



NATURAL RESOURCES ELEMENT

INTRODUCTION

This element provides the policy context for Merced County to achieve its vision for the management and preservation of natural resources. The County’s rich natural resources are essential to the local economy and quality of life. These resources are also a source of natural beauty and scenic vistas in the County. The preservation and protection of these resources is vital to the continued benefit and enjoyment of current and future residents. Goals and policies in this element are organized under the following headings:

- Biological Resources
- Energy Resources and Efficiency
- Soil and Mineral Resources
- Scenic Resources

BIOLOGICAL RESOURCES

Merced County is renowned for its unique natural resources, including pristine vernal pools, grasslands, unique plant and animal species, large managed wetland preserves, and wildlife-based recreational opportunities. More than 170,000 acres in Merced County are currently (2010) protected in either Federal and State wildlife areas or private conservancies. The County is also home to the Merced Grasslands, one of the largest and most intact grassland wetland habitats in the world. While the County’s biological resources are abundant, they face challenges from urbanization. The policies in this section address protection, preservation, and enhancement of biological resources in Merced County.

Goal NR-1	Preserve and protect, through coordination with the public and private sectors, the biological resources of the County. <i>[Source: New Goal, GPU Consultants]</i>
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Policy NR-1.1: Habitat Protection (RDR/PSR)

Identify areas that have significant long-term habitat and wetland values including riparian corridors, wetlands, grasslands, rivers and waterways, oak woodlands, and

vernal pools, and provide information to landowners. *[Sources: New Policy, Circulation Focus Group Comment, Open Space/Habitat Focus Group Comment, GPU Consultants]*

Policy NR-1.2: Protected Natural Lands (RDR/PSR)

Identify and support methods to increase the acreage of protected natural lands and special habitats, including but not limited to, wetlands, grasslands, and vernal pools, potentially through the use of conservation easements. *[Source: New Policy, Open Space/Habitat Focus Group Comment]*

Policy NR-1.3: Forest Protection (SO)

Preserve forests, particularly oak woodlands, to protect them from degradation, encroachment, or loss. *[Source: New Policy, Open Space/Habitat Focus Group Comment]*

Policy NR-1.4: Important Vegetative Resource Protection (SO)

Minimize the removal of vegetative resources which stabilize slopes, reduce surface water runoff, erosion, and sedimentation. *[Source: Existing GP Policy OS.2.1]*

Policy NR-1.5: Wetland and Riparian Habitat Buffer (PSR/RDR)

Identify wetlands and riparian habitat areas and designate a buffer zone around each area sufficient to protect them from degradation, encroachment, or loss. *[Source: MCGPU Alternatives Report, Policy Option NR-1.a, BOS/PC Comment]*

Policy NR-1.6: Terrestrial Wildlife Mobility (SO)

Encourage property owners within or adjacent to designated habitat connectivity corridors that have been mapped or otherwise identified by the California Department of Fish and Game or U.S. Fish and Wildlife Service to manage their lands in accordance with such mapping programs. *[Sources: New Policy, Open Space/Habitat Focus Group Comment, GPU Consultants]*

Policy NR-1.7: Agricultural Practices (SO)

Encourage agricultural, commercial, and industrial uses and other related activities to coordinate with environmental groups in order to minimize adverse effects to important or sensitive biological resources. *[Source: MCGPU Alternatives Report, Policy Option NR-1.d, Open Space/Habitat Focus Group Comment]*

Policy NR-1.8: Use of Native Plant Species for Landscaping (SO)

Encourage the use of native plant species in landscaping, and, where the County has discretion, require the use of native plant species for landscaping. *[Source: New Policy, Open Space/Habitat Focus Group Comment]*

Policy NR-1.9: Rural to Urban Redesignations (MPSP)

Carefully consider the potential impacts on significant habitats from new development when redesignating land from a rural to an urban use. *[Source: Existing GP Policy OS.1.3]*

Policy NR-1.10: Aquatic and Waterfowl Habitat Protection (MPSP)

Cooperate with local, State, and Federal water agencies in their efforts to protect significant aquatic and waterfowl habitats against excessive water withdrawals or other

activities that would endanger or interrupt normal migratory patterns or aquatic habitats. *[Source: Existing GP Policy OS.1.9]*

Policy NR-1.11: On-Going Habitat Protection and Monitoring (PSR)

Cooperate with local, State, and Federal agencies to ensure that adequate on-going protection and monitoring occurs adjacent to rare and endangered species habitats or within identified significant wetlands. *[Source: Existing GP Policy OS.1.8]*

Policy NR-1.12: Wetland Avoidance (RDR/PSR/MPSP)

Avoid or minimize loss of existing wetland resources by careful placement and construction of any necessary new public utilities and facilities, including roads, railroads, high speed rail, sewage disposal ponds, gas lines, electrical lines, and water/wastewater systems. *[Source: New Policy, GPU Consultants]*

Policy NR-1.13: Wetland Setbacks (RDR)

Require an appropriate setback, to be determined during the development review process, for developed and agricultural uses from the delineated edges of wetlands. *[Source: New Policy, GPU Consultants]*

Policy NR-1.14: Temporary Residential Uses (RDR)

Ensure that buildings and structures approved for temporary residential use in significant wetland areas are not converted to permanent residential uses. *[Source: Existing GP Policy OS.1.6]* [

Policy NR-1.15: Urban Forest Protection and Expansion (SO/MPSP)

Protect existing trees and encourage the planting of new trees in existing communities. Adopt an Oak Woodland Ordinance that requires trees larger than a specified diameter that are removed to accommodate development be replaced at a set ratio. *(Source: MCGPU Alternatives Report, Policy Option CC-1.q)*

Policy NR-1.16: Hazardous Waste Residual Repository Location (RDR)

Require new hazardous waste residual repositories (e.g., contaminated soil facilities) to be located at least a mile from significant wetlands, designated sensitive species habitat, and State and Federal wildlife refuges and management areas. *[Source: New Policy, GPU Consultants]*

Policy NR-1.17: Agency Coordination (MPSP/IGC/JP)

Coordinate with private, local, State, and Federal agencies to assist in the protection of biological resources and prevention of degradation, encroachment, or loss of resources managed by these agencies. *[Source: MCGPU Alternatives Report, Policy Option NR-1.b, Open Space/Habitat Focus Group Comment]*

Policy NR-1.18: San Joaquin River Restoration Program Support (MPSP/SO)

Monitor the San Joaquin River Restoration Program efforts to ensure protection of landowners, local water agencies, and other third parties. *[Source: New Policy, GPU Consultants]*

Policy NR-1.19: Merced River Restoration Program Support (MPSP/SO)

Support the restoration efforts for the Merced River consistent with the Merced River Corridor Restoration Plan. *[Source: New Policy, GPU Consultants]*

Policy NR-1.20: Conservation Easements

Encourage property owners to work with land trusts and State and Federal agencies to pursue voluntary conservation easements.

ENERGY RESOURCES AND EFFICIENCY

Energy resources are important natural resources that support the expansion of the region's economic base, agricultural sector, available developable land, and infrastructure capacity. Most County energy needs are supplied by resources imported from out of the area. Electricity and natural gas are received via electrical transmission and gas pipelines, while gasoline and diesel fuel are imported from outside the County by various oil companies by truck and pipeline. As traditional sources of energy become depleted, the need to develop alternate options and methods of power generation becomes more important. There is potential to decrease the County's reliance on fossil-fuel-based energy sources through increased use of biomass, wind, solar, and energy conservation programs. The policies in this section promote energy conservation practices and focus on renewable energy production within Merced County.

Goal NR-2

Provide adequate and efficient energy supplies by increasing renewable energy production and energy conservation. *[Source: New Goal, GPU Consultants]*

Policy NR-2.1: Renewable Energy Use (RDR) 

Promote the development and use of renewable energy resources to reduce dependency on petroleum-based energy sources. *[Source: MCGPU Alternatives Report, Policy Option NR-3.c]*

Policy NR-2.2: Clean Alternative Energy Requirement (RDR) 

Encourage new electricity providers to use only clean alternative energy sources (e.g., solar, thermal, wind). *[Source: New Policy, MARG comment]*

Policy NR-2.3: Biomass-to-Energy Production (RDR) 

Encourage the use of biomass facilities to capture untapped local energy sources from dairies, farmland, and other industrial sources. *[Source: New Policy, GPU Consultants]*

Policy NR-2.4: Solar Power (RDR) 

Encourage on-site solar power use in residential, commercial, and industrial buildings, and utility-scale solar facilities in rural locations that do not harm long-term agricultural productivity and habitat values. *[Source: New Policy, GPU Consultants]*

Policy NR-2.5: Legislative Advocacy (RDR) 🌐

Actively monitor, review, comment, and advocate for the purposes of furthering alternative energy resources on pending major State and Federal legislation, executive orders, and San Joaquin Valley Air Pollution Control District rulemaking that may have an impact on the development of alternative energy resources in Merced County.

[Source: New Policy, GPU Consultants]

Policy NR-2.6: Open Space Impacts (MPSP/IGC/JP) 🌐

Work with public agencies and private energy providers to ensure that energy projects avoid or minimize impacts to open space, natural resources, and productive agricultural land. *[Source: MCGPU Alternatives Report, Policy Option NR-3.b]*

Policy NR-2.7: Residential Rehabilitation and Improvement (RDR) 🌐

Encourage the rehabilitation and improvement of existing single-family and multi-family units to achieve greater energy efficiency. *[Source: New Policy, GPU Consultants]*

Policy NR-2.8: Energy Efficient County Facilities (RDR) 🌐

Replace existing traffic lights, street lights, and other electrical uses with energy efficient bulbs and appliances in the course of ongoing maintenance/replacement as funding permits. *[Source: New Policy, GPU Consultants]*

Policy NR-2.9: Energy Conservation (RDR) 🌐

Encourage and maximize energy conservation and identification of alternative energy sources (e.g., wind or solar). *(Source: MCGPU Alternatives Report, Policy Option CC-1.bb, BOS/PC Comment)*

Policy NR-2.10: Efficiency Education (RDR) 🌐

Work with energy providers to educate the public about energy efficiency, water conservation, and other greenhouse gas reduction measures. *(Source: MCGPU Alternatives Report, Policy Option CC-1.cc)*

Policy NR-2.11: Energy-Efficiency Focused Design (RDR) 🌐

Encourage the use of energy-efficiency design features such as site orientation, light colored building materials, and tree canopies. *(Source: MCGPU Alternatives Report, Policy Option CC-1.ee)*

Policy NR-2.12: Green Practices Education (RDR) 🌐

Encourage recycling, composting, source reduction, and education efforts throughout the County for residents, businesses, industries, institutions, and construction. *(Source: MCGPU Alternatives Report, Policy Option CC-1.kk, BOS/PC Comment)*

SOIL AND MINERAL RESOURCES

Merced County is rich in nonfuel mineral and soil resources; however, there are very few traditional hard rock mines in operation today. The County's mineral resources are primarily sand and gravel, which are ample in the County. The policies in this section address the extraction of known mineral resources, prevent the encroachment of

incompatible uses adjacent to mineral resources and ensure that resource extraction is compatible with the health and safety of County residents.

Goal NR-3	Facilitate orderly development and extraction of mineral resources while preserving open space, natural resources, and soil resources and avoiding or mitigating significant adverse impacts. <i>[Source: New Goal, County Staff and GPU Consultants]</i>
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Policy NR-3.1: Soil Protection (RDR/SO)

Protect soil resources from erosion, contamination, and other effects that substantially reduce their value or lead to the creation of hazards. *[Sources: Existing GP Objective OS.2.A, Policy AG.2.9]*

Policy NR-3.2: Soil Erosion and Contamination (RDR)

Require minimal disturbance of vegetation during construction to improve soil stability, reduce erosion, and improve stormwater quality. *[Sources: Existing GP Objective OS.2.A, Policy AG.2.9]*

Policy NR-3.3: Soil Improvement (RDR)

Encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. This shall include promoting and coordinating the efforts of University of California Cooperative Extension, various Resource Conservation Districts, and other similar agencies and organizations. *[Sources: Existing GP Implementation AG.2.9, and GPU Consultants]*

Policy NR-3.4: New Development Compatibility (RDR)

Ensure that new development is compatible with existing and potential surface mining areas and operations as identified on the Mineral Resource Zone Maps prepared by the State Division of Mines and Geology and other mineral resource areas identified by the County. The County shall:

- a. Require development applicants near identified mineral resources to prepare a statement that specifies why the County should permit the proposed land use and describe how the benefits of the proposed use would clearly outweigh the impacts that may limit the potential to extract mineral resources in that area.
- b. Require new incompatible land uses adjacent to existing mining operations to provide a buffer between the development and adjacent mining operations adequate to mitigate significant impacts to mineral land uses. The buffer distance shall be based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality.
- c. Require written notification to be sent to mining operators and subject landowners of land use entitlement applications for potentially incompatible

land uses in areas where mining operations are currently taking place. *[Source: County Staff]*

Policy NR-3.5: Mineral Resource Protection (RDR)

Require areas identified with mineral deposits on either the State Mine Land Classification Maps provided by the State Mining and Geology Board's Classification Report, or site-specific information, remain protected for possible future mineral extraction. Impose conditions upon new incompatible land uses in areas surrounding identified mineral deposits for the purpose of mitigating significant land use conflicts prior to approving a use that would otherwise be incompatible with mineral extraction. The identified mineral deposit may be determined by the classification maps, Classification Report, separate County maps, or on a site-specific basis. *[Source: County Staff]*

Policy NR-3.6: Buffers between Mining Operations and Adjacent Uses (RDR)

Require operators of new mines to provide buffers or physical barriers between the mining operation and any existing nearby incompatible land uses when a significant impact is identified during the development review process. *[Source: County Staff]*

Policy NR-3.7: Merced River Corridor Buffers (RDR)

Encourage surface mining operations in dredge tailing areas along the Merced River corridor to design riparian vegetation buffers consistent with the Merced River Corridor Restoration Plan. *[Source: County Staff]*

Policy NR-3.8: Habitat Restoration and Buffer Incentives (RDR)

Support and encourage property owners and surface mining operators to pursue one or more of the following incentives:

- a. State and Federal habitat restoration funding for restoring wildlife habitat;
- b. Conservation easements following reclamation for restoring wildlife habitat; and
- c. Other local, State, and Federal incentives. *[Source: County Staff]*

Policy NR-3.9: Riparian and Critical Habitat Protection (RDR)

Protect or mitigate, in compliance with local, State, and Federal requirements, areas of riparian vegetation along rivers, streams, and other habitats that support threatened, endangered, or otherwise sensitive species. This shall include:

- a. Requiring mining operators that propose mining operations that will have a significant adverse impact on these resources to mitigate to the fullest extent that the California Environmental Quality Act (CEQA) requires for such impacts and obtain the necessary State and Federal permits prior to operation.
- b. Encouraging mining operators that impact natural resources to propose an end use that will result in minimal loss of resources.

- c. Referring all surface mining applications to the appropriate local, State, and Federal agencies to coordinate project design, mitigation, and reclamation efforts. *[Source: County Staff]*

Policy NR-3.10: Disturbance to Productive Agricultural Farmland (RDR)

Encourage property reclamation to productive agricultural farmland, rather than habitat or an alternative non-agricultural land use, when a surface mining application involves disturbance of productive agricultural farmland. *[Source: County Staff]*

Policy NR-3.11: Concurrent Reclamation (RDR)

Require reclamation of mining sites concurrent with extraction activities rather than after extraction has been completed. *[Source: County Staff]*

Policy NR-3.12: Sand and Gravel Extraction Control (RDR)

Ensure that strict control is maintained on sand and gravel extractions in streambed channels and within areas designated as having sensitive habitat and open space resources. *[Source: Existing GP Policy OS.2.15]*

Policy NR-3.13: Agricultural Land Disturbance (RDR)

Require mining projects to obtain agricultural conservation easements at a minimum of 1:1 for each acre of productive agricultural land converted as a result of mining and not returned to agricultural production. *[Source: MCGPU Alternatives Report, Policy Options NR-4.c and NR-4.d, BOS/PC Comment]*

SCENIC RESOURCES

The rural and agricultural landscapes provide the primary scenic resources in Merced County. The County also has many scenic vistas, such as the Coastal and Sierra Nevada mountain ranges, and the Los Banos Creek, Merced, San Joaquin, and Bear Creek river corridors. State Route 152 and Interstate 5 are designated scenic routes in parts of the county. Preservation of the County's scenic features, both natural and working landscapes, enhances the amenity value and economic development potential of the County as it adds to the quality of life for existing and future residents. The policies in this section address the management, protection, and preservation of the County's scenic resources. *(Note: See the Land Use Element for additional goals and policies related to urban design).*

Goal NR-4

Protect scenic resources and vistas. *[Source: New Goal, GPU Consultants]*

Policy NR-4.1: Scenic Resource Preservation (RDR)

Promote the preservation of agricultural land, ranch land, and other open space areas as a means of protecting the County's scenic resources. *[Source: New Policy, GPU Consultant]*

Policy NR-4.2: Special Review Process for Structures Adjacent to Scenic Highways (IGC, RDR)

Coordinate with Caltrans, during the review of proposed structures and activities located adjacent to State-designated scenic highways, to ensure that scenic vistas and local scenic values are not significantly degraded. *[Source: Existing GP Policy OS.3.11]*

Policy NR-4.3: Building Design (RDR)

Require that siting and design of buildings protect, improve, and enhance the scenic quality of the built and natural environments and take full advantage of scenic resources through site orientation, building setbacks, preservation of viewsheds, height limits, and the use of appropriate construction materials and exterior modulation. *[Source: New Policy, GPU Consultants]*

Policy NR-4.4: New Roads (RDR)

Consider the surrounding landscape, topography, and existing scenic values when determining the location and construction of new roads. *[Source: Existing GP Policy OS.3.9, Revised]*

Policy NR-4.5: Light Pollution Reduction (RDR)

Require good lighting practices, such as the use of specific light fixtures that reduce light pollution, minimize light impacts, and preserve views of the night sky. *[Source: New Policy, GPU Consultant]*

IMPLEMENTATION PROGRAMS

Natural Resources Element Implementation Programs						
		2013-2015	2016-2020	2021-2030	Annual	Ongoing
Program NR-A: Habitat Conservation Plan (MPSP) In consultation with an established formal State or Federal program involving the cities within the County, the County will participate in a countywide Habitat Conservation Plan or regional plans that identify areas for natural resource conservation (including greenbelts) and describes standards for habitat blocks, fees, and compensation. This shall include: <ol style="list-style-type: none"> Conducting a countywide comprehensive habitat identification and mapping program for use in future policy determinations. Developing a conservation strategy to preserve, restore, and enhance the unique vernal pool habitats and associated special-status species in Merced County. <i>[Source: New Program, OS Focus Group Comment, County staff]</i> 			✓			
Implements Which Policies	NR-1.1 and NR-1.2					
Responsible Department	Planning and Community Development					
Supporting Department	Board of Supervisors, County Counsel					
Program NR-B: Oak Woodland Ordinance (RDR) Prepare an Oak Woodland Ordinance that establishes standards and mitigation for the protection of valuable oak resources in the County. <i>[Source: New Program, OS Focus Group Comment]</i>						
Implements Which Policies	NR-1.1, NR-1.3, NR-1.15	✓				
Responsible Department	Planning and Community Development					
Supporting Department						
Program NR-C: GIS Mapping (PSR, PI) Update the existing Geographical Information System to include current protected habitat spatial information, including wildlife refuges, mitigation banks, Williamson Act parcels, Habitat Connectivity Corridors, priority riparian corridors, and habitat preserves. <i>[Source: New Program, GPU Consultants]</i>						
Implements Which Policies	NR-1.1, NR-1.2	✓				✓
Responsible Department	Information Technology Department					

Natural Resources Element Implementation Programs						
		2013-2015	2016-2020	2021-2030	Annual	Ongoing
Supporting Department	Planning and Community Development					
Program NR-D: Sensitive Habitat Guidelines (MPSP) Prepare and adopt guidelines for evaluating project impacts to identified sensitive habitat. <i>[Source: New Program, GPU Consultants]</i>		✓				
Implements Which Policies	NR-1.1, NR-1.2, NR-1.3, NR-1.4, NR-1.7, NR-1.12, NR-1.13, NR-1.14					
Responsible Department	Planning and Community Development					
Supporting Department	Board of Supervisors					