

CITY OF MERCED
Planning Commission

Resolution #2988

WHEREAS, the Merced City Planning Commission at its regular meeting of July 20, 2011, held a public hearing and considered Certification of the Environmental Impact Report (EIR) for the *Merced Vision 2030 General Plan*; and,

WHEREAS, the Merced City Planning Commission concurs with Findings N through Y of Staff Report #11-09; and,

WHEREAS, after reviewing the City's Environmental Impact Report for the *Merced Vision 2030 General Plan*, and fully discussing all the issues, the Merced City Planning Commission does resolve to hereby recommend to City Council Certification of EIR #10-01 with page 2-2 of the Final EIR corrected to read, "Letter 22 – Thomas C. Grave" (not "Thomas Lollini" as noted); Adoption of Findings of Fact and a Statement of Overriding Considerations; and Adoption of a Mitigation Monitoring Program regarding EIR #10-01.

Upon motion by Commissioner Ward, seconded by Commissioner Colby, and carried by the following vote:

AYES: Commissioner(s) Colby, Ward, Amey, Acheson, and Chairperson Cervantes

NOES: Commissioner(s) None

ABSENT: Commissioner(s) McCoy and Madayag

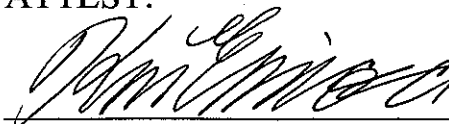
ABSTAIN: Commissioner(s) None

Adopted this 20th day of July 2011



Chairperson, Planning Commission of
the City of Merced, California

ATTEST:



Secretary

Attachment:

Exhibit A – Findings of Fact and a Statement of Overriding Considerations

Exhibit B – Mitigation Monitoring Program

n:\shared\planning\PC Resolutions\General Plan Merced Vision 2030 & FEIR #10-01 (EIR Res)

FINDINGS OF FACT
AND
STATEMENT OF OVERRIDING CONSIDERATIONS

FOR
CITY OF MERCED 2030 GENERAL PLAN

STATE CLEARINGHOUSE NUMBER 2008071069

CITY OF MERCED
PLANNING DIVISION
678 WEST 18TH STREET
MERCED, CALIFORNIA 95340

JULY 2011

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Introduction

The Merced Vision 2030 General Plan Environmental Impact Report (DEIR) identified significant impacts associated with implementation of the General Plan (Project). Approval of a project with significant impacts requires that findings be made by the City pursuant to the California Environmental Quality Act (CEQA, California Public Resources Code sections 21000 et seq.), and State CEQA Guidelines (California Administrative Code, Title 14, Chapter 3) Section 15043, 15091, and 15093. Significant impacts of the Project would either: 1) be mitigated to a less than significant level pursuant to the mitigation measures identified in this DEIR; or 2) mitigation measures notwithstanding, have a residual significant impact that requires a Statement of Overriding Consideration.

The Lead Agency is responsible for the adequacy and objectivity of the EIR. The City of Merced, as Lead Agency, has subjected the Draft EIR (DEIR) and Final EIR (FEIR) to the agency's own review and analysis. The DEIR, FEIR, and the Findings of Fact reflect the independent judgment of the City of Merced.

Incorporation by Reference

The Merced Vision 2030 General Plan DEIR and FEIR (State Clearinghouse #2008071069) are hereby incorporated into these findings in their entirety. Without limitation, this incorporation is intended to elaborate on the scope and nature of mitigation measures, the basis for determining the significance of impacts, the comparative analysis of alternatives, and the reasons for approving the Project in spite of the potential for associated significant unavoidable adverse impacts.

Location and Custodian of Records

Pursuant to Public Resources Code section 21081.6 and California Code of Regulations, Title 14, Section 15091, the City of Merced is the custodian of the documents and other material that constitute the record of proceedings upon which the City's decision is based. Such documents and other material are located at:

City of Merced
Planning Division
678 West 18th Street
Merced, CA 95340

FINDINGS FOR EIR CERTIFICATION

A. Findings Associated with Certification of the Environmental Impact Report

The City of Merced Planning Commission (“Planning Commission”) and the City of Merced City Council (“City Council”) declare and find as follows:

1. The Merced Vision 2030 General Plan Project (also referred to herein as “the Project”) FEIR has been completed in compliance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines. The FEIR consists of the following:
 - a) The Draft Environmental Impact Report (DEIR);
 - b) Comments and recommendations received on the DEIR;
 - c) A list of persons, organizations and public agencies commenting on the DEIR;
 - d) The response of the lead agency to significant environmental points raised in the review and circulation process;
 - e) Any other information added by the lead agency.
2. The FEIR for the Project fulfills all of the necessary requirements of CEQA and the Guidelines issued thereunder. Pursuant to CEQA, the FEIR includes mitigation measures for each potentially significant environmental impact.
3. The FEIR has been presented to the Planning Commission and the City Council. The Planning Commission and City Council have reviewed and considered the information in the FEIR prior to taking action on the Project.
4. The Planning Commission and the City Council also find:
 - a) The DEIR has been circulated in accordance with CEQA Guidelines (Section 15105) and the FEIR has been presented to the Planning Commission and the City Council, which have independently reviewed and analyzed the information contained therein prior to approving the Project;
 - b) The FEIR reflects the independent judgment of the lead agency, the City of Merced;
 - c) The Planning Commission and City Council further find that where more than one reason for approving the Project and rejecting specific mitigation measures or alternatives is given in its findings, the City would have granted the approval(s) on the basis of any one of those reasons.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

B. Findings Associated with Specific Impacts and Mitigation Measures (14 CCR Section 15091)

The Planning Commission and the City Council hereby adopt and make the following findings relating to its adoption of the Project and the Final Environmental Impact Report. Having received, reviewed, and considered the entire record, both written and oral, relating to the Project and associated Environmental Impact Report, the Planning Commission and the City Council find as follows:

Aesthetics/Light and Glare

1. **Impact 3.1-4:** Create a new source of substantial light or glare that would adversely affect day or night views in the area. This is a **potentially significant** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

- [X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measure:

MM 3.1-4 The following guidelines and standards will be followed in selecting and designing any outdoor lighting:

1. All outdoor lights including parking lot lights, landscaping, security, path and deck lights should be fully shielded, full cutoff luminaries.
2. Complete avoidance of all outdoor up-lighting for any purpose.
3. Avoidance of tree mounted lights unless they are fully shielded and pointing down towards the ground or shining into dense foliage. Ensure compliance over time.
4. Complete avoidance of up-lighting and unshielded lighting in water features such as fountains or ponds.

Finding: The City of Merced hereby finds that implementation of the mitigation measure is feasible, and it is therefore adopted. The mitigation measure identified will reduce impacts relative to aesthetics/light and glare to a **less-than-significant** level.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

Agricultural Resources

2. **Impact 3.2-1** Directly or indirectly result in conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland) to non-agricultural use. This is a **potentially significant** impact of project implementation.

Impact 3.2-2 Conflict with existing zoning for agricultural use, or a Williamson Act contract.

MM 3.2-1 The City will encourage property owners outside the City limits but within the SUDP/SOI to maintain their land in agricultural production until the land is converted to urban uses. The City will also work cooperatively with land trusts and other non-profit organizations to preserve agricultural land in the region. This may include the use of conservation easements. Infill development will be preferred and encouraged over fringe development. Sequential and contiguous development is also preferred and encouraged over leap-frog development.

Finding: The City of Merced hereby finds that implementation of the mitigation measure is feasible, and it is therefore adopted. The mitigation measure will serve to reduce the severity of impacts to agricultural resources; however, this measure is not sufficient to fully mitigate this impact, as loss of agricultural land will still occur. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

Air Quality

3. **Impact 3.3-1:** Construction activities associated with development under the Merced Vision 2030 General Plan would result in criteria pollutants, ozone precursors, and other pollutants. This is a **potentially significant** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

[X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measure:

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

MM 3.3-1a For any phase of construction in which an area greater than 22 acres, in accordance with Regulation VIII of the SJVAPCD, will be disturbed on any one day, the project developer(s) shall implement the following measures:

1. Basic fugitive dust control measures are required for all construction sites by SJVAPCD Regulation VIII.
2. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
3. Traffic speeds on unpaved roads shall be no greater than 15 mph.
4. Install wind breaks at windward side(s) of construction areas.

MM 3.3-1b To reduce emissions and thus reduce cumulative impacts, the City of Merced shall consider adoption of an ordinance requiring the following measures to be implemented in conjunction with construction projects within the City:

1. The idling time of all construction equipment used in the plan area shall not exceed ten minutes when practicable.
2. The hours of operation of heavy-duty equipment shall be minimized when practicable.
3. All equipment shall be properly tuned and maintained in accord with manufacturer's specifications when practicable.
4. When feasible, alternative fueled or electrical construction equipment shall be used at the project site.
5. The minimum practical engine size for construction equipment shall be used when practicable.
6. When feasible, electric carts or other smaller equipment shall be used at the project site.
7. Gasoline-powered equipment shall be equipped with catalytic converters when practicable.

Finding: The City of Merced hereby finds that implementation of the mitigation measures are feasible, and it is therefore adopted. The mitigation measures will reduce any potential air impacts due to construction exhaust emissions to a **less-than-significant** level.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

4. **Impact 3.3-2:** Development and operation under the General Plan would result in emissions of criteria pollutants, ozone precursors, and other pollutants caused by mobile source activity, area sources, and stationary sources. This is a **significant, cumulative** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

- [X] Changes or alterations have been required in, or incorporated into, the Project which would lessen the environmental effects thereof; however, there is no feasible way to avoid the significant impact as identified in the EIR. Specific benefits from the Project outweigh its unavoidable environmental effects as identified in the Statement of Overriding Considerations.

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measure:

MM 3.3-2 The following BACT (Best Available Control Technology) installations and mitigation shall be considered for new discretionary permits, to the extent feasible as determined by the City:

- Trees shall be carefully selected and located to protect building(s) from energy consuming environmental conditions, and to shade paved areas when it will not interfere with any structures. Trees should be selected to shade paved areas that will shade 50% of the area within 15 years. Structural soil should be used under paved areas to improve tree growth.
- If transit service is available to a project site, development patterns and improvements shall be made to encourage its use. If transit service is not currently available, but is planned for the area in the future, easements shall be reserved to provide for future improvements such as bus turnouts, loading areas, route signs and shade structures.
- Multi-story parking facilities shall be considered instead of parking lots to reduce exposed concrete surface and save green space.
- Sidewalks and bikeways shall be installed throughout as much of any project as possible, in compliance with street standards, and shall be connected to any nearby existing and planned open space areas, parks, schools, residential areas, commercial areas, etc., to encourage walking and bicycling.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

- Projects shall encourage as many clean alternative energy features as possible to promote energy self-sufficiency. Examples include (but are not limited to): photovoltaic cells, solar thermal electricity systems, small wind turbines, etc. Rebate and incentive programs are offered for alternative energy equipment.

As many energy-conserving features as possible shall be included in the individual projects. Energy conservation measures include both energy conservation through design and operational energy conservation. Examples include (but are not limited to):

- Increased energy efficiency (above California Title 24 Requirements)
- Energy efficient windows (double pane and/or Low-E)
- Use Low and No-VOC coatings and paints
- High-albedo (reflecting) roofing material
- Cool Paving. “Heat islands” created by development projects contribute to the reduced air quality in the valley by heating ozone precursors
- Radiant heat barrier
- Energy efficient lighting, appliances, heating and cooling systems
- Install solar water-heating system(s)
- Install photovoltaic cells
- Install geothermal heat pump system(s)
- Programmable thermostat(s) for all heating and cooling systems
- Awnings or other shading mechanism for windows
- Porch, patio and walkway overhangs
- Ceiling fans, whole house fans
- Utilize passive solar cooling and heating designs (e.g. natural convection, thermal flywheels)
- Utilize daylighting (natural lighting) systems such as skylights, light shelves, interior transom windows etc.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

- Electrical outlets around the exterior of the unit(s) to encourage use of electric landscape maintenance equipment
- Bicycle parking facilities for patrons and employees in a covered secure area. Bike storage should be located within 50' of the project's entrance. Construct paths to connect the development to nearby bikeways or sidewalks
- On-site employee cafeterias or eating areas
- Low or non-polluting landscape maintenance equipment (e.g. electric lawn mowers, reel mowers, leaf vacuums, electric trimmers and edger's, etc.)
- Pre-wire the unit(s) with high speed modem connections/DSL and extra phone lines
- Natural gas fireplaces (instead of wood-burning fireplaces or heaters)
- Natural gas lines (if available) and electrical outlets in backyard or patio areas to encourage the use of gas and/or electric barbecues
- Low or non-polluting incentives items should be provided with each residential unit (such items could include electric lawn mowers, reel mowers, leaf vacuums, gas or electric barbecues, etc.)

Finding: The City of Merced hereby finds that implementation of the mitigation measure is feasible, and it is therefore adopted. The above mitigation measure would be expected to reduce project emissions by one to five percent. However, buildout as proposed under the proposed project would produce stationary and mobile source operational emissions that would exceed San Joaquin Valley Air Pollution Control District thresholds. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

Biological Resources

5. **Impact 3.4-1:** Result in substantial adverse impacts on candidate, special-status, or sensitive species. This is a **potentially significant** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

- [X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measure:

MM 3.4-1a Vernal Pools and Vernal Pool Associates

To protect vernal pools and species associated with vernal pools including vernal pool smallscale, succulent owl's-clover, pincushion navarretia, Colusa grass, hairy Orcutt grass, spiny-sepaled button celery, San Joaquin Orcutt grass, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, Midvalley fairy shrimp, vernal pool tadpole shrimp, California linderiella, and Molestan blister beetle, surveys shall be conducted to determine the presence of vernal pools prior to or concurrent with application for annexation in areas identified as having potential habitat.

Surveys to detect vernal pools are most easily accomplished during the rainy season or during early spring when pools contain water, although surveys shall not be limited to a particular season or condition. If vernal pools are found to occur on a project site, the pools and a 100 foot-wide buffer around each pool or group of pools will be observed. If the vernal pools and buffer areas cannot be avoided, then the project proponent must consult with and obtain authorizations from, but not limited to, the California Department of Fish and Game, the United States Fish and Wildlife Service, the Army Corps of Engineers, and the State Water Resources Quality Control Board. Consultation and authorizations may require that additional surveys for special-status species be completed. Because there is a federal policy of no net loss of wetlands, mitigation to reduce losses and compensation to offset losses to vernal pools and associated special-status species will be required.

MM 3.4-1b Special-Status Plants

To protect special-status plants, the City shall ensure that a botanical survey be conducted for projects containing habitat suitable for special-status plant species. Surveys shall be conducted by a qualified biologist or botanist during the appropriate flowering season for the plants and shall be conducted prior to issuance of a grading or building permit for the project. If special-status plants are found to occur on the project site, the population of plants shall be avoided and protected. If avoidance and protection is not possible, then a qualified biologist will prepare a mitigation and monitoring plan for the affected species. The plan shall be submitted to the CDFG and/or the USFWS for review and comment. Details of the mitigation and monitoring plan shall include, but not be limited to:

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

- Removing and stockpiling topsoil with intact roots and seed bank in the disturbance area, and either replacing the soil in the same location after construction is complete or in a different location with suitable habitat; or
- Collect plants, seeds, and other propagules from the affected area prior to disturbance. After construction is complete, then the restored habitat will be replanted with propagules or cultivated nursery stock; or

MM 3.4-1c **Valley Elderberry Longhorn Beetle**

Until such time that the Valley elderberry longhorn beetle (VELB) is delisted as a federally threatened species, to protect the species, the project proponent shall ensure that a survey for elderberry bushes be conducted by a qualified biologist at each project site containing habitat suitable for VELB prior to the issuance of a grading permit or building permit. If elderberry bushes are found, the project proponent shall implement the measures recommended by the biologist, which shall contain the standardized measures adopted or otherwise authorized by the USFWS.

MM 3.4-1d **Burrowing Owls**

To protect burrowing owls on proposed projects where suitable habitat exists, the following shall be implemented:

To protect burrowing owls, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain grasslands, fallowed agricultural fields, or fallow fields along roadsides, railroad corridors, and other locations prior to grading. If, during a pre-construction survey, burrowing owls are found to be present, the project proponent shall implement the measures recommended by the biologist and include the standardized avoidance measures of CDFG.

MM 3.4-1e **Special-Status Birds**

To protect raptors and other special-status birds on proposed projects where suitable habitat exists, the following measures shall be implemented:

- Trees identified with occupied nests of special status birds which are scheduled to be removed because project implementation shall be removed only during the non-breeding season, or unless it is

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

determined by a qualified biologist that the nest is no longer occupied.

- Prior to construction, but not more than 14 days before grading, demolition, or site preparation activities, a qualified biologist shall conduct a preconstruction nesting survey to determine the presence of nesting raptors. Activities taking place outside of the breeding season (typically February 15 through August 31) do not require a survey. If active raptor nests are present within the construction zone or within 250-feet of the construction zone, temporary exclusion fencing shall be erected at a distance to be determined by a qualified raptor biologist in consultation with CDFG. Clearing and construction operations within this area shall be postponed until juveniles have fledged and there is no evidence of a second nesting attempt determined by the biologist.
- If nesting Swainson's hawks are observed during field surveys, then consultation with the CDFG regarding Swainson's hawk mitigation guidelines shall be required. The guidelines include, but are not limited to, buffers of up to one quarter mile, monitoring of the nest by a qualified biologist, and mitigation for the loss of foraging habitat.
- To avoid impacts to common and special-status migratory birds pursuant to the Migratory Bird Treaty Act and CDFG codes, a nesting survey shall be conducted prior to construction activities if the work is scheduled between February 15 and August 31. If migratory birds are identified nesting within the construction zone, a temporary buffer around the nest site will be designated by a qualified biologist in consultation with CDFG. No construction activity may occur within this buffer until a qualified biologist has determined that the young have fledged. A qualified biologist may modify the size of the buffer based on site conditions and the bird's apparent acclimation to human activities. If the buffer is modified, the biologist would be required to monitor stress levels of the nesting birds for at least one week after construction commences to ensure that project activities would not cause its abandonment or loss of eggs or young. At any time the biologist shall have the right to implement a larger buffer if stress levels are elevated to the extent that could cause nest abandonment and/or loss of eggs or young.

MM 3.4-1f **Special-Status Amphibians**

To protect California tiger salamander and western spadefoot on proposed projects where suitable habitat exists, the following shall be implemented:

- To protect special-status amphibians, a project specific site assessment

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

report, including protocol-level surveys, when indicated, shall be prepared by a qualified and permitted biologist at all project sites that contain appropriate habitat. If this site assessment report reveals that special status amphibians are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.

MM 3.4-1g **Special-Status Reptiles**

To protect western pond turtle and giant garter snake on proposed projects where suitable habitat exists, the following shall be implemented:

- To protect special-status reptiles, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special-status reptiles are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.

MM 3.4-1h **Special-Status Fish**

To protect special-status fish, including hardhead, on proposed projects where suitable habitat exists, the following shall be implemented:

- To protect special-status fish, a habitat assessment will be conducted to ascertain whether suitable habitat for special-status fish species is present. Should suitable habitat for special-status fish species (such as hardhead) be identified, the California Department of Fish and Game will be consulted to determine whether preconstruction surveys are warranted.

MM 3.4-1i **Special-Status Mammals**

To protect Merced kangaroo rat, western mastiff bat, western red bat, hoary bat, Yuma myotis, San Joaquin pocket mouse, American badger, and San Joaquin kit fox on proposed projects where suitable habitat exists, the following shall be implemented:

- To protect special-status mammals, a habitat assessment shall be conducted on each project site prior to construction to ascertain whether habitat suitable for supporting special status mammals exists on the project site. If suitable habitat is present, preconstruction surveys shall be conducted by a qualified biologist at all project sites

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that contain appropriate habitat according to established standards or protocols of the CDFG or USFWS, if available for that species. If during the preconstruction survey, special-status mammals are found to be present, the project proponent shall implement the measures recommended by the biologist and measures adopted by the USFWS or the CDFG.

Finding: The City of Merced hereby finds that implementation of the mitigation measures are feasible, and it is therefore adopted. The mitigation measures will reduce any potential biological impacts to a **less-than-significant** level.

6. **Impact 3.4-2:** Result in substantially adverse affect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS. This is a **potentially significant** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

- [X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measure:

MM 3.4-2 Streambed Alteration Agreement

To minimize impacts to riparian habitat and other sensitive natural communities, the following the measures shall be implemented when streambed alterations are proposed:

- The project proponent shall have a qualified biologist map all riparian habitat, or other sensitive natural communities. To the extent feasible and practicable, all planned construction activity shall be designed to avoid direct effects on these areas.
- In those areas where complete avoidance is not possible, then all riparian habitat, or other sensitive natural communities, shall be mitigated on a “no-net-loss” basis in accordance with either CDFG regulations and/or a Section 1602 Streambed Alteration Agreement, if required. Habitat mitigation shall be replaced at a location and with methods acceptable to the CDFG.

Finding: The City of Merced hereby finds that implementation of the mitigation

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

measure is feasible, and it is therefore adopted. The mitigation measure will reduce any potential biological impacts to a **less-than-significant** level.

7. **Impact 3.4-3:** Result in substantially adverse affect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means. This is a **potentially significant** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

- [X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measure:

MM 3.4-3a Conduct a delineation of Waters of the U.S. and Wetlands (WOUS/Wetlands) and Obtain Permits.

In order to determine if there are wetlands or waters of the U.S. on a proposed project site which fall under the U.S. Army Corps of Engineers (Corps) jurisdictional authority under Section 404 of the CWA, a delineation of the Waters of the U.S. and wetlands shall be performed and submitted to the Corps for verification prior to annexation.

A Section 404 permit and a Section 401 Water Quality Certification or Waiver of Waste Discharge shall be acquired from the Corps and the Regional Water Quality Control Board (RWQCB) and a Section 1602 Streambed Alteration Agreement from DFG respectively prior to the onset of construction related activities.

- MM 3.4-3b** Any jurisdictional waters that would be lost or disturbed due to implementation of any proposed project within the plan area shall be replaced or rehabilitated on a “no-net-loss” basis in accordance with the Corps’ and the RWQCB mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement if required shall be at a location and by methods agreeable to the Corps, the RWQCB, and the City of Merced. The project applicant shall abide by the conditions of any executed permits.

Finding: The City of Merced hereby finds that implementation of the mitigation measures are feasible, and it is therefore adopted. The mitigation measures will reduce any potential biological impacts to a **less-than-significant** level.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

8. **Impact 3.4-4** 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. This is a **potentially significant** impact of project implementation.

The Planning commission and the City Council find that as to such significant effect identified above:

[X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

MM 3-4-4 See Mitigation Measure #3.4-1e.

Finding: The City of Merced hereby finds that implementation of the mitigation measure is feasible, and it is therefore adopted. The mitigation measure will reduce any potential biological impacts to a **less-than-significant** level.

Noise

- 9 **Impact 3.11-4:** Proposed General Plan Buildout will result in construction activities which could contribute to vibration levels at building facades. This is a **potentially significant** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

[X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measures:

MM 3.11-4 Table 3.11-13 provides criteria for evaluating construction vibration impacts. If construction activities include the use of pile drivers or large vibratory compactors, an analysis of potential vibration impacts should be conducted. The vibration impacts should not exceed a peak particle velocity of 0.1 inches/second.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

*Table 3.11-13
Effects of Vibration on People and Buildings*

Peak Particle Velocity inches/second	Peak Particle Velocity mm/second	Human Reaction	Effect on Buildings
0-.006	0.15	Imperceptible by people	Vibrations unlikely to cause damage of any type
.006-.02	0.5	Range of Threshold of perception	Vibrations unlikely to cause damage of any type
.08	2.0	Vibrations clearly perceptible	Recommended upper level of which ruins and ancient monuments should be subjected
0.1	2.54	Level at which continuous vibrations begin to annoy people	Virtually no risk of architectural damage to normal buildings
0.2	5.0	Vibrations annoying to people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
1.0	25.4		Architectural Damage
2.0	50.4		Structural Damage to Residential Buildings
6.0	151.0		Structural Damage to Commercial Buildings

Source: Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic, Caltrans 1976.

Finding: The City of Merced hereby finds that implementation of the mitigation measure is feasible, and it is therefore adopted. The mitigation measures identified will reduce impacts relative to public services and facilities to a **less-than-significant** level.

Transportation/Traffic

- 10. Impact 3.15-1:** Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system and/or exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways. This is a **potentially significant** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

[X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

MM 3.15-1a Table 3.15-4 indicates the recommended number of travel lanes for several of the road segments analyzed to keep traffic levels-of-service at the City's preferred LOS "D" at General Plan buildout. Implementation of the following projects will permit the City to manage its traffic volumes at Level of Service "D", or better:

1. SR 59 from 16th to Olive (2 lanes to 6 lanes) Existing LOS=F / Future LOS=D
2. SR 59 from Olive to Yosemite (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D
3. SR 59 from Yosemite to Cardella (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
4. SR 59 from Cardella to Bellevue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
5. SR 59 from Bellevue to Old Lake (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C
6. SR 59 from Old Lake to Castle Farms (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D
7. "R" Street from Old Lake to Area of Influence Boundary (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=C+
8. "M" Street from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS=none / Future LOS = C+
9. "M" Street from Bellevue to Old Lake (Future Extension 0 lanes to 4 lanes) Existing LOS=none / Future LOS = C+
10. Martin Luther King Jr. Way/South SR 59 from Roduner to Mission (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
11. Martin Luther King Jr. Way/South SR 59 from Mission to Gerard (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D

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12. “G” Street from Yosemite to Cardella (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C+
13. “G” Street from Cardella to Bellevue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
14. “G” Street from Bellevue to Old Lake (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D
15. “G” Street from Old Lake to Snelling (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C
16. Parsons/Gardner from Childs to SR 140 (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D
17. Parsons/Gardner from Bear Creek to Olive (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
18. Parsons/Gardner from Olive to Yosemite (2 lanes to 6 lanes) Existing LOS=D / Future LOS=D
19. Parsons/Gardner from Yosemite to Cardella (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
20. Parsons/Gardner from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
21. Parsons/Gardner from Bellevue to Old Lake (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+
22. Parsons/Gardner from Old Lake to Golf Club (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=D
23. Campus Parkway SR 99/Mission to Childs (Future Extension 0 lanes to 6 lanes) Existing LOS= none / Future LOS=D
24. Campus Parkway from Childs to SR 140 (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
25. Campus Parkway from SR 140 to Olive (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
26. Campus Parkway from Olive to Yosemite (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D

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27. Campus Parkway from Yosemite to Cardella (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
28. Campus Parkway from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
29. Tyler Road from Childs to Mission (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=D
30. Old Lake Road SR 59 to “R” Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+
31. Old Lake Road “R” Street to “M” Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C
32. Old Lake Road “M” Street to “G” Street Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C
33. Bellevue Road from Franklin to Thornton (2 lanes to 4 lanes Divided Expressway Existing LOS=C+ / Future LOS= F
34. Bellevue Road (Atwater-Merced Expressway) from Thornton to SR 59 (2 lanes to 4 lanes (Divided Expressway) Existing LOS=C+ / Future LOS=F
35. Bellevue Road from Parsons/Gardner to Campus Parkway (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D
36. Cardella Road from SR 59 to “R” Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
37. Cardella Road from “M” Street to “G” Street (2 lanes to 4 lanes) Existing LOS= C+ / Future LOS=D
38. Cardella Road from “G” Street to Parsons/Gardner (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
39. Cardella Road from Parsons/Gardner to Campus Parkway (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D
40. Yosemite Avenue from Parsons/Gardner to Campus Parkway (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D
41. Olive Avenue West of Hwy 59 (Santa Fe Avenue) (4 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C

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- 42. SR 99 from Atwater/Merced Expressway to Mariposa (4 lanes to 6 lanes through Merced) Existing LOS=C+ and D / Future LOS=C+ and D
- 43. Childs Avenue from SR 59 to Tyler (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
- 44. Childs Avenue from Parsons/Gardner to Coffee (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
- 45. Childs Avenue from Coffee to Campus Parkway (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D
- 46. Childs Avenue from Campus Parkway to Tower (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+
- 47. Dickerson Ferry/Mission Avenue from Thornton to West Avenue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D
- 48. Dickerson Ferry/Mission Avenue from West Avenue to SR 59 (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+
- 49. Dickerson Ferry/Mission Avenue from SR 50 to Tyler (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+
- 50. Dickerson Ferry/Mission Avenue from SR 99 to Coffee (Future Campus Parkway)(2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+
- 51. Dickerson Ferry/Mission Avenue from Tyler to Henry (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D
- 52. Dickerson Ferry/Mission Avenue from Coffee to Tower (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C+
- 53. Thornton from Dickerson Ferry/Mission to SR 140 (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D

MM 3.15-1b Traffic studies shall be performed to satisfy the requirements of the California Environmental Quality Act (CEQA) for all proposed General Plan Amendments which intensify development, proposed specific plans, annexations, and other projects at the discretion of the Development Services Department. Future traffic studies shall generally conform to any guidelines established by the City. The studies shall be performed to

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

determine, at a minimum, opening-day impacts of proposed projects and as confirmation or revision of the General Plan. The studies shall address queue lengths and (at a minimum) peak-hour traffic signals warrants in addition to LOS and provide appropriate mitigations. At the discretion of the City, a complete warrant study in accordance with the most recent edition of the California Manual on Uniform Traffic Control Devices may be required to evaluate the need for traffic signals.

Finding: The City of Merced hereby finds that implementation of the mitigation measures are feasible, and it is therefore adopted. The mitigation measures identified will reduce impacts relative to transportation and circulation, but not to a less-than-significant level in some instances. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

Greenhouse Gas Emissions (Global Climate Change)

11. **Impact 3.17-1:** Development of the Project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change. This is a **significant, cumulatively considerable, and unavoidable** impact of project implementation.

The Planning Commission and the City Council find that as to such significant effect identified above:

- [X] Changes or alterations have been required in, or incorporated into, the Project which would avoid or substantially lessen the significant environmental effects thereof, as identified in the EIR.

The finding is based on the fact that City of Merced shall monitor the implementation of the following Project-specific mitigation measures:

MM 3.17-1a Per Sustainable Development Implementing Action SD 1.1.g of the Merced Vision 2030 General Plan, the City of Merced will work closely with the SJVAPCD to develop and implement uniform standards for determining “thresholds of significance” for greenhouse gas impacts for use in the City’s CEQA review process. The SJVAPCD has issued its “Guidance for Valley Land Use Agencies in Addressing GHG Impacts for New Projects Under CEQA”. The City will use the recommended threshold of Best Performance Measures and/or 29 percent below Business-As-Usual for new development with the City of Merced.

MM 3.17-1b Per Sustainable Development Implementing Action SD 1.1.g of the Merced Vision 2030 General Plan, and as required by recent changes in CEQA, the City shall address the issue of Climate Change and Greenhouse Gas Emissions in environmental documents prepared by the

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City. Techniques and best practices for evaluation these issues are currently being developed by various government agencies and interest groups and the City will keep track of these developments and remain up-to-date in evaluation methods.

MM 3.17-1c Per Sustainable Development Policy SD 1.7 and Implementing Action SD 1.7.a of the Merced Vision 2030 General Plan, the City will develop a Climate Action Plan (CAP) that identifies greenhouse gas emissions within the City as well as ways to reduce those emissions. The Plan will parallel the requirements adopted by the California Air Resources Board specific to this issue. The City will include the following key items in the Plan:

- Inventory all known, or reasonably discoverable, sources of greenhouse gases in the City,
- Inventory the greenhouse gas emissions level in 1990, the current level, and that projected for the year 2020, and
- Set a target for the reduction of emissions attributable to the City's discretionary land use decisions and its own internal government operations.
- Within one year of adoption of the CAP, the City will complete a review of its existing policies and ordinances in order to ensure implementation of the CAP.

MM 3.17-1d Per Sustainable Development Implementing Action SD 1.7.c of the Merced Vision 2030 General Plan, the City shall consider the following measures for new development:

- When approving new development, require truck idling to be restricted during construction.
- Require new development to implement the following design features, where feasible, many of these features are included as draft Best Performance Measures established by the SJVAPCD for new development:
 1. Recycling:
 - Design locations for separate waste and recycling receptacles;
 - Reuse and recycle construction and demolition waste;
 - Recover by-product methane to generate electricity; and,

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

- Provide education and publicity about reducing waste and available recycling services.
- 2. Promote pedestrian, bicycle and transit modes of travel through informational programs and provision of amenities such as transit shelters, secure bicycle parking and attractive pedestrian pathways.
- 3. Large canopy trees should be carefully selected and located to protect the building(s) from energy consuming environmental conditions, and to shade 50% of paved areas within 15 years.
- 4. Encourage mixed-use and high-density development to reduce vehicle trips, promote alternatives to vehicle travel and promote efficient delivery of services and goods.
- 5. Impose measures to address the "urban heat island" effect by, e.g. requiring light-colored and reflective roofing materials and paint; light-colored roads and parking lots; shade trees in parking lots and shade trees on the south and west sides of new or renovated buildings.
- 6. Transportation and motor vehicle emission reduction:
 - Use low or zero-emission vehicles, including construction vehicles;
 - Create car sharing programs;
 - Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems;
 - Provide shuttle service to public transit;
 - During construction, post signs that restrict truck idling;
 - Set specific limits on idling time for commercial vehicles, including delivery and construction vehicles;
 - Coordinate controlled intersections so that traffic passes more efficiently through congested areas. Where signals are installed, require the use of Light Emitting Diode (LED) traffic lights; and,
 - Assess transportation impact fees on new development in order to facilitate and increase public transit service.
- 7. Water Use Efficiency:
 - Use of both potable and non-potable water to the maximum extent practicable; low flow appliances (i.e., toilets, dishwashers, shower heads, washing machines, etc.); automatic shut off valves for sinks in restrooms; drought resistant landscaping; "Save Water" signs near water faucets;

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- Create water efficient landscapes;
- Use gray water. (Gray water is untreated household waste water from bathtubs, showers, bathroom wash facilities, and water from washing machines); and,
- Provide education about water conservation and available programs and incentives.

8. Energy Efficiency:

- Automated control system for heating/air conditioning and energy efficient appliances;
- Utilize lighting controls and energy-efficient lighting in buildings;
- Use light colored roof materials to reflect heat;
- Take advantage of shade (save healthy existing trees when feasible), prevailing winds, landscaping and sun screens to reduce energy use;
- Install solar panels on carports and over parking areas;
- Increase building energy efficiency percent beyond Title 24 requirements. In addition implement other green building design (i.e., natural daylighting and on-site renewable, electricity generation); and
- Require that projects use efficient lighting

Finding: The City of Merced hereby finds that implementation of the mitigation measures are feasible, and they are therefore adopted. The above mitigation measures would be expected to reduce project greenhouse gas emissions. However, buildout as proposed under the proposed project would produce emissions that would exceed San Joaquin Valley Air Pollution Control District thresholds. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

Findings Regarding Less Than Significant Environmental Impacts

The EIR identifies the thresholds of significant utilized to determine the impacts in the various resource categories. The EIR finds that there are less than significant environmental impacts requiring no mitigation in the following subject areas: Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Population and Housing, Recreation, Public Services, and Utilities. The City is not required to adopt mitigation measures as part of the General Plan for impacts that are considered less than significant.

FINDINGS FOR CUMULATIVE IMPACTS

C. Findings Associated With Significant Cumulative Environmental Effects (14 CCR Section 15130)

1. **Agriculture and Forest Resources** – The Demographic Research Unit of the California Department of Finance forecasts that the Valley's population will more than double by the year 2040 to almost 10 million people. According to the American Farmland Trust, if the land use trends of the 1990s continue and population forecasts are accurate, the Central Valley can expect to lose another 882,000 acres of farmland to urbanization and ranchette development by the year 2040. This would represent a 111% increase, bringing the total area of developed land in the Valley to 1.68 million acres. Unless things change, a significant amount of the additional land lost to agriculture will be high quality farmland, of which there is now only 6.3 million acres in the region. The annual value production capacity permanently lost to development will reach \$814 million by the year 2040. Between now and then, the cumulative loss of farm gate sales will be around \$17.7 billion (both figures in 2000 dollars).

New development in conformance with the proposed General Plan would contribute to these cumulative impacts. The proposed General Plan's policies and standards described in Section 3.2 would delay, reduce and partially offset Merced's contribution to these cumulative impacts. However, even after mitigation, Merced's contribution to cumulative impacts on agricultural resources in the region would remain ***cumulatively significant***.

Finding: Mitigation Measure 3.2-1 will serve to reduce the severity of cumulative impacts to agricultural resources; however, this measure is not sufficient to fully mitigate this impact, as loss of agricultural land on a cumulative basis will still occur. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

2. **Air Quality** – Cumulative air quality impacts were considered in terms of the various land uses proposed under the proposed General Plan and the traffic projections generated by the traffic model. Due to the existing and projected air quality issues in the San Joaquin Valley Air Basin, the proposed General Plan would contribute considerable to a ***significant and unavoidable cumulative*** air quality impact.

Finding: Mitigation Measure 3.3-2 would be expected to reduce the severity of cumulative impacts to air quality. However, buildout as proposed under the project would produce stationary and mobile source operational emissions that would exceed San Joaquin Valley Air Pollution Control District thresholds and would result in a cumulatively significant impact. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

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3. **Hydrology and Water Quality** – Regarding groundwater depletion and recharge, Merced is within the Merced Sub-basin which is, according to the California Department of Water Resources, being subjected to critical conditions of overdraft. Also, a Groundwater Impacts Analysis prepared by Brown and Caldwell for the City of Merced indicates that there is groundwater overdraft in the City's service area, and that the rate of overdraft will continue to increase with future urban development.

Finding: Mitigation Measure 3.8-5 will serve to reduce the severity of cumulative impacts to groundwater depletion and recharge; however, this measure is not sufficient to fully mitigate this impact, as overdraft will continue to occur on a cumulative basis. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

4. **Public Services (Electricity and Gas)** – Growth in the region will continue to require construction/expansion of utility infrastructure, and as noted in Section 3.13, without definitive plans, it cannot be determined at this time whether these potential impacts would be substantial and would therefore have to be characterized as significant and unavoidable. Similar to any other development in areas of new growth, the construction of any future required utility infrastructure could also result in a variety of environmental impacts (i.e., light/glare, noise, odors, traffic, etc.) that cannot be mitigated. Due to these uncertainties, potential impacts resulting from the construction and/or expansion of any required private utility infrastructure remain **cumulatively significant and unavoidable**.

Finding: Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

5. **Transportation/Traffic** – Cumulative traffic impacts of the proposed General Plan are more fully described in Section 3.15 Transportation/Traffic in Chapter Three of this Draft EIR. The traffic model used considered growth under the Draft General Plan in conjunction with the projected regional growth for Merced County. Therefore, the transportation analysis of the General Plan is inherently cumulative in nature, because the implementation of the proposed project would take place over many years and would occur in conjunction with other growth and development throughout the region.

As identified in Chapter Three, the proposed project would result in substantial increase in vehicular traffic on roadways in the SUDP/SOI resulting in a significant and unavoidable impact. Because this analysis was based on a cumulative model, the project's incremental contribution to traffic impacts would be **cumulatively considerable**.

Finding: Mitigation Measure 3.15-1 will serve to reduce the severity of cumulative impacts to transportation/traffic; however, this measure is not sufficient to fully mitigate this impact, as traffic impacts will continue to occur on a cumulative basis. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

FINDINGS FOR IMPACTS AND MITIGATION MEASURES

6. **Greenhouse Gas Emissions (Global Climate Change)** – Policies of the proposed General Plan will reduce global climate change impacts; however, buildout under the proposed General Plan will nonetheless result in a substantial amount of GHG emissions contributing to global climate change. Because it cannot be determined to a reasonable degree of certainty that buildout under the proposed General Plan will not result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change, the impacts of the proposed project on global climate change are a ***significant , unavoidable and cumulatively considerable*** impact.

Finding: Mitigation Measure 3.17-1 will serve to reduce the severity of cumulative impacts to global climate change; however, this measure is not sufficient to fully mitigate this impact, as impacts to global climate change will continue to occur on a cumulative basis. Implementation of the proposed project will have a **significant and unavoidable** impact and will require a Statement of Overriding Considerations.

FINDINGS FOR REJECTION OF PROJECT ALTERNATIVES

D. Findings Supporting Rejection of Alternatives

CEQA and the CEQA Guidelines require that an EIR “[d]escribe a range of reasonable alternatives to the Project, or to the location of the Project, which could feasibly obtain the basic objectives of the Project...” (CEQA Guidelines 15126(d)). The objectives of the Project are as follows:

Statement of Project Intent and Objectives

The *Merced Vision 2030 General Plan* is a long-range plan intended to guide growth and development of the City through the Year 2030. During this period, the population of the City of Merced Specific Urban Development Plan (SUDP)/Sphere of Influence (SOI) area is expected to more than double from its present (2010) level of 80,985 to over 155,000. The U.C. Merced (UCM) campus had an enrollment of approximately 2,700 full time students in 2008 with an expected population impact on the area of approximately 5,000 full time students by the year 2012.

By the year 2035, the UC Merced campus is expected to contribute approximately 37,135 people to the urban growth of the City’s urban area; the urban population of Merced is expected to approach 200,000 people by 2035.

The *Merced Vision 2030 General Plan* aims to achieve the following guiding principles as well as many others. (A complete summary of the General Plan’s goals and policies can be found in Table 2-2 of this Chapter):

- Expansion of the Sphere of Influence and City boundary with phasing of development to avoid premature conversion of agricultural land and to plan for cost-effective extension of municipal services.
- Foster compact and efficient development patterns.
- Connectivity between existing and planned urban areas. Examples include the northeast area toward UCM, the University Community, and South Merced.
- Merced as the single municipal service provider in the expanded sphere of influence.
- New development provides or pays its fair share of public services and facilities to avoid burdening existing city residents (in short, new growth pays for itself).
- Mixed-use, transit and pedestrian friendly urban villages in growth areas with direct access to commercial cores from surrounding neighborhoods.
- Commercial nodes in new growth areas to avoid the aesthetic and circulation issues associated with more common “strip commercial”.

FINDINGS FOR REJECTION OF PROJECT ALTERNATIVES

- Circulation: Recognition of the cost and importance of the arterial street system and protect capacity with access standards. Designs that encourage all modes of transportation.
- Build community quality. High community standards for Merced's services, infrastructure, and private development as a strategy for attracting business and industry and to benefit the City's residents.
- Planning well in advance for industrial/business park uses and for the infrastructure needed to support such development.
- A diversity of housing types and opportunities.
- Encouraging Sustainable and "Green" Development.
- Planning for the provision of infrastructure ahead of development.
- Maintaining Merced's high quality of life and keeping it a nice place to live.
- Encouraging new research parks and the use of new technologies.
- Protection of the Merced Regional Airport as an important community asset.
- Maintaining a quality educational environment for pre-school, K-12, and higher education.
- Maintaining our quality parks and recreation systems, including the bike path system.
- Encouraging a healthy community through improved medical facilities, air quality, parks & recreation opportunities, etc.

Intent

In broad terms, the *Merced Vision 2030 General Plan* is a strategy for accommodating population growth in a manner that minimizes adverse "physical" impacts of growth and development. "Physical" adverse impacts are within the purview of CEQA. Social and economic impacts are typically beyond the scope of CEQA, and this Program EIR, unless they will result in a "physical" impact (CEQA Guidelines Section 15131).

The *Merced Vision 2030 General Plan* relies on the concept of "sustainable development" as a means of accommodating expected future growth. In application, the term "sustainable development" in the City of Merced is defined in Chapter 8 of the *Merced Vision 2030 General Plan* and means accommodating growth and development without unnecessarily:

- Consuming valuable and limited agricultural soils,
- Contaminating or over-taxing water supplies,

FINDINGS FOR REJECTION OF PROJECT ALTERNATIVES

- Destroying or diminishing the value of important wildlife habitat,
- Reducing air quality to a point where our quality of life is threatened,
- Consuming limited non-renewable energy resources, or
- Destroying cultural and historical resources.

Plan Objectives

The *Merced Vision 2030 General Plan* contains a comprehensive set of goals and policies that establish the planning philosophy that will direct future City growth. To achieve its purpose of providing for future population growth, the plan contains land use policies that provide adequate area for housing, employment and commercial activities. The plan also contains policies and standards for the provision of public services and infrastructure necessary to support future population growth.

Beyond the physical needs of future population growth, the plan contains design and open space provisions. These provisions provide an important element to the planning process. Future growth and development are expected to contribute to the overall well being of the community while preserving and enhancing the City's present quality of life.

From the standpoint of "sustainable growth," the *Merced Vision 2030 General Plan* contains provisions to ensure that future growth and development:

- Are directed away from concentrations of "prime" agricultural soils,
- Conserve water and do not over-tax or contaminate the region's water resources,
- Preserve and protect important area wildlife habitat,
- Promote development which minimizes adverse growth related impacts on the region's air quality,
- Conserve non-renewable energy resources, and,
- Preserve important area cultural and historic resources.

The CEQA Guidelines indicate that an EIR must "describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of 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" (Guidelines Sec. 15126.6[a]). Accordingly, the alternatives selected for review pursuant to this EIR focus on: (a) the specific General Plan policies pertaining to project site and (b) alternatives that could eliminate or reduce significant environmental impacts to a level of insignificance, consistent with the project objectives (i.e., the alternatives could impede to some degree the attainment of project

FINDINGS FOR REJECTION OF PROJECT ALTERNATIVES

objectives, but still would enable the project to obtain its basic objectives). The alternatives analyzed in the following sections include:

- Existing General Plan (No Project) Alternative
- Reduced Project Area Alternative
- Concentrated Growth Alternative

According to the CEQA Guidelines, two primary provisions are necessary for an adequate alternative site analysis - feasibility and location. The EIR should consider alternate project locations if a significant project impact could be avoided or substantially lessened by moving the project to an alternate site. An alternative site for the proposed project would not be feasible because the project consists of the update of the City of Merced's General Plan. The project is, by definition, located in and around the City of Merced. Since the project consists of a plan update for a specific area, an alternative location for this project is not feasible.

A discussion of an infeasible alternative site would not meet the "rule of reason" under CEQA and this alternative was eliminated from further consideration in the EIR.

Based on all the information in the record, the City Council makes the following findings regarding the alternatives to the General Plan discussed in the EIR.

Alternative 1 – Existing General Plan (No Project) Alternative

1. Brief Description. The No Project Alternative is required under CEQA. Under the "No Project" or existing General Plan alternative, development would occur as allowed under the existing LAFCO approved SOI with the same General Plan Land Use map in effect (reference Figure 2-3). The land use designations established by the existing General Plan would accommodate a residential population ranging between 139,899 and 298,614 persons. Lands currently used or planned for longer term agricultural use would continue in that use with the associated impacts. Policies in the existing General Plan would remain the same and would not be updated to address current issues such as new flood regulations and greenhouse gas emissions.

Such a scenario would potentially result in reduced impacts to agricultural resources, biology, cultural resources, geology and soils, hazards and hazardous materials, noise, public services, transportation and circulation, and utilities and service systems.

2. Findings. The City Council finds that the No Project Alternative is less desirable than the Project and rejects the No Project Alternative for the following reasons:
 - a) The adoption of the No-Project/Existing General Plan Alternative would leave the City open for future growth that may not be compatible with the goals and objectives of the City. The No-Project/Existing General Plan Alternative fails to accomplish the

FINDINGS FOR REJECTION OF PROJECT ALTERNATIVES

project objectives in the City's vision and has other potential environmental impacts resulting from its implementation.

- b) Specific economic, legal, social, technological, or other considerations, as described in the Statement of Overriding Considerations, make infeasible this project alternative identified in the FEIR (Public Resources Code § 21081(a)(3), Guidelines § 15091(a)(3)).

Alternative 2 – Reduced Project Area Alternative

1. Brief Description. The Reduced Project Area Alternative would update the General Plan elements and policies, but would restrict growth to a smaller area. In this Alternative, the two Community Plan areas identified in the northwest and southwest corners of the 2030 Plan area are deleted from the proposed Project. This alternative was considered feasible because the City could grow at a slower pace than is being planned for. Further, the potential population under the proposed General Plan at buildout (between 152,063 and 328,956 persons) exceeds that projected for 2030 (116,800).

The alternative would potentially create reduced impacts to agricultural resources, air quality, biological resources, cultural resources, geology and soils, global climate change hazards and hazardous materials, hydrology and water quality, noise, public services, transportation and circulation, and utilities and service systems. However, some impacts, such as air quality and agricultural resources would remain significant.

2. Findings. The City Council finds that the Reduced Project Area Alternative is less desirable than the Project and rejects the Alternative for the following reasons:
 - a) Mitigation Measures incorporated into the Project, or otherwise being adopted by the City Council through the EIR, will substantially lessen or avoid most of the environmental effects of the Project, thereby diminishing or obviating the perceived mitigating or impact avoiding benefits of adopting the Reduced Area Alternative.
 - b) Specific economic, legal social, technological, or other considerations, as described in the Statement of Overriding Considerations, make infeasible this project alternative identified in the FEIR (Public Resources Code § 21081(a)(3). Guidelines § 15091(a)(3).
 - c) The Alternative would not accomplish all of the Project objectives.

Alternative 3 – Concentrated Growth Alternative

1. Brief Description. The Concentrated Growth Alternative assumes approximately the same number of residential units at buildout as the proposed General Plan, as well as the same goals, objectives, and policies. The density of residential development would increase to reduce the amount of land needed to provide the same growth capacity.

FINDINGS FOR REJECTION OF PROJECT ALTERNATIVES

Residential land use densities near and within proposed village locations and Transit Oriented Development (TOD) corridors would be increased significantly (25-50%), and minimum densities would be imposed. As a result, more of the land in the Planning Area would be left in open space or agricultural use.

Such a scenario would potentially create reduced impacts related to aesthetics, agricultural resources, air quality, biological resources, cultural resources, global climate change, public services, transportation and circulation, and utilities and service systems. However, some impacts, such as air quality and agricultural responses would remain significant.

2. Findings. The City Council finds that the Concentrated Growth Alternative is less desirable than the Project and rejects the Alternative for the following reasons:
 - a) Mitigation Measures incorporated into the Project, or otherwise being adopted by the City Council through the EIR, will substantially lessen or avoid most of the environmental effects of the Project, thereby diminishing or obviating the perceived mitigating or impact avoiding benefits of adopting the Concentrated Growth Alternative.
 - b) Specific economic, legal, social, technological, or other considerations, as described in the Statement of Overriding Considerations, make infeasible this project alternative identified in the FEIR (Public Resources Code § 21081(a)(3), Guidelines § 15091(a)(3).
 - c) The Alternative would not accomplish all of the Project objectives.

Conclusion Regarding Alternatives Not Chosen

In accordance with the *CEQA Guidelines*, a reasonable range of project alternatives have been evaluated for their comparative environmental superiority. Based on the analyses developed in this EIR, the Reduced Project Area Alternative is the environmentally superior alternative because it reduces more potential impacts than other alternatives relative to the proposed General Plan and serves to reduce the severity of three significant cumulative impacts (agriculture, air quality, and transportation/traffic). The No Project alternative (existing General Plan) is inferior to the proposed General Plan and other alternatives because it fails to achieve the objectives of the proposed General Plan.

A review of the foregoing alternatives reveals that the Project is the superior alternative for achieving the goals established for the Project and the City of Merced while minimizing impacts to the environment. For all of the reasons discussed above, each of the alternatives are not superior to the Project because they compromise one or more of the Project objectives. Accordingly, pursuant to CEQA Guidelines Section 15126.6, the City Council finds that the EIR has considered a reasonable range of alternatives to the Project and that such alternatives considered are not preferable to the Project as proposed.

STATEMENT OF OVERRIDING CONSIDERATIONS

E. Statement of Overriding Considerations

CEQA requires decision-makers to balance the benefits of the proposed project against its unavoidable environmental risks in determining whether to approve the project under consideration. If the benefits of the project outweigh the unavoidable adverse effects, those effects may be considered "acceptable" (State CEQA Guidelines Section 15093[a]). However, CEQA requires the agency to explain, in writing, the specific reasons for considering a project acceptable when significant impacts are infeasible to mitigate. Such reasons must be based on substantial evidence in the EIR or elsewhere in the administrative record (State CEQA Guidelines Section 15093[b]). The agency's statement is referred to as a "Statement of Overriding Considerations".

In approving the Project which is evaluated in the Final Environmental Impact Report (FEIR), the City makes the following Statement of Overriding Considerations in support of its findings on the FEIR. The City Council has considered the information contained in the FEIR and has fully reviewed and considered the public testimony and record in this proceeding.

The City Council has carefully balanced the benefits of the Project against any adverse impacts identified in the EIR that could not be feasibly mitigated to a level of insignificance. Notwithstanding the identification and analysis of the impacts which are identified in the EIR as being significant and potentially significant which have not been eliminated, lessened, or mitigated to a level of insignificance, the City Council acting pursuant to Section 15093 of the State CEQA Guidelines, hereby determines that the benefits of the Project outweigh the unmitigated adverse impacts and should be approved. The EIR describes certain environmental impacts which cannot be avoided if the Project is implemented. In addition, the EIR describes certain potential impacts, which, although substantially mitigated or lessened, are not mitigated to a point of environmental insignificance. This Statement of Overriding Considerations applies specifically to those impacts found to be significant and unavoidable as set forth in the EIR and the public hearing records.

All of the significant impacts associated with the Project have been mitigated to a level of insignificance except for the following: agricultural and forest resources (project and cumulative level), air quality (project and cumulative level), hydrology and water quality (cumulative level), public services: electricity and gas (cumulative level), transportation/traffic (project and cumulative level), and greenhouse gas emissions (project and cumulative level).

Specific Findings

1. Project Benefits Outweigh Unavoidable Impacts. The unavoidable impacts of the Project are acceptable in light of the long-term economic, fiscal, social, environmental, land-use and other considerations set forth herein.

STATEMENT OF OVERRIDING CONSIDERATIONS

The Project will result in unavoidable environmental changes, some of which may be detrimental to the area's residents, businesses and the environment. These detrimental changes, however, are outweighed by the following Project benefits:

- Expansion of the Sphere of Influence and City boundary with phasing of development to avoid premature conversion of agricultural land and to plan for cost-effective extension of municipal services.
- Foster compact and efficient development patterns.
- Connectivity between existing and planned urban areas. Examples include the northeast area toward UCM, the University Community, and South Merced.
- Merced as the single municipal service provider in the expanded sphere of influence.
- New development provides or pays its fair share of public services and facilities to avoid burdening existing city residents (in short, new growth pays for itself).
- Mixed-use, transit and pedestrian friendly urban villages in growth areas with direct access to commercial cores from surrounding neighborhoods.
- Commercial nodes in new growth areas to avoid the aesthetic and circulation issues associated with more common "strip commercial".
- Circulation: Recognition of the cost and importance of the arterial street system and protect capacity with access standards. Designs that encourage all modes of transportation.
- Build community quality. High community standards for Merced's services, infrastructure, and private development as a strategy for attracting business and industry and to benefit the City's residents.
- Planning well in advance for industrial/business park uses and for the infrastructure needed to support such development.
- A diversity of housing types and opportunities.
- Encouraging Sustainable and "Green" Development.
- Planning for the provision of infrastructure ahead of development.
- Maintaining Merced's high quality of life and keeping it a nice place to live.
- Encouraging new research parks and the use of new technologies.
- Protection of the Merced Regional Airport as an important community asset.
- Maintaining a quality educational environment for pre-school, K-12, and higher education.
- Maintaining our quality parks and recreation systems, including the bike path system.
- Encouraging a healthy community through improved medical facilities, air quality, parks & recreation opportunities, etc.

Merced has limited capacity for growth, so these objectives would be applied toward existing development as much as toward new projects. The application of these objectives toward existing development would improve the City's impact on the environment by enhancing open spaces and parks and by encouraging alternative transportation modes. They would have beneficial effects on the economic and cultural conditions of the City.

STATEMENT OF OVERRIDING CONSIDERATIONS

2. Balance of Competing Goals. The City Council finds it is imperative to balance competing goals in approving the Project and the environmental documentation of the Project. Not every environmental concern has been fully satisfied because of the need to satisfy competing concerns to a certain extent. The City Council has chosen to accept certain significant environmental impacts because complete eradication of impacts would unduly compromise some other important economic, social, or other goals. The City Council finds and determines that the Project proposal and the supporting environmental documentation provide for a positive balance of the competing goals that the economic, fiscal, social, environmental, land-use and other benefits to be obtained by the Project outweigh any remaining environmental and related potential detriment of the Project.

Overriding Considerations

Based upon the objectives identified in the Project and EIR and through the extensive public participation, the City Council has determined that the Project should be approved and that any implementation of the Merced General Plan Update would have environmental, economic, and social benefits that outweigh the unavoidable adverse environmental impacts of the physical development of the City.

Upon balancing the environmental risks and countervailing economic, social and environmental benefits, the City concludes that the benefits which the City will derive from the implementation of the General Plan outweigh those environmental risks, due to the following overriding considerations:

- The General Plan Update is critical in achieving the City's economic development and job creation goals by fostering a positive climate for investment, providing a supply of land that is appropriately located and designated for desired uses, ensuring the readiness of physical conditions to support development.
- The General Plan Update promotes social equity by ensuring adequate housing for all income levels; providing open government that values public participation; promoting local goods and cultures; promoting community health through a safe circulation system with multi-modal transportation options; and providing parks and quality public services to all members of the community.
- Implementation of the General Plan Update will serve as a foundation in making land use decisions based on goals and policies related to land use, transportation routes, population growth and distribution, development, open space, resource preservation and utilization, air and water quality, noise impacts, safety issues and other related physical, social, and economic development factors.
- Implementation of the General Plan Update will comply with State requirements and, more importantly, will provide the City, its residents, land owners and businesses, staff and policy

STATEMENT OF OVERRIDING CONSIDERATIONS

makers and all stakeholders with a comprehensive, long-range policy guideline for future development.

- The City finds that this level of comprehensive planning is desirable and that it provides a more environmentally sustainable vision and development plan for the City than the previously adopted General Plan.

Based upon these land use and environmental considerations, the City Council has determined that any environmental detriment caused by the General Plan has been minimized to the extent feasible, and where not feasible, has been outweighed and counterbalanced by the significant economic, fiscal, social, environmental and land-use benefits to be generated to the City.

SECTION FIVE

MITIGATION MONITORING AND REPORTING PROGRAM

SECTION FIVE

MITIGATION MONITORING AND REPORTING PROGRAM

Section 21081.6 of the California Environmental Quality Act (CEQA) requires a public agency to adopt a reporting or monitoring program in those cases where the public agency finds that changes or alterations have been required in, or incorporated into, a project, and that those changes mitigate or avoid a significant effect on the environment. A public agency may delegate the monitoring or reporting responsibilities to another public agency or private entity that accepts the delegation, but the lead agency remains responsible for ensuring that the mitigation measures have been implemented (CEQA Guidelines § 15097).

Table 5-1 identifies each mitigation measure identified in the Program Environmental Impact Report, and identifies the monitoring or reporting program, and timing for such efforts.

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Table 5-1
Mitigation Monitoring and Reporting Program (MMRP)

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
3.1 Aesthetics			
3.1-4	The following guidelines and standards will be followed in selecting and designing any outdoor lighting: 1. All outdoor lights including parking lot lights, landscaping, security, path and deck lights should be fully shielded, full cutoff luminaries. 2. Complete avoidance of all outdoor up-lighting for any purpose. 3. Avoidance of tree mounted lights unless they are fully shielded and pointing down towards the ground or shining into dense foliage. Ensure compliance over time. 4. Complete avoidance of up-lighting and unshielded lighting in water features such as fountains or ponds.	Implementation: City of Merced Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.2 Agriculture and Forest Resources			
3.2-1	The City will encourage property owners outside the City limits but within the SUDP/SOI to maintain their land in agricultural production until the land is converted to urban uses. The City will also work cooperatively with land trusts and other non-profit organizations to preserve agricultural land in the region. This may include the use of conservation easements. Infill development will be preferred and encouraged over fringe development. Sequential and contiguous development is also preferred and encouraged over leap-frog development.	Implementation: City of Merced Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.3 Air Quality			
3.3-1a	For any phase of construction in which an area greater than 22 acres, in accordance with Regulation VIII of the SJVAPCD, will be disturbed on any one day, the project developer(s) shall implement the following measures:	Implementation: City of Merced/SJVAPCD	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	1. Basic fugitive dust control measures are required for all construction sites by SJVAPCD Regulation VIII. 2. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent. 3. Traffic speeds on unpaved roads shall be no greater than 15 mph. 4. Install wind breaks at windward side(s) of construction areas.	Monitoring: Planning Division	
3.3-1b	To reduce emissions and thus reduce cumulative impacts, the City of Merced shall consider adoption of an ordinance requiring the following measures to be implemented in conjunction with construction projects within the City: 1. The idling time of all construction equipment used in the plan area shall not exceed ten minutes when practicable. 2. The hours of operation of heavy-duty equipment shall be minimized when practicable. 3. All equipment shall be properly tuned and maintained in accord with manufacturer's specifications when practicable. 4. When feasible, alternative fueled or electrical construction equipment shall be used at the project site. 5. The minimum practical engine size for construction equipment shall be used when practicable. 6. When feasible, electric carts or other smaller equipment shall	Implementation: City of Merced/SJVAPCD Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	be used at the project site. 7. Gasoline-powered equipment shall be equipped with catalytic converters when practicable.		
3.3-2	The following BACT (Best Available Control Technology) installations and mitigation shall be considered for new discretionary permits, to the extent feasible as determined by the City: • Trees shall be carefully selected and located to protect building(s) from energy consuming environmental conditions, and to shade paved areas when it will not interfere with any structures. Trees should be selected to shade paved areas that will shade 50% of the area within 15 years. Structural soil should be used under paved areas to improve tree growth. • If transit service is available to a project site, development patterns and improvements shall be made to encourage its use. If transit service is not currently available, but is planned for the area in the future, easements shall be reserved to provide for future improvements such as bus turnouts, loading areas, route signs and shade structures. • Multi-story parking facilities shall be considered instead of parking lots to reduce exposed concrete surface and save green space. • Sidewalks and bikeways shall be installed throughout as much of any project as possible, in compliance with street standards, and shall be connected to any nearby existing and planned open space areas, parks, schools, residential areas, commercial areas, etc., to encourage walking and bicycling.	Implementation: City of Merced/SJVAPCD Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	- Projects shall encourage as many clean alternative energy features as possible to promote energy self-sufficiency. Examples include (but are not limited to): photovoltaic cells, solar thermal electricity systems, small wind turbines, etc. Rebate and incentive programs are offered for alternative energy equipment. As many energy-conserving features as possible shall be included in the individual projects. Energy conservation measures include both energy conservation through design and operational energy conservation. Examples include (but are not limited to): - Increased energy efficiency (above California Title 24 Requirements) - Energy efficient windows (double pane and/or Low-E) - Use Low and No-VOC coatings and paints - High-albedo (reflecting) roofing material - Cool Paving. "Heat islands" created by development projects contribute to the reduced air quality in the valley by heating ozone precursors - Radiant heat barrier - Energy efficient lighting, appliances, heating and cooling systems - Install solar water-heating system(s) - Install photovoltaic cells		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	• Install geothermal heat pump system(s) • Programmable thermostat(s) for all heating and cooling systems • Awnings or other shading mechanism for windows • Porch, patio and walkway overhangs • Ceiling fans, whole house fans • Utilize passive solar cooling and heating designs (e.g. natural convection, thermal flywheels) • Utilize daylighting (natural lighting) systems such as skylights, light shelves, interior transom windows etc. • Electrical outlets around the exterior of the unit(s) to encourage use of electric landscape maintenance equipment • Bicycle parking facilities for patrons and employees in a covered secure area. Bike storage should be located within 50' of the project's entrance. Construct paths to connect the development to nearby bikeways or sidewalks • On-site employee cafeterias or eating areas • Low or non-polluting landscape maintenance equipment (e.g. electric lawn mowers, reel mowers, leaf vacuums, electric trimmers and edger's, etc.) • Pre-wire the unit(s) with high speed modem connections/DSL and extra phone lines • Natural gas fireplaces (instead of wood-burning fireplaces or		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	heaters) - Natural gas lines (if available) and electrical outlets in backyard or patio areas to encourage the use of gas and/or electric barbecues - Low or non-polluting incentives items should be provided with each residential unit (such items could include electric lawn mowers, reel mowers, leaf vacuums, gas or electric barbecues, etc.)		
3.4 Biological Resources			
3.4-1a	Vernal Pools and Vernal Pool Associates To protect vernal pools and species associated with vernal pools including vernal pool smallscale, succulent owl's-clover, pincushion navarretia, Colusa grass, hairy Orcutt grass, spiny-sepaled button celery, San Joaquin Orcutt grass, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, Midvalley fairy shrimp, vernal pool tadpole shrimp, California linderiella, and Molestan blister beetle, surveys shall be conducted to determine the presence of vernal pools prior to or concurrent with application for annexation in areas identified as having potential habitat. Surveys to detect vernal pools are most easily accomplished during the rainy season or during early spring when pools contain water, although surveys shall not be limited to a particular season or condition. If vernal pools are found to occur on a project site, the pools and a 100 foot-wide buffer around each pool or group of pools will be observed. If the vernal pools and buffer areas cannot be avoided, then the project proponent must consult with and obtain authorizations from, but not limited to, the California Department of Fish and Game, the United States Fish and Wildlife Service, the Army Corps of Engineers, and the State Water Resources Quality	Implementation: City of Merced / USFWS / CDFG / ACOE / RWQCB Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	Control Board. Consultation and authorizations may require that additional surveys for special-status species be completed. Because there is a federal policy of no net loss of wetlands, mitigation to reduce losses and compensation to offset losses to vernal pools and associated special-status species will be required.		
3.4-1b	Special-Status Plants To protect special-status plants, the City shall ensure that a botanical survey be conducted for projects containing habitat suitable for special-status plant species. Surveys shall be conducted by a qualified biologist or botanist during the appropriate flowering season for the plants and shall be conducted prior to issuance of a grading or building permit for the project. If special-status plants are found to occur on the project site, the population of plants shall be avoided and protected. If avoidance and protection is not possible, then a qualified biologist will prepare a mitigation and monitoring plan for the affected species. The plan shall be submitted to the CDFG and/or the USFWS for review and comment. Details of the mitigation and monitoring plan shall include, but not be limited to: • Removing and stockpiling topsoil with intact roots and seed bank in the disturbance area, and either replacing the soil in the same location after construction is complete or in a different location with suitable habitat; or • Collect plants, seeds, and other propagules from the affected area prior to disturbance. After construction is complete, then the restored habitat will be replanted with propagules or cultivated nursery stock; or	Implementation: City of Merced / USFWS / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
3.4-1c	Valley Elderberry Longhorn Beetle Until such time that the Valley elderberry longhorn beetle (VELB) is delisted as a federally threatened species, to protect the species, the project proponent shall ensure that a survey for elderberry bushes be conducted by a qualified biologist at each project site containing habitat suitable for VELB prior to the issuance of a grading permit or building permit. If elderberry bushes are found, the project proponent shall implement the measures recommended by the biologist, which shall contain the standardized measures adopted or otherwise authorized by the USFWS.	Implementation: City of Merced / USFWS Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.4-1d	Burrowing Owls To protect burrowing owls on proposed projects where suitable habitat exists, the following shall be implemented: To protect burrowing owls, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain grasslands, fallowed agricultural fields, or fallow fields along roadsides, railroad corridors, and other locations prior to grading. If, during a pre-construction survey, burrowing owls are found to be present, the project proponent shall implement the measures recommended by the biologist and include the standardized avoidance measures of CDFG.	Implementation: City of Merced / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.4-1e	Special-Status Birds To protect raptors and other special-status birds on proposed projects where suitable habitat exists, the following measures shall be implemented: Trees identified with occupied nests of special status birds which are scheduled to be removed because project	Implementation: City of Merced / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	implementation shall be removed only during the non-breeding season, or unless it is determined by a qualified biologist that the nest is no longer occupied. • Prior to construction, but not more than 14 days before grading, demolition, or site preparation activities, a qualified biologist shall conduct a preconstruction nesting survey to determine the presence of nesting raptors. Activities taking place outside of the breeding season (typically February 15 through August 31) do not require a survey. If active raptor nests are present within the construction zone or within 250-feet of the construction zone, temporary exclusion fencing shall be erected at a distance to be determined by a qualified raptor biologist in consultation with CDFG. Clearing and construction operations within this area shall be postponed until juveniles have fledged and there is no evidence of a second nesting attempt determined by the biologist. • If nesting Swainson's hawks are observed during field surveys, then consultation with the CDFG regarding Swainson's hawk mitigation guidelines shall be required. The guidelines include, but are not limited to, buffers of up to one quarter mile, monitoring of the nest by a qualified biologist, and mitigation for the loss of foraging habitat. • To avoid impacts to common and special-status migratory birds pursuant to the Migratory Bird Treaty Act and CDFG codes, a nesting survey shall be conducted prior to construction activities if the work is scheduled between February 15 and August 31. If migratory birds are identified nesting within the construction zone, a temporary buffer around the nest site will be designated by a qualified biologist in consultation with CDFG. No construction activity may occur within this buffer until a qualified biologist has determined that the young have		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	fledged. A qualified biologist may modify the size of the buffer based on site conditions and the bird's apparent acclimation to human activities. If the buffer is modified, the biologist would be required to monitor stress levels of the nesting birds for at least one week after construction commences to ensure that project activities would not cause its abandonment or loss of eggs or young. At any time the biologist shall have the right to implement a larger buffer if stress levels are elevated to the extent that could cause nest abandonment and/or loss of eggs or young.		
3.4-1f	Special-Status Amphibians To protect California tiger salamander and western spadefoot on proposed projects where suitable habitat exists, the following shall be implemented: To protect special-status amphibians, a project specific site assessment report, including protocol-level surveys, when indicated, shall be prepared by a qualified and permitted biologist at all project sites that contain appropriate habitat. If this site assessment report reveals that special status amphibians are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.	Implementation: City of Merced / USFWS / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.4-1g	Special-Status Reptiles To protect western pond turtle and giant garter snake on proposed projects where suitable habitat exists, the following shall be implemented: To protect special-status reptiles, preconstruction surveys shall be conducted by a qualified biologist at all project sites that	Implementation: City of Merced / USFWS / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	contain appropriate habitat. If, during a pre-construction survey, special-status reptiles are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.		
3.4-1h	Special-Status Fish To protect special-status fish, including hardhead, on proposed projects where suitable habitat exists, the following shall be implemented: To protect special-status fish, a habitat assessment will be conducted to ascertain whether suitable habitat for special-status fish species is present. Should suitable habitat for special-status fish species (such as hardhead) be identified, the California Department of Fish and Game will be consulted to determine whether preconstruction surveys are warranted.	Implementation: City of Merced / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.4-1i	Special-Status Mammals To protect Merced kangaroo rat, western mastiff bat, western red bat, hoary bat, Yuma myotis, San Joaquin pocket mouse, American badger, and San Joaquin kit fox on proposed projects where suitable habitat exists, the following shall be implemented: To protect special-status mammals, a habitat assessment shall be conducted on each project site prior to construction to ascertain whether habitat suitable for supporting special status mammals exists on the project site. If suitable habitat is present, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain appropriate habitat according to established standards or protocols of the CDFG or USFWS, if available for that species. If during the	Implementation: City of Merced / USFWS / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	preconstruction survey, special-status mammals are found to be present, the project proponent shall implement the measures recommended by the biologist and measures adopted by the USFWS or the CDFG.		
3.4-2	Streambed Alteration Agreement To minimize impacts to riparian habitat and other sensitive natural communities, the following the measures shall be implemented when streambed alterations are proposed: • The project proponent shall have a qualified biologist map all riparian habitat, or other sensitive natural communities. To the extent feasible and practicable, all planned construction activity shall be designed to avoid direct effects on these areas. • In those areas where complete avoidance is not possible, then all riparian habitat, or other sensitive natural communities, shall be mitigated on a “no-net-loss” basis in accordance with either CDFG regulations and/or a Section 1602 Streambed Alteration Agreement, if required. Habitat mitigation shall be replaced at a location and with methods acceptable to the CDFG.	Implementation: City of Merced / CDFG Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.4-3a	Conduct a delineation of Waters of the U.S. and Wetlands (WOUS/Wetlands) and Obtain Permits. In order to determine if there are wetlands or waters of the U.S. on a proposed project site which fall under the U.S. Army Corps of Engineers (Corps) jurisdictional authority under Section 404 of the CWA, a delineation of the Waters of the U.S. and wetlands shall be performed and submitted to the Corps for verification prior to annexation.	Implementation: City of Merced / ACOE / RWQCB Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing																
	A Section 404 permit and a Section 401 Water Quality Certification or Waiver of Waste Discharge shall be acquired from the Corps and the Regional Water Quality Control Board (RWQCB) and a Section 1602 Streambed Alteration Agreement from DFG respectively prior to the onset of construction related activities.																		
3.4-3b	Any jurisdictional waters that would be lost or disturbed due to implementation of any proposed project within the plan area shall be replaced or rehabilitated on a “no-net-loss” basis in accordance with the Corps’ and the RWQCB mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement if required shall be at a location and by methods agreeable to the Corps, the RWQCB, and the City of Merced. The project applicant shall abide by the conditions of any executed permits.	Implementation: City of Merced / ACOE / RWQCB Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects																
3.11 Noise																			
3.11-4	Table 3.11-13 provides criteria for evaluating construction vibration impacts. If construction activities include the use of pile drivers or large vibratory compactors, an analysis of potential vibration impacts should be conducted. The vibration impacts should not exceed a peak particle velocity of 0.1 inches/second. Table 3.11-13 Effects of Vibration on People and Buildings <table border="1"> <thead> <tr> <th>Peak Particle Velocity inches/second</th><th>Peak Particle Velocity mm/second</th><th>Human Reaction</th><th>Effect on Buildings</th></tr> </thead> <tbody> <tr> <td>0-.006</td><td>0.15</td><td>Imperceptible by people</td><td>Vibrations unlikely to cause damage of any type</td></tr> <tr> <td>.006-.02</td><td>0.5</td><td>Range of Threshold of perception</td><td>Vibrations unlikely to cause damage of any type</td></tr> <tr> <td>.08</td><td>2.0</td><td>Vibrations clearly perceptible</td><td>Recommended upper level of which ruins and ancient monuments should be subjected</td></tr> </tbody> </table>	Peak Particle Velocity inches/second	Peak Particle Velocity mm/second	Human Reaction	Effect on Buildings	0-.006	0.15	Imperceptible by people	Vibrations unlikely to cause damage of any type	.006-.02	0.5	Range of Threshold of perception	Vibrations unlikely to cause damage of any type	.08	2.0	Vibrations clearly perceptible	Recommended upper level of which ruins and ancient monuments should be subjected	Implementation: City of Merced Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
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Mitigation #	Mitigation Measure				Implementing Agency / Monitoring Agency	Timing
	0.1	2.54	Level at which continuous vibrations begin to annoy people	Virtually no risk of architectural damage to normal buildings		
	0.2	5.0	Vibrations annoying to people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings		
	1.0	25.4		Architectural Damage		
	2.0	50.4		Structural Damage to Residential Buildings		
	6.0	151.0		Structural Damage to Commercial Buildings		
	Source: Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic, Caltrans 1976.					
3.15 Transportation/Traffic						
3.15-1a	Table 3.15-4 indicates the recommended number of travel lanes for several of the road segments analyzed to keep traffic levels-of-service at the City’s preferred LOS “D” at General Plan buildout. Implementation of the following projects will permit the City to manage its traffic volumes at Level of Service “D”, or better: 1. SR 59 from 16 th to Olive (2 lanes to 6 lanes) Existing LOS=F / Future LOS=D 2. SR 59 from Olive to Yosemite (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 3. SR 59 from Yosemite to Cardella (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 4. SR 59 from Cardella to Bellevue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 5. SR 59 from Bellevue to Old Lake (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C				Implementation: City of Merced Monitoring: Planning Division	As Appropriate

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	6. SR 59 from Old Lake to Castle Farms (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 7. "R" Street from Old Lake to Area of Influence Boundary (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=C+ 8. "M" Street from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS=none / Future LOS = C+ 9. "M" Street from Bellevue to Old Lake (Future Extension 0 lanes to 4 lanes) Existing LOS=none / Future LOS = C+ 10. Martin Luther King Jr. Way/South SR 59 from Roduner to Mission (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 11. Martin Luther King Jr. Way/South SR 59 from Mission to Gerard (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 12. "G" Street from Yosemite to Cardella (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C+ 13. "G" Street from Cardella to Bellevue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 14. "G" Street from Bellevue to Old Lake (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 15. "G" Street from Old Lake to Snelling (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C 16. Parsons/Gardner from Childs to SR 140 (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	17. Parsons/Gardner from Bear Creek to Olive (2 lanes to 4 lanes) Exiting LOS=C+ / Future LOS=D 18. Parsons/Gardner from Olive to Yosemite (2 lanes to 6 lanes) Exiting LOS=D / Future LOS=D 19. Parsons/Gardner from Yosemite to Cardella (2 lanes to 4 lanes) Exiting LOS=C+ / Future LOS=D 20. Parsons/Gardner from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 21. Parsons/Gardner from Bellevue to Old Lake (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+ 22. Parsons/Gardner from Old Lake to Golf Club (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=D 23. Campus Parkway SR 99/Mission to Childs (Future Extension 0 lanes to 6 lanes) Existing LOS= none / Future LOS=D 24. Campus Parkway from Childs to SR 140 (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 25. Campus Parkway from SR 140 to Olive (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 26. Campus Parkway from Olive to Yosemite (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 27. Campus Parkway from Yosemite to Cardella (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	28. Campus Parkway from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 29. Tyler Road from Childs to Mission (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=D 30. Old Lake Road SR 59 to “R” Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+ 31. Old Lake Road “R” Street to “M” Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C 32. Old Lake Road “M” Street to “G” Street Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C 33. Bellevue Road from Franklin to Thornton (2 lanes to 4 lanes Divided Expressway Existing LOS=C+ / Future LOS= F 34. Bellevue Road (Atwater-Merced Expressway) from Thornton to SR 59 (2 lanes to 4 lanes (Divided Expressway) Existing LOS=C+ / Future LOS=F 35. Bellevue Road from Parsons/Gardner to Campus Parkway (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 36. Cardella Road from SR 59 to “R” Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 37. Cardella Road from “M” Street to “G” Street (2 lanes to 4 lanes) Existing LOS= C+ / Future LOS=D 38. Cardella Road from “G” Street to Parsons/Gardner (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	39. Cardella Road from Parsons/Gardner to Campus Parkway (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 40. Yosemite Avenue from Parsons/Gardner to Campus Parkway (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D 41. Olive Avenue West of Hwy 59 (Santa Fe Avenue) (4 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C 42. SR 99 from Atwater/Merced Expressway to Mariposa (4 lanes to 6 lanes through Merced) Existing LOS=C+ and D / Future LOS=C+ and D 43. Childs Avenue from SR 59 to Tyler (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 44. Childs Avenue from Parsons/Gardner to Coffee (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 45. Childs Avenue from Coffee to Campus Parkway (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D 46. Childs Avenue from Campus Parkway to Tower (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+ 47. Dickerson Ferry/Mission Avenue from Thornton to West Avenue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 48. Dickerson Ferry/Mission Avenue from West Avenue to SR 59 (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	49. Dickerson Ferry/Mission Avenue from SR 50 to Tyler (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+ 50. Dickerson Ferry/Mission Avenue from SR 99 to Coffee (Future Campus Parkway)(2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+ 51. Dickerson Ferry/Mission Avenue from Tyler to Henry (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 52. Dickerson Ferry/Mission Avenue from Coffee to Tower (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C+ 53. Thornton from Dickerson Ferry/Mission to SR 140 (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D		
3.15-1b	Traffic studies shall be performed to satisfy the requirements of the California Environmental Quality Act (CEQA) for all proposed General Plan Amendments which intensify development, proposed specific plans, annexations, and other projects at the discretion of the Development Services Department. Future traffic studies shall generally conform to any guidelines established by the City. The studies shall be performed to determine, at a minimum, opening-day impacts of proposed projects and as confirmation or revision of the General Plan. The studies shall address queue lengths and (at a minimum) peak-hour traffic signals warrants in addition to LOS and provide appropriate mitigations. At the discretion of the City, a complete warrant study in accordance with the most recent edition of the California Manual on Uniform Traffic Control Devices may be required to evaluate the need for traffic signals.	Implementation: City of Merced Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
3.17 Greenhouse Gas Emissions (Global Climate Change)			
3.17-1a	Per Sustainable Development Implementing Action SD 1.1.g of the Merced Vision 2030 General Plan, the City of Merced will work closely with the SJVAPCD to develop and implement uniform standards for determining “thresholds of significance” for greenhouse gas impacts for use in the City’s CEQA review process. The SJVAPCD has issued its “Guidance for Valley Land Use Agencies in Addressing GHG Impacts for New Projects Under CEQA”. The City will use the recommended threshold of Best Performance Measures and/or 29 percent below Business-As-Usual for new development with the City of Merced.	Implementation: City of Merced Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.17-1b	Per Sustainable Development Implementing Action SD 1.1.g of the Merced Vision 2030 General Plan, and as required by recent changes in CEQA, the City shall address the issue of Climate Change and Greenhouse Gas Emissions in environmental documents prepared by the City. Techniques and best practices for evaluation these issues are currently being developed by various government agencies and interest groups and the City will keep track of these developments and endeavor to remain up-to-date in evaluation methods.	Implementation: City of Merced Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects
3.17-1c	Per Sustainable Development Policy SD 1.7 and Implementing Action SD 1.7.a of the Merced Vision 2030 General Plan, the City will develop a Climate Action Plan (CAP) that identifies greenhouse gas emissions within the City as well as ways to reduce those emissions. The Plan will parallel the requirements adopted by the California Air Resources Board specific to this issue. The City will include the following key items in the Plan: • Inventory all known, or reasonably discoverable, sources of greenhouse gases in the City, • Inventory the greenhouse gas emissions level in 1990, the	Implementation: City of Merced Monitoring: Planning Division	Following adoption of the General Plan and General Plan EIR

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	current level, and that projected for the year 2020, and - Set a target for the reduction of emissions attributable to the City's discretionary land use decisions and its own internal government operations. - Within one year of adoption of the CAP, the City should complete a review of its existing policies and ordinances in order to ensure implementation of the CAP.		
3.17-1d	Per Sustainable Development Implementing Action SD 1.7.c of the Merced Vision 2030 General Plan, the City shall consider the following measures for new development: - When approving new development, require truck idling to be restricted during construction. - Require new development to implement the following design features, where feasible, many of these features are included as draft Best Performance Measures established by the SJVAPCD for new development: - Recycling: - Design locations for separate waste and recycling receptacles; - Reuse and recycle construction and demolition waste; - Recover by-product methane to generate electricity; and, - Provide education and publicity about reducing waste and available recycling services. - Promote pedestrian, bicycle and transit modes of travel through informational programs and provision of	Implementation: City of Merced Monitoring: Planning Division	Ongoing / Prior to Approval of Discretionary Projects

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	amenities such as transit shelters, secure bicycle parking and attractive pedestrian pathways. 3. Large canopy trees should be carefully selected and located to protect the building(s) from energy consuming environmental conditions, and to shade 50% of paved areas within 15 years. 4. Encourage mixed-use and high-density development to reduce vehicle trips, promote alternatives to vehicle travel and promote efficient delivery of services and goods. 5. Impose measures to address the "urban heat island" effect by, e.g. requiring light-colored and reflective roofing materials and paint; light-colored roads and parking lots; shade trees in parking lots and shade trees on the south and west sides of new or renovated buildings. 6. Transportation and motor vehicle emission reduction: ▪ Use low or zero-emission vehicles, including construction vehicles; ▪ Create car sharing programs; ▪ Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems; ▪ Provide shuttle service to public transit; ▪ During construction, post signs that restrict truck idling; ▪ Set specific limits on idling time for commercial		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	vehicles, including delivery and construction vehicles; ▪ Coordinate controlled intersections so that traffic passes more efficiently through congested areas. Where signals are installed, require the use of Light Emitting Diode (LED) traffic lights; and, ▪ Assess transportation impact fees on new development in order to facilitate and increase public transit service. 7. Water Use Efficiency: ▪ Use of both potable and non-potable water to the maximum extent practicable; low flow appliances (i.e., toilets, dishwashers, shower heads, washing machines, etc.); automatic shut off valves for sinks in restrooms; drought resistant landscaping; “Save Water” signs near water faucets; ▪ Create water efficient landscapes; ▪ Use gray water. (Gray water is untreated household waste water from bathtubs, showers, bathroom wash facilities, and water from washing machines); and, ▪ Provide education about water conservation and available programs and incentives. 8. Energy Efficiency: ▪ Automated control system for heating/air conditioning and energy efficient appliances; ▪ Utilize lighting controls and energy-efficient lighting		

Mitigation #	Mitigation Measure	Implementing Agency / Monitoring Agency	Timing
	in buildings; ▪ Use light colored roof materials to reflect heat; ▪ Take advantage of shade (save healthy existing trees when feasible), prevailing winds, landscaping and sun screens to reduce energy use; ▪ Install solar panels on carports and over parking areas; ▪ Increase building energy efficiency percent beyond Title 24 requirements. In addition implement other green building design ((i.e., natural daylighting and on-site renewable, electricity generation); and ▪ Require that projects use efficient lighting		