessary land treatment, structural measures and timing requirements to minimize soil erosion and sedimentation, and erosion control best management practices (BMPs) and vegetative measures that would be employed to stabilize the site.

City of Milpitas Soils Report Requirements

In accordance with the City's Municipal Code, building permit applications must be accompanied by a preliminary soils report, prepared by a civil engineer in the State and based upon adequate test borings, to be submitted to and approved by the Chief Building Official prior to the issuance of building permits. The soils investigation must indicate the presence of critically expansive soils or other soil problems which, if not corrected, could lead to structural defects and include recommended corrective actions to prevent structural damage where such soil problems exist (Title 11, Chapter 1, Section 8).

City of Milpitas General Plan

The City of Milpitas General Plan, as amended through 2008, includes policies related to seismic and geologic hazards and emergency services in the Seismic and Safety Element.

Guiding Principle 5.a-G-1 Minimize threat to life and property from seismic and geologic hazards.

Policy 5.a-I-1 Require all projects within the Alquist-Priolo Special Studies Zone to have geologic investigations performed to determine the locations of active fault traces before structures for human occupancy are built.

Policy 5.a-I-2 Require applications of all projects in the Hillside Area and the Special Studies Zone to be accompanied by geotechnical reports ensuring safety from seismic and geologic hazards.

Policy 5.a-I-3 Require projects to comply with the guidelines prescribed in the City's Geotechnical Hazards Evaluation manual.

Guiding Principle 5.d-G-1: Use the City's Emergency Management Plan as the guide for emergency management in the Planning Area.

Policy 5.d-I-2: Design critical public facilities to remain operational during emergencies.

3.6.3 Impact Analysis

This section describes the CEQA impact analysis relating to geology and soils for the Master Plan Updates. It describes the methods used to determine the Master Plan's impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, if required.

Significance Criteria

Based on the professional judgment of City staff and its consultants, an impact pertaining to geology and soils was considered significant if it would result in any of the following:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii) Strong seismic ground shaking?
   iii) Seismic-related ground failure, including liquefaction?
   iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Criteria Requiring No Further Analysis

Certain potential hazards are not discussed further in this section because they do not represent a potentially adverse seismic or geologic hazard within Study Area. Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The Hayward Fault FRHZ is located along the eastern border of the Study Area and east of I-680. The improvements contemplated as part of the Master Plan Updates are all generally situated within the western portions of the City and outside of the FRHZ for the Hayward Fault. For this reason, implementation of the Master Plan Updates would not result in the exposure of an increased number of people and/or structures to potential substantial adverse effects as a result of rupture along a known earthquake fault. For this reason, no significant impact would occur.
- Areas west of I-680 within the Study Area are characterized by level to undulating topography and do not contain slopes in excess of 10 percent. In this context, the potential for a landslide to impact structural improvements associated with Master Plan implementation is remote and no impact is expected.
- The Master Plan improvements would not include the construction or use of septic tanks or alternative waste water disposal systems. During construction of the Master Plan improvements, temporary portable toilets and water treatment units would be used and no residual impact is expected.

Impacts and Mitigation Measures

Earthquakes and Secondary Effects of Ground Motion

Impact GS-1 The Master Plan Update improvements could be subjected to hazards associated with earthquakes and the secondary effects of ground motion.

Pipelines, above-ground facilities, and associated facilities constructed in conjunction with the Master Plan improvement projects could be subjected to significant ground motion associated with at least one major earthquake throughout their operational life. Ground failure or differential settlement along pipeline alignments could cause misalignment of the pipeline and result in failure of a coupling joint. The disruption of water supply service through a pipeline breakage, a critical public infrastructure facility, would represent a potentially significant impact. Likewise, the disruption of sanitary sewer facilities through a pipeline breakage could result in the discharge of untreated, wastewater into local drainage facilities and creeks.

These types of impacts would generally be mitigated through the use of densification techniques, such as dynamic compaction or through the use of stone columns, vertical anchors (tension piles), sub-surfacing in a shallow trench, or thick-walled ductile-steel pipe during construction. However, without site-specific geotechnical information and interpretation, the City is unable to accurately pinpoint where these types of techniques would be required. As a result, the implementation of Mitigation Measure 3.5-1 would be required to minimize the risks associated with strong ground motion and secondary geologic hazards to a less than significant level.

In addition to the water and sewer pipelines, the proposed storage tank could experience at least one major earthquake during the operational life of the facility. Ground failure due to ground motion could result in damage to below- and above-ground storage structures, thereby potentially disrupting water services to portions of the City. Seismic design consistent with current professional engineering and industry standards would be used in construction for resistance to strong ground motion, especially for lateral forces. The implementation of the seismic design criteria as required by the CBC and City's Municipal Code would reduce the potential for structural failure, major structural damage, and reduce the

primary effects of ground motion on structures, and infrastructures to an acceptable level of risk. Additional requirements, recommended by a Certified Engineering Geologist or Geotechnical Engineer, would also be incorporated into the storage tank's design.

Accurate prediction of seismic events is not possible, nor can site-specific design entirely eliminate the potential for injury and damage that could occur during a seismic event. Nonetheless, conformance with City geotechnical and building code requirements and incorporation of Mitigation Measures GS-1a and GS-1b would reduce potential impacts related to regional seismicity and secondary geologic hazards to a less than significant level.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts through construction of new water and wastewater conveyance and storage facilities that would otherwise be susceptible to local seismic hazards.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

> Mitigation Measure GS-1a: Prepare Geotechnical Report(s) for Individual Water and Sewer Master Plan Improvement Projects.
> The City of Developer shall require that facility design for all Water and Sewer Master Plan facilities comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer. These recommendations will be based on the anticipated PGA for each project-improvement identified in the Water and Sewer Master Plans In instances where conflicting PGA values are obtained, the City will apply the greater of the two values to ensure maximum structural integrity. Design recommendations provided in the geotechnical report will demonstrate compliance with applicable 2000 UBC and 2001 CBC requirements for structures located in seismic risk zone 4.
>
> Mitigation Measure GS-1b: Incorporate Pipeline Failure Contingency Measures.
> The City of Developer shall require that isolation valves or similar devices be incorporated into all pipeline facilities to prevent significant losses of potable water and/or untreated-wastewater in event of pipeline rupture. The specifications of the isolation valves will conform to the UBC, AWWA, and City standards.

Significance Determination After Mitigation

With the implementation of Mitigation Measures GS-1a and GS-1b, potential impacts from local seismic hazards would be mitigated to a less than significant level.

Soil Erosion

Impact GS-2 Construction of the Master Plan improvements could result in substantial soil erosion and loss of topsoil.

Construction of the various Master Plan improvements could expose bare soil to precipitation and wind erosion, thereby potentially resulting in increased sedimentation of local waterways. Ground-disturbing activities, including removal of vegetation, could cause increased water runoff rates and concentrated flows, thereby potentially leading to accelerated erosion. In addition, by virtue that the City is crossed by several creeks, construction activities could occur in close-proximity to local waterways and result in adverse effects to water quality and aquatic habitat if proper erosion control measures are not implemented. Dewatering operations utilized during pipeline installation and the installation of sub-grade structures associated with the storage tank(s) also carries the potential for increased sedimentation of local waterways. This impact is considered potentially significant without mitigation.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant soil erosion impacts during construction of new water and wastewater conveyance and storage facilities.

Mitigation Measures

The following mitigation measure is required for all Master Plan improvements.

Mitigation Measure HWQ-1a: Implement NPDES Permit Measures, including Development and Implementation of a SWPPP
See *Section 3.8, Hydrology and Water Quality*.

Mitigation Measure HWQ-1b: Provisions for Dewatering and Hydrostatic Test Water
See *Section 3.8, Hydrology and Water Quality*.

Mitigation Measure HWQ-1e: Dry-Season Construction
See *Section 3.8, Hydrology and Water Quality*.

Significance Determination After Mitigation

With implementation of Mitigation Measures HWQ-1a, HWQ-1b, and HWQ-2b, soil erosion from construction activities would be reduced to a less than significant level.

Unstable Geologic Conditions

Impact GS-3 The Master Plan improvements could be located on an instable geologic unit, thereby subjecting new facilities to potential geologic hazards.

Based on the discussions provided for geologic hazards above, the primary local geologic hazards are related to the secondary effects of earthquakes and include seismically-induced ground failure, such as liquefaction, and differential settlement. Water and sewer pipelines may be underlain by loose alluvium, especially those in close proximity to creeks and areas underlain by recent alluvium. The potential for collapse of the underlying materials under seismic conditions or gradual settlement under non-seismic conditions is possible, given the potential for shallow groundwater and varying distribution of alluvial material.

Settlement could potentially occur from the placement of new static loads with possibly half of the settlement taking place during construction or shortly thereafter. Differential settlement could occur between foundation blocks and/or slabs due to variability in underlying soil conditions. Total and differential settlement could therefore damage proposed foundations, structures, and pipelines. The implementation of Mitigation Measures GS-1a and GS-1b would reduce this impact to less than significant.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant geologic hazards during construction of new water and wastewater conveyance and storage facilities.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

Mitigation Measure GS-1a: Prepare Geotechnical Report(s) for Individual Water and Sewer Master Plan Improvement Projects.
See above.

Mitigation Measure GS-1b: Incorporate Pipeline Failure Contingency Measures.
See above.

Significance Determination After Mitigation

With the implementation of Mitigation Measures GS-1a and GS-1b, geologic hazards in terms of total and differential settlement would be reduced to a less than significant level.

Problematic Soils

Impact GS-4 Construction of the Master Plan improvements could encounter expansive and/or corrosive soil materials, thereby subjecting new facilities to risks of structural failure.

Soils with high potential for shrink swell may be found at various locations throughout the City. Unless properly mitigated, shrink-swell soils could exert additional pressure on buried pipelines producing shrinkage cracks that would allow water infiltration and compromise the integrity of backfill material. Depending on the depth of the buried pipeline, soil expansion or contraction could lead to undue lateral pipeline stress and stress of structural joints. Over time, lateral stresses could lead to pipeline rupture or leaks in the coupling joints. However, standard engineering practices dictate that expansive soil materials would be identified and replaced by non-expansive engineered fill material. These practices would be conducted under the supervision of a licensed geotechnical or civil engineer.

As indicated above, soil materials encountered within the Study Area may have high electrical conductivities, thereby introducing the potential for corrosion. Corrosive soil materials could lead to pipe corrosion, potentially resulting in pipe failure and localized surface flooding of water or wastewater, and/or localized settlement of surface soils in the location of the failure. This impact would be reduced to a less than significant level with the implementation of Mitigation Measure GS-4.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant structural hazards related to expansive and corrosive soils.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

> Mitigation Measure GS-4: Install Corrosion Protection Measures.
> As appropriate, the City shall install a cathodic protection system for all underground metallic fittings, appurtenances, and piping to protect these facilities from corrosion. The cathodic protection system shall be designed consistent with City standards.

Significance Determination After Mitigation

With implementation of Mitigation Measure GS4, soil-related hazards in terms of expansive and corrosive soils would be reduced to a less than significant level.

3.6.3 Cumulative Analysis

Implementation of the Master Plan Updates would include the installation of water and sanitary sewer conveyance infrastructure through excavation methods as outlined in *Chapter 2, Project Description*. With mitigation, individual Master Plan projects would not expose persons to substantial risk of loss, injury, or death relative to seismic and geologic hazards; result in substantial site erosion; create substantial risks due to expansive soils; or create substantial risks due to landslides. Further, implementation of the Master Plan projects conjunction with other projects in the immediate vicinity would not cumulatively add to existing geologic risks. For these reasons, the contribution of the Master Plan Updates to cumulative geologic and soil-related impacts would not be significant.

With the implementation of the programmatic mitigation at the project-level, the potential for physical geologic and soil forces to impact Master Plan-related improvements would be less than significant. This in turn would minimize the potential for cumulative effects related to potable water losses as a result of leaks within new water mains and I/I concerns for new sanitary sewer facilities.

3.7 Public Health and Hazards

This section discusses the existing conditions related to public health and hazards in the Study Area. Federal, state, and local regulations related to public health and hazards that would apply to the proposed Master Plan Updates follow. Existing conditions were characterized through a combination of reviewing relevant technical reports for the Study Area, aerial photography, and conducting an online search of state and federal databases. Major public health and hazards issues addressed in the section include release of hazardous materials, contaminated soil and water, interference with an emergency plan, and the threat of wildland fires.

3.7.1 Environmental Setting

Past and present land uses within the Study Area include industrial, commercial, office, and research and development. Activities associated with these past and current land uses, includes legacy environmental contamination sites and existing operations that could pose potential environmental, health, and safety risks. These risks include accidents involving vehicles transporting hazardous materials or hazardous wastes, accidental spills or leaks, and improper use, handling, storage, transport, and disposal of hazardous materials.

Environmental Database Review

An online database search was conducted to identify reported hazardous materials spills and releases within the Study Area. Environmental databases reviewed include the Department of Toxic Substances Control (DTSC) EnviroStor (DTSC 2008a) and the SWRCB GeoTracker (SWRCB 2008). Properties in which historic or on-going activities have resulted in a reported release of hazardous materials into soil and groundwater, as identified by DTSC and SWRCB, are presented in Appendix D. These sites are located throughout the City, including the vicinities of the proposed Master Plan Update projects. It is important to note that listed properties do not necessarily represent a potential risk to the Study Area. Many of the identified sites in the City have been remediated and their cases have been closed.

The EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. Specifically, it lists the following site types: Federal Superfund sites (National Priority List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. Sites that are in the Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)[1] are also identified (DTSC 2008b). Ten (10) hazardous material sites were identified by the DTSC EnviroStor within the City of Milpitas. One site, the Stonegate Development (1260 Dempsey Road, east of I-680) is identified in the Cortese List. This site contains pesticides and the corrective action was to place a cap on the site to prevent the public from exposure to contaminated materials. Land use restrictions on the site prohibit any disturbance of the contaminated soils.

The GeoTracker database provides regulatory data regarding sites with leaking underground fuel tanks, fuel pipelines, and public drinking water supplies. As of July 1, 2004, oversight responsibilities for subsurface investigations and clean-up of petroleum releases from leaking underground storage tanks (LUSTs) were transferred from the SCVWD to the Santa Clara County Department of Environmental Health (DEH). The SWRCB Geotracker identifies 148 sites in the City of Milpitas, the majority of which are located in the western portion of the Study Area between I-880 and I-680. These sites are primarily LUST sites. Clean up of 80 sites have been completed and those cases have been closed; they do not require additional soil and/or groundwater remediation, and thus, are not considered a threat to future land uses. There are currently 28 sites open, and many of those are at various stages of site assessment,

[1] Cortese List sites are those that are compiled pursuant to Government Code Section 65962.5.

remediation, or verification monitoring. One site has been identified as inactive. Additionally, there are 39 permitted underground storage tank sites within the Study Area.

Hazardous Waste Handling

The California Environmental Protection Agency (Cal EPA), DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Cal EPA has authorized DTSC to enforce hazardous waste laws and regulations in California. State requirements assign "cradle-to-grave" responsibility for hazardous waste to hazardous waste generators. Generators must ensure that their waste is disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills). All hazardous waste generators must certify that, at a minimum, they make a good faith effort to minimize their waste and select the best waste management method available. Hazardous waste laws and regulations are enforced locally by the Milpitas Fire Department and the Santa Clara County DEH.

In Santa Clara County, remediation of contaminated sites is performed under the oversight of DEH with the cooperation of the San Francisco Bay RWQCB. At sites where contamination is suspected or known to occur, the project sponsor is required to perform a site investigation and develop a remediation plan, if necessary. For typical municipal infrastructure projects, actual site remediation is done either before or during the construction phase of the project. Site remediation or development may be subject to regulation by other agencies. For example, if dewatering of a hazardous waste site were required during construction, subsequent discharge to the sewer collection system would require a permit from the Milpitas Public Works Department and San Jose WPCP, while discharge to a storm drain would require a permit from both the Milpitas Public Works Department and the San Francisco Bay RWQCB.

Wildland Fires

During summer, and in prolonged periods without rainfall, grasses, trees, and other vegetation in the City become extremely dry and act as potential fuel for fires (City of Milpitas 2002). The grasses on local hillsides are light fuel vegetation, which burn quickly in the event of a fire. Fire protection for the hillsides is primarily provided by the California Department of Forestry and Fire Protection (CAL FIRE) and the Spring Valley voluntary Fire Department. The Milpitas Fire Department provides assistance for the hillside as needed on the basis of a mutual aid agreement.

3.7.2 Regulatory Setting

Federal Policies and Regulations

Federal regulatory agencies include the U.S. Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Nuclear Regulatory Commission (NRC), the DOT, and the National Institute of Health (NIH). The DOT and EPA have both developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. The following represent federal laws and guidelines governing hazardous substances.

- Pollution Prevention Act (42 US Code Section 13101 et seq. / 40 CFR)
- Clean Water Act (33 US Code Section 1251 et seq. / 40 CFR)
- Oil Pollution Act (33 US Code Section Sections 2701-2761 / 30, 33, 40, 46, 49 CFR)
- Clean Air Act (42 US Code Section 7401 et seq. / 40 CFR)
- Occupational Safety and Health Act (29 US Code Sections 651 et seq. / 29 CFR)
- Federal Insecticide, Fungicide, and Rodenticide Act 7 US Code Section 136 et seq. / 40 CFR)
- Comprehensive Environmental Response Compensation and Liability Act (42 US Code Section 9601 et seq. / 29, 40 CFR)

- Superfund Amendments and Reauthorization Act Title III (42 US Code Section 9601 et seq. / 29, 40 CFR)
- Resource Conservation and Recovery Act (42 US Code Section 6901 et seq. / 40 CFR)
- Safe Drinking Water Act (42 US Code Section 300f et seq. / 40 CFR)
- Toxic Substances Control Act (15 US Code Section 2601 et seq. / 40 CFR)

Resource Conservation and Recovery Act (RCRA)

At the federal level, the principal agency regulating the generation, transport and disposal of hazardous substances is the EPA, under the authority of Resource Conservation and Recovery Act (RCRA). The RCRA established a federal hazardous substance "cradle-to-grave" regulatory program that is administered by the EPA. Under RCRA, the EPA regulates the generation, transportation, treatment, storage and disposal of hazardous substances. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle-to-grave" system of regulating hazardous substances. The HSWA specifically prohibits the use of certain techniques for the disposal of some hazardous substances. Under the RCRA, individual states may implement their own hazardous substance management programs as long as they are consistent with, and at least as strict as, RCRA. The EPA must approve state programs intended to implement the RCRA requirements.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The EPA regulates hazardous substance sites under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLA, commonly referred to as Superfund, was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. In addition, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action.

State Policies and Regulations

The Cal EPA and the State Office of Emergency Services (OES) establish rules governing the use of hazardous substances. The California Highway Patrol, Caltrans, and Department of Toxic Substances Control (DTSC) also play key roles in enforcing hazardous materials transportation requirements. The SWRCB has primary responsibility to protect water quality and supply. The following represent state laws and guidelines governing hazardous substances:

- Porter Cologne Water Quality Control Act (California Water Code Section 13000–14076 / 23 CCR)
- California Accidental Release Prevention Law (California Health and Safety Code Section 25531 et seq. / 19 CCR)
- California Building Code (California Health and Safety Code Section 18901 et seq. / 24 CCR)
- California Fire Code (California Health and Safety Code Section 13000 et seq. / 19 CCR)
- California Occupational Safety and Health Act (California Labor Code Section 6300–6718/ 8 CCR)

- Hazardous Materials Handling and Emergency Response "Waters Bill" (California Health and Safety Code Section 25500 et seq. / 19 CCR)
- Hazardous Waste Control Law (California Health and Safety Code Section 25100 et seq. / 22 CCR)
- Carpenter-Presley-Tanner Hazardous Substance Account Act "State Superfund" (California Health and Safety Code Section 25300 et seq. / California Revenue and Tax Code Section 43001 et seq.)
- Hazardous Substances Act (California Health and Safety Code Section 108100 et seq.)
- Safe Drinking Water and Toxic Enforcement Act "Proposition 65" (California Health and Safety Code Sections 25180.7, 25189.5, 25192, 25249.5-25249.13 / 8, 22 CCR)
- California Air Quality Laws (California Health and Safety Code Section 39000 et seq. / 17 CCR)
- Above ground Petroleum Storage Act (California Health and Safety Code Section 25270 et seq.)
- Pesticide Contamination Prevention Act (California Food and Agriculture Code Section 13141 et seq. / 3 CCR)
- Underground Storage Tank Law "Sher Bill" (California Health and Safety Code Section 25280 et seq. / 23 CCR)

California Department of Toxic Substances Control (DTSC)

Within Cal EPA, the DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the generation, transport and disposal of hazardous substances under the authority of the Hazardous Waste Control Law (HWCL). Regulations implementing the HWCL list 791 hazardous chemicals and 20 or 30 more common substances that may be hazardous; establish criteria for identifying, packaging and labeling hazardous substances; prescribe management of hazardous substances; establish permit requirements for hazardous substances treatment, storage, disposal and transportation; and identify hazardous substances that cannot be deposited in landfills.

California Division of Occupational Safety and Health (Cal OSHA)

Occupational safety standards have been established by federal and state law to minimize worker safety risks from both physical and chemical hazards in the work place. The California Division of Occupational Safety and Health (Cal OSHA) and the federal Occupational Safety and Health Administration are the agencies responsible for assuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. At sites known to be contaminated, a Site Safety Plan must be prepared and submitted and approved by Cal OSHA to protect workers. The Site Safety Plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Hazardous Materials Release Response Plans and Inventory Law

California's Hazardous Materials Release Response Plans and Inventory Law, sometimes called the "Business Plan Act," aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored, to prepare an emergency response plan, and to train employees to use the materials safely. This law is implemented locally by the Milpitas Fire Department, which also enforces certain fire code regulations pertaining to hazardous materials storage under the City of Milpitas Fire Code.

Local Policies and Regulations

The City's Fire Department OES is responsible for the coordination of the City's preparedness efforts to respond to natural disasters. The OES prepares and updates the City's Multi-Hazard Emergency Plan, maintains the Emergency Operations Center in a state of readiness, and organizes disaster recovery and relief efforts in cooperation with the California Office of Emergency Services and the Federal Emergency Management Agency (FEMA). The Strategic Action for Emergencies (SAFE) Program, also implemented by the Milpitas Fire Department OES, is an emergency preparedness program created to generate public awareness of potential threats to the community and to instruct individuals in self-help and mutual aid techniques.

City of Milpitas Fire Code

In 1983, the City of Milpitas adopted a Hazardous Materials Storage Ordinance for regulating hazardous materials in both aboveground and underground applications. In 1990, the City adopted a Toxic Gas Ordinance which regulated the handling, dispensing and potential release of toxic gases. In 1995, the requirements contained within the Hazardous Materials Storage and Toxic Gas Ordinances were adopted by the Milpitas City Council as the Milpitas Fire Code.

City of Milpitas Multi-Hazard Emergency Plan

The Milpitas Fire Department maintains a Multi-Hazard Emergency Plan, which coordinates the City's preparedness and response efforts for natural and man-made disasters. The objectives of the Emergency Plan are to prepare for and facilitate coordinated and effective responses to emergencies within the City and to provide assistance to other jurisdictions as needed. The Emergency Plan specifies actions for the coordination of operations, management and resources, and responsibilities of the different departments and governmental agencies during emergency events. The Milpitas Fire Department responds to routine, non-emergency hazardous materials incidents. The Santa Clara County Hazardous Materials Response Team, composed of representatives of the Santa Clara Fire Department, CAL FIRE, and member cities, responds to large scale, emergency hazardous material incidents within the City of Milpitas. Evacuation routes are to be determined as appropriate depending on the nature of the emergency.

City of Milpitas General Plan

The City of Milpitas General Plan, Open Space and Environmental Conservation Element and Seismic and Safety Element, as amended through 2008, includes the following policies related to hazardous materials and emergency services:

> *Guiding Principle 4.i-G-1* Ensure that off-site hazardous waste management facilities are safely located to maintain the quality of life in the community.
>
> *Policy 4.i-I-2* Limit off-site hazardous waste management facilities to those that process the types of waste generated in the City, and limit the capacity of these facilities based on the "fair share" provisions of the Santa Clara County Hazardous Waste Management Plan.
>
> *Guiding Principle 5.c-G-1*: Provide high quality, effective and efficient fire protection services for the Milpitas area residents.
>
> *Policy 5.c-I-1*: Maintain a response time of four minutes or less for all urban service areas.
>
> *Guiding Principle 5.d-G-1*: Use the City's Emergency Management Plan as the guide for emergency management in the Planning Area.
>
> *Policy 5.d-I-2*: Design critical public facilities to remain operational during emergencies.

3.7.3 Impact Analysis

This section describes the CEQA impact analysis relating to public health and hazards for the proposed Master Plan Updates. It describes the methods used to determine impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to public health and hazards was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Criteria Requiring No Further Analysis

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The San Jose International Airport is located more than two miles southwest of the Study Area. There are no other public airports or private airstrips located within two miles of the Study Area. Further, the Master Plan Updates would not involve the construction of sensitive uses and, therefore, would not subject an increased number of people and/or structures to airport safety-related hazards. No impact would occur.

Impacts and Mitigation Measures

Creation of Hazards

Impact HAZ-1 Construction of the Master Plan improvements could result in significant hazards to the public or environment through the accidents involving the release of hazardous materials and/or substances.

Proposed facilities developed as part of the Master Plan Updates include buried pipelines, turnouts, valves, and an above-ground storage tank and pump station. Potentially toxic substances such as fuels, oils, and lubricants would be used during construction of proposed facilities. These materials would generally be used for excavation equipment, generators, and other construction equipment and would be contained within vessels engineered for safe storage. These materials could be stored at the construction site for the storage tank and pump station; however, for pipeline construction, storage of significant quantities of these materials at the construction sites is not expected given the continual shifting of trenching activities. Instead, support vehicles would most likely provide fuel and lubricant to construction equipment on a daily basis and would be mobilized from an offsite location. Accidental releases of these substances, such as spills during onsite fueling of equipment or an upset condition associated with puncture of a fuel tank through operator error, have the potential to expose workers and the public to contamination. In addition, where construction activities are adjacent to a waterway, accidental release of these materials could degrade water quality.

Operation of the underground components of the Master Plan Updates (i.e., pipelines, valves, and turnouts) would not require the use of any hazardous materials. The proposed storage tank and pump station, however, would be equipped with emergency standby generators. Diesel, contained within vessels engineered for safe storage, would be required for operation of the generators. Because the generators would be operated for short periods during weekly testing and during emergencies, only minor amounts of hazardous materials would likely be stored onsite. Additionally, because these generators would be operated for a shortly duration during regular testing, high-frequency, routine transport or use of this material would not be required.

The potential for exposure of workers and the public to hazardous materials from accidental spills would be temporary, lasting through the construction period only. To ensure that potential impacts would be reduced to less than significant levels from accidental events, Mitigation Measure HAZ-1 would be required.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts resulting from release of hazardous materials during construction activities.

Mitigation Measures

The following mitigation measure is required for all Master Plan improvements.

> Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities.
>
> The City's or Developer's construction contractor will develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities. The SPCCP will be prepared consistent with the requirements of the City's NPDES Permit and Hazardous Materials program before any construction activities begin.
>
> If a spill of petroleum products is reportable (per 40 CFR 110), the contractor's superintendent will notify the City and take action to contact the appropriate safety and cleanup crews to implement the SPCCP. A written description of reportable releases must be submitted to the San

Francisco Bay RWQCB. The program contractor will select and implement measures to control contamination, with a performance standard that surface and/or groundwater quality must be returned to baseline conditions. These measures will be subject to review by the City.

The City will review the SPCCP before onset of construction activities as required. The City will routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The City will notify its contractors immediately if there is a noncompliance issue and will require compliance.

Significance Determination After Mitigation

With the implementation of Mitigation Measure HAZ-1, potential hazardous materials impacts resulting from construction of Master Plan improvements would be reduced to less than significant levels.

Accidental Discovery

Impact HAZ-2 Construction of the Master Plan improvements could expose workers and the public to hazards associated with the accidental discovery of undocumented soil and/or groundwater contamination.

Proposed Master Plan Update projects would occur at or near commercial and industrial sites or other uses where chemicals have been used or released. Sites with historical or current contamination are identified in Appendix C. Construction of proposed conveyance and above-ground facilities would involve excavation and grading activities, which could encounter documented and unreported contaminated soils and groundwater during excavation activities. Encountered, contaminated materials may be classified as a hazardous waste, a designated waste, or a special waste, depending on the type and degree of contamination. If hazardous substances were encountered during construction of the proposed project and if materials were improperly managed or disposed, workers and the public would be potentially exposed to contaminated materials. The degree of any public health impact associated with the hazardous substances would depend on the nature and extent of any hazardous substances encountered and the subsequent handling and management of those materials. To reduce potential safety hazards to workers and the public to a less-than-significant level, Mitigation Measures HAZ-1, HAZ-2a, and HAZ-2b would be implemented.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts resulting from exposure to contaminated soil and water during construction activities.

Mitigation Measures

The following mitigation measure is required for all Master Plan improvements.

Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities.
See above.

Mitigation Measure HAZ-2a: Conduct Phase 1 Site Assessment(s) for Master Plan Improvements that Deviate from Existing Roadway ROW.
Prior to construction, the City may conduct a Phase 1 Environmental Site Assessment according to ASTM protocol for portions of individual Master Plan improvements that deviate from existing roadway ROW, as warranted. If any hazardous materials or waste sites are identified during the Phase 1, the City shall implement Mitigation Measure HAZ-2b.

Mitigation Measures HAZ-2b: Develop Remediation Plan(s), As Necessary.
If determined necessary, to mitigate for potential hazards resulting from disturbance of existing contaminated areas, the extent of contamination from hazardous materials sites within or adjacent to individual Master Plan improvements shall be delineated during final design. Disturbance to

contaminated areas during individual project construction shall be avoided, or any work done within contaminated areas shall be undertaken in compliance with standards approved by the DTSC or the County DEH to ensure that hazardous materials will not be released as a result of the ground disturbance.

Additionally, if unidentified contaminated soil and/or groundwater are encountered, or if suspected contamination is encountered during any construction activities, work shall be halted in the area of potential exposure, and the type and extent of contamination shall be identified. A qualified professional, in consultation with appropriate regulatory agencies, will then develop and implement a plan to remediate the contamination and properly dispose of the contaminated material.

Significance Determination After Mitigation

With the implementation of Mitigation Measure HAZ-1, HAZ-2a, and HAZ-2b, potential contamination exposure impacts resulting from construction of Master Plan improvements would be reduced to less than significant levels.

Emergency Response

Impact HAZ-3 Construction of the Master Plan improvements could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The City maintains a Multi-Hazard Emergency Plan to deal with natural or man-made disasters. Conveyance improvements along public ROWs could potentially interfere with implementation of the Emergency Plan. The restriction of road width may slow down emergency response service providers. However, in most instances, construction equipment could be moved relatively quickly to facilitate the necessary emergency vehicle movements. Additionally, horizontal drilling or jack-and-bore methods would be implemented at busy intersections, thereby reducing potential impacts associated with interference with emergency response. Staging of equipment and soils and construction of the storage tank and pump station or groundwater well would not be expected to interfere with the Emergency Plan as it would occur within private parcels away from public access. Due to the temporary nature of construction activities along ROWs and the continual shifting of such activities, impacts would be reduced. Planning and notification for continual emergency access in Mitigation Measure TR-1 in *Section 3.11, Transportation* would further reduce the impact to a less-than-significant level.

No long-term interference with the City's emergency response plan are expected associated with operation of the proposed facilities, as the underground components would be buried and above-ground surfaces would be located on private parcels away from public access. As such, no impacts on emergency response would occur associated with these components.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts resulting from exposure to contaminated soil and water during construction activities.

Mitigation Measures

The following mitigation measure is required for all Master Plan improvements.

Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan
See *Section 3.11, Transportation*.

Significance Determination After Mitigation

With the implementation of Mitigation Measure TR-1, potential contamination exposure impacts resulting from construction of Master Plan improvements would be reduced to less than significant levels.

Risk of Wildland Fire

Impact HAZ-4 Construction of the Master Plan improvements could expose people and/or structures to risks involving wildland fires.

The majority of the Master Plan Update improvement projects are located within urbanized areas along public ROWs. These areas are generally devoid of the dried vegetation unlike the foothill landscape east of Evans Road / Piedmont Road and, therefore, the corresponding risk of wildland fire is considered low. Given that a majority of the land area within the Study Area is urbanized, the presence of paved surfaces and existing structures substantially reduces the risk of construction equipment accidentally igniting surrounding vegetation. Further, the Master Plan improvements would not result in the placement of new habitable structures within an area at high risk of experiencing wildfires. Based on these considerations, the Master Plan Updates are not expected to substantially increase the threat of wildfire within the Study Area and this impact is considered less than significant.

Significance Determination Before Mitigation

The Master Plan improvements would result in less than significant wildland fire impacts.

Mitigation Measures

No mitigation is required.

Hazardous Emissions

Impact HAZ-5 The Master Plan Updates may result in hazardous emissions or handling of hazardous materials within one-quarter mile of an existing or proposed school.

Children are sensitive receptors for inhalation or ingestion of hazardous materials due to their smaller body size and underdeveloped nervous systems. Assessment of the proximity of local schools to the proposed Master Plan Update projects is necessary to ensure that human health risks are not exacerbated in these areas. Several public and private schools are located within one-quarter mile of proposed Master Plan Update projects, as shown in Table 3.7-1 below.

Potential for accidental release of hazardous materials or emissions during construction near schools would be reduced through implementation of Mitigation Measure HAZ-1, above. As further described in Impact HAZ-1 above, conveyance improvements would not require the use of any hazardous materials during operational activities. As such, these individual projects would not emit or require the handling of hazardous materials. Operation of the conveyance improvements would not result in any safety impacts to the public at nearby schools.

The proposed storage tank and pump station (W-MP-5), however, may be located within one-quarter mile of a school. As described in Impact HAZ-1 above, diesel for operation of the pump station would be used during emergencies only. The City intends to store minor amounts of diesel onsite within vessels engineered for safe storage, and does not expect to engage in routine transport or use of this material. Because of the limited use of diesel, emissions associated with its use would constitute a less than significant impact on school children.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant impacts to sensitive receptors due to hazardous materials emissions during construction activities.

Mitigation Measures

The following mitigation measure is required for all Master Plan improvements.

> Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities.
> See above.

Significance Determination After Mitigation

With the implementation of Mitigation Measure HAZ-1, potential impacts to sensitive receptors due to hazardous materials emissions would be reduced to less than significant levels.

Table 3.7-1: Schools in the Vicinity of Master Plan Update Projects

Project ID	Project Description	School(s)
W-MP-1	Dixon Road Valve Installation	Milpitas High School 1285 Escuela Pkwy, Milpitas CA Marshall Pomeroy Elementary 1501 Escuela Parkway Russell Middle School 1500 Escuela Parkway
W-MP-2	Carlo Street Pipeline	St. John the Baptist Catholic School 279 S Main St, Milpitas CA
W-MP-5	SCVWD Zone Storage Project	Zanker Elementary School 1585 Fallen Leaf Dr, Milpitas CA
W-MP-6	TASP Recycled Water Pipeline Improvements	Zanker Elementary School 1585 Fallen Leaf Dr, Milpitas CA
S-MP-5A	Smithwood Street Sewer Improvements	St. John the Baptist Catholic School 279 S Main St, Milpitas CA Anthony Spangler Elementary School 140 N Abbott Ave, Milpitas CA
S-MP-11D	Great Mall Project D	Zanker Elementary School 1585 Fallen Leaf Dr, Milpitas CA

3.7.3 Cumulative Analysis

Cumulative projects proposed in the Study Area would have the potential to expose workers and the public to safety hazards associated with construction activities (e.g., accidental spills and/or encountering contaminated soils and groundwater). Potential safety impacts associated with these other projects would be addressed by individual project proponents who would be expected to require implementation of mitigation measures that reduces such hazards. Because impacts related to hazardous materials during construction activities are generally site-specific in nature, cumulative impacts of other projects would be considered less than significant with mitigation measures. As described above, the proposed Master Plan Updates would involve the construction of water and sewer facilities that has the potential to result in safety hazards to workers and the public. Where such potential would occur, mitigation measures set forth requirements that would reduce the potential for adverse safety hazards. Additionally, as described in the program-level analysis, the operation of individual Master Plan facilities is not expected to add to cumulative risks of upset. For these reasons, the Master Plan Update's contribution to significant cumulative impacts would be less than considerable.

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3.8 Hydrology and Water Quality

The following discussion describes the existing water quality, hydrology, drainage, and potential flooding conditions in the Master Plan Study Area. Federal, state, and local regulations related to hydrology and water quality that would apply to the Master Plan Updates follow. Existing conditions information was compiled by reviewing relevant technical reports from the State Department of Water Resources (DWR), San Francisco Bay RWQCB, Federal Emergency Management Agency (FEMA), and the City of Milpitas.

3.8.1 Environmental Setting

Hydrology and Drainage

The City lies at the base of the Los Bullis Hills of the Diablo Range and is situated along an alluvial plain in the northeastern corner of the Santa Clara Valley that extends toward San Francisco Bay. The Study Area is mostly contained within the 57,500-acre Coyote Creek watershed (Calwater Unit No. 2205.300800) and east of Coyote Creek's confluence with South San Francisco Bay (see Figure 3.8-1). A small linear area north of Dixon Landing Road in the northern Study Area is contained within the Fremont Bayside watershed; Calwater Unit No. 2205.200003.

Drainage within the Study Area is generally to the west and northwest. The Study Area is drained by seven intermittent creeks, all tributary to Coyote Creek. Local tributaries to Coyote Creek that traverse the Study Area include:

- Arroyo de Los Coches
- Berryessa Creek (including Los Buellis branch)
- Calera Creek (North and South branches)
- Lower Penitencia Creek (including East Channel)
- Piedmont Creek
- Tularcitos Creek (North and South branches)
- Wrigley/Ford Creek

Several of the creeks originate in the Los Buellis Hills east of Milpitas, which are almost entirely open space and retain their natural runoff characteristics absent the affects of localized grazing. The steepness of the hills results in relatively rapid runoff. Downstream of the hills, urban development now dominates the primarily flat Bay Plain area. Extensive urban development has largely modified the above waterways into straight, trapezoidal channels. The structurally channelized watercourse and culverts retain few natural attributes of the original meandering creeks.

Storm Water

Paved areas and gutters direct runoff to the storm drain system, a system of street gutters and underground pipes, which then convey this runoff to the modified creek channels. Urbanization tends to increase the rate of runoff generated from local precipitation due to the predominance of impermeable surface area (e.g., pavement). Storm drains close to the Bay tend to rely heavily upon pumping facilities to move water, rather than gravity.

The City collects and disposes its storm water via a storm drainage network consisting of catch basins, conveyance piping, pump stations, and outfalls to creeks. The City has 108 miles of storm pipe, 3,750 catch basins, approximately 4 miles of drainage ditches and creeks, and 13 storm water pump stations. Storm water collection efforts are guided by the City's Storm Drain Master Plan (2001), which is currently in the process of being updated.

Flooding

The creeks and channels within the Study Area are subject to periodic flooding. The City owns and maintains the local storm drain and gutter system, while the Santa Clara Valley Water District (SCVWD) maintains Arroyo de Los Coches, Caldera Creek (north and south branches), Piedmont Creek, Tularcitos Creek (north and south branches), Lower Penitencia and Berryessa Creeks. SCVWD is responsible for flood protection within the Study Area because it is located within the East Zone of the SCVWD's Flood Control Benefit Assessment District.

FEMA provides information on flood hazard and frequency for cities and counties on its Flood Insurance Rate Maps (FIRM) and identifies designated zones of flood hazard potential. Flooding is highly dependent on conditions both within and upstream of the Study Area. Under existing conditions, the current condition and/or design of several creeks that traverse Study Area are not sufficient in preventing the 100-year flood and require improvements to contain 100-year flood events. In response to these current conditions, SCVWD in coordination with USACE are proposing a series of improvements intended to reduce the hazard of flooding, which currently exists in several portions of the Study Area. These planned improvements are identified in Figure 3.1-1.

As shown in Figure 3.8-1, several portions of the Study Area are mapped within a Flood Hazard Area based on revised data recently released by FEMA. As shown, areas subject to flooding during a 100-year event are mainly concentrated along Coyote Creek, areas situated in-between I-880 and I-680, and a small area just east of I-680 and south of Calaveras Boulevard (FEMA 2009). The 100-year flood is the largest event likely to occur once every 100 years; in other words, the event with a one percent chance of flood occurrence in any given year. Areas outside of the 100-year flood zone include Zones D and X along with the area identified as having a 0.2 percent annual chance of flooding.

Portions of the Study Area within a FEMA-designated flood zone means that area-wide planning is required, and special construction methods must be applied to infrastructure and development. Regional flooding mitigation is regulated by the SCVWD and USACE for creeks improvements. Localized flood mitigation is coordinated by the City and implemented by individual developers as necessary for on-site and off-site drainage improvements.

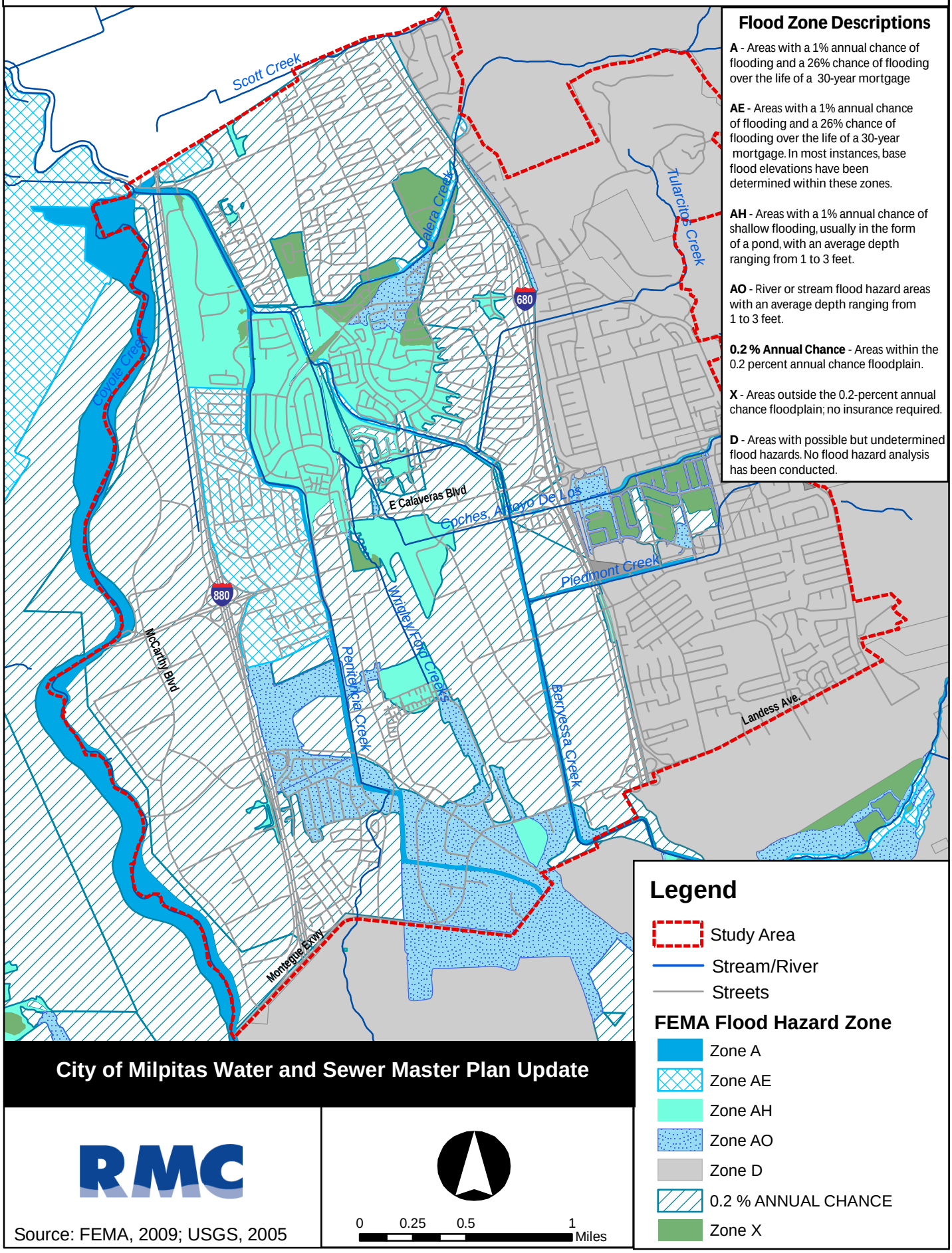
Berryessa Creek

Berryessa Creek is a seasonal creek that begins in the Los Buellis Hills southeast of the Study Area and enters the southern portion of the Study Area near the intersection of Montegue Expressway and S. Milpitas Boulevard. Berryessa Creek is characterized as a linear ditch within the Study Area and receives flows from Piedmont Creek, Arroyo de los Coches, Calera Creek, and Penitencia Creek as it traverses through the City. Berryessa Creek confluences with Coyote Creek in the northwestern corner of the Study Area. SCVWD has historically maintained and improved portions of the levee system along Berryessa Creek, including portions of the creek that traverse through the Study Area.

Lower Penitencia Creek

Lower Penitencia Creek drains a portion of San Jose and Milpitas to the confluence of Berryessa Creek at Milmont Drive. Through Milpitas, SCVWD has lined portions of Penitencia Creek with concrete and built floodwalls to protect adjacent properties. The Penitencia East Channel conveys runoff from the Study Area to Penitencia Creek (City of Milpitas 2001).

Figure 3.8-1 - Local Hydrology and Flood Hazards



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RMC

Source: FEMA, 2009; USGS, 2005

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Wrigley-Ford Creek

Wrigley Creek and Ford Creek drain a residential/commercial/industrial area located between Lower Penitencia and Berryessa Creeks. The two creeks combine into Wrigley-Ford Creek, an excavated channel along the Union Pacific railroad. The City regained jurisdiction from SCVWD over Wrigley-Ford Creek in 1993. Under low flow conditions in Berryessa Creek, flow from Wrigley-Ford Creek can drain by gravity; however under high tailwater conditions in Berryessa, a pump station drains the channel (City of Milpitas 2001).

Water Quality

Urbanized areas can contribute substantial non-point source (NPS) pollution to surface waters. Common contaminants include, but are not limited to: sediment, nutrients (phosphorous and nitrogen), trace metals (e.g., lead, zinc, copper, nickel, iron, cadmium, and mercury), oil and grease, bacteria (e.g., coliform), viruses, pesticides and herbicides, organic matter, and solid debris/litter. Vehicles account for most of the heavy metals, fuel and fuel additives (e.g., benzene), motor oil, lubricants, coolants, rubber, battery acid, and other substances. Nutrients result from excessive fertilizing of landscaped areas, while pesticides and herbicides are widely used in landscaping for keeping right-of-way areas clear of vegetation and pests. All these substances are entrained by runoff during wet weather, carried into the storm drains, discharged into creeks and eventually discharged into the San Francisco Bay.

No waterways traversing the Study Area are listed on the 2008 303d list of impaired waterbodies. However, South San Francisco Bay and Coyote Creek are listed on the 2008 303d list and receive drainage runoff from various section of the Study Area. Coyote Creek was recently listed for trash. South San Francisco Bay is listed for the following impairments: chlordane, DDT, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, polychlorinated biphenyls (PCBs), trash, and selenium (SWRCB, 2009). In general, the improvements associated with the Master Plan Updates could result in the discharge of one or more of these water quality contaminants to local waterways.

Groundwater

The Study Area is located within the Santa Clara Valley Groundwater Basin, Santa Clara Subbasin (2-9.02), which occupies a structural trough parallel to the northwest trending Coast Ranges. The Study Area is characterized by relatively shallow groundwater within alluvium deposits with borings for the central and southern portions of the Study Area encountering groundwater at depths of less than 10 feet bgs (DCM Engineering 2006). The local groundwater basin includes three waterbearing zones: a shallow, intermediate and deeper zone (RWQCB 2008). The shallow zone is composed of sand, silty sand and gravel between the depth of 10 and 40 feet below ground surface (bgs). The intermediate zone consisting of smaller lenses underlies the shallow at depths between 40 and 70 feet bgs. The deeper zone consists of silty sand, sandy silts and gravelly sands and is found at greater than 70 feet bgs. The intermediate and deeper zones are separated by a clayey layer which appears to act as a confining layer (RWQCB 2008).

From the early 1900s through the mid-1960s, water levels declined from groundwater pumpage, causing subsidence in the Santa Clara subbasin and degradation of the aquifer adjacent from saltwater intrusion. Recently, however, groundwater levels have generally increased as a result of increases in imported water supplies and groundwater recharge efforts. SCVWD conducts an artificial recharge program by releasing locally conserved or imported water to in-stream and off-stream recharge facilities (DWR 2004). The City operates one well that is designated as an emergency water supply source and has a second well under construction; however groundwater is typically not used as a domestic water supply in the area.

The groundwater in the major producing aquifers within the subbasin is generally of a bicarbonate type, with sodium and calcium the principal cations. Localized sources of groundwater contamination within the Study Area exist; particularly within the TASP area. These sources are described in the TASP EIR, which is incorporated by reference. Notwithstanding localized sources of groundwater degradation,

primary drinking water standards are still met at public supply wells without the use of treatment methods (DWR 2004). However, recent sampling for a well currently under construction indicates that secondary standards are currently not met.

Dam Inundation

According to the City's General Plan, as amended through 2008, parts of the City along the Calaveras Road area east of I-680 could be inundated by failure of the 38-foot high Sandy Wool Lake Dam, located in Ed Levin Park. Although extremely unlikely, the City's Office of Emergency Services (OES) maintains an evacuation plan in the event that a failure of the dam were to occur. Given that the improvements associated with the Master Plan Updates would not include new structures for human habitation, adoption of the Master Plan Updates would not be expected to increase the risk or exposure of individuals to hazards associated with dam inundation and, therefore, this issue requires no further evaluation.

Seiche/Tsunami

A tsunami originating in the Pacific Ocean would dissipate in the San Francisco Bay, and therefore pose a negligible hazard to the Study Area. A seiche (seismically induced wave) could potentially occur in Sandy Wool Lake under the right circumstances, thereby potentially flooding downstream areas. However, the risk of a seiche of sufficient magnitude is low and, therefore, no further discussion of this hazard is warranted.

Climate Change

In July 2006, DWR released a technical report titled "Progress on Incorporating Climate Change into Management of California's Water Resources" (DWR 2006). DWR concluded that future hydrologic conditions in California will likely change when compared to the patterns observed over the last century. Although a full understanding of water resources changes associated with climate change is not possible, there is a general consensus among recent investigations that the following effects are likely to occur within the next 50 to 100 years: 1) increases in air temperature; 2) changes in the timing, amount, and form of precipitation; 3) changes in runoff timing and volume; 4) sea level rise; 5) effects of sea level rise on Delta water quality; and 5) changes in irrigation volumes due to modified evapotranspiration rates (DWR 2006; IPCC 2007). These changes could have significant implications for water resources within California and the Study Area.

A major portion of California's annual water storage is held within the Sierra Nevada snowpack. DWR estimates that, by 2060, Sierra Nevada snowmelt runoff could be reduced by 36 percent (DWR 2006). These changes, along with anticipated changes in the timing of precipitation, could reduce both local and Statewide reservoir refilling. In addition, computer models estimate that global climate change could lead to a sea level rise of 0.6 to 1.9 feet over the next 100 years (IPCC 2007). This rise in sea level would increase the frequency of existing high tides in the southern San Francisco Bay and tributaries that experience tidal fluctuation. These changes, combined with coastal area subsidence that has occurred in the Santa Clara Valley as a result of groundwater extraction, could exacerbate existing flooding hazards (DWR 2006).

3.8.2 Regulatory Setting

Federal Policies and Regulations

Clean Water Act

The Clean Water Act (CWA), administered by the U.S. Environmental Protection Agency (USEPA), serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Applicable sections of the CWA follow.

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers. Section 303(d) requires states to develop a TMDL for each of the listed pollutants and water bodies. TMDL is the amount of pollutant loading that the water body can receive and still meet water quality standards.

Under *CWA Section 401*, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain a water quality certification from the State Water Resources Control Board (SWRCB) in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 regulates storm water discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. In California, the USEPA authorizes the SWRCB to oversee the NPDES program through the RWQCBs. A NPDES permit (NPDES Permit No. CAS612008, Order No. R2-2009-0074 has been issued to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) for areas that drain to South San Francisco Bay and includes the City, 12 other communities, portions of Santa Clara County, and SCVWD. As a member agency, the City is required to implement the program's Stormwater Management Plan to ensure that stormwater runoff from the City does not cause or contribute to a violation of the water quality standards for the south San Francisco Bay. The NPDES permit is amended periodically; development in the City is required to meet any new requirements that result.

The RWQCB, under the guidance of the USEPA Stormwater Phase I and Phase II Final Rules, further issues NPDES permits to any construction project over one acre. Construction projects are required to obtain an individual NPDES permit supported by a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would be comprised of best management practices (BMPs) for construction of facilities.

The SCVURPPP includes a Water Utility Operation and Maintenance Discharge Pollution Prevention Plan (WUDPPP), which include BMPs specific to the operation and maintenance of water-related utilities. Specific BMPs for these operational activities are provided in Appendix E.

Amended NPDES General Construction Permit

The SWRCB recently adopted Order 2009-0009-DWQ/NPDES Order CAS000002, which amended the waste discharge requirements for discharges of storm water runoff associated with construction and land disturbance activities (previously Order 99-08-DWQ). The amended General Construction Permit is still subject to USEPA's approval, which is expected sometime in early 2010. The amended General Construction Permit differs from Order 99-08-DWQ in many ways ranging from a streamlined permitting process for linear underground/overhead project (LUPs) to new requirements for preparers of Stormwater Pollution Prevention Plans (SWPPP). The following changes to the General Construction Permit would apply to one or more of the individual Master Plan improvement projects:

- Rainfall Erosivity Waiver: the Amended General Construction Permit includes a option allowing a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value)[1] for their site's given location and time frame is less than or equal to 5.
- Technology-Based Numeric Action Levels (NALs): the Amended General Construction Permit includes NALs for pH and turbidity.
- Risk-Based Permitting Approach: the Amended General Construction Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: 1) Project Sediment Risk, and 2) Receiving Water Risk.
- Minimum Requirements Specified: the Amended General Construction Permit imposes more minimum BMPs and better integrates with local Municipal Separate Storm Sewer System (MS4) permit requirements.
- Project Site Soil Characteristics Monitoring and Reporting: the Amended General Construction Permit provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.
- Effluent Monitoring and Reporting: the Amended General Construction Permit requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to determine compliance with the Numeric Effluent Levels (NELs) and evaluate whether NELs included in this General Permit are exceeded.
- Rain Event Action Plan: the Amended General Construction Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.
- Annual Reporting: the Amended General Construction Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and pubic information.
- Certification/Training Requirements for Key Project Personnel: the Amended General Construction Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with General Permit requirements.
- Linear Underground/Overhead Projects: the Amended General Construction Permit includes requirements and a separate risk determination process for all Linear Underground/Overhead Projects (LUPs).

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[1] EPA's Storm Water Phase II Final Rule provides the option for a Small Construction Rainfall Erosivity Waiver. This waiver applies to small construction sites between 1 and 5 acres, and allows permitting authorities to waive those sites that do not have adverse water quality impacts. In order to obtain the waiver, the discharger must certify to the SWRCB that small construction activity will occur only when the rainfall erosivity factor is less than 5 ("R" in the Revised Universal Soil Loss Equation).

National Flood Insurance Program

The City of Milpitas is a participant in the National Flood Insurance Program (NFIP) created by the Community Rating System (CRS) to promote flood awareness and reduce flood losses of properties within Special Flood Hazard Areas (SFHA). The City is a participant in the program and is currently ranked as Class 6[2]. This ranking is among the highest in the nation based on the City's proactive flood mitigation efforts thereby resulting in a 20 percent insurance premium credit to City residents.

Drainage and related flooding hazards are managed in response to requirements established by the National Flood Insurance Act of 1986 and the Flood Disaster Protection Act of 1973, as amended. Requirements of the NFIP are included in the Building Code and through overall City and interagency programs for flood management. In implementing the NFIP, FEMA requires that new construction in a flood hazard area meet minimum design standards to place occupied structures above flood hazard areas. A special flood hazard area is defined as a 100-year floodplain, which, on average, is likely to flood once every 100 years. As previously indicated, portions of the Study Area are included within the 100-year flood hazard area (see Figure 3.8-1).

State Policies and Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Basin Plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater.

San Francisco Bay RWQCB Basin Plan

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: 1) designates beneficial uses for surface and ground waters; 2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy; 3) describes implementation programs to protect the beneficial uses of all waters in the Region; and 4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan [California Water Code Sections 13240 thru 13244, Section 13050(j)].

Assembly Bill 162 (AB 162)

This recently enacted legislation requires local jurisdictions to update the land use element of their General Plan to identify and annually review those areas covered by the General Plan that are subject to flooding as identified by floodplain mapping prepared by FEMA or DWR. AB 162 also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the General Plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management.

Local Policies and Programs

City of Milpitas General Plan

[2] Class 1 having greatest insurance premium credit, and Class 10 having no insurance premium credit)

The City's General Plan, as amended through 2008, contains the following policies that address hydrology and water quality. These principles and policies are provided in the Seismic and Safety Element and the Open Space and Environmental Conservation Element.

Guiding Principle 4.d-G-1 Protect and enhance the quality of water resources in the Planning Area.

Guiding Principle 4.d-G-2 Promote conservation and efficiency in the use of water.

Policy 4.d-I-1 Continue implementing the National Pollutant Discharge Elimination System (NPDES) requirements of the Regional Water Quality Control Board.

Policy 5.b-G-1 Minimize threat to life and property from flooding and dam inundation.

Policy 5.b-I-4 Continue working with the Office of Emergency Services to update and maintain the Sandy Wool Lake Dam failure evacuation plan.

Policy 5.b-I-5 Seek construction of flood control channels to withstand 100-year floods along Coyote, Penitencia, Berryessa, Scott, Calera, and Los Coches creeks.

Based on recent improvements, both Coyote and Calera Creeks are certified as providing 100-year flood protection.

City of Milpitas Municipal Code

The City implements NPDES requirements through Title XI, Chapter 16 of the City's Zoning Ordinance. In addition, Title VIII, Chapter 2 of the Milpitas Sanitary Code prohibits the discharge of any sewage, industrial waste, or other polluted waters into any storm drain or natural outlet or channel unless expressly allowed by a valid NPDES permit.

FEMA-designated flood hazard zones are considered to be areas of special flood hazard according to Section XI-15-3.2 of the City of Milpitas Municipal Code. Standards for Utilities (Section XI-15-5.2) specify requirements for new and replacement water supply and sanitary sewage systems, and on-site waste disposal systems:

XI-15-5.2 Standards for Utilities

(a) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:

(1) Infiltration of floodwaters into the systems; and

(2) Discharge from the systems into floodwaters.

(b) On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding. (Ord. 209.3(A) (part), 5/4/93)

3.8.3 Impact Analysis

This section describes the CEQA impact analysis relating to hydrology and water quality for the proposed Project. It describes the methods used to determine the Project's impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to hydrology and water quality was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

Criteria Requiring No Further Analysis

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The Master Plan Updates are comprised of water and sewer conveyance and storage improvements and do not include new structures for human occupation. Therefore, the implementation of the Master Plan Updates would not result in the placement of new housing within a 100-year flood hazard area. Based on these circumstances, a no impact determination is appropriate.
- The Study Area is sufficiently elevated and distant from South San Francisco Bay to avoid tsunami or seiche run-up inundation. In addition, underground conveyance pipelines and new storage facilities would be situated to the west of hills to the east and outside associated landslide hazard zones. For this reason, Master Plan related improvements would not be affected by mudflow hazards and no impact would occur.
- The Master Plan Update improvements do not include new wells and associated pumping facilities, which could otherwise contribute to withdraw of regional groundwater resources. No impact would occur.
- The Master Plan Updates would not require the placement of new structures for human occupancy and, therefore, would not add to preexisting hazards related to threats of dam inundation. No impact would occur.

Impacts and Mitigation Measures

Violation of Water Quality Standards

Impact HWQ-1 Runoff generated by Master Plan construction could exceed water quality standards due to erosion, sedimentation, and potential for release of hazardous materials.

Construction of the various program facilities would require grading, soil stockpiling, and excavation, along with disturbances of soils and vegetation. Construction would take place periodically and, therefore, has the potential to expose bare soils during the winter rainfall period. Bare soils are much more likely to erode than vegetated areas due to the lack of dispersion, infiltration, and retention created by covering vegetation. The extent of impact is dependent on soil erosion potential, type of construction practice, extent of disturbed area, timing of precipitation events, and topography and proximity to drainage channels. Storm events during construction activities could also cause transport of other construction-related contaminants (e.g., fuels, oil, concrete, paint) to nearby receiving waters thereby impairing water quality and potentially affecting aquatic organisms and their associated habitats. Discharge of construction-related dewatering effluent could also result in the release of contaminants to surface water. In addition, short-term water quality impacts are possible, such as local changes in turbidity and possibly changes in dissolved oxygen. Construction-related erosion, sedimentation, and release of hazardous materials are considered potentially significant water quality impacts.

Due to the presence of shallow groundwater within the City, trenching and trenchless construction activities associated with pipeline installation could encounter the water table, through which it would immediately and directly become available for contaminants to enter the groundwater system. Similarly, if construction is initiated in an area with direct contact with surface water, then the potential for contaminants to enter the surface water system increases. During trenchless construction, dewatering would be necessary to remove water from tunnel, launching, and receiving pits. It is not known how much water would be withdrawn because the volume would be influenced by the local shallow aquifer character, the depth of excavation, and the duration that subsurface work is conducted.

Groundwater withdrawn from the construction areas would be subsequently discharged to local waterways or drainage ditches, or via land application. These discharges may contain sediments, dissolved solids, salts, and other water quality contaminants found in the shallow groundwater, which could degrade the quality of receiving waters. Degradation of local receiving waters from the introduction of shallow groundwater during construction dewatering could result in a significant impact to receiving waters.

Trenchless construction activities may require the use a mixture of bentonite (an inert clay) and petroleum as a lubricant for the drilling mechanism. Drilling near the ground surface or close to the bed of a surface water body introduces the potential for an unplanned "frac-out[3]," in which the pressure of the bentonite or other drilling lubricant generates a surface rupture, causing a release of bentonite to the ground surface or water column. Although bentonite is not toxic, it can smother aquatic habitat and increase turbidity and suspended sediments in the water column. Water quality degradation due to trenching and excavation activities are considered potentially significant impacts.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant water quality impacts due to construction-related erosion, sedimentation, and release of hazardous materials.

[3] A "frac-out" or inadvertent return occurs when drilling lubricant seeps through fractures in the overlying substrate into the water column above. If a "frac-out" occurs in waterways, aquatic species such as benthic invertebrates, aquatic plants, and fish and their eggs can be smothered by the fine particles in the bentonite.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

Mitigation Measure HAZ-1: Develop and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities

See *Section 3.7, Public Health and Hazards*.

Mitigation Measure HWQ-1a: Implement NPDES Permit Measures, including Development and Implementation of a SWPPP.

Prior to the onset of construction activities on sites of one acre or more, the City's or Developer's contractor shall obtain coverage under the NPDES General Construction Permit. The City will be responsible for ensuring that construction activities comply with the conditions in the 2009 Amended General Construction Permit through the preparation of a SWPPP or, if determined appropriate, a Rainfall Erosivity Waiver. Individual improvement projects eligible for a Rainfall Erosivity Waiver must demonstrate that the rainfall erosivity factor will be less than five throughout the duration of construction. Improvement projects qualifying for the Rainfall Erosivity Waiver will be required to implement minimum BMPs consistent with City standards.

All other Master Plan improvement projects will require the preparation of a SWPPP. At minimum, the SWPPP shall be prepared by a Qualified SWPPP Practitioner (QSP), identify site-appropriate soil stabilization and sediment control BMPs, and include a monitoring component that is consistent with the individual project's Risk Level or LUP Type. Based on the types of activities anticipated over the duration of the implementation of the Master Plan updates, SWPPPs for individual improvement projects shall include BMPs that cover the following:

- ensure implementation of good site management (i.e.,"housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. Special consideration shall be given to vehicle storage and maintenance, landscaping, waste management, and construction materials or equipment that are not designed to be outdoors and exposed to environmental conditions;
- provide effective soil cover for inactive construction areas that could contribute sediment to waterways;
- enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways;
- establish and maintain effective perimeter controls, as needed, to sufficiently control sediment discharges from the site. This will be done by using a combination of one or more of the following: berms, silt fencing, straw bales or wattles, plastic sheeting or geofabric, silt/sediment traps and catch basins, sand bag dikes, temporary vegetation or other groundcover, or other control measures consistent with City standards;
- ensure that no earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water;
- ensure that dewatering activities shall be conducted according to the provisions of the SWPPP. No dewatered materials shall be placed in local water bodies or in storm drains leading to such bodies without implementation of proper construction water quality control measures;
- effectively manage all run-on, all runoff within the site and all runoff that discharges off the site using BMPs consistent with City standards; and

- ensure that grass or other vegetative cover will be established on non-paved portions of the construction site as soon as possible after disturbance.

As required by the Amendment General Construction Permit, in situations where the improvements will occur across several properties, the City will be responsible for obtaining coverage under the General Permit. The City shall ensure that a QSP prepares each SWPPP specific to the individual improvements included in the Master Plan Updates as determined necessary by the City. The City shall review and approve the BMPs proposed in the SWPPP to ensure consistency with the City's standards and specifications.

The City will ensure that the SWPPP and NOI are filed with the San Francisco Bay RWQCB prior to the start of construction. A QSP with the City or its agent will perform routine inspections of the construction area to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The City or its agent will notify the project contractor(s) if there is a noncompliance issue and will require immediate corrective action.

Mitigation Measure HWQ-1b: Implement Provisions for Dewatering and Hydrostatic Test Water.
Before discharging any substance that could reach surface waters, the City's or Developer's construction contractor shall develop a plan for the disposal of dewatering or hydrostatic discharge in accordance with the requirements of the City and San Francisco Bay RWQCB. Depending on the volume and characteristics of the discharge, coverage under the RWQCB's General Construction Permit or General Dewatering Permit (R2-2007-0033) is possible. As part of the plan, the contractor will design and implement measures as necessary so that the discharge limits identified in the relevant permit are met. If it is determined that neither of these permits apply, the contractor will be required to implement control measures for conditionally exempt discharges from uncontaminated groundwater pumping as outlined in the SCVURPPP's WUDPPP. A range of potential BMPs is provided in Appendix E. Final selection of water quality control measures will be subject to review by the City of Milpitas.

Mitigation Measure HWQ-1c: Use Trenchless Technology.
Where conveyance pipelines cross water bodies, the City will require its construction contractor to use trenchless technology (micro-tunneling or jack-and-bore), where feasible. Frac-out plans as described in Mitigation Measure HWQ-1d shall be implemented as necessary.

Mitigation Measure HWQ-1d: Develop and Implement a Frac-Out Contingency Plan for HDD and Jack and Bore Activities.
For tunneling activities that use drilling lubricants (e.g., construction of pipelines using jack-and-bore methods), the City's or Developer's construction contractor will prepare and implement a Frac-Out Contingency Plan. The purpose of the plan will be to minimize the potential for a frac-out associated with tunneling activities, provide for the timely detection of frac-outs, and ensure an organized, timely, and "minimum-impact" response in the event of a frac-out and release of drilling lubricant (i.e., bentonite). Preparation and implementation of a Frac-Out Contingency Plan will be reflected in contract documents.

Mitigation Measure HWQ-1e: Dry-Season Construction
Where Mitigation Measure HWQ-1c is not feasible, and flows in the water body (or area) are seasonal, construction shall be conducted during the dry season. The program site will be restored prior to the onset of the rainy season to minimize the potential for erosion. This proposed mitigation is subject to additional conditions as a result of negotiations of the required permits from USACE, CDFG, and the San Francisco Bay RWQCB.

Significance Determination After Mitigation

With the implementation of Mitigation Measures HWQ-1a through 1e, potential water quality impacts resulting from construction of Master Plan improvements would be reduced to less than significant levels.

Operational Discharges

Impact HWQ-2 Process discharge water generated during the operation of conveyance pipelines and storage tank facilities could impact surface waters.

Pipelines may include blow-offs and other appurtenances that would result in the periodic release of potable water to surface waters. In addition, discharge of potable water associated with periodic maintenance of conveyance pipelines, storage tank, and pump stations may also be required. Impacts could include reductions in water quality where the water released is of lower quality than ambient conditions. This impact is potentially significant, but implementation of Mitigation Measure HWQ-2 would reduce the impact to a less than significant level.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant water quality impacts due to process discharge water associated with facility maintenance.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

> Mitigation Measure HWQ-2: Implement BMPs Contained in the SCVURPPP's Water Utility Operation and Discharge Pollution Prevention Plan. For operational discharges, the City will select and implement appropriate BMPs as identified in the SCVURPPP's WUDPPP. Appendix E of this EIR contains a range of acceptable BMPs for both potable water and sewer collection facilities.

Significance Determination After Mitigation

With the implementation of Mitigation Measure HWQ-2 potential water quality impacts resulting from the discharge of operational process water would be reduced to a less than significant level.

Surface Runoff

Impact HWQ-3 The Master Plan Updates could generate increased surface runoff and associated impacts to water quality, drainage facilities, and groundwater recharge.

Due to their location within roadway ROWs, construction of a majority of the Master Plan conveyance pipelines and associated underground facilities would not alter the surface infiltration characteristics of the Study Area. However, the new aboveground facilities (storage tank and pump station) would involve a small amount of new impervious surface, which could increase the amount of surface runoff, convey NPS contaminants to surface waters during storm events, and reduce the ability of precipitation to infiltrate and recharge groundwater. Additional runoff could contribute to localized flooding with local waterways, accelerate soil erosion and stream channel scour, and provide a more lucrative means of transport for pollutants to enter waterways. However, the amount of additional impervious surface is anticipated to be relatively small, less than 3 acres, such that water quality, drainage capacity, and groundwater recharge impacts could be mitigated.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant water quality impacts due to increased impervious surfaces and surface runoff.

Mitigation Measures

The following mitigation measures are required for the storage tank and pump station facilities.

> Mitigation Measure HWQ-3: Design Drainage Facilities for the Storage Tank and Pump Station In Accordance with City Standards.
> The City shall design the proposed storage tank and associated facilities in accordance with City design standards and the City's NPDES permit for drainage to maintain runoff during peak conditions to pre-construction discharge levels.

Significance Determination After Mitigation

With the implementation of Mitigation Measure HWQ-3, potential water quality impacts due to increased surface runoff would be reduced to less than significant levels.

Flooding

Impact HWQ-4 Some Master Plan improvements could involve the placement of structures within a 100-year Flood Hazard Area, which could impede or redirect flood flows.

Construction of several of the Master Plan Update improvements would occur within the 100-year Flood Zone and 500-year Flood Zone, as defined by FEMA. Due to their location within roadway ROWs, however, construction of the Master Plan conveyance pipelines and associated underground facilities would not impede or redirect flood flows.

Small segments of the new conveyance pipelines may require the crossing of local floodways. These crossings would be completed using in-channel or trenchless construction techniques and would be installed at sufficient depth below existing and/or planned flood control facilities and placed in suitable bedding materials. Additionally, construction of these facilities would generally be restricted to the summer months based on current environmental regulations and be of limited duration, and, therefore unlikely to expose workers to significant risk of injury or death as a result of flooding.

In addition to conveyance facilities, the new aboveground facilities (storage tank and pump station) would be located within a Special Flood Hazard Area, thereby creating the potential to contribute to and/or redirect flood flows. However, these facilities would be subject to standards specified in the City of Milpitas Municipal Code (Standards for Utilities, Section XI-15-5.2) and the City's Floodplain Regulations. Compliance with these existing requirements would minimize any related hazard and therefore, this impact is considered less than significant.

Significance Determination Before Mitigation

The Master Plan improvements would result in less than significant flooding impacts and no further mitigation is required.

Global Climate Change

Impact HWQ-5 Effects of global climate change on hydrology and flooding in the Study Area are unknown.

Global climate change could result in changes in the timing, amount, and form of precipitation both within the Bay Area and in Sierra Nevada, where SFPUC's Hetch Hetchy System originates. Global climate change could also result in changes in runoff timing and volume from the Sierra snowpack. More intense and/or frequent precipitation in the Bay Area could lead to changes in local reservoir operations in order to prevent flooding hazards. Additionally, global climate change will likely produce a rise in sea level, including high tides in San Francisco Bay. Higher water levels in San Francisco Bay could lead to seiche and other flooding hazards in low-lying areas of the City. High volume flood flows within Coyote Creek and its tributaries could potentially exacerbate existing flooding in the Special Flood Hazard Zones.

However, it is not possible to accurately estimate the specific changes to flood flows and the duration over which these changes may occur because of climate change. For this reason, potential impacts are considered speculative and level of significance cannot be determined.

Significance Determination Before Mitigation

The effects of global climate change on Master Plan facilities are considered speculative and level of significance cannot be determined.

Mitigation Measures

No mitigation measures are required.

3.8.4 Cumulative Analysis

The proposed Master Plan Update facilities in conjunction with other projects considered in the cumulative analysis as described in Section 3.1.4 would be developed within an urban environment with the Master Plan-related improvements generally avoiding direct impacts to local waterways. As provided in the project-specific analysis, the Master Plan Updates would not substantially alter existing drainage patterns to the extent that substantial flooding, erosion, or siltation would occur within or outside the Master Plan Study Area. The City is currently in the process of updating its Storm Drain Master Plan, which is expected to further contribute to a reduction in cumulative drainage impacts within the City. In this context, the contribution of individual Master Plan Update improvements to cumulative hydrology and flooding impacts would not be considerable.

Mitigation measures prescribed in the Program level analysis set forth requirements and performance standards for Master Plan-related construction to minimize indirect, adverse effects to surface and groundwater quality. This mitigation combined with compliance with the City's design standards and NPDES permit requirements would minimize the potential for water quality impacts at the individual project-level to the extent that they would be rendered less than significant. Operational impacts to water quality would be less than significant and insignificant when compared to other cumulative projects considered in this analysis.

Based on the project-specific impact findings, the Master Plan improvements would result in less than significant or no impacts to existing groundwater supplies and existing flooding hazards and, therefore, would not be cumulatively considerable.

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3.9 Planning and Land Use

This section discusses the existing conditions related to planning and land use in the Study Area. Federal, state, and local regulations related to planning and land use that would apply to the Master Plan Updates follow. Major planning and land use issues addressed in the section include disruptions to an established community, interference with the achievement of environmental justice, and compatibility of the Master Plan with plans and policies adopted for the purpose of avoiding and/or minimizing environmental effects.

3.9.1 Environmental Setting

Existing Land Use

The City of Milpitas encompasses an area of approximately 13 square miles, extending from the south end of San Francisco Bay to the Los Buellis Hills of the Mount Diablo Range in northern Santa Clara County. Broad residential areas include single family low density neighborhoods, as well as multi-family medium density and high density areas; especially in areas north of Calaveras Boulevard and east of I-680. Over 150 acres of City-owned park and recreation facilities serve local residents, in addition to the 1,544-acre Ed Levin Park, along the eastern border of the City. There is currently a large manufacturing and warehousing area to the west of I-680 and north of Montague Expressway. North of this area and along the western boundary of the City, there are two large industrial park areas. General commercial areas are concentrated along Calaveras Boulevard, but can also be found throughout the City along Abel Street, S. Main Street, S. Milpitas Avenue, and S. Park Victoria Drive.

Land area within the City is split between the western Valley Floor and the eastern Hillside Area. Much of the Valley Floor is developed with residential, commercial and industrial uses. Less than ten percent of the total land in the Valley Floor is vacant and available for development with half of the vacant land designated for industrial uses. All of the proposed projects included in the Master Plan Updates are located within the Valley Floor area.

The Milpitas TASP, located on the Valley Floor, outlines a development vision for the area of the City including and just south of the Great Mall. The area is currently dominated by light industrial land use and will be converted to high density residential, commercial, and mixed use land uses over the next 20 years. According to the 2009 Sewer Master Plan Update, the switch from light industrial to high density residential will increase the sewer flow in an area already identified for needing sewer main improvements in the near future.

The Hillside Area comprises approximately 6,000 acres generally east of Piedmont Road, Evans Road and the portion of North Park Victoria Drive north of Evans Road. The undeveloped portion of the Hillside Area is characterized by gentle to steep slopes, grassy terrain with some chaparral and trees, wildlife, geologically unstable areas, and the Ed R. Levin County Regional Park.

Population

The City of Milpitas had a 2008 population of 69,419, according to the California Department of Finance (May 2008). In 2007, the Association of Bay Area Governments (ABAG) projected the population in Milpitas to be 79,700 by 2020 and 90,400 by 2030. The TASP is anticipated to generate approximately 17,900 additional residents by 2030. This will bring the average population density to almost 41 persons per gross acre and will contain almost 20 percent of the City's total population.

Environmental Justice

The California Government Code (Section 65040.12) defines environmental justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies."

The Equity Analysis and Environmental Justice Report for the 2001 Regional Transportation Plan (Metropolitan Transportation Commission 2001) defined environmental justice communities for the entire Bay Area region. "Low-income populations" are defined as communities with an annual median household income (MHI) at or below 200% of the U.S. Department of Health and Human Services Poverty Guidelines. A 200% figure was used to reflect the relatively high cost of living in the Bay Area. There are no low-income populations located within the City of Milpitas.

"Minority populations" are defined as communities with concentrations of 70% or greater minority populations (Asian, African American, Native American, or Hispanic origin). There are multiple minority population zones within the City, generally covering the Valley Floor area. As such, a majority of the proposed Master Plan Update conveyance pipelines and the storage tank are located within "minority population" zones.

3.9.2 Regulatory Setting

State Policies and Programs

SB 115 (Solis) and SB 89 (Escutia)

Cal EPA is charged with implementing SB 115 (Solis) and SB 89 (Escutia) to ensure "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies." SB 115 gives Cal EPA broad responsibilities to include environmental justice in the design and implementation of programs, policies, and activities. SB 115 also established the Governor's Office of Planning and Research as the lead agency for implementation of environmental justice programs within the State. SB 89 establishes the formation of an Interagency Advisory Group made up of the Cal EPA Secretary, boards, departments, and office heads and the Office of Planning and Research (OPR) director. Cal EPA developed the 2004 Inter-Agency Environmental Justice Strategy to serve as the overarching environmental justice vision document for the Advisory Group.

Local Policies and Programs

Santa Clara County General Plan

Santa Clara County does not regulate land use in incorporated cities within its jurisdiction; however, the County General Plan outlines countywide goals for managed, balanced growth. County goals include balanced growth of jobs and housing; planned and orderly urban expansion; appropriately located urban development within city service areas; and compact, transportation- efficient urban development. The County General Plan also includes countywide goals for social and economic well-being, livable communities, and responsible resource conservation. The proposed projects identified in the Water and Sewer Master Plans are consistent with the County's goals.

City of Milpitas General Plan

The policies contained in the City' General Plan, Land Use Element, as amended through 2008, provide the physical framework for development in the Study Area. It is a comprehensive, long-range plan for the physical development of the City and any land outside its boundaries, which in the City's judgment bears relation. The General Plan contains the following policies related to land use and planning.

Guiding Principle 2.a-G-1 Maintain a land use program that balances Milpitas' regional and local roles by providing for a highly amenable community environment and a thriving regional industrial center.

Policy 2.a I-2.1: Maintain an Urban Growth Boundary in the hillside area, as shown on the General Plan Land Use Map, that shall be effective until December 31, 2018 and, except as otherwise provided below, shall not be moved until that time.

A. The City shall not process, approve or authorize construction or provision of any City service or City service extension to any property or people in that area located both outside of the Urban Growth Boundary and outside of the city limits of the City of Milpitas, except as expressly provided in this policy. "City service" means any water, sanitary sewer, storm drain, flood control, road maintenance, sidewalk maintenance, police, fire or emergency medical service, including construction of related infrastructure that the City, its agents, its departments, or its contractors, provides to any property or people within the City limits….

Guiding Principle 2.d-G-1 Provide all possible community facilities and utilities of the highest standards commensurate with the present and anticipated needs of Milpitas, as well as any special needs of the region.

Policy 2.d-I-1 Coordinate capital improvement planning for all municipal service infrastructure with the location and timing of growth.

Policy 2.d-I-2 Periodically update the City's water and sewer master plans.

The proposed projects in the Master Plan Updates do not conflict with any of the requirements of the City of Milpitas General Plan.

Milpitas Midtown Specific Plan

The 2002 Milpitas Midtown Specific Plan provides direction for the traditional downtown areas of the city in terms of land use, circulation, community design, and utilities and services. It addresses transit-oriented areas in the southern portion of Milpitas with a transit-oriented overlay zone. It requires a Precise Plan in this overlay zone before development can take place. This requirement for a Precise Plan is met by the TASP, which was adopted by the City Council in June 2008. The TASP provides much more detailed land use designations for this area and is consistent with the goals and policies of the Midtown Specific Plan.

Milpitas Transit Area Specific Plan

The Milpitas TASP outlines a development vision for the area of the City including and just south of the Great Mall. The TASP has been in development over the past two years and calls for additional residential, retail, and mixed land uses in a portion of the previous Midtown Specific Plan area. The TASP development will not be completed for approximately 20 years; however, some projects will begin the planning and approval process following approval of the MTA Specific Plan and EIR. The TASP assumes approximately 7,100 units of residential development, all of which will be in multi-family structures, with 18,000 new residents, a high level of residential density near transit that maximizes transit ridership and creates a vibrant residential community. The area is currently dominated by light industrial land use and will be converted to high density residential, commercial, and mixed use land uses over the next 20 years. The switch from light industrial to high density residential will increase the wastewater flow and water required in an area already identified for needing sewer main improvements in the near future.

3.9.3 Impact Analysis

This section describes the CEQA impact analysis relating to planning and land use for the proposed Project. It describes the methods used to determine the Project's impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to planning and land use was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

d) Impede the achievement of environmental justice?

Criteria Requiring No Further Analysis

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- There is no applicable habitat conservation plan or natural community conservation plan within the Study Area. The Santa Clara Valley Habitat Plan, which addresses much of Santa Clara County, does not include the areas within the City of Milpitas. There would be no impact.

Impacts and Mitigation Measures

Division of Established Communities

Impact LU-1 The Master Plan improvements could result in disruptions or division of an established community during construction activities.

Construction of Master Plan Update improvements would not physically divide an established community, but would temporarily disrupt existing land uses. Land uses adjacent to the proposed Master Plan improvements include regional commercial, manufacturing and warehousing, single family and multi-family residential, mixed use, and mobile home park.

Construction would occur primarily within or adjacent to established roadway ROWs and could temporarily disrupt neighborhood circulation and access. The SCVWD Zone Storage Project (W-MP-5) project would be installed outside of the City ROW; however, an exact location has not been determined at this time and will require additional engineering. Potential direct and indirect impacts on land uses from construction-related traffic delays, public safety hazards, visual disruption, air emissions, and noise are addressed in other chapters of this document. Because construction is a short-term activity, however, disruption of existing neighborhoods and access routes within the City would be temporary during construction of program elements. Additionally, construction activity would move along the pipeline route, therefore shifting short-term disruptions.

The range of improvements proposed as part of the Master Plan Updates, including a water storage tank, wastewater collection pipelines, and water distribution pipelines, would represent a minimal change in existing land uses. Surface features that would be visible above grade may include utility boxes, water

appurtenances, sewer manholes, water storage tanks, and associated booster pumps. These elements would generally not conflict with the density, scale, and character of the existing land uses currently within the Study Area. Furthermore, the Master Plan Updates would be compatible with the future nearby land uses anticipated under the General Plan and TASP. Construction of the improvements would not preclude the existing land uses on surrounding properties, nor future development of surrounding parcels for urban (re)development. In order to mitigate disruption of existing land uses during the construction period, Mitigation Measure LU-1 shall be implemented. With implementation of public outreach, this impact would be less than significant.

Significance Determination Before Mitigation

The Master Plan improvements could result in potentially significant land use impacts resulting from construction of water and sewer conveyance and storage facilities.

Mitigation Measures

The following mitigation measure is required for all Master Plan improvements.

> Mitigation Measure LU-1: Public Outreach and Advance Construction Noticing.
> The City or Developer, in cooperation with its construction contractor, shall provide a phone number and community contact for inquiries about the Master Plan Update construction schedule throughout the construction period. This information will be posted in a local newspaper and at City Hall and will be updated on a monthly basis for individual projects.
>
> The City or Developer shall also require its construction contractor to provide a minimum 2-week advance notice of the construction activities schedule to the affected community members within 100 feet of construction areas (e.g., residences, property owners, business owners, and public facility operators), including the posting of signs. These conditions shall be included in contract documents.

Significance Determination After Mitigation

Following the application of Mitigation Measure LU-1, potentially significant land use impacts would be less than significant.

Plan Consistency

Impact LU-2 The Master Plan improvements could conflict with applicable land use plans, policies, and/or regulations.

The Master Plan Update improvements do not conflict with the goals, policies, and objectives of the City's General Plan. The proposed Master Plan Update improvements would ensure construction of adequate wastewater collection, water distribution mains, and water storage tanks to provide consistent and reliable water supply and wastewater collection to the existing community. The Master Plan Updates implement General Plan Policy 2.d-I-2*:* Periodically update the City's water and sewer master plans.

Construction of the Master Plan Update improvements, generally within ROWs, would comply with existing land use designations for the sites; in addition, construction activities would be temporary and the sites would be restored to pre-construction conditions once construction is completed. Construction of Master Plan Update improvements would not require amendments to the General Plan or conflict with policies adopted for the purposes of avoiding and/or mitigating significant environmental effects.

Significance Determination Before Mitigation

The Master Plan Update improvements would not conflict with applicable plans, policies, and regulations and would therefore be considered less than significant.

Mitigation Measures

No mitigation measures are required.

Environmental Justice

Impact LU-3 The Master Plan improvements would not impede the achievement of environmental justice for low-income and minority communities.

Based on mapping of environmental justice communities within the region conducted by the Metropolitan Transportation Commission (2001), a majority of the proposed Master Plan Update conveyance pipelines and the storage tank are located within "minority population" zones.

Analysis of construction and operational impacts in all other disciplines (i.e., air quality, noise, traffic) is presented in the other sections of *Chapter 3, Environmental Analysis*. Mitigation measures are presented in each section to ensure that construction and operational impacts would be reduced to less than significant levels. In addition, the improvements associated with the Master Plan Updates would typically provide long-term benefits to the areas in which they are located. Therefore, identified minority population zones would not be disproportionately affected in an adverse way by the Master Plan Update improvements and environmental justice related impacts would be less than significant.

Significance Determination Before Mitigation

The Master Plan Update improvements would not impede the achievement of environmental justice and would therefore be considered less than significant.

Mitigation Measures

No mitigation measures are required.

3.9.3 Cumulative Analysis

Implementation of the Master Plan Updates projects, in conjunction with the reasonably foreseeable projects identified by the City, would not create long-term cumulative land use conflicts. Although overlapping cumulative construction activities would cause disturbance in the form of noise, exhaust and dust emissions, and traffic access impedances, such impacts would be reduced through the implementation of mitigation measures in *Section 3.3, Air Quality, Section 3.9, Planning and Land Use, Section 3.10, Noise,* and *Section 3.11, Transportation*.

The long-term implementation of the Master Plans would not incrementally add to inconsistencies with General Plan and other local planning documents that could otherwise lead to significant cumulative environmental effects. Further, the City expects the Master Plan Update improvements will provide long-term benefits to the areas in which they are located.

At a regional scale, the Master Plan Updates would not change environmental justice conditions from a cumulative standpoint. Although a majority of the proposed Master Plan Update improvements are located within "minority population" zones, potential environmental impact would be reduced through implementation of the mitigation measures outlined in this Draft EIR and disproportionate impacts would not occur. Further, the long-term operational effects of the Master Plan improvements would be minimal and, therefore, not cumulatively considerable to environmental justice communities.

3.10 Noise

This section discusses the existing conditions related to noise in the Study Area. Federal, state, and local regulations related to noise that would apply to the proposed Master Plan Updates follow. Pipeline construction, operation, and maintenance would cause impacts to the noise environment. Key noise issues addressed in this section include construction-related noise and vibration, as well as long-term increases in ambient noise levels.

3.10.1 Environmental Setting

Technical Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. Therefore, the sound pressure level constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies and greater sensitivity to mid-range frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Noise Exposure and Community Noise

The noise levels presented in Table 3.10-1 are representative of measured noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. Rather, noise levels vary with time, such that the noise experienced in any one place, or the community noise environment, varies continuously over time. Specifically, community noise is the result of many distant noise sources that constitute a relatively stable background noise exposure where the individual contributors are unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic. At the same time, throughout the day, short duration single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens) that are readily identifiable to the individual add to the existing background noise level. The combination of the slowly changing background noise and the single-event noise events give rise to a constantly changing community noise environment.

Given the variation of community noise levels from instant to instant, community noise levels must be measured over an extended period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is

described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The Leq is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- L_{max}: The instantaneous maximum noise level measured during the measurement period of interest.
- L_x: The sound level that is equaled or exceeded x percent of a specified time period. The L50 represents the median sound level (i.e., the noise level exceeded 50 percent of the time).
- DNL: The day-night average sound level (DNL) is the energy average of the A-weighted sound levels occurring during a 24-hour period, accounting for the greater sensitivity of most people to nighttime noise by weighting ("penalizing") nighttime noise levels by adding 10 dBA to noise between 10:00 p.m. and 7:00 a.m.
- CNEL: Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m., in addition to the 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Table 3.10-1: Typical Levels of Noise and Human Response

Human Response	Noise Level (dBA, L_{eq})	Typical Events Indoor	Typical Events Outdoor
	110	--	Jet flyover at 1,000 ft
	100	Inside subway train (new York)	Gas lawn mower at 3 ft
Local committee activity	90	Food blender at 3 ft, Garbage disposal at 3 ft	Diesel truck at 50 ft, Noisy urban day
Complaints likely	80	Shouting at 3 ft, Vacuum cleaner at 10 ft	Gas lawn mower at 100 ft
Complaints possible (Reference)	70	--	Commercial area, Heavy traffic at 300 ft
Complaints rare	60	Large business office	Quiet urban day
Acceptance	50	Dishwasher (next room)	Quiet urban night
	40	Small theater, Conference room (background), Library	Quiet suburban night
	30	Concert hall (background)	Quiet rural night
	20	Broadcast and recording studio	--
	10	Threshold of hearing	--

Source: City of Milpitas 2007 (from Caltrans 1982).

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, and learning; and
- physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the

subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Therefore, an important way of predicting human reaction to a new or changed noise environment is the way the noise levels compare to the existing environment to which one has adapted: the so-called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as an approximate doubling in loudness, and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary "point" sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA to 7.5 dBA per doubling of distance from the source, depending upon environmental conditions (i.e., atmospheric conditions and noise barriers). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles (a "line" source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA per doubling of the distance from the source, again, depending upon environmental conditions (Caltrans, 1998). Noise from large construction sites would have characteristics of both "point" and "line" sources, so attenuation would generally range between 4.5 and 7.5 dBA per doubling of distance.

Noise levels may also be reduced by intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA. Structures also act to insulate people inside these structures from exterior noise. Older home construction methods generally provide a reduction of exterior-to-interior noise levels of about 20 dBA with closed windows, while the reduction in newer homes is generally 30 dBA or more.

Noise Setting

As in most urban areas, vehicular traffic along major arterials is the principal noise source in the Study Area. Other human-caused sources of noise include train and light rail traffic, planes flying overhead, construction machinery, and landscaping equipment. Natural sources of noise include wind and birds.

Roadway Noise

The Study Area includes urbanized land surrounding major vehicular routes: I-880, I-680, SR-237, and Montague Expressway. Traffic noise depends primarily on traffic speed (high frequency tire noise increases with speed) and the proportion of truck traffic, which generates engine, exhaust and wind noise. The proximity of freeways and major streets, and the large amount of truck traffic serving industrial, commercial, warehousing, and freight uses in the area make Milpitas susceptible to traffic noise.

Noise measures taken for the TASP EIR, incorporated by reference, include 60 L_{eq} and 78 L_{max} on McCandless Drive and 72 L_{eq} and 86 L_{max} on Great Mall Parkway, generally from traffic and other ambient sources (City of Milpitas 2007 (from Environmental Sciences Associates 2005).

Railway Noise

Amtrak and freight trains operating on the Union Pacific Railroad line through the City affect the noise environment in surrounding residential areas. Railroad tracks bisect the Study Area, including a freight-serving spur in the center of the City. According to the Santa Clara Valley Transportation Authority (VTA), approximately 564 train cars used the tracks in 2005 (VTA 2006). Freight operation noise levels are in excess of 70 dBA DNL immediately adjacent to the tracks, decreasing to 60 dBA DNL at 300 feet. Light rail, which runs along Capitol Avenue, generates noise levels of 54 to 56 dBA DNL at a distance of 285 feet from the tracks. The most intrusive rail-related noise is the train whistle, which typically ranges from 90 dB to 100 dB at 140 feet.

Existing Land Uses

Existing uses in the Study Area whose activities also contribute to the noise environment include light industrial (manufacturing, distribution, storage), offices, regional retail uses, and general commercial. Mechanical equipment that produces noise is used extensively in buildings to provide heating, cooling, air circulation, and water supply. Although noise levels from these sources are generally low at nearby properties, they do contribute to ambient noise levels.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. People in residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, natural areas, parks, and outdoor recreation areas are generally more sensitive to noise than are people at commercial and industrial establishments. Consequently, the noise standards for sensitive land uses are more stringent than for those at less sensitive uses. Potential sensitive receptors are distributed throughout the Study Area.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves, which are also measured in decibels. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences. As vibrations travel outward from the source, they excite the particles of rock and soil through which they pass and cause them to oscillate by a few ten-thousandths to a few thousandths of an inch. Differences in subsurface geologic conditions and distance from the source of vibration will result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes will decrease with increasing distance. High frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases. While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings may be perceived as motion of building surfaces or rattling of windows, items on shelves, and pictures hanging on walls. Vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as ground-borne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz),

or when the structure and the source of vibration are connected by foundations or utilities, such as sewer and water pipes.

To assess a project's vibration impacts, Caltrans has prepared a publication concerning vibration impact assessment, entitled the "Transportation and Construction-Induced Vibration Guidance Manual," which was prepared in 2004. The guidance manual uses peak particle velocity (PPV) to quantify vibration amplitude. Peak particle velocity is defined as the maximum instantaneous peak of the vibratory motion. **Table 3.10-2** identifies acceptable vibration limits for transportation and construction projects based on guidelines prepared by Caltrans.

Table 3.10-2: Typical Groundborne Vibration Thresholds

Structure and Condition	Transient Sources PPV[(1)] at 25 feet (in/sec)	Continuous/Frequent Intermittent Sources PPV at 25 feet (in/sec)
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
New residential structures with gypsum board walls/ceilings	1.00	0.50
Modern Industrial/commercial buildings	2.00	0.50
Strongly perceptible	0.90	0.10

1 Peak particle velocity
Source: Caltrans, 2004

3.10.2 Regulatory Setting

Federal Policies and Regulations

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR, Part 205, Subpart B. The federal truck passby noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers. In addition to noise standards for individual vehicles, under regulations established by the U.S. Department of Transportation's Federal Highway Administration, noise abatement must be considered for certain federal or federally-funded projects. Abatement is an issue for new highways or significant modification of an existing freeway. The agency must determine if the project would create a substantial increase in noise or if the predicted noise levels approach or exceed the

Noise Abatement Criteria. Under the regulations, a substantial increase is defined as an increase in Leq 12 dB during the peak hour of traffic noise. The Noise Abatement Criteria differ among various activity categories. For sensitive uses, such as residences, schools, churches, parks, and playgrounds, the Noise Abatement Criteria is Leq 57 (interior) and 67 dB (exterior) during the peak hour of traffic noise.

State Policies and Regulations

The State establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State passby standard is consistent with the federal limit of 80 dB. The State passby standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by state and local laws enforced against vehicle operators. For new roadway projects, the California Department of Transportation (Caltrans) employs the Noise Abatement Criteria, discussed above in connection with the Federal Highway Administration.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (California Code of Regulations, Title 24). The noise insulation standards set forth an interior standard of DNL 45 dB for any habitable room. They also require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Local Policies and Programs

Local General Plans and noise ordinances typically set forth standards related to construction activities, nuisance-type noise sources, and industrial property-line noise levels.

City of Milpitas General Plan

The Noise Element of the City of Milpitas General Plan, as amended through 2008, has adopted standards for evaluating the compatibility of land uses with respect to noise levels. These standards are derived from guidelines published by the California Office of Planning and Research. In addition, the Noise Element contains guiding principles and policies applicable to the Master Plan Updates.

> *Guiding Principles 6-G-1* Maintain land use compatibility with noise levels similar to those set by State guidelines.
>
> *Guiding Principles 6-G-2* Minimize unnecessary, annoying, or injurious noise.
>
> *Policy 6-I-1* Use the guidelines in Table 6-1 (Noise and Land Use Compatibility) as review criteria for development projects.
>
> *Policy 6-I-9* Enforce the provisions of the City of Milpitas Noise Ordinance and the use of established truck routes.
>
> *Policy 6-I-13* Restrict the hours of operation, technique, and equipment used in all public and private construction activities to minimize noise impact. Include noise specifications in requests for bids and equipment information.

Noise Abatement Ordinance

The Noise Element is implemented through the City's Noise Abatement Ordinance. The City of Milpitas Noise Abatement Ordinance (1988) establishes that it is unlawful to create or permit disturbing noise in the City of Milpitas (Section V-213-3). The ordinance states that it is unlawful for any person in any district zoned for residential use to make, continue, or cause to be made any disturbing noise between the hours of 10 PM and 7 AM and that construction shall not be allowed in all zoning districts between 7 PM and 7 AM.

The City's Municipal Code, Section V-213(c) provides an exemption for utility construction and maintenance.

3.10.3 Impact Analysis

This section describes the CEQA impact analysis relating to noise for the proposed Project. It describes the methods used to determine impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

For the purposes of this analysis, the significance of Project-related noise impacts can be determined by comparing estimated Project-related noise levels to existing no-project noise levels. An increase of at least 3 dBA is usually required before most people will perceive a change in noise levels, and an increase

of 5 dBA is required before the change will be clearly noticeable. A common practice has been to assume that minimally perceptible to clearly noticeable increases of 3 to 5 dBA represents a significant increase in ambient noise levels. A sliding scale is commonly used to identify the significance of noise increases, allowing greater increases at lower absolute sound levels than at higher sound levels. This approach is based on research that relates changes in noise to the percentage of individuals that would be highly annoyed by the change in ambient noise levels.

Significance Criteria

For this analysis, an impact pertaining to noise was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Criteria Requiring No Further Analysis

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The Study Area is not located within an airport land use plan or within two miles of a public or private airport. Further, the Master Plan improvements would not involve the construction of noise sensitive land uses. For these reasons, no impact would occur.

Impacts and Mitigation Measures

Exceedance of Noise Standards

Impact NOI-1 Construction of the Master Plan improvements could result in noise levels in excess of established standards during construction.

Construction of the Master Plan Update improvements would occur primarily in roadway ROWs, with the exception of the storage tank site. Construction activities would generally involve excavation, concrete removal, earth movement, stockpiling, trenching activities, and truck hauling. These construction activities would generate temporary and intermittent noise at and near the conveyance pipeline alignments and storage tank site during construction. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. In addition, construction-related material haul trips would raise ambient noise levels along haul routes depending on the number of haul trips and the types of vehicles used. Table 3.10-3 shows typical noise levels produced by various types of

construction equipment at a distance of 50 feet. As shown, noise levels from the loudest pieces of construction equipment could approach 89 dBA at distances as short as 50 feet.

In addition to pipeline installation, staging areas will be located at various points along the construction route. These areas would be used to store pipe, equipment, and other construction-related material. In some cases, staging areas will be used for the duration of the project construction. In other cases, the area will be moved along the route to minimize the hauling distances and avoid disrupting any one area for an extended period of time. Potential staging areas include vacant private and public land, parking lots, and segments of closed traffic lanes. The City, or its contractor, would make short-term arrangements for the use of staging areas. These staging areas could be considerable sources of noise.

Table 3.10-3: Typical Noise Levels from Construction Equipment

Construction Equipment	Noise Level (dBA at 50 ft)	Construction Equipment	Noise Level (dBA at 50 ft)
Front loaders	85	Forklifts	76-82
Backhoes, excavators	80-85	Pumps	76
Tractors, dozers	83-89	Generators	81
Graders, scrapers	85-89	Compressors	83
Trucks	88	Pneumatic tools	85
Concrete pumps, mixers	82-85	Jack hammers, rock drills	98
Cranes (movable)	83	Pavers	89
Cranes (derrick)	88	Compactors	82
Pipelayers	83-88	Drill rigs	70-85
Source: Adapted from USEPA 1972 and Federal Transit Administration 1995.			

Based on the noise levels provided in Table 3.10-3 and assuming a conservative attention rate of 4.5 dBA per doubling distance, noises levels during construction could range from 75.5 to over 80 dBA at 200 feet from the nearest sensitive receptor locations depending on the types of equipment in operation. Sensitive receptors within closer proximity could be subjected to even higher noise levels. Additionally, back-up beepers associated with trucks and equipment used for material loading and unloading at the staging area would generate significantly increased noise levels over the ambient noise environment in order to be discernable and protect construction worker safety as required by OSHA (29 CFR 1926.601 and 29 CFR 1926.602).

Because existing daytime noise levels in the vicinity of the conveyance pipeline alignments are assumed to range from 60 to 70 dBA (based on noise monitoring conducted for the TASP EIR), daytime construction work associated with the Master Plan Updates would significantly affect the noise environment of structures in close proximity to construction activities by increasing ambient noise levels by five dBA or more. Few of the proposed pipeline alignments would affect residential receptors; a majority of the proposed improvements are located along arterial roadways in commercial or industrial areas. However, retired persons, people who work at home, and people caring for their children in their homes could be significantly affected by noise should construction activities occur in the immediate vicinity.

The exposure of individual sensitive receptors to elevated noise levels would be contingent on the types of equipment in use and the duration of use. For example, pipeline construction per the Master Plan Updates would progress at rate of 50 to 100 feet a day and, therefore, no one particular receptor along the pipeline would be subjected to elevated noise for more than a couple of days. Construction activities associated with the Master Plan Updates would therefore be temporary in nature and related noise impacts would be short-term. However, in instances where trenchless construction techniques are required,

localized activities could last upwards of several weeks. Likewise, the construction of the storage facilities could take several months. Since pipeline and other construction activities could substantially increase ambient noise levels, with potential intermittent noise levels exceeding 80 dBA, construction noise could exceed established thresholds (e. g. greater than 5 dBA) and result in potentially significant impacts to sensitive receptors in close proximity to construction.

Significance Determination Before Mitigation

Construction and trenching activities along the conveyance alignments would generate temporary, potentially significant noise impacts.

Mitigation Measures

The following mitigation measures are required for all Master Plan Update improvements.

Mitigation Measure NOI-1a: Comply with Noise Abatement Ordinance.
The City or Developer will require all construction contractors to comply with the City's Noise Abatement Ordinance. Construction shall not be allowed in all zoning districts between 7 PM and 7 AM. Exemptions to these working hours will require the approval of the City engineer and are allowed per Section V-213-3.03(c) of the City's Municipal Code.

Mitigation Measure NOI-1b: Employ Noise-Reducing Construction Practices.
The City or Developer will require its construction contractor to identify and employ noise-reducing construction practices. This provision will be reflected in contract documents. Measures that may be used to limit noise include, but are not limited to:

- locating equipment as far a practical from noise sensitive uses,
- using mufflers on all standard equipment,
- selecting haul routes that affect the fewest number of people,
- using noise-reducing enclosures around noise-generating equipment,
- constructing barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (terrain, structures) to block sound transmission, and
- enclosing equipment.

Mitigation Measure NOI-1c: Disseminate Essential Information to Residences and Implement a Complaint/Response Tracking Program.
The City or Developer shall require the construction contractor to notify all residents and businesses within 500 feet of construction areas of the construction schedule in writing a minimum of two weeks prior to ground-breaking. The construction contractor will designate a Noise Complaint Coordinator who will be responsible for responding to complaints regarding construction noise. The Coordinator will determine the cause of the complaint and will ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the Noise Complaint Coordinator will be conspicuously posted on construction site fences or barriers, where possible, and will be included in the written notification of the construction schedule sent to nearby residents. This provision will be reflected in contract documents.

Significance Determination After Mitigation

With implementation of Mitigation Measures NOI-1a, NOI-1b, and NOI-1c, the potential exposure of sensitive receptors to noise levels in excess of established standards would be substantially reduced. However, given that multiple Master Plan construction activities could occur within 100 feet of multiple sensitive receptors, the prescribed mitigation would not reduce the level of impact to a less than significant level. For this reason, construction-related noise effects could be significant and unavoidable.

Groundborne Vibration

Impact NOI-2 Construction of Master Plan Update improvements could result in the excessive groundborne vibration.

Construction activities associated with the Master Plan Updates would result in groundborne vibration, with the primary sources including installation of conveyance pipelines, using open-cut techniques or trenchless construction. In addressing the range of potential issues associated with ground-vibration, there are generally two forms of impacts that should be addressed: (1) annoyance to individuals or the community; and (2) damage to buildings. It is anticipated that installation of conveyance pipelines would require a backhoe or other trenching equipment, while trenchless construction activities would require a trencher and boring machine. Vibration from these typical construction activities is typically below the threshold of perception when the activity is more than about 50 feet from the receiver. Given that construction activities are not expected to encroach within 50 feet of existing structures, the level of annoyance from construction-related vibration at potential receptor locations would be unnoticeable especially in relation to the noise from construction equipment as described in Impact 3.10-1. For this reason, the level of annoyance from construction activities would be less than significant.

In relation to the potential for structural damage at adjacent residential and commercial structures, peak particle velocity (PPV) is the maximum instantaneous positive or negative peak of the vibration signal, measured as a distance per time (such as millimeters or inches per second). The PPV measurement has been used historically to evaluate shock-wave type vibrations from actions like blasting, pile driving, and mining activities, and their relationship to building damage.

As provided in Table 3.10-2, the level of potential impact resulting project construction is generally contingent on the structural composition of the buildings potentially affected. As shown in Table 3.10-2, new residential structures with gypsum board walls/ceilings have a PPV threshold of 1.0 in/sec and would be the types of structures most likely to be impacted by project construction activities. Given that Master Plan-related construction activities would employ the use of equipment similar to those identified in Table 3.10-4, would not involve the use of blasting or pile driving, and would be situated 50 feet or more from existing structures , project construction is unlikely to generate vibration levels in excess of the thresholds identified in Table 3.10-2. Based on these considerations, the Master Plan improvements would result in less than significant impacts from groundborne vibration during construction and no additional mitigation is required.

Table 3.10-4: Construction Equipment Vibration Levels

Equipment PPV at 25 feet (in/sec)	Equipment PPV at 25 feet (in/sec)
Vibratory roller	0.210
Large bulldozer	0.089
Caisson Drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006

Significance Determination Before Mitigation

Potential vibratory impacts from Master Plan-related activities along conveyance alignments within the Master Plan Study Area would be less than significant.

Mitigation Measures

No mitigation measures are required.

Permanent Increase in Ambient Noise

Impact NOI-3 Operation of the Master Plan improvements could create a substantial permanent increase in ambient noise levels.

Noise-generating operations for the Master Plan Updates mainly include the use of electric pumps to move water throughout the pipeline network, operation of the emergency backup generators, and vehicle trips and equipment used for routine maintenance of facility components. Because routine maintenance is anticipated to be sporadic and short term in nature, it is not anticipated that maintenance activities would result in a significant noise impact.

The proposed storage tank pump(s) would operate year-round (24-hours a day, seven days a week) and the backup generator(s) would operate under certain situations, during emergencies. Increased operation of diesel engines to pump treated water supplies would contribute to increased noise in the areas where these facilities are proposed. The pump station could eventually consist of a 1,930 horsepower (hp) vertical turbine pump installed within an enclosed structure, constructed of concrete masonry units or steel. Based on a review of published literature and other EIRs prepared for similar facilities, the typical noise level for water supply pumping facilities ranges from 70 to 76 dBA at 50 feet.

Additionally, a standby generator will be installed in an enclosure to operate the entire pump station during a power outage. The typical noise level for a generator is approximately 80 dBA at 50 feet. With a surrounding masonry buffer, or with generator placement using other structures as shielding, the effective noise level may be reduced by 10 to 15 dBA at 50 feet. Since emergency generators would only be tested on a weekly basis for a short duration, they are not expected to contribute substantially to the overall average noise exposure outside of the site boundary. However, the combined operation of the pumps and back-up generator, depending on the proximity to the nearest sensitive receptor, could be significant.

Without proper design, nearby noise-sensitive land uses could be exposed to significant increases in ambient noise levels. This impact is considered potentially significant.

Significance Determination Before Mitigation

Master Plan operations could generate potentially significant , long-term noise impacts.

Mitigation Measures

The following mitigation measures are required for the Master Plan storage tank pumping facilities.

Mitigation Measures NOI-3: Implement Noise Minimization Measures during Operation.
The City shall design the proposed storage tank pump station to ensure that operational noise levels at the property line does not exceed the City standards. The City shall implement the following noise minimization measures to the extent they are feasible.

- Shielding and other specified measures as deemed appropriate and effective by the design engineer will be incorporated into the design in order to comply with performance standards.
- Project equipment shall be outfitted and maintained with noise-reduction devices such as equipment closures, fan silencers, mufflers, acoustical louvers, noise barriers, acoustical panels, etc., to minimize operational noise.

- Particularly noisy equipment shall, to the extent feasible, be located a minimum of 200 feet from nearby sensitive receptors.
- The orientation of acoustical exits shall always be facing away from nearby sensitive receptors.
- Buildings and landscaping shall be incorporated, where possible, to absorb and/or redirect noise away from nearby sensitive receptors.

Significance Determination After Mitigation

With implementation of Mitigation Measure NOI-3, potential long-term increases in ambient noise levels are reduce to a less than significant level.

3.10.4 Cumulative Analysis

In combination with other cumulative projects identified in Section 3.1.4, construction, vehicular traffic, and operational equipment associated with the Master Plan Updates would result in cumulative noise increases. The significance of these noise increases will be contingent upon the duration of construction and the amount of overlap between the various projects. The Program-level analysis concluded that temporary construction-related noise impacts could be mitigated to appropriate levels, but not all cases, and therefore, are considered significant and unavoidable. Additionally, taken in the context of other projects scheduled to start construction at the same time as the Master Plan Updates, construction noise generated for individual projects could be cumulatively considerable.

Minimal noise from vehicular traffic and operational activities would be expected from the storage tank facility. However, the proximity of pump and generator facilities for these facilities to adjacent sensitive receptors is not known at this time and, therefore the City is unable to confirm whether project-related operational noise would be minimized below City standards and, therefore, this impact could be cumulatively considerable.

3.11 Transportation

This section discusses the existing conditions related to traffic operations and alternatives modes of transportation within the Study Area. Federal, state, and local regulations related to transportation that would apply to the proposed Master Plan Updates follow. Existing conditions information was compiled by reviewing relevant technical reports and maps.

3.11.1 Environmental Setting

Existing Conditions

The City of Milpitas is located on the east side of the San Francisco Bay, just south of the Alameda/Santa Clara County border. The transportation network within the City consists of two interstate highways (I-880 and I-680) and one state route (SR 237). Within each individual jurisdiction, the local traffic network consists of arterial streets, collector streets, and local streets. Typically, arterial streets accommodate through traffic and are located around rather than through residential neighborhoods, commercial centers, and industrial areas. Collector streets supplement and provide access to arterial streets and provide access to neighborhoods. Local streets primarily provide access to abutting properties.

A description of the highways and some major streets within the City is provided below. Traffic volumes for the highways are shown in Table 3.11-1.

- **I-880 (Nimitz Freeway)** is a north-south freeway running through the western portion of the City, extending south to the City of San Jose and north to the City of Oakland. The freeway includes eight lanes north of SR 237/Calaveras Boulevard and six lanes to the south. The I-880/SR 237 interchange includes direct ramp connections for High Occupancy Vehicle (HOV) lanes between the west and north legs of the interchange. The peak direction of travel is southbound during the AM peak hour and northbound during the PM peak hour.
- **I-680** is a north-south freeway running through the eastern portion of the City, extending south to the City of San Jose and north to Solano County. The freeway includes six mixed-flow lanes plus a southbound HOV lane north of Calaveras Boulevard (SR 237) and eight mixed-flow lanes to the south. Southbound I-680 is the commute direction during the AM peak hour and northbound I-680 is the commute direction during the PM peak hour.
- **SR 237** is an east-west roadway that traverses the center of the City and includes two distinct facilities: a six-lane freeway extending from I-880 west to US 101, and a four- to eight-lane arterial roadway between I-880 and I-680 with an elevated section over the Union Pacific Railroad tracks. The arterial section is locally designated as *Calaveras Boulevard*, which is six lanes except on the bridge over the Union Pacific railroad tracks and Main Street, where it is four lanes. Calaveras Boulevard serves as a major commute route with heavy directional travel during the peak hours (westbound in the morning and eastbound in the afternoon).
- **Montague Expressway** is an east-west, six- to eight-lane divided arterial roadway in the southern portion of the City, extending from US 101 east to I-680. Limited access is provided to land uses fronting Montague Expressway. This facility is designated San Tomas Expressway west of US 101 and Landess Avenue east of I-680. Montague Expressway includes directional HOV lanes during peak periods (westbound during the morning and eastbound during the afternoon commute hours). Montague Expressway connects with I-880 and I-680 via full cloverleaf interchanges.
- **Great Mall Parkway** is an east-west, six-lane divided arterial roadway extending from I-880 east to Montague Expressway. Great Mall Parkway is designated *Tasman Drive* west of I-880 and extends into the Cities of San Jose, Santa Clara, and Sunnyvale. Great Mall Parkway becomes

Capitol Avenue east of Montague Expressway and continues south through the City of San Jose. VTA operates light-rail transit (LRT) service along the median of Tasman Drive/Great Mall Parkway/Capitol Avenue.

- **Abel Street** is a north-south, four-lane roadway parallel to and east of I-880 extending from Milpitas Boulevard (north of Calaveras Boulevard) south to Main Street (south of Great Mall Parkway).
- **Milpitas Boulevard** is a north-south, four-lane arterial parallel to and west of I-680 extending from the Milpitas-Fremont City limit line (also the Santa Clara-Alameda County limit line) south to Montague Expressway. Milpitas Boulevard is designated Warm Springs Boulevard north of the City/County limit.

Table 3.11-1: Traffic Volumes along Major Highways in Milpitas

Roadway	Intersection	Back Peak Hour	Back AADT	Ahead Peak Hour	Ahead AADT
I-880	Montague Expressway	8,900	138,000	9,300	144,000
I-880	Great Mall Parkway	9,300	144,000	8,900	137,000
I-880	Junction w/ SR 237	8,900	137,000	11,500	176,000
I-880	Dixon Landing Rd	11,500	176,000	11,400	176,000
I-680	Montague Expressway	11,700	157,000	11,000	148,000
I-680	Junction w/ SR 237 west	11,000	148,000	10,700	143,000
I-680	Jacklin Road	10,700	143,000	10,200	135,000
SR 237	Main Street	5,300	75,000	5,700	81,000

Notes:

Annual average daily traffic (AADT) is the estimated total traffic volume for the year divided by 365 days. The traffic count year is from October 1st through September 30th. AADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways and other purposes.

Back AADT and Peak Hour usually represent traffic South or West of the count location. Ahead AADT, Peak Month, and Peak Hour usually represent traffic North or East of the count location.

Source: Caltrans 2007.

Level of Service

The operations of roadway facilities are described with the term level of service (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, with the best operating conditions, to LOS F, with the worst operating conditions. LOS E represents “at-capacity” operations. Operations are designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions.

As required by state law, the Santa Clara County Congestion Management Program (CMP) includes LOS standards for the designated CMP Roadway System, as follows:

- The basic LOS traffic standard is E;
- The LOS standard for locations with a baseline (1991) LOS F is LOS F;
- The LOS goal for the CMP System is LOS D;
- If the baseline LOS for a CMP System facility is LOS F, then any development project that impacts the facility at or greater than one percent of facility capacity must implement mitigation

measures to reduce the development project's impacts below the one percent level or implement the mitigation measures as prescribed in an approved Deficiency Plan. If such a plan is unavailable, the affected cities are required to complete one. Deficiency Plans allow local jurisdictions to implement innovative solutions to transportation problems where specific project mitigation is infeasible and project denial would conflict with other community goals. Deficiency Plans are designed to improve system-wide levels of service and contribute to a significant improvement in air quality.

The City has established a minimum acceptable operating level of LOS D for intersections excluded from the CMP. The minimum acceptable level for CMP-monitored intersections in Milpitas is LOS E.

Signalized Intersections

The TASP EIR, incorporated by reference, evaluated key intersections within the TASP Study Area during the weekday morning and evening peak hours. Existing intersection lane configurations, signal timings, and peak-hour turning movement volumes were used as inputs for the levels of service calculations. Table 3.11-1 provides a summary of the major intersections analyzed in the TASP EIR. The analysis found that the majority of the intersections operate at acceptable levels of service, except for five locations.

Table 3.11-2: Intersection Level of Service on Major Roadways in Milpitas

Intersection[1]	Peak Hour[2]	Delay	LOS[3]
Calaveras Boulevard / I-880 NB Ramps (M)	AM	19.7	B-
	PM	33.4	C-
Calaveras Boulevard / Abel Street (CMP, M)	AM	37.3	D+
	PM	38.2	D+
Calaveras Boulevard / S. Milpitas Boulevard (CMP, M)	AM	55.8	E+
	PM	40.0	D
Great Mall Parkway / I-880 NB Ramps (M)	AM	25.2	C
	PM	23.7	C
Great Mall Parkway / S. Abel Street (M)	AM	39.8	D+
	PM	39.3	D
Great Mall Parkway-E. Capitol Avenue / Montague Expressway (CMP, M)	AM	48.3	D
	PM	62.5	E
Montague Expressway / S. Milpitas Boulevard (CMP, M)	AM	31.1	C
	PM	35.1	D+
S. Abel Street / W. Capitol Avenue (M)	AM	22.5	C+
	PM	11.6	B+

Notes:
1 CMP = CMP intersection, M = Milpitas intersection
2 AM = morning peak hour, PM = afternoon peak hour
3 LOS = level of service
Source: City of Milpitas 2007 (from Fehr & Peers 2006).

Designated Truck Haul Routes

City-designated truck haul routes are identified in Figure 2-8 of *Chapter 2, Project Description*. These roadways include Calaveras Boulevard, South Milpitas Boulevard, Abel Avenue, South Main Street, Curtis Avenue, Great Mall Parkway, Montague Expressway, and Dixon Landing Road.

Public Transportation Network

The City's public transit network consists of the bus, light rail, bikeway, and pedestrian systems as described below.

Existing Transit Service

The Santa Clara Valley Transportation Authority (VTA) operates bus and light rail service in Santa Clara County. The Great Mall/Main Transit Center is located on the north side of Great Mall Parkway and east of Main Street on the south western portion of the City. This multimodal transit hub consists of an elevated light rail station above Great Mall Parkway and a bus transfer facility and park-and-ride lot located on the northeast corner of the Great Mall Parkway/Main Street intersection. The Montague light rail station is elevated above Capitol Avenue. No bus or park-and-ride facilities are provided at this location.

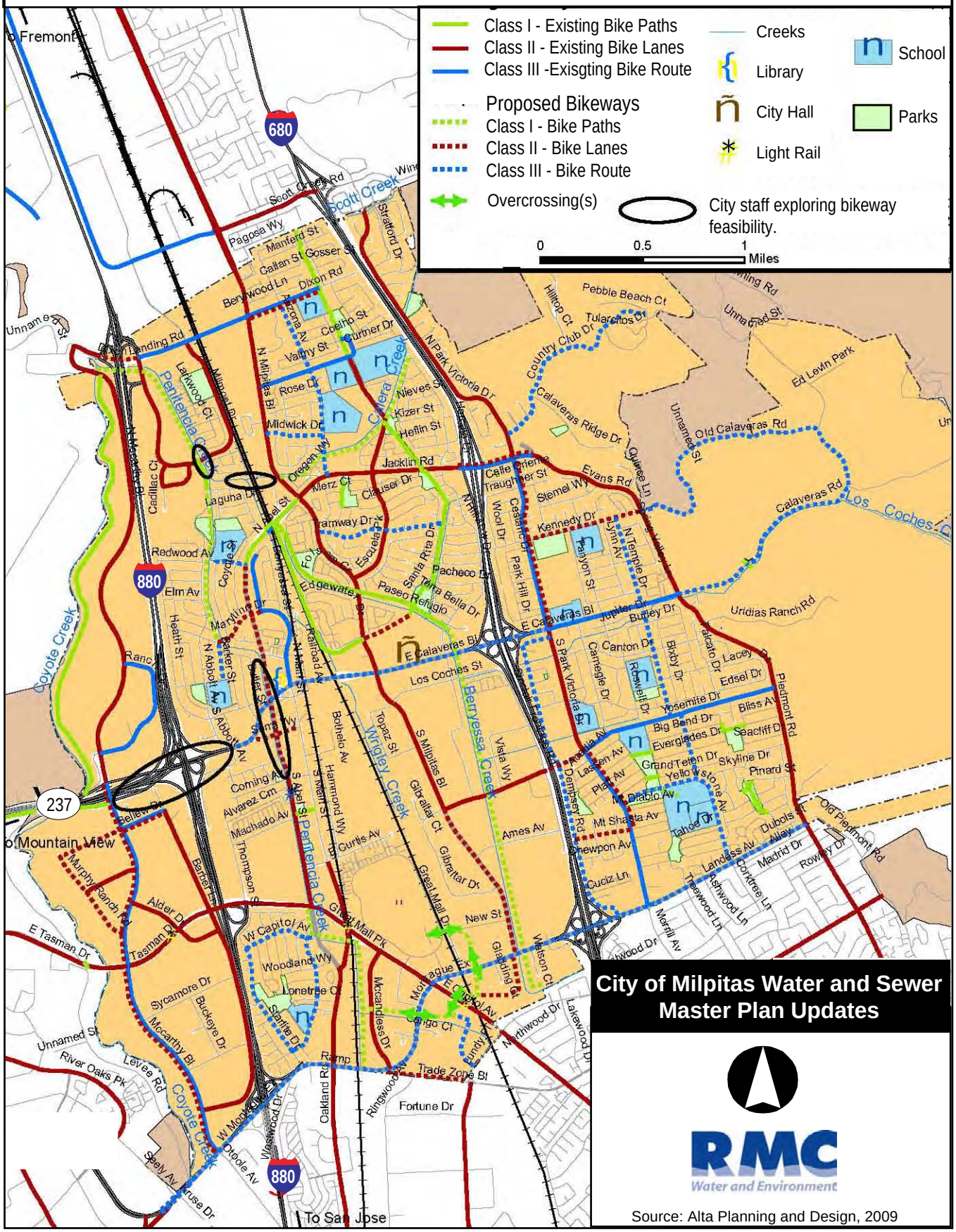
VTA bus routes 33, 46, 47, 66, 70, 71, 77, 104, 120, 140, 180, 321, and 330 as well as AC Transit route 217, serve the Great Mall/Main Transit Center and provide mobility within the City. Other VTA bus routes traverse the City along major streets such as Great Mall Parkway, Montague Expressway, South Main Street, Abel Street, and Milpitas Boulevard (VTA 2008a). The Altamont Commuter Express (ACE) Violet Shuttle and Purple Shuttle also provide service within the City (VTA 2008b). Several transit routes may be temporarily impacted by construction of the Master Plan Update facilities within roadway ROWs.

Bicycle and Pedestrian Facilities

Bicycle facilities comprise paths (Class I), lanes (Class II), and routes (Class III). Bicycle paths are paved trails that are separate from roadways. Bicycle lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bicycle routes are roadways designated for bicycle use by signs only. Existing and proposed bike paths, lanes, and routes are scattered throughout the City and identified in Figure 3.11-1. The bikeway facilities illustrated in Figure 3.11-1 are described in more detail in the City's final Bikeway Master Plan Update (2009), which is available for review at: http://www.ci.milpitas.ca.gov/government/commissions/bicycle.asp.

Pedestrian facilities within the Study Area are comprised of sidewalks, crosswalks, and off-street paths. Sidewalks are located in most residential and commercial areas. However, no sidewalks or paths are provided on Montague Expressway to the west of Great Mall Parkway.

Figure 3.11-1 - City Bikeway Facilities



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3.11.2 Regulatory Setting

No federal regulations relating to transportation are relevant to the Master Plan Updates.

State Policies and Regulations

California Department of Transportation

The California Department of Transportation (Caltrans) has jurisdiction over State-designated routes including I-880, I-680, and SR 237 (Calaveras Boulevard up to the I-680 interchange). Any encroachment within the ROW of a state highway or route would be subject to Caltrans regulations, including issuance of an encroachment permit and the provision of temporary traffic control systems.

Local Policies and Regulations

The City of Milpitas maintains and has jurisdiction over all roadways with several exceptions. The City of San Jose maintains jurisdiction over intersections and local roads located at the southwestern portions of the City. The Santa Clara County Roads and Airports Department has jurisdiction over local county roads and the expressway system that includes Montague Expressway.

Santa Clara Valley Transportation Authority (VTA)

The VTA is an independent special district responsible for congestion management, countywide transportation planning, and bus and light rail operations in Santa Clara County. As the Congestion Management Agency (CMA) for the County, the VTA determines, with input from the member agencies, State and Federal funding priorities for transportation improvements. The VTA monitors Congestion Management Program facilities that include the freeways/key intersections along state routes listed above, the County expressways, and other arterial roads that serve regional traffic.

Congestion Management Program (CMP)

The Santa Clara County CMP is administered by VTA. The CMP promotes an integrated approach to transportation planning decision-making and seeks to maintain mobility in Santa Clara County by establishing traffic and transit standards, trip-reduction and travel-demand requirements, and by incorporating the transportation implications of land-use decisions in planning efforts.

Cities within the County are responsible for conformance with the adopted service level standards on the principal arterial system defined by the CMP, and for transit standards. They are also responsible for the adoption and implementation of a trip-reduction and travel-demand ordinance and for developing a program to analyze the impacts of land use decisions. Where deficiencies in the system exist, deficiency plans must be adopted and methods of correcting the deficiencies identified. If deficiencies go unmitigated, a city could lose its entitlement to a portion of its gas tax revenues.

Valley Transportation Plan 2035

Adopted January 2009, the Valley Transportation Plan (VTP) 2035 is the long-range countywide transportation plan for Santa Clara County. VTA, in its role as the appointed CMA for Santa Clara County, is responsible for preparing and periodically updating the plan. VTP 2035 is intended to provide a planning framework for developing and delivering transportation projects and programs over the next 25 years (2010 to 2035).

VTP 2035 identifies existing and future transportation-related needs, considers all travel modes, links land use and transportation planning and decision-making, and identifies what can be accomplished with the projected available funding for projects and programs. VTP 2035 does not include schedules for project implementation and does not make assumptions regarding financing costs that may be needed to implement specific projects in specific years.

City of Milpitas General Plan

The City's General Plan, as amended through 2008, contains the following policies that address transportation. These principles and policies are provided in the Circulation Element.

Guiding Principal 3.a-G-1 Continue to utilize the City's adopted Level of Service standards in evaluating development proposals and capital improvements.

Guiding Principal 3.a-G-2 Maintain acceptable service standards for a major streets and intersections.

Policy 3.a-I-1 Strive to maintain CMP LOS standards and goals for the CMP Roadway System in Milpitas.

Policy 3.a-I-2 For collectors and arterials east of Interstate 880 operating at baseline (1991) LOS F, require any development project that impacts the facility at or greater than one percent of facility capacity to implement mitigation measures to reduce the development project's impacts below the one percent level. If an identified location cannot be mitigated, measures designed to improve system-wide levels of service can be implemented. These system-wide improvement strategies will be contained in the Citywide Deficiency Plan.

Policy 3.a-I-3 Recognize that the City's development pattern and deficiencies in the regional network have resulted in substandard service levels on certain streets where capacity cannot be increased.

3.11.3 Impact Analysis

This section describes the CEQA impact analysis relating to the assessment of transportation-related effects for the Master Plan Updates. It describes the methods used to determine the impacts of the Master Plan Updates and lists the thresholds used to conclude whether an impact would be significant.

According to City policies and consistent with the CMP, a transportation impact analysis (TIA) is required for all projects that generate more than 100 peak-hour (A.M. or P.M.) trips. However, since the Master Plan improvements are not a specific development project and operational effects for the combined improvements would generate less than 100 peak-hour trips, a TIA was not been prepared in support of this analysis. Rather, this analysis primarily focuses on construction-related transportation impacts to the local roadway network as a result of the Master Plan improvements. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to transportation was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? [See Cumulative Impact discussion under Section 3.11.4.]

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Result in inadequate parking capacity?

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Criteria Requiring No Further Evaluation

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The Master Plan improvements would not require a change in air traffic patterns. For this reason, no impact would occur.
- The Master Plan improvements are limited to new potable water and sanitary sewer infrastructure. In this context, the implementation of the Master Plans would not involve any activities that could conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). No impact would occur.

Impacts and Mitigation Measures

Trip Generation

Impact TR-1 The Master Plan improvements could result in short-term increases in traffic volumes, thereby contributing to decreases in roadway and intersection LOS.

Construction-Related Effects. Construction-related traffic associated with the Master Plan Updates would result in a temporary and intermittent lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. During construction activities, project traffic would be generated from two sources: truck trips to and from the work sites, and construction work crews and supervisor staff commuting to and from work sites. Construction-related truck trips would include trucks hauling equipment, material, or backfill to the work sites as well as trucks hauling spoils away for disposal or reuse offsite. As described in *Chapter 2, Project Description*, the peak trips associated with the most intense construction period when multiple water and sewer projects undergo concurrent construction (anticipated in 2010-2011) are estimated to be up to 142 round-trip truck trips per day. In assuming an average crew size of 15, including inspectors, construction activities could generate up to 120 round-trip truck trips per day. In addition, the Project could require up to 20 round-trip concrete delivery and/or soil export truck trips per day. The estimated average general materials delivery is estimated at 1 to 2 round-trips per day. The actual number of construction-related trucks traveling on the City's local transportation network each day would be influenced by the activity occurring at each work site and would generally be less than the peak number of trips as specified above.

Construction-related truck trips would be scattered throughout the City, depending on the location of the individual work sites, along existing designated truck haul routes. The TASP EIR identified 14 intersections (Figure 3.3-9 in TASP EIR) that are projected to exceed their LOS standards and operate at unacceptable levels if the TASP is implemented. Because they include pipeline alignments and/or serve as part of designated truck routes, the following intersections would also be temporarily impacted by construction of the Master Plan Update improvements:

- **Montague Expressway / S. Milpitas Boulevard**. Coupled with traffic associated with TASP development, construction of the Master Plan Updates would degrade LOS F conditions during the PM peak hour. No feasible mitigation measures were identified in the TASP EIR. Therefore, this impact is considered significant and unavoidable.

- **Great Mall Parkway-E. Capitol Avenue / Montague Expressway**. Coupled with traffic associated with TASP development, construction of the Master Plan Updates would exacerbate LOS F conditions during the AM and PM peak hours. Although the VTP 2030 includes planned improvements to this interchange, funding has not yet been secured and the improvements cannot be assumed completed. Therefore, construction-related impacts associated with the improvements are considered significant and unavoidable.
- **Montague Expressway / McCandless Drive-Trade Zone Boulevard**. Coupled with traffic associated with TASP development, construction of the Master Plan Updates would exacerbate LOS F conditions during the AM and PM peak hour. The planned improvements (ROW widening) are currently considered infeasible. Therefore, this impact is considered significant and unavoidable.

The generation of daily construction-related truck trips by the Master Plan Update sites would be distributed geographically on haul routes, would be temporary (lasting only during the duration of construction at each site), and would shift regularly to accommodate the movement of pipeline installation. However, if all the construction-related truck trips were to occur on segments of busy roadways during the peak AM or PM commute hours, an increase in traffic volumes would impede traffic flows and lead to short-term traffic delays. This impact is considered potentially significant and requires the implementation of the prescribed mitigation.

Operational Effects. A small number of vehicle trips would potentially be generated by workers traveling to and from proposed facilities (i.e., conveyance pipelines, valves, storage tank and pump station) for routine operation and maintenance. These trips would not be substantial in relation to the existing traffic load and capacity of the street system or cause long-term increases in traffic delay. For these reasons, the Master Plan Updates would result in less than significant, long-term impacts to the local roadway network.

Significance Determination Before Mitigation

Coupled with reasonably-foreseeable traffic associated with the TASP, Master Plan-related construction impacts would impede traffic flows and lead to short-term traffic delays. This impact is considered significant and unavoidable. The following mitigation is recommended to help the City minimize construction-related traffic delays.

Mitigation Measures

The following mitigation measure is recommended for construction of all Master Plan projects.

Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan.
The City will arrange for a licensed traffic engineer to prepare a Traffic Control Plan for roadways and intersections affected by the Master Plan Update improvements. The Traffic Control Plan will comply with the requirements of the agency (e.g., City of Milpitas, City of San Jose, Caltrans) with jurisdiction over project construction. The Traffic Control Plan will include, but not be limited to, the following elements:

- Provide street layout showing location of construction activity and surrounding streets to be used as detour routes, including “special signage.” Post advance warning of construction activities within affected roadways to allow motorists to select alternative routes.
- Restrict delivery of construction materials to non-peak travel periods (9:00am – 3:00pm) as appropriate. Weekend and night work shifts will be allowed in non-residential areas only.
- Maintain the maximum travel-lane capacity during non-construction periods and provide flagger-control at construction sites to manage traffic control and flows.

- Limit the construction work zone in each block to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone.
- Maintain access for driveways and private roads, except for brief periods of construction, in which case property owners will be notified.
- Require temporary steel-plate trench crossings, as needed, to maintain reasonable access to homes, businesses, and streets. When required by the applicable encroachment permit, maintain the existing lane configuration during nonworking hours by covering the trench or jack pit with steel plates or by using temporary backfill.
- Require appropriate warning signage and safety lighting for construction zones.
- Access for emergency vehicles shall be maintained at all times. Police, fire, and emergency services shall be notified of the timing, location, and duration of construction activities that could hinder and/or delay emergency access through the construction period.
- Coordinate with VTA to plan, as needed, for the temporary relocation of bus stops and/or detour of transit routes on affected pipeline alignments.
- Identify detours, where available, for bicyclists and pedestrians in areas potentially affected by project construction.
- Provide adequate off-street parking locations for workers' vehicles and construction equipment in those areas where on-street parking availability is insufficient.
- Provide written notification to appropriate contractors regarding appropriate routes to and from construction sites and weight and speed limits for local roads used to access construction sites. Submit a copy of all such written notifications to the City.
- Repair or restore the roadway ROW to its original condition or better upon completion of the work.

Mitigation Measure LU-1: Public Outreach and Advance Construction Noticing.
See *Section 3.9, Planning and Land Use*.

Significance Determination After Mitigation

Despite implementation of the recommended mitigation measure, Master Plan-related construction could still impede traffic flows and further degrade LOS at three key intersections. Consequently, short-term construction-related impacts are considered significant and unavoidable.

Roadway Safety and Access

Impact TR-2 Construction of the Master Plan improvements could increase roadway safety hazards and contribute to disruptions in emergency and/or recreational access.

The Master Plan Updates consist of water and wastewater facility improvements throughout the City. With the exception of the proposed storage tank and pump station located within private property, a majority of the other improvements would be installed along public road ROWs. Pipeline installation would occur within roadways in a variety of land uses, including residential, commercial, and industrial uses. These roadways may include bicycle facilities and accommodate transit routes. Bicycle and bus routes that may be impacted by proposed Master Plan Update projects are located along the City's major roadways, including Great Mall Parkway, Montague Expressway, South Main Street, Abel Street, and Milpitas Boulevard.

Because pipeline construction would require sufficient space (approximate 60-foot construction zone) to accommodate open trenches/pits and additional room for the placement of material and equipment, the

travel width of roadways would be reduced. As such, transportation and circulation patterns in the vicinity of work zones would temporarily be disrupted. Specifically, impacts would include direct disruption of traffic flows and street operations (including the use of bus stops), and restriction of bicycle and pedestrian access to adjacent land uses and streets. Access for emergency vehicles could also be impaired from the reduced roadway widths associated with the construction easement, as well as the increased volume of construction-related traffic on the roads.

The Master Plan improvements do not include the installation of any roadway design features (e.g., sharp curves or dangerous intersections) or incompatible uses that would increase safety hazards. However, construction of the individual improvements within public ROWs could increase the interaction of construction-related traffic, vehicles (including buses), bicycles, and pedestrians, thus temporarily increasing potential safety hazards and restricting or delaying access to adjacent land uses. In addition, construction activities could temporarily affect the use of bike lanes/routes and/or existing trail networks throughout the Program Study Area. Mitigation Measure TR-1 would reduce potential safety hazards by providing flagger control in construction zones, maintaining emergency and recreational access using steel trench plates, coordinating with VTA for detour of transit routes, and posting signage warning of construction activities.

Significance Determination Before Mitigation

Construction-related traffic within public ROWs could temporarily increase potential safety hazards and delay access to adjacent land uses, which is potentially significant without mitigation.

Mitigation Measures

The following mitigation measure is required for construction of all Master Plan Update projects.

> Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan.
> See above.

Significance Determination After Mitigation

Preparation and implementation of the Traffic Control Plan (Mitigation Measure TR-1) will reduce potentially-significant traffic safety hazards to less than significant levels.

Parking Capacity

Impact TR-3 Construction of the Master Plan improvements could increase demands for parking.

During construction, the Master Plan Update projects would generate a need for parking spaces for construction workers and heavy equipment. Assuming that each worker drives alone to work sites, each crew would require about 15 parking spaces at each work site. For the proposed storage tank and pump station, adequate space would likely be available to accommodate construction and worker vehicles as they would be located on private property. For the proposed pipeline alignments, an inadequate parking supply on the adjacent roadways may result, due to the number of parking spaces required and the potential need to use the adjacent parking lanes to accommodate the 60-foot construction zone. To ensure that the Master Plan Updates would not result in impacts associated with parking capacity, Mitigation Measure TR-1 would require provision of off-street parking for construction workers.

Upon completion of construction, all water and sewer facilities would be buried underground and/or located within an acceptable portion of the ROW. No permanent parking would be necessary for pipeline operation and maintenance. The proposed storage tank and pump station would provide sufficient parking onsite for City maintenance staff. As such, the Master Plan Updates would not result in any long-term increases in parking demand that exceeds the existing parking capacity.

Significance Determination Before Mitigation

Construction-related activities within public ROWs could temporarily decrease parking capacity along the pipeline alignments, which is potentially significant without mitigation.

Mitigation Measures

The following mitigation measure is required for construction of all Master Plan Update projects.

> Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan.
> See above.

Significance Determination After Mitigation

Preparation and implementation of the Traffic Control Plan (Mitigation Measure TR-1) will reduce potentially-significant parking impacts to less than significant levels.

3.11.4 Cumulative Analysis

Cumulative development projects, including proposed high-density developments within the TASP are expected to substantially alter future traffic flows and patterns within the Study Area. The inhabitants of these new developments would add to the long-term traffic volumes such that the capacities of some local roadways and intersections is projected to decline from existing levels. Potential traffic-related impacts associated with these other projects would be considered cumulatively significant.

The proposed Master Plan Updates would involve the construction and operation of water and sewer facilities that would result in temporary traffic increases and safety hazards during construction activities. Operation of the Master Plan Updates would result in minimal traffic volumes associated with maintenance of project facilities. Where traffic impacts associated with construction activities would occur, Mitigation Measure TR-1 would help in reducing these temporary LOS impacts. Additionally, to mitigate anticipated cumulative impacts of new development traffic on future deficient intersections, the City of Milpitas will require development projects to pay their fair share of the traffic improvement costs. However, because LOS conditions on some City roadways are so poor, the temporary traffic delays caused by construction of the Master Plan Updates would still be a considerable contribution to a significant and unavoidable cumulative traffic impact.

Following construction of the Master Plan improvements at roadways and intersections operating at or below acceptable LOS, the long-term impacts to traffic operations would be less than significant and not cumulatively considerable.

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3.12 Utilities and Service Systems

This section discusses the existing conditions related to utilities and service systems in the Study Area. Federal, state, and local regulations related to utilities and service systems that would apply to the proposed Master Plan Updates follow. Key utilities and service system issues addressed in this section include landfill capacity for construction wastes, disruption of utilities, and inefficient use of energy resources.

3.12.1 Environmental Setting

Potable water supply, recycled water, and sanitary sewer infrastructure within the Master Plan Study Area are described in detail in *Chapter 2, Project Description*. A summary follows.

Potable Water Supply

Potable water supply is provided by the City of Milpitas through its municipal water system. The City buys domestic water from two sources: the SFPUC supplies are delivered through the Hetch Hetchy Water system, and SCVWD supplies are delivered through the South Bay Aqueduct. The City's emergency supply consists of one local groundwater well—with a second one under construction—and three emergency interties, one with the San Jose Water Company and two with the Alameda County Water District. With minor exceptions, SFPUC water is provided to the residential areas of the City, while SCVWD water is distributed to the industrial areas. In addition, SFPUC and SCVWD have an intertie where they can share water on a wholesale level. The SFPUC and SCVWD service areas are illustrated in Figure 2-3.

The City currently has a supply assurance amount from the SFPUC of 9.23 mgd or 10,340 acre-feet per year (AFY). However, this allocation is subject to reductions during drought years. The City's contract with SCVWD allows for increases in purchased water to accommodate growth within the City. In accordance with the City's contract, SCVWD provides exact delivery commitments on a three-year delivery schedule based, in part, on projections made by the City (City of Milpitas 2005).

Water Conservation

Future water demand projections made by the City of Milpitas account for continued implementation of the City of Milpitas' Water Conservation Programs. Currently, the City's Water Conservation Programs include the provision of free low-flow showerheads and faucet aerators to all Milpitas residents, water-wise house calls, the Washer Rebate Program implemented by the SCVWD, and several commercial customer programs, including rebates for the implementation of water efficient technologies and toilet retrofits.

City Water Demands

With the addition of recycled water supplies totaling 0.4 mgd, the City's normal projected water demand is expected to reach 17.0 mgd or 19,040 AFY by 2030, with a maximum daily demand of 30.7 mgd and a peak hourly demand of 58.6 mgd. These demands are up from the City's current demand of approximately 11.3 mgd or 12,656 AFY. Based on available supplies, projected normal year demand is not expected to exceed projected supplies through 2030. However, during dry years the demand is expected to exceed supply as early as 2007, depending on the severity of the drought.

Potable Water Infrastructure

The City owns and operates the municipal water distribution system (refer to Figure 2-3). The City has a distribution system consisting of five turnouts delivering wholesale water to 203 miles of water mains with approximately 16,000 service connections (City of Milpitas 2005). The distribution network is

divided by elevation with six pressure zones created to allow water to flow from their respective turnout stations and storage reservoirs to their zone of services.

Recycled Water

Recycled water is also currently available in the City to supplement potable water use through the SBWRP. Recycled water provided by the SBWRP is delivered through an existing transmission line constructed as part of Phase 1. Recycled water is then distributed through a series of mains that provide landscape irrigation to business/retail areas surrounding McCarthy Ranch and Oak Creek Industrial Park. Phase 2A included the extension of recycled water pipelines northeasterly to Escuela Parkway and Washington Drive, and southerly to McCandless and Centre Pointe Drives. Recycled water use has surpassed 600 AFY since 2000 and is expected to rise to approximately 850 AFY by 2010 (City of Milpitas 2005).

Sanitary Sewer Service

The San Jose/Santa Clara WPCP provides wastewater treatment for the City as well as for several other cities and sanitary districts in the Santa Clara Valley. The cities of San Jose and Santa Clara jointly own the facility while San Jose operates and maintains the WPCP. The WPCP is rated for a treatment capacity of 167 mgd and currently receives an average annual influent of 125 mgd (NPDES Permit No. R2-2003-0085). The cities of San Jose, Santa Clara, and Milpitas are granted the rights to discharge wastewater to the WPCP under the "Master Agreement for Wastewater Treatment."

The Master Agreement allows Milpitas to discharge up to an average of 12.5 mgd dry weather peak five-day flow (average dry weather peak week flow). Following the preparation of the City's 2004 Sewer Master Plan, which facilitates additional growth, the City purchased an additional one (1) mgd of flow capacity from West Valley Sanitation District, increasing the City's limit to 13.5 mgd. Following the adoption of the TASP in 2008, the City has pursued additional sewer treatment plant capacity. At the time of this EIR's preparation, the cities of San Jose, Santa Clara, and Milpitas, and the Cupertino Sanitary District have all approved a 0.75 mgd transfer of sewage treatment plant capacity from the Cupertino Sanitary District to the City. The Master Agreement for Wastewater Treatment is currently being amended to reflect these changes.

The City reports its dry-weather peak week flow in December of every year. Over the past three years, the City's dry-weather peak week flow was reported at 8.952 mgd in 2008, 10.188 mgd in 2007, and 8.232 in 2006. These flows are currently well below the City's 13.5 mgd inflow limit at the WPCP.

Wastewater Disposal

The WPCP discharges treated water to Artesian Slough, a tributary to Coyote Creek and South San Francisco Bay. The WPCP must meet stringent regulatory disposal requirements, including heavy metal limits and maximum dry weather disposal levels intended to protect sensitive salt marshes. In the dry weather period of May through October, the WPCP is required by the San Francisco Bay RWQCB to limit discharge flows from the WPCP to 120 mgd ADWF or to flows that would not further impact rare and endangered species habitat. The average dry weather effluent flow in the last year for which records are available is approximately 100 mgd. Long term plans to remain in compliance with the 120-mgd requirement include on-going water conservation and water recycling.

Sanitary Sewer Collection Infrastructure

The City's existing sanitary sewer system collects the wastewater flows from approximately 6,000 acres within the City's planning area, serving a population of approximately 69,419 through over 172.5 miles or 860,000 LF of sewer mains. The City's wastewater flows are conveyed mostly by gravity to the Milpitas Main Pump Station, which pumps all the flow to the WPCP through two force mains (refer to Figure 2-4). A second pump station, located on Venus Way, connects a low elevation portion of the City

to the gravity sewer system. The sewer system includes a number of siphons under the SFPUC Hetch Hetchy water supply pipeline, creeks, and highways.

Solid Waste

The City of Milpitas disposes of all solid waste at the Permitted Class III, Subtitle D facility, the Newby Island Sanitary Landfill. The Newby Island facility accepts solid waste, recyclables, and compostable materials, but not hazardous waste. The facility is 342 acres, of which waste has been placed on approximately 270 acres, and has over 30 feet of 120 feet total depth available. The City's contract with the landfill runs through 2017. The City of Milpitas also participates in Santa Clara County's Hazardous Waste Program, which provides a drop-off site for residents and small generators.

Electricity

Pacific Gas & Electric (PG&E) provides electrical service to the Study Area. PG&E transmits electrical power through four transmission lines:

- One 230 kilovolt (kV) electric transmission line starting from Los Esteros Substation (1515 Alviso-Milpitas Road) and running northerly along I-880 toward Dixon Landing Road;
- One 115 kV electric transmission line running southeasterly along I-680 toward Landess Avenue;
- One 115 kV electric transmission line starting from Dixon Landing Substation and running southeasterly along I-680 toward and crossing Landess Avenue;
- One 115 kV electric transmission line starting at Milpitas Substation and running southwesterly toward and crossing Old Oakland Road.

The primary distribution circuits within the City are 21 kV and are mostly located underground except in two places along Main Street, and along Montague Expressway and East Capitol Avenue, which are still served by overhead wire.

Electric and Magnetic Fields

EMFs are invisible fields of force created by the production, transmission, and use of electrical power. Because the use of electric power is so widespread, humans are constantly exposed to EMFs. While there is no scientific consensus on the health effects of EMF exposure, they should be considered in the relocation and expansion of electrical facilities.

Natural Gas

PG&E also provides natural gas service to the Study Area. Three transmission lines convey natural gas to the Study Area:

- One 34-inch gas transmission line (#300B) running southwesterly from SR-37 toward and along North Capitol Avenue;
- One 36-inch gas transmission line (#300A) running northeasterly from I-880 at Barber Lane towards and along Great Mall Parkway; and
- One 30-inch gas transmission line (#131) running northwesterly from the intersection of I-880 and SR-237 and crossing Dixon Landing Road.

The transmission lines connect to a network of gas main lines between 4 and 8 inches in diameter, with service lines to existing customers ranging between 1¼ and 2 inches.

Phone/Communications

AT&T provides phone service to the Study Area. Phone service is currently available to all existing users, with most connected by underground service lines following the City's roadway network. Some overhead facilities exist along Great Mall Parkway, East Capitol Avenue, and Montague Expressway.

Cable

Comcast provides cable service to the Study Area. Coaxial cable lines run along South Main Street, Lundy Place, and Capitol Avenue, while fiber optic lines run along Trimble Road, Lundy Place, and Capitol Avenue.

3.12.2 Regulatory Setting

There are no federal regulations relevant to utilities and service systems.

State Policies and Regulations

The City of Milpitas is within the jurisdiction of the San Francisco Bay RWQCB, which governs many of the regulations associated with potable water, sanitary sewers, storm drains, and recycled water. The RWQCBs administer regulations related to wastewater discharges under the Federal Water Pollution Control Act of 1972, as amended (the Clean Water Act) and the Porter-Cologne Water Quality Control Act. Wastewater discharges are guided by NPDES permits granted by the RWQCBs. Additional discussion of these regulations is provided in Section 3.8, Hydrology and Water Quality.

California Department of Public Health

For potable water, the California Department of Public Health (CDPH), previously the Department of Health Services, administers regulations contained under the Safe Drinking Water Act (SDWA) of 1974, as amended. The SDWA regulates the water quality of drinking water distributed by the City and mandates testing to ensure the required water quality levels are met. State regulations are contained primarily within Titles 22 and 17, Chapter 5 of the California Code of Regulations.

Recycled water regulations are administered by both the RWQCBs and CDPH. The regulations governing recycled water are found in a combination of sources including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations (CCR). Issues related to treatment and distribution of recycled water are generally under the influence of the RWQCB, while issues related to use and quality of recycled water are the responsibility of CDPH.

California Health and Safety Code

The California Health and Safety Code, Division 104. Environmental Health, Part 12. Drinking Water, Chapter 5. Water Equipment and Control, Article 2. Cross Connection Control by Water Users, Section 116815(a) states: "All pipes installed above or below the ground, on and after June 1, 1993, that are designed to carry recycled water, shall be colored purple or distinctively wrapped with purple tape."

California Code of Regulations

The California Code of Regulations (CCR) Title 22, contains California's Waterworks Standards, which are referenced in the City's standards and specifications. Applicable sections of the Waterworks Standards are identified below for the readers' benefit:

- Article 2. Permit Requirements,
  - Section 64552. Initial Permit for Public Water System
  - Section 64556. Permit Amendments.

- Article 4. Materials and Installation of Water Mains and Appurtenances,
  - Section 64570. Materials and Installation.
    - Table 64570-A, Materials Standards for Water Mains
    - Table 64570-B, Installation Standards for Water Mains
  - Section 64572. Water Main Separation.
  - Section 64575. Flushing,
    - Table 64575-A. Minimum Flushing Flows for Different Size Water Mains.
  - Section 64577. Isolation Valves.
- Article 5. Disinfection Requirements,
  - Section 64580. Disinfection of New or Repaired Mains.
- Article 6. Distribution Reservoirs,
  - Section 64585. Design and Construction
- Article 8. Distribution System Operation,
  - Section 64600. Water System Operations and Maintenance Plan.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB939) established an integrated waste management framework that consists of the following order of importance: source reduction, recycling, composting, and land disposal or solid waste. Each county is required to prepare and submit an Integrated Waste Management Plan for expected solid waste generation within the county to the California Integrated Waste Management Board (CIWMB). The Act also requires each city to prepare a Source Reduction and Recycling Element for achieving a solid waste diversion goal of 25 percent by January 1, 1995, and 50 percent by January 1, 2000. In 2006, the City achieved a solid waste diversion rate of 60 percent thereby exceeding the state minimum for the forth consecutive year.

California Integrated Waste Management Board

The CIWMB governs solid waste regulations on the state level, delegating local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies. Regulations authored by CIWMB (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board pertaining to landfills (Title 23, Chapter 15) to form Title 27 of the California Code of Regulations.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates Investor-Owned Utilities (IOUs) including those that offer electric, natural gas, steam, and petroleum service to consumers. The CPUC regulates both electric and natural gas rates and services provided by these utilities including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing. Natural gas regulations are found in General Orders 58, 94, 96, and 112, while electrical distribution regulations are found in General Orders 95, 128, 131, 165, and 166.

California Energy Commission

Buildings constructed after June 30, 1977 must comply with standards identified in Title 24 of the California Code of Regulations. Title 24, established by the California Energy Commission in 1978, requires the inclusion of state-of-the-art energy conservation features in building design and construction including the incorporation of specific energy conserving design features, use of non-depletable energy resources, or a demonstration that buildings would comply with a designated energy budget.

Local Policies and Regulations

Milpitas Municipal Code

The Milpitas Sanitary Code prohibits the discharge of hazardous and polluted matters into the sanitary sewer system. These restrictions include the prohibition of flammable or explosive substances, grease, oils, solid or viscous matter, corrosive matter, toxic substances, unusual levels of suspended solids, noxious materials, and radioactive matter. The Sanitary Code also specifies requirements for oil and grease devices to be installed where grease or other objectionable materials may be discharged into public or private sewage main (Title VIII, Chapter 2, Sewer Use Regulations).

City of Milpitas General Plan

The City's General Plan, Land Use Element and Open Space and Environmental Conservation Element, as amended through 2008, contains the following policies relevant to the provision of public services and utilities.

Guiding Principle 2.d-G-1 Provide all possible community facilities and utilities of the highest standards commensurate with the present and anticipated needs of Milpitas, as well as any special needs of the region.

Guiding Principle 2.d-G-2 Develop adequate civic, recreational, and cultural centers in locations for the best service to the community and in ways which will protect and promote community beauty and growth.

Policy 2.d-I-1 Coordinate capital improvement planning for all municipal service infrastructure with the location and timing of growth.

Policy 2.d-I-2 Periodically update the City's water and sewer master plans.

Guiding Principle 4.h-G-1 Undertake efforts to reduce the generation of waste, increase recycling and slow the filling of local and regional landfills, in accord with the California Integrated Waste Management Act of 1989.

Policy 4.h-I-1 Implement measures specified in the City's Source Reduction and Recycling Element and the City's Household Hazardous Waste Element.

3.12.3 Impact Analysis

This section describes the CEQA impact analysis relating to utilities and service systems for the proposed Master Plan Updates and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to utilities and service systems was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G and Appendix F (14 CCR 15000 et seq.):

a) Exceed wastewater treatment requirements of the applicable RWQCB?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Comply with federal, state, and local statutes and regulations related to solid waste?

h) Result in wasteful or inefficient consumption of energy during the project construction, operation, maintenance, and/or removal?

i) Conflicts with existing energy standards or exceeds regional energy supply?

Criteria Requiring No Further Evaluation

Criteria listed above that are not applicable to actions associated with the Master Plan Updates are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The improvements associated with the Master Plan Updates would convey wastewater to the City of San Jose's WPCP. No improvements are proposed to the WPCP as part of the Master Plan Updates. Although periodic maintenance flushing of storage tanks and pipelines would result in disposal of wastewater in the WPCP, such discharges are anticipated and existing contracts are in place to ensure adequate collection and treatment. Based on these circumstances, the Master Plan Updates would not contribute to violations of the WPCP WDRs or require an expansion of the facility, which could otherwise result in environmental effects. No impact would occur.
- The Master Plan Updates would not require the expansion or construction of new water treatment facilities by SFPUC or SCVWD, which could otherwise cause significant environmental effects. No impact would occur. The environmental effects related to the construction of potable and recycled water improvements are addressed throughout this EIR.
- The Master Plan improvements do not require the construction of new offsite storm water drainage facilities or expansion of existing drainage facilities. The environmental effects of constructing new drainage facilities as required for specific Master Plan improvements are covered throughout this EIR.
- The City has already entered into water service contracts with SFPUC, SCVWD, and San Jose SBWRP to meet projected water demand within the Study Area. As a result, the Master Plan Updates would not require any new or expanded water supply entitlements. For this reason, no impact would occur.

Impacts and Mitigation Measures

Cross-Contamination

Impact USS-1 Implementation of the Master Plan Updates would carry the potential for cross-contamination of potable water pipelines.

Conveyance improvements proposed as part of the Master Plan Updates would include new recycled water distribution pipelines with the water being provided by the SBWRP. With the extension of recycled water pipelines into other parts the TASP, there is a corresponding potential for cross-contamination of potable water with recycled water pipelines. This could in turn result in reduced potable water quality and

potential public health concerns. Cross-contamination of water supply pipelines would be considered a potentially significant impact.

Significance Determination Before Mitigation

Impacts related to provision of adequate water supply and prevention of cross-contamination for the Master Plan Update projects would be potentially significant.

Mitigation Measures

The following mitigation measures are required for all recycled water improvements.

Mitigation Measure USS-1: Design Recycled Water Pipelines to Prevent Cross-Contamination. The City or Developer shall require the engineering and/or construction contractors to implement the following measures to avoid the potential for cross-contamination of potable water with recycled water. These measures shall be included in all contract documents.

- Incorporate applicable backflow prevention devices, as outlined in CCR Titles 22 and 17, South Bay Water Recycling Guidelines, and City Supplemental Guidelines, into pipeline design.
- Incorporate applicable minimum pipeline separation standards for potable and non-potable water pipelines, as outlined in CCR Title 22, Section 64572(a), into pipeline design.
- Use purple pipes (or purple tape) for all above or below ground recycled water pipelines, as outlined in Health and Safety Code, Section 116815(a).
- Inspect all recycled water sites for possible cross-connections with the potable water system, in accordance with CCR Title 22, Section 60316(a).

Significance Determination After Mitigation

With the implementation of Mitigation Measure USS-1, potential impacts associated with provision of adequate water supply and prevention of cross-contamination would be mitigated to less than significant.

Landfill Capacity

Impact USS-2 The Master Plan improvements would collectively generate construction wastes that could exceed local landfill capacity and conflict with the State's solid waste diversion requirements.

Construction of the Master Plan Updates would generate some construction debris during installation of the conveyance pipeline and structural foundations for above-ground facilities. Some materials excavated during trenching associated with the Master Plan Updates could be used as fill materials at the storage tank site. Non-recyclable construction waste would be hauled off site for disposal at the Newby Island Sanitary Landfill. The Newby Island Sanitary Landfill has adequate remaining capacity to provide solid waste disposal services to the City through 2017. However, by virtue that several of the Master Plan improvements would be constructed after 2017, the City is unable to confirm whether sufficient landfill capacity would be available for construction debris after 2017. In the event Newby Island reaches capacity, it is likely that solid waste would be transported to the next closest landfill, Zanker Road Landfill, which also recycles construction debris onsite..

Given that the City currently exceeds the State's solid waste diversion requirements, as of 2006, and has done so for the past three consecutive years, it is reasonable to conclude that the City will continue to implement its existing solid waste diversion programs during implementation of the Master Plan improvements. The continued implementation of the City's recycling and waste diversion programs and application of these programs to individual Master Plan improvements would ensure compliance with State solid waste diversion requirements and, therefore, the impact is considered less than significant.

If construction wastes were determined to be hazardous, as defined by federal and state regulations, the waste would be disposed of at landfill(s) permitted to accept hazardous waste. A discussion of the disposal of hazardous materials is addressed in *Section 3.7, Public Health and Hazards*.

Significance Determination Before Mitigation

Provision of adequate landfill capacity to accommodate construction wastes from the Master Plan improvements would be considered a potentially significant impact.

Mitigation Measures

No mitigation measures are required.

Utility Disruptions

Impact USS-3 Master Plan Update construction could result in temporary, planned, and/or accidental disruption to existing utility services.

Utility services could be disrupted as a result of Master Plan Update construction. In most cases, impacts to utilities and services involve temporary disruption that would not exceed one day. All utility lines and cables that would be disrupted during program construction would be identified during the design phase for individual Master Plan improvements. Design for each Master Plan Update project would include a detailed engineering and construction plan, which would thoroughly describe construction techniques and protective measures for minimizing impacts to utilities. Reasonable efforts would be made to provide temporary bypass around the affected utilities during construction so interruptions in service are eliminated or minimized. Review of this plan by special service districts and utility providers in the program area would be required; as such, the City and its program contractors would coordinate with utility owners prior to program construction.

Accidental disruption of utilities would be possible in conjunction with any of the Master Plan improvements, most notably along all conveyance pipeline alignments. Temporary and accidental impacts to small utility lines, such as telephone or cable lines, would be considered adverse, but not significant, because the affected area and duration of the impacts would be limited. However, disruptions to major utility lines, such as natural gas or sewer lines, would be considered significant.

Significance Determination Before Mitigation

Disruptions to major utility lines during construction of the Master Plan improvements would be considered a potentially significant impact.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

> Mitigation Measure USS-3: Identify and Relocate Existing Utilities, Where Necessary.
> The City's or Developer's construction contractor shall identify all underground utilities in the areas of proposed excavations for Master Plan Update improvements. Prior to beginning construction, USA shall be conducted to identify underground utilities. Temporary disruption of service may be required to allow for construction. No service on such lines would be disrupted until prior approval is received from the construction manager and the service provider (e.g., PG&E, AT&T, Comcast). Where possible, design and specifications for Master Plan Update projects shall avoid existing utilities. In instances where utilities cannot be avoided, the City's contractor will relocate existing utilities either before, or during, project construction. These conditions shall be included in contract documents.

Significance Determination After Mitigation

With the implementation of Mitigation Measure USS-3, potential impacts associated with utility disruption would be mitigated to a less than significant level.

Energy Consumption and Efficiency

Impact USS-4 Construction and operation of the Master Plan improvements could result in the inefficient consumption of energy.

During construction, the Master Plan Updates would consume energy in two general forms: 1) the fuel energy consumed by construction vehicles and equipment; and 2) bound energy used in the manufacturing and processing of construction materials such as steel, concrete, pipes, lumber, and glass. Energy in the form of fuels used for construction vehicles and other equipment would be used during site excavation, grading, and construction. Such fuel energy use would be temporary and not represent a significant or permanent commitment to the use of energy. In addition, contractors have a strong financial incentive to avoid wasteful and inefficient consumption of energy during construction. There would also be some non-renewable petroleum-based fuel savings resulting from mitigation measures in *Section 3.3, Air Quality* which would prevent the unnecessary idling of vehicles and equipment and require that vehicles and equipment be properly maintained.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building and construction materials composed of recycled materials, which require substantially less energy to produce than from non-recycled materials. Compliance with the City's existing solid waste diversion programs would ensure that all recyclable materials from construction and demolition activities are transferred to the City's recycling facility. Implementation of Mitigation Measure AQ-4, would ensure that recycled materials are used during construction of the Master Plan Updates, to the extent feasible. This will minimize the wastage of bound energy used in the original manufacturing and processing of construction materials.

Although operation of the underground components of the Master Plan Updates (i.e., pipelines, valves, and turnouts) would not require the use of any additional energy sources, the proposed storage tank and pump station would be equipped with emergency standby generators. Diesel, contained within vessels engineered for safe storage, would be required for operation of the generators. Because the generators would be used only during emergencies, minor amounts of diesel would likely be stored onsite. Due to the limited amount of non-renewable diesel that would be used for operation, potential impacts would be considered less than significant.

Significance Determination Before Mitigation

Inefficient consumption of energy during construction of the Master Plan Updates would be considered a potentially significant impact.

Mitigation Measures

The following mitigation measures are required for all Master Plan improvements.

> Mitigation Measure AQ-4: GHG Reduction Measures for Construction.
> See *Section 3.3, Air Quality and Climate Change*.

Significance Determination After Mitigation

With the implementation of Mitigation Measures AQ-4, potential impacts associated with inefficient energy consumption would be mitigated to a less than significant level.

3.12.4 Cumulative Analysis

Through the early identification of other underground utilities prior to the commencement of Master Plan Update construction, potentially significant cumulative effects would be reduced to a less than significant level. Notification requirements outlined in the mitigation measures would ensure that impacts to public and private utility providers are not cumulatively considerable.

Construction and operation of the Master Plan Updates in conjunction with other projects in the Study Area would also result in a commitment of energy resources in the form of fossil fuels, including fuel oil, natural gas, and gasoline for automobiles, and facility utility services. However, design of the Master Plan Updates render them energy efficient by minimizing the construction of new water supply facilities and integrating operations into the City's existing distribution system. From this broader perspective, it is reasonable to conclude that the Master Plan Updates would not lead to a cumulatively considerable increase in inefficient energy consumption.

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Chapter 4 – Alternatives

Chapter 4 Alternatives

4.1 Factors Used in Selection of Alternatives

4.1.1 Development of Alternatives and Screening Process

One of the key aspects of the environmental review process is the identification and assessment of reasonable alternatives that have the potential for avoiding or minimizing the impacts of a proposed project. In addition to mandating consideration of the No Project Alternative, the CEQA Guidelines (Section 15126.6[d]) emphasize the selection of a range of reasonable alternatives and an adequate assessment of these alternatives to allow for comparative analysis.

CEQA requires consideration of a range of reasonable alternatives to the project or project location that: (1) would feasibly attain most of the basic project objectives; and (2) would avoid or substantially lessen any of the significant impacts of the proposed project. An alternative cannot be eliminated simply because it would "impede to some degree the attainment of project objectives or would be more costly." As such, this screening analysis does not focus on relative economic factors of the alternatives (as long as they are feasible). Likewise, the question of market demand or project need is not considered.

However, the CEQA Guidelines declare that an EIR need not consider an alternative whose effects cannot be reasonably attained and whose implementation is remote or speculative. CEQA requires that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.

4.1.2 Alternatives Screening Methodology

Alternatives to the proposed Master Plan Updates were selected based on the input from the City and from the public and responsible agencies during EIR scoping meetings. The alternatives screening process consisted of three steps:

Step 1: Define the alternatives to allow comparative evaluation.

Step 2: Evaluate each alternative in consideration of one of more of the following criteria:

- The extent to which the alternative would accomplish most of the basic goals and objectives of the project.
- The extent to which the alternative would avoid or lessen one or more of the identified significant environmental effects of the project.
- The potential feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, General Plan consistency, and consistency with other applicable plans and regulatory limitations.
- The requirement of the CEQA Guidelines to consider a "no project" alternative and to identify, under specific criteria, an "environmentally superior" alternative in addition to the "no project" alternative (CEQA Guidelines, section 15126.6[e]).

Step 3: Determine suitability of the proposed alternative for full analysis in the EIR. If the alternative is unsuitable, eliminate it, with appropriate justification, from further consideration.

Feasible alternatives that did not clearly offer the potential to reduce significant environmental impacts and infeasible alternatives were removed from further analysis. In the final phase of the screening process, the environmental advantages and disadvantages of the remaining alternatives were carefully weighed regarding potential for overall environmental advantage, technical feasibility, and consistency with project and public objectives.

If an alternative clearly does not provide any environmental advantages as compared to the proposed project, it is eliminated from further consideration. At the screening stage, it is not possible to evaluate potential impacts of the alternatives or the Master Plan improvements with absolute certainty. However, it is possible to identify elements of the proposed Master Plan Updates that are likely to be the sources of impact. A preliminary assessment of potential significant effects of the proposed Master Plan Updates resulted in identification of the following impacts:

- Direct and indirect impacts to biological resources and waterways;
- Impacts to water quality and drainage;
- Air quality impacts (construction-related);
- Noise and nuisance effects on adjacent residential areas;
- Temporary disruptions to traffic; and
- Potential indirect and secondary impacts as a result of the Project's removal of an obstacle to growth (e. g. potable water storage and conveyance capacity).

4.1.3 Summary of Screening Results

Five potential alternatives were reviewed against the criteria listed under Step 2 above. The range of alternatives considered included the following:

- No Project Alternative
- Scenario 1 Improvements Only
- Scenario 2 Improvements Only
- Scenario 3 Improvements, SCVWD Wells
- Adoption of 2002 Water and 2004 Sewer Master Plans

The specific improvements associated with each of these alternatives are described below (No Project Alternative), in the 2009 Water and Sewer Master Plan Updates (incorporated by reference), and in the 2002 Water and 2004 Sewer Master Plans (under separate cover).

Several alternatives were eliminated based on their infeasibility of reducing or avoiding the potentially significant impacts of the Master Plan Updates; in certain circumstances, some alternatives would result in greater environmental effects. Those alternatives that were found to be technically feasible and consistent with the City's objectives were reviewed to determine if the alternative had the potential to reduce the environmental impacts of the Master Plan Updates.

Alternatives Eliminated from Additional Consideration

Four alternatives were considered, but eliminated from detailed consideration in this EIR because of limited reliability, potential to result in more significant and/or new environmental effects, or inability to meet specific project objectives. Therefore, each of the following alternatives is not considered to be feasible or provides no or minimal benefit in terms of avoiding or minimizing significant environmental impacts caused by the implementation of the proposed Master Plan Updates:

Scenario 1 Improvements Only

Scenario 1 was eliminated because it would not meet the stated goals and objectives of the Master Plan Updates. More specifically, the water and sewer improvements associated with Scenario 1 would result in projected deficiencies in both water and sewer service if existing patterns of development continue within the City. Additionally, this alternative would result in insufficient storage capacity within the City's SCVWD Zone and a corresponding reduction in water pressure within this zone. Further, this scenario

would involve many of the same improvements as proposed in the 2009 Water and Sewer Master Plans and, therefore, no substantial reduction in construction-related impacts is anticipated.

Scenario 2 Improvements Only

Scenario 2 was eliminated because it would not meet the stated goals and objectives of the Master Plan Updates. More specifically, the water and sewer improvements associated with Scenario 2 would result in projected deficiencies in both water and sewer service if existing patterns of development continue within the City. Additionally, this scenario would involve many of the same improvements as proposed in the 2009 Water and Sewer Master Plans and, therefore, no substantial reduction in construction-related impacts is anticipated.

Scenario 3 Improvements, SCVWD Wells Only

The main reason for eliminating the option of constructing groundwater wells in place of a storage tank and pump station under Scenario 3 was the limited availability of groundwater within the vicinity of the TASP. Based on the City's review of a nearby well currently under construction, preliminary estimates indicate that the local aquifer would be unable to produce greater than the required 15,400 gpm. Further, the quality of the local groundwater within the TASP is also in question and treatment requirements for any well-head treatment facilities could be cost-prohibitive. Based on these factors, well facilities proposed under Scenario 3 are considered infeasible and could result in more significant groundwater impacts when compared to the construction and operation of water storage tanks as proposed in the Water Master Plan Update. For these reasons, this alternative was removed from further consideration.

Adoption of 2002 Water and 2004 Sewer Master Plans

Adoption of the 2002 Water and 2004 Sewer Master Plans was eliminated from further consideration by virtue that it does not address any of the system deficiencies identified as part of the 2009 Master Plan Updates. As a result, this alternative would not meet the City's basic goals and objectives for the proposed project and could result in more severe impacts as compared to the proposed Master Plan Updates. Without the proposed potable water improvements, portions of the City would have insufficient water pressure. Likewise, without the proposed sewer collection improvements, this alternative could result in an increased potential for sanitary sewer overflows. For these reasons, this alternative was eliminated from further consideration.

Description of Alternatives Considered in the EIR

As previously discussed, several alternative projects, technologies, and locations were considered during the Master Plan Update's engineering and planning stages. Based on the recognized constraints, the only alternative being carried forward for detailed consideration in this EIR is the No Project Alternative per the requirements of the CEQA Guidelines, Section 15126.6(e).

No Project Alternative

The No Project Alternative would preclude the construction of the 2009 Water and Sewer Master Plan improvements as described in *Chapter 2, Project Description*. Under this alternative, the physical area within the Master Plan Study Area would not be disturbed and would likely remain the same until the City's existing water and sewer facilities need to be replaced, rehabilitated, and/or upgraded. This process would likely be done on a project-by-project basis and in more of a piecemeal fashion.

Under the No Project Alternative, no additional changes in current City water delivery and sewer collection operations would occur. In the near-term, no additional regulatory agency approvals would be required under this alternative. In the longer term, projected deficiencies within the City's sewer and water systems could require that the City implement of individual improvement projects to maintain compliance with state and federal standards.

4.2 Alternatives Analysis

4.2.1 No Project Alternative

The primary difference between Master Plan Updates described in *Chapter 2, Project Description* and the No Project Alternative is the avoidance of construction-related effects under the No Project Alternative. More specifically, near-term construction-related effects avoided by the No Project Alternative include those related to temporary increases in noise, disruptions to traffic and circulation, water quality impacts, and the potential for the disruption of previously undiscovered cultural resources and/or undocumented hazardous material sites. A more detailed evaluation of the No Project Alternative is provided under each of the following sub-headings.

Aesthetics

Under the No Project Alternative, existing conditions would be maintained within the Master Plan Study Area. No construction-related aesthetic impacts would result from the continuation of the existing conditions. As a result, temporary aesthetic impacts identified for the Master Plan Updates would be avoided under this alternative.

Air Quality and Climate Change

Under the No Project Alternative, there would be no construction activities. As a result, impacts related to construction-phase emissions would not occur, at least over the interim. Under this alternative, there would be no change in existing stationary emission sources within the Master Plan Study Area and, therefore, long term air quality impacts would be less than those associated with the Master Plan improvements. Similarly, the No Project Alternative would be expected to result in the generation of fewer GHGs as compared to the implementation of the Master Plan Updates.

Biological Resources

Under the No Project Alternative, there would be no direct impacts to biological resources due to construction. However, the potential for impaired water quality as a result of higher sanitary sewer overflows could result in indirect impacts to special status fish, amphibians, and mammals that may use local creeks. Therefore, longer-term indirect impacts to biological resources as a result of the No Project Alternative could be greater when compared to the implementation of the Master Plan Updates.

Cultural Resources

Under the No Project Alternative, no ground disturbing or infrastructure changes would be implemented and, therefore, no impacts to cultural resources would occur. Longer-term impacts would be expected; however, their intensity and magnitude would be similar to the Master Plan Updates.

Geology and Soils

Under the No Project Alternative, there would be no immediate impacts to existing geologic, topographic, or soil conditions within the Study Area. The potential for seismic events would remain the same under the No Project Alternative as they would for the Master Plan Updates. Potential increases in surface soil erosion would not occur under the No Project Alternative.

Public Health and Hazards

The No Project Alternative would minimize concerns related to the potential for exposing the public and the environment to hazardous materials during construction activities. Therefore, the impacts associated with the No Project Alternative would be less than the Master Plan Updates.

Hydrology and Water Quality

Under the No Project Alternative, there would be no construction activities. As a result, impacts to water quality from construction would be reduced and/or avoided. However, there would be no immediate improvements to existing sewer infrastructure deficiencies and consequently water quality impacts to local creeks could potentially be greater due to higher probability for sanitary sewer overflows. The threat of sanitary sewer overflows would be a significant and unavoidable impact under the No Project Alternative.

Planning, Land Use, and Agriculture

The No Project Alternative would preclude adoption of the Master Plan Updates and potential land use conflicts, such as noise effects on adjacent residential and commercial properties, would be avoided. However, it is acknowledged that this alternative would be inconsistent with the City's General Plan, Implementing Policies 2.d-I-1 and 2.d-I-1, which requires the City to coordinate capital improvements for municipal infrastructure with the location and timing of growth and periodically update the City's Water and Sewer Master Plans. This inconsistency is recognized as a potentially significant land use impact of the No Project Alternative. This inconsistency would be rectified through the implementation of the Master Plan Updates.

Noise

The No Project Alternative would not result in construction-related noise and, therefore no short-term increases in the ambient noise environment would be expected under this alternative. Unlike the Master Plan Updates, which would include the operation of new pumping facilities, no long-term increase in the ambient noise environment would occur under the No Project Alternative.

Transportation

The No Project Alternative would preclude the installation of individual Master Plan improvements within the local roadway ROWs. Impacts that would be avoided with selection of the No Project Alternative include a reduction in short-term morning and evening traffic congestion, reduced potential for pedestrian and cyclist interference, and reduced potential for conflicts with transit operations.

Utilities, Service Systems, and Recreation

Under the No Project Alternative, no new above-ground structures or new impervious surfaces would be constructed and, therefore, no changes to the City's existing drainage system would occur. The No Project would initially avoid disruptions to utilities and/or service system; however, longer term impacts could still be expected as piecemeal projects are implemented in the future. No impacts to recreation would occur with the No Project Alternative.

4.3 Environmentally Superior Alternative

The No Project Alternative would avoid many of the potential environmental effects associated with construction of the Master Plan improvements. By virtue that the vast majority of the Master Plan-identified impacts are related to construction, the No Project Alternative would be environmentally superior from a short-term perspective. However, under the No Project Alternative, the City would be unable to meet projected water and sewer service demands from existing and planned development within the City. Further, the No Project Alternative would conflict with the City's General Plan, Implementing Policies 2.d-I-1 and 2.d-I-2, which requires the City to coordinate capital improvements for municipal infrastructure with the location and timing of growth and periodically update the City's Water and Sewer Master Plans. As a result, the No Project Alternative does not meet the City's stated goals and objectives and would conflict with policy directions contained in the City's General Plan, as amended through 2008.

In addition to these issues, the construction-related impacts initially avoided by the No Project Alternative could still occur as individual improvements are constructed on a project-by-project basis in the future. Therefore, it is reasonable to conclude that although the No Project Alternative would delay the construction of individual improvements along with their associated environmental effects, these construction-related effects would not likely be avoidable over the longer term. This delay may reduce the cumulative intensity of the environmental effects for individual water and sewer improvements in the near term, but without the implementation of a comprehensive mitigation program as developed in this program EIR, construction-related effects in the future could ultimately be greater.

As discussed in Section 4.1.3 above, no other feasible alternatives have been identified as a being capable of achieving the identified goals and objectives and, more importantly, reducing or avoiding significant environmental impacts of the Master Plan Updates. In all instances, such alternatives would result in similar and/or more significant environmental effects. Without the implementation of the Master Plan Update improvements, as would occur under the No Project Alternative, the City would risk longer term environmental effects in the form of increased sanitary sewer overflows and associated adverse impacts to water quality and biological resources. Based on these considerations, the Master Plan Updates are considered environmentally superior from a long-term perspective when compared to No Project Alternative.

Chapter 5 – Other CEQA Considerations

Chapter 5 Other CEQA Considerations

5.1 Introduction

CEQA contains statutory requirements that require the City to consider the growth-inducing impacts of a project (CEQA Guidelines 15126.2(d)); the cumulative impacts of the Master Plan Updates (CEQA Guidelines 15130); the significant irreversible environmental changes resulting from the Master Plan Updates (CEQA Guidelines 15126.2(c)); and significant environmental effects which cannot be avoided if the Master Plan Updates are implemented (CEQA Guidelines 15126.2(b)).

5.2 Growth-Inducing Impacts

5.2.1 Approach to Growth-Inducing Analysis

The environmental impacts associated with growth include secondary, or indirect, physical effects including increased traffic, degradation of air and/or water quality, loss of sensitive biological resources and habitats, increased demand on public services and infrastructure, and changes in land use. Projects are considered to have growth-inducing implications when economic, housing, or population growth would be stimulated, either directly or indirectly.

Local land use plans (e.g., General Plans and Specific Plans) provide for development patterns and growth policies that allow for the planned and orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce unplanned growth (i.e., conflict with local land use plans) could indirectly cause adverse environmental impacts not previously envisioned. Thus, to assess whether a project has the potential to induce growth and result in adverse secondary effects beyond what is anticipated by local jurisdictions, it is important to assess the degree to which the growth associated with a project would or would not be consistent with applicable land use plans. Likewise, many agencies also compare how a project may influence existing population and land use projections by reviewing data produced by regional governments.

5.2.2 Growth-Inducing Analysis

This section describes the impact analysis relating to growth inducement for the proposed Master Plan Updates. It describes the methods used to determine the potential impacts of the Master Plan Updates and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Significance Criteria

For this analysis, an impact pertaining to growth inducement was considered significant if it would result in any of the following, which are based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.) standards:

a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

b) Remove an obstacle to, encourage, or otherwise facilitate future population growth or development?

Impacts and Mitigation Measures

Growth Inducement

Impact POP-1 Construction of the Master Plan Updates would induce substantial population growth through provision of water supply and sewer capacity.

Construction of the Master Plan Updates would not directly induce population growth, as they do not propose any new residential or commercial development projects. The Master Plan Updates would indirectly induce growth by removing or reducing the barriers to growth – namely provision on potable water supply and sewer treatment within the Study Area. However, the infrastructure improvements associated with the Master Plan Updates would support an amount of growth that is consistent with the applicable land use plans already adopted by the City. As described in *Chapter 2, Project Description*, the Master Plan Updates are designed to project water and sewer capacity needs for the City based on current planning projects, including the near- and long-term developments currently in planning and approval stages, development in accordance with the TASP, and updated demand projections for large water users. As such, the Updates would provide the water and sewer capacity necessary to meet the anticipated demands of the City through build-out of the City's General Plan, as amended through 2008.

The Master Plan Updates would consist of individual water and sewer improvements implemented at different stages through the build-out period. Each individual water and sewer project would be constructed as the City's development projects come online. Infrastructure projects would be implemented in line with development to support planned growth; they would not create additional capacity that would induce unplanned growth.

Because the Master Plan Updates would not induce unplanned growth through increases in population or employment, they would not overwhelm existing community service facilities (e.g., parks, police, and fire protection stations) and require construction of new facilities beyond those anticipated by the City. Secondary impacts of planned growth, including traffic, air emissions, and noise, are addressed by the environmental documentation associated with the City's land use plans. Additional impacts associated with growth inducement would not occur.

Significance Determination Before Mitigation

Because the Master Plan Updates would not induce unplanned growth through increases in population or employment, growth-inducing impacts are considered less than significant.

Mitigation Measures

No mitigation measures are required.

5.3 Summary of Cumulative Effects

As discussed in *Chapter 3, Environmental Analysis*, a majority of the potentially significant environmental affects associated with the Master Plan Updates are related to facility construction as opposed to long-term operation. In particular, construction of the Master Plan Updates could have effects on noise, air quality, transportation, and water quality that are potentially significant and directly or indirectly affect the environment. However, a majority of these effects would be mitigated by the design of the Master Plan improvements and by the mitigation measures described in *Chapter 3, Environmental Analysis*.

The resources most likely to be cumulatively affected by the Master Plan Updates would be the ambient noise environment from construction traffic, degradation of air quality, and reduced roadway and intersection LOS. Based on the analysis provided in this EIR, these impacts could serve as significant contributions to a cumulative condition.

5.4 Significant Unavoidable Impacts of the Project

Two potentially significant and unavoidable impacts would result from construction of the Master Plan Updates. As described in *Sections 3.10, Noise,* and *3.11, Transportation*, construction-related activities could result in significant and unavoidable increases in ambient noise levels and traffic delays. The City will be required to adopt Findings and prepare a Statement of Overriding Considerations for these unavoidable, adverse impacts as part of its approval of the EIR.

Impact NOI-1 Construction of the Master Plan improvements could result in noise levels in excess of established standards during construction.

These construction activities would generate temporary and intermittent noise at and near the conveyance pipeline alignments and storage tank site during construction. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. In addition, construction-related material haul trips would raise ambient noise levels along haul routes depending on the number of haul trips and the types of vehicles used.

The exposure of individual sensitive receptors to elevated noise levels would be contingent on the types of equipment in use and the duration of use. Since pipeline and other construction activities could substantially increase ambient noise levels, with potential intermittent noise levels exceeding 80 dBA, construction noise could exceed established thresholds (e. g. greater than 5 dBA) and result in significant impacts and unavoidable noise impacts to sensitive receptors in close proximity to construction.

Impact TR-1 The Master Plan improvements could result in short-term increases in traffic volumes, thereby contributing to decreases in roadway and intersection LOS.

A majority of the water and sewer conveyance and storage improvements would be constructed within existing roadway ROWs, with the exception of the storage tank and associated facilities. Because they include pipeline alignments and/or serve as part of designated truck routes, the following intersections would be temporarily impacted by construction of the Master Plan Update improvements:

- Montague Expressway / S. Milpitas Boulevard
- Great Mall Parkway-E. Capitol Avenue / Montague Expressway
- Montague Expressway / McCandless Drive-Trade Zone Boulevard

The generation of daily construction-related truck trips by the Master Plan Update sites would be distributed geographically on haul routes, would be temporary (lasting only during the duration of construction at each site), and would shift regularly to accommodate the movement of pipeline installation. However, if all the construction-related truck trips were to occur on segments of busy roadways during the peak AM or PM commute hours, an increase in traffic volumes would impede traffic flows and lead to short-term traffic delays. This impact is considered significant and unavoidable.

5.5 Significant Irreversible Changes

CEQA requires a discussion of potential significant, irreversible environmental changes that could result from a proposed project (CEQA Guidelines 15126.2(c)). Implementation of the Master Plan Updates would require irreversible commitment of natural resources including construction materials; labor; and energy required for construction, operation, and maintenance. Commitment of nonrenewable natural resources used in construction would include gravel, petroleum products, steel, and others. Commitment of energy resources for construction would include fuel oil, natural gas, and gasoline for heavy machinery. Operation of the Master Plan Updates would result in further commitment of energy resources in the form of fossil fuels.

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Chapter 6 – Document Preparation and Consultation

Chapter 6 Document Preparation and Consultation

6.1 Document Preparation

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6.2 Consultation and Coordination

Agencies and other groups that were consulted with during the preparation of this EIR include the following:

6.2.1 Federal Agencies

U.S. Army Corps of Engineers

6.2.2 State Agencies

Governor's Office of Planning and Research, State Clearinghouse
California Department of Toxic Substances Control
State Water Resources Control Board, Division of Water Rights
California Department of Fish and Game, Central Coast Region
California Department of Water Resources
California Department of Transportation
California Air Resources Board
San Francisco Bay Regional Water Quality Control Board

6.2.3 Local Agencies

Santa Clara County, Department Of Roads and Airports
Santa Clara County, Parks and Recreation Department
Santa Clara County, Planning Office
San Francisco Public Utilities Commission
San Jose/Santa Clara Water Pollution Control Plant
Association of Bay Area Governments

West Valley Sanitation District
Metropolitan Transportation Commission
Santa Clara Valley Water District
Bay Area Air Quality Management District
Cupertino Sanitary District
Santa Clara Valley Transportation Authority (VTA)
Santa Clara County Open Space Authority
City Of San Jose, Planning Dept
City Of Fremont, Planning Dept

6.2.4 Other

Milpitas Chamber Of Commerce
Milpitas Community Library
Pacific Gas & Electric

Chapter 7 – References

Chapter 7 References

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Appendix A

Notice of Preparation of Draft Environmental Impact Report and Notice of Public Scoping Meeting for the City of Milpitas Water and Sewer Master Plan Updates

Notice of Completion and Environmental Document Transmittal for the Notice of Preparation

Comment Letters Received on the Notice of Preparation

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NOTICE OF PREPARATION (NOP) OF
A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)
AND NOTICE OF PUBLIC SCOPING MEETING
FOR THE
City of Milpitas Water and Sewer Master Plan Updates

Date: August 27, 2008
To: Interested Parties
From: City of Milpitas

The City of Milpitas (City) is preparing an Environmental Impact Report (EIR) for the City's Water and Sewer Master Plan Updates (2009 Master Plan Updates or Proposed Program). The City is soliciting the view of interested persons and agencies on the scope and content of the information included in the EIR.

Location. The Proposed Program includes incorporated areas within the City of Milpitas in northern Santa Clara County, California (see Figure 1, Regional Locator). The Program Study Area for the EIR will include all areas within the current city limits and is illustrated in Figure 1.

Project Objectives. The specific objectives of the City's 2009 Water and Sewer Master Plan Updates include the following:

- Identify pipe and storage deficiencies caused by projected changes in water and wastewater demand, and implement corrective projects to relieve these deficiencies.
- Develop and implement a water and sewer impact fee for projects caused by these new developments.
- Update the City's Water and Sewer Connection Fee for new users.
- Update the City's Treatment Plant Fee
- Implement recycled water infrastructure improvements for the Transit Area Specific Plan (TASP).

Project Description. The City's 2009 Water and Sewer Master Plans are an update of the City's 2002 Water and 2004 Sewer Master Plans. The previous Master Plans defined the water and sewer system improvements necessary to meet the City's existing and future demands associated with future development plans in 2008, 2018 and build-out year of 2021 levels of development. The 2009 Master Plan Updates are a re-evaluation of the City's water and sewer system capacity based on updated land use projections from several near- and long-term development projects currently in the planning process. Drafts of the 2009 Master Plan Updates will be made available for review on the City's website sometime after September 15, 2008.

The City intends to formally adopt the 2009 Master Plan Updates and is preparing a Program-level EIR to assess the potential environmental impacts of implementing the water and sewer capital improvement projects (CIPs) identified in each of the updates. The Program EIR will analyze the impact of the City's preferred land use buildout scenario, which is identified as Scenario 3 in the 2009 Master Plan Updates. Scenario 3 includes improvements necessary to accommodate several near- and long-term development projects currently in the planning process, buildout of the Transit Area Specific Plan (TASP), and modifications to the City's list of Large Water Users.

These improvements are expected to be constructed over the course of the next 20-years.

Water Master Plan Improvements. Proposed CIP improvements to the City's water system are illustrated in Figure 2 and briefly described below. Projects W-MP-1 through W-MP-4 are recommended for construction within the next three to five years.

W-MP-1. This project will involve the installation of pressure reducing valves and open/close isolation valves near the intersection of Dixon Rd. and I-680.

W-MP-2. This project includes the construction of 300 linear feet (LF) of 12-in pipe to three dead-end pipes; one on Abel and two on Carlo Street and 260 LF of 6-in pipe on Carlo Street between Railroad Avenue and Carlo Street.

W-MP-3. Project will include construction of 150 LF of 12-inch pipe connecting a dead-end point at Pecten Court to a 10-inch pipe at Montague Expressway.

W-MP-6. This project will include the construction of a 6.6 million gallon (MG) Tank and Pump Station or a new well with a 9,200 gallons per minute (gpm) capacity. This facility will be located in the south-central portion of the City; however, an exact location has not been determined.

Projects W-MP-4 through W-MP-5 are recommended for construction within the next five to twenty years.

W-MP-4. This project would construct a new 20-inch Turnout and a yet-to-be-determined distance of parallel pipe along Trade Zone Boulevard.

W-MP-5. The City plans to construct approximately 14,970 ft of 8-inch pipe within the TASP area.

Sewer Master Plan Improvements. Proposed CIP improvements to the City's sewer system are illustrated in Figure 3 and briefly described below. Projects S-MP-10B through S-MP-11C are recommend to be constructed within the next one to five years.

S-MP-10B This project includes the replacement of 1,460 LF of 15-inch sewer pipe with 21-inch pipe along South Abel Street north of East Curtis Avenue. This project has already been constructed and underwent separate environmental review.

S-MP-11A Sewer improvements are proposed along South Main Street to replace existing 12 and 18-inch pipe with 21 and 27-inch. This project would be constructed within the next five to six years.

S-MP-11B This project includes various improvements along the Great Mall Parkway between South Main Street and Montague Expressway to replace existing 10 and 15-inch sewer pipe with 15 and 18-inch pipe.

S-MP-11C Project includes various improvements along the Montague Expressway to replace existing 8 and 10-inch sewer pipe with 12 and 15-inch diameter pipes.

Project S-MP-11D is recommended for construction prior to 2020.

S-MP-11D Project includes the replacement of 2,060 LF of 8-inch sewer pipe with 12-inch diameter pipe along South Main Street south of Great Mall Parkway.

Projects S-MP-1 through S-MP-12 are recommended for construction sometime after 2020.

S-MP-1 Project includes the replacement of 225 LF of 18-inch sewer pipe with 27-inch pipe at an existing I-880 crossing.

S-MP-2 The project includes the replacement of 490 LF of 8-inch with 10-inch diameter sewer along North Milpitas Boulevard near Jason Avenue and Home Way.

S-MP-5A The project includes the replacement of 500 LF of 15-inch sewer pipe with 18-inch and 385 LF of 15-inch sewer pipe with 21-inch pipe along Smithwood Street near Abbott Boulevard.

S-MP-6A This Project includes replacement sewer pipe along South Milpitas Boulevard between Calaveras Boulevard and Turquoise with 15 and 18-inch diameter sewer pipe.

S-MP-11E This project will involve the replacement of over 2,000 LF of sewer pipe along East Curtis Street.

S-MP-12 This project will involve the replacement of sewer pipe along Montague Expressway, west of Gladding Avenue, with 12-inch pipes.

Scope of the EIR. Pursuant to the State CEQA Guidelines section 15060, the City conducted a preliminary review of the Proposed Program. Based on the potential for significant impacts, an EIR is deemed necessary. The EIR will provide an evaluation of the resource areas listed below.

- *General Plan Consistency and Land Use Compatibility.* The compatibility of the Program facilities with existing land use will be considered in the EIR. The EIR will also provide an evaluation of the Program's consistency with applicable local, regional, and State plans and policies.

- *Geologic and Soil-Related Hazards.* The EIR will evaluate the potential for local geologic hazards to impact Program-related facilities.

- *Displacement of Existing Housing and Structures.* The EIR will analyze whether any Program-related facilities could result in the displacement of existing housing and/or structures.

- *Air Quality and Health Risk.* Short- and long-term impacts to air quality as a result of construction and facility operations (e. g. pump stations) will be considered in the EIR.

- *Noise and Acoustics.* Short-term noise from construction projects will be considered in the EIR. Long-term noise impacts due to new facilities (e. g. pump stations) will be analyzed.

- *Traffic, Circulation, and Alternative Transportation.* The EIR will evaluate the potential for Program facilities to disrupt local traffic circulation, create delay at intersections, and create safety hazards.

- *Biological Resources and Wetlands.* Potential impacts to special status wildlife and plant species, wetland resources, and City trees during facility construction will be considered in the EIR.

- *Hydrology and Water Quality.* Potential short and long-term impacts to water quality, drainage system capacity, and groundwater resources will be considered in the EIR

- *Hazards and Hazardous Materials.* The EIR will include an evaluation of whether Program-related improvements could encounter hazardous materials sites during construction.

- *Historic and Archaeological Resources.* Construction-related impacts to historic and archaeological resources will be considered in the EIR.

- *Growth Inducement and Related Secondary Effects.* The EIR will provide an analysis of the Program's potential to induce disorderly growth and the secondary effects related thereto.

Alternatives to be Addressed in the EIR. In accordance with section 15126.6 of the State CEQA Guidelines, an EIR must "describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most the basic objectives of the Project, but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines also require that a No Project Alternative be evaluated, and that under specific circumstances, an environmentally superior alternative be designated from among the remaining alternatives. The identified alternatives will be analyzed at a qualitative level of detail for comparison against the impacts identified for the Proposed Program, consistent with the requirements of CEQA.

Purpose of Public Scoping Process. The City will be the Lead Agency under CEQA for the preparation of the Program EIR. Comments on the NOP need to be submitted to the City by **September 30, 2008.** Submittal of electronic copies of comments in MS Word format is also appreciated. Please send your comments or email to:

Sheldon S. Ah-Sing
City of Milpitas
455 E. Calaveras Blvd.
Milpitas Ca, 95035-5411
sahsing@ci.milpitas.ca.gov

The City will also conduct one public scoping meeting for the Proposed Program to receive public and agency input on the scope and content of the Draft EIR. The format of the meeting will include a brief overview of the Project by the City and its consultant(s) followed by an informal, open forum where agencies and individuals will be able to provide the City with oral and written input on the Program. The scoping meeting will be held at the time and place listed below:

DATE: September 9, 2008

TIME: 6:30 p.m.

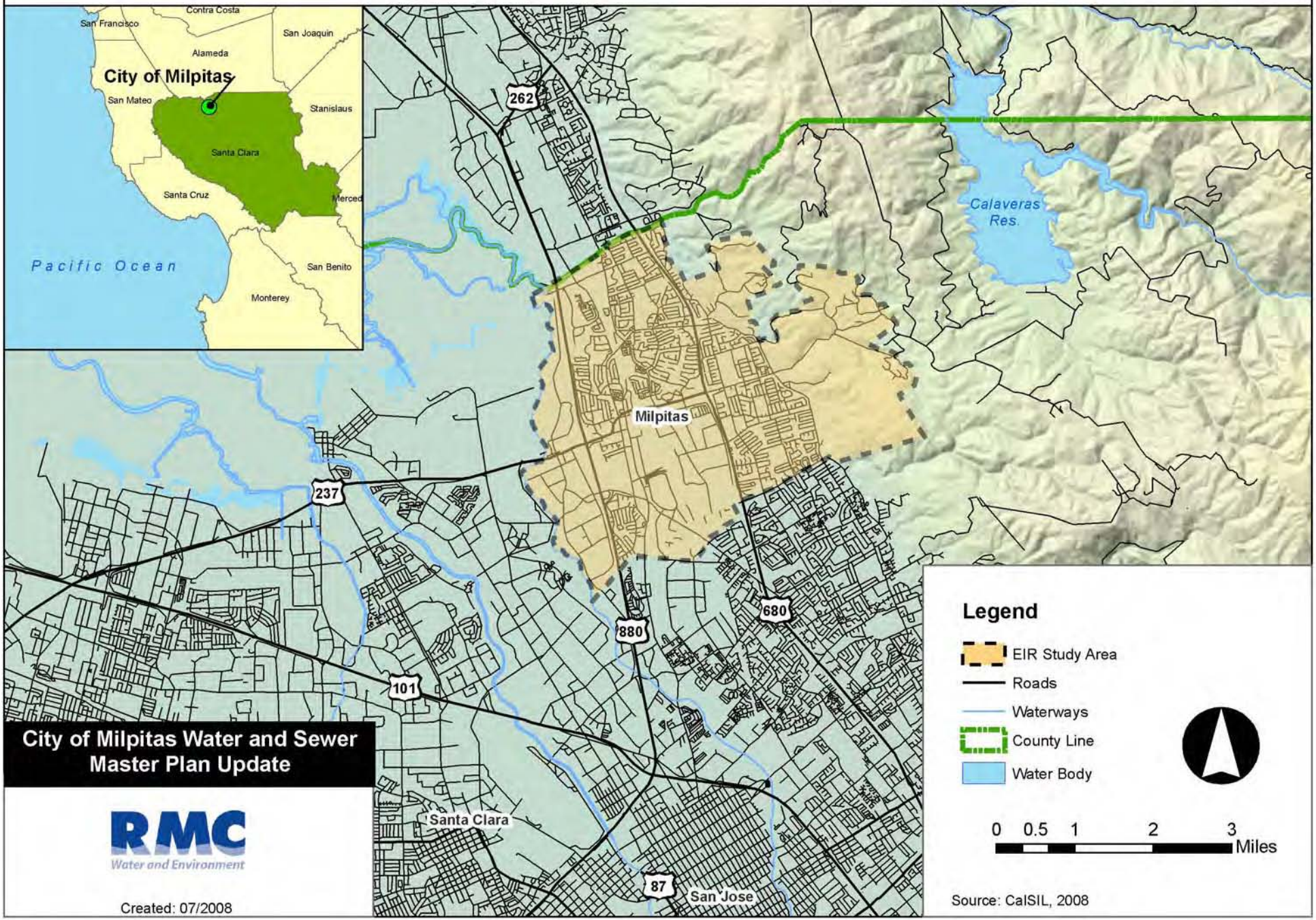
LOCATION: Committee Conference Room
Milpitas City Hall
455 E. Calaveras Boulevard
Milpitas, California

If you have any questions, please contact Sheldon Ah-Sing at the above address, by calling (408) 586-3278, or by e-mail to sahsing@ci.milpitas.ca.gov. Copies of this notice will also be available at the Public Scoping Meeting.

Signature: Sheldon S. Ah Sing Date: August 27, 2008

Sheldon Ah Sing, Senior Planner
City of Milpitas Planning Department

Figure 1 - Regional Map

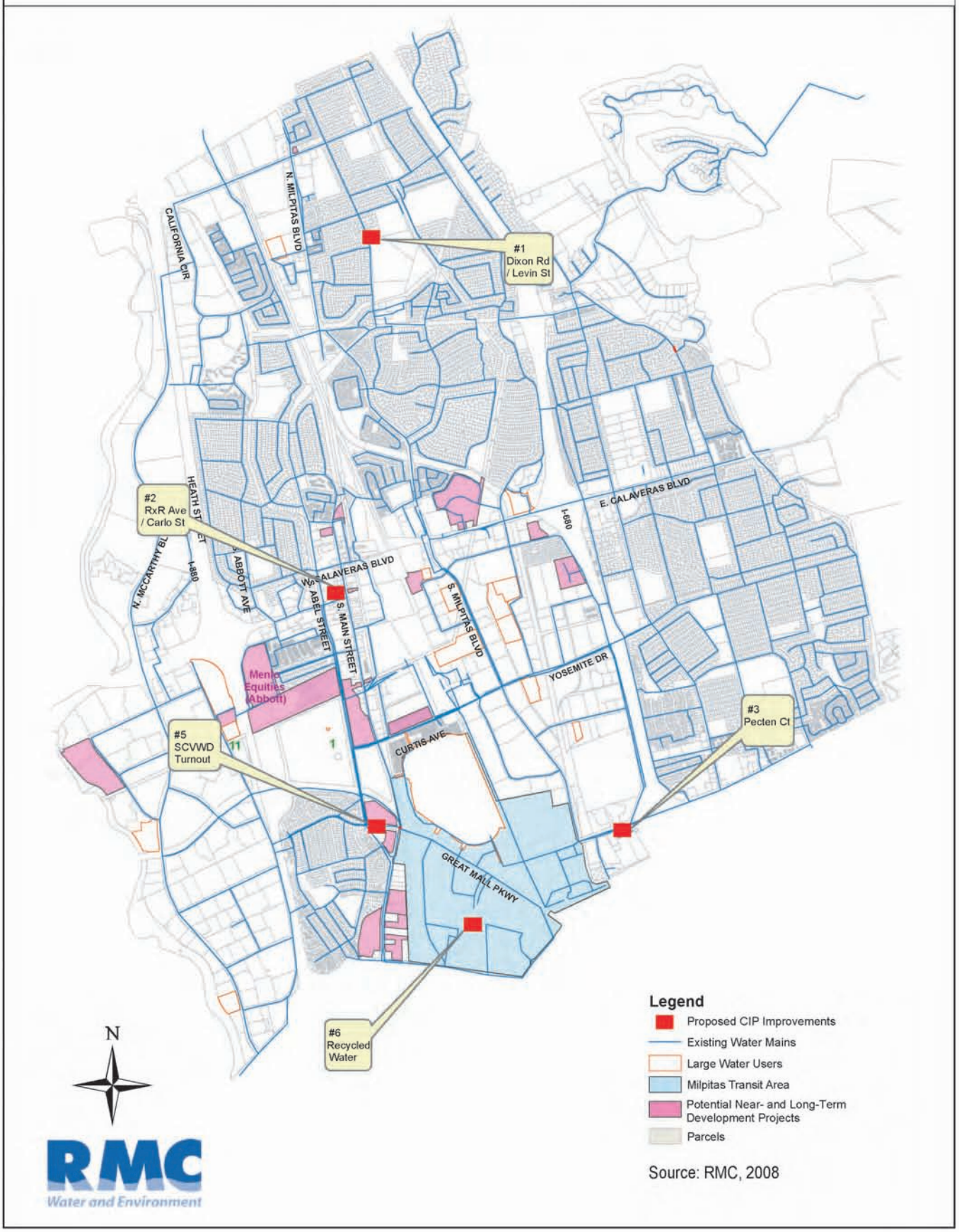


City of Milpitas Water and Sewer Master Plan Update

RMC
Water and Environment

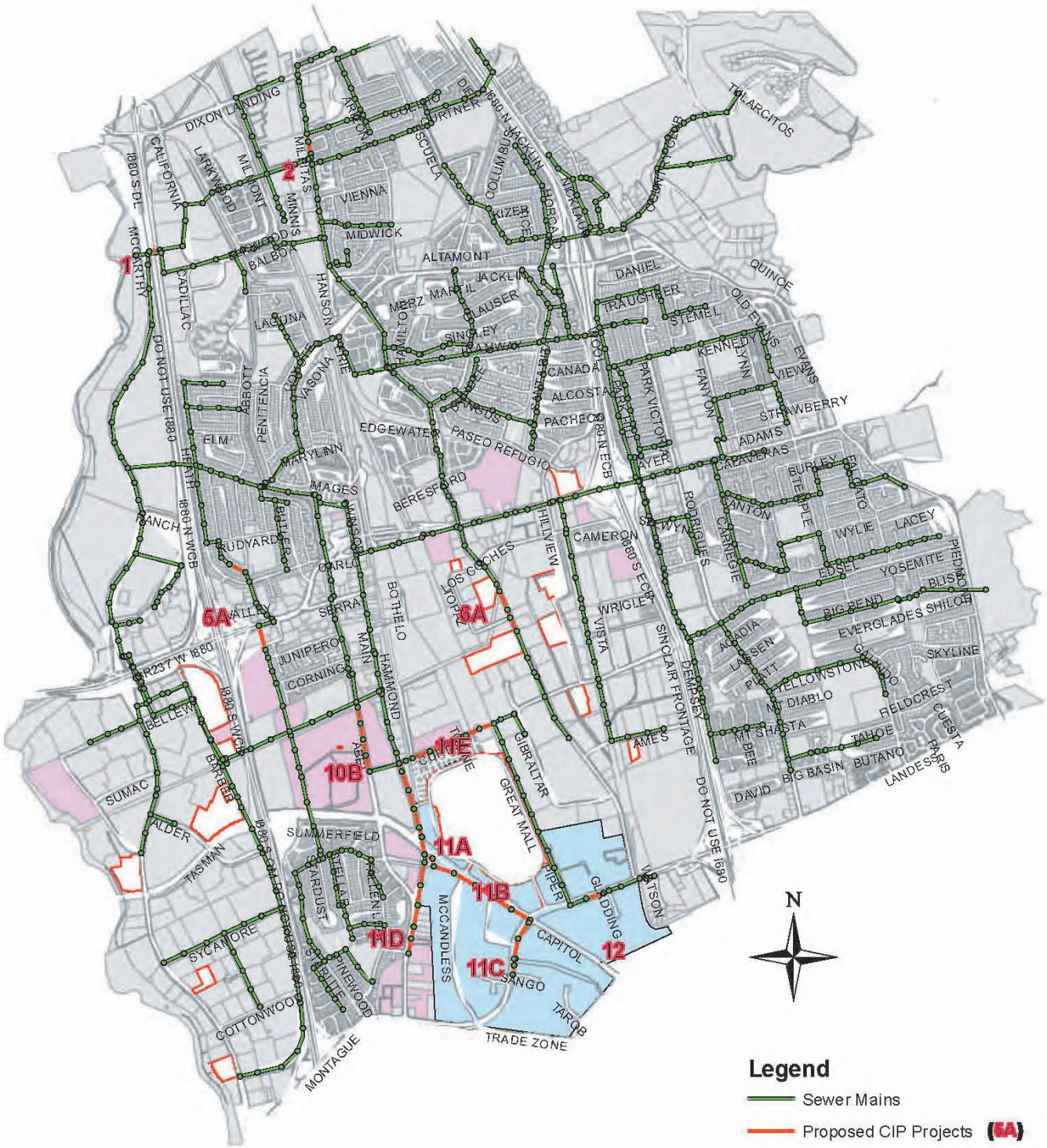
Created: 07/2008

Figure 2 - Water Master Plan Update Projects



Source: RMC, 2008

Figure 3 - Sewer Master Plan Update Projects



RMC
Water and Environment

Source: RMC, 2008

US CORPS OF ENGINEERS
1455 MARKET STREET FL 17
SAN FRANCISCO, CA 94103-1368

OFFICE OF PLANNING & RESEARCH
STATE CLEARINGHOUSE
1400 TENTH STREET, ROOM 222
SACRAMENTO, CA 95814

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
PLANNING & ENVIRONMENTAL ANALYSIS
PO BOX 806
SACRAMENTO, CA 95812-0806

WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS
1001 "I" ST
SACRAMENTO, CA 95814

DEPARTMENT OF ROADS & AIRPORTS
ATTENTION ASHOK VYAS
1505 SHALLENBERGER ROAD
SAN JOSE, CA 95131

MILPITAS CHAMBER OF COMMERCE
828 N. HILLVIEW DRIVE
MILPITAS, CA 95035

SAN FRANCISCO WATER DEPARTMENT
1000 EL CAMINO REAL
MILLBRAE, CA 94030

WATER POLLUTION CONTROL PLANT
ATTENTION DALE IHRKE
700 LOS ESTEROS ROAD
SAN JOSE, CA 95134

ASSOCIATION OF BAY AREA GOVERNMENTS
PO BOX 2050
OAKLAND, CA 94604

WEST VALLEY SANITATION DISTRICT
100 E. SUNNYOAKS AVE
CAMPBELL, CA 95008

DEPARTMENT OF FISH & GAME
CENTRAL COAST REGION
HABITAT CONSERVATION
PO BOX 47
YOUNTVILLE, CA 94599

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, ROOM 449
SACRAMENTO, CA 95814

CITY OF SAN JOSE
PLANNING DEPARTMENT
ATTENTION HUGH GRAHAM
200 EAST SANTA CLARA STREET
SAN JOSE, CA 95113

MILPITAS COMMUNITY LIBRARY
ATTENTION ED CAVELLINI, COMMUNITY LIBRARIAN
40 NORTH MILPITAS BOULEVARD
MILPITAS, CA 95035

METROPOLITAN TRANSPORTATION COMMISSION
101 EIGHTH STREET
OAKLAND, CA 94607-4700

SANTA CLARA VALLEY WATER DISTRICT
ATTENTION SUE TIPPETS
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118

CITY OF FREMONT PLANNING DEPT
ATTN ENVIRONMENTAL REVIEW
39550 LIBERTY STREET
FREMONT, CA 94537-5006

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
ATTENTION: SUZANNE BOURGUIGNON
939 ELLIS STREET
SAN FRANCISCO, CA 94109

CUPERTINO SANITARY DISTRICT
20833 STEVENS CREEK BLVD
SUITE 104
CUPERTINO, CA 95014

County of Santa Clara
Planning Office
70 W. Hedding Street
East Wing, 7th Floor
San Jose, CA 95110

IGR/CEQA COORDINATOR
OFFICE OF TRANS. PLANNING
CALIF. DEPT. OF TRANSPORTATION
BOX 23660
OAKLAND, CA 94623-0660

CALIFORNIA AIR RESOURCES BOARD
1001 "I" STREET
SACRAMENTO, CA 95812

REGIONAL WATER QUALITY CONTROL BOARD
1515 CLAY STREET, STE. 1400
OAKLAND, CA 94612

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA)
ATTN: ENVIRONMENTAL REVIEW
3331 N. FIRST STREET
SAN JOSE, CA 95134-1906

SANTA CLARA COUNTY OPEN SPACE AUTHORITY
ATTN: ENVIRONMENTAL REVIEW
6830 VIA DEL ORO, SUITE 200
SAN JOSE, CA 95119

PACIFIC GAS & ELECTRIC
111 ALMADEN BOULEVARD, ROOM 814
SAN JOSE, CA 95198

CITY OF SANTA CLARA
PLANNING DEPARTMENT
1500 WARBURTON AVENUE
SANTA CLARA, CA 95050

LEYLA HEDAYAT
SANTA CLARA VALLEY TRANSPORTATION AUTHORITY
3331 NORTH FIRST STREET, BUILDING B/2
SAN JOSE, CA 95134-1927

Santa Clara County Parks and Recreation Dept.
298 Garden Hill Drive
Los Gatos, CA 95032

BURBANK SANITARY DISTRICT
20833 STEVENS CREEK BLVD
SUITE 104
CUPERTINO, CA 95014

CITY OF CAMPBELL
PLANNING DEPT
70 N 1ST STREET
CAMPBELL, CA 95008

TOWN OF LOS GATOS
PLANNING DEPT
110 E MAIN STREET
LOS GATOS, CA 95030

CITY OF MONTE SERENO
PLANNING DEPT
18041 SARATOGA- LOS GATOS RD
MONTE SERENO, CA 95030

CITY OF CUPERTINO
PLANNING DEPT
10300 TORRE AVENUE
CUPERTINO, CA 95014-3202

CITY OF SARATOGA
PLANNING DEPT
13777 FRUITVALE AVENUE
SARATOGA, CA 95070

CITY OF SUNNYVALE
PLANNING DEPT
P.O. BOX 3707
SUNNYVALE, CA 94088-3707

Print Form

2008082114

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: City of Milpitas Water and Sewer Master Plan Update

Lead Agency: City of Milpitas
Contact Person: Sheldon Ah-Sing
Mailing Address: 445 East Calaveras Blvd
Phone: 408-586-3278
City: Milpitas
Zip: 95035
County: Santa Clara

Project Location: County: Santa Clara
City/Nearest Community: Milpitas
Cross Streets: Numerous - I-680 and 880
Zip Code: 95035
Lat. / Long.: ___° ___' ___" N/ ___° ___' ___" W
Total Acres: N/A
Assessor's Parcel No.: Numerous
Section: ___ Twp.: ___ Range: ___ Base: ___
Within 2 Miles: State Hwy #: 680, 101, 880
Waterways: Coyote Creek, Penitencia Creek
Airports: none
Railways: Southern Pacific
Schools: numerous

Document Type:

CEQA:
- [x] NOP
- [ ] Early Cons
- [ ] Neg Dec
- [ ] Mit Neg Dec
- [ ] Draft EIR
- [ ] Supplement/Subsequent EIR (Prior SCH No.) ___
- Other ___

NEPA:
- [ ] NOI
- [ ] EA
- [ ] Draft EIS
- [ ] FONSI

Other:
- [ ] Joint Document
- [ ] Final Document
- [ ] Other ___

RECEIVED
AUG 27 2008
STATE CLEARING HOUSE

Local Action Type:

- [ ] General Plan Update
- [ ] General Plan Amendment
- [ ] General Plan Element
- [ ] Community Plan
- [ ] Specific Plan
- [ ] Master Plan
- [ ] Planned Unit Development
- [ ] Site Plan
- [ ] Rezone
- [ ] Prezone
- [ ] Use Permit
- [ ] Land Division (Subdivision, etc.)
- [ ] Annexation
- [ ] Redevelopment
- [ ] Coastal Permit
- [x] Other CIP

Development Type:

- [ ] Residential: Units ___ Acres ___
- [ ] Office: Sq.ft. ___ Acres ___ Employees ___
- [ ] Commercial: Sq.ft. ___ Acres ___ Employees ___
- [ ] Industrial: Sq.ft. ___ Acres ___ Employees ___
- [ ] Educational ___
- [ ] Recreational ___
- [x] Water Facilities: Type Various MGD ___
- [ ] Transportation: Type ___
- [ ] Mining: Mineral ___
- [ ] Power: Type ___ MW ___
- [ ] Waste Treatment: Type ___ MGD ___
- [ ] Hazardous Waste: Type ___
- [x] Other: Sewer Collection - Various

Project Issues Discussed in Document:

- [x] Aesthetic/Visual
- [x] Agricultural Land
- [x] Air Quality
- [x] Archeological/Historical
- [x] Biological Resources
- [ ] Coastal Zone
- [x] Drainage/Absorption
- [ ] Economic/Jobs
- [ ] Fiscal
- [x] Flood Plain/Flooding
- [ ] Forest Land/Fire Hazard
- [x] Geologic/Seismic
- [ ] Minerals
- [x] Noise
- [x] Population/Housing Balance
- [x] Public Services/Facilities
- [x] Recreation/Parks
- [x] Schools/Universities
- [x] Septic Systems
- [x] Sewer Capacity
- [x] Soil Erosion/Compaction/Grading
- [x] Solid Waste
- [x] Toxic/Hazardous
- [x] Traffic/Circulation
- [x] Vegetation
- [x] Water Quality
- [x] Water Supply/Groundwater
- [x] Wetland/Riparian
- [x] Wildlife
- [x] Growth Inducing
- [x] Land Use
- [x] Cumulative Effects
- [ ] Other ___

Present Land Use/Zoning/General Plan Designation:
Various

Project Description: *(please use a separate page if necessary)*

The City intends to formally adopt its 2009 Water and Sewer Master Plan Updates and is preparing a Program-level EIR to assess the potential environmental impacts of implementing the water and sewer capital improvement projects (CIPs) identified in each of the updates. The Program EIR will analyze the impact of the City's preferred land use buildout scenario, which is identified as Scenario 3 in the Master Plan Updates. These improvements are expected to be constructed over the course of the next 20-years and include various water distribution and sewage collection facilities, which would be constructed at various locations throughout the City's corporate limits.

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

January 2008

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Highway Patrol	X	Parks & Recreation
X	Caltrans District # 4		Pesticide Regulation, Department of
	Caltrans Division of Aeronautics		Public Utilities Commission
	Caltrans Planning (Headquarters)	X	Reclamation Board
	Coachella Valley Mountains Conservancy	X	Regional WQCB # 2
	Coastal Commission		Resources Agency
	Colorado River Board		S.F. Bay Conservation & Development Commission
X	Conservation, Department of		San Gabriel & Lower L.A. Rivers and Mtns Conservancy
	Corrections, Department of		San Joaquin River Conservancy
	Delta Protection Commission		Santa Monica Mountains Conservancy
	Education, Department of	X	State Lands Commission
	Energy Commission		SWRCB: Clean Water Grants
X	Fish & Game Region # 3	X	SWRCB: Water Quality
	Food & Agriculture, Department of		SWRCB: Water Rights
	Forestry & Fire Protection		Tahoe Regional Planning Agency
	General Services, Department of	X	Toxic Substances Control, Department of
X	Health Services, Department of		Water Resources, Department of
	Housing & Community Development		
X	Integrated Waste Management Board		Other
	Native American Heritage Commission		Other
	Office of Emergency Services		

Local Public Review Period (to be filled in by lead agency)

Starting Date August 27, 2008 Ending Date September 30, 2008

Lead Agency (Complete if applicable):

Consulting Firm: RMC Water and Environment
Address: 2290 North First Street, Suite 212
City/State/Zip: San Jose, CA 95131
Contact: Clint Meyer
Phone: 408-240-8161

Applicant: City of Milpitas
Address: 455 E Calaveras Blvd.
City/State/Zip: Milpitas CA, 95035
Phone: 408-586-3278

Signature of Lead Agency Representative: [signature] **Date:** 26 Aug 08

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

PG&E Land Services, 111 Almaden Blvd., Rm. 814, San Jose, CA 95115

September 23, 2008

City of Milpitas
Planning Department
455 E Calaveras Blvd.
Milpitas, CA 95035
Attn: Sheldon Ah Sing
Fax: 408-586-3293
Email: sahsing@ci.milpitas.ca.gov

RE: Review of Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR)- July 2008
For: City of Milpitas Water and Sewer Master Plan Updates
Loc: City of Milpitas
City's Ref: Nil
PG&E File : SJ 164 (Land)

Dear Sir / Madam,

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Water and Sewer Master Plan Updates Project.

Information provided in the NOP of the DEIR did not specifically indicate the direct impacts on our gas and electric facilities. However, since PG&E has an obligation to provide the public with a reliable and safe energy supply as mandated by the California Public Utilities Commission (CPUC) and to comply with the guidelines outlined in General Orders 95 and 112. PG&E should be consulted during the development of the plan to ensure that the capacity, operational and maintenance requirements for its gas and electric facilities are taken into consideration prior to approval of the final plan.

Early involvement will allow us to assess cumulative impacts to our systems and to identify facilities that may need to be installed, relocated and or realigned as a result of the proposed general plan revision. Because engineering and construction of our facilities may require long lead times, we encourage you to consult with us during the initial stages of your planning process.

We would like to note that expansion of utility facilities is a necessary consequence of growth and development. As development occurs, the cumulative impacts of new energy load growth use up available capacity in the utility system. In addition to adding new distribution feeders, the range of electric system improvements needed to accommodate growth may include upgrading existing substations and building new substations and interconnecting transmission line. Comparable upgrades or additions would be required for our gas system as well. Environmental impacts associated with new and or relocated gas or electric facilities as a result of the proposed project should be fully addressed in the Final EIR and, if appropriate, mitigation measures to minimize or eliminate such impacts should be incorporated into the document as well.

PG&E owns and operates the following facilities within the project area:

Gas Transmission – one 34" gas transmission line # 300B- running from Hwy 237 at westerly of Hwy 880 , going southeasterly, crossing Hwy 880 again, and turns easterly towards N Capitol Avenue;
one 36" gas transmission line # 300A- running northeasterly from Highway 880 at Barber Lane , towards and along Great Mall Parkway, and running southeasterly;
one 30" gas transmission line # 131- starting from the area northwesterly of the intersection of Hwy 880 and Hwy 237, going northerly crossing Dixon Landing Rd.

Electric Transmission – one 230 KV Electric Transmission pole line, starting from PG&E Los Esteros Substation , 1515 Alviso – Milpitas Rd., running approximately northerly along west side of Hwy 880- towards Dixon Landing Rd. ;
One 115 KV Electric Transmission pole line running southerly along easterly side of Hwy 880, crossing Hwy 237, towards Landess Avenue;
One 115 KV tower line starting from PG&E Dixon Landing Substation, running southeasterly along the easterly side of Hwy 880 , crossing N Abel St., going southeasterly, and crosses Hwy 237, going southerly towards and crossing Landess Avenue;
One 115 KV Electric Transmission pole line, starting from PG&E Milpitas Substation, running southwesterly, crossing N Capitol Avenue, going westerly towards and crossing Old Oakland Rd.

To promote the safe and reliable maintenance and operation of these utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their project plans. Any proposed development plans should provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities.

Developers will be responsible for the costs associated with the relocation of existing PG&E facilities to accommodate their proposed development. Because these facilities relocations require long lead times and are not always feasible, developers should be encouraged to consult with PG&E as early in their planning stages as possible.

Relocations of PG&E's electric transmission and substation facilities (50,000 volts and above) could also require formal approval from the California Public Utilities Commission. If required, this approval process could take up to two years to complete. Proponents with development plans which could affect such electric transmission facilities should be referred to PG&E for additional information and assistance in the development of their project schedules.

We would also like to note that continued development consistent with your General Plans will have a cumulative impact on PG&E's gas and electric systems and may require on-site and off-site additions and improvements to the facilities which supply these services. Because utility facilities are operated as an integrated system, the presence of an existing gas or electric transmission or distribution facility does not necessarily mean the facility has capacity to connect new loads.

Expansion of distribution and transmission lines and related facilities is a necessary consequence of growth and development. In addition to adding new distribution feeders, the range of electric system improvements needed to accommodate growth may include upgrading existing substation and transmission line equipment, expanding existing substations to their ultimate buildout capacity, and building new substations and interconnecting transmission lines. Comparable upgrades or additions needed to accommodate additional load on the gas system could include facilities such as regulator stations, odorizer stations, valve lots, distribution and transmission lines."

We would like to recommend that environmental documents for proposed development projects include adequate evaluation of cumulative impacts to utility systems, the utility facilities needed to serve those developments and any potential environmental issues associated with extending utility service to the proposed project. This will assure the project's compliance with CEQA and reduce potential delays to the project schedule.

We encourage the City to include information about the issue of electric and magnetic fields (EMF) in the EIR. It is PG&E's policy to share information and educate people about the issue of EMF.

EMFs are invisible fields of force created by electric voltage (electric fields) and by electric current (magnetic fields). Wherever there is a flow of electricity, both electric and magnetic fields are created; in appliances, homes, schools and offices, and in power lines. There is no scientific consensus on the actual health effects of EMF exposure, but it is an issue of public concern. PG&E relies on organizations and health agencies such as the California Department of Health Services, U.S. Environmental Protection Agency and the Electric Power Research Institute to review research on EMF and provide a foundation for developing policies.

Because there is concern about the possible health effects of exposure to EMF, we support and fund medical, scientific, and industry research on EMF. It is PG&E policy to consider EMF in the design, planning and construction of new and upgraded facilities.

PG&E remains committed to working with the City to provide timely, reliable and cost effective gas and electric service to Brentwood area. We would also request that we be copied on future correspondence regarding this subject as this project develops and that we be placed on the list to review the DEIR and FEIR.

Should you require any additional information or have any questions, please call me at (408) 282-7544; or by email at akp3@PGE.com.

Thank you.

Sincerely,

Alfred Poon
Land Rights Protection
Southern Area

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF TRANSPORTATION
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 622-5491
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

September 25, 2008

SCL-000-GEN
SCL000196
SCH2008082114

Mr. Sheldon Ah-Sing
City of Milpitas
455 E. Calaveras Boulevard
Milpitas, CA 95035

Dear Mr. Ah-Sing:

City of Milpitas Water and Sewer Master Plan Update, Notice of Preparation (NOP)

Thank you for including the California Department of Transportation (Department) in the environmental review process for the proposed plan update. We have reviewed the NOP and have the following comments to offer.

The Department is primarily concerned with potential impacts of the proposed project on State highway facilities in Santa Clara County and the regional State transportation network in adjacent counties.

As lead agency, the City of Milpitas is responsible for all project mitigation, including any needed improvements to state highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. The project's traffic mitigation should be specifically identified in the environmental document. Any required roadway improvements should be completed prior to issuance of project occupancy permits. While an encroachment permit is only required when the project involves work in the State Right of Way (ROW), the Department will not issue an encroachment permit until our concerns are adequately addressed. Therefore, we strongly recommend that the lead agency ensure resolution of the Department's California Environmental Quality Act (CEQA) concerns prior to submittal of the encroachment permit application. Further comments will be provided during the encroachment permit process if required; see the end of this letter for more information regarding the encroachment permit process.

Advance Planning – Environmental
The Department plans include the following projects on Interstate (I)-880 and I-680 in the vicinity of Milpitas. Scheduling of construction and other project phases are subject to change:

I-680
- Construct sound walls. Scheduled to begin Fall 2011 and end Spring 2013;
- Rehabilitate and widen roadway. Scheduled to begin Fall 2008 and end Fall 2011;

- Widen I-680 northbound and add High Occupaucy Vehicle (HOV) lanes from Calaveras Boulevard (Milpitas) to Stoneridge Drive (Pleasanton). Scheduled to begin Spring 2013 and end Spring 2015;
- Convert southbound HOV laue. Scheduled to begin Spring 2009 and end Fall 2011;

I-880
- Irrigate, plant and restore highway vegetation. Began Summer 2004 and ends Fall 2008;
- Construct sound walls. Scheduled to begin Fall 2011 and end Spring 2013;
- Widen from 6 to 8 lanes for HOV. Scheduled to begin Spring 2011 and end Summer 2013.

Traffic
Any work in State ROW that may disrupt traffic on a State facility should be addressed in a *traffic control plan.*

Capital Improvements/Public Facilities
Public works projects should be in conformity with the City of Milpitas and County of Santa Clara general plans.

Cumulative Impacts
Cumulative impacts should also be considered where alternatives contemplate work that would affect State ROW such as any transportation of hazardous material on State ROW, greenhouse emissions, commnnity impacts, traffic impacts, tree removal, endangered species, seasonal wetlands, and water quality impacts (e.g. drainages, culverts etc.).

Greenhouse Gases
Recent concern abont greenhouse gas (GHGs) emissions and the current release of the Office of Planning and Research (OPR) Technical Advisory (June 19, 2008) have increased emphasis on the need to evaluate GHG impacts. OPR's Techuical Advisory (OPR TA) has provided guidance on methods to identify potential emissions. Good faith effort in reducing GHG emissions would also include energy efficient practices for water usage. This would entail a redncti on in the length of water and sewer lines that would enhance urban infill and mixed use development (OPR TA page 5 and OPR General Plan Guidelines, page 112) and thereby reduce vehicle trips and reduce construction and maintenance impacts to State ROW. Any increased emissions and/or expanded carbon footprint due to increased vehicles miles traveled should be evaluated and mitigation recommended, where appropriate.

Water Quality
Please provide discussion on any State ROW regarding alteration or impacts to drainage facilities, and culverts. Review the CEQA guidance Appendix G Environmental Checklist for Hydrology and Water Quality specifically c) and e) to ensure compliance.

Cultural Resources
The project's environmental impact report needs to include documented results of a current archaeological record search from the Northwest Information Center of the California Historical Resources Information System if construction activities are proposed within State ROW. Current searches must be no more than five years old. The Department requires the records search, and if warranted, a cultural resource study by a qualified, professional

archaeologist, to ensure compliance with CEQA, Section 5024.5 of the California Public Resources Code, and Volume 2 of the Department's Environmental Handbook. Work subject to these requirements includes, but is not limited to: lane widening, channelization, anxiliary lanes, and/or modification of existing features such as slopes, drainage features, curbs, sidewalks and driveways within or adjacent to State ROW. These requirements, including applicable mitigation, must be fulfilled before an encroachment permit can be issued for project-related work in State ROW. See the website address below for more information regarding the California Historical Resources Information System – Northwest Information Center. (Click on IC Roster) http://ohp.parks.ca.gov

Encroachment Permit

Work that encroaches onto the State ROW requires an encroachment permit that is issued by the Department. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to the address below. Traffic-related mitigation measures should be incorporated into the construction plans during the encroachment permit process.

Office of Permits
California DOT, District 4
P.O. Box 23660
Oakland, CA 94623-0660

See the website link below for more information.
http://www.dot.ca.gov/hq/traffops/developserv/permits/

Should you have any questions regarding this letter, please call José L. Olveda of my staff at (510) 286-5535.

Sincerely,

Lisa Carboni

LISA CARBONI
District Branch Chief
Local Development - Intergovernmental Review

c: Scott Morgan (State Clearinghouse)

SANTA CLARA
Valley Transportation Authority

FAX COVER SHEET

Please deliver fax to:

Sheldon Ah Sing	City of Milpitas	**Phone**	**Fax**
			586-3293

Subject: Development Review

Total pages including cover: 2

Original _____ will x _____ will not follow by mail.

From: Roy Molseed
Santa Clara Valley Transportation Authority
Environmental Planning
3331 North First Street, Bldg. B
San Jose, CA 95134-1906

OFFICE PHONE (408) 321-5789 OFFICE FAX (408) 321-5787

Memo:

If you do not receive all the pages indicated above, or have any problems with this transmittal, please call (408) 321-5789.

SANTA CLARA
Valley Transportation Authority

September 29, 2008

City of Milpitas
Planning Division
455 East Calaveras Boulevard
Milpitas, CA 95035-5479

Attention: Sheldon Ah Sing

Subject: Milpitas Water and Sewer Master Plan Update

Dear Mr. Sing:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the NOP for a Draft EIR for an update to the Water and Sewer Master Plan Update. We have the following comments.

Transit Service Impacts

There are several projects that may have impacts on transit operations due to the location of existing transit facilities. These projects include: W-MP-4, S-MP-11A, S-MP-11B, S-MP-11C, S-MP-11D, and S-MP-12.

The plans for the projects should have a note to contact Steve Newgren of VTA Operations Planning at (408) 952-4106 if a bus stop or bus route will be affected by construction activities.

VTA requests the opportunity to review more detailed maps of the projects when they are made available as part of the Master Plan. We may have additional comments concerning potential impacts to existing or planed transit service.

Thank you for the opportunity to review this project. If you have any questions, please call me at (408) 321-5784.

Sincerely,

Roy Molseed
Senior Environmental Planner

RM:kh

cc: Samantha Swan, VTA
ML0806

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org

September 30, 2008

Sheldon S. Ah-Sing
City of Milpitas
455 E. Calaveras Blvd.
Milpitas, CA 95035-5411

Subject: Notice of Preparation of a Draft Environmental Impact Report for the City of Milpitas Water and Sewer Master Plan Updates

Dear Mr. Ah-Sing:

The Santa Clara County Parks and Recreation Department (County Parks Department) is in receipt of a Notice of Preparation for a Draft Environmental Impact Report (DEIR) for the City of Milpitas Water and Sewer Master Plan Update. The County Parks Department's comments are primarily focused on potential impacts related to the *Santa Clara County Countywide Trails Master Plan Update* relative to countywide trail routes, public access, and regional parks.

General Plan Consistency and Land Use Compatibility
The DEIR should include a discussion related to the Santa Clara County Countywide Trails Master Plan Update, an element of the Parks and Recreation Section of the County General Plan, that the Board of Supervisors adopted on November 14, 1995 and how the proposed project is consistent with the Countywide Trails Master Plan Update.

Traffic, Circulation and Alternative Transportation
The DEIR states that alternative transportation will be evaluated, but does not include language regarding potential impacts the proposed project may have on the countywide trail routes in the project vicinity. The DEIR should include a discussion of any potential impacts to existing and proposed trails routes and how it will impact the bicycle trail connections within the city.

Recreation
The scope of the DEIR should also include an evaluation of recreational opportunities in the project vicinity and whether or not the improvements associated with the Master Plan Update will result in potential impacts to these recreational opportunities.

The DEIR should include a discussion of the nearby Ed Levin County Park and how the proposed project may or may not impact the County Park.

The DEIR should also describe the following countywide trail routes, which offer opportunities for non-motorized transportation and connections to the surrounding neighborhoods, parks trails and open space areas, and how the proposed project may impact these countywide trail routes.

- ***Bay Area Ridge Trail: Diablo Range*** (R5-B) – designated as a trail route within other public lands for hiking, off-road cycling and equestrian use. This trail follows the Calera Creek Trail: Northwest Agua Caliente Trail within Ed Levin County Park.

- ***Calaveras Connector Trail*** (C7) – designated as an on-street bicycle route within road right-of-way for on-road cycling use only. This trail is located along Calaveras Road.

- ***Calera Creek Connector Trail*** (C6) – designated as a trail route within other public lands for hiking, off-road cycling and equestrian use. This trail is located along Calera Creek.

Since the project scope is located outside of Ed Levin County Park, the County Parks Department is under the impression that the City of Milpitas would not need to enter our Park system to access their water and sewer systems, nor use Ed Levin for a potential staging area.

Thank you for the opportunity to comment on the Notice of Preparation for the DEIR for the City of Milpitas Water and Sewer Master Plan Update. Please send us a copy of the Draft EIR once it becomes available for review. If you have any questions regarding these comments, please feel free to contact me at (408) 355-2230 or via email at kimberly.Brosseau@prk.sccgov.org.

Sincerely,

Kimberly Brosseau
Park Planner III

cc: Jane Mark, Senior Planner
Bill Grimes, Environmental Health and Safety Compliance Specialist – Water Systems Advisor

Appendix B

Master Plan Updates Air Quality Model Assumptions, Basis for Worst-Case Construction Day

Road Construction Emissions Model, Version 6.3, Estimates for 2010 and 2011

URBEMIS 2007, Version 9.2.4, Detailed Reports

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W/WW/RW Master Plan Projects
Basis for Worst-Case Contruction Day

Potable WaterProject	Construction Year	Length (LF)	Area (acres)	Assumptions
Dixon Road Valve Installation (W-MP-1)	2009		0.688705234	10x10 construction area for all 300 residences
Carlo Street Pipeline (W-MP-2)	2010	560	0.771349862	contruction ROW = 60 feet
Pectin Court Pipeline (W-MP-3)	2010	300	0.034435262	J/B - Pits 15x50
SCVWD Zone Storage Project (W-MP-6)	2011-12		2.5	approximate storage tank are requirments
Gibraltar Turnout (W-MP-4	<2020	N/A		pipe distances unknown
TASP Recycled Water Pipeline Improvements (W-MP-5)	2010-2020	1497	2.061983471	total improvments = 14,970 LF; averaged over 10 years; assumed start in 2010
Sanitary Sewer Projects				
I-880 Sewer Crossing (S-MP-1)	2010-11	225	0.034435262	J/B - Pits 15x50
North Milpitas Boulevard Sewer Improvements (S-MP-2)	2010-11	490	0.674931129	contruction ROW = 60 feet
Smithwood Street Sewer Improvements (S-MP-5A)	2020	885	1.219008264	contruction ROW = 60 feet
South Milpitas Boulevard Sewer Improvements (S-MP-6A)	2020	745	1.026170799	contruction ROW = 60 feet
Great Mall Project A (S-MP-11A)	2010-11	1920	2.644628099	contruction ROW = 60 feet
Great Mall Project B (S-MP-11B)	2010-11	2630	3.622589532	contruction ROW = 60 feet
Great Mall Project C (S-MP-11C)	2010-11	1240	1.707988981	contruction ROW = 60 feet
Great Mall Project D (S-MP-11D)	<2020	2060	2.837465565	contruction ROW = 60 feet
Great Mall Project E (S-MP-11E)	>2020	4105	5.654269972	contruction ROW = 60 feet
Montague Expressway Sewer Improvements (S-MP-12)	>2020	N/a	N/A	
Worst Case Construction	2010-11	8862	14.0523416	Appiled to each year - 2010/2011

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Milpitas Master Plan Updates 2010 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	7.1	46.7	40.1	22.1	2.1	20.0	6.0	1.8	4.2	6,395.0
Grading/Excavation	8.0	51.7	45.2	22.6	2.6	20.0	6.4	2.3	4.2	7,120.4
Drainage/Utilities/Sub-Grade	7.2	45.1	37.2	22.3	2.3	20.0	6.1	2.0	4.2	6,165.7
Paving	7.9	37.4	19.7	1.9	1.9	-	1.6	1.6	-	9,975.2
Maximum (pounds/day)	8.0	51.7	45.2	22.6	2.6	20.0	6.4	2.3	4.2	9,975.2
Total (tons/construction project)	1.0	3.0	8.2	2.6	0.3	2.2	12.5	0.5	0.5	935.5

Notes: Project Start Year -> 2010
Project Length (months) -> 12
Total Project Area (acres) -> 14
Maximum Area Disturbed/Day (acres) -> 2
Total Soil Imported/Exported (yd^3/day)-> 42

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Milpitas Master Plan Updates 2010 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	3.2	21.2	18.2	10.1	1.0	9.1	2.7	0.8	1.9	2,906.8
Grading/Excavation	3.7	23.5	20.6	10.3	1.2	9.1	2.9	1.0	1.9	3,236.6
Drainage/Utilities/Sub-Grade	3.3	20.5	16.9	10.1	1.1	9.1	2.8	0.9	1.9	2,802.6
Paving	3.6	17.0	9.0	0.9	0.9	-	0.7	0.7	-	4,534.2
Maximum (kilograms/day)	3.7	23.5	20.6	10.3	1.2	9.1	2.9	1.0	1.9	4,534.2
Total (megagrams/construction project)	0.9	2.8	7.4	2.3	0.3	2.0	11.3	0.4	0.4	848.5

Notes: Project Start Year -> 2010
Project Length (months) -> 12
Total Project Area (hectares) -> 6
Maximum Area Disturbed/Day (hectares) -> 1
Total Soil Imported/Exported ($meters^3$/day)-> 32

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Milpitas Master Plan Updates 2011 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	6.9	44.3	39.7	22.1	2.1	20.0	6.0	1.8	4.2	6,397.3
Grading/Excavation	7.8	49.1	44.7	22.6	2.6	20.0	6.4	2.2	4.2	7,123.6
Drainage/Utilities/Sub-Grade	7.0	42.7	36.8	22.3	2.3	20.0	6.1	2.0	4.2	6,168.1
Paving	7.5	35.1	19.5	1.9	1.9	-	1.6	1.6	-	9,979.9
Maximum (pounds/day)	7.8	49.1	44.7	22.6	2.6	20.0	6.4	2.2	4.2	9,979.9
Total (tons/construction project)	1.0	3.0	7.8	2.6	0.3	2.2	12.5	0.5	0.5	935.9

Notes: Project Start Year -> 2011
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Total Project Area (acres) -> 14
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Emission Estimates for -> Milpitas Master Plan Updates 2011 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	3.1	20.1	18.1	10.1	1.0	9.1	2.7	0.8	1.9	2,907.9
Grading/Excavation	3.6	22.3	20.3	10.3	1.2	9.1	2.9	1.0	1.9	3,238.0
Drainage/Utilities/Sub-Grade	3.2	19.4	16.7	10.1	1.1	9.1	2.8	0.9	1.9	2,803.7
Paving	3.4	15.9	8.9	0.9	0.9	-	0.7	0.7	-	4,536.3
Maximum (kilograms/day)	3.6	22.3	20.3	10.3	1.2	9.1	2.9	1.0	1.9	4,536.3
Total (megagrams/construction project)	0.9	2.7	7.1	2.3	0.3	2.0	11.3	0.4	0.4	848.9

Notes: Project Start Year -> 2011
Project Length (months) -> 12
Total Project Area (hectares) -> 6
Maximum Area Disturbed/Day (hectares) -> 1
Total Soil Imported/Exported ($meters^3$/day)-> 32

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

1/13/2009 3:05:41 PM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Area Source Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.07						
TOTALS (tons/year, unmitigated)	0.09	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Changes to Defaults

1/13/2009 3:04:24 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Area Source Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.06	0.81	0.68	0.00	0.00	0.00	966.44
Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	0.38						
TOTALS (lbs/day, unmitigated)	0.56	0.83	2.23	0.00	0.01	0.01	969.25

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.4

Detail Report for Winter Area Source Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.06	0.81	0.68	0.00	0.00	0.00	966.44
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	0.38						
TOTALS (lbs/day, unmitigated)	0.44	0.81	0.68	0.00	0.00	0.00	966.44

Area Source Changes to Defaults

1/13/2009 3:05:33 PM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2012	0.85	1.17	0.84	0.00	0.42	0.06	0.48	0.09	0.06	0.15	151.67
Mass Grading 04/15/2012-06/01/2012	0.05	0.38	0.22	0.00	0.26	0.02	0.28	0.05	0.02	0.07	41.11
Mass Grading Dust	0.00	0.00	0.00	0.00	0.26	0.00	0.26	0.05	0.00	0.05	0.00
Mass Grading Off Road Diesel	0.05	0.38	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	39.33
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
Fine Grading 06/02/2012-07/02/2012	0.03	0.23	0.13	0.00	0.16	0.01	0.17	0.03	0.01	0.04	24.67
Fine Grading Dust	0.00	0.00	0.00	0.00	0.16	0.00	0.16	0.03	0.00	0.03	0.00
Fine Grading Off Road Diesel	0.03	0.23	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	23.60
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
Trenching 06/15/2012-07/15/2012	0.02	0.16	0.09	0.00	0.00	0.01	0.01	0.00	0.01	0.01	19.08
Trenching Off Road Diesel	0.02	0.16	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	18.00
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07

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Asphalt 07/03/2012-08/03/2012	0.02	0.13	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	14.34
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.02	0.13	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	11.75
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.14
Coating 08/01/2012-11/01/2012	0.70	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
Architectural Coating	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
Building 08/08/2012-10/08/2012	0.03	0.26	0.28	0.00	0.00	0.01	0.02	0.00	0.01	0.01	51.63
Building Off Road Diesel	0.02	0.17	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	19.65
Building Vendor Trips	0.01	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.66
Building Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.32

Phase Assumptions

Phase: Fine Grading 6/2/2012 - 7/2/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 3

Maximum Daily Acreage Disturbed: 0.75

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 4/15/2012 - 6/1/2012 - Type Your Description Here

Total Acres Disturbed: 3

Maximum Daily Acreage Disturbed: 0.75

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

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On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/15/2012 - 7/15/2012 - Type Your Description Here

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 7/3/2012 - 8/3/2012 - Default Paving Description

Acres to be Paved: 0.75

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 8/8/2012 - 10/8/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 8/1/2012 - 11/1/2012 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 4/16/2012-6/1/2012 Active Days: 35	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Mass Grading 04/15/2012-06/01/2012	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Mass Grading Dust	0.00	0.00	0.00	0.00	15.00	0.00	15.00	3.13	0.00	3.13	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Time Slice 6/4/2012-6/14/2012 Active Days: 9	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Fine Grading 06/02/2012-07/02/2012	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Fine Grading Dust	0.00	0.00	0.00	0.00	15.00	0.00	15.00	3.13	0.00	3.13	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04

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Time Slice 6/15/2012-7/2/2012 Active Days: 12	4.56	**37.30**	**21.50**	0.00	15.01	**1.81**	**16.82**	3.14	**1.66**	**4.80**	**4,166.03**
Fine Grading 06/02/2012-07/02/2012	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Fine Grading Dust	0.00	0.00	0.00	0.00	15.00	0.00	15.00	3.13	0.00	3.13	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Trenching 06/15/2012-07/15/2012	1.84	15.30	9.00	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.67
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Time Slice 7/3/2012-7/13/2012 Active Days: 9	3.70	26.24	17.64	0.00	0.02	1.66	1.67	0.01	1.52	1.53	3,011.76
Asphalt 07/03/2012-08/03/2012	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.21	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.30
Paving Worker Trips	0.05	0.09	1.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.56
Trenching 06/15/2012-07/15/2012	1.84	15.30	9.00	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.67
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Time Slice 7/16/2012-7/31/2012 Active Days: 12	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Asphalt 07/03/2012-08/03/2012	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.21	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.30
Paving Worker Trips	0.05	0.09	1.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.56

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Time Slice 8/1/2012-8/3/2012 Active Days: 3	**22.77**	10.95	8.88	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,219.96
Asphalt 07/03/2012-08/03/2012	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.21	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.30
Paving Worker Trips	0.05	0.09	1.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.56
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Time Slice 8/6/2012-8/7/2012 Active Days: 2	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Time Slice 8/8/2012-10/8/2012 Active Days: 44	22.39	12.03	13.04	**0.01**	0.06	0.64	0.70	0.02	0.59	0.61	2,371.91
Building 08/08/2012-10/08/2012	1.50	12.02	12.80	0.01	0.06	0.64	0.70	0.02	0.59	0.61	2,347.03
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.29	3.85	2.82	0.01	0.03	0.14	0.17	0.01	0.13	0.14	893.62
Building Worker Trips	0.17	0.30	5.42	0.01	0.03	0.01	0.04	0.01	0.01	0.02	560.03
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Time Slice 10/9/2012-11/1/2012 Active Days: 18	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88

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Phase Assumptions

Phase: Fine Grading 6/2/2012 - 7/2/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 3

Maximum Daily Acreage Disturbed: 0.75

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 4/15/2012 - 6/1/2012 - Type Your Description Here

Total Acres Disturbed: 3

Maximum Daily Acreage Disturbed: 0.75

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/15/2012 - 7/15/2012 - Type Your Description Here

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 7/3/2012 - 8/3/2012 - Default Paving Description

Acres to be Paved: 0.75

Off-Road Equipment:

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4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 8/8/2012 - 10/8/2012 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 8/1/2012 - 11/1/2012 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Winter Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 4/16/2012-6/1/2012 Active Days: 35	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Mass Grading 04/15/2012-06/01/2012	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Mass Grading Dust	0.00	0.00	0.00	0.00	15.00	0.00	15.00	3.13	0.00	3.13	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Time Slice 6/4/2012-6/14/2012 Active Days: 9	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Fine Grading 06/02/2012-07/02/2012	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Fine Grading Dust	0.00	0.00	0.00	0.00	15.00	0.00	15.00	3.13	0.00	3.13	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04

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Time Slice 6/15/2012-7/2/2012 Active Days: 12	4.56	**37.30**	**21.50**	0.00	15.01	**1.81**	**16.82**	3.14	**1.66**	**4.80**	**4,166.03**
Fine Grading 06/02/2012-07/02/2012	2.72	22.00	12.50	0.00	15.00	1.07	16.08	3.13	0.99	4.12	2,349.35
Fine Grading Dust	0.00	0.00	0.00	0.00	15.00	0.00	15.00	3.13	0.00	3.13	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Trenching 06/15/2012-07/15/2012	1.84	15.30	9.00	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.67
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Time Slice 7/3/2012-7/13/2012 Active Days: 9	3.70	26.24	17.64	0.00	0.02	1.66	1.67	0.01	1.52	1.53	3,011.76
Asphalt 07/03/2012-08/03/2012	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.21	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.30
Paving Worker Trips	0.05	0.09	1.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.56
Trenching 06/15/2012-07/15/2012	1.84	15.30	9.00	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.67
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.04
Time Slice 7/16/2012-7/31/2012 Active Days: 12	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Asphalt 07/03/2012-08/03/2012	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.21	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.30
Paving Worker Trips	0.05	0.09	1.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.56

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Time Slice 8/1/2012-8/3/2012 Active Days: 3	**22.77**	10.95	8.88	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,219.96
Asphalt 07/03/2012-08/03/2012	1.87	10.94	8.64	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,195.09
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.21	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.30
Paving Worker Trips	0.05	0.09	1.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.56
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Time Slice 8/6/2012-8/7/2012 Active Days: 2	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Time Slice 8/8/2012-10/8/2012 Active Days: 44	22.39	12.03	13.04	**0.01**	0.06	0.64	0.70	0.02	0.59	0.61	2,371.91
Building 08/08/2012-10/08/2012	1.50	12.02	12.80	0.01	0.06	0.64	0.70	0.02	0.59	0.61	2,347.03
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.29	3.85	2.82	0.01	0.03	0.14	0.17	0.01	0.13	0.14	893.62
Building Worker Trips	0.17	0.30	5.42	0.01	0.03	0.01	0.04	0.01	0.01	0.02	560.03
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Time Slice 10/9/2012-11/1/2012 Active Days: 18	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Coating 08/01/2012-11/01/2012	20.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88
Architectural Coating	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.88

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Phase Assumptions

Phase: Fine Grading 6/2/2012 - 7/2/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 3

Maximum Daily Acreage Disturbed: 0.75

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 4/15/2012 - 6/1/2012 - Type Your Description Here

Total Acres Disturbed: 3

Maximum Daily Acreage Disturbed: 0.75

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/15/2012 - 7/15/2012 - Type Your Description Here

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 7/3/2012 - 8/3/2012 - Default Paving Description

Acres to be Paved: 0.75

Off-Road Equipment:

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4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 8/8/2012 - 10/8/2012 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 8/1/2012 - 11/1/2012 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General light industry	0.18	0.26	2.38	0.00	0.41	0.08	221.81
TOTALS (tons/year, unmitigated)	0.18	0.26	2.38	0.00	0.41	0.08	221.81

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General light industry		51.80	acres	3.00	155.40	1,309.24
					155.40	1,309.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.8	0.7	99.1	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	12.8	1.6	95.3	3.1
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	59.4	40.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
General light industry				50.0	25.0	25.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General light industry	0.95	1.22	12.85	0.01	2.25	0.43	1,272.80
TOTALS (lbs/day, unmitigated)	0.95	1.22	12.85	0.01	2.25	0.43	1,272.80

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General light industry		51.80	acres	3.00	155.40	1,309.24
					155.40	1,309.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.8	0.7	99.1	0.2
Light Truck < 3750 lbs	12.8	1.6	95.3	3.1

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	59.4	40.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
General light industry				50.0	25.0	25.0

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Operational Changes to Defaults

1/13/2009 3:05:14 PM

Urbemis 2007 Version 9.2.4

Detail Report for Winter Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General light industry	1.13	1.82	13.50	0.01	2.25	0.43	1,100.65
TOTALS (lbs/day, unmitigated)	1.13	1.82	13.50	0.01	2.25	0.43	1,100.65

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General light industry		51.80	acres	3.00	155.40	1,309.24
					155.40	1,309.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.8	0.7	99.1	0.2
Light Truck < 3750 lbs	12.8	1.6	95.3	3.1

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	59.4	40.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
General light industry				50.0	25.0	25.0

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Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	0.85	1.17	0.84	0.00	0.42	0.06	0.48	0.09	0.06	0.15	151.67
2012 TOTALS (tons/year mitigated)	0.85	1.17	0.84	0.00	0.42	0.06	0.48	0.09	0.06	0.15	151.67
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.09	0.15	0.26	0.00	0.00	0.00	176.63

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.18	0.26	2.38	0.00	0.41	0.08	221.81
TOTALS (tons/year, mitigated)	0.18	0.26	2.38	0.00	0.41	0.08	221.81
Percent Reduction	0.00	0.00	0.00	NaN	0.00	0.00	0.00

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.27	0.41	2.64	0.00	0.41	0.08	398.44

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	22.77	37.30	21.50	0.01	15.01	1.81	16.82	3.14	1.66	4.80	4,166.03
2012 TOTALS (lbs/day mitigated)	22.77	37.30	21.50	0.01	15.01	1.81	16.82	3.14	1.66	4.80	4,166.03

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.56	0.83	2.23	0.00	0.01	0.01	969.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.95	1.22	12.85	0.01	2.25	0.43	1,272.80
TOTALS (lbs/day, mitigated)	0.95	1.22	12.85	0.01	2.25	0.43	1,272.80
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.51	2.05	15.08	0.01	2.26	0.44	2,242.05

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Documents and Settings\cmeyer\My Documents\Projects\0051-012_Milpitas_MP_Program EIR\ADEIR1\AQ\Milpitas1.urb924

Project Name: milpitas1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	22.77	37.30	21.50	0.01	15.01	1.81	16.82	3.14	1.66	4.80	4,166.03
2012 TOTALS (lbs/day mitigated)	22.77	37.30	21.50	0.01	15.01	1.81	16.82	3.14	1.66	4.80	4,166.03

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.44	0.81	0.68	0.00	0.00	0.00	966.44

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.13	1.82	13.50	0.01	2.25	0.43	1,100.65
TOTALS (lbs/day, mitigated)	1.13	1.82	13.50	0.01	2.25	0.43	1,100.65
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.57	2.63	14.18	0.01	2.25	0.43	2,067.09

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

Miliptas Master Plan Update Operational GHG Emissions

Storage Tank Pump Station	
1450 HP/hr =	
1081.265 KWh	
Total Annual KWh =	9238328.16
Total lbs/CO2/year=	5230741.404
Total metric tons/CO2/year=	**2372.627212**
Total lbs/CH4/year =	267.9115166
Total metric tons/CH4/year=	0.121522764

Project Total MTC02e/yr	**2372.748735**

Assumptions

Pumps run via electrical grid
1 HP/hr = 0.7457 KWh
Mulptiple pumps w/ total hp rating of 1450
Operations assumed 24/7
0.5662 lbs/CO2 emitted per KWh (1)
2,204.62 lbs = 1 metric ton
0.000029 lbs/CH4/KWh (2)

Source(s):
(1) California Climate Action Registry Power/Utility Protocol Public Reports (as of June 2008).
http://www.climateregistry.org/CARROT/public/reports.aspx

(2) Emissions from California Air Resources Board, Greenhouse Gas Inventory, 1990 – 2004 (November 17, 2007 version), available on line at http://www.arb.ca.gov/cc/inventory/data/data.htm. Consumption data from California Energy Commission, http://www.energy.ca.gov

Appendix C

California Natural Diversity Database (CNDDB) Outputs for a 5-mile Radius of the Master Plan Study Area

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California Natural Diversity Database (CNDDB) Outputs for a 5-mile Radius of the Master Plan Study Area

SNAME	CNAME	KQUADNAME	ACCURACY	PRESENCE	FEDLIST	CALLIST	CNPSLIST
Accipiter striatus	sharp-shinned hawk	La Costa Valley	80 meters	Presumed Extant	None	None	
Actinemys marmorata	western pond turtle	San Jose East	nonspecific area	Presumed Extant	None	None	
Actinemys marmorata	western pond turtle	Milpitas	80 meters	Presumed Extant	None	None	
Actinemys marmorata pallida	southwestern pond turtle	La Costa Valley	80 meters	Presumed Extant	None	None	
Agelaius tricolor	tricolored blackbird	Milpitas	2/5 mile	Presumed Extant	None	None	
Agelaius tricolor	tricolored blackbird	Milpitas	1/5 mile	Presumed Extant	None	None	
Agelaius tricolor	tricolored blackbird	Milpitas	1/5 mile	Presumed Extant	None	None	
Ambystoma californiense	California tiger salamander	San Jose West	5 miles	Extirpated	Threatened	None	
Ambystoma californiense	California tiger salamander	Milpitas	nonspecific area	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Milpitas	specific area	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Milpitas	specific area	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Milpitas	1/10 mile	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Milpitas	specific area	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Milpitas	80 meters	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Milpitas	80 meters	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Calaveras Reservoir	80 meters	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	La Costa Valley	80 meters	Presumed Extant	Threatened	None	
Ambystoma californiense	California tiger salamander	Calaveras Reservoir	80 meters	Presumed Extant	Threatened	None	
Antrozous pallidus	pallid bat	La Costa Valley	80 meters	Presumed Extant	None	None	
Antrozous pallidus	pallid bat	San Jose West	1 mile	Presumed Extant	None	None	
Aquila chrysaetos	golden eagle	Calaveras Reservoir	80 meters	Presumed Extant	None	None	
Aquila chrysaetos	golden eagle	La Costa Valley	80 meters	Presumed Extant	None	None	
Ardea herodias	great blue heron	Calaveras Reservoir	1/5 mile	Presumed Extant	None	None	
Ardea herodias	great blue heron	Milpitas	80 meters	Presumed Extant	None	None	
Astragalus tener var. tener	alkali milk-vetch	Milpitas	1 mile	Possibly Extirpated	None	None	1B.2
Astragalus tener var. tener	alkali milk-vetch	Milpitas	1 mile	Extirpated	None	None	1B.2
Astragalus tener var. tener	alkali milk-vetch	Milpitas	specific area	Presumed Extant	None	None	1B.2
Athene cunicularia	burrowing owl	San Jose West	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Mountain View	3/5 mile	Possibly Extirpated	None	None	
Athene cunicularia	burrowing owl	Milpitas	2/5 mile	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Niles	2/5 mile	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Mountain View	1/5 mile	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	1/5 mile	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Mountain View	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Niles	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	specific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	1/10 mile	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	San Jose West	1/10 mile	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Niles	1/10 mile	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	specific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	nonspecific area	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Presumed Extant	None	None	

California Natural Diversity Database (CNDDB) Outputs for a 5-mile Radius of the Master Plan Study Area

SNAME	CNAME	KQUADNAME	ACCURACY	PRESENCE	FEDLIST	CALLIST	CNPSLIST
Athene cunicularia	burrowing owl	San Jose West	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Possibly Extirpated	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Extirpated	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Niles	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Possibly Extirpated	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Milpitas	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Niles	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	Niles	80 meters	Presumed Extant	None	None	
Athene cunicularia	burrowing owl	San Jose West	80 meters	Presumed Extant	None	None	
Atriplex depressa	brittlescale	Milpitas	specific area	Presumed Extant	None	None	1B.2
Atriplex joaquiniana	San Joaquin spearscale	Niles	1 mile	Presumed Extant	None	None	1B.2
Atriplex joaquiniana	San Joaquin spearscale	Milpitas	specific area	Presumed Extant	None	None	1B.2
Campanula exigua	chaparral harebell	Calaveras Reservoir	80 meters	Presumed Extant	None	None	1B.2
Centromadia parryi ssp. congdonii	Congdon's tarplant	San Jose East	5 miles	Extirpated	None	None	1B.2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Milpitas	1 mile	Possibly Extirpated	None	None	1B.2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Milpitas	specific area	Presumed Extant	None	None	1B.2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Milpitas	specific area	Presumed Extant	None	None	1B.2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Milpitas	specific area	Presumed Extant	None	None	1B.2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Milpitas	specific area	Presumed Extant	None	None	1B.2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Niles	specific area	Presumed Extant	None	None	1B.2
Charadrius alexandrinus nivosus	western snowy plover	Milpitas	nonspecific area	Presumed Extant	Threatened	None	
Charadrius alexandrinus nivosus	western snowy plover	Milpitas	1/5 mile	Presumed Extant	Threatened	None	
Chorizanthe robusta var. robusta	robust spineflower	San Jose West	5 miles	Possibly Extirpated	Endangered	None	1B.1
Clarkia concinna ssp. automixa	Santa Clara red ribbons	San Jose East	1 mile	Presumed Extant	None	None	4.3
Clarkia concinna ssp. automixa	Santa Clara red ribbons	Calaveras Reservoir	1 mile	Presumed Extant	None	None	4.3
Cordylanthus maritimus ssp. palustris	Point Reyes bird's-beak	Milpitas	1 mile	Extirpated	None	None	1B.2
Corynorhinus townsendii	Townsend's big-eared bat	Calaveras Reservoir	1/5 mile	Presumed Extant	None	None	
Dipodomys heermanni berkeleyensis	Berkeley kangaroo rat	Calaveras Reservoir	nonspecific area	Presumed Extant	None	None	
Elanus leucurus	white-tailed kite	Milpitas	2/5 mile	Presumed Extant	None	None	
Elanus leucurus	white-tailed kite	Milpitas	80 meters	Presumed Extant	None	None	
Eryngium aristulatum var. hooveri	Hoover's button-celery	Milpitas	1 mile	Possibly Extirpated	None	None	1B.1
Eryngium aristulatum var. hooveri	Hoover's button-celery	Milpitas	1 mile	Possibly Extirpated	None	None	1B.1
Eryngium aristulatum var. hooveri	Hoover's button-celery	Milpitas	specific area	Presumed Extant	None	None	1B.1
Falco mexicanus	prairie falcon	La Costa Valley	80 meters	Presumed Extant	None	None	
Falco mexicanus	prairie falcon	La Costa Valley	80 meters	Presumed Extant	None	None	
Falco peregrinus anatum	American peregrine falcon	La Costa Valley	80 meters	Presumed Extant	Delisted	Endangered	
Falco peregrinus anatum	American peregrine falcon	La Costa Valley	80 meters	Presumed Extant	Delisted	Endangered	
Falco peregrinus anatum	American peregrine falcon	San Jose West	80 meters	Presumed Extant	Delisted	Endangered	
Fritillaria liliacea	fragrant fritillary	Calaveras Reservoir	1 mile	Presumed Extant	None	None	1B.2

California Natural Diversity Database (CNDDB) Outputs for a 5-mile Radius of the Master Plan Study Area

SNAME	CNAME	KQUADNAME	ACCURACY	PRESENCE	FEDLIST	CALLIST	CNPSLIST
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	Milpitas	nonspecific area	Presumed Extant	None	None	
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	Milpitas	specific area	Presumed Extant	None	None	
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	Milpitas	80 meters	Presumed Extant	None	None	
Helianthella castanea	Diablo helianthella	La Costa Valley	3/5 mile	Presumed Extant	None	None	1B.2
Lasiurus cinereus	hoary bat	San Jose West	1 mile	Presumed Extant	None	None	
Lasiurus cinereus	hoary bat	San Jose West	1 mile	Presumed Extant	None	None	
Lasthenia conjugens	Contra Costa goldfields	Milpitas	specific area	Presumed Extant	Endangered	None	1B.1
Lasthenia conjugens	Contra Costa goldfields	Milpitas	specific area	Presumed Extant	Endangered	None	1B.1
Lepidurus packardi	vernal pool tadpole shrimp	Milpitas	specific area	Presumed Extant	Endangered	None	
Lepidurus packardi	vernal pool tadpole shrimp	Milpitas	specific area	Presumed Extant	Endangered	None	
Lepidurus packardi	vernal pool tadpole shrimp	Milpitas	80 meters	Presumed Extant	Endangered	None	
Malacothamnus arcuatus	arcuate bush-mallow	San Jose West	1 mile	Possibly Extirpated	None	None	1B.2
Malacothamnus arcuatus	arcuate bush-mallow	Calaveras Reservoir	1 mile	Presumed Extant	None	None	1B.2
Malacothamnus hallii	Hall's bush-mallow	San Jose West	1/5 mile	Possibly Extirpated	None	None	1B.2
Malacothamnus hallii	Hall's bush-mallow	Milpitas	1/10 mile	Presumed Extant	None	None	1B.2
Masticophis lateralis euryxanthus	Alameda whipsnake	La Costa Valley	80 meters	Presumed Extant	Threatened	Threatened	
Masticophis lateralis euryxanthus	Alameda whipsnake	La Costa Valley	80 meters	Presumed Extant	Threatened	Threatened	
Masticophis lateralis euryxanthus	Alameda whipsnake	Niles	specific area	Presumed Extant	Threatened	Threatened	
Melospiza melodia pusillula	Alameda song sparrow	Milpitas	3/5 mile	Presumed Extant	None	None	
Melospiza melodia pusillula	Alameda song sparrow	Mountain View	nonspecific area	Presumed Extant	None	None	
Melospiza melodia pusillula	Alameda song sparrow	Milpitas	nonspecific area	Presumed Extant	None	None	
Monardella villosa ssp. globosa	robust monardella	Calaveras Reservoir	specific area	Presumed Extant	None	None	1B.2
Myotis yumanensis	Yuma myotis	Calaveras Reservoir	1/10 mile	Presumed Extant	None	None	
Navarretia prostrata	prostrate vernal pool navarretia	Milpitas	specific area	Presumed Extant	None	None	1B.1
Navarretia prostrata	prostrate vernal pool navarretia	Milpitas	specific area	Presumed Extant	None	None	1B.1
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	Newark	specific area	Presumed Extant	None	None	
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	Mountain View	specific area	Presumed Extant	None	None	
Oncorhynchus mykiss irideus	steelhead - central California coast ESU	Niles	specific area	Presumed Extant	Threatened	None	
Plagiobothrys glaber	hairless popcorn-flower	San Jose West	1 mile	Possibly Extirpated	None	None	1A
Plagiobothrys glaber	hairless popcorn-flower	San Jose East	1 mile	Possibly Extirpated	None	None	1A
Rallus longirostris obsoletus	California clapper rail	Milpitas	nonspecific area	Presumed Extant	Endangered	Endangered	
Rallus longirostris obsoletus	California clapper rail	Mountain View	nonspecific area	Presumed Extant	Endangered	Endangered	
Rallus longirostris obsoletus	California clapper rail	Mountain View	nonspecific area	Presumed Extant	Endangered	Endangered	
Rana boylii	foothill yellow-legged frog	La Costa Valley	nonspecific area	Presumed Extant	None	None	
Rana draytonii	California red-legged frog	Milpitas	specific area	Presumed Extant	Threatened	None	
Rana draytonii	California red-legged frog	Calaveras Reservoir	specific area	Presumed Extant	Threatened	None	
Rana draytonii	California red-legged frog	La Costa Valley	specific area	Presumed Extant	Threatened	None	
Rana draytonii	California red-legged frog	Calaveras Reservoir	80 meters	Presumed Extant	Threatened	None	
Rana draytonii	California red-legged frog	La Costa Valley	80 meters	Presumed Extant	Threatened	None	
Rana draytonii	California red-legged frog	Calaveras Reservoir	specific area	Presumed Extant	Threatened	None	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	nonspecific area	Presumed Extant	Endangered	Endangered	

California Natural Diversity Database (CNDDB) Outputs for a 5-mile Radius of the Master Plan Study Area

SNAME	CNAME	KQUADNAME	ACCURACY	PRESENCE	FEDLIST	CALLIST	CNPSLIST
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	nonspecific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	specific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	specific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	nonspecific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	1/5 mile	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	1/5 mile	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	specific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	specific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Mountain View	nonspecific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	nonspecific area	Presumed Extant	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	80 meters	Extirpated	Endangered	Endangered	
Reithrodontomys raviventris	salt-marsh harvest mouse	Milpitas	80 meters	Presumed Extant	Endangered	Endangered	
Sidalcea malachroides	maple-leaved checkerbloom	Calaveras Reservoir	1 mile	Presumed Extant	None	None	4.2
Sorex vagrans halicoetes	salt-marsh wandering shrew	Milpitas	1 mile	Extirpated	None	None	
Sorex vagrans halicoetes	salt-marsh wandering shrew	Milpitas	nonspecific area	Presumed Extant	None	None	
Streptanthus albidus ssp. peramoenus	most beautiful jewel-flower	Niles	3/5 mile	Presumed Extant	None	None	1B.2
Streptanthus albidus ssp. peramoenus	most beautiful jewel-flower	La Costa Valley	specific area	Presumed Extant	None	None	1B.2
Streptanthus albidus ssp. peramoenus	most beautiful jewel-flower	La Costa Valley	specific area	Presumed Extant	None	None	1B.2
Streptanthus albidus ssp. peramoenus	most beautiful jewel-flower	La Costa Valley	specific area	Presumed Extant	None	None	1B.2
Streptanthus albidus ssp. peramoenus	most beautiful jewel-flower	Calaveras Reservoir	specific area	Presumed Extant	None	None	1B.2
Suaeda californica	California seablite	Milpitas	1 mile	Presumed Extant	Endangered	None	1B.1
Tryonia imitator	mimic tryonia (=California brackishwater snail)	Milpitas	1 mile	Presumed Extant	None	None	
Tryonia imitator	mimic tryonia (=California brackishwater snail)	Mountain View	specific area	Presumed Extant	None	None	

Appendix D

Department of Toxic Substances Control EnviroStor Database Results for City of Milpitas

State Water Resources Control Board Geotracker Database Results for City of Milpitas

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Department of Toxic Substances Control EnviroStor Database Results for City of Milpitas

ID	SITE / FACILITY NAME	SITE / FACILITY TYPE[1]	CLEAN UP STATUS[2]	STATUS DATE	ADDRESS	CITY	ZIP	COUNTY	CODE	LATITUDE	LONGITUDE
43280132	COOK PAINT AND VARNISH COMPANY	STATE RESPONSE	CERTIFIED	3/29/1988	201 SINCLAIR FRONTAGE ROAD	MILPITAS	95035	SANTA CLARA		37.43222222	-121.8880556
43360006	EXIDE CORPORATION	STATE RESPONSE	CERTIFIED	6/1/1986	700 MONTAGUE EXPRESSWAY	MILPITAS	95035	SANTA CLARA		37.41065531	-121.8901467
43360134	FORMER STORMEDIA FACILITY	VOLUNTARY CLEANUP	NO FURTHER ACTION	5/10/2001	690 GIBRALTAR DRIVE	MILPITAS	95035	SANTA CLARA	201354	37.42301318	-121.89478
CAD095991253	GREAT WESTERN CHEMICAL CO	HAZ WASTE - NON-OPERATING	INACTIVE		945 AMES AVE	MILPITAS	9.5E+08	SANTA CLARA		37.420515	-121.887105
43320043	HANDCRAFT TILE	VOLUNTARY CLEANUP	CERTIFIED	12/13/2005	1696 SOUTH MAIN STREET	MILPITAS	95035	SANTA CLARA	201558	37.4059049	-121.9018591
CAT080012479	IDC OF CALIFORNIA INC	HAZ WASTE - NON-OPERATING	INACTIVE		1601 DIXON LANDING ROAD	MILPITAS	9.5E+08	SANTA CLARA		37.454843	-121.925918
CAL000175030	IONIZATION RESEARCH CO DBA ECOSOLUTIONS	HAZ WASTE - OPERATING PERMIT	EVALUATION NEEDED		1823 HOURET CT	MILPITAS	9.5E+08	SANTA CLARA	600419	37.406219	-121.896684
43010018	MCCARTHY RANCH	VOLUNTARY CLEANUP	NO FURTHER ACTION	6/3/1997	MCCARTHY BLVD. AND RANCH DRIVE	MILPITAS	95035	SANTA CLARA	200910	37.42708333	-121.925
43520002	STONEGATE DEVELOPMENT	STATE RESPONSE	CERTIFIED / OPERATION & MAINTENANCE - LAND USE RESTRICTIONS	5/6/1991	1260 DEMPSEY ROAD	MILPITAS	95035	SANTA CLARA	200213	37.41642222	-121.8800222
CAD043720861	THE SHERWIN WILLIAMS COMPANY	HAZ WASTE - NON-OPERATING	INACTIVE		805 SINCLAIR FRONTAGE RD	MILPITAS	9.5E+08	SANTA CLARA		37.420364	-121.882881

Report Located at: http://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&city=Milpitas&zip=&county=&federal_superfund=True&state_response=True&voluntary_cleanup=True&school_cleanup=True&permitted=True&corrective_action=True&display_results=
Search conducted by Sue Chau on 5 November 2008

1 Site / Facility Type
- State Response: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.
- Voluntary Cleanup: Identifies sites with either confirmed or unconfirmed releases, and the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC's costs.
- Non-Operating: A Treatment, Storage, Disposal or Transfer Facility (TSDTF) with no operating hazardous waste management unit(s).
- Operating: A Treatment, Storage, Disposal or Transfer (TSDTF) Facility with an operating hazardous waste management unit(s).

2 Clean Up Status
- Certified: Identifies completed sites with previously confirmed release that are subsequently certified by DTSC as having been remediated satisfactorily under DTSC oversight.
- Certified O&M: Identifies sites that have certified cleanups in place but require ongoing Operation and Maintenance (O&M) activities. The Certified O&M designation means that all planned activities necessary to address the contamination problems have been implemen
  Some remedial activities (e.g., pumping and treating contaminated groundwater) must be continued for years before complete cleanup is achieved. Prior to the Certified O&M designation, all institutional controls (e.g., land use restrictions) necessary to protect public hea
- Inactive – Action Required: Identifies non-active sites where, through a Preliminary Endangerment Assessment (PEA) or other evaluation, DTSC hasdetermined that a removal or remedial action or further extensive investigation is required.
- Inactive – Needs Evaluation: Identifies non-active sites where DTSC has determined a PEA or other evaluation is required.
- No Further Action: Identifies completed sites where DTSC determined after investigation, generally a PEA (an initial assessment), that the property does not pose a problem to public health or the environment.

State Water Resources Control Board Geotracker Database Results for City of Milpitas

ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
SL0608526854	QUANTUM CORPORATION	COMPLETED - CASE CLOSED	500 MCCARTHY	MILPITAS	37.422895	-121.922872
SL0608549827	DART TRANSPORTATION SERVICES	COMPLETED - CASE CLOSED	620 EAST CAPITOL AVENUE	MILPITAS	37.408628	-121.892984
SL18208588	NORTH AMERICAN TRANSFORMER	COMPLETED - CASE CLOSED	1200 PIPER DR	MILPITAS	37.412744	-121.891085
SL18219599	FORD ASSEMBLY PLANT	COMPLETED - CASE CLOSED	1 GREAT MALL PARKWAY	MILPITAS	37.414631	-121.900824
T0608500087	A TOOL SHED	COMPLETED - CASE CLOSED	1300 MAIN ST S	MILPITAS	37.412906	-121.900777
T0608500118	HERZSTEIN	COMPLETED - CASE CLOSED	1535 GLADDING CT	MILPITAS	37.411393	-121.887675
T0608500160	ARCO #6072	COMPLETED - CASE CLOSED	1575 LANDESS AVE	MILPITAS	37.415864	-121.874856
T0608500178	ARCO #2121	COMPLETED - CASE CLOSED	43 S ABBOTT AVE	MILPITAS	37.427678	-121.912808
T0608500188	ARCO #2100	COMPLETED - CASE CLOSED	98 S PARK VICTORIA DR	MILPITAS	37.433914	-121.882367
T0608500208	BACCAGLIO SITE	COMPLETED - CASE CLOSED	1666 S MAIN ST	MILPITAS	37.406075	-121.901758
T0608500268	BUDDY'S FLOORS	COMPLETED - CASE CLOSED	329 SANGO CT	MILPITAS	37.4086	-121.8921
T0608500321	TRUSS COMM	COMPLETED - CASE CLOSED	80 RAILROAD AVE	MILPITAS	37.432554	-121.904521
T0608500377	CHEVRON #9-2435	COMPLETED - CASE CLOSED	342 W CALAVERAS BLVD	MILPITAS	37.427525	-121.909515
T0608500416	OLD CORPORATION YARD	COMPLETED - CASE CLOSED	116 N MAIN ST	MILPITAS	37.433398	-121.906663
T0608500458	CONTAINER CORPORATION	COMPLETED - CASE CLOSED	2600 S HILLVIEW DR	MILPITAS	37.435337	-121.890238
T0608500481	CUSTOM DRYWALL, INC.	COMPLETED - CASE CLOSED	1570 GLADDING CT	MILPITAS	37.410951	-121.887701
T0608500496	DART TRANSPORTATION	COMPLETED - CASE CLOSED	620 E CAPITOL AVE	MILPITAS	37.409191	-121.891152
T0608500518	DI SALVO TRUCKING	COMPLETED - CASE CLOSED	730 E CAPITOL	MILPITAS	37.4081	-121.8887
T0608500527	DOUDELL TRUCKING	COMPLETED - CASE CLOSED	555 E CAPITOL AVE	MILPITAS	37.409769	-121.891886
T0608500573	EXXON #7-8993	COMPLETED - CASE CLOSED	39 S PARK VICTORIA DR	MILPITAS	37.434901	-121.882934
T0608500627	FLEMING FOODS	COMPLETED - CASE CLOSED	999 MONTAGUE EXPY	MILPITAS	37.401626	-121.908244
T0608500641	FOX HOLLOW	COMPLETED - CASE CLOSED	1197 FOX HOLLOW CT	MILPITAS	37.4482	-121.8856
T0608500652	FROST ALL-CAL TRUCKING	COMPLETED - CASE CLOSED	75 E MONTAGUE EXPY	MILPITAS	37.410669	-121.893338
T0608500691	GRACE SIERRA CHEMICAL	COMPLETED - CASE CLOSED	1001 YOSEMITE DR	MILPITAS	37.425	-121.883
T0608500707	HANSON CONCRETE PRODUCTS	COMPLETED - CASE CLOSED	1 HANSON CT	MILPITAS	37.446	-121.9081
T0608500714	HULLIGAN PROPERTY	COMPLETED - CASE CLOSED	1446 S MAIN ST	MILPITAS	37.409306	-121.901497
T0608500740	CALIFORNIA CIRCLE PUMP STATION	COMPLETED - CASE CLOSED	1735 CALIFORNIA CIR	MILPITAS	37.447428	-121.918912
T0608500807	KINGSFORD CO.	COMPLETED - CASE CLOSED	1601 W DIXON LANDING RD	MILPITAS	37.4536	-121.922
T0608500827	LEE'S IMPERIAL WELDING, INC.	COMPLETED - CASE CLOSED	231 HOURET DR	MILPITAS	37.4076	-121.8956
T0608500883	MCCARTHY RANCH	COMPLETED - CASE CLOSED	1400 BELLEW DR	MILPITAS	37.42185	-121.91935
T0608500884	MCCARTHY RANCH	COMPLETED - CASE CLOSED	783 ALVISO-MILPITAS RD	MILPITAS	37.423784	-121.92475
T0608500905	MILPITAS FIRE STATION #1	COMPLETED - CASE CLOSED	25 W CURTIS AVE	MILPITAS	37.419005	-121.902137
T0608500907	MILPITAS GREENS	COMPLETED - CASE CLOSED	1854 N MILPITAS BLVD	MILPITAS	37.456981	-121.910063
T0608500908	MILPITAS MATERIALS	COMPLETED - CASE CLOSED	1125 N MILPITAS BLVD	MILPITAS	37.446192	-121.90801
T0608500912	MISSION LINEN	COMPLETED - CASE CLOSED	1180 AMES AVE	MILPITAS	37.4202	-121.888
T0608500913	MISSION PIPELINE CORP.	COMPLETED - CASE CLOSED	1265 N MILPITAS BLVD	MILPITAS	37.44667	-121.908063
T0608501015	PMT-UNION PACIFIC RAILROAD	COMPLETED - CASE CLOSED	650 HAMMOND AVE	MILPITAS	37.421374	-121.901904
T0608501232	MILPITAS SENIOR CENTER	COMPLETED - CASE CLOSED	160 N MAIN ST	MILPITAS	37.433512	-121.906625
T0608501237	SHAPELL INDUSTRIES OF N.CALIF.	COMPLETED - CASE CLOSED	100 N MILPITAS BLVD	MILPITAS	37.433737	-121.899901
T0608501254	SHELL	COMPLETED - CASE CLOSED	1310 ALVISO-MILPITAS RD	MILPITAS	37.423784	-121.92475
T0608501267	SHELL	COMPLETED - CASE CLOSED	1780 MAIN	MILPITAS	37.405139	-121.901782
T0608501315	SHELL	COMPLETED - CASE CLOSED	950 E CALAVERAS BLVD	MILPITAS	37.434454	-121.88747
T0608501351	SPRING VALLEY GOLF COURSE	COMPLETED - CASE CLOSED	3441 CALAVERAS RD	MILPITAS	37.44486	-121.841037
T0608501413	TENG PROPERTY	COMPLETED - CASE CLOSED	1845 N MILPITAS BLVD	MILPITAS	37.456843	-121.910236
T0608501429	TEXACO	COMPLETED - CASE CLOSED	790 CAPITOL AVE	MILPITAS	37.412612	-121.8984
T0608501430	TEXACO	COMPLETED - CASE CLOSED	92 SERRA WY	MILPITAS	37.427571	-121.908876
T0608501461	SUMMITPOINTE GOLF CLUB	COMPLETED - CASE CLOSED	1200 COUNTRY CLUB	MILPITAS	37.450592	-121.881701
T0608501474	UNION PACIFIC RAILROAD	COMPLETED - CASE CLOSED	224 CURTIS AVE	MILPITAS	37.419776	-121.900101
T0608501504	UNOCAL #6397	COMPLETED - CASE CLOSED	190 W. CALAVERAS BOULEVARD	MILPITAS	37.42783618	-121.9100485
T0608501545	U.S. POSTAL SERVICE	COMPLETED - CASE CLOSED	450 S ABEL ST	MILPITAS	37.424126	-121.906087
T0608501590	QUIKRETE	COMPLETED - CASE CLOSED	91 MONTAGUE EXPY	MILPITAS	37.4105	-121.8922

State Water Resources Control Board Geotracker Database Results for City of Milpitas

ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0608501615	OAK CREEK PUMP STATION	COMPLETED - CASE CLOSED	1515 MCCARTHY BLVD	MILPITAS	37.407842	-121.920392
T0608501634	DEVCON CONSTRUCTION	COMPLETED - CASE CLOSED	555 LOS COCHES ST	MILPITAS	37.4315	-121.8944
T0608501651	MCCARTHY RANCH	COMPLETED - CASE CLOSED	MCCARTHY & MAGNOLIA ST BLVD	MILPITAS	37.414715	-121.920582
T0608501775	PEPSI COLA WEST	COMPLETED - CASE CLOSED	1800 MILMONT DR	MILPITAS	37.4515	-121.9131
T0608501971	BOTTOMLY DISTRIBUTING	COMPLETED - CASE CLOSED	755 YOSEMITE DR	MILPITAS	37.423454	-121.890992
T0608501988	UNION PACIFIC REALTY PROPERTY	COMPLETED - CASE CLOSED	755 E CAPITOL AVE	MILPITAS	37.408151	-121.889697
T0608502004	ROADWAY EXPRESS, INC.	COMPLETED - CASE CLOSED	750 E CAPITOL AVE	MILPITAS	37.407915	-121.88988
T0608502017	CHEVRON #9-0670	COMPLETED - CASE CLOSED	230 N MAIN ST	MILPITAS	37.434311	-121.906914
T0608502028	BRAZIL PROPERTY	COMPLETED - CASE CLOSED	2124 OLD CALAVERAS RD	MILPITAS	37.44569	-121.871606
T0608502054	MILPITAS FIRE STATION #3	COMPLETED - CASE CLOSED	45 MIDWICK DR	MILPITAS	37.449251	-121.908174
T0608502055	AZTEC TILE	COMPLETED - CASE CLOSED	1126 YOSEMITE DR	MILPITAS	37.425482	-121.884111
T0608502105	MARYLINN WELL PUMP STATION	COMPLETED - CASE CLOSED	350 MARYLINN DR	MILPITAS	37.434682	-121.912313
T0608502107	MILPITAS FIRE STATION NO.2	COMPLETED - CASE CLOSED	1263 YOSEMITE DR	MILPITAS	37.426603	-121.881938
T0608502122	PINEWOOD WELL	COMPLETED - CASE CLOSED	232 GREENTREE WY	MILPITAS	37.409604	-121.90519
T0608502139	MILPITAS BERRYESSA PUMP STNT.	COMPLETED - CASE CLOSED	731 FOLSOM CIR	MILPITAS	37.438713	-121.902947
T0608502234	UNOCAL #5130	COMPLETED - CASE CLOSED	27 S PARK VICTORIA DR	MILPITAS	37.43530358	-121.8843607
T0608502379	FEDERAL EXPRESS	COMPLETED - CASE CLOSED	620 S MAIN ST	MILPITAS	37.421557	-121.904124
T0608502382	TALLEY PROPERTY	COMPLETED - CASE CLOSED	893 AMES AVE	MILPITAS	37.421223	-121.888106
T0608502432	OLYMPIAN OIL	COMPLETED - CASE CLOSED	800 AMES AVE	MILPITAS	37.41985	-121.889665
T0608510342	ELMWOOD MEN'S FACILITY	COMPLETED - CASE CLOSED	701 S ABEL ST	MILPITAS	37.418337	-121.905751
T0608514909	FIRESTONE STORE #3673	COMPLETED - CASE CLOSED	1379 S PARK VICTORIA DR	MILPITAS	37.416978	-121.875744
T0608518272	ARCO #6072	COMPLETED - CASE CLOSED	1575 LANDESS	MILPITAS	37.416301	-121.875529
T0608532324	BALCH PETROLEUM	COMPLETED - CASE CLOSED	930 AMES AVE	MILPITAS	37.419661	-121.888164
T0608589973	ARCO #2121	COMPLETED - CASE CLOSED	43 S ABBOTT AVE	MILPITAS	37.427853	-121.914268
T0608590342	LARSON PALLET	COMPLETED - CASE CLOSED	1000 YOSEMITE DR	MILPITAS	37.424168	-121.888184
T0608591307	MURPHY RANCH PUMP STATION	COMPLETED - CASE CLOSED	801 MURPHY RANCH RD	MILPITAS	37.415997	-121.924696
T0608591509	PG&E FACILITY	COMPLETED - CASE CLOSED	66 RANCH RD	MILPITAS	37.425475	-121.920847
T0608591760	SHELL	COMPLETED - CASE CLOSED	990 JACKLIN RD	MILPITAS	37.447311	-121.886333
T0608591766	PIERCE & STEVENS CHEMICAL CORP	COMPLETED - CASE CLOSED	805 SINCLAIR FRONTAGE RD	MILPITAS	37.428099	-121.884335
SLT2O107113	PRUDENTIAL OVERALL SUPPLY	INACTIVE	1429 MILPITAS BLVD N	MILPITAS	37.450834	-121.908723
L10002276721	NEWBY ISLAND LANDFILL	OPEN	1601 DIXON LANDING	MILPITAS	37.45417	-121.92606
SL18327747	COOK PAINT & VARNISH	OPEN	201 SINCLAIR FRONTAGE ROAD	MILPITAS	37.43603815	-121.8952687
SL20284902	SOUTHERN PACIFIC TRANSPORATION CO	OPEN	80 RAILROAD AVENUE	MILPITAS	37.431804	-121.904734
SL18213593	985 MONTAGUE EXPRESSWAY	OPEN - REMEDIATION	985 MONTAGUE EXPRESSWAY	MILPITAS	37.43603815	-121.8952687
T0608500221	BEACON	OPEN - REMEDIATION	10 MAIN ST.	MILPITAS	37.43080627	-121.906857
T0608500224	BEACON #602	OPEN - REMEDIATION	1885 NORTH MILPITAS BOULEVARD	MILPITAS	37.457938	-121.910464
T0608500260	MOBIL #10-JQP (BP 11223)	OPEN - REMEDIATION	97 S. ABBOTT AVENUE	MILPITAS	37.4268526	-121.9131692
T0608501513	UNOCAL #5130	OPEN - REMEDIATION	27 S. PARK VICTORIA	MILPITAS	37.4353066	-121.884583
T0608501549	USA PETROLEUM #102	OPEN - REMEDIATION	200 SERRA WY	MILPITAS	37.4274	-121.9088
T0608525893	PRESTON PIPELINES	OPEN - REMEDIATION	151 BOTHELO AVE.	MILPITAS	37.42827842	-121.9043579
T0608591605	GREAT WESTERN STINNES WESTERN CHEM	OPEN - REMEDIATION	945 AMES AVE	MILPITAS	37.420614	-121.887508
T0608500923	MOBIL (BP 11227)	OPEN - REOPEN CASE	1787 S. MAIN ST.	MILPITAS	37.40486233	-121.9032531
SL0608562344	PARKTOWN PLAZA SHOPPING CENTER	OPEN - SITE ASSESSMENT	1350 SOUTH PARK VICTORIA DRIVE	MILPITAS	37.41755	-121.873784
SL0608594981	601 VISTA WAY	OPEN - SITE ASSESSMENT	601 VISTA WAY	MILPITAS	37.425462	-121.888663
SLT2O104110	SUNNYHILLS SHOPPING CENTER	OPEN - SITE ASSESSMENT	42-110 DIXON RD	MILPITAS	37.43603815	-121.8952687
SLT2O105111	KOMAG 4	OPEN - SITE ASSESSMENT	275 HILLVIEW DR S	MILPITAS	37.437319	-121.890102
T0608501249	SHELL	OPEN - SITE ASSESSMENT	12 N. PARK VICTORIA DRIVE	MILPITAS	37.43602132	-121.8839121
T0608501499	UNOCAL #5368	OPEN - SITE ASSESSMENT	1640 MILPITAS	MILPITAS	37.454125	-121.909448

State Water Resources Control Board Geotracker Database Results for City of Milpitas

ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0608501810	MILPITAS TRANSMISSION	OPEN - SITE ASSESSMENT	130 WINSOR	MILPITAS	37.432618	-121.905517
T0608533813	PENSKE TRUCK LEASING	OPEN - SITE ASSESSMENT	1039 MONTAGUE	MILPITAS	37.412821	-121.885796
T0608565949	SHELL	OPEN - SITE ASSESSMENT	990 JACKLIN	MILPITAS	37.446519	-121.89265
T0608591616	HARRIS MICROWAVE	OPEN - SITE ASSESSMENT	1530 MCCARTHY BLVD	MILPITAS	37.40758	-121.919733
T0608591645	1800 MILMONT DRIVE PROPERTY	OPEN - SITE ASSESSMENT	1800 MILMONT DR	MILPITAS	37.451494	-121.913856
T0608591648	BOTTOMLEY DISTRIBUTING COMPANY	OPEN - SITE ASSESSMENT	755 YOSEMITE DR	MILPITAS	37.423454	-121.890992
T0608591745	GENERAL ELECTRIC CALMA SITE	OPEN - SITE ASSESSMENT	501 SYCAMORE DR	MILPITAS	37.4115	-121.9137
T0608591772	LSI LOGIC CORPORATION	OPEN - SITE ASSESSMENT	1601 MCCARTHY BLVD	MILPITAS	37.405803	-121.918169
SL18240661	QUANTIC INDUSTRIES	OPEN - VERIFICATION MONITORING	MARSH RD & CALAVERAS CREEK	MILPITAS	37.43603815	-121.8952687
T0608501880	CHEVRON #9-2534	OPEN - VERIFICATION MONITORING	1490 S. PARK VICTORIA DRIVE	MILPITAS	37.416464	-121.874762
9724	U.S. FILTER		960 AMES AVE	MILPITAS	37.42043	-121.88744
10208	SPRING VALLEY GOLF COURSE		3441 E. CALAVERAS BL.	MILPITAS	37.45058216	-121.848865
10484	MILPITAS-BELLEW PUMP STATION		481 MURPHY RANCH RD	MILPITAS	37.43641	-121.89487
10485	MILPITAS - CORPORATION		1265 N MILPITAS BLVD	MILPITAS	37.44888	-121.90965
10486	PENSKE TRUCK LEASING COMPANY		1039 MONTAGUE EXPY	MILPITAS	37.41282	-121.88592
10487	SHELL OIL - CALAVERAS BL.		950 E CALAVERAS BLVD	MILPITAS	37.4339	-121.89167
10488	UNOCAL - MILPITAS BL.		1640 N MILPITAS BLVD	MILPITAS	37.45413	-121.91066
10489	DOUDELL TRUCKING		555 E CAPITOL AVE # A	MILPITAS	37.40904	-121.89158
10490	LANDESS ARCO SERVICE STATION		1575 LANDESS AVE	MILPITAS	37.41595	-121.87561
10491	BALCH PETROLEUM		930 AMES AVE	MILPITAS	37.42036	-121.88779
10492	SHELL OIL		12 N PARK VICTORIA DR	MILPITAS	37.43591	-121.88431
10493	SHELL OIL - MAIN ST.		1780 S MAIN ST	MILPITAS	37.40543	-121.90285
10494	UNION OIL-CALAVERAS PLAZA UNION 76		190 W CALAVERAS BLVD	MILPITAS	37.42811	-121.91006
10495	UNOCAL GAS STATION		27 S PARK VICTORIA DR	MILPITAS	37.43509	-121.8842
10496	SHELL OIL - JACKLIN RD		990 JACKLIN RD	MILPITAS	37.44687	-121.89289
10497	MILPITAS MATERIALS CO.		1125 N MILPITAS BLVD	MILPITAS	37.44671	-121.90908
10498	UNOCAL		697 S ABBOTT AVE	MILPITAS	37.43641	-121.89487
10499	UNOCAL		1787 S MAIN ST	MILPITAS	37.4053	-121.90289
10500	USA GAS STATION		1885 N MILPITAS BLVD	MILPITAS	37.45777	-121.91165
10501	XICOR CORPORATION		851 BUCKEYE CT	MILPITAS	37.40681	-121.91492
10502	PACIFIC BELL		76 CARLO ST	MILPITAS	37.43022	-121.90842
10503	OLYMPIAN OIL		800 AMES AVE	MILPITAS	37.41986	-121.88962
10504	MILPITAS - BERRYESSA PUMP STA.		731 FOLSOM CIR	MILPITAS	37.43896	-121.90525
10506	DEVCON CONSTRUCTION, INC.		555 LOS COCHES ST	MILPITAS	37.43158	-121.89445
10507	ARCO OIL - ABBOTT AVE.		43 S ABBOTT AVE	MILPITAS	37.42798	-121.91389
10508	BOTTOMLEY DISTRIBUTORS		755 YOSEMITE DR	MILPITAS	37.42323	-121.89175
10509	PACIFIC GAS & ELECTRIC CO.		66 RANCH DR	MILPITAS	37.42662	-121.92227
10510	FROST ALL-CAL TRUCKING		75 MONTAGUE EXPY	MILPITAS	37.40427	-121.90111
10511	SCOTTS SIERRA HORTICULTURAL PROD		1001 YOSEMITE DR	MILPITAS	37.42418	-121.88819
10512	CHEVRON PARKTOWN PLAZA		1490 S PARK VICTORIA DR	MILPITAS	37.41646	-121.87506
10513	UNITED STATES POST OFFICE		450 S ABEL ST	MILPITAS	37.42299	-121.90682
10514	SHAPELL		100 N MILPITAS BLVD # A	MILPITAS	37.43401	-121.9003
10515	CROWNE PLAZA		777 BELLEW DR # A	MILPITAS	37.42187	-121.91969
10516	MILPITAS - PINEWOOD WELL		232 GREENTREE WAY	MILPITAS	37.40971	-121.90592
10517	FACILITY 43-011-900329-0		345 JURGENS DR	MILPITAS	37.45149	-121.91521
10518	MILPITAS - WRIGLEY/FORD PUMP STA.		75 MARYLINN DR	MILPITAS	37.4358	-121.90754

State Water Resources Control Board Geotracker Database Results for City of Milpitas

ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
10519	MILPITAS - GIBRALTAR PUMP STATION		641 GIBRALTAR CT	MILPITAS	37.42264	-121.89582
10520	MAIN STREET GAS		10 N MAIN ST	MILPITAS	37.43153	-121.90719
10521	CHEVRON STATION #207673		1249 GREAT MALL DR	MILPITAS	37.41273	-121.89731

Map located at: http://www.geotracker.waterboards.ca.gov/map/default.asp?global_id=&x=-
Search conducted by Sue Chau on 5 November 2008

Appendix E

Best Management Practices for Water Utility Operation and Maintenance Discharge Pollution Prevention Plans

Santa Clara Valley Urban Runoff Pollution Prevention Program, Conditionally Exempted Discharges, Task SC 16-22, Classification and Control Measures, June 15, 2000

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Santa Clara Valley Urban Runoff Pollution Prevention Program

CONDITIONALLY EXEMPTED DISCHARGES

Classification and Control Measures

June 15, 2000

Task SC 16-22

August 29, 2000

John West
Regional Water Quality Control Board
1515 Clay St., Suite 1400
Oakland, CA 94612

Subject: Transmittal of Conditionally Exempted Discharges Report

Dear John:

Enclosed please find a copy of the Santa Clara Valley Urban Runoff Program's report entitled *Conditionally Exempted Discharges: Classification and Control Measures* ("CED Report") dated June 15, 2000. The final report was approved by the Management Committee at its June 15, 2000 meeting and distributed in the Management Committee handout packet. You should have received a copy of the handout packet; however, we are also submitting the report to you separately with this letter.

The CED Report is submitted in compliance with Provisions C.5.b. and C.5.c of the Program's NPDES permit. Provision C.5.b. lists 12 specific non-storm water discharges which the Co-permittees are not required to prohibit if they are identified as not being sources of pollutants or if appropriate control measures to minimize adverse impacts are developed and implemented. In order to exempt these discharges from the non-storm water discharge prohibition, the Co-permittees are required under Provision C.5.c. to:

- Demonstrate that each discharge is not a source of pollutant to receiving waters;
- Identify the circumstances in which the discharges are not sources of pollutants; <u>or</u>
- Describe and implement appropriate control measures to the maximum extent practicable to minimize the adverse effects of the discharge.

The CED Report stresses the Regional Board's preference for reclamation of conditionally exempted discharges whenever possible, or discharge to the local POTW (if allowable) as a second option. In cases where these options are not feasible, the report provides appropriate control measures for allowing discharges to storm drains and creeks.
The CED Report was developed by an ad hoc task group, with assistance from Program staff. A draft report was submitted to the Management Committee and Regional Board staff (you) in October, 1998 for review and comment. Your comments were addressed in a revised draft dated May 5, 1999. Additional work on the report was performed during FY 99-00 to address

BMPs for discharges of potable water containing chloramines. Program staff researched the BMPs being used by other water utilities (such as EBMUD), and did not find any BMPs specific to chloraminated water (the current standard practice is to use the same BMPs as for chlorinated water). In May 2000, the Management Committee directed Program staff to complete the CED Report with this information and submit the report to the Regional Board.

Thank you for your input to the CED Report. If you have any questions, please contact me.

Very truly yours,

Jill C. Bicknell, EOA, Inc.
Assistant Program Manager

cc: SCVURPPP Management Committee
Robert Falk, Morrison & Foerster

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Conditionally Exempted Discharges: Classification and Control Measures

1.0 INTRODUCTION

The Santa Clara Valley Urban Runoff Pollution Prevention Program (Program, formerly known as the Santa Clara Valley Nonpoint Source Pollution Control Program) consists of fifteen dischargers, the Santa Clara Valley Water District, Santa Clara County and 13 cities and towns in the Santa Clara Valley. These dischargers are Co-permittees of a NPDES storm water discharge permit (No. CAS29718) issued by the Regional Water Quality Control Board (Regional Board). Each Co-permittee has responsibility for discharges to its municipal storm drain system and water courses within its jurisdiction, and each must comply with the requirements in the NPDES Permit regarding storm water and non-storm water discharges.

Generally, discharge of materials other than storm water into storm drain systems and water courses is prohibited as described in Discharge Prohibition A.1 of the permit; however, several categories of discharges may be exempt from this prohibition. Provision C.5.b. of the NPDES Permit identifies twelve (12) such non-storm water discharges that may not require prohibition. These specific non-storm water discharge categories include:

i. Uncontaminated pumped groundwater,
ii. Foundation drains,
iii. Water from crawl space pumps,
iv. Footing drains,
v. Air conditioning condensate,
vi. Irrigation water,
vii. Landscape irrigation,
viii. Lawn or garden watering,
ix. Planned and unplanned discharges from potable water sources,
x. Water line and hydrant flushing,
xi. Individual residential car washing, and
xii. Discharges or flows from emergency fire fighting activities.

In order to exempt these discharges from the non-storm water discharge prohibitions, the Co-permittees are required, as described in Provision C.5.c, to either,

- Demonstrate that each discharge is not a source of pollutant(s) to receiving waters; or
- Identify the circumstances in which the discharges are not sources of pollutants to receiving waters; or
- Describe and implement appropriate control measures under the Urban Runoff Management Plan to minimize the adverse effects of the discharge.

This report presents appropriate control measures for the twelve (12) non-storm water discharges listed above (the last option). Although they are rarely, if ever, pollution sources, each of the discharges may warrant some type of control measure. This report includes a discussion of control measures to reduce pollutants in these discharges to appropriate levels, procedures and Performance Standards for the implementation of these control measures,

procedures for notifying the Regional Board of these discharges, and procedures for monitoring and record management.

This report was developed by a specially formed Ad-Hoc Task Group consisting of qualified Co-permittee staff members. The evaluations and recommendations for these Conditionally Exempted Discharges are based on the Ad-Hoc Task Group's thirty (30) years of combined water quality inspection experience. This report also includes responses to Regional Water Quality Control Board staff comments on an earlier draft of the report.

2.0 PREVIOUS DOCUMENTS AND REPORTS

Several existing Program and outside studies done on these specific Conditionally Exempted Discharges were found. Relevant information from these documents provided support to the recommendations proposed by the Ad-Hoc Task Group.

- The Program's November 1995 "Guidelines for Non-Storm Water Discharges to the Storm Drain System" was developed primarily as a reference list of disposal alternatives for common non-storm water discharges. It provided useful information on some of the conditionally exempted discharges.

- Control measures for the discharge of uncontaminated pumped groundwater and potable water sources are based on information from the Program's June 1998 "Water Utility Operation & Maintenance Discharge Pollution Prevention Plan (WUDPPP)" and the Water Utility Operation and Maintenance Performance Standard (included as a part of the WUDPPP). The WUDPPP and the Performance Standard were developed by an Ad-Hoc Task Group of Co-permittees who operate municipal water utilities.

- Relevant information from the East Bay Municipal Utility District (EBMUD) report on "Environmental Impacts of Potable Water Discharges" (*Draft,* March 1998) and procedures for "Dechlorination of Potable Water Discharges" (effective August 19, 1998) was incorporated into this report.

- A 1995 "Report of Waste Discharges (NPDES Application) for Lawrence Livermore National Laboratory - Livermore Site: Non-Storm Water Discharges" represents a thorough evaluation (data collection and monitoring) of various sources of discharge throughout the Livermore facility. Relevant information regarding air conditioning condensate was incorporated into this report.

- The "Evaluation of Non-Storm Water Discharges and Effective Prohibition Methods," (July 1997) was completed by research staff (L. Donald Duke, et.al) from the University of California, Los Angeles. This study was sponsored by the State Water Resources Control Board with the intent that its findings may facilitate the implementation of a statewide policy on non-storm water discharges. Program staff participated in this effort through a work group of the California Storm Water Quality Task Force.

3.0 CONTROL MEASURES FOR CONDITIONALLY EXEMPTED DISCHARGES

It is the objective of the Co-permittees to address applicable water quality standards and to control pollutants to the maximum extent practicable, with respect to each of the conditionally exempted discharges listed in the Permit. The control measures rely on a case-by-case evaluation to ensure that an appropriate course of action is taken, and includes a process of assessing the conditionally exempted discharge and the existing conditions surrounding the discharge.

The conditionally exempted discharges are grouped together throughout this report based on their common control measures and Co-permittee actions. Control measures for each group are described below, and are summarized in Table 1.

In general, the Regional Board prefers reclamation of conditionally exempted discharges whenever possible. Methods of reclamation include irrigation, dust control, and reuse as process water. If reclamation is not feasible, the Board recommends discharge to the local publicly owned treatment works (POTW), if allowable. The last option is to discharge to a creek or storm drain. In some cases, this may require an NPDES permit. This guidance has been incorporated into the control measures for the discharges as appropriate.

The local POTW should be contacted before redirecting any non-storm water discharges to the sanitary sewer system, to ensure that the addition of the particular discharge to its system will not be problematic. Although each POTW in the Program area usually accepts these discharges, directing flows from these sources to the sanitary sewer system will still be considered on a case by case basis. POTWs, in general, have several concerns regarding non-storm water discharges that enter sanitary sewer systems. Such discharges may have the potential to interfere with wastewater treatment processes, causing the POTW to violate its permit requirements or exceed a desired flow rate, utilize reserve capacity allocated for future development, or hydraulically overload a local collection system.

All Co-permittees want to ensure that clean, natural flows are directed to the storm drain system, and that polluted discharges are treated and/or disposed of properly. Operational restrictions of wastewater treatment plants are some of the factors that determine the maximum extent practicable to which a Co-permittee is able to address non-storm water discharges.

3.1 Control Measures for Discharges: i, ix and x

i. Uncontaminated Pumped Groundwater,
ix. Planned and Unplanned Discharges from Potable Water Sources, and
x. Water Line and Hydrant Flushing.

Control measures for these three conditionally exempted discharges are contained in the Program's Model WUDPPP. Although this WUDPPP applies to treated and untreated potable water supply systems, reclaimed water, raw water and non-potable water, the control measures and discharge evaluations contained within are also relevant and applicable to discharges from uncontaminated pumped groundwater.

Typical constituents of concern include sediment (from erosion), chlorine residual, turbidity and chemical additives. Dissolved oxygen, pH, ammonia and sulfides were determined not to be pollutants of concern in potable water discharges as discussed in the Draft EBMUD report (March 1998).

Another constituent of concern is chloramines which result when chloramination (the addition of both chlorine and ammonia compounds) is used as a means to disinfect potable water supplies. The Santa Clara Valley Water District recently began to use chloramination for disinfection. Current procedures used by EBMUD[1] and other agencies recommend use of the same BMPs for dechlorination of chloraminated water discharges as those used for dechlorination of chlorinated discharges. For the purpose of this report, it is assumed that a chloramine residual is the same pollutant of concern as a chlorine residual. BMPs for discharge of chlorinated water are addressed in the current version of the WUDPPP.. Additional research may be needed to determine whether the residual ammonia in dechlorinated water that originally contained chloramines is a pollutant of concern.

Consistent with the Program's other storm water pollution control measures, actions taken to address the potential concerns and prevent pollution of creeks and the Bay from these three conditionally exempted discharges will include:

- Identify discharges of concern:
  - Determine areas of likely or scheduled discharges. If feasible, survey agencies (e.g., water agencies and fire departments) for key activities related to the three types of discharges. Information to obtain may include responsible agency, source water, flow rate, frequency, flow pathway, receiving water, chemical additives and predictability (planned/unplanned).
  - Identify source of discharge. Determine if discharge is a planned/scheduled activity.
  - Assess area of discharge. Perform visual inspection. Determine flow pathway, and receiving waters.
  - Characterize discharge. Estimate flow rate, frequency, erosion potential, turbidity levels. Determine if any chemical additives are present (e.g., chlorination).
- Select and implement appropriate control measures or Best Management Practices (BMPs) as described in the WUDPPP.
- Train staff and inspectors on pollution prevention procedures, BMPs, etc.
- Continually evaluate and modify control measures for effectiveness as additional information becomes available.

To implement the Water Utility Operation and Maintenance Performance Standard, the Co-permittees with water utilities will be developing individual Water Utility Discharge Pollution Prevention Plans, that address local conditions. The local WUDPPPs will include BMPs and control measures for the three types of discharges, based on the Model WUDPPP.

Disposal of extracted groundwater from groundwater cleanup projects is addressed by Regional

[1] Correspondence with Cynthia Adkisson, Environmental Compliance Section, EBMUD, Oakland, California, November 16, 1999.

Board Resolution No. 88-160[2]. The Regional Board's position is that dischargers of extracted groundwater from groundwater cleanup projects should reclaim their effluents to the extent technically and economically feasible. Methods of reclamation include irrigation, dust control, and reuse as process water. If reclamation is not feasible, the Board recommends discharge to the local POTW. The last option is to obtain an NPDES permit for discharge to a creek or storm drain.

3.2 Control Measures for Discharges: ii, iii and iv

ii. Foundation Drains,
iii. Water from Crawl Space Pumps, and
iv. Footing Drains.

These three conditionally exempted discharges have minimal pollutant concerns. Based on the experience of the inspectors in the Ad-Hoc Task Group, water from foundation drains, crawl space pumps, and footing drains are not typically found to be sources of contaminants. In addition, a majority of experts who were surveyed for the UCLA Report (Duke, July 1997) also found these discharges to be of low concern. Nevertheless, a series of control measures to eliminate or minimize pollution from these sources will be implemented. Co-permittee inspectors will perform the steps outlined below, and use best professional judgment to decide the proper disposal option for the discharge in question.

A. Examine the immediate site for chemical storage and the potential for the non-storm water discharge to come in contact with pollutants before entering the storm drain system. If a significant potential for chemical contact exists, a sample of the discharge should be collected and analyzed. Based on the results of the sample analysis and the site evaluation, Co-permittee staff should decide whether the flow should be allowed to discharge to the storm drain system, or should be contained and discharged to the sanitary sewer system (with POTW concurrence), or otherwise mitigated.

B. Evaluate the surrounding neighborhood regarding the potential for local groundwater pollution to impact the discharges. This evaluation may include visual reconnaissance of the surrounding area for the type of land uses represented and/or a records search at appropriate local agencies for evidence of chemical plumes. If a significant potential for chemical contact exists, a sample should be collected and analyzed, and a judgment regarding discharge method should be made as outlined in Step A.

C. Examine the characteristics of the discharge. If the discharge appears turbid or exhibits other evidence of contamination, treatment of the discharge via filtration, settling, or other methods is required before the discharge may be directed to the storm drain system.

Water from foundation drains, crawl space pumps, and footing drains may be discharged to the storm drain system if the water appears clear, and there is no threat of chemical contamination, based on the evaluation of Co-permittee staff as described in Steps A through C. Co-permittees will respond to any complaint calls regarding these discharges promptly. Additionally, areas

[2] California Regional Water Quality Control Board, San Francisco Bay Region, Resolution 88-160, "Regional Board Position Statement on the Disposal of Extracted Groundwater from Groundwater Cleanup Projects", October 19, 1988.

with known subsurface drainage problems will be evaluated by the Co-permittees for inclusion into their priority areas for pro-active field investigations. Performing pro-active field investigations in identified high, medium, and low priority areas is a component of the Program's Illicit Connection and Illegal Dumping Identification (IC/ID) and Elimination Activities Model Performance Standard (Attachment 1).

3.3 Control Measures for Discharge: v

v. Air Conditioning Condensate.

Small Air Conditioning Units. For the purposes of implementing storm water pollution control measures, air conditioning condensate can be considered to originate from two main types of units. The first type includes relatively small air conditioning units, such as those used for apartments, hotel rooms, and mobile office trailers. The operation of these small units is characterized by an intermittent dripping of condensate from the outside of the unit.

Consistent with the findings presented in the "Report of Waste Discharges (NPDES Application) for Lawrence Livermore National Laboratory - Livermore Site: Non-Storm Water Discharges," observations of air conditioning condensate from the smaller units have typically found that:

- Collecting a sufficient volume of air conditioning condensate for chemical analysis purposes can be problematic due to low condensate discharge rates from smaller air conditioning units.

- Air conditioning condensate from smaller units is often unlikely to reach a receiving water body for two reasons: (1) the low volume of condensate water produced by these air conditioning units, and (2) the seasonal nature of these air conditioning discharges given unit operation is most prevalent during the summer months, when evaporation and percolation rates are highest, and the condensate drips from the unit onto the ground surface.

Co-permittees will take the following steps to address air conditioning condensate discharges from these relatively small air conditioning units:

A. Encourage home and apartment owners to direct air conditioning condensate to landscaped areas. This may be accomplished through outreach material directed at residential areas. Air conditioning units in residential areas may be a concern if there is a method by which condensate water can enter a receiving water body. Co-permittees may consider encouraging the plumbing of any condensate lines installed as part of remodeling or new construction to the sanitary sewer system (with POTW concurrence), for those air conditioning units which can be feasibly connected to the system. Directing air conditioning condensate to the sanitary system may be appropriate in cases where the water cannot be directed to landscaping and would otherwise be discharged to an impervious surface leading to the storm drain system or a receiving water body.

B. Require the proper disposal of descaling or anti-algal agents if they are used to treat these smaller air conditioning units. Residues from flushing agents must be properly disposed of, and the condensate line must be bypassed while flushing the unit.

Large Air Conditioning Units. The second type of air conditioning equipment is the relatively large industrial unit. A continuous flow of condensate water characterizes the operation of these larger machines. Co-permittees will take the following steps to address condensate discharges from large air conditioning units:

A. Require that condensate lines installed as part of remodeling or new construction be plumbed to the sanitary sewer system (with POTW concurrence), or redirected to landscaping, if appropriate. Flows from these larger industrial units should not be directed to the storm drain system or a receiving water body. These flows are continuous and may contain pollutants. The condensate flow rate may be too large to be directed to landscaping.

B. Require the proper disposal of descaling or anti-algal agents used to treat larger air conditioning units. Residues from flushing agents must be properly disposed of, and the condensate line must be bypassed while flushing the unit.

3.4 Control Measures for Discharges: iv, vii and viii

vi. Irrigation Water,
vii. Landscape Irrigation, and
viii. Lawn or Garden Watering.

Irrigation water, landscape irrigation and garden watering will be addressed similarly by the Co-permittees, and are therefore grouped together. The concerns associated with these three discharges are primarily potential pesticide and nutrient loading to waterways.

Since it not be feasible to prohibit irrigation or watering activities altogether, targeted distribution of existing education materials would likely be the most effective control measure. Existing distribution of water conservation public outreach material also benefits non-point source pollution control, since over-watering is the primary cause of runoff from landscape, lawn, and garden areas. Co-permittees already perform extensive distribution of brochures such as "Pests Bugging You?" and "Home Maintenance Tips for a Cleaner Bay" which address these three conditionally exempted discharges. Other special education and outreach activities pertaining to these discharges that have been or will be completed are listed below.

- In Spring 1997, lawn care techniques to help prevent non-point source pollution were the major focus of the BASMAA regional advertising campaign.

- In 1997, the Program conducted a pilot project with the Santa Clara County U.C. Cooperative Extension office. This project consisted of point-of-sale distribution of brochures and training of nursery staff in techniques of Integrated Pest Management. Two presentations were given to the California Association of Nurserymen.

- Co-permittees will participate in a region-wide Integrated Pest Management campaign scheduled for fiscal year 1998-1999. This campaign will target pesticide point-of-sales.

- Co-permittees will consider developing a stand-alone outreach document to prevent over-watering that addresses both water conservation and runoff quality issues. Conducting such targeted outreach is one of the control measures the Co-permittees

may implement to reduce pollutants in, and quantities of, irrigation and lawn watering discharges.

To further reduce the threat of pollution from these non-storm water discharges, Co-permittees will evaluate areas with known over-watering or irrigation problems for inclusion into their priority areas for pro-active field investigations. Appropriate BMP literature will be distributed in areas with significant watering or irrigation activities. Co-permittees will respond to any complaint calls about these discharges promptly.

3.5 Control Measures for Discharge: xi

xi. Individual Residential Car Washing

This discharge is a concern primarily due to soaps and other automotive residues which can be carried to waterways and are potentially toxic to fish and wildlife. Since it would not be feasible to prohibit residential car washing activities, targeted distribution of existing education materials and increased attention on field investigations in residential areas would likely be the most effective control measures. Co-permittees already perform extensive distribution of brochures such as "The Bay Begins at Your Front Door" and "Home Maintenance Tips for a Cleaner Bay," which address residential car washing. The Co-permittees also distribute Program literature targeted at vehicle service shops which includes car washing BMPs.

Conducting targeted outreach is one of the control measures the Co-permittees will implement to reduce both pollutants in, and quantities of, residential car washing discharges. Co-permittees will continue to emphasize to citizens that elimination or reduction of pollution from residential car washing activities can be achieved by (1) having cars washed at commercial facilities plumbed to the sanitary sewer system; (2) not using soap and minimizing water use if cars are washed at home; and (3) washing cars over lawn or dirt areas.

Co-permittees will consider developing a stand-alone outreach document that addresses only residential car washing. This will be done to help ensure that guidance for car washing methods are not overlooked, as they may be, if contained in a brochure that addresses other runoff quality issues. Co-permittees will also consider offering incentives, such as coupons for residents to take their cars to commercial car washing facilities, to help reduce pollution from car washing activities.

To further reduce the threat of storm water pollution from this non-storm water discharge, Co-permittees will evaluate areas with known residential car washing problems for inclusion into their priority areas for pro-active field investigations. Appropriate BMP literature will be distributed in areas with significant residential car washing activity. Co-permittees will respond to any complaint calls about residential car washing discharges promptly.

3.6 Conditionally Exempted Discharge: xii

xii. Discharges or Flows from Emergency Fire Fighting Activities.

During an emergency situation, priority for efforts will be directed towards life, property, and the environment in descending order. However, Co-permittees will control the pollution threat from fire fighting activities in the field to the extent that time and resources allow. Some cities are already in the practice of protecting the storm drain system from fire fighting flows during events at chemical storage facilities. Co-permittees will also take steps to eliminate or reduce potential pollution from fire fighting flows in commercial and residential neighborhoods. One method is to plug the storm drain system draining the area at its outfall, thereby using the drainage system between the emergency site and the corresponding outfall for temporary storage. After the emergency event, the water is pumped out of the storm drain system and is properly disposed. Methods of preventing potentially polluted water from entering the storm drain system may vary from jurisdiction to jurisdiction.

4.0 PROCEDURES FOR IMPLEMENTATION OF CONTROL MEASURES

In the case that the Co-permittees choose to address conditionally exempted discharges with control measures, the NPDES Permit requires that a description of procedures and performance standards for implementation of these control measures be submitted to the Regional Board.

Specific procedures are described in the previous discussion on control measures (Section 3). Co-permittees will continue to follow their individual standard operating procedures for field investigations, facility inspections, and public outreach/education activities that apply to the conditionally exempted discharges.

5.0 PERFORMANCE STANDARDS FOR IMPLEMENTATION OF CONTROL MEASURES

The NPDES Permit requires that performance standards for implementation of these control measures be developed. The twelve conditionally exempted discharges listed in the NPDES Permit are addressed under the Program's Model Performance Standards for IC/ID and Water Utility Operation and Maintenance, as indicated in this section.

5.1 Discharges i, ix and x

i. Uncontaminated Pumped Groundwater,
ix. Planned and Unplanned Discharges from Potable Water Sources, and
x. Water Line and Hydrant Flushing.

These conditionally exempted discharges are addressed in the Water Utility Operation and Maintenance Performance Standard. Although this Performance Standard applies to Co-permittee-owned water utility operations, the levels of effort in implementing the associated control measures incorporated into the Standard are applicable to private water companies and any other dischargers of uncontaminated pumped groundwater, potable water, and line and hydrant water. Individual performance standards are being developed by the Co-permittees that operate water supply/distribution systems.

5.2 Discharges ii, iii and iv

ii. Foundation Drains,
iii. Water from Crawl Space Pumps, and
iv. Footing Drains.

The IC/ID Model Performance Standard contains provisions for each Co-permittee to conduct field investigations in high priority areas within its jurisdiction. Areas with significant occurrence of these three discharges will be included as priority areas for pro-active field investigations. Complaints regarding these discharges will also be responded to promptly as described in the Performance Standard.

5.3 Discharge v

v. Air Conditioning Condensate

Air conditioning condensate from industrial units will be addressed by each Co-permittee's implementation of its Industrial/Commercial Discharger Control Program Performance Standard, if applicable.

Air conditioning condensate concerns in residential areas will be primarily addressed through distribution of outreach material as part of implementing the Training/Education/Outreach portion of the IC/ID Performance Standard.

5.4 Discharges vi, vii, viii and xi.

vi. Irrigation Water,
vii. Landscape Irrigation,
viii. Lawn or Garden Watering, and
xi. Individual Residential Car Washing.

Co-permittees will include these four discharges when addressing sources of storm water pollution from residences and commercial facilities in their targeted outreach material.

The IC/ID Model Performance Standard contains provisions for each Co-permittee to conduct field investigations in identified priority areas within its jurisdiction. Areas with significant occurrence of these four discharges will be included as priority areas for pro-active field investigations. Complaints regarding these discharges will also be responded to promptly as described in the IC/ID Performance Standard.

5.5 Discharges xii

xii. Discharges or Flows from Emergency Fire Fighting Activities

Each Co-permittee will review the activities of the fire department(s) that serve(s) its area and determine the extent to which field personnel protect the storm drain system from discharge of pollutants during emergency activities. Co-permittees will not conduct pollution prevention procedures in the field during emergency fire fighting events at the expense of either lives or property. However, each Co-permittee will ensure that staff fighting fires within its jurisdiction are aware of storm water pollution issues, and have the materials and equipment available in the field to protect water quality during emergency events.

During a fire at a facility with a known chemical hazard, the Hazardous Materials Team present on site will be relied upon to take appropriate action to prevent or reduce polluted discharges from entering the storm drain system. After protecting life and property, the main concern of the team would be to protect the environment, including preventing chemical contamination of nearby receiving waters. The primary concern associated with fires in residences and similar buildings with regards to water quality is the introduction of debris and sediment to the storm drain system. As much as is feasible during an emergency, fire fighting staff will implement measures to prevent these materials from entering the storm drain system.

6.0 DISCHARGE NOTIFICATION PROCEDURES

The NPDES Permit requires submittal of a description of procedures for notifying the Regional Board about incidents of conditionally exempted discharges.

The Regional Board will be notified of reported incidents of non-storm water discharges in the Program's Annual Report each year, as part of the reporting form each Co-permittee uses to report illegal dumping incidents.

7.0 MONITORING / RECORD MANAGEMENT PROCEDURES

The NPDES Permit requires that a description of procedures for monitoring and record management concerning conditionally exempted discharges be submitted to the Regional Board.

Monitoring the status of the conditionally exempted discharges will include looking for trends in non-storm water discharge occurrence over time, conducting follow-up activities after discharge investigations, and performing effectiveness evaluations to determine how well the control measures are working. Co-permittees may also use monitoring information to help designate priority areas for pro-active field investigations.

Procedures for record management shall remain consistent with Co-permittees' existing procedures for handling information. All of the conditionally exempted discharges will be handled by Co-permittee staff familiar with their respective jurisdiction's Urban Runoff Management Plan elements and Performance Standards under which the specific discharges are addressed.

TABLE 1
SUMMARY OF
CONTROL MEASURES FOR CONDITIONALLY EXEMPTED DISCHARGES

CONDITIONALLY EXEMPTED DISCHARGE	POTENTIAL AREAS/ POLLUTANTS OF CONCERN	CONTROL MEASURES
(i) Uncontaminated pumped groundwater	• Sediment and turbidity onsite and offsite (from erosion caused by release of discharge) • Existing chorine residual • Presence of chemical additives	1. Identify source of discharge. – determine if discharge is a planned/scheduled activity. 2. Assess area of discharge – determine flow pathway and receiving waters. 3. Characterize discharge: – flow rate (15-20 gpm O.K.) – frequency – erosion potential – turbidity levels – chemical additives present (e.g., chlorine). 4. If flows > 20 gpm, contact City or local POTW; call SCVWD if discharge < 50 feet from creek. 5. Assess potential for groundwater pollution based on knowledge of historical land uses. 6. Determine if area is (or should be) classified by the inspecting agency as a priority area for pro-active field investigations. [3] 7. Use WUDPPP Tables 1 and 2 to identify appropriate control measures or BMPs.[4] 8. Apply control measures or BMPs.
(ii) Foundation drains	• Chemical contamination • Potential for chemicals to come into contact with the discharge (en route to storm drain) • Existing local groundwater pollution	1. Promptly respond to any complaint calls regarding this discharge. 2. Perform visual inspection of area of discharge. 3. Locate areas of chemical storage or usage. 4. Assess potential for groundwater pollution based on knowledge of historical land uses. 5. Determine if area is (or should be) classified by the inspecting agency as a priority area for pro-active field investigations.[1] 6. Based on Steps 2-5, assess potential for contamination. 7. Examine discharge for turbidity and/or other evidence of contamination. 8. If contamination or potential for contamination exists, collect sample of discharge for chemical analysis. Depending on sample results and site evaluation, discharge flow to storm drain or sanitary sewer system, as appropriate and allowed by POTW. If no contamination is evident <u>and</u> the discharge is not turbid, discharge may be directed to the storm drain system.
(iii) Water from crawl	*Same as Discharge (ii)*	*Same as Discharge (ii)*

[3] Identifying priority areas is a component of the Illicit Connection and Illegal Dumping Identification and Elimination Activities Model Performance Standard provided in Attachment 1 of this report.
[4] Refer to the "Tables" section of the most recent SCVURPPP Water Utility Operation & Maintenance Discharge Pollution Prevention Plan (WUDPPP) to determine selection and implementation of BMPs.

TABLE 1, continued
SUMMARY OF
CONTROL MEASURES FOR CONDITIONALLY EXEMPTED DISCHARGES

CONDITIONALLY EXEMPTED DISCHARGE	POTENTIAL AREAS/ POLLUTANTS OF CONCERN	CONTROL MEASURES
space pumps		
(iv) Footing drains	*Same as Discharge (ii)*	*Same as Discharge (ii)*
(v) Air conditioning condensate	• Contamination from chemical additives such as descaling or anti-algal agents, used in air conditioning units.	1. Require proper disposal of chemical additives and any flushing residues from these additives. Condensate line must be bypassed while flushing the air conditioning unit. 2. For small air conditioning units: – encourage users (e.g., via outreach material) to direct condensate to landscaped areas, – with approval from the local POTW, direct condensate line to sanitary sewer system, when feasible. 3. For large air conditioning units: – depending on quantity of flow, re-direct condensate lines to nearby landscaping or to sanitary sewer system. With approval from local POTW, preference is to direct to sanitary sewer system, when feasible.
(vi) Irrigation water	• Presence of pesticides • Nutrients from fertilizers	1. Promptly respond to any complaint calls regarding this discharge. 2. Conduct targeted outreach. Distribute existing education and outreach material, focusing on preventing over-watering and over-application of pesticides and fertilizers, in areas of significant watering or irrigation activities. 3. Continue participation in local and region-wide education and outreach efforts related to this discharge. 4. Include areas of known over-watering and/or over-application of pesticides and fertilizers, in Co-permittees' priority areas for pro-active field investigations.
(vii) Landscape irrigation	*Same as Discharge (vi)*	*Same as Discharge (vi)*
(viii) Lawn or garden watering	*Same as Discharge (vi)*	*Same as Discharge (vi)*
(ix) Planned and unplanned discharges from potable water sources	*Same as Discharge (i)*	*Same as Discharge (i)*
(x) Water line and hydrant flushing	*Same as Discharge (i)*	*Same as Discharge (i)*
(xi) Individual residential car	• Soaps and surfactants • Automotive fluid residues	1. Promptly respond to any complaint calls regarding this discharge.

TABLE 1, continued
SUMMARY OF
CONTROL MEASURES FOR CONDITIONALLY EXEMPTED DISCHARGES

CONDITIONALLY EXEMPTED DISCHARGE	POTENTIAL AREAS/ POLLUTANTS OF CONCERN	CONTROL MEASURES
washing		2. Conduct targeted outreach. Distribute existing education and outreach material (including BMPs) that address residential car washing to residents and at vehicle service shops. 3. Encourage and provide incentives for residents to – wash their cars at commercial facilities, – minimize use of soap and water when cars are washed at home, – wash cars over lawn or dirt areas. 4. Include areas of known residential car washing problems, in Co-permittees' priority areas for pro-active field investigations.
(xii) Discharges or flows from emergency fire fighting activities	• Debris and contaminated runoff from fire fighting • Sediment and turbidity (from erosion caused by release of discharge)	To the extent practicable during emergency situations: 1. Protect storm drains during emergencies involving chemical facilities. 2. Isolate storm drain system in vicinity of event and utilize as temporary storage for runoff.

Water & Sewer Utility Maintenance SC-76

Objectives

- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	
Metals	
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Although the operation and maintenance of public utilities are not considered chronic sources of stormwater pollution, some activities and accidents can result in the discharge of pollutants that can pose a threat to both human health and the quality of receiving waters if they enter the storm drain system. Sewage incident response and investigation may involve a coordinated effort between staff from a number of different departments/agencies. Cities that do not provide maintenance of water and sewer utilities must coordinate with the contracting agency responsible for these activities and ensure that these model procedures are followed.

Approach

Pollution Prevention

Inspect potential non-stormwater discharge flow paths and clear/cleanup any debris or pollutants found (i.e. remove trash, leaves, sediment, and wipe up liquids, including oil spills).

Suggested Protocols

Water Line Maintenance and Cleaning

Procedures can be employed to reduce pollutants from discharges associated with water utility operation and maintenance activities. Planned discharges may include fire hydrant testing, flushing water supply mains after new construction, flushing lines due to complaints of taste and odor, dewatering mains for maintenance work. Unplanned discharges from treated, recycled water, raw water, and groundwater systems operation and maintenance activities can occur from water main

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breaks, sheared fire hydrants, equipment malfunction, and operator error.

Planned discharges

- Identify a suitable discharge option in the following order of preference:
  - Apply to the land.
  - Reuse water for dust suppression, irrigation, or construction compaction.
  - Discharge to a sanitary sewer system with approval.
  - Discharge to the storm drain system using applicable pollution control measures. (Only available to clean water discharges such as water main/ water storage tank/water hydrant flushing).
- If water is discharged to a storm drain, control measures must be put in place to control potential pollutants (i.e. sediment, chlorine, etc.). Examples of some storm drain protection options include:
  - Silt fence – appropriate where the inlet drains a relatively flat area.
  - Gravel and wire mesh sediment filter – Appropriate where concentrated flows are expected.
  - Wooden weir and fabric – use at curb inlets where a compact installation is desired.
- Prior to discharge, inspect discharge flow path and clear/cleanup any debris or pollutants found (i.e. remove trash, leaves, sediment, and wipe up liquids, including oil spills).
- General Design considerations for inlet protection devices include the following:
  - The device should be constructed such that cleaning and disposal of trapped sediment is made easy, while minimizing interference with discharge activities.
  - Devices should be constructed so that any standing water resulting from the discharge will not cause excessive inconvenience or flooding/damage to adjacent land or structures.
- The effectiveness of control devices must be monitored during the discharge period and any necessary repairs or modifications made.

Unplanned Discharges

- Stop the discharge as quickly as possible.
- Inspect flow path of the discharged water:
  - Identify erodible areas which may need to be repaired or protected during subsequent repairs or corrective actions

- Identify the potential for pollutants to be washed into the waterway

- If repairs or corrective action will cause additional discharges of water, select the appropriate procedures for erosion control, chlorine residual, turbidity, and chemical additives. Prevent potential pollutants from entering the flow path.

Sanitary Sewer Maintenance

Applicable to municipalities who own and operated a sewage collection system. Facilities that are covered under this program include sanitary sewer pipes and pump stations owned and operated by a municipality. The owner of the sanitary sewer facilities is the entity responsible for carrying out this prevention and response program.

- Clean sewer lines on a regular basis to remove grease, grit, and other debris that may lead to sewer backups.

- Establish routine maintenance program. Cleaning should be conducted at an established minimum frequency and more frequently for problem areas such as restaurants that are identified

- Cleaning activities may require removal of tree roots and other identified obstructions.

- During routine maintenance and inspection note the condition of sanitary sewer structures and identify areas that need repair or maintenance. Items to note may include the following:

  - Cracked/deteriorating pipes

  - Leaking joints/seals at manhole

  - Frequent line plugs

  - Line generally flows at or near capacity

  - Suspected infiltration or exfiltration.

- Prioritize repairs based on the nature and severity of the problem. Immediate clearing of blockage or repair is required where an overflow is currently occurring or for urgent problems that may cause an imminent overflow (e.g. pump station failures, sewer line ruptures, sewer line blockages). These repairs may be temporary until scheduled or capital improvements can be completed.

- Review previous sewer maintenance records to help identify "hot spots" or areas with frequent maintenance problems and locations of potential system failure.

Spills and Overflows

- Identify and track sanitary sewer discharges. Identify dry weather infiltration and inflow first. Wet weather overflow connections are very difficult to locate.

- Locate wet weather overflows and leaking sanitary sewers using conventional source identification techniques such as monitoring and field screening. Techniques used to identify other illicit connection sources can also be used for sewer system evaluation surveys (see SC74 Drainage System Operation and Maintenance).
- Implement community awareness programs for monitoring sanitary sewer wet weather overflows. A citizen's hotline for reporting observed overflow conditions should be established to supplement field screening efforts.
- Establish lead department/agency responsible for spill response and containment. Provide coordination within departments.
- When a spill, leak, and/or overflow occurs and when disinfecting a sewage contaminated area, take every effort to ensure that the sewage, disinfectant and/or sewage treated with the disinfectant is not discharged to the storm drain system or receiving waters. Methods may include:
  - Blocking storm drain inlets and catch basins
  - Containing and diverting sewage and disinfectant away from open channels and other storm drain fixtures (using sandbags, inflatable dams, etc.)
  - Removing the material with vacuum equipment
- Record required information at the spill site.
- Perform field tests as necessary to determine the source of the spill.
- Develop notification procedures regarding spill reporting.

Septic Systems

- Ensure that homeowners, installers, and inspectors are educated in proper maintenance of septic systems. This may require coordination with staff from other departments. Outreach to homeowners should include inspection reminders informing then that inspection and perhaps maintenance is due for their systems. Recommend that the system be inspected annually and pumped-out regularly.
- Programs which seek to address failing septic systems should consider using field screening to pinpoint areas where more detailed onsite inspection surveys are warranted.

Training

- Conduct annual training of water utility personnel and service contractors. (field screening, sampling, smoke/dye testing, TV inspection).
- OSHA-required Health and Safety Training 29 CFR 1910.120 plus annual Refresher Training (as needed).
- OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and federal OSHA 29 CFR 1910.146).

Spill Response and Prevention

- See previous section regarding spills and overflows.
- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Enact ordinance granting "right-of-entry" to locate potentially responsible parties for sewer overflows.
- Reliance on individual onsite inspection to detect failed septic systems can be a major limitation. The individual onsite inspection is very labor-intensive and requires access to private property to pinpoint the exact location of the failing system.
- A significant limitation to correcting failing septic systems is the lack of techniques available for detecting individual failed septic systems.

Requirements

Costs

- Departmental cooperation recommended for sharing or borrowing staff resources and equipment from municipal wastewater department.
- Infiltration, inflow, and wet weather overflows from sanitary sewers are very labor and equipment intensive to locate.
- The costs associated with detecting and correcting septic system failures are subject to a number of factors, including availability of trained personnel, cost of materials, and the level of follow-up required to fix the system problems.

Maintenance

- Minimum 2-person teams to perform field screening and associated sampling.
- Larger teams required for implementing other techniques (i.e. zinc chloride smoke testing, fluorometric dye testing, television camera inspection and physical inspection with confined space entry) to identify sewer system leaks.
- Program coordination required for handling emergencies, record keeping, etc.
- Many of the problems associated with improper use of septic systems may be attributed to lack of user knowledge on operation and maintenance. Educational materials for homeowners and training courses for installers and inspectors can reduce the incidence of pollution from these widespread and commonly used pollution control devices.

SC-76 Water & Sewer Utility Maintenance

Supplemental Information

Further Detail of the BMP

Onsite Sewage Disposal Systems

New onsite sewage disposal systems should be designed, located, and installed away from open waterbodies and sensitive resources such as wetlands and floodplains. A protective separation between the OSDS and groundwater should also be established. OSDSs should be operated and maintained to prevent surface water discharges and reduce pollutant loadings to groundwater. Inspection of OSDSs should occur regularly and repairs made immediately. New or replacement plumbing fixtures should be of the high efficiency type.

Typical Sanitary Sewer Problems

- Old and deteriorated main and lateral pipes - Sewers range in age from 30 to 100 years with an average age of 50 years.
- Cracked sewer pipes - Existing sewers are mostly clay pipes which can crack as they deteriorate with age and also by earth movement.
- Misaligned and open pipe joints - Most of the mortar used to seal the joints between sections of clay pipe has deteriorated.
- Undersized sewer pipe - The existing sewer system is overloaded due to new sewer hook-ups, underground water infiltration, and illegal roof and/or yard drain connections.
- Defective manholes - Old manholes are made of bricks. Typical problems associated with brick manholes are loose bricks, missing bricks, and misaligned manholes.
- Missing and/or unrecorded sewer pipes and manholes - This problem is typical in the easement/backline sewer. Sewer pipe locations shown on the sewer record map are different from the actual sewer location.
- Sewer main under houses and other improvements - Complaints of sewer main alignment crossing the house and other improvements. A solution to this problem requires an agreement with the property owner for a new sewer easement at a relocated line.

Causes of Sanitary Sewer Backups

- Root infiltration - Tree roots are a major cause of backups.
- Water inflow/infiltration - Rain water entering the sewer pipe causes overflows.
- Solids - Typical solids that buildup in the pipe and cause backups are grease, dirt, bones, tampons, paper towels, diapers, broken dishware, garbage, concrete, and debris.
- Structural defects in pipes and manholes - Sags in the line, cracks, holes, protruding laterals, misaligned pipe, offset joints are all possible causes of backups.

Design Considerations

Sanitary sewer overflows can often be reduced or eliminated by a number of practices, in addition to sewer system cleaning and maintenance, including the following:

- Reducing infiltration and inflow through rehabilitation and repair of broken or leaking sewer lines.
- Enlarging or upgrading the capacity of sewer lines, pump stations, or sewage treatment plants.
- Constructing wet weather storage and treatment facilities to treat excess flows.
- Addressing SSOs during sewer system master planning and facilities planning.

Septic Systems

Two field screening techniques that have been used with success at identifying possible locations of failing septic systems are the brightener test and color infrared (CIR) aerial photography. The first involves the use of specific phosphorus-based elements found in many laundry products, often called brighteners, as an indicator of the presence of failing onsite wastewater systems. The second technique uses color infrared (CIR) aerial photography to characterize the performance of septic systems. This method has been found to be a quick and cost-effective method for assessing the potential impacts of failing systems and uses variations in vegetative growth or stress patterns over septic system field lines to identify those systems that may potentially be malfunctioning. Then a more detailed onsite visual and physical inspection will confirm whether the system has truly failed and the extent of the repairs needed. These inspections may be carried out by county health departments or other authorized personnel.

References and Resources

Alameda Countywide Clean Water Program on-line
http://www.ci.berkeley.ca.us/pw/Storm/stormala.html

Los Angeles County Stormwater Quality. Public Agency Activities Model Program. On-line: http://ladpw.org/wmd/npdes/public_TC.cfm

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1998. Water Utility Operation and Maintenance Discharge Pollution Prevention Plan. June

United States Environmental Protection Agency (USEPA). 2001. Illicit Discharge Detection and Elimination. On-line: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/illi_1.cfm

United States Environmental Protection Agency (USEPA). 2001. Pollution Prevention/Good Housekeeping for Municipal Operators Septic System Controls. On-line: http://www.epa.gov/npdes/menuofbmps/poll_14.htm

NOTICE OF PREPARATION (NOP) OF
A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)
AND NOTICE OF PUBLIC SCOPING MEETING
FOR THE
City of Milpitas Water and Sewer Master Plan Updates

Date: August 27, 2008
To: Interested Parties
From: City of Milpitas

The City of Milpitas (City) is preparing an Environmental Impact Report (EIR) for the City's Water and Sewer Master Plan Updates (2009 Master Plan Updates or Proposed Program). The City is soliciting the view of interested persons and agencies on the scope and content of the information included in the EIR.

Location. The Proposed Program includes incorporated areas within the City of Milpitas in northern Santa Clara County, California (see Figure 1, Regional Locator). The Program Study Area for the EIR will include all areas within the current city limits and is illustrated in Figure 1.

Project Objectives. The specific objectives of the City's 2009 Water and Sewer Master Plan Updates include the following:

- Identify pipe and storage deficiencies caused by projected changes in water and wastewater demand, and implement corrective projects to relieve these deficiencies.
- Develop and implement a water and sewer impact fee for projects caused by these new developments.
- Update the City's Water and Sewer Connection Fee for new users.
- Update the City's Treatment Plant Fee
- Implement recycled water infrastructure improvements for the Transit Area Specific Plan (TASP).

Project Description. The City's 2009 Water and Sewer Master Plans are an update of the City's 2002 Water and 2004 Sewer Master Plans. The previous Master Plans defined the water and sewer system improvements necessary to meet the City's existing and future demands associated with future development plans in 2008, 2018 and build-out year of 2021 levels of development. The 2009 Master Plan Updates are a re-evaluation of the City's water and sewer system capacity based on updated land use projections from several near- and long-term development projects currently in the planning process. Drafts of the 2009 Master Plan Updates will be made available for review on the City's website sometime after September 15, 2008.

The City intends to formally adopt the 2009 Master Plan Updates and is preparing a Program-level EIR to assess the potential environmental impacts of implementing the water and sewer capital improvement projects (CIPs) identified in each of the updates. The Program EIR will analyze the impact of the City's preferred land use buildout scenario, which is identified as Scenario 3 in the 2009 Master Plan Updates. Scenario 3 includes improvements necessary to accommodate several near- and long-term development projects currently in the planning process, buildout of the Transit Area Specific Plan (TASP), and modifications to the City's list of Large Water Users.

These improvements are expected to be constructed over the course of the next 20-years.

Water Master Plan Improvements. Proposed CIP improvements to the City's water system are illustrated in Figure 2 and briefly described below. Projects W-MP-1 through W-MP-4 are recommended for construction within the next three to five years.

W-MP-1. This project will involve the installation of pressure reducing valves and open/close isolation valves near the intersection of Dixon Rd. and I-680.

W-MP-2. This project includes the construction of 300 linear feet (LF) of 12-in pipe to three dead-end pipes; one on Abel and two on Carlo Street and 260 LF of 6-in pipe on Carlo Street between Railroad Avenue and Carlo Street.

W-MP-3. Project will include construction of 150 LF of 12-inch pipe connecting a dead-end point at Pecten Court to a 10-inch pipe at Montague Expressway.

W-MP-6. This project will include the construction of a 6.6 million gallon (MG) Tank and Pump Station or a new well with a 9,200 gallons per minute (gpm) capacity. This facility will be located in the south-central portion of the City; however, an exact location has not been determined.

Projects W-MP-4 through W-MP-5 are recommended for construction within the next five to twenty years.

W-MP-4. This project would construct a new 20-inch Turnout and a yet-to-be-determined distance of parallel pipe along Trade Zone Boulevard.

W-MP-5. The City plans to construct approximately 14,970 ft of 8-inch pipe within the TASP area.

Sewer Master Plan Improvements. Proposed CIP improvements to the City's sewer system are illustrated in Figure 3 and briefly described below. Projects S-MP-10B through S-MP-11C are recommend to be constructed within the next one to five years.

S-MP-10B This project includes the replacement of 1,460 LF of 15-inch sewer pipe with 21-inch pipe along South Abel Street north of East Curtis Avenue. This project has already been constructed and underwent separate environmental review.

S-MP-11A Sewer improvements are proposed along South Main Street to replace existing 12 and 18-inch pipe with 21 and 27-inch. This project would be constructed within the next five to six years.

S-MP-11B This project includes various improvements along the Great Mall Parkway between South Main Street and Montague Expressway to replace existing 10 and 15-inch sewer pipe with 15 and 18-inch pipe.

S-MP-11C Project includes various improvements along the Montague Expressway to replace existing 8 and 10-inch sewer pipe with 12 and 15-inch diameter pipes.

Project S-MP-11D is recommended for construction prior to 2020.

S-MP-11D Project includes the replacement of 2,060 LF of 8-inch sewer pipe with 12-inch diameter pipe along South Main Street south of Great Mall Parkway.

Projects S-MP-1 through S-MP-12 are recommended for construction sometime after 2020.

S-MP-1 Project includes the replacement of 225 LF of 18-inch sewer pipe with 27-inch pipe at an existing I-880 crossing.

S-MP-2 The project includes the replacement of 490 LF of 8-inch with 10-inch diameter sewer along North Milpitas Boulevard near Jason Avenue and Home Way.

S-MP-5A The project includes the replacement of 500 LF of 15-inch sewer pipe with 18-inch and 385 LF of 15-inch sewer pipe with 21-inch pipe along Smithwood Street near Abbott Boulevard.

S-MP-6A This Project includes replacement sewer pipe along South Milpitas Boulevard between Calaveras Boulevard and Turquoise with 15 and 18-inch diameter sewer pipe.

S-MP-11E This project will involve the replacement of over 2,000 LF of sewer pipe along East Curtis Street.

S-MP-12 This project will involve the replacement of sewer pipe along Montague Expressway, west of Gladding Avenue, with 12-inch pipes.

Scope of the EIR. Pursuant to the State CEQA Guidelines section 15060, the City conducted a preliminary review of the Proposed Program. Based on the potential for significant impacts, an EIR is deemed necessary. The EIR will provide an evaluation of the resource areas listed below.

- *General Plan Consistency and Land Use Compatibility.* The compatibility of the Program facilities with existing land use will be considered in the EIR. The EIR will also provide an evaluation of the Program's consistency with applicable local, regional, and State plans and policies.

- *Geologic and Soil-Related Hazards.* The EIR will evaluate the potential for local geologic hazards to impact Program-related facilities.

- *Displacement of Existing Housing and Structures.* The EIR will analyze whether any Program-related facilities could result in the displacement of existing housing and/or structures.

- *Air Quality and Health Risk.* Short- and long-term impacts to air quality as a result of construction and facility operations (e. g. pump stations) will be considered in the EIR.

- *Noise and Acoustics.* Short-term noise from construction projects will be considered in the EIR. Long-term noise impacts due to new facilities (e. g. pump stations) will be analyzed.

- *Traffic, Circulation, and Alternative Transportation.* The EIR will evaluate the potential for Program facilities to disrupt local traffic circulation, create delay at intersections, and create safety hazards.

- *Biological Resources and Wetlands.* Potential impacts to special status wildlife and plant species, wetland resources, and City trees during facility construction will be considered in the EIR.

- *Hydrology and Water Quality.* Potential short and long-term impacts to water quality, drainage system capacity, and groundwater resources will be considered in the EIR

- *Hazards and Hazardous Materials.* The EIR will include an evaluation of whether Program-related improvements could encounter hazardous materials sites during construction.

- *Historic and Archaeological Resources.* Construction-related impacts to historic and archaeological resources will be considered in the EIR.

- *Growth Inducement and Related Secondary Effects.* The EIR will provide an analysis of the Program's potential to induce disorderly growth and the secondary effects related thereto.

Alternatives to be Addressed in the EIR. In accordance with section 15126.6 of the State CEQA Guidelines, an EIR must "describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most the basic objectives of the Project, but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines also require that a No Project Alternative be evaluated, and that under specific circumstances, an environmentally superior alternative be designated from among the remaining alternatives. The identified alternatives will be analyzed at a qualitative level of detail for comparison against the impacts identified for the Proposed Program, consistent with the requirements of CEQA.

Purpose of Public Scoping Process. The City will be the Lead Agency under CEQA for the preparation of the Program EIR. Comments on the NOP need to be submitted to the City by **September 30, 2008.** Submittal of electronic copies of comments in MS Word format is also appreciated. Please send your comments or email to:

Sheldon S. Ah-Sing
City of Milpitas
455 E. Calaveras Blvd.
Milpitas Ca, 95035-5411
sahsing@ci.milpitas.ca.gov

The City will also conduct one public scoping meeting for the Proposed Program to receive public and agency input on the scope and content of the Draft EIR. The format of the meeting will include a brief overview of the Project by the City and its consultant(s) followed by an informal, open forum where agencies and individuals will be able to provide the City with oral and written input on the Program. The scoping meeting will be held at the time and place listed below:

DATE: September 9, 2008

TIME: 6:30 p.m.

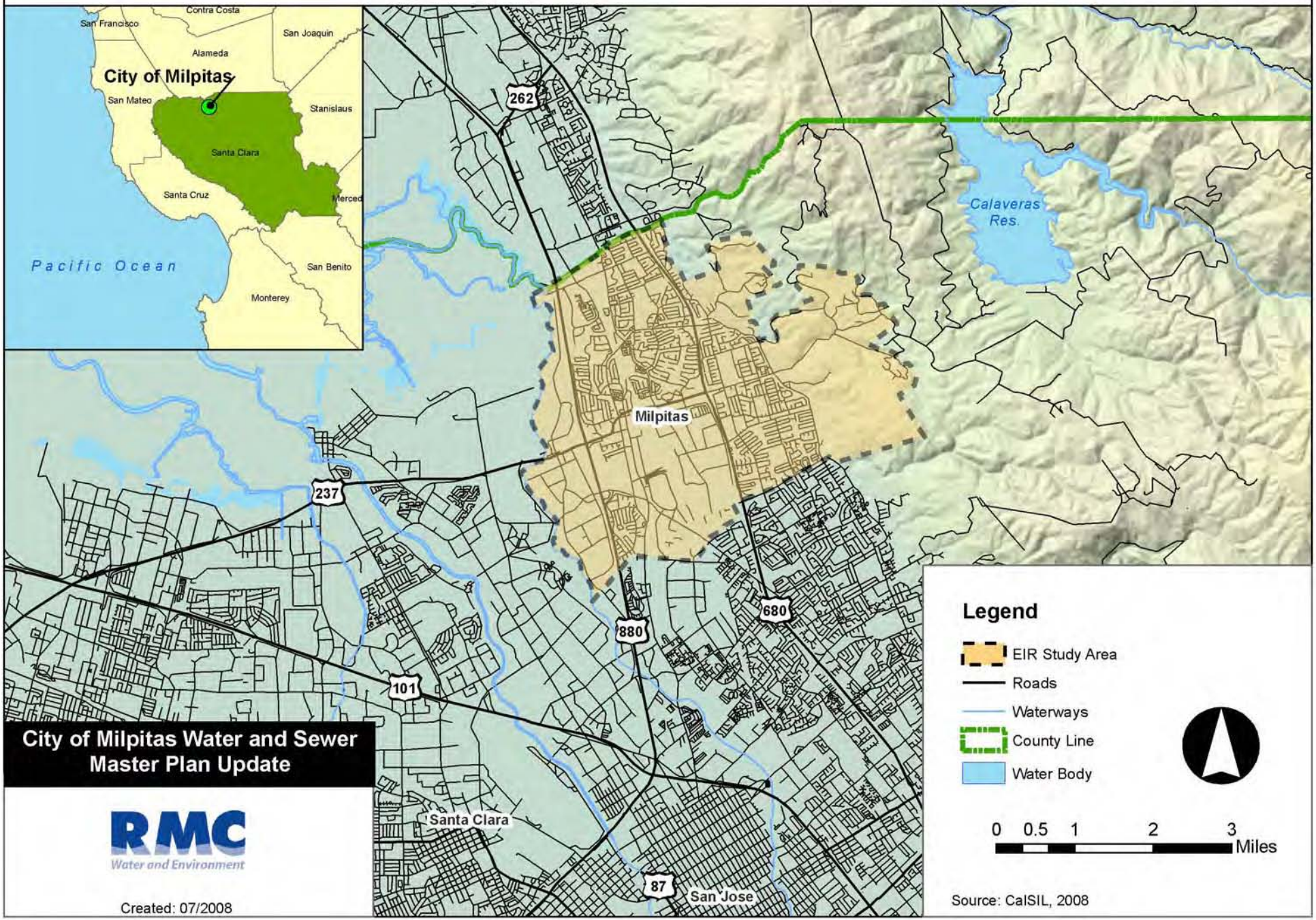
LOCATION: Committee Conference Room
Milpitas City Hall
455 E. Calaveras Boulevard
Milpitas, California

If you have any questions, please contact Sheldon Ah-Sing at the above address, by calling (408) 586-3278, or by e-mail to sahsing@ci.milpitas.ca.gov. Copies of this notice will also be available at the Public Scoping Meeting.

Signature: Sheldon S. Ah Sing Date: August 27, 2008

Sheldon Ah Sing, Senior Planner
City of Milpitas Planning Department

Figure 1 - Regional Map

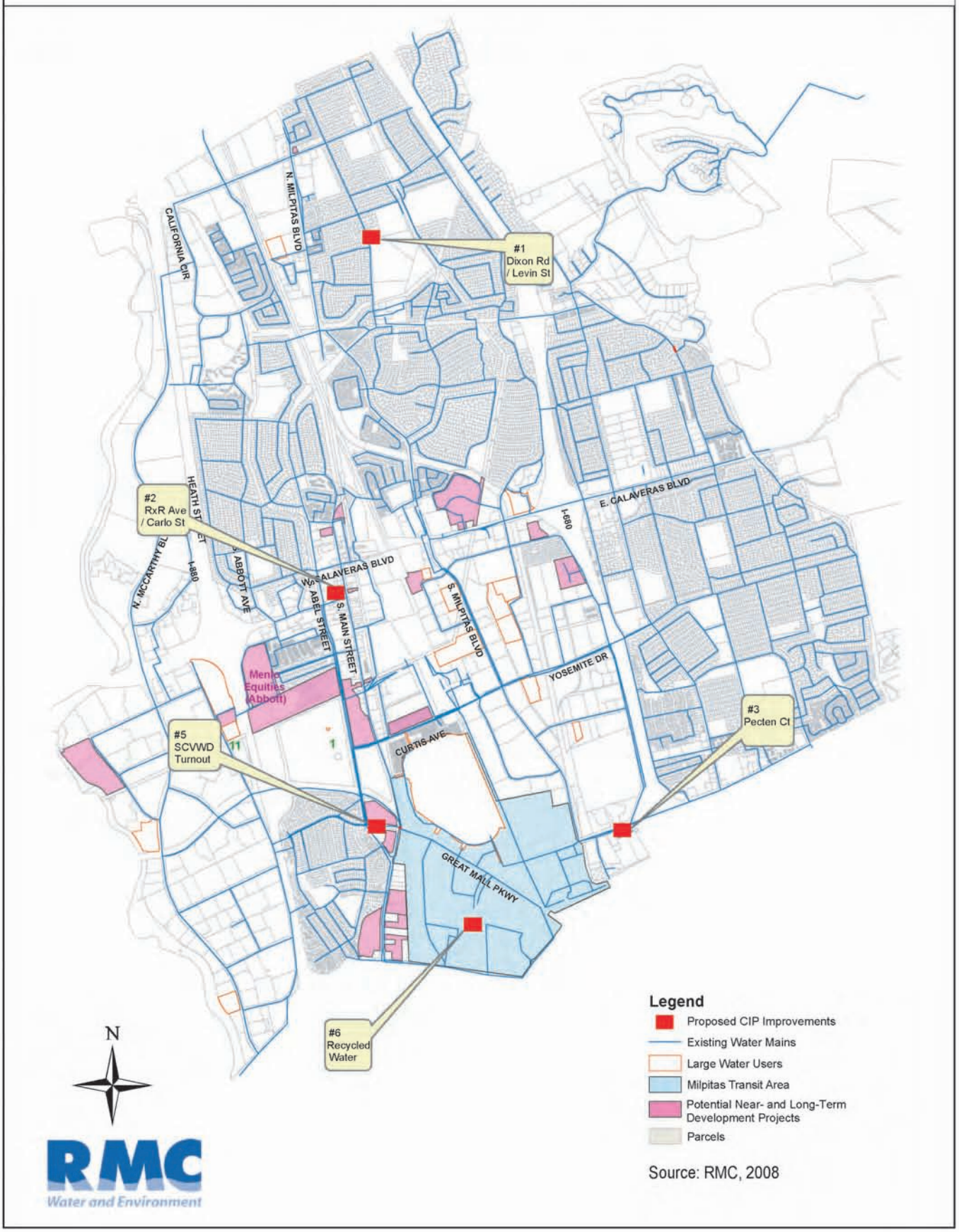


City of Milpitas Water and Sewer Master Plan Update

RMC
Water and Environment

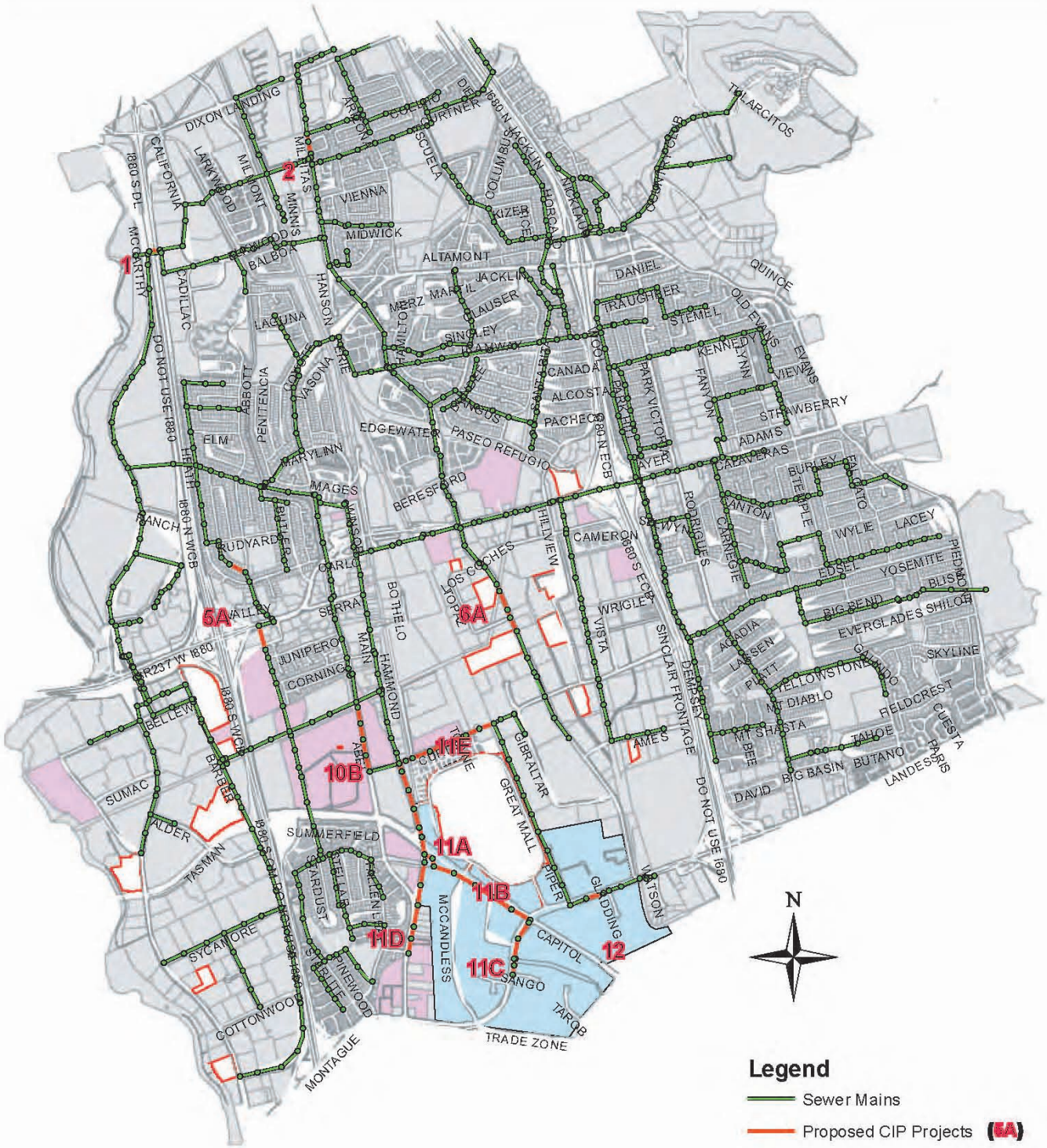
Created: 07/2008

Figure 2 - Water Master Plan Update Projects



Source: RMC, 2008

Figure 3 - Sewer Master Plan Update Projects



RMC
Water and Environment

Source: RMC, 2008

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DEPARTMENT OF TOXIC SUBSTANCES CONTROL
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PO BOX 806
SACRAMENTO, CA 95812-0806

WATER RESOURCES CONTROL BOARD
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1001 "I" ST
SACRAMENTO, CA 95814

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ATTENTION ASHOK VYAS
1505 SHALLENBERGER ROAD
SAN JOSE, CA 95131

MILPITAS CHAMBER OF COMMERCE
828 N. HILLVIEW DRIVE
MILPITAS, CA 95035

SAN FRANCISCO WATER DEPARTMENT
1000 EL CAMINO REAL
MILLBRAE, CA 94030

WATER POLLUTION CONTROL PLANT
ATTENTION DALE IHRKE
700 LOS ESTEROS ROAD
SAN JOSE, CA 95134

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PO BOX 2050
OAKLAND, CA 94604

WEST VALLEY SANITATION DISTRICT
100 E. SUNNYOAKS AVE
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MILPITAS COMMUNITY LIBRARY
ATTENTION ED CAVELLINI, COMMUNITY LIBRARIAN
40 NORTH MILPITAS BOULEVARD
MILPITAS, CA 95035

METROPOLITAN TRANSPORTATION COMMISSION
101 EIGHTH STREET
OAKLAND, CA 94607-4700

SANTA CLARA VALLEY WATER DISTRICT
ATTENTION SUE TIPPETS
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118

CITY OF FREMONT PLANNING DEPT
ATTN ENVIRONMENTAL REVIEW
39550 LIBERTY STREET
FREMONT, CA 94537-5006

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
ATTENTION: SUZANNE BOURGUIGNON
939 ELLIS STREET
SAN FRANCISCO, CA 94109

CUPERTINO SANITARY DISTRICT
20833 STEVENS CREEK BLVD
SUITE 104
CUPERTINO, CA 95014

County of Santa Clara
Planning Office
70 W. Hedding Street
East Wing, 7th Floor
San Jose, CA 95110

IGR/CEQA COORDINATOR
OFFICE OF TRANS. PLANNING
CALIF. DEPT. OF TRANSPORTATION
BOX 23660
OAKLAND, CA 94623-0660

CALIFORNIA AIR RESOURCES BOARD
1001 "I" STREET
SACRAMENTO, CA 95812

REGIONAL WATER QUALITY CONTROL BOARD
1515 CLAY STREET, STE. 1400
OAKLAND, CA 94612

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA)
ATTN: ENVIRONMENTAL REVIEW
3331 N. FIRST STREET
SAN JOSE, CA 95134-1906

SANTA CLARA COUNTY OPEN SPACE AUTHORITY
ATTN: ENVIRONMENTAL REVIEW
6830 VIA DEL ORO, SUITE 200
SAN JOSE, CA 95119

PACIFIC GAS & ELECTRIC
111 ALMADEN BOULEVARD, ROOM 814
SAN JOSE, CA 95198

CITY OF SANTA CLARA
PLANNING DEPARTMENT
1500 WARBURTON AVENUE
SANTA CLARA, CA 95050

LEYLA HEDAYAT
SANTA CLARA VALLEY TRANSPORTATION AUTHORITY
3331 NORTH FIRST STREET, BUILDING B/2
SAN JOSE, CA 95134-1927

Santa Clara County Parks and Recreation Dept.
298 Garden Hill Drive
Los Gatos, CA 95032

BURBANK SANITARY DISTRICT
20833 STEVENS CREEK BLVD
SUITE 104
CUPERTINO, CA 95014

CITY OF CAMPBELL
PLANNING DEPT
70 N 1ST STREET
CAMPBELL, CA 95008

TOWN OF LOS GATOS
PLANNING DEPT
110 E MAIN STREET
LOS GATOS, CA 95030

CITY OF MONTE SERENO
PLANNING DEPT
18041 SARATOGA- LOS GATOS RD
MONTE SERENO, CA 95030

CITY OF CUPERTINO
PLANNING DEPT
10300 TORRE AVENUE
CUPERTINO, CA 95014-3202

CITY OF SARATOGA
PLANNING DEPT
13777 FRUITVALE AVENUE
SARATOGA, CA 95070

CITY OF SUNNYVALE
PLANNING DEPT
P.O. BOX 3707
SUNNYVALE, CA 94088-3707

Print Form

2008082114

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: City of Milpitas Water and Sewer Master Plan Update

Lead Agency: City of Milpitas
Contact Person: Sheldon Ah-Sing
Mailing Address: 445 East Calaveras Blvd
Phone: 408-586-3278
City: Milpitas
Zip: 95035
County: Santa Clara

Project Location: County: Santa Clara
City/Nearest Community: Milpitas
Cross Streets: Numerous - I-680 and 880
Zip Code: 95035
Lat. / Long.: ___° ___' ___" N/ ___° ___' ___" W
Total Acres: N/A
Assessor's Parcel No.: Numerous
Section: ___ Twp.: ___ Range: ___ Base: ___
Within 2 Miles: State Hwy #: 680, 101, 880
Waterways: Coyote Creek, Penitencia Creek
Airports: none
Railways: Southern Pacific
Schools: numerous

Document Type:

CEQA:
- [x] NOP
- [ ] Early Cons
- [ ] Neg Dec
- [ ] Mit Neg Dec
- [ ] Draft EIR
- [ ] Supplement/Subsequent EIR (Prior SCH No.) ___
- Other ___

NEPA:
- [ ] NOI
- [ ] EA
- [ ] Draft EIS
- [ ] FONSI

Other:
- [ ] Joint Document
- [ ] Final Document
- [ ] Other ___

RECEIVED
AUG 27 2008
STATE CLEARING HOUSE

Local Action Type:

- [ ] General Plan Update
- [ ] General Plan Amendment
- [ ] General Plan Element
- [ ] Community Plan
- [ ] Specific Plan
- [ ] Master Plan
- [ ] Planned Unit Development
- [ ] Site Plan
- [ ] Rezone
- [ ] Prezone
- [ ] Use Permit
- [ ] Land Division (Subdivision, etc.)
- [ ] Annexation
- [ ] Redevelopment
- [ ] Coastal Permit
- [x] Other CIP

Development Type:

- [ ] Residential: Units ___ Acres ___
- [ ] Office: Sq.ft. ___ Acres ___ Employees ___
- [ ] Commercial: Sq.ft. ___ Acres ___ Employees ___
- [ ] Industrial: Sq.ft. ___ Acres ___ Employees ___
- [ ] Educational ___
- [ ] Recreational ___
- [x] Water Facilities: Type Various MGD ___
- [ ] Transportation: Type ___
- [ ] Mining: Mineral ___
- [ ] Power: Type ___ MW ___
- [ ] Waste Treatment: Type ___ MGD ___
- [ ] Hazardous Waste: Type ___
- [x] Other: Sewer Collection - Various

Project Issues Discussed in Document:

- [x] Aesthetic/Visual
- [x] Agricultural Land
- [x] Air Quality
- [x] Archeological/Historical
- [x] Biological Resources
- [ ] Coastal Zone
- [x] Drainage/Absorption
- [ ] Economic/Jobs
- [ ] Fiscal
- [x] Flood Plain/Flooding
- [ ] Forest Land/Fire Hazard
- [x] Geologic/Seismic
- [ ] Minerals
- [x] Noise
- [x] Population/Housing Balance
- [x] Public Services/Facilities
- [x] Recreation/Parks
- [x] Schools/Universities
- [x] Septic Systems
- [x] Sewer Capacity
- [x] Soil Erosion/Compaction/Grading
- [x] Solid Waste
- [x] Toxic/Hazardous
- [x] Traffic/Circulation
- [x] Vegetation
- [x] Water Quality
- [x] Water Supply/Groundwater
- [x] Wetland/Riparian
- [x] Wildlife
- [x] Growth Inducing
- [x] Land Use
- [x] Cumulative Effects
- [ ] Other ___

Present Land Use/Zoning/General Plan Designation:
Various

Project Description: *(please use a separate page if necessary)*

The City intends to formally adopt its 2009 Water and Sewer Master Plan Updates and is preparing a Program-level EIR to assess the potential environmental impacts of implementing the water and sewer capital improvement projects (CIPs) identified in each of the updates. The Program EIR will analyze the impact of the City's preferred land use buildout scenario, which is identified as Scenario 3 in the Master Plan Updates. These improvements are expected to be constructed over the course of the next 20-years and include various water distribution and sewage collection facilities, which would be constructed at various locations throughout the City's corporate limits.

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

January 2008

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Highway Patrol	X	Parks & Recreation
X	Caltrans District # 4		Pesticide Regulation, Department of
	Caltrans Division of Aeronautics		Public Utilities Commission
	Caltrans Planning (Headquarters)	X	Reclamation Board
	Coachella Valley Mountains Conservancy	X	Regional WQCB # 2
	Coastal Commission		Resources Agency
	Colorado River Board		S.F. Bay Conservation & Development Commission
X	Conservation, Department of		San Gabriel & Lower L.A. Rivers and Mtns Conservancy
	Corrections, Department of		San Joaquin River Conservancy
	Delta Protection Commission		Santa Monica Mountains Conservancy
	Education, Department of	X	State Lands Commission
	Energy Commission		SWRCB: Clean Water Grants
X	Fish & Game Region # 3	X	SWRCB: Water Quality
	Food & Agriculture, Department of		SWRCB: Water Rights
	Forestry & Fire Protection		Tahoe Regional Planning Agency
	General Services, Department of	X	Toxic Substances Control, Department of
X	Health Services, Department of		Water Resources, Department of
	Housing & Community Development		
X	Integrated Waste Management Board		Other
	Native American Heritage Commission		Other
	Office of Emergency Services		

Local Public Review Period (to be filled in by lead agency)

Starting Date August 27, 2008 Ending Date September 30, 2008

Lead Agency (Complete if applicable):

Consulting Firm: RMC Water and Environment
Address: 2290 North First Street, Suite 212
City/State/Zip: San Jose, CA 95131
Contact: Clint Meyer
Phone: 408-240-8161

Applicant: City of Milpitas
Address: 455 E Calaveras Blvd.
City/State/Zip: Milpitas CA, 95035
Phone: 408-586-3278

Signature of Lead Agency Representative: [signature] **Date:** 26 Aug 08

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

PG&E Land Services, 111 Almaden Blvd., Rm. 814, San Jose, CA 95115

September 23, 2008

City of Milpitas
Planning Department
455 E Calaveras Blvd.
Milpitas, CA 95035
Attn: Sheldon Ah Sing
Fax: 408-586-3293
Email: sahsing@ci.milpitas.ca.gov

RE: Review of Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR)- July 2008
For: City of Milpitas Water and Sewer Master Plan Updates
Loc: City of Milpitas
City's Ref: Nil
PG&E File : SJ 164 (Land)

Dear Sir / Madam,

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Water and Sewer Master Plan Updates Project.

Information provided in the NOP of the DEIR did not specifically indicate the direct impacts on our gas and electric facilities. However, since PG&E has an obligation to provide the public with a reliable and safe energy supply as mandated by the California Public Utilities Commission (CPUC) and to comply with the guidelines outlined in General Orders 95 and 112. PG&E should be consulted during the development of the plan to ensure that the capacity, operational and maintenance requirements for its gas and electric facilities are taken into consideration prior to approval of the final plan.

Early involvement will allow us to assess cumulative impacts to our systems and to identify facilities that may need to be installed, relocated and or realigned as a result of the proposed general plan revision. Because engineering and construction of our facilities may require long lead times, we encourage you to consult with us during the initial stages of your planning process.

We would like to note that expansion of utility facilities is a necessary consequence of growth and development. As development occurs, the cumulative impacts of new energy load growth use up available capacity in the utility system. In addition to adding new distribution feeders, the range of electric system improvements needed to accommodate growth may include upgrading existing substations and building new substations and interconnecting transmission line. Comparable upgrades or additions would be required for our gas system as well. Environmental impacts associated with new and or relocated gas or electric facilities as a result of the proposed project should be fully addressed in the Final EIR and, if appropriate, mitigation measures to minimize or eliminate such impacts should be incorporated into the document as well.

PG&E owns and operates the following facilities within the project area:

Gas Transmission – one 34" gas transmission line # 300B- running from Hwy 237 at westerly of Hwy 880 , going southeasterly, crossing Hwy 880 again, and turns easterly towards N Capitol Avenue;
one 36" gas transmission line # 300A- running northeasterly from Highway 880 at Barber Lane , towards and along Great Mall Parkway, and running southeasterly;
one 30" gas transmission line # 131- starting from the area northwesterly of the intersection of Hwy 880 and Hwy 237, going northerly crossing Dixon Landing Rd.

Electric Transmission – one 230 KV Electric Transmission pole line, starting from PG&E Los Esteros Substation , 1515 Alviso – Milpitas Rd., running approximately northerly along west side of Hwy 880- towards Dixon Landing Rd. ;
One 115 KV Electric Transmission pole line running southerly along easterly side of Hwy 880, crossing Hwy 237, towards Landess Avenue;
One 115 KV tower line starting from PG&E Dixon Landing Substation, running southeasterly along the easterly side of Hwy 880 , crossing N Abel St., going southeasterly, and crosses Hwy 237, going southerly towards and crossing Landess Avenue;
One 115 KV Electric Transmission pole line, starting from PG&E Milpitas Substation, running southwesterly, crossing N Capitol Avenue, going westerly towards and crossing Old Oakland Rd.

To promote the safe and reliable maintenance and operation of these utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their project plans. Any proposed development plans should provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities.

Developers will be responsible for the costs associated with the relocation of existing PG&E facilities to accommodate their proposed development. Because these facilities relocations require long lead times and are not always feasible, developers should be encouraged to consult with PG&E as early in their planning stages as possible.

Relocations of PG&E's electric transmission and substation facilities (50,000 volts and above) could also require formal approval from the California Public Utilities Commission. If required, this approval process could take up to two years to complete. Proponents with development plans which could affect such electric transmission facilities should be referred to PG&E for additional information and assistance in the development of their project schedules.

We would also like to note that continued development consistent with your General Plans will have a cumulative impact on PG&E's gas and electric systems and may require on-site and off-site additions and improvements to the facilities which supply these services. Because utility facilities are operated as an integrated system, the presence of an existing gas or electric transmission or distribution facility does not necessarily mean the facility has capacity to connect new loads.

Expansion of distribution and transmission lines and related facilities is a necessary consequence of growth and development. In addition to adding new distribution feeders, the range of electric system improvements needed to accommodate growth may include upgrading existing substation and transmission line equipment, expanding existing substations to their ultimate buildout capacity, and building new substations and interconnecting transmission lines. Comparable upgrades or additions needed to accommodate additional load on the gas system could include facilities such as regulator stations, odorizer stations, valve lots, distribution and transmission lines."

We would like to recommend that environmental documents for proposed development projects include adequate evaluation of cumulative impacts to utility systems, the utility facilities needed to serve those developments and any potential environmental issues associated with extending utility service to the proposed project. This will assure the project's compliance with CEQA and reduce potential delays to the project schedule.

We encourage the City to include information about the issue of electric and magnetic fields (EMF) in the EIR. It is PG&E's policy to share information and educate people about the issue of EMF.

EMFs are invisible fields of force created by electric voltage (electric fields) and by electric current (magnetic fields). Wherever there is a flow of electricity, both electric and magnetic fields are created; in appliances, homes, schools and offices, and in power lines. There is no scientific consensus on the actual health effects of EMF exposure, but it is an issue of public concern. PG&E relies on organizations and health agencies such as the California Department of Health Services, U.S. Environmental Protection Agency and the Electric Power Research Institute to review research on EMF and provide a foundation for developing policies.

Because there is concern about the possible health effects of exposure to EMF, we support and fund medical, scientific, and industry research on EMF. It is PG&E policy to consider EMF in the design, planning and construction of new and upgraded facilities.

PG&E remains committed to working with the City to provide timely, reliable and cost effective gas and electric service to Brentwood area. We would also request that we be copied on future correspondence regarding this subject as this project develops and that we be placed on the list to review the DEIR and FEIR.

Should you require any additional information or have any questions, please call me at (408) 282-7544; or by email at akp3@PGE.com.

Thank you.

Sincerely,

Alfred Poon
Land Rights Protection
Southern Area

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF TRANSPORTATION
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 622-5491
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

September 25, 2008

SCL-000-GEN
SCL000196
SCH2008082114

Mr. Sheldon Ah-Sing
City of Milpitas
455 E. Calaveras Boulevard
Milpitas, CA 95035

Dear Mr. Ah-Sing:

City of Milpitas Water and Sewer Master Plan Update, Notice of Preparation (NOP)

Thank you for including the California Department of Transportation (Department) in the environmental review process for the proposed plan update. We have reviewed the NOP and have the following comments to offer.

The Department is primarily concerned with potential impacts of the proposed project on State highway facilities in Santa Clara County and the regional State transportation network in adjacent counties.

As lead agency, the City of Milpitas is responsible for all project mitigation, including any needed improvements to state highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. The project's traffic mitigation should be specifically identified in the environmental document. Any required roadway improvements should be completed prior to issuance of project occupancy permits. While an encroachment permit is only required when the project involves work in the State Right of Way (ROW), the Department will not issue an encroachment permit until our concerns are adequately addressed. Therefore, we strongly recommend that the lead agency ensure resolution of the Department's California Environmental Quality Act (CEQA) concerns prior to submittal of the encroachment permit application. Further comments will be provided during the encroachment permit process if required; see the end of this letter for more information regarding the encroachment permit process.

Advance Planning – Environmental
The Department plans include the following projects on Interstate (I)-880 and I-680 in the vicinity of Milpitas. Scheduling of construction and other project phases are subject to change:

I-680
- Construct sound walls. Scheduled to begin Fall 2011 and end Spring 2013;
- Rehabilitate and widen roadway. Scheduled to begin Fall 2008 and end Fall 2011;

- Widen I-680 northbound and add High Occupaucy Vehicle (HOV) lanes from Calaveras Boulevard (Milpitas) to Stoneridge Drive (Pleasanton). Scheduled to begin Spring 2013 and end Spring 2015;
- Convert southbound HOV laue. Scheduled to begin Spring 2009 and end Fall 2011;

I-880
- Irrigate, plant and restore highway vegetation. Began Summer 2004 and ends Fall 2008;
- Construct sound walls. Scheduled to begin Fall 2011 and end Spring 2013;
- Widen from 6 to 8 lanes for HOV. Scheduled to begin Spring 2011 and end Summer 2013.

Traffic
Any work in State ROW that may disrupt traffic on a State facility should be addressed in a *traffic control plan.*

Capital Improvements/Public Facilities
Public works projects should be in conformity with the City of Milpitas and County of Santa Clara general plans.

Cumulative Impacts
Cumulative impacts should also be considered where alternatives contemplate work that would affect State ROW such as any transportation of hazardous material on State ROW, greenhouse emissions, commnnity impacts, traffic impacts, tree removal, endangered species, seasonal wetlands, and water quality impacts (e.g. drainages, culverts etc.).

Greenhouse Gases
Recent concern abont greenhouse gas (GHGs) emissions and the current release of the Office of Planning and Research (OPR) Technical Advisory (June 19, 2008) have increased emphasis on the need to evaluate GHG impacts. OPR's Techuical Advisory (OPR TA) has provided guidance on methods to identify potential emissions. Good faith effort in reducing GHG emissions would also include energy efficient practices for water usage. This would entail a redncti on in the length of water and sewer lines that would enhance urban infill and mixed use development (OPR TA page 5 and OPR General Plan Guidelines, page 112) and thereby reduce vehicle trips and reduce construction and maintenance impacts to State ROW. Any increased emissions and/or expanded carbon footprint due to increased vehicles miles traveled should be evaluated and mitigation recommended, where appropriate.

Water Quality
Please provide discussion on any State ROW regarding alteration or impacts to drainage facilities, and culverts. Review the CEQA guidance Appendix G Environmental Checklist for Hydrology and Water Quality specifically c) and e) to ensure compliance.

Cultural Resources
The project's environmental impact report needs to include documented results of a current archaeological record search from the Northwest Information Center of the California Historical Resources Information System if construction activities are proposed within State ROW. Current searches must be no more than five years old. The Department requires the records search, and if warranted, a cultural resource study by a qualified, professional

archaeologist, to ensure compliance with CEQA, Section 5024.5 of the California Public Resources Code, and Volume 2 of the Department's Environmental Handbook. Work subject to these requirements includes, but is not limited to: lane widening, channelization, anxiliary lanes, and/or modification of existing features such as slopes, drainage features, curbs, sidewalks and driveways within or adjacent to State ROW. These requirements, including applicable mitigation, must be fulfilled before an encroachment permit can be issued for project-related work in State ROW. See the website address below for more information regarding the California Historical Resources Information System – Northwest Information Center. (Click on IC Roster) http://ohp.parks.ca.gov

Encroachment Permit

Work that encroaches onto the State ROW requires an encroachment permit that is issued by the Department. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to the address below. Traffic-related mitigation measures should be incorporated into the construction plans during the encroachment permit process.

Office of Permits
California DOT, District 4
P.O. Box 23660
Oakland, CA 94623-0660

See the website link below for more information.
http://www.dot.ca.gov/hq/traffops/developserv/permits/

Should you have any questions regarding this letter, please call José L. Olveda of my staff at (510) 286-5535.

Sincerely,

Lisa Carboni

LISA CARBONI
District Branch Chief
Local Development - Intergovernmental Review

c: Scott Morgan (State Clearinghouse)

SANTA CLARA
Valley Transportation Authority

FAX COVER SHEET

Please deliver fax to:

Sheldon Ah Sing	City of Milpitas	**Phone**	**Fax**
			586-3293

Subject: Development Review

Total pages including cover: 2

Original _____ will x _____ will not follow by mail.

From: Roy Molseed
Santa Clara Valley Transportation Authority
Environmental Planning
3331 North First Street, Bldg. B
San Jose, CA 95134-1906

OFFICE PHONE (408) 321-5789 OFFICE FAX (408) 321-5787

Memo:

If you do not receive all the pages indicated above, or have any problems with this transmittal, please call (408) 321-5789.

SANTA CLARA
Valley Transportation Authority

September 29, 2008

City of Milpitas
Planning Division
455 East Calaveras Boulevard
Milpitas, CA 95035-5479

Attention: Sheldon Ah Sing

Subject: Milpitas Water and Sewer Master Plan Update

Dear Mr. Sing:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the NOP for a Draft EIR for an update to the Water and Sewer Master Plan Update. We have the following comments.

Transit Service Impacts

There are several projects that may have impacts on transit operations due to the location of existing transit facilities. These projects include: W-MP-4, S-MP-11A, S-MP-11B, S-MP-11C, S-MP-11D, and S-MP-12.

The plans for the projects should have a note to contact Steve Newgren of VTA Operations Planning at (408) 952-4106 if a bus stop or bus route will be affected by construction activities.

VTA requests the opportunity to review more detailed maps of the projects when they are made available as part of the Master Plan. We may have additional comments concerning potential impacts to existing or planed transit service.

Thank you for the opportunity to review this project. If you have any questions, please call me at (408) 321-5784.

Sincerely,

Roy Molseed
Senior Environmental Planner

RM:kh

cc: Samantha Swan, VTA
ML0806

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org

September 30, 2008

Sheldon S. Ah-Sing
City of Milpitas
455 E. Calaveras Blvd.
Milpitas, CA 95035-5411

Subject: Notice of Preparation of a Draft Environmental Impact Report for the City of Milpitas Water and Sewer Master Plan Updates

Dear Mr. Ah-Sing:

The Santa Clara County Parks and Recreation Department (County Parks Department) is in receipt of a Notice of Preparation for a Draft Environmental Impact Report (DEIR) for the City of Milpitas Water and Sewer Master Plan Update. The County Parks Department's comments are primarily focused on potential impacts related to the *Santa Clara County Countywide Trails Master Plan Update* relative to countywide trail routes, public access, and regional parks.

General Plan Consistency and Land Use Compatibility
The DEIR should include a discussion related to the Santa Clara County Countywide Trails Master Plan Update, an element of the Parks and Recreation Section of the County General Plan, that the Board of Supervisors adopted on November 14, 1995 and how the proposed project is consistent with the Countywide Trails Master Plan Update.

Traffic, Circulation and Alternative Transportation
The DEIR states that alternative transportation will be evaluated, but does not include language regarding potential impacts the proposed project may have on the countywide trail routes in the project vicinity. The DEIR should include a discussion of any potential impacts to existing and proposed trails routes and how it will impact the bicycle trail connections within the city.

Recreation
The scope of the DEIR should also include an evaluation of recreational opportunities in the project vicinity and whether or not the improvements associated with the Master Plan Update will result in potential impacts to these recreational opportunities.

The DEIR should include a discussion of the nearby Ed Levin County Park and how the proposed project may or may not impact the County Park.

The DEIR should also describe the following countywide trail routes, which offer opportunities for non-motorized transportation and connections to the surrounding neighborhoods, parks trails and open space areas, and how the proposed project may impact these countywide trail routes.

- ***Bay Area Ridge Trail: Diablo Range*** (R5-B) – designated as a trail route within other public lands for hiking, off-road cycling and equestrian use. This trail follows the Calera Creek Trail: Northwest Agua Caliente Trail within Ed Levin County Park.

- ***Calaveras Connector Trail*** (C7) – designated as an on-street bicycle route within road right-of-way for on-road cycling use only. This trail is located along Calaveras Road.

- ***Calera Creek Connector Trail*** (C6) – designated as a trail route within other public lands for hiking, off-road cycling and equestrian use. This trail is located along Calera Creek.

Since the project scope is located outside of Ed Levin County Park, the County Parks Department is under the impression that the City of Milpitas would not need to enter our Park system to access their water and sewer systems, nor use Ed Levin for a potential staging area.

Thank you for the opportunity to comment on the Notice of Preparation for the DEIR for the City of Milpitas Water and Sewer Master Plan Update. Please send us a copy of the Draft EIR once it becomes available for review. If you have any questions regarding these comments, please feel free to contact me at (408) 355-2230 or via email at kimberly.Brosseau@prk.sccgov.org.

Sincerely,

Kimberly Brosseau
Park Planner III

cc: Jane Mark, Senior Planner
Bill Grimes, Environmental Health and Safety Compliance Specialist – Water Systems Advisor