EXECUTIVE SUMMARY

Introduction

The City of Merced (City) is proposing to install improvements to its wastewater treatment plant (WWTP) in order to meet existing and future water quality standards and expand its capacity to 20 million gallons per day (mgd). The expanded facility would serve planned demand within the City's Specific Urban Development Plan (SUDP) area as well as the adjacent University of California Merced (UC-Merced) Campus Long Range Development Plan (LRDP) area.

The City of Merced is the lead agency for purposes of complying with the requirements of the California Environmental Quality Act (CEQA). In this role, the City prepared a Draft Environmental Impact Report (Draft EIR) to address the environmental consequences of implementing the Project and alternatives. The City subsequently received comments on the Draft EIR and has prepared this Final EIR in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 *et seq.*) of 1970 (as amended), and the CEQA Guidelines (California Code of Regulations, Title 14).

Project construction will be partially funded with a loan from the State Water Resources Control Board (SWRCB) State Revolving Fund loan program. Because this program is partially funded by the U.S. Environmental Protection Agency, it is subject to federal environmental regulations. These "CEQA-Plus" requirements expand the typical content requirements of an EIR to include additional information pertaining to federally designated endangered species, cultural resource protection, and conformity with applicable air management plans (SWRCB, 2004).

As appropriate, this Final EIR identifies measures to minimize identified significant environmental effects of the Project, presents corrections, clarifications, or modifications to the Draft EIR as noted by comments received during the public review period, and summarizes and responds to public and agency comments on the Draft EIR.

Opportunities for Public Comment

The City of Merced publicly issued a Notice of Preparation (NOP) on October 28, 2005. The NOP included a preliminary analysis of the potential environmental effects on the Project, and was publicly circulated for 30-days, in accordance with Section 15082 of the CEQA Guidelines.

As a result of this effort, the City received seven letters of comment, addressing 14 environmental issues. A copy of the NOP can be found in Appendix A of the Draft EIR. Written comments received on the NOP were considered in the preparation of this EIR, and are included in Appendix B of the Draft EIR.

The City released the Draft EIR on August 14, 2006, and made it available during a 51-day period ending on October 4, 2006 to receive public and/or agency comments on the document. The Draft EIR contained a detailed description of the need for and purpose of the proposed Project, a description of the proposed Project and alternatives, a description of existing and future environmental conditions related to the Project, and a discussion of environmental issues of potential concern to the public and agencies.

The City of Merced Planning Commission held a public meeting on October 4th, 2006 at 7:00 p.m. in the City Council Chambers at the City of Merced Department of Planning and Community Development in Merced.

As a result of these efforts, two written comments letters were received from interested agencies by the end of the review period. No public written or oral comments were received. The letters containing comments are presented in Chapter 3 of this Final EIR, along with individual responses to identified comments.

Purpose of the Project

The City's primary objectives for implementing the proposed Project are (1) to install sufficient WWTP capacity to meet wastewater loads generated by planned population growth in the following areas: the City's existing service area, the adjacent UC Merced Campus, and new growth areas that are identified in the City's SUDP area; and (2) install additional levels of wastewater treatment sufficient to meet current and future effluent quality regulatory limits by replacing and adding to aged facilities and implementing improved wastewater treatment technologies and processes.

Project Description

The proposed Project would add wastewater treatment capacity over several phases and improve treated effluent quality of the existing City of Merced WWTP facility to comply with existing and future waste discharge requirements. Specifically, the Project would:

- Increase WWTP capacity to 20 mgd, which is sufficient to meet City SUDP area and UC Merced campus planned wastewater loads that would be generated in about 2025. The capacity would be installed in phases corresponding to continued population growth and development in the Merced SUDP area and the UC Merced campus.
- Improve existing facilities, including new head works, influent pump station, septage/debris station, additional primary clarifier and aeration basin, secondary clarifier, new blower building, return biosolids pump station, and new digester.
- Wastewater treatment improvements including increased denitrification, coagulation, filtration, and ultra-violet disinfection, increased aeration, and Class A Biosolids production.
- Other improvements, consisting of a new effluent discharge structure into Hartley Slough, landscaping, secondary and emergency power, and new laboratory and administration buildings.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has stated that measures identified in the Draft EIR to comply with its rules and regulations to lower air pollutant emissions should be considered as compliance requirements and incorporated into the project, rather than be considered as mitigation. The SJVAPCD considers mitigation to consist of measures that reduce air pollutant above and beyond their compliance requirements. Therefore, the measures to comply with SJVAPCD requirements have been deleted as mitigation in this Final EIR, but incorporated into the project description.

Project Alternatives

Several project alternatives considered different capacities, technologies, and locations. These alternatives were considered and evaluated during the Project's planning and engineering stages. These alternatives were eliminated from further consideration in the Draft EIR because they failed to meet the primary object of the City to serve planned population and development, or would not operate efficiently or effectively as part of the City's existing wastewater collection and treatment system. Only the No Project Alternative was carried forward for detailed consideration within the Draft EIR.

No Project Alternative

The No Project Alternative would result in the proposed Project not being constructed, and would avoid construction-related impacts to wetlands and air quality. Other impacts that would initially be avoided include land-use conflicts, construction- and operation-related noise, conversion of prime agricultural land, and potential disruptions to traffic and emergency services. Wastewater discharge could increase from 8.5 mgd to 10 mgd, but the City would be unable to provide sufficient treatment capacity. The existing WWTP would be unable to serve planned populations, and community growth and development would be limited by available WWTP capacity.

Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines requires the analysis to identify the environmentally superior alternative if it is not the No Project Alternative. Although the No Project Alternative would avoid many of the potential environmental impacts associated with construction of the Project, it would not achieve the long-term water quality improvements that would occur with implementation of the proposed Project. Because the Project would improve the quality of the treated effluent being discharged to Hartley Slough and also improve the management and control of solids handling and disposal, including measures for the protection of groundwater resources, the Project is considered to be the environmentally superior alternative.

Mitigation Monitoring Plan

The California Environmental Quality Act (CEQA) requires that when a public agency approves a project on the basis of an EIR, the agency must adopt a program of monitoring or reporting on the mitigation measures it has imposed to reduce or avoid significant environmental impacts. The purpose of the Mitigation Monitoring Plan (MMP) is to ensure that the mitigation measures are implemented.

As concluded in this document, the proposed Project would generate several significant environmental impacts that can be reduced, avoided, or minimized with implementation of identified mitigation measures. Therefore, mitigating these effects is mandated as part of approving or proceeding with project implementation.

A Mitigation Monitoring Plan (MMP) has been prepared, and is included in Appendix A to this Final EIR. The MMP includes a description of its purpose, outlines mitigation monitoring procedures, describes actions to be taken in the event of noncompliance, and provides a tabulated monitoring matrix including: specific mitigation measures, the timing at which mitigation measures shall be completed, responsible agencies, and instructions for verification of adherence to Project specific mitigation.

Content and Format of this Final EIR

This Final EIR addresses the entire wastewater treatment expansion project to be implemented by the City of Merced. The Final EIR contains comments received during the review period for the Draft EIR, provides responses to the comments received, and describes changes, modifications, and revisions to the Draft EIR in response to public comment.

The Final EIR does not duplicate sections in the Draft EIR describing baseline environmental conditions, potential impacts, or technical environmental background information, unless the information was clarified in response to public input.

The Final EIR contains the following sections:

Section 1: Executive Summary.

Section 2: Project background,

Section 3: Comments received on the Draft EIR, both written and oral.

Section 4: Changes to the Draft EIR. As appropriate, changes, modifications, and responses to comments are presented.

Section 5: List of preparers of the Final EIR.

Appendices: Appendix A: Mitigation Monitoring Plan

Summary of Environmental Impacts

Project related environmental impacts, along with mitigation measures as appropriate, are summarized in Table ES-1 of this document.

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Water Quantity		
Impact 4.1.1: The change in point of discharge to Hartley Slough and increase in treated effluent flow would result in substantial adverse effects to the physical character and channel hydrology of Hartley Slough. (Potentially significant)	**Mitigation Measure 4.1.1:** The City shall develop and implement a monitoring program to determine if increased effluent discharges are inducing excessive stream channel erosion on Hartley Slough downstream of the effluent discharge to the location of the existing agricultural water diversion facility. If observed, bank stabilization practices and other best management practices (BMPs) to control erosion shall be implemented. The following criteria will be used to define excessive erosion in Hartley Slough: • Bank undercutting (e.g., over-hanging root wads) • Bank collapse (the ultimate effect of undercutting and/or bed scouring) e.g., banks held by structure of tree but otherwise eroded and unstable. • Vegetation – perennial cover to waterline; sparse perennial cover to waterline; no perennial cover near waterline. • Tree root exposure affecting stability (where trees occur in riparian zone) • In-channel scouring BMPs would be implemented if monitoring indicates a high rate for any of the five criteria has occurred as result of increased discharges from the WWTP. BMPs will also be implemented if a medium rate of the above criteria is observed which indicates may subsequently degrade to a high-erosion condition as result of the increased WWTP discharges. Measures could include planting stabilizing vegetation, using integrated measures, and as a last resort, installing riprap. If no substantial stream channel erosion is observed, the program may be terminated.	LTS
Impact 4.1.2: The expanded WWTP would result in increased surface runoff resulting from new impervious surfaces, which could result in impacts to Hartley Slough. (Less than significant)	None required.	LTS
Impact 4.1.3: Implementation of the Project would deplete local groundwater supplies or interfere substantially with groundwater recharge. (Less than significant)	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Water Quality		
Impact 4.2.1: Construction of the Project would result in increased erosion and degrade water quality in Hartley Slough and downstream waterways. (Potentially significant)	**Mitigation Measure 4.2.1a:** An Integrated Water Pollution Control Program (IWPCP) shall be developed and implemented to manage and control potential erosion and water quality degradation that would occur during Project construction. Additionally, the program shall describe monitoring during construction activities, dewatering operations, in-water construction activities, and specific best management practices (BMPs) to avoid and minimize impacts to water quality. The plan shall be approved by the City prior to commencement of construction and shall be made conditions of performance with the City's contractor selected to build the Project. The IWPCP shall incorporate control measures in the following categories: • Soil stabilization practices • Sediment and runoff control practices • Monitoring protocols • Non-storm water management and waste management and disposal control practices • Construction dewatering • Hazardous materials management Once approved by the City, the contractor shall be responsible throughout the duration of Project construction for installing, constructing, inspecting, and maintaining the control measures included in the IWPCP. **Mitigation Measure 4.2.1b:** The City will monitor groundwater that is collected during groundwater dewatering and, if it exceeds applicable surface water quality standards, will convey it into a water treatment system, where it will undergo treatment prior to its discharge to Hartley Slough. The water treatment system may use either temporary mobile treatment equipment or the WWTP. Either system would need to have applicable capability (i.e., activated carbon filtration or other suitable treatment technology) to treat and/or remove water quality constituents that exceed applicable surface water criteria.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Impact 4.2.2: The discharge of treated wastewater from the expanded WWTP would increase the receiving water temperature in Hartley Slough to exceed Basin Plan objectives. (Potentially significant)	**Mitigation Measure 4.2.2:** The City shall assess and install a suitable effluent cooling system to comply with temperature receiving water objectives as identified in the Basin Plan (CVRWQCB, 1998). The selected system for effluent cooling, including use of the equalization basins, or installing mechanical chillers or cooling towers, would be sized to provide sufficient cooling to maintain effluent temperature within 5 degrees F of the average annual ambient water temperature. The cooling system shall be constructed within the boundaries of the expanded WWTP site and not generate additional adverse effects to biological resources, wetlands, or sensitive habitats; would not pose a visual nuisance; or would not create obtrusive noise or other emissions. Cooling technologies will initially be sized for the 16 mgd capacity, with a provision to add additional units to accommodate the ultimate 20 mgd capacity.	LTS
Impact 4.2.3: The Project would eliminate chlorine disinfection from the wastewater treatment processes. As a result, several disinfection by-products would no longer be formed in the treated effluent as a result of wastewater disinfection. (Beneficial)	None required.	Beneficial
Impact 4.2.4: The Project would continue to discharge in the treated effluent other Criteria Pollutants, Non-Priority Pollutants, and 303(d) Listed Contaminants at levels consistent with the California Toxics Rule (CTR) and other applicable water quality standards. (Less than significant)	None required.	LTS
Impact 4.2.5: Expansion of the WWTP would increase the discharged salt load to downstream surface waters. (Less than significant)	None required.	LTS
Impact 4.2.6: The application of biosolids to lands within and surrounding the City's WWTP property would degrade local groundwater quality. (Less than significant)	None required.	LTS
Impact 4.2.7: Land application of disinfected tertiary treated water would result in degradation of groundwater quality, and over-application of disinfected tertiary water could result in direct runoff to surface water bodies. (Less than significant)	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Air Quality		
Impact 4.3.1: Construction activities associated with development of the Project would generate short-term emissions of criteria pollutants, including suspended and respirable particulate matter (PM_{10}) and equipment exhaust emissions. (Less Than Significant)	**Mitigation Measure 4.3.1:** The City shall consider including other air pollutant reduction measures as referenced in the SJVAPCD letter dated October 4, 2006, that exceed mandatory compliance levels, which can be implemented by construction contractors during facility construction. The City will consider the implementation of such measures as one of several criteria in the selection of the project construction contractor. The City shall consider the additional measures recommended by the SJVAPCD to minimize air pollutant emissions during construction, including: • Making use of the District's Heavy-Duty Engine Program for replacing older diesel engines with newer, cleaner, fuel-efficient diesel engines • Construction activity mitigation including: o Limiting area of excavation or grading, at any one time o Use catalyst equipped diesel construction equipment o Replace fossil-fueled equipment with electricity-driven equipment o Shut off diesel engines when not in use o Curtail construction emissions during period of high pollutant concentrations o Implement activity management • Lengthen construction period to minimize emission occurring at one time • Use Ultra Low Sulfur Diesel fuel as certified by the California Air Resource Board	LTS
Impact 4.3.2: The Project would result in an increase in operational emissions of criteria air pollutants (ROG, NOx and PM10) and other TACs from on-road motor vehicle traffic traveling to and from the Project area and onsite area sources associated with the Project. (Less than significant)	None required.	LTS
Impact 4.3.3: The Project could create objectionable odors affecting a substantial number of people. (Less than significant).	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Geology		
Impact 4.4.1: In the event of a major earthquake in the region, seismic ground shaking could cause collapse or structural damage to the WWTP and associated facilities. Structural damage to Project components resulting from substantial displacement along various fault sources could indirectly result in significant injury to people and disruption of major services (e.g., sanitary sewer). (Less than significant).	None required.	LTS
Impact 4.4.2: The Project area could be subjected to geologic hazards, including liquefaction, differential settlement, total settlement, and minor slumping along Hartley Slough. (Less than significant)	None required.	LTS
Soils		
Impact 4.5.1: The presence of expansive and corrosive soils could result in structural damage to the proposed pipeline and associated facilities. (Less than significant)	None required	LTS
Vegetation		
Impact 4.6.1: Construction and/or operation of the Project would conflict with local policies or ordinances for protecting biological resources. (Potentially significant)	Implementation of Mitigation Measure 4.2.1a will reduce potential impacts from soil erosion to less than significant **Mitigation Measure 4.6.1a:** The City shall avoid spreading invasive plants that could impact biological resources in the Project area. The City will ensure that all fill material brought onto the Project area from offsite shall be from weed-free sources. The upland filled areas and upland areas disturbed by grading and excavation activities will be re-vegetated with appropriate native species to discourage the colonization of invasive plants in the Project study area. All seed for re-vegetation shall consist of 100 percent native plant species. The seed mix shall be premixed and packaged by a commercial seed supplier, labeled in accordance with the California Agricultural Code; shall be delivered to the site in original, unopened containers; and shall bear a dated guaranteed analysis.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
	Mitigation Measure 4.6.1b: The City shall avoid unnecessary disturbance to native vegetation. In order to avoid and minimize potential impacts from trampling to established vegetation communities, construction activities will be limited to designated staging areas, construction footprints, and construction easements. These areas shall be reseeded with native plants (as prescribed in Mitigation Measure 4.6.1a).	
Impact 4.6.2: The Project would jeopardize or eliminate plant and wildlife habitats. (Less than significant)	None required.	LTS
Fish and Wildlife		
Impact 4.7.1: The expansion of the WWTP will not impede or interfere with the regional movement or migration of wildlife species in the area. (No impact)	None required.	NI
Impact 4.7.2: Expansion of the WWTP will not create new ponds or waterbodies that would attract waterfowl. (No impact)	None required.	NI
Impact 4.7.3: Proposed improvements to the WWTP treatment process will increase effluent volume and improve produce higher quality effluent. Changes to Hartley Slough aquatic species may occur as effluent quantity increases and quality improves. (Less than significant)	None required.	LTS
Aesthetic Resources		
Impact 4.8.1: The Project would adversely affect a scenic vista or scenic resources within a state scenic highway or a City scenic corridor. (No impact)	None required.	NI
Impact 4.8.2: The Project would modify the visual character of the Project area. (Less than significant)	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Impact 4.8.3: The Project would construct structures that would result in the creation of new sources of daytime glare and/or nighttime illumination. (Potentially significant)	**Mitigation Measure 4.8.3:** The City shall install security lighting with directional shields to concentrate lighting toward the Project site. The nighttime security and associated parking lighting fixtures will be equipped with directional shields that aim light downward and away from adjacent properties and public roadways. In addition, lighting fixtures will be placed to concentrate light onsite to avoid spillover onto adjacent properties and public roadways	LTS
Noise		
Impact 4.9.1: Project construction would temporarily increase noise levels at nearby sensitive receptor locations. (Potentially significant)	**Mitigation Measure 4.9.1:** The applicant shall implement the following measures: • Construction activities shall be limited to between 7:00 a.m. and 10:00 p.m. Monday through Saturday to avoid noise-sensitive hours of the day. Construction activities shall be prohibited on Sundays and holidays. • Construction equipment noise shall be minimized during Project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools. • Construction contractors shall locate fixed construction equipment (such as compressors and generators) and construction staging areas as far as possible from nearby residences.	LTS
Impact 4.9.2: Project operational activities associated with traffic and WWTP equipment operation could increase ambient noise levels at nearby land uses. (Less than significant)	None required.	LTS
Recreation		
Impact 4.10.1: The Project would result in an increase in visitor use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (No impact)	None required.	NI
Impact 4.10.2: The Project would substantially disrupt or conflict with the use of existing recreational facilities to the extent that it would affect the recreational value of such facilities. (No impact)	None required.	NI

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Open Space		
Impact 4.11.1: The Project would displace about 20-acres of open space currently in an agricultural land use. (Potentially significant)	**Mitigation Measure 4.11.1:** (Same as Mitigation 4.14.1) The 25 acres of farmland within the WWTP expansion area, not required for the WWTP facility, shall remain in an agricultural land use. The City shall pay into a "farmland trust" fund for Merced County that will acquire agricultural conservation easements to compensate for the conversion of 20 acres of farmland within the WWTP expansion area. The farmland subject to the easements shall be of the same acreage, and at least the same category of farmland, as identified by the latest FMMP report, as that farmland affected at the WWTP. With the implementation of Mitigation Measure 4.14.1, the impact to the remaining 25 acres would be reduced to a less-than-significant level. However, offsite conservation easements over existing farmland would not provide full Project-level mitigation, because they would not compensate for the loss or farmland due to the Project or replace the resources lost because they would not reduce the overall net loss of farmland by the WWTP. Therefore, the direct impact and permanent conversion of important farmlands as a result of the expanded WWTP would be significant and unavoidable.	SU
Impact 4.11.2: The Project would conflict with an existing policy for managing open space or other agreement /easement for open space protection. (No impact)	None required.	NI
Impact 4.11.3: The Project would result in the loss of open space which acts as a buffer and could result in conflict between adjacent land uses. (No impact)	None required.	NI
Cultural Resources		
Impact 4.12.1: The Project would cause adverse effects to unknown historical resources, including unique archaeological resources. (Potentially significant)	**Mitigation Measure 4.12.1:** In the event of accidental discovery of cultural resources, such as structural features or unusual amounts of bone or shell, artifacts, human remains, architectural remains (such as bricks or other foundation elements), or historic archaeological artifacts (such as antique glass bottles, ceramics, etc.), work will be suspended and City staff will be contacted. A qualified cultural resource specialist will be retained and will perform any necessary investigations to determine the significance of the find. The City will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources. In considering any suggested mitigation proposed by the consulting archaeologist to	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
	mitigate impacts to historical resources or unique archaeological resources, the Project proponent will determine whether avoidance is feasible in light of the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the Project site while the mitigation for historical resources or unique archaeological resources is carried out. In addition, pursuant to Sections 5097.97 and 5097.98 of the California Public Resources Code and Section 7050.5 of the California Health and Safety Code, in the event of the discovery of human remains, all work will be halted and the County Coroner will be immediately notified. If the remains are determined to be Native American, their treatment and disposition will adhere to the Native American Heritage Commission guidelines.	
Impact 4.12.2: The Project would cause adverse effects on unknown paleontological resources. (Potentially significant)	**Mitigation Measure 4.12.2:** The City shall notify a qualified paleontologist of unanticipated discoveries, in order to document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in Section 15064.5 of the CEQA Guidelines. In the event a fossil is discovered during construction, activities that could potentially affect the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist will notify City to determine procedures to be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the Project on the qualities that make the resource important, and the plan will be implemented. The plan will be submitted to the City for review and approval.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Threatened and Endangered Species		
Impact 4.13.1: Construction of the Proposed Project could result in impacts to the following special-status species: valley elderberry longhorn beetle, blunt-nosed leopard lizard, giant garter snake, Swainson's hawk, greater sandhill crane, and San Joaquin kit fox. (Potentially significant) **Impact 4.13.1a:** One elderberry shrub is located along an access road north of the firing range in the eucalyptus grove. As currently planned, construction of the proposed Project would require the removal of the one shrub located in the eucalyptus grove. This shrub contains five stems greater than 1 inch (but less than 3 inches) in diameter, does not have beetle exit holes, and is within historically riparian habitat. Without mitigation, this is considered to be a significant impact.	**Mitigation Measure 4.13.1a:** The one elderberry shrub that cannot be avoided by the project shall be transplanted following USFWS (1999) guidelines. Transplanting this shrub meets the definition of "take" of a federally-listed species and will require coordination with and approval from the USFWS. Transplanting shall only occur when the shrub is dormant (approximately November through the first two weeks in February) and shall follow the procedures described in USFWS (1999) as updated. The area that the shrub is transplanted to shall also be planted with at least 10 additional elderberry cutting or seedlings, and at least 5 associated native species, and shall be protected in perpetuity per USFWS (1999).	LTS
Impact 4.13.1b: Habitat for the blunt-nosed leopard lizard (alkali scrub and non-native annual grasslands) occurs in the former peach pit disposal area in the western portion of the Project study area. No Project construction would occur in the alkali or grassland habitat of this area. (Less than significant)	None required.	LTS
Impact 4.13.1c: Construction of the new roadway over Hartley Slough at the WWTP entrance and the new effluent outfall, the filling of the southern portion of the effluent channel, the rerouting of Hartley Lateral and Paden Drain, and subsequent dewatering of a portion of Hartley Lateral would involve work within potential giant garter snake aquatic and upland habitat and would result in 2.03 acres of temporary and 1.24 acres of permanent habitat loss.	**Mitigation Measure 4.13.1c:** The following mitigation measures shall be implemented to reduce Project impacts on giant garter snake: • All construction activity within giant garter snake habitat shall be conducted between May 1 and October 1. This is the active period for giant garter snakes and the potential for direct impacts are reduced because snakes are actively moving and avoiding danger. More danger is posed to snakes during their inactive period, because they are occupying underground burrows or crevices and are more susceptible to direct effects, especially during excavation. Between October 2 and April 30 contact the Service's Sacramento Fish and Wildlife Office to determine if additional measures are necessary to minimize and avoid take.	LTS

TABLE ES-1
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Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
In addition, inadvertent construction of the Project would result in temporary habitat degradation and, potentially, direct take. Permanent loss includes temporary impacts that span more than two seasons (one season is May 1 to October 1). Without mitigation, this is considered to be a potentially significant impact.	• Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat. • Construction personnel shall participate in a worker environmental awareness program. Under this program, workers shall be informed about the presence of giant garter snakes and habitat associated with the species and that unlawful take of the animal or destruction of its habitat is a violation of the Federal Endangered Species Act (FESA). This instruction shall be conducted by a qualified biologist prior to construction activities. Proof of this instruction shall be submitted to the City. The City shall implement a fresh emergent marsh monitoring program to determine if increased WWTP discharge is degrading giant garter snake habitat quality. If degradation is found, the City shall consult with the U.S. Fish and Wildlife Service (USFWS) to identify and implement suitable habitat compensation consistent with USFWS mitigation policy for this species. • Within 24 hours before construction activities begin in areas of giant garter snake habitat, the site shall be inspected by a qualified biologist. The biologist will provide the City with a field report form documenting the monitoring efforts within 24 hours of commencement of construction activities. The monitoring biologist shall be available thereafter; if a snake is encountered during construction activities, the monitoring biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. Giant garter snakes encountered during construction activities will be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals shall only be attempted by personnel or individuals with current Service recovery permits pursuant to section 10(a)1(A) of FESA. The biologist shall be required to report any incidental take to the City immediately by telephone and by written letter within one working day. The Project area shall be reinspected whenever a lapse in construction activity of two weeks or greater has occurred. • Clearing of wetland vegetation will be confined to the minimal area necessary to excavate toe of bank for riprap or fill placement. Excavation of channel for removal of accumulated sediments will be accomplished by using equipment located on and operated from top of bank, with the least interference practical for emergent vegetation.	

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
	• Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance. Preserved giant garter snake habitat shall be designated as Environmentally Sensitive Areas and shall be flagged by a qualified biologist and avoided by all construction personnel. • After completion of construction activities, any temporary fill and construction debris shall be removed and, wherever feasible, disturbed areas shall be restored to pre-project conditions. • Affected giant garter snake habitat shall be replaced or restored in kind at a 3:1 ratio (see Table 4-9). This table assumes that temporary impacts will only last one season. • All replacement habitat must include both upland and aquatic habitat components. Upland and aquatic habitat components must be included in the replacement habitat at a ratio of 2:1 upland acres to aquatic acres (see Table 4-9). • Restored habitat shall receive one year of monitoring with a photo documentation report due to the City one year from implementation of the restoration with pre- and post-project area photos. • Monitoring replacement habitat with photo documentation report shall be conducted for five years and submitted to the City annually. The calculations of acres lost assumes no impacts to land north of the access road paralleling the north bank of the southern reach of the effluent channel; disturbance during only one season; and the revegetation of all temporarily disturbed areas.	
Impact 4.13.1d: A relatively small amount of potential foraging habitat would be lost to Project construction; however, nesting pairs of Swainson's hawks in the Project study area could be adversely affected by construction activities. (Potentially significant)	**Mitigation Measure 4.13.1d:** In order to avoid impacts to nesting Swainson's hawk, pre-construction surveys shall be conducted by a qualified biologist during the bird and raptor breeding season (March 1 to August 15), before the start of any construction activities. Similar to Mitigation Measure 4.13.2d, the Project applicant shall contract with a qualified biologist to conduct surveys in habitat suitable for nesting raptors. However, for Swainson's hawk, the survey area includes a one-half mile zone from any construction activities. Surveys may be combined with general raptor surveys as detailed in mitigation measure 4.13.2d and shall follow the same survey schedule.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
	If nesting Swainson's hawk is detected within the survey area, the Project applicant shall install a one-half-mile buffer around the nests of Swainson's hawk. No construction activities shall be allowed within these buffers during active nesting. Buffers shall be marked in the field with stakes and flagging at all potential access points to the buffer. Buffers shall remain in place until the nest is no longer active, as determined by a qualified biologist. If a buffer distance needs to be reduced, a qualified biologist will determine if the reduction is appropriate, and what the reduced buffer distance will be. A reduction in buffer distance must be approved by the City of Merced, who may consult with CDFG. If the buffer is reduced, a qualified biologist shall be retained to monitor the nest daily during construction activity occurring within one-half-mile of the nest. The biologist shall inform the City's construction manager immediately if construction activities within the half mile buffer threaten to cause the nest to fail.	
Impact 4.13.1e: Construction activities could cause the loss of foraging habitat for wintering greater sandhill crane within the Project study area. (Less than significant)	None required.	LTS
Impact 4.13.1.f: The Project would impact potential San Joaquin kit fox denning habitat in the grasslands and alkali scrub in the western portion of the Project study area or to the open areas within and surrounding the Project study area that may serve as movement or linkage habitat for San Joaquin kit fox. (No impact)	None required.	NI
Impact 4.13.2: The Project study area provides habitat for several species of concern. The species with potential to occur are: Sacramento splittail, western pond turtle, tricolored blackbird, burrowing owl, ferruginous hawk, mountain plover, white-tailed kite, loggerhead shrike, Merced kangaroo rat, San Joaquin pocket mouse, and American badger. Construction and/or operation of the proposed Project may temporarily or permanently impact fish and wildlife species or substantially reduce their habitats. This is a potentially significant impact. **Impact 4.13.2a:** Construction activities may affect nesting tricolored blackbird, potentially reducing reproductive success. Without mitigation, this is considered a significant impact.	**Mitigation Measure 4.13.2a:** Implement measures to avoid construction-related impacts to tricolored blackbirds. In order to avoid impacts to nesting tricolored blackbirds, pre-construction surveys shall be conducted in potential breeding habitat within 500 feet of construction by a qualified biologist during the breeding season (March 1 to July 15), before the start of any construction activities. The Project applicant shall contract with a qualified biologist to conduct surveys in habitat suitable for tricolored colonies. Any construction within the Project study area shall avoid active tricolored blackbird colonies by a 500 foot buffer. If warranted by site conditions (as evaluated and documented by a qualified biologist), this buffer may be reduced with the approval of the City, which may consult with CDFG.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Impact 4.13.2b: Construction within aquatic habitats in the Project study area may result in direct mortality of western pond turtle, as well as basking habitat for western pond turtle. Construction of the outfall in Hartley Slough would permanently remove about 0.1 acre of aquatic habitat. Relative to the availability of aquatic habitat, the loss of this habitat would be considered less than significant for this species.	**Mitigation Measure 4.13.2b:** Implement measures to avoid construction-related impacts to Sacramento splittail and western pond turtle. To avoid mortality of Sacramento splittail or western pond turtle during construction, a qualified biologist shall be onsite during any dewatering activities. This biologist shall remove any stranded Sacramento splittail or western pond turtles and shall release them to Hartley Slough.	LTS
Impact 4.13.2c: Several areas within the Project study area have potential to support burrowing owls. If burrowing owl is found to occupy the Project study area, then construction activities may result in direct habitat loss, take, or cause abandonment of the nest. Without mitigation, this is considered a significant impact.	**Mitigation Measure 4.13.2c:** Implement measures to avoid construction-related impacts to burrowing owl. The following mitigation will be implemented to avoid potential impacts from Project construction activities: • A pre-construction survey of suitable habitat and buffers will be conducted within 30 days prior to construction to ensure no additional burrowing owls have established territories since the initial surveys. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be resurveyed. • No disturbance shall occur within 75 meters (~250 feet) of an occupied burrow during the breeding season (February 1 – August 31) or within 50 meters (~160 feet) during the non-breeding season. • Foraging habitat contiguous with occupied burrow sites shall be permanently preserved at a ratio of 6.5 acres per pair of breeding or single unpaired resident burrowing owl; this is equivalent to a 100-meter (~300-foot) foraging radius around the burrow. The protected habitat shall be adjacent to occupied burrowing owl habitat and its configuration shall be approved by a qualified biologist. • When destruction of occupied burrows is unavoidable, existing unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows shall be created by installing artificial burrows at a ratio of 2:1 on the protected lands site. If owls must be moved away from the disturbance area, passive relocation with one-way doors shall be used, but only during the non-breeding season. Owls shall be excluded from burrows in the immediate impact zone and within a 50-meter (~160-foot) buffer zone by installing one-way doors in burrow entrances. One-way doors shall be left in place 48 hours to ensure that owls have left the burrow before excavation. Two natural or artificial burrows shall be provided for each burrow in the Project study area that will be rendered biologically	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
	unsuitable. The Project study area shall be monitored daily for one week to confirm owl use of the new burrows before excavating burrows in the immediate impact zone. Burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals within the burrow.	
Impact 4.13.2d: The Project area provides suitable nesting and foraging habitat for white-tailed kite, loggerhead shrike, and other birds. The approximately 20 acres of potential foraging habitat lost to Project construction is unlikely to affect the success of these birds. Therefore, the loss of foraging habitat is considered less than significant. However, nesting pairs of white-tailed kite, loggerhead shrike, and other birds in the Project study area may be adversely affected by construction activities. Failure of a raptor nest (protected under Fish and Game Code Section 3503) due to Project construction would be a significant impact.	**Mitigation Measure 4.13.2d:** Implement measures to avoid construction-related impacts to nesting raptors. In order to avoid impacts to nesting raptors, pre-construction surveys shall be conducted by a qualified biologist during the raptor breeding season (March 1 to August 15), before the start of construction activities. The Project applicant shall provide a qualified biologist to conduct surveys in habitat suitable for nesting raptors and other birds within *500 feet* of any construction activities. These surveys shall be conducted by a qualified biologist with demonstrated bird and raptor nest-searching experience. Surveys shall be conducted no less than one week apart on the following schedule or until construction begins: 1 survey between February 15 and March 20 2 surveys between March 20 and April 5 2 surveys between April 5 and April 20 2 surveys between June 1 and July 20 If nesting raptors are detected within the survey area, the Project applicant shall maintain a 500-foot buffer around the nest. No construction activities shall be allowed in these buffers. Buffers shall be marked in the field with stakes and flagging at all potential access points to the buffer. Buffers shall remain in place until the nest is no longer active, as determined by a qualified biologist. If warranted by site conditions (as evaluated and documented by a qualified biologist), this buffer may be reduced with the approval of the City, which may consult with CDFG. The biologist shall submit the locations of nests detected during the surveys to the CNDDB.	LTS
Impact 4.13.2e: The Project area and surrounding vicinity may provide foraging habitat for wintering ferruginous hawk and mountain plover. Given the abundance of available open habitat surrounding the Project study area, the loss of foraging habitat to construction within the Therefore, the loss of foraging habitat is considered less than significant.	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Potential year-round habitat exists in the Project area for Merced kangaroo rat, San Joaquin pocket mouse, and American badger. These species have potential to occur in the grassland and scrub habitat within the peach-pit disposal and wildlife area in the western portion of the Project study area, adjacent to Hartley Slough. No construction activities would occur in this area. Therefore, with respect to these species, the Project would have no impact.		
Environmentally Sensitive Areas		
Impact 4.14.1: Implementation of the Project would result in the conversion of economically viable prime farmland and farmland of statewide importance to non-agricultural uses. This impact is considered significant.	**Mitigation Measure 4.14.1**: The 25-acres of farmland within the WWTP expansion area, not required for the WWTP facility, shall remain in an agricultural land use. The City shall pay into a "farmland trust" fund for Merced County that will acquire agricultural conservation easements to compensate for the conversion of 20-acres of farmland within the WWTP expansion area. The farmland subject to the easements shall be of the same acreage, and at least the same category of farmland, as identified by the latest FMMP report, as that farmland affected at the WWTP. With the implementation of Mitigation Measure 4.14.1, the impact to the remaining 25-acres would be reduced to a less-than-significant level. However, offsite conservation easements over existing farmland would not provide full Project-level mitigation, because they would not compensate for the loss or farmland due to the Project or replace the resources lost because they would not reduce the overall net loss of farmland by the WWTP. Therefore, the direct impact and permanent conversion of important farmlands as a result of the expanded WWTP would be significant and unavoidable.	LTS
Impact 4.14.2: Construction and/or operation would affect federally protected wetlands, as defined by Section 404 of the Clean Water Act, by removal, filling, hydraulic interruption, or other disturbance. This impact would be potentially significant.	**Mitigation Measure 4.14.2a:** Permanent impacts to jurisdictional waters of the U.S. will be mitigated at a minimum 1:1 ratio consistent with the regulatory guidance of the Corps and/or other agencies with regulatory authority. Compensatory mitigation may include the purchase of mitigation credits at a Corps-approved wetland mitigation bank, or through other options consistent with the Section 404 regulatory program including "in-lieu-fee" mitigation in which the applicant provides funds to an in-lieu-fee sponsor such as the National Fish and Wildlife Foundation (NFWF), or onsite mitigation.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
	Mitigation Measure 4.14.2b: Construction activities shall avoid and minimize adverse impacts to jurisdictional waters of the U.S. the maximum practicable extent. Areas used for staging and temporary stockpiling during project construction shall be prohibited from being within such waters including wetlands, and shall be clearly defined on final construction plans. Storage of equipment and/or debris shall not occur within 25 feet of jurisdictional waters. Work within jurisdictional waters including trenching and bridge construction shall occur during low-flow or dry periods. Standard and appropriate BMPs including use of silt fences and/or straw bales shall be utilized to prevent incidental discharge of material into jurisdictional waters.	
Impact 4.14.3: Project construction and/or operation could impact sensitive natural communities identified by CDFG or USFWS. (No impact)	None required.	NI
Impact 4.14.4: The Project would conflict with an adopted HCP, NCCP, or other approved local, regional, or state plan for conservation of habitat. (No impact)	None required.	NI
Impact 4.14.5: Project construction on floodway that could impede floodwaters or expose structures to significant losses. (Less than significant)	None required.	LTS
Impact 4.14.6: Project construction could cause the loss of critical habitats. (No impact)	None required.	NI
Solid Waste and Energy		
Impact 4.15.1: Project construction and operation wastes would not be disposed of in a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs. (Less than significant)	None required.	LTS
Impact 4.15.2: Construction of the Project would conflict with federal, state, and local solid waste management statutes and regulations. (Less than significant)	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Impact 4.15.3: Operation of the Project would use substantial amounts of energy, which in turn could create a substantial increase in demand upon existing sources of energy, or require construction of additional facilities for energy generation or distribution to meet the increased demand. (Potentially significant)	**Mitigation Measure 4.15.3:** The City will consult with MID to determine the appropriate energy facility upgrades needed to supply the expanded WWTP and in turn will obtain a will-serve letter from MID for energy supplies.	LTS
Transportation and Circulation		
Impact 4.16.1: Construction of the Project would increase the number of daily vehicle trips on local roadways that provide access to the WWTP, in relation to existing traffic and roadway capacity. (Potentially significant)	**Mitigation Measure 4.16.1a:** Prior to the start of Project construction, a Traffic Control Plan shall be prepared addressing vehicle movement along Project-affected roadways and intersections. This plan shall designate haul routes for the Project in consultation with Caltrans and Merced County Department of Transportation. The plan should include the following measures: • Maintaining the maximum amount of travel lane capacity during non-construction periods. • If larger construction equipment or articulated trucks will have difficulty maneuvering at haul route-affected intersections, provide a flagman for traffic control at the access road on an as-needed basis. **Mitigation Measure 4.16.1b:** The City shall arrange for a 24-hour telephone hotline to address public questions and complaints during Project construction. **Mitigation Measure 4.16.1c:** Heavy trucks and other construction transport vehicles shall avoid the busiest commute hours (7 to 8 a.m. and 5 to 6 p.m. on weekdays) on highly congested roadways in the Merced community.	LTS
Impact 4.16.2: Operation of the Project would substantially increase the number of daily vehicle trips on local roadways that provide access to the WWTP, in relation to existing traffic and roadway capacity. (Potentially significant)	**Mitigation Measure 4.16.2:** Implement Mitigation Measures 4.16.1a and 4.16.1c.	LTS
Impact 4.16.3: Construction of the Project would affect general and emergency traffic access to the WWTP, the adjacent shooting range, and the Merced Wildlife Management Area. (Less than significant)	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Impact 4.16.4: Construction of the Project would result in significant disruptions to transit service. (Less than significant)	None required.	LTS
Impact 4.16.5: Construction of the Project would generate a need for construction crew parking. (Less than significant)	None required.	LTS
Impact 4.16.6: Construction of the Project would increase wear and tear on the access routes used by construction vehicles to access the Project work site. (Potentially significant)	**Mitigation Measure 4.16.6:** Prior to construction, the City's shall assess current road conditions for the Project construction haul routes including the local access roads and identify post-construction road restoration requirements. An agreement shall be entered into by Merced County prior to construction that details suitable post-construction road restoration improvements. The City shall fund roadway repairs or rehabilitation as necessary such that post-construction requirements are met.	LTS
Public Services		
Impact 4.17.1: The WWTP Expansion Project would generate the need to alter existing government facilities and services including fire protection, police protection, schools, parks and other public facilities. (Less than significant)	None required.	LTS
Public Health and Safety		
Impact 4.18.1: Construction of the Project may expose construction workers, the general public, and the environment to pre-existing hazardous materials contamination. (Potentially significant)	**Mitigation Measure 4.18.1a:** If contaminated soil and/or groundwater or suspected contamination were encountered during Project construction, work shall be halted in the area, and the type and extent of the contamination shall be identified. A contingency plan to dispose of any contaminated soil or groundwater should be developed through consultation with the appropriate regulatory agencies. If dewatering were to occur during Project construction, the RWQCB should be consulted for any special requirements such as containing the water until it can be sampled and analyzed to ensure that no contaminants are in the groundwater that could be released into the Merced Irrigation District drainage system.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
	Hazardous materials associated with construction equipment, such as fuels, oils, antifreeze, coolants, and other substances could adversely affect water quality if released to surface waters. If precautions are not taken to contain contaminants, construction could produce contaminated stormwater runoff (nonpoint source pollution), a major contributor to the degradation of water quality. In addition, hazardous materials associated with construction equipment could adversely affect surface and groundwater quality if spilled or stored improperly. Without mitigation, construction of the Project could result in potentially significant impacts.	
	Mitigation Measure 4.18.1b: Implement Mitigation Measure 4.2.1b.	LTS
Impact 4.18.2: During construction, there is a risk of exposure to hazardous materials such as fuel and other chemicals used for excavation and construction activities. (Potentially significant)	**Mitigation Measure 4.18.2:** The City shall ensure, through the enforcement of contractual obligations, that all contractors transport, store and handle construction-related hazardous materials in a manner consistent with relevant regulations and guidelines, including those recommended and enforced by the Department of Transportation, California RWQCB, the local fire departments, and the local environmental health department. Recommendations shall include as appropriate transporting and storing materials in appropriate and approved containers, maintaining required clearances, and handling materials using applicable federal, state and/or local regulatory agency protocols. In addition, all precautions required by the RWQCB issued NPDES construction activity stormwater permits would be taken to ensure that no hazardous materials enter any nearby waterways. In the event of a spill, the City shall ensure, through the enforcement of contractual obligations, that all contractors immediately control the source of any leak and immediately contain any spill utilizing appropriate spill containment and countermeasures. If required by the local fire departments, the local environmental health department, or any other regulatory agency, contaminated media shall be collected and disposed of at an offsite facility approved to accept such media.	LTS
Impact 4.18.3: The Project could interfere with an emergency response or evacuation plan. (Less than significant)	None required.	LTS
Impact 4.18.4: Construction of the Project would interfere with safe operations of the Merced Municipal Airport or result in a safety hazard for people residing or working in the Project area, due to its proximity to the airport. (No impact)	None required.	NI

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Impact 4.18.5: Construction of the Project would expose people or structures to a significant risk of loss, injury, or death involving wildland fires. (Potentially significant)	**Mitigation Measure 4.18.5a:** The City shall designate and ensure, through the enforcement of contractual obligations, that during construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. The City shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws. **Mitigation Measure 4.18.5b:** Construction crews shall be required to carry sufficient fire suppression equipment to ensure that any fire resulting from construction activities is immediately extinguished. All off-road equipment using internal combustion engines shall be equipped with spark arrestors.	LTS
Impact 4.18.6: The implementation of the WWTP Expansion Project could present additional vector concerns. (Less than significant)	None required.	LTS
Impact 4.18.7: The use of reclaimed wastewater effluent carries the potential for human contact. (Less than significant)	None required.	LTS
Population and Housing		
Impact 4.19.1 The Proposed Project would displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere. (No impact)	None required.	LTS
Land Use and Zoning		
Impact 4.20.1: The Project would be consistent with applicable land use goals, policies, and objectives of the City's and Merced County's General Plans. (Less than significant)	None required.	LTS

TABLE ES-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation **
Impact 4.20.2: Implementation of the Project would create land uses that are incompatible with current and planned land uses adjacent to Project facilities. (Less than significant)	None required.	LTS
Impact 4.20.3: Construction of the Project would not create an obstruction that could physically divide an established community. (No impact)	None required.	LTS
Impact 4.20.4: Implementation of the Project would not conflict with a Williamson Act contract or adjacent agricultural zoning. (No impact)	None required.	LTS
Impact 4.20.5: Construction of the Project could impact farmland and/or adjacent agricultural operations. Additionally, routine maintenance over the long term could potentially conflict with these operations. (Potentially Significant)	**Mitigation Measure 4.20.5:** The City shall consult with all affected landowners where the proposed expansion area would encroach onto productive farmland. As part of the easement acquisition process, the City and affected landowners shall negotiate an agreed-upon compensation for the loss of any existing pasture and/or row crops currently in production. During these consultations, the City shall also, in conjunction with landowners' input, identify areas within the expansion area that could be left in agricultural production. Compensation for the loss of crops and associated revenues will be up to the provisions of law.	LTS

Notes: LTS = Less than significant; SU = Significant and unavoidable; NI = No impact