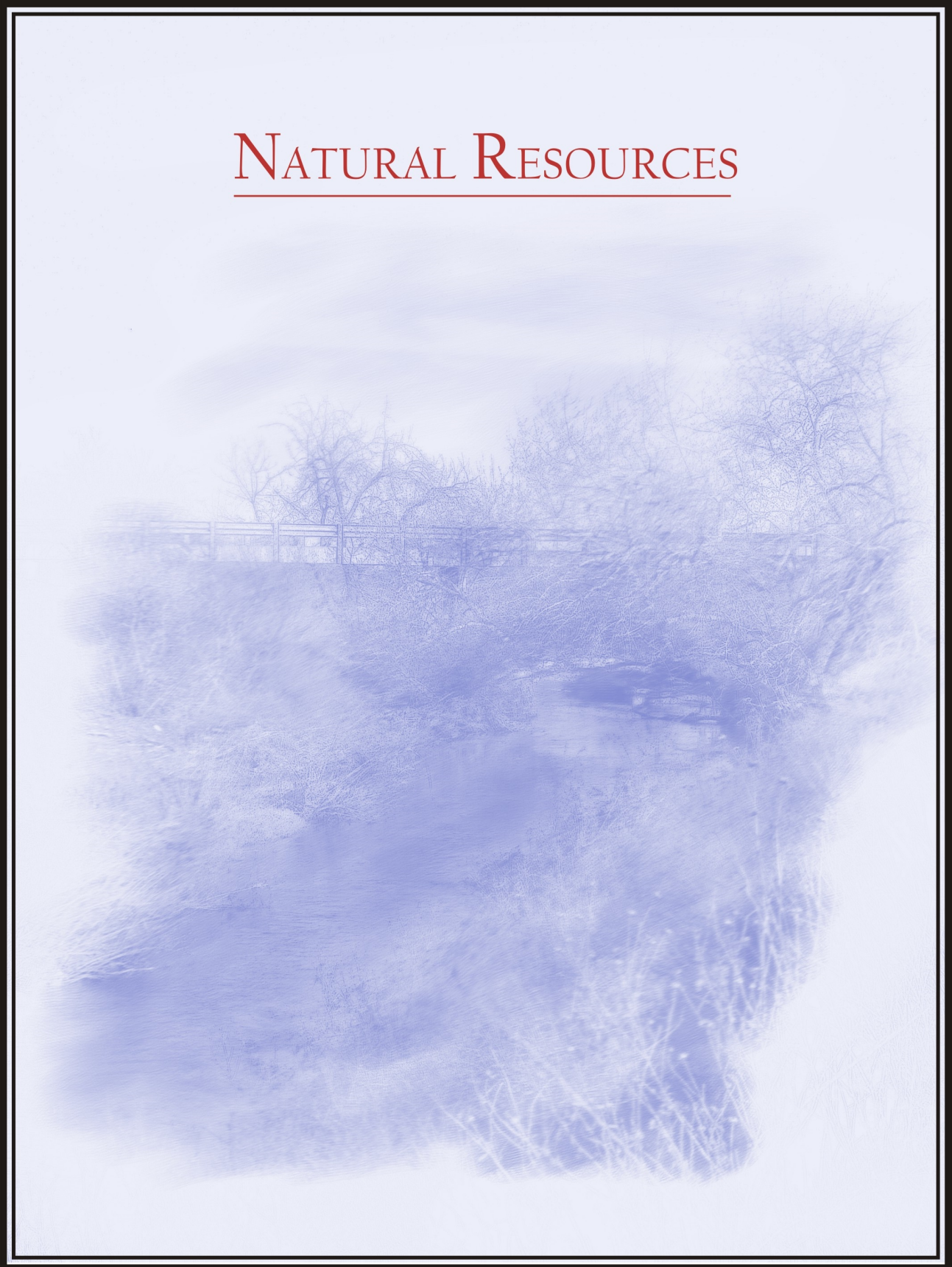


NATURAL RESOURCES



Introduction

The Natural Resources Element constitutes the City's Conservation and Open Space General Plan Elements combined in one element. The Natural Resources Element provides policies and programs to guide the location, design, and quality of development in a manner that protects, preserves, and promotes important biological, agricultural, and water resources. Important biological resources in the Patterson planning area include foraging habitat and movement corridors for endangered wildlife species, riparian habitats along creeks, and other natural systems as they relate to both local and regional ecosystems.

The City's Open Space Plan, as required by Government Code Section 65563 is addressed by the following goals, policies and implementation measures:

Goals

NR-2 Agricultural Resources
NR-3 Open Space and Sensitive Habitats

Policies

NR-2.1 through NR-2.11
NR-3.1 through NR-3.10

Implementation Measures

NR-3, NR-4, NR-5, NR-9

The preservation of Native American historical, cultural, and sacred sites is addressed by policies PR-6.1 through PR-6.5 and implementation measure PR-8 of the Parks, Recreation and Cultural Resources Element.

Patterson also lies in the heart of one of the most productive agricultural regions in the United States. In addition to their important role in the production of food and fiber, agricultural lands also provide habitat for endangered species, open space, and flood protection, as well as an important visual resource. Policies of this Element seek to preserve productive agricultural soils locally and in the region.

Recognizing that clean water is vital to sustain Patterson's economy and overall quality of life, this Element also provides policies aimed at the protection of surface and groundwater resources.

In response to State and federal mandates aimed at curbing the emission of greenhouse gases which contribute to climate change, policies and programs relating to air quality and climate change are provided in the Air Resources and Climate Change element.

This symbol denotes a policy that contributes to sustainability and/or sustainable practices.



Goals and Policies

Water Quality and Watersheds

Goal NR-1 To protect and preserve the quality of water from local watersheds, groundwater resources, and water bodies including creeks, reservoirs, and the San Joaquin River.

Policies

NR-1.1 Open space conservation. The City shall conserve open space areas and drainage canals to protect water resources within the local watershed and the San Joaquin River.

NR-1.2 Stormwater quality. The City shall implement measures to minimize the discharge of pollutants and sediment into Salado Creek, Del Puerto Creek and the San Joaquin River. (See Goal PS-3 for more policies on stormwater quality.)

NR-1.3 Inter-agency cooperation. The City shall continue to work with local, state, and federal agencies and other watershed organizations to improve water quality.

NR-1.4 Sedimentation. The City shall continue to support local, regional, and statewide efforts to minimize the discharge of sediment into waterways, including Salado Creek, Del Puerto Creek and the San Joaquin River.

NR-1.5 New development. The City shall require new development to protect the quality of water bodies and drainage systems through adaptive site design, stormwater management, and the implementation of best management practices (BMPs). The City shall apply the following principles of Low Impact Development in the review of development projects for purposes of minimizing runoff and potential water quality impacts:

- a. Make Sensitive Choices in Site Layout. Identify the most sensitive natural areas and, where possible, leave

them undeveloped. To the extent possible, set back development from creeks, wetlands, and riparian habitats. Preserve significant trees. Conform the site along natural land forms, avoid excessive grading and disturbance of vegetation and soils, and mimic the site's natural drainage patterns. Where possible, concentrate development on portions of the site with less permeable soils, and preserve areas that can promote infiltration. To the extent possible, limit overall coverage of paving and roofs by designing compact structures, narrower and shorter streets and sidewalks, smaller parking lots, and indoor or underground parking. Where possible, detain and retain runoff throughout the site. Use drainage design elements such as depressed landscape areas, vegetated buffers, and bioretention facilities (consisting of a shallow surface reservoir, a layer of imported planting medium, and a gravel underlayer with perforated pipe underdrains) as amenities and focal points within the site and landscape design.

- b. Use Pervious Surfaces. In new buildings and major retrofits, evaluate the technical and economic feasibility of green roofs. Identify where permeable pavements, such as crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt could be substituted for impervious concrete or asphalt paving.
- c. Disperse Runoff to Adjacent Pervious Areas. Where possible, direct roof downspouts across pervious areas. A maximum 2:1 ratio between impervious and pervious surfaces is recommended. Receiving pervious areas should be relatively flat, and soils should be amended as needed to promote infiltration. Similarly, parking areas should be designed so that runoff can sheet flow to landscaped areas. Where feasible, use curb cuts or no curbs to allow runoff to flow to vegetated areas.
- d. Direct runoff to bioretention facilities, flow-through planters, dry wells, or cisterns. On densely developed sites, and where runoff from impervious roofs and paved areas cannot be dispersed to landscaping, consider directing runoff to facilities designed to detain and treat runoff before letting it seep away slowly. Dry wells or infiltration basins may be used if soils are sufficiently permeable and geotechnical considerations allow. Bioretention facilities can be a suitable option for many sites.

NR-1.6 Septic tanks. The City shall seek the elimination of existing septic tanks in urbanized areas.



NR-1.7 CEQA. The City shall use the California Environmental Quality Act (CEQA) process to identify and avoid (or mitigate) potential groundwater pollution problems resulting from new urban development.

NR-1.8 Well monitoring. The City shall regularly monitor water quality in City wells for evidence of toxics, saltwater intrusion, and other contaminants.

NR-1.9 Education. The City shall implement watershed awareness and water quality educational programs for City staff, community groups, potential developers, and the public.

NR-1.10 Water conservation. The City shall promote the efficient use of water.

NR-1.11 Groundwater recharge areas. Groundwater recharge is an important component of the City’s long-term water supply program. Areas within the General Plan area suitable for groundwater recharge shall be preserved and incorporated into the design of new development.

Agricultural Resources

Goal NR-2 To protect and preserve local agricultural lands and to prevent their premature conversion to urban uses.

Policies

NR-2.1 Agricultural land preservation. Undeveloped lands that are State designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland shall be preserved, to the greatest extent feasible, for open space or agricultural use.

NR-2.2 Compact development. The City shall encourage infill development within existing urbanized areas of the city in order to minimize pressure to convert agricultural lands to urban uses. Conversely, the City shall support the continuation of agricultural uses on lands for urban uses until urban development is imminent.

NR-2.3 **Greenbelt.** The City shall encourage the County to retain agricultural uses on lands surrounding the City’s General Plan area and on lands within the General Plan area pending their annexation to the City or development by mutual agreement with the City.

NR-2.4 **Support for County agricultural land preservation.** The City shall support strategies adopted by Stanislaus County aimed at maintaining agricultural lands in viable farming units in areas not designated for urban development.

NR-2.5 **Regional farmland preservation.** The City shall continue to work with the County and other jurisdictions to implement conservation plans that preserve prime farmland.



NR-2.6 **Financial incentives.** The City shall support tax and economic incentives, at both the local and state levels, to enhance the economic competitiveness of agricultural exports.



NR-2.7 **Markets.** The City shall allow, encourage, and support local activities that strengthen the viability of agricultural markets, including farmers’ markets, the on-site sale of produce, and special events that promote local agricultural products.



NR-2.8 **Community gardens.** The City shall allow and encourage urban agriculture in the form of community gardens as an important recreational, educational, landscaping, and community-nurturing resource, and an important source of fresh food in urbanized areas.



NR-2.9 **Williamson Act.** The City shall allow cancellation of Williamson Act contracts only if the City Council finds that cancellation is consistent with State law.



NR-2.10 **Right-to-farm.** The City shall continue to apply its right-to-farm ordinance.



NR-2.11 Soil conservation. The City shall encourage soil conservation practices as recommended by the Natural Resources Conservation Service.

Open Space and Sensitive Habitats

Goal NR-3 To protect natural open space areas, sensitive native vegetation, and wildlife communities and habitat.

Policies

NR-3.1 Public awareness. The City shall encourage and support educational programs that enhance public appreciation and awareness of the natural environment, and programs on how to manage development to preserve native wildlife populations.

NR-3.2 Protection of sensitive species. A project with the potential to adversely impact special status species or their habitat, shall provide evidence of compliance with the relevant provisions of state and federal laws relating to the preservation of rare, threatened, or endangered species and their habitat prior to project approval and/or prior to construction as determined by the requirements set forth in the federal and state Endangered Species Acts, the federal Clean Water Act, the federal Rivers and Harbors Act and the Implementation Measures provided in Appendix NR.

NR-3.3 On-site resource preservation. The City shall encourage new development to preserve on-site natural elements that contribute to the community's native plant and wildlife species value and to its aesthetic character.

NR-3.4 Agency coordination. The City shall support, and participate in, local and regional efforts of local, state and federal resource agencies (e.g. Stanislaus County, California Department of Fish and Game, Army Corps, United States Fish and Wildlife Service) to protect, restore and maintain viable, contiguous areas of habitat for sensitive plant and animal species. (see also Implementation Measures and Appendix NR)

NR-3.5 Project-specific surveys for rare plants. Where future development projects have the potential to impact natural plant communities, the City shall require the project applicant to conduct a rare plant survey prepared by a qualified biologist in accordance with applicable guidelines of the USF&WS, CDFG and CNPS. The survey shall identify and map any existing rare, threatened, or endangered plant species. If any of these species are found, mitigation measures shall be developed within the project-level CEQA document and implemented with performance monitoring to avoid significant impacts. The project applicant shall be required to consult with the CDFG and USFWS regarding appropriate mitigation for potential impacts to each sensitive plant species found to occur at the project site. Mitigation may include (but is not limited to) the acquisition and permanent protection of habitat for the subject species of concern, in addition to the implementation of project-specific mitigation measures designed to reduce potential impacts to individual animals. These measures shall be based on the biological requirements of each species found to occur at a particular site, as well as a complete description of the proposed project and its potential impacts to the subject species. (see also Implementation Measures and Appendix NR)

NR-3.6 Wildlife surveys for individual projects. Where future development projects have the potential to adversely impact sensitive wildlife resources, the City shall require the project applicant to conduct a biological field survey to assess habitat suitability and wildlife utilization of the project site. All biological field surveys shall be prepared consistent with the requirements of relevant state and federal resources agencies, and each project applicant shall consult with applicable state and federal agencies regarding the results of these surveys and appropriate mitigation measures. Additionally, species-specific surveys shall be conducted in accordance with current guidelines for each rare, threatened, and endangered animal species potentially occurring at the site. If any sensitive wildlife species are found to occur on or utilize the existing habitat as a proposed project site, the project applicant shall be required to consult with CDFG and USFWS regarding appropriate mitigation prior to any City action on a development entitlement request. Mitigation may include (but is not limited to) the acquisition and permanent protection of habitat for the subject species of concern, in

addition to the implementation of project-specific mitigation measures designed to reduce the potential impacts for individual animals. These measures shall be based on the biological requirements of each species found to occur at a particular site, as well as a complete description of the proposed projects and its potential impacts to the subject species. (see also Implementation Measures and Appendix NR)

NR-3.7 Riparian habitat protection. The City shall preserve the ecological integrity of creek corridors, canals, and drainage ditches that support riparian resources by preserving native riparian plants and, to the extent feasible, removing invasive nonnative plants. If preservation of the ecological integrity of existing resources is found to be infeasible, adverse impacts to riparian resources shall be fully mitigated consistent with the requirements of applicable state and federal regulations. (see also Implementation Measures and Appendix NR)

NR-3.8 Wetland protection. The City shall preserve and protect wetland resources including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetland areas, to the extent feasible. If preservation of the ecological integrity of existing wetland resources is found to be infeasible, adverse impacts to such resources shall be fully mitigated consistent with the requirements of applicable state and federal regulations. (see also Implementation Measures and Appendix NR)

NR-3.9 Monitoring. Monitoring of mitigation and restoration activities shall be consistent with requirements for each species or habitat as prescribed by the relevant regulatory jurisdictional agencies. For listed or candidate species, species of special concern, or sensitive habitats for which no mitigation or avoidance measures have been published, the City shall require evidence of coordination with the responsible agencies prior to acceptance of mitigation, avoidance measures, or monitoring requirements.

NR-3.10 Open space conservation. The City shall continue to preserve, protect, and provide access to designated open space areas that may be established along the San Joaquin River, Del Puerto Creek, and undevelopable floodplains.

Sustainability

Goal NR-4: To maintain a sustainable, diverse, and stable economy that supports the basic needs of all segments of the community.

NR-4.1 Outreach. The City shall work with other agencies, citizen groups, and the public to encourage and promote the social, economic, environmental, and health benefits of adopting sustainable practices.

NR-4.2 School curriculum. The City shall encourage the Patterson Joint Unified School District (PJUSD) to integrate sustainability and environmental literacy into the academic curriculum.

NR-4.3 Patterns of Development. The City shall promote patterns of development that provide a complimentary range of land uses to serve the daily needs of nearby residents and minimize dependence on the automobile.

Goal NR-5: To encourage the efficient use of fuels for motor vehicles.

NR-5.1 Fuel efficient vehicles. The City encourage residents to drive electric, hybrid, or other fuel-efficient vehicle for personal transportation by marketing state and federal tax incentives in the community newsletter and on the City Website.

NR-5.2 Fleet efficiency. The City shall work toward establishing a minimum of 35 miles per gallon (mpg) fuel efficiency for the City vehicle fleet.



NR-5.3 Alternate fuels. The City shall work toward converting 100% of non-emergency City vehicles to electric, hybrid, flex-fuel, or alternative fuels. In addition, the City shall encourage the Parks & Recreation and Public Works Departments to replace gas-powered mowers and other equipment with electric or hybrid models and to use biodiesel fuel (produced from waste oil) for diesel vehicles



where possible.

Goal NR-6: To incorporate sustainable building practices into the City’s development regulations and fleet vehicle use.

NR-6.1 Sustainable building practices. The City shall encourage the use of sustainable, energy efficient construction techniques. The City shall identify and remove regulatory or procedural barriers to implementing green building practices, such as updating codes, guidelines, and zoning, and shall ensure that all plan review and building inspection staff are trained in green building materials, practices, and techniques.



NR-6.2 Passive solar. The City shall encourage passive solar design (passive heating and cooling) to avoid or minimize cooling needs through building orientation of all new development.



NR-6.3 Renewable energy. The City shall allow renewable energy projects in areas zoned for open space, where consistent with all of the elements of this General Plan, and other uses and values.

NR-6.4 Co-generation. The City shall promote and encourage co-generation projects for commercial and industrial facilities, provided they meet all applicable air quality standards and provide a net reduction in GHG emissions associated with energy production.

NR-6.5 Renewable energy systems for City facilities. The City shall install renewable energy systems at its facilities where feasible, including solar collection systems at municipal properties and waste-to-energy (methane recovery) systems at the waste water treatment plant.

NR-6.6 Landscaping options. The City shall evaluate existing landscaping and options to convert reflective and impervious surfaces to landscaping, and shall, as feasible, install or replace vegetation with drought-tolerant, low maintenance native species that can also provide shade and reduce heat-island effects.

Implementation Measures							
No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near -Term			Mid-Term
NR-1	The City shall continue its program of routinely monitoring groundwater quality.	NR-1.5 NR-1.9	City Council Public Works Dept. Community Development Dept.				¢
NR-2	<p>Within 24 months of adoption of the General Plan, the City shall prepare and adopt a comprehensive water conservation plan, which includes but is not limited to, the following:</p> <ol style="list-style-type: none"> 1. Landscape watering timing restrictions; 2. Requirements for water-efficient irrigation equipment for all new private and public development; 3. Enforcement strategies for water waste; 4. Recommendations for water-efficient landscape ordinances; 5. Evaluation of and recommendations for water conservation pricing (such as a tiered rates for water users) to encourage efficient use; 6. Strategies for providing individualized water audits for large accounts to identify conservation opportunities; 7. Requirements for water efficiency training and certification for irrigation designers, installers, and property managers operating within the City. 	NR-1.11	City Council Public Works Dept. Community Development Dept.	¢			
NR-3	The City shall work with the County, conservation organizations, the Stanislaus Council of Governments, the California Department of Fish and Game, and the US Fish and Wildlife Service to identify strategies for the permanent protection of habitat for rare and endangered species. Such	NR-3.2 NR-3.3 NR-3.4	City Council Community Development Dept.				¢

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near -Term			Mid-Term
	<p>strategies may include, but are not limited to:</p> <ol style="list-style-type: none"> 1. Investigating funding options for the acquisition and management of a mitigation land bank to mitigate the loss of agricultural land and/or habitat for special status plant or animal species; 2. Participating in the preparation of a Natural Community Conservation Plan (NCCP) and/or Habitat Conservation Plan (HCP) as part of countywide efforts to protect sensitive species. In addition to statutory requirements, such an NCCP/HCP shall address at least the following: <ul style="list-style-type: none"> ▪ long term solutions to land use conflicts; ▪ voluntary cooperation between agencies and landowners; ▪ sustainable habitat protection on a regional scale; ▪ Development of a habitat conservation easement program, whereby landowners of properties with biological value will have the opportunity to sell conservation easements for the long-term preservation of those resources. 						
NR-4	The City shall investigate a mechanism for funding the acquisition and management of lands for mitigation land bank for impacts to biological and/ agricultural resources.	NR-3.2 NR-3.3 NR-3.4	Community Development Dept.	¢			

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near -Term			Mid-Term
NR-5	The City shall require project proponents to identify and map sensitive biological and wetland resources on each development parcel and identify the measures necessary to avoid and/or minimize impacts on such resources prior to approving the development. Mitigation for impacts to sensitive biological and wetland resources shall replace the functions and values of the resources as well as gross acreage.	NR-3.5 NR-3.6 NR-3.7 NR-3.8	City Council Community Development Dept.				¢
NR-6	The City shall audit existing signalized intersections to ensure that they are programmed to respond to actual traffic volumes. All new signalized intersections must be programmed in like manner.	NR-5.2	Public Works Dept.	¢			
NR-7	The City shall, within 24 months of adoption of the General Plan, prepare and adopt a comprehensive Climate Action Plan that includes but is not limited to the following components: <ol style="list-style-type: none"> 1. Strategies for public involvement and input; 2. A baseline inventory of greenhouse gas (GhG) emissions from all sources within the city; 3. Goals for reducing manmade greenhouse gas (GHG) emissions from community, municipal, and business activities. 4. Resiliency and adaptation programs to prepare for potential impacts of climate change, and provide a phased implementation plan to achieve these goals. 5. A greenhouse gas emissions reduction target of 15% percent below 2007 levels by 2020, consistent with California Assembly Bill 32, the 	NR-4.3	City Council Community Development Dept.	¢			

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near -Term			Mid-Term
	<p>Global Warming Solutions Act of 2006 (AB32) and the guidance provided in the associated California Air Resources Board Climate</p> <p>6. Outline a strategy to achieve 1990 GHG levels by 2020 and an 80% reduction from 1990 GHG levels by 2050 in accordance with California State Executive Order S-3-05. A program of regular review of progress toward emissions reduction targets;</p> <p>7. A green building program that includes adoption of an ordinance which requires Build It Green certification for all new housing and LEED Silver certification for all non-residential buildings;</p> <p>8. A renewable energy portfolio standard of 33% for both investor-owned and publicly-owned utilities.</p>						
NR-8	The City shall prepare and adopt a Sustainability Plan to guide efforts by the City to enact and promote sustainable practices by the City and the community.	NR-4.1	Community Development Dept.		¢		
NR-9	Creek stabilization. The City shall apply for United States Department of Agriculture (USDA) grants to provide funding for stabilization of creeks and creek banks.	NR-1.4	Community Development Dept.				¢
NR-10	The City shall conduct individualized Energy Audits of all City-owned facilities and implement cost-effective retrofits.	NR-6.1 NR-6.3 NR-6.5	Administration		¢		

Implementation Measures							
No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near -Term			Mid-Term
NR-11	The City shall establish, update, and maintain a Sustainability webpage on the City website.	NR-4.1	Administration		¢		
NR-12	The City shall adopt an ordinance within twelve months of adoption of the General Plan that will require the relevant provisions of the items listed in Appendix NR as conditions of approval for projects with the potential to adversely impact biological resources.	NR-3.2	Community Development Dept.	¢			
NR-13	The City shall consider amendments to the Zoning Regulations and relevant building codes and providing training for City staff regarding the incorporation of features which will reduce heat gain in new construction. Such revisions may include: - Allowances for the construction of “green” roofs; - Standards for surface shading of paved areas such as parking lots; - Standards for the use of paving materials with an enhanced solar reflective index (SRI); Standards that provide for pervious pavement options.	NR-6.1	Community Development Dept.		¢		
NR-14	As residential or school development occurs adjacent to agricultural uses, such development shall implement one or more of the following buffering techniques in its design: Roadways, creeks or canals shall be used as buffers where feasible; Where incompatible uses directly abut, fences shall be installed on the non-agricultural use, which shall be designed to limit the drift of pesticides or	NR-2.1	Community Development Dept.				¢

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near -Term			Mid-Term
	<p>other sprays, and shall discourage climbing and graffiti to the extent possible;</p> <p>If additional non-residential development is anticipated in an area that is currently in agricultural use, fencing at the current interface of conflict shall be removed if requested by the current property owner on which the fence is located. The cost for the fence removal must be borne by the developer of the land being converted from agriculture to urban uses.</p>						

Near-Term = Within 5 Years
 Mid-Term = Within 10 Years
 Long-Term = 10 Years and Beyond

Appendix NR -Requirements for Biological Resources

For projects with the potential to adversely impact vernal pool habitat, require the following:

- BIO-1 Pre-construction surveys shall be conducted prior project related activities that may impact wetland areas. If these areas will be impacted by project activities, CDFG will request adequate measures to offset impacts to wetland resources. Early consultation with CDFG is recommended to determine adequate protocol, as project modification and/or mitigation measures may be necessary and will require agency approval.

For projects with the potential to adversely impact Riparian Habitat, require the following:

- BIO-2 Pre-Construction Surveys and Agency Coordination. Pre-construction surveys shall be conducted prior to project related activities that may impact the riparian resources in the project area (including in the vicinity of Del Puerto Creek and Salado Creek, the Elfers Road irrigation pond, and the unnamed drainages west of I-5) in order to identify significant impacts. If riparian areas and regulated habitats will be impacted by project activities, USACE permits and a Streambed Alteration Agreement from CDFG will be required. Early consultation with the USACE and CDFG is recommended to determine adequate protocols, as project modification and/or mitigation measures may be necessary and will require agency approval.

Furthermore, if construction activities would result in impacts to special-status species, mitigation measures for that species described in the policies and programs of the General Plan shall be implemented. If surveys indicate that impacts would result to a special-status species not previously identified or for which mitigation measures are not described in the policies and programs of the General Plan, avoidance and minimization measures to reduce project impacts to less than significant levels shall be determined through coordination with the City of Patterson, CDFG, and USFWS

For projects with the potential to adversely impact Elderberry Longhorn Beetles (*Desmocerus californicus dimorphus*) or their habitat, require the following:

For projects with the potential to adversely impact elderberry longhorn beetle habitat, require the following:

- BIO-3 Surveys. The project alignment and immediately adjacent area shall be surveyed and mapped for the presence of the valley elderberry longhorn beetle and its elderberry host species plant by a qualified biologist. Mitigation is not required for plants with no stems measuring 1 inch or greater in diameter at ground level, and surveys are valid for a period of 2 years.

BIO-4 Avoidance. Avoid and protect elderberry shrubs whenever possible. If suitable habitat for the beetle occurs on the project site, these areas shall be designated as avoidance areas that will be protected from disturbance during the construction of the project. Any beetle habitat that cannot be avoided shall be considered impacted and appropriate mitigation shall be implemented as described below:

Core avoidance areas include all areas within 20 ft of the dripline of any elderberry plant with a stem measuring 1 inch or greater in diameter at ground level. Such core areas shall not be disturbed during construction. Buffer avoidance areas include all the area within 100 ft of any elderberry plant with a stem measuring 1 inch or greater at ground level.

- a. Temporary construction fencing shall be constructed to provide a minimum setback of at least 20 ft from the dripline of each potential host elderberry plant.
- b. A tailgate education program on the valley elderberry longhorn beetle shall be given to each construction worker and all personnel working within the project area to avoid adverse effects on the beetle.
- c. Signs shall be placed every 50 ft along the edge of the exclusion fence to help identify the area as a protected area for the valley elderberry longhorn beetle for the duration of the project.
- d. The protected area shall be restored if any damage to the area occurs during the project construction period and maintained as a natural area.

BIO-5 Elderberry plants shall be transplanted to a mitigation area if they cannot be avoided by the proposed project. All elderberry plants with one or more stems measuring 1 inch or greater in diameter at ground level shall be transplanted to a mitigation area. The following guidelines shall be followed:

- a. A qualified biologist shall monitor the project and mitigation sites for the duration of the transplanting to ensure no unauthorized take or loss of individuals occurs.
- b. Elderberry plants shall be transplanted after shrubs have lost their leaves and are dormant, usually from November through the first 2 weeks in February.
- c. Transplanting shall be conducted according to standard procedures set forth by the USFWS. This includes planting additional seedlings or cuttings at various ratios for plants removed for translocating.
- d. A mitigation area set aside for translocated plants shall provide habitat for the beetle in perpetuity. The mitigation area shall provide at least 1800 ft² for each transplanted elderberry shrub and follow USFWS guidelines for other associated native plants to be planted within the area. This mitigation area shall be weeded by mechanical means (no herbicides) once a year.

- e. The mitigation area shall be monitored for the general condition of the mitigation area, the condition of the elderberry plants, and the associated native plants, for a period of 10 consecutive years with surveys and reports every year, or for 15 years of monitoring with surveys and reports on years 1, 2, 3, 5, 7, 10, and 15. Reports shall be provided to the USFWS.

For projects with the potential to adversely impact California Tiger Salamanders (CTS) (*Ambystoma californiense*) or their habitat, require the following:

- BIO-6 Conduct pre-construction surveys for California tiger salamander. To assure that CTS are not disturbed by construction activities, a qualified herpetologist shall conduct pre-construction surveys for projects within the Foothill Expansion Area. The survey shall be conducted in accordance with the October 2003 Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander, jointly prepared by the USFWS and the CDFG. The 1st step of the survey shall consist of a CTS site assessment that determines the presence or absence of suitable breeding habitat or suitable aestivation habitat within 1.24 mi of a suitable breeding habitat, even if it occurs off site. A report of the CTS site assessment shall then be provided to the USFWS and CDFG, who would then provide recommendations as to the appropriateness of further surveys. If the CTS site assessment determines the project does not provide potential breeding habitat of suitable aestivation habitat within 1.24 mi of a potential breeding site then no further mitigation measures would be required. If, however, potential breeding and/or aestivation habitat is present within the proposed project footprint, the project could either assume CTS presence and implement Mitigation Measures BIO-7 and BIO-8, or conduct field surveys to determine whether or not CTS occur on the project site. Conducting site-specific surveys to demonstrate CTS absence generally requires 2 years of surveys.
- BIO-7 Provide Compensatory Habitat Mitigation. If CTS presence is assumed, or if protocol-level surveys document presence anywhere on the project site, mitigation for habitat loss in consultation with the USFWS and CDFG will be required. This compensation may be achieved through purchase of credits for the appropriate acreage of aestivation and dispersal habitat at an approved off-site mitigation bank or by acquiring, preserving, and managing suitable upland habitat in or adjacent to areas currently supporting CTS.
- BIO-8 Implement Avoidance and Minimization Measures. If CTS presence is assumed, or if protocol-level surveys document presence anywhere on the project site, the project shall implement the following avoidance and minimization measures. The project shall also consult with the USFWS and CDFG to determine if additional site-specific measures are required to protect

CTS from take during construction activities.

- a. The limits of work shall be flagged prior to the start of construction.
- b. Exclusion fencing shall be constructed around the entire footprint of the project area, immediately outside the flagged limits of work, to exclude CTS from construction areas.
- c. An on-site construction personnel education program shall be conducted by a qualified biologist to educate workers on CTS recognition, the potential for occurrence of CTS in the project area, measures to avoid take, and penalties for take. A protocol shall be developed and followed in the event that a CTS is encountered inside the exclusion fencing during project construction. This protocol shall include the following elements:
 - i. All work that could result in direct injury, disturbance, or harassment of the individual animal must immediately cease;
 - ii. The foreman shall be immediately notified;
 - iii. The foreman shall immediately notify an appropriate project representative, who in turn shall immediately notify the USFWS and CDFG; and
 - iv. A qualified biologist approved by the USFWS to handle the individual salamander shall be contacted to remove the individual to a safe location nearby.
- d. During construction, dedicated construction personnel shall conduct daily checks of the exclusion fencing to ensure that it is functioning correctly (e.g., without any gaps through which CTS might enter the work area), and to maintain the fencing as needed. Prior to the start of work each day, these personnel shall also inspect trenches and pits that were left open overnight.

For projects with the potential to adversely impact California Red-legged Frogs (CRLF) (*Rana aurora draytonii*) or their habitat, require the following:

- BIO-9 Conduct pre-construction surveys for California red-legged frog. To assure that CRLF are not disturbed by construction activities, a qualified herpetologist shall conduct pre-construction surveys for projects occurring within 1000 ft of Del Puerto creek west of I-5. The survey periods and schedule shall be conducted in accordance with the Revised guidance on site assessments and field surveys for the California red-legged frog (USFWS 2005)
- BIO-10 Provide Compensatory Habitat Mitigation. If CRLF presence is documented on the project site, mitigation for habitat loss in consultation with the USFWS shall be required. This compensation may be achieved through purchase of credits for the appropriate acreage habitat at an approved off-site mitigation bank or by acquiring, preserving, and managing suitable habitat in areas currently supporting CRLF.

BIO-11 Implement Avoidance and Minimization Measures. If CRLF are found to be present anywhere on the project site, the project shall consult with the USFWS to develop appropriate avoidance and minimization measures to protect CRLF from take during construction activities.

- a. The limits of work shall be flagged prior to the start of construction.
- b. Exclusion fencing shall be constructed around the entire footprint of the project area, immediately outside the flagged limits of work, to exclude CRLF from construction areas.
- c. An on-site construction personnel education program shall be conducted by a qualified biologist to educate workers on CRLF recognition, the potential for occurrence of CRLF in the project area, measures to avoid take, and penalties for take. A protocol shall be developed and followed in the event that a CRLF is encountered inside the exclusion fencing during project construction. This protocol shall include the following elements:
 - i. All work that could result in direct injury, disturbance, or harassment of the individual animal must immediately cease;
 - ii. The foreman shall be immediately notified;
 - iii. The foreman shall immediately notify an appropriate project representative, who in turn shall immediately notify the USFWS; and
 - iv. A qualified biologist approved by the USFWS to handle the individual frogs shall be contacted to remove the individual to a safe location nearby.
- d. During construction, dedicated construction personnel shall conduct daily checks of the exclusion fencing to ensure that it is functioning correctly (e.g., without any gaps through which CRLF might enter the work area) and to maintain the fencing as needed. Prior to the start of work each day, these personnel shall also inspect trenches and pits that were left open overnight.
- e. Prior to commencement of work on the project site, but after construction of the exclusion fencing, a pre-construction survey shall be conducted by a qualified biologist in the work area adjacent to potential red-legged frog habitat. If any red-legged frogs are found within the work area, the USFWS shall be contacted, and if approved by the USFWS, the qualified biologist shall remove the individual to a safe location nearby.

For projects with the potential to adversely impact Swainson's Hawks (*Buteo swainsoni*) or their habitat, require the following:

BIO-12 Conduct pre-construction surveys for Swainson's Hawks. In order to assure that nesting Swainson's hawks will not be disturbed by construction in the project area, a qualified ornithologist shall conduct pre-construction surveys as described in the CDFG's Staff Report Regarding Mitigation for Impacts to

Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (CDFG 1994, Appendix D). Survey Period I occurs from 1 January to 20 March, Period II from 20 March to 5 April, Period III from 5 April to 20 April, Period IV from 21 April to 10 June (surveys not recommended during this period), and Period V from 10 June to 30 July. Three surveys shall be completed in at least each of the 2 survey periods immediately prior to a project's initiation but are recommended during periods II, III, and V. If a nest site is found, consultation with CDFG shall be required.

BIO-13 Removal of nest trees. Nest trees along the proposed project shall not be removed unless avoidance measures are determined to be infeasible. If a nest tree must be removed, a Management Authorization (including conditions to offset the loss of the nest tree) must be obtained from the CDFG. The Management Authorization shall specify the tree removal period, generally between 1 October and 1 February. If construction or other project-related activities that may cause nest abandonment or forced fledging are necessary within the specified buffer zone, monitoring of the nest site (funded by the applicant) by a qualified biologist shall be required to determine if the nest is abandoned. If the nest is abandoned, and if the nestlings are still alive, the applicant shall fund the recovery and hacking (controlled release of captive reared young) of the nestling(s).

BIO-14 Compensate for loss of foraging habitat. Loss of foraging habitat for Swainson's Hawks shall be mitigated by providing Habitat Management (HM) lands as described in the CDFG's Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (CDFG 1994, Appendix D) because the site is known foraging habitat for Swainson's Hawks. The final acreage of HM lands to be provided on site shall depend on the distance between the proposed project area and the nearest active nest site (CDFG 1994), as determined by nest surveys conducted in the spring prior to project implementation. The acreage of HM lands provided shall be derived from the recommendations included in the 1994 CDFG staff report (Appendix D). The ratios of mitigation for loss of Swainson's hawk foraging habitat is 1:1 (mitigation: impact) for projects within 1 mi of an active nest, 0.75:1 for projects within 5 mi but greater than 1 mi of an active nest, 0.5:1 for projects within 10 mi but greater than 5 mi of an active nest.

For projects with the potential to adversely impact San Joaquin Kit Fox (*Vulpes macrotis mutica*) or their habitat, require the following:

BIO-15 Conduct focused surveys for San Joaquin kit fox. Protocol-level surveys for SJKF shall be performed for future projects covered by the General Plan occurring in the Foothill Expansion Area containing grassland habitat. The survey shall be conducted in accordance with the U.S. Fish and Wildlife Service San Joaquin Kit Fox Survey Protocol for the Northern Range (USFWS

1999) or follow an approach coordinated with the USFWS or CDFG. An evaluation of the site that describes the project, its size, the habitats it would impact, known SJKF occurrences within 10 mi of the project, an evaluation of the project site's suitability as SJKF habitat, and an analysis of the project's adverse effects on SJKF shall be submitted to USFWS. If the evaluation determines that the project will not impact SJKF and the USFWS concurs, then implementation measure BIO-15 would not be required. Such a determination is unlikely given recent CNDDDB records in the area. If, however, it is judged on the basis of the evaluation that potential SJKF habitat is present within a proposed project footprint, that project could either assume SJKF presence and implement Mitigation Measures BIO-16 and BIO-17 or conduct field surveys to determine whether or not SJKF occur on the project site.

BIO-16 Preserve off-site habitat for San Joaquin kit fox. To mitigate potential permanent impacts to habitat from project construction, the project proponent shall acquire habitat occupied by SJKF. Conversion of these habitats for residential purposes shall be mitigated for in one of the following manner:

- a. Fee title purchase and/or dedication of a permanent conservation easement of land in the higher quality kit fox habitat (under 1000 ft in elevation) west of I-5 within Stanislaus County at a ratio of 2:1 (2 acres protected for each acre developed). Lands shall be dedicated prior to grading activities on the property; or,
- b. Payment of an in-lieu fee of \$2000 per developed acre, to be held by the County, the Center for Natural Lands Management, the California Wildlife Foundation, the CDFG, or other entity approved by the USFWS, for the ultimate purpose of establishing a permanent movement corridor in western Stanislaus County below 1000 ft elevation and west of I-5, pursuant to the existing recovery planning goals for kit fox in the County. Fees shall be paid prior to grading of the site. When these funds are ultimately applied for mitigation purposes, should the actual cost of setting aside and protecting lands under this provision be less than the \$2000 per developed acre, then the unused portion of the funds shall be reimbursed to the original payee, less reasonable administrative costs for the account holder. Lands selected for conservation shall be approved by the USFWS.

BIO-17 Implement Avoidance and Minimization Measures. Future projects covered by the General Plan occurring west of the Delta Mendota canal shall comply with the 1999 U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the San Joaquin kit fox Prior to or During Ground Disturbance. These recommendations include the following:

- a. Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or

construction activities for any project activity likely to impact the SJKF. Pre-construction survey reports shall be provided to the USFWS within 5 days of completing surveys. If construction is phased, pre-construction surveys shall be conducted for each phase according to the timing and schedule stated above.

- b. An employee education program shall be conducted.
- c. Project-related vehicles shall observe a 20-mph speed limit in the project area, except on county roads and state and federal highways; this is particularly important at night when kit foxes are most active.
- d. To the extent practicable, nighttime construction shall be minimized.
- e. Off-road traffic outside of designated project areas shall be prohibited.
- f. To prevent inadvertent entrapment of kit foxes or other animals during the construction phases of the projects, all excavated, steep-walled holes or trenches more than 2 ft deep shall be covered at the close of each working day by plywood or similar materials or equipped with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals.
- g. All construction pipes, culverts, or similar structures with a diameter of 4 inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in anyway. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of a qualified biologist, the pipe may be moved once to remove it from the path of construction activity.
- h. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in a closed container and removed at least once a week from a construction or project site.

For projects with the potential to adversely impact Southwest Pond Turtles (*Actinemys marmorata*) or their habitat, require the following:

BIO-18 Conduct focused presence/absence surveys for southwestern pond turtle. A qualified biologist shall conduct focused surveys for southwestern pond turtle in the area of the proposed project crossings at Del Puerto Creek. Focused surveys shall consist of a minimum of 4 daytime surveys, to be completed between 1 April and 1 June. If southwestern pond turtles are detected in or adjacent to the proposed project, nesting surveys shall be conducted, as detailed in implementation measure BIO-19.

BIO-19 Conduct focused surveys for southwestern pond turtle nesting. Focused surveys for evidence of southwestern pond turtle nesting shall be conducted by a qualified biologist if southwestern pond turtles are detected or assumed present in or adjacent to the proposed project and if suitable nesting habitat exists within 1300 ft of occupied habitat in an area where project-related

ground disturbance will occur. The qualified biologist shall make the determination of what constitutes suitable nesting habitat. Surveys shall entail searching for evidence of pond turtle nesting, including remnant eggshell fragments, which may be found on the ground following nest depredation.

BIO-20 Monitoring and avoidance and minimization measures. A qualified biologist with demonstrated expertise with southwestern pond turtles shall monitor construction activities where pond turtles are present or assumed present. This person shall be approved by the CDFG prior to the onset of ground-disturbing activities. This biologist shall be referred to as the authorized biologist hereafter. The authorized biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of southwestern pond turtles.

Prior to the onset of construction activities the project proponent shall provide all personnel who will be present on work areas within or adjacent to the proposed project with the following information:

- a. A detailed description of the southwestern pond turtle including color photographs
- b. The protective measures being implemented to conserve the southwestern pond turtle and other species during construction activities associated with the proposed project
- c. A point of contact if southwestern pond turtles are observed
- d. If the installation of fencing is deemed necessary by the authorized biologist, one clearance survey for southwestern pond turtles shall be conducted at the time of the fence installation. Additionally, focused surveys as described under mitigation measure BIO-19 shall be conducted prior to the initiation of construction each day.

BIO-21 Relocation of nests and individuals from construction zones. To mitigate potential impacts and permanent habitat losses resulting from project construction, the authorized biologist shall coordinate with CDFG to identify adjacent suitable habitat and relocate pond turtles and/or their nests.

For projects with the potential to adversely impact Burrowing Owls (*Athene cunicularia*) or their habitat, require the following:

BIO-22 Implement CDFG protocol for burrowing owls. In conformance with federal and State regulations regarding the protection of raptors, a habitat assessment in accordance with California Burrowing Owl Consortium's (CBOC) 1993 Burrowing Owl Survey Protocol and Mitigation Guidelines (Appendix F) shall be completed prior to the start of construction. Burrowing owl habitat within the proposed project and within a 500-ft buffer zone shall be assessed ("Assessment Area"). If the habitat assessment concludes that the Assessment Area lacks suitable burrowing owl habitat, no additional action is

required. However, if suitable habitat is located on the Assessment Area, all ground squirrel colonies shall be mapped at an appropriate scale, and the mitigation measures covered in the CDFG protocol for burrowing owls shall be implemented:

- a. In conformance with federal and state regulations regarding the protection of raptors, a pre-construction survey for burrowing owls, in conformance with CDFG guidelines, shall be completed no more than 30 days prior to the start of construction within suitable habitat at the project site(s) and buffer zone(s). Three additional protocol-level surveys shall also be completed per CDFG guidelines prior to construction.
- b. Occupied burrows shall not be disturbed during the nesting season (1 February through 31 August) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Eviction outside the nesting season may be permitted pending evaluation of eviction plans and receipt of formal written approval from the CDFG authorizing the eviction.
- c. A 250-ft buffer, within which no new activity shall be permissible, shall be maintained between project activities and nesting burrowing owls during the nesting season. This protected area shall remain in effect until 31 August or at the CDFG's discretion, and based upon monitoring evidence, until the young owls are foraging independently.
- d. If accidental take (disturbance, injury, or death of owls) occurs, the CDFG shall be notified immediately.

BIO-23 Compensate for loss of burrowing owl habitat. If surveys determine that burrowing owls occupy the site and avoiding development of occupied areas is not feasible, then habitat compensation on off-site mitigation lands shall be implemented based on the CBOC (1993) guidelines. HM lands comprising existing burrowing owl foraging and breeding habitat shall be acquired and preserved. An area of 6.5 acres (the amount of land found to be necessary to sustain a pair or individual owl) shall be secured for each pair of owls, or individual in the case of an odd number of birds. As part of an agreement with the CDFG, the project applicant shall secure the performance of its mitigation duties by providing the CDFG with security in the form of funds that would:

- a. Allow for the acquisition and/or preservation of 6.5 acres of HM lands;
- b. Provide initial protection and enhancement activities on the HM lands, potentially including, but not limited to, such measures as fencing, trash clean-up, artificial burrow creation, grazing or mowing, and any habitat restoration deemed necessary by CDFG;
- c. Establish an endowment for the long-term management of the HM lands, and;

- d. Reimburse the CDFG for reasonable expenses incurred as a result of the approval and implementation of this agreement.

For projects with the potential to adversely impact Nesting Avians, require the following:

- BIO-24 Avoidance. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from January through August.

- BIO-25 To the extent construction cannot be scheduled to avoid the nesting season, conduct pre-construction surveys and monitoring for breeding birds. A qualified ornithologist shall conduct pre-construction surveys for nesting birds if construction and removal activities are scheduled to occur during the breeding season. Surveys shall be conducted in areas within 500 ft of construction activities. If breeding birds with active nests are found, a biological monitor shall establish a 500-ft buffer around the nest, and no activities shall be allowed within the buffer until the young have fledged from the nest, the nest fails or an ornithologist in cooperation with CDFG determines avoidance is possible by other means. The biological monitor shall conduct regular monitoring of the nest. If an active raptor nest is found close enough to the construction area to be disturbed by these activities, the ornithologist, in consultation with the CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest.

For projects with the potential to adversely impact Nesting Raptors, require the following:

- BIO-26 Avoid nesting season for raptors. To the extent practicable, construction shall be scheduled to avoid the nesting season for raptor species, which extends from 1 January through 31 August.-

- BIO-27 If it is not possible to schedule construction between August and January, then pre-construction surveys for nesting raptors shall be conducted by a qualified ornithologist or wildlife biologist to ensure that no raptor nests shall be disturbed during Project implementation. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (January through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the qualified person shall inspect all trees and suitable structures in, and immediately adjacent to, the impact areas for raptor nests. If an active raptor nest is found close enough to the construction area to be disturbed by these activities, the ornithologist, in consultation with the CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest.

For projects with the potential to adversely impact Special Status Plants, require the following:

BIO-28 Conduct Protocol-Level Surveys for Annual and Herbaceous Perennial species

BIO-29 Conduct focused protocol-level surveys in areas where suitable habitat is present. Before any ground disturbance has occurred, focused, protocol-level surveys for the above-named species shall be conducted by a qualified plant ecologist at all areas of ground disturbance. CNPS standards for conducting protocol-level surveys for special-status plants indicate that surveys must be accomplished in a floristic manner. Generally, floristic, protocol-level surveys require between 3 to 4 visits by a qualified plant ecologist during the growing season and blooming period for the species to identify all potential associate species and be reasonably certain the presence of an ephemeral, annual plant population may be detected. These surveys must be accomplished during a year of at least normal rainfall (timing and amount) to be reasonably certain the plant species are not remaining dormant in the seed bank (or not producing above-ground tissue, in the case of herbaceous perennials) due to unfavorable climactic conditions. Any populations found during surveys shall be fully described, mapped, and a CNDDDB Field Survey Form or written equivalent shall be prepared for any special-status populations found to occur within the specific project footprint.

If none of the special-status plant species are located within the project footprint after completion of protocol-level field surveys conducted during a year of average rainfall amount and timing, then no further mitigation measures are necessary. If populations of the plants are found then the remaining implementation measures NR-43 through NR-46 must be implemented.

BIO-30 Avoid direct and indirect impacts to any populations of special-status plant species found during surveys through project re-design. In consultation with a plant ecologist, the project shall be redesigned, constructed, and operated in such a way as to avoid direct and indirect impacts to the special-status plant population, if practicable. If complete avoidance of direct and indirect impacts to individuals is infeasible, the project proponent shall implement mitigation measure BIO-31 below. Populations of special-status plant species located within temporary construction areas shall be fenced or flagged for avoidance prior to construction.

BIO-31 Minimize indirect effects. Reduce indirect impacts to the species by the creation of a buffer zone during and after construction. Prior to site grading, any populations shall be identified by a qualified plant ecologist. A buffer zone shall be established around these areas and they shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other

potential sources of disturbance. Temporary fences shall be constructed between any populations and project activities.

The size of the buffer depends on the proposed use of the immediately adjacent lands and includes consideration of the plant's ecological requirements (i.e., sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by a qualified plant ecologist based on the growth requirements of the species. Public access to the area shall be restricted after the construction phase of the project as well.

BIO-32 Restore impacted habitat on-site. To mitigate impacts to habitat capable of supporting the above-named species, prior to any ground disturbance, a qualified restoration ecologist shall conduct a feasibility analysis to identify restoration opportunities within impacted areas. The feasibility analysis shall include background literature review, consultation with responsible agencies familiar with restoration of this habitat type, and an initial investigation of existing site conditions such as soils, hydrology, topography, and aspect. If restoration is deemed feasible, habitat shall be restored 1:1 (habitat restored: habitat impacted). A restoration and monitoring plan (RMP) shall be developed for the project and shall include the description of impacted habitat functions, values, and acreage; mitigation ratio; mitigation goal; location of mitigation area and existing condition; site manipulation/ preparation required; planting plan; maintenance plan; monitoring plan and detailed performance and final success criteria. Should restoration not be feasible, or should the restoration sites not meet performance criteria detailed within the time allotted within the RMP,

BIO-33 Preserve off-site habitat/management of existing populations. In the case that project re-design to completely avoid all direct and indirect impacts to populations located during surveys is not feasible, existing offsite habitat that is not already part of the public lands shall be preserved in perpetuity at a 1:1 mitigation ratio (one acre preserved for each acre impacted) to mitigate impacts to habitat capable of supporting special-status species. The preserved habitat shall be of similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, vegetation structure, and dominant species composition, as determined by a qualified plant ecologist.

The project proponent shall work with CDFG to identify appropriate nearby mitigation lands and ensure their permanent protection through an appropriate CDFG-approved mechanism, such as a conservation easement or fee title purchase. A conservation easement could be held by CDFG or an approved land management entity and shall be recorded within a time frame agreed upon by CDFG.

Alternatively, if currently held private lands supporting the same vegetation types are not available within relatively close proximity to the impact locations,

the project proponent shall seek a suitable funding mechanism involving an endowment or similar trust to fund activities on public lands that currently support known populations of the affected species that are under threat from factors such as noxious weed infestations or vandalism. The goal is to fund the long-term management of these species through implementation of specific management measures including such items as additional fencing, public education, grazing management, and so forth to the satisfaction of the public land managers.

- BIO-34 A no-disturbance area of 100 feet shall be established from the high water mark, or outside edge of existing riparian vegetation, whichever is greater, along Del Puerto Creek and existing wetland and vernal pool habitats. Pedestrian and bicycle paths may be established within the no-disturbance area so long as such efforts do not conflict with the objective of protecting and enhancing existing riparian, wetland and vernal pool resources.