



APPENDIX A: General Plan Sustainability Policies and Programs

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INTRODUCTION

The issue of global climate change has received greater attention from governments around the world in recent years. Global climate change refers to the change in the average weather of the earth that may be measured by changes in wind patterns, storms, precipitation, and temperature. In 2006, the California State Legislature took a proactive role in addressing the challenges of climate change with the adoption of the California Global Warming Solutions Act of 2006, Assembly Bill 32 (AB 32). AB 32 focuses on reducing GHG emissions in California. AB 32 requires the California Air Resources Board (CARB), the state agency charged with regulating state-wide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to 1990 state-wide levels by 2020.

As part of the 2035 General Plan, the County integrated measures and actions for into the General Plan goals, policies, and implementation programs to reduce greenhouse gas emissions and address climate change impacts. In response to the mandate of SB 97, the CEQA Guidelines (Section 15183.5) establish standards for the contents and approval process of plans to reduce GHGs. The 2035 General Plan has been prepared the Plan to meet State standards as a qualified plan for the reduction of greenhouse gas emissions.

The 2035 General Plan takes steps to address the challenging issue of climate change by reducing GHG emissions, improving energy efficiency, reducing waste and promoting recycling, and managing water use. The General Plan will reduce GHG emissions primarily through land use patterns that support public transit, increased opportunities for pedestrians and bicycle use and encouraging "green building" practices and alternative energy systems. Policies also address adaptation to climate change, such as reducing the impacts from the urban heat island effect, managing water use, and increasing flood protection.

The sources, impacts, and solutions to climate change are complex. Climate change and GHG emissions reduction are addressed by policies and programs throughout the General Plan, rather than in a single section. Appendix A provides a detailed analysis of how the 2035 General Plan addresses climate change and acts as the County's qualified plan for the reduction of greenhouse gas emissions. Through implementation of the 2035 General Plan, the County will ensure it is contributing to State objectives to reduce GHG emissions (i.e., EO S-3-05) AB 32, SB 375) and address the impacts of a changing climate. The County will annually monitor its efforts to reduce GHG emissions and report on its progress as part of its State-mandated General Plan implementation report.



A-1: San Joaquin County GHG Inventory and Projections

| Emissions Sector | Subsector | 2007 | 2020 | 2035 | 2050 |
|---|-------------------|------------------|------------------|------------------|------------------|
| Energy - Electricity | | | | | |
| | Residential | 174,391 | 201,044 | 236,896 | 279,142 |
| | Commercial | 356,393 | 410,860 | 484,129 | 570,464 |
| | Industrial | 21,933 | 25,285 | 29,795 | 35,108 |
| | Subtotal | 552,717 | 637,189 | 750,820 | 884,714 |
| Energy - Natural Gas | | | | | |
| | Residential | 88,197 | 101,676 | 119,808 | 141,174 |
| | Commercial | 181,945 | 209,751 | 247,156 | 291,232 |
| | Industrial | 8,672 | 9,998 | 11,781 | 13,882 |
| | Subtotal | 278,814 | 321,425 | 378,745 | 446,287 |
| Total Energy (Electricity and Natural Gas) | Total | 831,532 | 958,614 | 1,129,565 | 1,331,001 |
| Transportation | Total | 1,350,924 | 1,558,620 | 2,189,999 | 2,580,544 |
| Waste | Total | 41,067 | 47,343 | 55,786 | 65,734 |
| Wastewater | Total | 2,784 | 3,210 | 3,782 | 4,456 |
| Agriculture | | 5,568 | 2,877 | 2,877 | 2,877 |
| | Residue Burn | 40,089 | 40,089 | 40,089 | 40,089 |
| | Livestock | 518,780 | 518,780 | 518,780 | 518,780 |
| | Rice Cultivation | 5,996 | 5,996 | 5,996 | 5,996 |
| | Farming Equipment | 172,837 | 172,837 | 172,837 | 172,837 |
| | Ag Pumps | 28,116 | 28,116 | 28,116 | 28,116 |
| | Fertilizer | 59,871 | 59,871 | 59,871 | 59,871 |
| | Total | 825,689 | 825,689 | 825,689 | 825,689 |

A-1: San Joaquin County GHG Inventory and Projections

| | | | | | |
|--|----------------------|-----------|-----------------|------------------|-------------------|
| Total San Joaquin County (Unincorporated) GHG Emissions | | 3,051,996 | 3,393,475 | 4,204,821 | 4,807,425 |
| Target/Goals | | | 2,594,196 | 1,556,518 | 518,839 |
| Reduction Needed from Projected Emissions to Meet Target/Goals | | | 799,279 | 2,648,303 | 4,288,586 |
| Legislative Reductions | | | | | |
| | Pavley 1 +LCDF | | -340,085 | -583,930 | -696,747 |
| | Title 24 | | -149,245 | -325,105 | -383,081 |
| | RPS/RES | | -210,272 | -247,770 | -291,956 |
| | Total | | -699,603 | -909,035 | -1,079,828 |
| GHG Reductions from County Actions | | | | | |
| | Energy | | -34,879 | -52,487 | -73,235 |
| | Transportation | | -779 | -1,095 | -1,290 |
| | Water and Wastewater | | -35,507 | -50,207 | -50,760 |
| | Wastewater | | -10,111 | -11,914 | -14,038 |
| | Agriculture | | -24,830 | -24,830 | -24,830 |
| | Total | | -106,106 | -140,533 | -164,153 |
| Overall Surplus (-) or Gap | | | | | |
| | Total | | -6,429 | 1,598,735 | 3,044,605 |

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| A-2: GHG Reductions from County Actions Summary | | | |
|---|--|--|--|
| GHG Reduction Strategy | San Joaquin General Plan Policy/Implementation Program | 2020 GHG Reduction (MT CO₂e) | 2035 GHG Reduction (MT CO₂e) |
| Energy Reduction Strategies | | | |
| Energy Strategy 1: Renewable Energy <ul style="list-style-type: none"> • 5% of existing residential reduce energy consumption off the grid by 75% • 5% of existing commercial reduce energy consumption off the grid by 50% Energy Strategy 1: PACE Program <ul style="list-style-type: none"> • 25% of new residential reduce energy consumption off the grid by 75% • 25% of new commercial reduce energy consumption off the grid by 50% | NCR-K: Renewable Energy/PACE Program | 25,193 | 41,074 |
| Energy Strategy 2: Participation in PGE Renewable Energy <ul style="list-style-type: none"> • 5% of existing users purchase 50% renewable option • 1% of existing users purchase 100% renewable option | NCR-5.1: Nonrenewable Energy and Efficiency, NCR-5.2: Alternative Energy, NCR-L: Remove Barriers to Renewable Energy NCR-P: Industrial Design Standards | 9,685 | 11,412 |
| <i>Subtotal</i> | | 34,879 | 52,487 |



A-2: GHG Reductions from County Actions Summary

| GHG Reduction Strategy | San Joaquin General Plan Policy/Implementation Program | 2020 GHG Reduction (MT CO ₂ e) | 2035 GHG Reduction (MT CO ₂ e) |
|--|--|---|---|
| Transportation Reduction Strategies | | | |
| Transportation Strategy 2: Complete Streets <ul style="list-style-type: none">0.05% reduction in VMT based on percentage of streets with planned improvements | TM-2.1: Urban Complete Streets TM-2.2: Reconstructed Urban Complete Streets TM-2.3: Land Use Patterns TM-2.4: Rural Complete Streets TM-2.6: Funding for Complete Streets TM-2.7: New Development | 779 | 1,095 |
| <i>Subtotal</i> | | 779 | 1,095 |
| Waste Reduction Strategies | | | |
| Waste Strategy 1: Diversion, Recycling, and Reuse <ul style="list-style-type: none">75% diversion of landfilled waste by 202090% diversion of landfilled waste by 2035. | PHS-6.5: Diversion, Recycling, and Reuse | 35,507 | 50,207 |
| <i>Subtotal</i> | | 35,507 | 50,207 |
| Water and Wastewater Reduction Strategies | | | |
| Water and Wastewater Strategy 1: Water Conservation <ul style="list-style-type: none">20% reduction in water/wastewater use | IS-4.8: Water Conservation Targets | 10,111 | 11,914 |
| <i>Subtotal</i> | | 10,111 | 11,914 |

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| A-2: GHG Reductions from County Actions Summary | | | |
|---|--|------------------------------|------------------------------|
| GHG Reduction Strategy | San Joaquin General Plan Policy/Implementation Program | 2020 GHG Reduction (MT CO2e) | 2035 GHG Reduction (MT CO2e) |
| Agriculture Reduction Strategies | | | |
| Agriculture Strategy 1: Agricultural Equipment and Emissions <ul style="list-style-type: none"> 10% improvement in fuel use in 5% (participation rate) of agricultural vehicles implementing BMPs. | PHS-6.8: Agricultural Equipment and Emissions | 864 | 864 |
| Agriculture Strategy 2: Agricultural Fertilizer Application <ul style="list-style-type: none"> 10% reduction in fertilizer application | PHS-S: Agricultural Best Practices Implementation | 5,987 | 5,987 |
| Agriculture Strategy 3: Agriculture Burning <ul style="list-style-type: none"> 10% reduction in the amount of burned agriculture residue from 25% of agriculture acres | PHS-S: Agricultural Best Practices Implementation | 1,002 | 1,002 |
| Agriculture Strategy 4: Agricultural Energy Use <ul style="list-style-type: none"> 10% diesel pumps converted to solar power | PHS-S: Agricultural Best Practices Implementation | 2,812 | 2,812 |
| Agriculture Strategy 5: Manure Management <ul style="list-style-type: none"> 10% reduction in the amount of manure produced | PHS-S: Agricultural Best Practices Implementation, PHS-6.4: Methane Digesters | 14,165 | 14,165 |
| <i>Subtotal</i> | | 24,830 | 24,830 |
| Total | | 106,106 | 140,533 |



SAN JOAQUIN COUNTY GENERAL PLAN UPDATE
General Plan Sustainability Policies and Programs

| A-3: Sustainability Policies and Programs | | 2020 GHG Reduction (MT CO2e) | 2035 GHG Reduction (MT CO2e) | Adaption & Resiliency Program |
|---|--|------------------------------|------------------------------|-------------------------------|
| 3.1 Community Development Element | | | | |
| GOAL LU-1 | | | | |
| Direct most urban development towards cities and urban and rural communities within the unincorporated county to promote economic development, while preserving agricultural lands and protecting open space resources. (Source: New Goal) | | | | |
| LU-1.1 Compact Growth and Development The County shall discourage urban sprawl and promote compact development patterns, mixed-use development, and higher-development intensities that conserve agricultural land resources, protect habitat, support transit, reduce vehicle trips, improve air quality, make efficient use of existing infrastructure, encourage healthful, active living, conserve energy and water, and diversify San Joaquin County's housing stock. (RDR) (Source: Existing GP, Energy, Land Use and Circulation Patterns, Policy 1, modified) | | Supporting | | |
| LU-1.4 Encourage Infill Development The County shall encourage infill development to occur in Urban and Rural Communities and City Fringe Areas within or adjacent to existing development in order to maximize the efficient use of land and use existing infrastructure with the capacity to serve new development. The County shall balance infill development within outward expansion of communities and new development in other unincorporated areas. (RDR) (Source: New Policy) | | Supporting | | |
| LU-1.7 Farmland Preservation The County shall consider information from the State Farmland Mapping and Monitoring Program when designating future growth areas in order to preserve prime farmland and limit the premature conversion of agricultural lands. (RDR) (Source: New Policy) | | Supporting | | |