APPENDIX A

Listing of Polices, Programs and Implementation Actions of other California Communities,
AND
Survey denoting City of Merced Departments that are implementing such actions.

"✕" denotes that the action is being implemented by the City of Merced.

Redevelopment

Policy:

Require recycling plans from public event organizers.

Programs:

✕ Prepare a Specific Plan for commercial areas that identifies the potential for high quality, pedestrian-oriented, mixed-use development.

Implementation Activities:

Design and implement parking strategies such as parking rate increases or extended metering hours.
Provide free plug-in vehicle parking spaces.
✕ Install bike racks in commercial and civic areas of the City where racks do not currently exist.
✕ Consider incorporating pedestrian-friendly design features into the City's civic/commercial centers.
✕ Make available underutilized City land within 1,500 feet of transit for housing and mixed use development.
✕ Support renovation of declining commercial strip developments along arterial streets and in residential areas.

Airport

Develop a policy for airports to meet green building specifications, improve recycling, use alternate fuel sources, use recycled water, employ water conservation methods, and reduce energy requirements.

✕ Exploring solar energy generation and LED lighting systems to reduce energy needs.

Police

Programs

- Implement bicycle and pedestrian police units.

Implementation Activities

- Improve fuel efficiency of the City vehicle fleet by purchasing low or zero emission vehicles when vehicles are retired.

- Strictly enforce pedestrian and bike rights laws on City streets.

Finance

Programs

Develop and implement an Environmentally Preferable Purchasing program.

Implementation Activities

Identify what budgets might provide funding for GHG reduction measures, such as public works or capital improvement programs.

Evaluate various financing products that would encourage property owners to invest in energy efficiency upgrades and renewable energy systems in existing homes.

Consult with other agencies, utilities and private lenders to evaluate and develop cost-effective financing products.

Provide loans targeted for green building and retrofits.

Utilize the interaction between the City government and local businesses at the time a business license is issued to distribute resources and information regarding setting up recycling and composting systems.

Charge the majority of water bills based on volume used, and implement an additional demand charge in summer months.

Programs

Support or develop a "green business program" that recognizes small businesses that comply with environmental standards and take additional steps to conserve.

Enhance recycling and composting outreach and assistance to local businesses.

Work with local lenders to promote energy efficient mortgages. Require that energy efficient mortgage information be presented to all buyers of commercial and residential properties at the time mortgages are secured.

Support farmers markets and other distribution markets for local and affordable foods.

Implementation Activities

Expand the types of materials that can be recycled locally and identify local markets for recycled products.

- Prepare local workforce for green jobs.

Encourage development of the bio-diesel industry, requiring bio-diesel pumps at new service stations.

- Incubate new green technologies and collaborate with local universities to leverage research funds for GHG reductions.
- Compete for Federal and State funding opportunities in the green technology sector.
- Work with property owners and evaluate use of public lands or green tech development.
- Advocate legislation that supports the growth of Green Technology Industry.

Design and administer recycling and composting training sessions for local building maintenance companies.

Enhance recycling and composting outreach and assistance to local businesses.

Identify local markets for recycled products.

Partner with local restaurants to distribute used grease to bio-fuel vehicles.

Implement a policy allowing City to openly demonstrate green technologies in facilities.

Promote Locally Produced and Distributed Products

Policy

Adopt local ordinance giving preference to local businesses.

Programs

Expand "Buy Local" programs that reduce the number vehicle miles traveled.

In collaboration with the Chamber of Commerce and other business associations, enhance outreach and education to local businesses about the waste embodied in products and packaging and support local manufacturers' efforts to reduce packaging.

Implementation Activities

✕ Partner with local hotels and visitor destinations to provide information about public transit.

Promote reuse and repair businesses.

Partner with business associations to create incentives for restaurants to feature local and organic foods.

Provide Aid for Existing Businesses looking to Reduce Carbon Footprint

Programs

Work with employers to establish a guaranteed ride home program for employees using alternative transportation.

✕ Identify and develop financial incentives and low-cost financing products and programs to encourage investment in energy efficiency and renewable energy within existing commercial buildings. (Finance)

Partner with PG&E to provide a business education program that encourages commercial energy efficiency improvements.

Promote retail business to adopt take-back programs.

Implementation Activities

Refer large businesses to StopWaste.org's recycling partnership program, which provides free waste analysis and consulting services for waste reduction.

Create a checklist of "Green" measures for small businesses.

✕ Develop small business incentive programs to encourage new neighborhood-serving uses in commercial areas.

Identify and implement opportunities to assist local businesses to aggregate purchasing power for the purchase of sustainable product alternatives such as compostable take-out fare and reusable bags.

Seek out and encourage new industries/firms that "Close the loop" on production and waste/ recycling materials in Merced – industrial ecology.

Encourage PG&E and MID to provide comparative energy and water conservation metrics on utility bills.

Encourage employers to provide "flexible hours" offering a compressed workweek or telecommuting.

Fire

Implementation Activities

Improve fuel efficiency of the City vehicle fleet by purchasing low- or zero-emission vehicles when vehicles are retired.

Explore ultra-low sulfur diesel (ULSD) applications in heavy duty vehicles.

Parks and Recreation

Policy

Require recycling plans from public event organizers.

Programs

Create program promoting shade trees to reduce summer heat.

Develop a community gardening program to encourage local food supply.

Promote local gardening efforts and training within the community on farming and gardening techniques.

Implementation Activities

Maximize tree planting.

Implement solar heating on all pools.

Improve fuel efficiency of the City vehicle fleet by purchasing low- or zero-emission vehicles when vehicles are retired.

Work so that accessible public and recreation space is available within ½ mile from all residents.

Perform a tree canopy survey to quantify benefit from current city trees.

Develop an integrated pest management program for exterminating weeds and bugs that will minimize the use of pesticides in the City.

Acquire open space lands for use as passive parks.

Inventory and map areas currently preserved as open space easements.

Public Works

Decrease Water and Energy Demand through Efficient Use

Policy

✕ Develop standards and guidelines for storm water use and retention in landscaping that would be ecologically beneficial to trees and other plants.

✕ Require new landscaping projects to reduce outdoor potable water use.

✕ Require that multi-tenant buildings be sub-metered to allow individuals to track energy consumption.

Programs

✕ Create benefits for both the owner and the renter of residential and non-residential units that utilize energy and water efficiency measures.

Develop a water auditing program for residential and commercial users.

✕ Create example for residents by the Install renewable energy systems on City facilities.

Provide and market incentives for residents, businesses, and institutions to conserve water.

✕ Develop landscaping program with minimal maintenance.

Create a turf replacement program for the City and promote native plants within landscaping.

Implementation Activities

✕ Produce materials on sustainable landscaping techniques that require less water and energy to maintain.

Develop fee to support recycled water.

✕ Facilitate the installation of weather based evapotranspiration (ET) controller irrigation systems in both City and private landscapes.

Encourage rainwater collection for landscaping.

Encourage re-use of grey water in landscaping.

Provide reduced water rates to community gardens as incentive to residents.

Daylight streams, as to unearth previously diverted water so it can be naturally incorporated into City vegetation.

✕ Convert street lights to LED bulbs or LED-solar systems.

✕ Retrofit lighting in City buildings with motion sensors.

Install build performance data displays for energy and water in all City buildings.

In addition to individual energy metering, consider adopting a network to allow customers to access consumption and demand information.

Provide rebates for purchase of new and more water-efficient toilets and washers.

✕ Develop a master lighting plan for the City, allowing for reduced energy consumption.

Explore feasibility of installing micro-hydro systems taking advantage of areas where the City reduces water pressure.

Recycling, Composting & Reuse

Policy

Enact a local ordinance requiring managers of commercial buildings to provide commercial tenants with the opportunity to recycle, including the provision of shared storage containers and tenant education.

Adopting an ordinance requiring all commercial food service providers to use recycling and organic services.

Create a policy mandating a minimum recycling rate for businesses and residents.

Make recycling and composting mandatory at public events and provide more public recycling containers.

Develop standards to ensure new and remodeled buildings are designed to include appropriate space and facilities for recycling and green waste receptacles/systems.

Partner with local hotels and visitor destinations to provide information about public transit and water conservation.

Programs

Enhance the education for organic household waste and yard trimmings compost.

Target expanded recycling outreach and services to multi-family residential buildings.

Develop a volunteer "Master Recycler" Program for public enrollment. Program could include field trips, work, projects, and speakers.

Enhance recycling and composting outreach and assistance to local businesses.

✕ Welcome Basket" for new Merced homeowners with information on waste diversion,

✕ Expand outreach programs to maximize participation in waste reduction and diversion programs.

Create a permanent recycling program for electronics and universal wastes.

Implementation Activities

✕ Update solid waste disposal billing rates to cover costs of providing basic refuse, recycling, and composting service to the community. Analyze new rate structure options with the goal of maintaining and enhancing incentives to recycle.

✕ Review the service impacts and operational and financial aspects of offering every-other-week residential refuse service.

Initiate a "split-cart" program to increase convenience and recycling capacity for residents of single-family homes. The split cart separates plastic, glass, and aluminum from cardboard and paper.

Negotiate contracts which apply a low or zero waste policy with commercial designers and construction.

Provide waste audits for residential buildings.

✕ Provide on-site assistance and containers for City building managers to set up recycling and composting systems in existing buildings.

Design and administer recycling and composting training sessions for local building maintenance companies.

Enhance recycling and composting outreach and assistance to local businesses.

Refer large businesses to StopWaste.org's recycling partnership program, which provides free waste analysis and consulting services for waste reduction.

✕ Provide more public recycling containers on commercial corridors and in parks and public places.

✕ Locate recycling areas in the center of activity, and implement zoning changes so recycling may be located in convenient areas.

✕ Prepare a recycling guide for local event organizers/planners.

✕ Use single stream recycling system for ease of use.

Expand the types of materials that can be recycled locally, such as certain plastics.

Offer environmental recycling and incentives for recycling duplicate and non-efficient refrigerators.

✕ Identify if recycling of construction and demolition materials can be carried out by City or transferred.

Identify local markets for recycled products.

Work with franchised haulers, private recycling companies, and their customers to identify opportunities to recycle and reduce waste in the commercial sector.

Require new landscapes and city projects use locally produced compost and mulch.

Encourage compost use in community gardens.

Explore the feasibility of providing composting receptacles in the public right of way.

✕ Use city fleet as a moving billboard for reducing waste, energy, and water.

Perform a tree canopy survey to quantify benefit from current city trees.

✕ Evaluate current energy portfolio and identify ways to move towards "Green" energy.

Charge the majority of water bills based on volume used, and implement an additional demand charge in summer months.

Reduce Waste Sources: Packaging & Grocery Bags

Policy

Ban the use of polystyrene by all food vendors and City facilities, instead opting for biodegradable and compostable food packaging.

Institute a ban on single-use plastic bags and establish a fee on paper shopping bags.

Programs

Hold public education programs on waste packaging.

Promote a City-wide garage sale to promote re-use.

Implementation Activities

Provide incentive for residents to divert waste streams.

Explore bulk purchase of reusable bags.

Promote landscaping as a whole systems approach to the design, construction, and maintenance of the landscape in order to reduce waste and recycling materials, as well as reduce storm water runoff and create wildlife habitat, among other benefits.

Partner with local restaurants to distribute used grease to bio-fuel vehicles.

Incorporate information about waste reduction services into expanded marketing and outreach print and web-based materials, including City and partner agency newsletters, the City website, and door-to door marketing.

Encourage the State and Federal governments to create a voluntary Do Not Mail Registry to reduce junk mail deliveries.

Encourage the State and Federal governments to pass legislation requiring extended producer responsibility for waste produced, and improve the recyclability of products and packaging.

Support policies at the state level that provide incentives for efficient product design, reduced product and packaging waste, and elimination of toxics in the discard stream through mandatory compliance programs.

Fleet and Facilities

Implementation Activities

✕ Improve fuel efficiency of the City vehicle fleet by purchasing low- or zero-emission vehicles when vehicles are retired.

✕ Explore ultra-low sulfur diesel (ULSD) applications in heavy duty vehicles.

✕ Use green cleaning products in public facilities and offer training for effective use of non-hazardous cleaners to maintenance staff.

✕ Review the service impacts and operational and financial aspects of offering every-other-week residential refuse service.

Install micro-turbines using landfill methane to generate electricity for the City.

Investigate geothermal energy for heating and cooling City buildings.

Investigate installing load shifting devices on municipal buildings moving the power used to operate equipment to off-peak hours.

Provide bicycles for employee use on day trips during lunch breaks.

Expand Local Tree Plantings and Maintenance

Policy

Tree preservation ordinance creating standard for the preservation and replacement of trees in the right of way and private property.

Programs

✕ Promote an urban forest campaign, such as the "Millions of Trees" LA program.

✕ Create tree master plans for sub-areas within the City. Such plans would guide the selection of appropriate tree species for streets and open spaces and outline a regular maintenance and planting cycle to ensure that hazards to trees are minimized and that the local tree stock continues to increase.

Program promoting shade trees to reduce summer heat.

Implementation Activities

✕ Provide tree planting guidelines for residents, businesses, and public institutions.

Expand local tree planning efforts and continue to maintain the health of existing trees by providing local outreach and guidelines for residents, businesses, and public institutions.

✕ Maintain and protect mature trees.

✕ Investigate underground public utilities and the potential for planting larger street tree species.

✕ Develop an integrated pest management program for exterminating weeds and bugs that will minimize the use of pesticides in the City.

Reduce the use of 2-cycle combustion engine, including enforcement in City ordinances.

Wastewater Management

Implementation Activities

Develop standards and guidelines for storm water use and retention in landscaping that would be ecologically beneficial to trees and other plants.

Require new develops to mitigate transportation impacts by providing annual operating, capital, and maintenance funds for public transit projects.

Programs

Provide guidance and tools for determining the GHG impact of a particular land-use proposal.

✕ Develop an air quality plan for the City, providing health benefits, and reducing greenhouse gases.

Create a pedestrian plan.

✕ Develop or expand City bicycle plan and infrastructure.

✕ Prepare a Specific Plan for commercial areas that identifies the potential for high quality, pedestrian-oriented, mixed-use development.

Create a turf replacement program for the City, and promote native plants within landscaping.

Implementation Activities

Provide signs linking bike paths and establish safe bike parking areas. (Public Works)

Mid-block pedestrian crossings in between intersections with high pedestrian traffic.

✕ Scale and design streetscapes to reduce traffic speed and improve walking and bicycling conditions.

✕ Promote a bike-to-work day.

Conduct audit of land use, zoning, development standards, and other regulations that may act as barriers to neighborhood-serving businesses and mixed use development.

Develop small business incentive programs to encourage new neighborhood-serving uses in commercial areas.

✕ Encourage development of housing, retail, and employment centers in areas served by public transit.

✕ Encourage development of affordable housing in areas served by public transit.

Provide additional permitting assistance for transit-oriented development projects.

Make available underutilized City land within 1,500 feet of transit for housing and mixed use development.

✕ Identify the feasibility of the City's Wastewater Treatment Plant (WWTP) utilizing bio-gas co-generation.

Road Maintenance/Design

Implementation Activities

✕ Provide signs linking bicycle networks between parks and other City areas.

Planning

Policy

Require recycling plans from public event organizers.

Permit multi-unit buildings to provide street level public space, instead of private space.

Require that, where feasible, all new buildings be constructed to allow for the easy, cost-effective installation of future solar energy systems. "Solar ready" features should include: proper solar orientation (south facing roof area sloped at 20° to 55° from the horizontal), clear access on the south sloped roof (no chimneys, heating vents, plumbing vents, etc.), electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water system, and space provided for a solar hot water storage tank.

The City's Land Use Code may be revised to contain policies that promote the use of solar energy.

Develop standards and guidelines for storm water use and retention in landscaping that would be ecologically beneficial to trees and other plants.

Make a policy to prioritize transit-oriented development.

✕ Evaluate the potential for mixed use development in Merced's existing commercial center.

✕ Adjust zoning policy to facilitate a mix of housing and commercial development in transit-served areas.

In areas not served by transit, consider where small markets and corner stores may be feasible.

Identify if a congestive pricing transit model would be appropriate at certain City events.

Adopt an ordinance that requires new development to provide adequate bicycle parking for tenants and customers and requires businesses with more than 30 employees to provide end-of trip facilities including: showers, lockers, and Class I bicycle storage facilities.

Support renovation of declining commercial strip developments along arterial streets and in residential areas.

✕ Promote high density housing near transportation arterials.

Create/increase fees to build revenue for transportation demand management.

✕ Increase the number of bike trails, as well as safety and interconnectivity.

Give preferential parking allotments for electric/plug-in vehicles and carpool vehicles.

Require new landscapes and City projects use locally-produced compost and mulch.

Produce materials on sustainable landscaping techniques that require less water and energy to maintain.

Facilitate the installation of weather-based evapotranspiration (ET) controller irrigation systems in both City and private landscapes.

Promote landscaping as a whole systems approach to the design, construction, and maintenance of the landscape in order to reduce waste and recycling materials, as well as reduce storm water runoff and create wildlife habitat, among other benefits.

Provide signs linking bicycle networks between parks and other City areas. (Development Services)

✕ Work with regional, state, federal, and private entities to secure funding and sponsorship of bike trails.

Design a climate action "stakeholder database" that identifies the many stakeholders that are playing or will play a role in implementing local climate protection strategies.

Promote landscaping as a whole systems approach to the design, construction, and maintenance of the landscape in order to reduce waste and recycling materials, as well as reduce storm water runoff and create wildlife habitat, among other benefits.

Enhance construction and demolition recycling outreach and assistance to improve enforcement of existing ordinance and convenience of compliance for local builders.

Identify if recycling of construction and demolition materials can be carried out by the City or transferred.

Evaluate current energy portfolio and identify ways to move towards "Green" energy.

Engineering

Policy

Develop local grey water guidelines that are consistent with the Building Code.

Encourage the use of water conservation technologies, such as waterless urinals and cisterns, through the development of local guidelines that are consistent with the Building Code.

Develop standards and guidelines for storm water use and retention in landscaping that would be ecologically beneficial to trees and other plants.

Implementation Activities

✕ Scale and design streetscapes to reduce traffic speed and improve walking and bicycling conditions.

✕ Identify ways to alter City streets to meet needs of bicyclists and pedestrians.

Design roadways to ease integration of public transit into normal traffic flow, including "Queue-jumper" lanes, timing signals, and on-street parking spaces.

✕ Design universal access bus shelters to provide easy access for persons in wheelchairs, with walkers, and other mobility impairments.

Give preferential parking allotments for electric/plug-in vehicles and carpool vehicles.

✕ Increase water storage capacity to allow for off-peak pumping of water.

Encourage porous pavements/surfaces.

Daylight streams, as to unearth previously diverted water so it can be naturally incorporated into City vegetation.

✕ Review projects for accessibility features and create standards for enhanced accessibility in design.

Find and repair leaks within the water system.

✕ Synchronize traffic signals along primary City arterials.

Negotiate contracts which apply a low or zero waste policy with commercial designers and construction.

Require new landscapes and City projects use locally-produced compost and mulch.

✕ Scale and design streetscapes to reduce traffic speed and improve walking and bicycling conditions.

✕ Mid-block pedestrian crossings in between intersections with high pedestrian traffic.

Building

Policy

Design and implement a more effective space allocation ordinance to ensure that new and re-modeled buildings provide adequate space for storage of recycled materials.

Establish a wood-burning prohibition ordinance during new residential construction.

✕ Require water efficiency measures in new construction.

Develop a water-efficient landscaping ordinance to implement the California Water Efficient Landscaping Ordinance and require or facilitate use of grey water or rainwater collection systems in new construction.

Adopt the provisions of the California Water Efficient Landscaping Ordinance, and make it available for residents to construct grey water and rain collection systems conforming to Title 24 Part 5 of the California Plumbing Code.

✕ Adopt or expand on a Green Building Ordinance incorporating energy and water efficiency standards contained in Chapter 5 and 6 of the 2008 California Green Building Code.

Require energy and water efficiency upgrades at the point of sale of commercial buildings.

Require that, where feasible, all new buildings be constructed to allow for the easy, cost-effective installation of future solar energy systems. "Solar ready" features should include: proper solar orientation (south facing roof area sloped at 20° to 55° from the horizontal), clear access on the south sloped roof (no chimneys, heating vents, plumbing vents, etc.), electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water system, and space provided for a solar hot water storage tank.

✕ Require energy performance standards in new construction.

Require that multi-tenant buildings be sub-metered to allow individuals to track energy consumption.

Encourage the development of green roofs by providing local outreach and guidelines consistent with the Building Code.

✕ Require water efficiency measures in new construction.

Provide City staff training regarding State code requirement for grey water systems in order to help interested parties develop systems.

Encourage the use of water conservation technologies, such as waterless urinals and cisterns, through the development of local guidelines that are consistent with the Building Code. (Building)

Support solar programs for rental markets and other innovative financing.

Programs

Create benefits for both the owner and the renter of residential and non-residential units that utilize energy and water efficiency measures.

Develop a public outreach program to educate residents about the availability of energy efficiency improvement financing and benefits to homeowners.

Promote deconstruction and re-use of building materials through written outreach materials such as a brochure on residential remodeling and through direct consultations with builders.

Provide development incentives for buildings that exceed the State's current Title-24 standards for energy efficiency by 25%.

Make a basic home energy retrofit program available, including attic insulation, water heater insulation, hot water pipe insulation, programmable thermostats, and draft elimination (caulking and sealing).

Expand weatherization program.

Provide rebates or incentives program for low flow water shower heads and faucet aerator.

Emphasize energy saving in a program promoting shade trees on private property to reduce summer heat.

Promote the Million Solar Roofs Program/legislation.

Implementation Activities

Simplify project review and permit approval process to encourage innovative green building measures

✕ Facilitate the installation of weather-based evapotranspiration (ET) controller irrigation systems in both City and private landscapes.

Encourage use of rainwater collection and grey water use

Provide City staff training regarding State code requirement for grey water systems in order to help interested parties develop systems.

Promote landscaping as a whole systems approach to the design, construction, and maintenance of the landscape in order to reduce waste and recycling materials, as well as reduce storm water runoff and create wildlife habitat, among other benefits.

Establish and continuously increase minimum energy standard for residential and non-residential buildings

Inform residents about options and incentives for installing and utilizing renewable energy such as rooftop solar.

Require solar heating on all pools.

✕ Enhance construction and demolition recycling outreach and assistance to improve enforcement of existing ordinance and convenience of compliance for local builders.

Policy

Design and implement a more effective space allocation ordinance to ensure that new and remodeled buildings provide adequate space for storage of recycled materials.

Establish a wood-burning prohibition ordinance during new residential construction.

Local Council of Governments

Programs

Installation of real time transit signage for buses.

Establish a car-sharing program.

Negotiate subsidized public transport pricing for low-income citizens.

✕ Implement a pass program for people or businesses funding public transit to receive free or reduced rates on city buses (for UC Merced)

✕ Market car-pooling programs. Rideshare website

Create a social networking tool to help residents find available carpool and vanpool opportunities.

✕ Community-wide marketing campaign to increase bike and pedestrian transit.

Implement a "Rideshare Trust Fund" program, similar to the City of LA, among City employees to move money from traditional commuters to green commuters.

Welcome Basket" for new Merced homeowners with information on transportation options.

Implement a Bike-renting program.

Partner with businesses and neighborhoods to make space available for car share.

Implementation Activities

✕ Make transit information, including alternative/public transit methods easily understandable.

Partner with local hotels and visitor destinations to provide information about public transit and water conservation.

Create a social networking tool to help residents find available carpool and vanpool opportunities.

Combine car share programs with alternative fuel vehicles for increased GHG reduction.

✕ Work with Busing/Transit to conduct a public transit gap study and provide bus stops with safe and convenient bicycle and pedestrian access and essential improvements.

Provide designated ride share areas for community residents.

✕ Ensure bus shelters are safe, well maintained, and lit.

✕ Create a list prioritizing alternative transport options (Electric buses, bio-diesel, ride share), to be incorporated into alternative transportation funding plan.

✕ Engage actively with federal, state and regional organizations to secure capital and funding for sustainable transportation.

Housing

Policy

✕ Encourage the development of green roofs by providing local outreach and guidelines consistent with the Building Code.

Programs

✕ Integrate low-income household programs with energy efficiency and cost-saving measures.

Negotiate subsidized public transport pricing for low income citizens.

✕ Make a basic home energy retrofit program available, including attic insulation, water heater insulation, hot water pipe insulation, programmable thermostats, and draft elimination (caulking and sealing).

Provide low interest loans for residential solar energy systems in conjunction with the City's First Time Home Buyer Program.

✕ Expand weatherization program.

Implementation Activities

Offer exchange of old appliances for new energy star efficient ones for low income residents.

Community Coordinator

Initiate and Expand Partnerships and Programs in the Community to Engage Residents

Programs

Focus an outreach program of the impacts of climate change.

Collaborate with the sister city of Merced to encourage GHG reduction actions.

Increase awareness and action in the City government by providing training on how to increase sustainability at home and in the workplace.

Start a voluntary local "Carbon Offset" program allowing businesses and residents to participate in carbon reduction projects to reduce their overall emissions.

Provide community workshops on reducing GHGs at the neighborhood level.

Establish community working groups to connect CAP programs and initiatives within specific sectors of the community.

Initiate competitive programs, such as "Green neighborhood challenge" or "Green Star Household" to utilize friendly competition and community partners to promote action.

Implementation Activities

Create a voluntary "Merced Climate Action Pledge" by which residents can gain tools to help reduce GHG emissions.

Launch and maintain a web portal for the City to disclose Climate Action Plan implementation in a transparent manner.

Collaborate with community media outlets to highlight climate information sources and events.

Develop a press kit showcasing the City's efforts in reducing greenhouse gases.

Take advantage of City events and celebrations to survey and distribute information about Climate Action Plan alternatives.

Encourage participation in local health and wellness events.

Coordinate with local senior center to ensure availability of health living resources.

Collaborate with students of local school/university to explore how "Green" ambitions may be used to aid City initiatives.

Work with schools to improve and expand walking and school bus use.

Support policies from the *San Joaquin* Valley air pollution control district that reduce GHGs.

Promote Alternative Energy and Energy Efficiency

Programs

Increase awareness and action in the City government by providing training on how to increase sustainability at home and in the workplace.

Alternative fuel vehicle campaign, including electric and bio-fuels.

Fully employ the Sustainability Performance Improvement Management system to track and improve sustainability initiatives.

Develop a program for the trade in of devices using 2-cylce combustion engine for rebates.

Implementation Activities

Hire staffing to focus on energy & sustainability.

Require that all City Council actions include an analysis of impact on greenhouse gases.

Incentives for promoting renewable energy should also be considered. City help should be offered to those wishing to access state and federal incentive programs.

Provide public education regarding reducing motor vehicle related greenhouse gas emissions.

APPENDIX B

State of California Green Funding & Program Opportunities

OPEN SPACE

1. Urban Greening for Sustainable Communities Program

This program provides funding for the preservation, enhancement, increase, and establishment of community open space and green areas, such as urban forests, wetlands, open spaces, parks, and other "community spaces" (community gardens, for example). In response to the limitations of growth in the State's urban areas, the Urban Greening for Sustainable Communities Program aims to "incrementally create more viable and sustainable communities" throughout California. *The Strategic Growth Council (SGC) , under Proposition 84, plans for three total funding cycles, and allows for up to 25 percent of the funds in the program bond to be made available for communities to use to prepare comprehensive Urban Greening Programs. Matching funds are not required for participation in this program, but SGC "encourages leveraging all resources, including other sources of funds."*

Source: California Strategic Growth Council, http://www.sgc.ca.gov/urban_greening_grants.html (accessed June 16, 2010)

2. Urban Greening Plans:

The goal of these plans is to develop a "Master Urban Greening Plan" that will ultimately result in projects to help the State of California meet its environmental goals and the creation of healthy communities. The plan must outline or layout projects that reduce greenhouse gas emissions and provide **multiple benefits** including, but not limited to, *decreasing air and water pollution, reducing the consumption of natural resources and energy, increasing the reliability of local water supplies, or increasing adaptability to climate change*.

Source: California Strategic Growth Council, http://www.sgc.ca.gov/urban_greening_grants.html (accessed June 16, 2010)

BUILDING EFFICIENCY

3. Energy Partnership Program

For communities seeking financial help to make energy-efficiency building upgrades, the California Energy Commission offers low-interest loans up to $3 million per project to incorporate energy-saving components in planned buildings or retrofits to existing facilities. The California Energy Commission offers free technical assistance to cities and counties for energy efficiency planning for public facilities. The Commission also provides up to $20,000 of its consultants' costs for cities. These costs depend on the facility size and type and the scope of the projects. Cities may also apply for a low-interest loan from the Energy Commission to pay for energy savings projects. The Commission's

web site includes several case studies of California cities and counties that have participated in the Energy Partnership Program.

Source: California Energy Commission, http://www.energy.ca.gov/efficiency/partnership/ (accessed June 16, 2010).

4. Property Tax Exclusion for Solar Energy Systems (CA State Board of Equalization)

Section 73 of the California Revenue and Taxation Code allows a property tax exclusion for certain types of solar energy systems installed between January 1, 1999, and December 31, 2016. This section was amended by Assembly Bill 1451 in September 2008 to include the construction of an active solar energy system incorporated by an owner-builder in the initial construction of a new building that the owner-builder does not intend to occupy or use. This only applies if the owner-builder did not already receive an exclusion for the same active solar energy system and only if the initial purchaser purchased the new building prior to that building becoming subject to reassessment to the owner-builder. *This program applies to commercial, industrial, and residential sectors.*

Source: DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CA25F&re=1&ee=1 (accessed June 16, 2010)

5. Savings by Design (California Public Utilities Commission)

Savings by Design offers services and incentives to help these decision makers raise energy performance to a top priority. This program is funded by California utility customers and administered by Pacific Gas and Electric Company, San Diego Gas and Electric, Southern California Edison Company, Southern California Gas Company and the Sacramento Municipal Utility District. Services offered at no-cost by the utility may include recommendations for efficient equipment, consultation on enhanced design strategies, or preparation of a report on recommended design modifications and facilitating the integration of these changes. *Local governments may qualify for up to $150,000 in owner incentives for energy efficiency in new city-owned buildings.*

Source: Savings By Design, http://www.savingsbydesign.com/overview.htm (accessed June 16, 2010)

6. California Statewide Communities Development Authority (CSCDA or California Communities)

California Communities, jointly sponsored by the California State Association of Counties and the League of California Cities, provides California cities, counties, and other public agencies with low-cost, tax-exempt financing for projects that provide a tangible public benefit, contribute to social and economical growth, and improve the overall quality of life in local communities throughout the state. California Communities offers programs for airports, water/wastewater projects, leases, and the Go-Solar Program.

The California Communities Lease Finance Program ("CaLease") allows local agencies to finance equipment and real estate. The program has been established using a Master Lease Agreement with each respective local agency to provide for efficient subsequent purchases in the future. *CaLease provides local agencies with access to multiple funding institutions who competitively bid on their project. This comprehensive lease management program allows local government the ability to bid*

and manage leases without dedicating significant staff time to the process. Minimum project sizes start at $500,000 for equipment and $1 million for real property. More than 40 local agencies have participated in the CaLease program, including the cities of Elk Grove and Pinole and the counties of Santa Clara, Santa Barbara and Solano. To maximize efficiencies and control costs, California Communities has designated a team of financial and legal experts to partner with on the CaLease Program. This design reduces issuance cost via negotiated fees based upon program volume while maintaining consistency in the program documents.

Source: California Statewide Communities Development Authority (California Communities), https://www.psacommunities.org/fs/apps/?app=4 (accessed June 16, 2010)

7. Property Assessed Clean Energy (PACE) Financing Services (Renewable Funding)

PACE is a financing tool being implemented by cities throughout the country that allows commercial and residential property owners in each city to install solar systems and energy efficiency upgrades with no upfront cost. Local governments can use PACE to reduce greenhouse gas emissions and spur sustainable development. *PACE programs can be administered at a city, county, regional, or state level, depending on state law. PACE costs can be paid with bond proceeds, and a city's general fund is protected from liability or other financial risk.*

The CaliforniaFIRST Program is a property assessed clean energy (PACE) finance program. PACE programs allow property owners within participating regions to finance the installation of energy improvements on their home or business and pay the amount back as a line item on their property tax bill. The CaliforniaFIRST Program is sponsored by the California Statewide Communities Development Authority (California Communities), an association of counties and cities, in partnership with Renewable Funding and the Royal Bank of Canada Capital Markets. A local government must adopt the Program in order for local residents to apply for financing.
The pilot phase of the program includes 14 counties and over 120 cities and is set to launch in summer 2010. California Communities intends to extend CaliforniaFIRST to include all interested counties and cities following a successful pilot. The legal and procedural steps for the next round of counties and cities are estimated to begin in the late spring or early summer of 2010.

Source: California Communities, http://www.californiafirst.org/government.html (accessed June 16, 2010)

8. Merced Irrigation District Energy-Efficiency Programs

A. Merced Irrigation District / Commercial/Industrial Lighting Program

The Commercial Lighting Program is a "turnkey" lighting retrofit rebate program with a financial rebate menu for energy saving lighting equipment retrofits. The program allocates public benefit funds toward energy efficiency programs in the form of financial rebates and incentives for retrofits of electrical equipment. *The program is available to all MID industrial, commercial, and agricultural customers. Qualifying projects are eligible for a maximum rebate of $150,000 per customer per year, not to exceed 60% of the project's total costs, including labor and equipment.*

B. Merced Irrigation District / Solar Incentive Program

The Solar Incentive Program provides financial incentives to qualifying commercial/industrial customers to buy down installed solar generation projects and to help offset the commercial and indus-

trial customer's investment in renewable/green energy generation. The rebate incentive is equal to the estimated performance of the installed solar system multiplied times $2.80/watt AC. *The rebate incentive for commercial/industrial solar systems are capped at $70,000 (25kW). On a case by case basis projects that exceed the program cap may be considered.*

C. Commercial New Construction Program

The Merced Irrigation District's Commercial New Construction Program is available to businesses building new facilities in Merced Irrigation District-Electric Services territory. Rebates are available for projects estimated to exceed a Title-24 or standard practice baseline by at least 10% on a whole building performance basis. The maximum rebate is $150,000 per year, per customer and will not exceed 60% of the project's cost (equipment plus labor).

D. Customized Commercial/Industrial Retrofit Program

The Customized Commercial/Industrial Retrofit Program is program that enables qualifying commercial and industrial customers to apply for financial incentives on more specialized and comprehensive energy saving measures that do not fall under the Commercial Lighting Program or the Mechanical Equipment Retrofit Program. Applications for this program are evaluated and approved on an individual per application basis. Financial incentives for qualifying customer projects will be paid for annual kilowatt hour savings in a one year period on approved projects.

Source: Merced Irrigation District, http://www.mercedid.org/energyefficientrebates (accessed June 16, 2010)

GREEN JOBS

9. AB 118 Advanced Technology Demonstration Projects

Established by the California Air Resources Board (CARB), Air Quality Improvement Plan (AB 118), the purpose of the Advanced Technology Demonstration Projects is to help accelerate the next generation of advanced technology vehicles, equipment, or emission controls which are not yet commercialized. Local air districts and other public agencies would be eligible to apply for these projects to demonstrate promising technologies to reduce emissions in their regions. This project was approved for up to $9 million for the 2009-2010 Fiscal Year.
Source: California Air Resources Board, http://www.arb.ca.gov/msprog/aqip/demo.htm (accessed June 16, 2010)

10. Alternative Fuel Vehicle Mechanic Training Component

The REMOVE II Program provides incentives for specific projects that will reduce motor vehicle emissions within the San Joaquin Air Pollution Control District. The Alternative Fuel Vehicle Mechanic Training Component provides incentives/subsidies for the education of personnel on the mechanics, operation safety and maintenance of alternative fuel vehicles, equipment structures, refueling stations, and tools involved in the implementation of alternative fuel emission reducing technologies. Qualifying agencies are those currently utilizing an alternative fuels program, servicing an alternative fuels system or making the transition to alternative fuels technology in the fleet or infrastructure operations. Potential training categories include: alternative fuel engines, fuel systems, fuel station components, operational safety and procedures, technical or mechanics training and

general alternative fuels technology overview. *SJVAPCD is providing incentives to fleet operators and infrastructure managers of government agencies interested in the specific training of alternative fuel systems and related technology*.

Source: San Joaquin Valley Air Pollution Control District, http://www.valleyair.org/grant_programs/grantprograms.htm#RemoveII (accessed June 16, 2010)

ALTERNATIVE TRANSPORTATION

11. Electronic Mobility (Telecommunications) Component

The REMOVE II Program provides incentives for specific projects that will reduce motor vehicle emissions within the San Joaquin Air Pollution Control District. The Electronic Mobility Component program provides incentives for telecommunication projects such as video teleconferencing, Internet business transactions, telework sites, etc. The purpose of this program is to encourage the development or expansion of telecommunications services and electronic technology applications to directly replace vehicle travel by the general public. Residents of the San Joaquin Valley can utilize various electronic technology applications to circumvent vehicle trips to multiple public agencies or school sites for necessary services, transactions, meetings, education, documents and information. *Incentives will be available to municipalities, government agencies, public education, community colleges and municipal courts.*

Source: San Joaquin Valley Air Pollution Control District, http://www.valleyair.org/grant_programs/grantprograms.htm#RemoveII (accessed June 16, 2010)

12. Bicycle Infrastructure Component

The REMOVE II Program provides incentives for specific projects that will reduce motor vehicle emissions within the San Joaquin Air Pollution Control District. The Bicycle Infrastructure Component provides incentives for Class I or Class II bicycle path construction. The purpose of this program is to assist with the development or expansion of a comprehensive bicycle transportation network. Residents of the San Joaquin Valley can utilize commuter bicycling as an alternative to daily vehicular travel. The Bicycle Infrastructure Component program serves to promote bicycling as a viable option of transportation for residents traveling short distances (less than five miles) to school, work and commercial sites. *The SJVAPCD is providing incentives to municipalities, government agencies, and public educational institutions interesting in the funding of transportation routes to support a commuter bicycling network.*

Source: San Joaquin Valley Air Pollution Control District, http://www.valleyair.org/grant_programs/grantprograms.htm#RemoveII (accessed June 16, 2010)

13. Public Transportation and Commuter Vanpool Subsidy Component

The REMOVE II Program provides incentives for specific projects that will reduce motor vehicle emissions within the San Joaquin Air Pollution Control District. The Public Transportation and Commuter Vanpool Subsidy Component provides incentives for public transportation pass subsidies, such as transit and rail and vanpool subsidies. Additionally, funding will be available for public transporta-

tion kiosks and the construction of Park-and-Ride lots. The purpose of this program is to encourage commuter rideshare activities as an alternative to single occupant vehicle (SOV) commutes. There are multiple alternative transportation methods available to daily long distance (greater than 10 miles) commuters throughout the San Joaquin Valley. Therefore, projects must result in the reduction of vehicle emissions and vehicle miles traveled (VMT) by the transition of SOV commuters to utilize rideshare or alternative transportation measures. *The SJVAPCD is providing commuter passenger subsidies to municipalities and government agencies for city, county, and regional transit bus agencies; shuttle service; commuter vanpools, regional commuter rail services; and park-and-ride lot construction/expansion.*

Source: San Joaquin Valley Air Pollution Control District, http://www.valleyair.org/grant_programs/grantprograms.htm#RemoveII (accessed June 16, 2010)

MOTOR VEHICLES, SMALL ENGINES AND EQUIPMENT

14. Hybrid Truck and Bus Voucher Incentive Project (HVIP)

Established by the California Air Resources Board (CARB), Air Quality Improvement Plan (AB 118), the **Hybrid Truck and Bus Voucher Incentive Project (HVIP)**, with a total fund of $20.4 million, is aimed at speeding up the deployment of new hybrid medium- and heavy-duty vehicles in the State of California. CARB has teamed with CALSTART to implement this streamlined program on a first-come, first-serve basis. Vouchers of $10,000 to $45,000 are now available for the purchase of each eligible new hybrid truck or bus. The HVIP Implementation Manual defines the roles and responsibilities of ARB, CALSTART, vehicle dealers, and vehicle purchasers in project implementation. ARB must approve hybrid truck and bus models for them to become eligible for the program.
Source: California Air Resources Board, http://www.arb.ca.gov/msprog/aqip/hvip.htm (accessed June 16, 2010)

15. Zero-Emission Vehicle and Plug-In Hybrid Light-Duty (Clean Vehicle) Rebate Project

Established by the California Air Resources Board (CARB), Air Quality Improvement Plan (AB 118), the **Zero-Emission and Plug-In Hybrid Light-Duty Vehicle (Clean Vehicle) Rebate** Project is intended to encourage and accelerate zero-emission vehicle deployment and technology innovation. Rebates for clean vehicles are now available through the Clean Vehicle Rebate Project (CVRP) funded by the Air Resources Board (ARB) and implemented statewide by the California Center for Sustainable Energy (CCSE). *Effective March 15, 2010, rebates of up to $5,000 for the lease or purchase of zero-emission and plug-in hybrid light-duty vehicles and up to $20,000 for the lease or purchase of ARB-certified or approved zero-emission commercial vehicles are now available on a first-come, first-serve basis.*
Source: California Air Resources Board, http://www.arb.ca.gov/msprog/aqip/cvrp.htm (accessed June 16, 2010)

16. Assembly Bill (AB) 118 Lawn and Garden Equipment Replacement (LGER) Project

Established by the California Air Resources Board (CARB), Air Quality Improvement Plan (AB 118), the purpose of the **Lawn and Garden Equipment Replacement (LGER) Project** is to encourage fur-

ther development and deployment of cordless zero-emission lawn and garden equipment. The availability of incentive funding will help bring a variety of residential and commercial cordless zero-emission equipment to the market. The LGER Project will allow up to $250 per voucher or rebate for each electric cordless residential lawn mower. *The LGER Project will be administered and implemented through a partnership between ARB and local air districts designated as non-attainment of the federal 8-hour ozone standard. This project was approved for up to $2 million in the FY-2009-10 AQIP Funding Plan.*

A total of 8 air districts have been selected as Grantees for the LGER Project. As LGER Project Grantees, the air districts will administer and implement the LGER Project by applying LGER Project funds towards their existing lawn mower exchange programs. The San Joaquin Valley Air Pollution Control District was among 8 districts selected as Grantees for the LGER Project, which allotted $1.6 million for the 2009-2010 Fiscal Year. The San Joaquin Valley Air Pollution Control District received a grant of $464,000. [Note: Refer to section of programs deployed through the San Joaquin Valley Air Pollution Control District, as listed further in this report.]

Source: California Air Resources Board, http://www.arb.ca.gov/msprog/aqip/lger.htm (accessed June 16, 2010)

17. AB 118 Zero-Emission Agricultural UTB Rebate Project

Established by the California Air Resources Board (CARB), Air Quality Improvement Plan (AB 118), the $1.1 million **Zero-Emission Agricultural Utility Terrain Vehicle (Agricultural UTV) Rebate Project** is intended to encourage and accelerate the use of zero-emission work vehicles for use in California agricultural operations, as defined by ARB's Regulation for In-Use Off-Road Diesel Vehicles, by providing rebates of up to $2500 or 15% of MSRP for the purchase of new, eligible all terrain and utility vehicles on a first come, first serve basis. Rebates for these vehicles are now available through the Agricultural UTV Rebate Project and implemented statewide by the San Joaquin Valley Unified Air Pollution Control District.
Source: California Air Resources Board, http://www.arb.ca.gov/msprog/aqip/ag_utv.htm (accessed June 16, 2010)

18. Goods Movement Emission Reduction Program

Grant program working under California Proposition 1B, the Highway Safety, Traffic Reduction Air Quality, and Port Security Act of 2006. Programs funded to local agencies in specified trade corridors, with Merced located in the Central Valley trade corridor. Grants are funded to replace, repower or retrofit ports, rail yards, and trucking areas. Merced might be able to use grants towards electrification infrastructure for truck stops and distribution centers to reduce the idle time of diesel trucks

Source: California Air Resources Board, http://www.arb.ca.gov/bonds/gmbond/gmbond.htm (accessed June 16, 2010)

19. Carl Moyer Memorial Air Quality Standards Attainment Program

Established by the California Air Resources Board (CARB), Air Quality Improvement Plan (AB 118), the **Carl Moyer Memorial Air Quality Standards Attainment Program** offers incentive grants to

owners of heavy duty vehicles and equipment for the purpose of retrofitting and replacing the equipment beyond required standards. Grants available through the program could assist in reducing carbon emissions by replacing old engines with newer, more efficient ones and by replacing old equipment with electric equipment that require less diesel to be used for idling heavy duty equipment.

Source: California Air Resources Board, http://www.arb.ca.gov/msprog/moyer/moyer.htm (accessed June 16, 2010)

20. Sales Tax Exemption for Alternative Energy Manufacturing Equipment

Senate Bill 71 of 2010, established an exclusion from the state's sales and use tax for the purchase of renewable energy equipment, combined heat and power equipment, and alternative transportation equipment in California. The legislation defines renewable and energy broadly to include "solar, biomass, wind, geothermal, hydroelectricity under 30 megawatts, or any other source of energy, the efficient use of which will reduce the use of fossil and nuclear fuels." Eligible projects include solar space heat, solar thermal electric, photovoltaics, wind, biomass, geothermal electric, geothermal heat pumps, CHP/cogeneration, small hydroelectric, other distributed generation technologies, and geothermal direct-use.

Project owners will need to apply to the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) to receive the sales tax exclusion. The CAEATFA will publish a notice of the availability of project applications and deadlines for submission of project applications when they are available. The CAEATFA will announce the winning projects at a public hearing.

Source: Database of State Incentives for Renewables & Efficiency (DSIRE), http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CA210F&re=1&ee=1 (accessed June 16, 2010)

21. Light- and Medium-Duty (LMD) Vehicle Incentive Component

The REMOVE II Program provides incentives for specific projects that will reduce motor vehicle emissions within the San Joaquin Air Pollution Control District. The LMD Vehicle-Incentive Component provides incentives for the purchase of low-emission passenger vehicles, light trucks, small buses, and trucks less than 14,000 pounds gross vehicle weight (GVW) to municipalities, government agencies, non-profit public service organizations, and private owners. The purpose of this program is to encourage the early introduction of low-emission vehicles in the San Joaquin Valley. *The program pays between $1,000 and $3,000 per vehicle depending on the emission certification level and size of the vehicle. Vehicles must be powered by alternative fuel, electric, or hybrid electric engines/motors. The LMD Program has allocated $750,000 that has resulted in 43,000 pounds of emission reductions since the inception of the program in 2001.*

Source: San Joaquin Valley Air Pollution Control District, http://www.valleyair.org/grant_programs/grantprograms.htm#RemoveII (accessed June 16, 2010)

Livable Communities & Housing Incentive Program

The Metropolitan Transportation Commission (MTC) Transportation for Livable Communities (TLC) program provides technical assistance and capital grants to help cities, neighborhoods, transit agencies, and nonprofits develop transportation-related projects that improve walking and bicycle access to public transit stations, major activity centers, and neighborhood commercial districts.

- **Safe Routes to Schools**

Safe Routes to School is an international movement focused on increasing the number of children who walk or bicycle to school by funding projects that remove barriers that currently prevent them from doing so. Those barriers include lack of infrastructure, unsafe infrastructure, lack of programs that promote walking and bicycling through education/encouragement programs aimed at children, parents, and the community. In California, two separate Safe Routes to School programs are available. One is the State program referred to as SR2S. The other is the federal program referred to as SRTS. Both fund qualifying infrastructure projects.

CaliforniaFIRST: Property Assessed Clean Energy (PACE) / AB 811.

AB 811, passed in July of 2008, allows local governments to form assessment districts that allow property owners to install renewable energy and energy efficiency improvements on their properties and pay for the cost of the projects over time. This bill allows land-secured loans for homeowners and businesses who install energy-efficiency projects and clean-energy generation systems, to be paid back through assessments on individual property tax bills. If the property is sold, the outstanding loan balance is taken over by the new owner. AB 811 means property owners can avoid upfront installation costs, while at the same time requiring little or no investment of local government general funds. AB 811 has wide applicability to many measures in the CAP, especially measures that require some private investment on the part of the residents or local businesses.

The CaliforniaFIRST Program is a property assessed clean energy (PACE) finance program, which is enabled through the AB 811 legislation. This program allows property owners within participating regions to finance the installation of energy and water improvements on their home or business and pay the amount back as a line item on their property tax bill. The CaliforniaFIRST Program is sponsored by the California Statewide Communities Development Authority (California Communities), an association of counties and cities, in partnership with Renewable Funding and the Royal Bank of Canada Capital Markets. Pursuant to AB 811, property owners may finance energy efficiency and renewable energy projects that are permanently affixed to the property. Recent legislation, AB 474, expanded the Program's reach to include the financing of water efficiency projects. Eligible projects under the CaliforniaFIRST Program may include but are not limited to air sealing, wall and roof insulation, energy efficient windows, tankless water heaters, solar photovoltaics, and low-flow toilets. California Communities intends to extend CaliforniaFIRST to include all interested counties and cities following a successful pilot.

California Energy Commission Energy Efficiency Financing

The California Energy Commission offers low interest loans for public institutions to finance energy efficient projects and programs. Interest rates are currently at between one and three percent. Projects with proven energy and/or capacity savings are eligible, provided they meet the eligibility requirements for ECAA loans. Examples of projects include:

- Lighting systems
- Pumps and motors
- Streetlights and LED traffic signals
- Automated energy management systems/controls
- Building insulation
- Energy generation including renewable and combined heat and power projects
- Heating and air conditioning modifications
- Waste water treatment equipment

Loans for energy projects must be repaid from energy cost savings within 15 years, including principal and interest (approximately 13 years simple payback for the 1% interest rate funding and approximately 11 years simple payback for the 3% interest rate funding). Simple payback is calculated by dividing the dollar amount of the loan by the anticipated annual energy cost savings. Only project -related costs with invoices dated after loans are officially awarded by the Energy Commission at a Business Meeting are eligible to be reimbursed from loan funds. The funds are available on a reimbursement basis. The final 10 percent of the funds will be retained until the project is completed. Interest is charged on the unpaid principal computed from the date of each disbursement to the borrower. The repayment schedule is up to 15 years and will be based on the annual projected energy cost savings from the aggregated projects.

California Comprehensive Residential Building Retrofit Program

The California Comprehensive Residential Building Retrofit Program is a proposed program under the State Energy Program (SEP), which is administered by the California Energy Commission.

Other Public Finance Qualified Energy Conservation Bonds (QECBs)

A Qualified Energy Conservation Bond (QECB) is a tax credit bond. Issuers repay principal on a regular schedule, but generally do not pay interest. Instead, the holder of a QECB receives a federal tax credit in lieu of interest. The tax credit may be applied against the bond holder's regular and alternative minimum tax liability. The tax credit amount is treated as taxable interest income to the holder of the bonds. For example, if the tax credit amount is $100 and the holder is in the 35% tax bracket, the credit provides a $65 benefit to the holder. Under this program, QECBs must be issued by the end 2010. The proceeds of the Qualified Energy Conservation Bonds can be used for one or more or the following "qualified conservation purposes":

a) Type I: Capital expenditures incurred for purposes of (i) reducing energy consumption in publicly-owned buildings by at least 20 percent, (ii) implementing green community programs (including the use of loans, grants, or other repayment mechanisms to implement such programs), (iii) rural devel-

opment involving the production of electricity from renewable energy resources, or (iv) any qualified facility eligible for the production tax credit under Section 45 of the IRS Code.

b) Type II: Expenditures with respect to research facilities, and research grants, to support research in: (i) development of cellulosic ethanol or other nonfossil fuels; (ii) technologies for the capture and sequestration of carbon dioxide produced through the use of fossil fuels, (iii) increasing the efficiency of existing technologies for producing non-fossil fuels; (iv) automobile battery technologies and other technologies to reduce fossil fuel consumption in transportation, or (v) technologies to reduce energy use in buildings.

c) Type III: Mass commuting facilities and related facilities that reduce the consumption of energy, including expenditures to reduce pollution from vehicles uses for mass commuting.

d) Type IV: Demonstration projects designed to promote the commercialization of (i) green building technology; (ii) conversion of agricultural waste for use in the production of fuel or otherwise; (iii) advanced battery manufacturing technologies; (iv) technologies to reduce peak use of electricity; or (v) technologies for the capture and sequestration of carbon dioxide emitted from combining fossil fuels in order to produce electricity.

e) Type V: Public education campaigns to promote energy efficiency.

Infrastructure State Revolving Fund Program

The Infrastructure State Revolving Fund Program provides direct low cost loans for local governmental public infrastructure. Infrastructure projects to be financed can include:

- Streets
- Highways
- Environmental Mitigation Measures
- Parks and Recreational Facilities
- Public Transit
- Solid Waste Collection and Disposal

The City of Merced can consider applying for these low-interest loans to implement a wide range of measures and activities in the CAP. In particular, the transportation and waste related measures could seek financing through this program. Loans are available in amounts ranging from $250,000 to $10 million per applicant for Tier 1 loans, and $250,000 to $2.5 million per applicant for Tier 2 loans (tier system based on evaluation of project impact – the greater the project impact, the higher the cap on available funds).

APPENDIX C

Catalog of Federal Green Funding & Program Opportunities

1. Energy Efficient and Conservation Block Grant Program (EECBG)

The "American Recovery and Reinvestment Act of 2009" helps reduce fossil fuel emissions and also helps create and retains jobs to help stimulate the economy. The total funding of the program is $3.2 billion dollars, around $2.7 billion was awarded to program funding for cities and states. Along with that $454 million dollars was made available for competitive grants.

2. Climate Leaders (http://www.epa.gov/climateleaders/)

Large industries/companies work with the EPA to develop a plan of action to reduce greenhouse gases produced. Each company has a specific, detailed plan of how they are going to achieve their goals and report their progress to EPA annually. The Climate Leaders also have an opportunity to reach out to the local businesses in different cities/towns. In order to join the Climate Leaders, the small business must/should complete an inventory of their green house gas emissions; after their inventory is completed they must then set reasonably goals that those small business owners can achieve.

3. Environmentally Preferable Purchase (EPP) (http://www.epa.gov/epp/):

EPP assist the federal government in purchasing green products and in return helps stimulate the economy and raises the demand for green products/services. Although the sight is directed for federal agencies, it also helps direct small and large businesses and sustainable vendors figure out what product best suits there needs. The websites has everything that the buyer needs to know regarding rules and regulations when purchasing green products and the cost and benefit of the item being obtained.

4. Green Communities (www.epa.gov/region02/sustainability/greencommunities/):

The title of this website is called "How to make a community green." It is a site for region 2 of the EPA map (California is region 9) but can make a very fine road map for the City of Merced. Although it is directed for Region 2, the title of the plan is called "Planning for a Sustainable Future- a Guide for Local Governments." The pamphlet covers many areas such as Land Use Planning, Energy, Air Quality & Climate and Transportation; another section deals with implementation and the various ways of reaching out to a community.

2. Smart Growth (http://www.epa.gov/smartgrowth)

EPA and the U.S. Department of Housing and Urban Development as well as the U.S. Department of Transportation have joined the Partnership for Sustainable Communities. Some goals of the Partnership of Sustainable Communities are more affordable housing, transportation and at cheaper/ affordable cost while still being able to defend the environment. If the City of Merced were to start

to practice Smart Growth, the EPA and the Partnership for Sustainable Communities offer tools such as education, tools for the community, and can participate in the "New Partners for Smart Growth Annual Conference.

3. It all Adds Up to Cleaner Air (http://w www.italladdsup.gov /):

As a result of amendments to the "Clean Air Act" and the "Equity Act for the 21st Century," the "It all adds up" Program was created to help promote healthy air and lower traffic by educating the public about different transportation choices. "It All Adds Up" offers free materials for advertisements (billboards, PSA, education centers); they also help with "implementing and evaluating the air quality campaign." The US Department of Transportation provides local and state agencies free commercial materials to help call attention to four easy and convenient tasks people can take to improve their city's air quality which are: (1) combine all errands that involve car trips to one trip; (2) properly maintain your car; (3) refuel after 5pm; and (4) chose different modes of transportation: biking, walking, carpooling, and public transportation

7. Transportation Planning Capacity Building Program—FHWA & FTA

Transportation Planning Capacity Building (TPCB) Program—a joint venture of FHWA and FTA—is designed to help decision makers, transportation officials, and staff resolve the increasingly complex issues they face when addressing transportation needs in their communities. This comprehensive program for training, technical assistance, and support targets state, local, regional, and tribal governments; transit operators; and community leaders. Resources provided by TPCB include:

Examples of effective transportation planning practices from across the nation.

- A central clearinghouse for information and contacts within the transportation planning community.

Training programs and peer-to-peer information exchange opportunities.

Many of these resources can help communities implement smart growth projects. *http://www.planning.dot.gov/default.asp; http://planning.dot.gov/Peer/NewMex/albuquerque_09.asp*

8. Federal Highway Administration

This federal-aid transportation planning program supports efforts to coordinate land use and transportation decision making and to foster smart growth initiatives. http://www.fhwa.dot.gov/planning/ppasg.htm

9. Federal Transit Administration

This program provides funding for planning multimodal transportation investments in metropolitan areas and states, including the coordination of land use and transportation decision making, and provides technical assistance for transportation planning staff and policy makers. Web site: http://www.fta.dot.gov/planning_environment.html

10. Partnership for Sustainable Communities.

In June 2009, EPA, the Department of Transportation (DOT), and the Department of Housing and Urban Development (HUD) formed this partnership to coordinate their funding and better support sustainable communities. EPA, DOT, and HUD will work to assure that their programs maximize the benefits of their combined investments in communities for livability, affordability, environmental excellence, and the promotion of green jobs of the future. HUD and DOT will work together to identify opportunities to better coordinate their programs and encourage location efficiency in housing and transportation choices. HUD, DOT, and EPA will also share information and review processes to facilitate better-informed decisions and coordinate investments.

11. U.S. EPA Office of Transportation and Air Quality.

This program offers policy and guidance documents regarding land use.
Web site: http://www.epa.gov/otaq/stateresources/policy/pag_transp.htm#lu.
Web site**:** http://www.epa.gov/smartgrowth/partnership/index.html.

12. U.S. EPA Smart Growth program.

This program offers research and publications, tools, and technical assistance to help communities create better development. EPA offers an annual Smart Growth Implementation Assistance competition, which funds national experts to offer technical assistance to tribal, regional, state, and local governments that want to implement smart growth strategies but aren't sure how to do it.
Web site: www.epa.gov/smartgrowth

*13. U.S. EPA State and Local Climate and Energy Program***.**

This program assists state, local, and tribal governments in meeting their climate change and clean energy efforts by providing technical assistance, analytical tools, and outreach support. It includes two programs:

- The ***Local Climate and Energy Program*** helps local and tribal governments meet multiple sustainability goals with cost–effective climate change mitigation and clean energy strategies. EPA provides local and tribal governments with peer exchange training opportunities and financial assistance along with planning, policy, technical, and analytical information that support reduction of greenhouse gas emissions.

- The ***State Climate and Energy Program*** helps states develop policies and programs that can reduce greenhouse gas emissions, lower energy costs, improve air quality and public health, and help achieve economic development goals. EPA provides states with and advises them on proven, cost–effective best practices, peer exchange opportunities, and analytical tools. Web site**:** http://www.epa.gov/statelocalclimate/

14. Energy and Climate Change / Programs, Tools & Resources to Assist Local Governments

- An "instruction" pamphlet for getting a CAP started and implemented. Takes a city step through step to help create and get opportunities regarding greenhouse gases.

- A directory list and grant funding for cities to consider. The second part of partnership is a list of programs offered by the EPA, and address programs that the city may be considering. The City of Merced would create list of their own personalized programs to share with other cities.

- An Environmental Management System (EMS) is to ensure that all policies and regulations are implemented in the Climate Action Plan.

http://www.epa.gov/region9/climatechange/pdfs/localgovernment.pdf

Although many of the following grant opportunities were part of the American Recovery and Reinvestment Act (ARRA), this list should be examined for continued funding opportunities.

15. HUD HOPE VI Revitalization Grants Program

HUD requests proposals for the HOPE VI Revitalization Grants Program. HOPE VI Revitalization grants assist Public Housing Authorities in areas including but not limited to improving the living environment for public housing residents of severely distressed public housing projects through the demolition, rehabilitation, reconfiguration, or replacement of obsolete public housing projects; and building sustainable communities. HUD encourages development that increases resource efficiency, promotes green development, reduces greenhouse gas emissions, and promotes healthy living environments for residents. Lead applicant must be Public Housing Authorities that have severely distressed housing in their inventory. $124 million is expected to be available; up to 5 awards are anticipated. For more information, contact Leigh van Rij at leigh_e._van_rij@hud.gov http://www.grants.gov/search/search.do?mode=VIEW&oppId=56894. Refer to Sol# FR-5415-N-07

16. USDA Forest Service's National Urban and Community Forestry Challenge Cost Share Grant Program

The National Urban and Community Forestry Advisory Council is offering Innovation Grants for program development, research, and collaboration to address the following three strategic priority issues widely seen as confronting the urban and community forestry community at a national or multi-state level: Climate Change, Public Health, and Economic Development. For the purposes of this grant process, the Council defines innovation to include new, unfamiliar, or uncommon efforts to address any or all of these three priority issues. Funds are to support urban and community forestry projects that have a national or widespread impact and application. For more information, visit http://www.fs.fed.us/ucf/nucfa

17. USDA Rural Community Development Initiative

The U.S. Department of Agriculture requests proposals for the Rural Community Development Initiative. RCDI supports organization capacity and ability to undertake projects related to housing, community facilities, or community and economic development in rural area. Areas of interest include, but are not limited to, programs that support micro-enterprise and sustainable development, and programs to assist recipients in completing pre-development requirements for housing, community facilities, or community and economic development projects by providing resources for professional services, e.g., architectural, engineering, or legal. For more information, including state contacts, go to:

http://www.grants.gov/search/search.do?mode=VIEW&oppId=58143.

18. EPA Integrated Assessment of Greenhouse Gases and Climate Impacts

EPA has announced the availability of funds and is soliciting proposals to advance comprehensive, integrated modeling and assessment of multiple greenhouse gases and air pollutants. Proposals should also provide ways to enhance understanding of climate change impacts and their economic implications in order to assist decision makers and the public in effectively responding to the challenges and opportunities posed by climate change. For more information, view the funding announcement at: http://www.epa.gov/air/grants_funding.html

19. NOAA K-12 Environmental Literacy Grants

The U.S. Department of Commerce, NOAA, requests proposals for Environmental Literacy Grants for Formal K-12 Education. This RFP will support K-12 education projects that advance inquiry-based Earth System Science learning and stewardship directly tied to the school curriculum, with a particular interest in increasing climate literacy. $8 million is expected to be available, up to 10 awards are anticipated. For more information, contact Carrie McDougall at oed.grants@noaa.gov or go to:

http://www.grants.gov/search/search.do?mode=VIEW&oppId=56016. Refer to Sol# NOAA-SEC-OED-2011-2002608.

20. EPA National Clean Diesel Funding Assistance Program FY 2011

EPA's National Clean Diesel Funding Assistance Program is soliciting proposals nationwide for projects that achieve significant reductions in diesel emissions in terms of tons of pollution produced and diesel emissions exposure, particularly from fleets operating in areas designated by the Administrator as poor air quality areas. Eligible diesel emission reduction solutions include verified emission control technologies such as retrofit devices, cleaner fuels, and engine upgrades; verified idle reduction technologies; verified aerodynamic technologies and low rolling resistance tires; certified engine repowers; and/or vehicle or equipment replacement. For more information, view the funding announcement posted at:

http://www.epa.gov/air/grants_funding.html

21. EPA Pollution Prevention Grant Program

EPA requests proposals for the Pollution Prevention (P2) Grant Program. P2 supports technical assistance programs that help businesses identify better environmental strategies and solutions for reducing or eliminating waste at the source. National focus areas include greenhouse gas reduction, toxic and hazardous materials reduction, resource conservation, business efficiency, and promoting P2 integration. $4.1 million expected to be available, up to 70 awards anticipated. Responses due 4/6/10. For more info, including EPA regional contacts and region-specific categories, go to:

http://www.epa.gov/p2/pubs/grants/ppis/ppis.htm

22. NASA Global Climate Change Education Grant

Application Due: April 28, 2010 Eligible Entities: State and local governments, tribal government agencies, public school districts NASA's Office of Education is soliciting proposals to increase learning and teaching about climate science. Proposals that integrate NASA's findings about climate change with findings in other disciplines are encouraged. Proposals that offer unique ways of minimizing their carbon footprint in the execution of the proposal are also encouraged. NASA will issue approximately 20 to 25 awards. Funding awards will fall into one of two categories: 1) Using NASA Earth system data, interactive models and/or simulations to strengthen teaching and learning about global climate change, and 2) Global climate change science research experiences for undergraduate or community college students and pre- or in-service teachers, including those in nontraditional teacher licensure programs. For more info, contact Tamra Ross at tkross@nasaprs.com or go to:

http://nspires.nasaprs.com/ Refer to Sol# NNL10ZB1011C.

23. Weatherization Assistance Program

DOE requests proposals for Weatherization Formula Grants. Weatherization Assistance Program (WAP) funds are used to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential expenditures, and improve their health and safety. WAP assists persons who are particularly vulnerable, such as the elderly, persons with disabilities, families with children, high residential energy users, and households with high energy burdens. Prime applicant eligibility is restricted to agencies responsible for administering the annual WAP formula allocation. Fifty-eight awards are anticipated. The response due date depends on the fiscal year end of the prime applicant, with range of 2/15/10 – 8/1/10. For more info, go to:

https://www.fedconnect.net/FedConnect/?doc=DE-FOA-0000216&agency=DOE

24. USDA Food Service Equipment Grants

In January 2010, USDA announced the availability of $25M in equipment grants to help schools operating a National School Lunch Program (NSLP) replace outdated equipment with new energy-efficient appliances such as refrigerators, ovens, and other food service related equipment. Eligible school food authorities are those that participate in the NSLP and did not receive an ARRA grant for NSLP equipment assistance. State educational authorities received allocations from USDA and are to award grants on a competitive basis no later than 180 days after receiving their grant allocation. Procurement and expenditures must be completed no later than one year after grant receipt. State grant allocations can be found in the press release at:

http://www.fns.usda.gov/cga/PressReleases/2010/0015.htm. More details can be found in the USDA memo at:

http://www.fns.usda.gov/cnd/governance/Policy-Memos/2010/SP_14-2010_os.pdf.

For more information on ENERGY STAR qualified commercial food service equipment, please visit www.energystar.gov/cfs or contact Una Song (song.una@epa.gov) or Jeffrey Clark (jclark@icfi.com).

25. HUD Sustainable Communities Planning Grant Program

The grant will focus on helping communities integrate housing and transportation decisions into overall sustainability planning. A full description of the proposed funding is available at:

http://portal.hud.gov/portal/page/portal/HUD/program_offices/sustainable_housing_communities/grant_program

26. DOE State Efficiency Grants

DOE's National Energy Technology Laboratory intends to issue two funding opportunity announcements in March or April to provide funding for programs to retrofit residential and commercial property and to develop policies that promote energy efficiency. The funding will be available for two areas of interest:

- Strengthening Building Retrofit Markets: Up to $23 million for programs and strategies to retrofit residential and/or commercial properties. Open to state energy offices only. Anticipated awards will be in the range of $2 to 5 million per state.
- Energy Efficiency Action Grants: Up to $7 million to support states and groups of states in achieving an annual minimum electricity savings target of 1 percent through energy efficiency. This area will be represented in two separate funding opportunity announcements: one restricted to state energy offices and one for which all entities, including public utility commissions, are eligible to apply. Complete descriptions of the proposed funding opportunities are available at:

https://e-center.doe.gov/doebiz.nsf/UNID/8C64E6FEA873F5DA852576C000584823/$file/Final+Notice+of+Intent+2-4-10.pdf

27. HUD Choice Neighborhoods - $65 million

HUD requests proposals for the Choice Neighborhoods Initiative-Round 1. Choice Neighborhoods seeks to employ a comprehensive approach to neighborhood transformation. Core goals include but are not limited to: 1) Transforming distressed public and assisted housing into energy-efficient, mixed-income housing that is physically and financially viable over the long term; 2) Transforming neighborhoods of poverty into viable, mixed-income neighborhoods with access to well-functioning services, high-quality public schools, public transportation, and improved access to jobs. Planning and Implementation grants will be awarded. $65 million is expected to be available, up to 19 awards are anticipated. For more information, go to: http://www.grants.gov/search/search.do?mode=VIEW&oppId=56918. Refer to Sol# FR-5415-N-25.

28. EPA Reducing Greenhouse Gas Emissions Through Energy Efficiency in Homes and Buildings Grants – $5.36 million

The Climate Protection Partnerships Division at EPA seeks proposals from eligible entities to advance national, regional, state, and local energy efficiency programming by using market-based approaches to program design and delivery. Proposals must demonstrate the potential to create a sustainable change in the market for energy efficient products, services, and best practices. Proposed activities relevant to local governments include improving energy performance in the residential and commercial/government market through increased use of high-efficiency products; promoting combined heat and power as clean distributed generation in developing state and local energy and environmental strategies; and providing information and technical assistance at the state or regional level about policies and programs that have been effective in maximizing energy savings and GHG

emission reductions within the utility sector. For more information, go to: www.epa.gov/air/grants_funding.html

29. HUD HOPE VI Revitalization Grants Program - $124 million

HUD requests proposals for the HOPE VI Revitalization Grants Program. HOPE VI Revitalization grants assist Public Housing Authorities in areas including but not limited to: improving the living environment for public housing residents of severely distressed public housing projects through the demolition, rehabilitation, reconfiguration, or replacement of obsolete public housing projects; and building sustainable communities. HUD encourages development that increases resource efficiency, promotes green development, reduces GHG emissions, and promotes healthy living environments for residents. Lead applicant must be Public Housing Authorities that have severely distressed housing in their inventory. $124 million is expected to be available; up to 5 awards are anticipated. For more information, contact Leigh van Rij at leigh_e._van_rij@hud.gov or go to:

http://www.grants.gov/search/search.do?mode=VIEW&oppId=56894. Refer to Sol# FR-5415-N-07.

30. NOAA K-12 Environmental Literacy Grants - $8 million

The U.S. Department of Commerce, NOAA, requests proposals for Environmental Literacy Grants for Formal K-12 Education. This RFP will support K-12 education projects that advance inquiry-based Earth System Science learning and stewardship directly tied to the school curriculum, with a particular interest in increasing climate literacy. $8 million expected to be available, up to 10 awards anticipated. For more information, contact Carrie McDougall at oed.grants@noaa.gov or go to:

http://www.grants.gov/search/search.do?mode=VIEW&oppId=56016. Refer to Sol# NOAA-SEC-OED-2011-2002608.

31. EPA Upcoming Request for Applications (RFA) for Environmental Workforce Development and Job Training Grants Program

EPA solicited comments through September 13th, 2010, on the new FY2011 Grant Application Guidelines for this funding opportunity. EPA expects to release a Request for Applications (RFA) based on these revised application guidelines in October 2010 with an anticipated deadline for submission of applications in January 2011. The upcoming RFA will announce the availability of grants for helping eligible entities deliver environmental workforce development and job training programs focused on hazardous and solid waste management, assessment, and cleanup activities. EPA anticipates awarding approximately 13 environmental workforce development and job training cooperative agreements from this competitive opportunity. For more information, visit http://www.epa.gov/brownfields/applicat.htm or access the draft grant application guidelines at: http://www.epa.gov/brownfields/proposal_guides/fy11guidelines.pdf

APPENDIX D

Catalog of "Co-Benefit" Laws and Programs

WATER CONSERVATION LEGISLATION

1. Water Conservation / SB 7 (Steinberg)

Senate Bill 7 requires cities to reduce urban water consumption 20% by 2020. SB 7 includes steps to the 20% goal, mandating a 10% reduction in per capita water use by December 2015, followed by the 20% reduction in urban per capita water use by December 2020. Retail water suppliers must develop use targets to reach these goals. It is mandated that agricultural water management plans be updated and the city be notified of and offer review, to meet these standard on 12/31/2012, updating again on 12/31/2015, and every 5 years after. Enforcement measures include halting state water grants or loans after July 1, 2012 for urban retail suppliers, July 1, 2013 for agricultural suppliers if compliance is not met. Old conditions for loans/grants repealed once the new targets are in place.

Co-Benefit: Water and Energy Conservation

Ranking: Required

Reference: "SBX7 7 (Steinberg)." Around the Capitol. http://www.aroundthecapitol.com/Bills/SBX7_7/ (accessed June 14, 2010).

2. Water Conservation in Landscaping / AB 1881

AB 1881 requires the adoption of a water efficient landscaping model. Water efficient landscape models, either developed by the Department of Water Resources or determined by locality, must be adopted and enforced. Additionally the law requires recycled water producers proposing to provide water within the boundaries of the local agency (city) to notify the city. The city must adopt a specified recycled water ordinance within 180 days.

Co-Benefit: Water conservation, reduced energy in distributions collection and treatment

Ranking: Required

Reference: "Assembly Bill No. 1881." CA Department of Water Resources. http://www.water.ca.gov/wateruseefficiency/docs/ab_1881_bill.pdf (accessed June 14, 2010).

3. Contractual Assessments: Water Efficiency Improvements AB 474 (Blumenfeild)

Assembly bill 474 permits contracts relating to water efficiency between the city and residents. AB 474 grants the rights to any public agency to designate areas that city officials and property owners may enter into contractual assessments relating to water efficiency improvements on the property. The city can finance public improvements through these contracts. This expands the bill from its previous permissions on renewable energy source and energy efficiency.

Co-benefit: Water and Energy Conservation, accountability

Ranking: Financial, Voluntary Program

Reference: "AB 474 (Blumenfeild)." Around the Capitol. http://www.aroundthecapitol.com/Bills/AB_474/ (accessed June 14, 2010).

4. Common Interest Developments: Water-Efficient Landscapes / AB 1061 (Lieu)

Assembly bill 1091makes previous laws that prohibit some measures of water conservation void. AB 1061 prohibits guidelines formed under the Davis-Stirling Common Interest Development Act which banned water efficiency methods, water conservation methods, and low water plants in landscaping. Guidelines banning water saving measures are voided by the law and are now unenforceable.

Co-Benefit: Regulatory tool, Water and Energy Conservation

Ranking: Required

Reference: "AB 1061 (Lieu)." Around the Capitol. http://www.aroundthecapitol.com/Bills/AB_1061/ (accessed June 14, 2010).

5. California Plumbing Code Chapter 16

California Plumbing Code Chapter 16 makes it safe and easy to adopt grey water systems. Included in the official California Plumbing Code in chapter 16 are the standards of design for grey water systems. These are adapted from the 2006 American National Standard Uniform Plumbing Code, and intended to be used as a resource to for design, standards, and maintenance of systems. Having the specifications for grey water readily available increases the ease of installation of these systems.

Co-Benefit: Water and Energy Conservation,

Ranking: Voluntary

Reference: "California Plumbing Code." California Building Standards Commission. http://www.iapmo.org/Pages/californiaplumbingcode.aspx (accessed June 14, 2010).

BUSINESS AND JOB CREATION LEGISLATION

7. Energy Consumption Data Disclosure / AB 531 (amendment AB 1103) (Saldana)

Assembly bill 531 allows people investing in businesses identify the potential cost or savings of different commercial locations.

AB 531 requires electric and gas utilities to record the most recent 12 months of energy consumption data so that it may be uploaded to the US EPA's energy star portfolio manager. This data collected by the utility companies must be disclosed to the prospective buyer, lessee, or financer of the entire building by the owner or operator. Initial compliance for the rule is recommended to begin in January 2011, with the California Energy Commission enacting rolling compliance dates for different building sizes. This will allow perspective buyers, lessees, and financers see the energy consumption of buildings.

Co-Benefit: Cost savings through energy efficiency, business stability

Ranking: Required

Reference: “AB 531 (Saldana).” Around the Capitol. http://www.aroundthecapitol.com/Bills/AB_531/ (accessed June 14, 2010).

8. Net Energy Metering / AB 510 (Skinner)

Assembly bill 510 offers Californians an alternative method of income in tough economic times by requiring electric companies to repay customers for a certain percentage of energy contribution to power grid.

AB 510 requires that energy producers provide customer generated energy producers a standard contract or tariff until the customer-generators account for 5% of the peak customer energy demand. This is increased from the 2.5% peak customer demand produced by customer-generators previously.

Co-Benefit: Alternative energy, air quality, jobs

Ranking: Voluntary

Reference: “AB 531 (Skinner).” Around the Capitol. http://www.aroundthecapitol.com/Bills/AB_510/ (accessed June 14, 2010).

9. Renewable Energy Resources / AB 1031 (Blumenfield)

Assembly bill 1031 reduces the cost of energy to campuses with alternative energy programs by crediting the campus for all energy exported to the power grid.

AB 1031 ensures that energy producers provide state colleges and universities credit for the energy they produce, expanding this credit system that was previously only available to local government. This allows energy to be transferred between buildings, reducing the burden of energy costs for campuses with alternative energy sources.

Co-Benefit: Alternative energy, incentive

Ranking: Voluntary

Reference: “Daily Business Report Jan, 1 2010.” San Diego Metropolitan Magazine. http://sandiegometro.com/2010/01/daily-business-report-—-jan-1-2010/ (accessed June 14, 2010).

Reference: “AB 1031 (Blumenfield).” Around the Capitol. http://www.aroundthecapitol.com/Bills/AB_1031/ (accessed June 14, 2010).

Regulatory Tools

10. Green Building Standards / AB 210 (Hayashi)

Assembly bill 210 gives local government permission to create a green building code.

AB 210 gives permission to the city or county to change the California Building Standards Code due to the local climate, geographic, or topographical conditions. The bill was written to include specific reference to the green building standards.

Co-benefit: Green Building

Ranking: Voluntary

Reference: "AB 210 (Hayashi)." Around the Capitol. http://www.aroundthecapitol.com/Bills/AB_210/ (accessed June 14, 2010).

11. Local government: organization / SB 215 (Wiggins)

Senate bill 215 ensures that city plans, such as climate plans, are considered by other local California commissions.

SB 215 requires commissions to review the specific or general plans when proposing a transportation plan change or organization for an area. The state must consider the city plans, making these plans enforceable.

Co-Benefit: specific sustainability plans, enforcement, law

Ranking: Required

Reference: "AB 215 (Wiggins)." Around the Capitol. http://www.aroundthecapitol.com/Bills/SB_215 (accessed June 14, 2010).

12. Committee on Budget. Sales and Use Taxes: Motor Vehicle Fuel Tax: Diesel Fuel Tax / ABX8 6 (Committee on Budget)

Assembly bill 6 shows dedication by the California legislature to not cut funding to public transportation.

AB 6 directs more money into the Public Transportation Account by changing the tax code for gasoline and diesel. The bill eliminates sales tax on gasoline and increases the excise tax on gasoline by $0.173 per gallon beginning on July 1st, 2010. The sales tax on diesel will be increased 1.75% and on July 1, 2011 decrease the tax rate of diesel by $0.044 per gallon. The state board of equalization thereafter is responsible for adjusting the tax afterwards.

Co-Benefit: Public Transportation

Ranking: Required

Reference: "Funding Update for March 22, 2010." California Transit Association. http://www.caltransit.org/node/1289 (accessed June 18, 2010).

"ABX8 6 (Committee on Budget)." Around the Capitol. http://www.aroundthecapitol.com/Bills/ABX8_6/ (accessed June 14, 2010).

13. Transportation: Bond-Funded Projects: Letter of No Prejudice / AB 672 (Bass)

Assemble Bill 672 allows for expedited implementation of transportation related Proposition 1B projects.

AB 672 allows local transportation agencies with approved projects under proposition 1B to expend their own funds, and remain eligible for reimbursement. Projects approved by proposition 1B are aimed at reducing greenhouse gas emissions.

Co-Benefit: Air Quality, jobs

Ranking: Financial

Reference: “AB 672 (Bass).” Around the Capitol. http://www.aroundthecapitol.com/Bills/AB_672/ (accessed June 14, 2010).

14. Energy: Solar Thermal and Photovoltaic Powerplants: Siting: California / SBX8 34 (Padilla, Pavley)

SBX8 34 expedites the approval process of new photovoltaic plants to help create new jobs in California.

SBX8 34 helps allow solar thermal and photovoltaic power plants gain expedited approval by the Energy Resources and Conservation and Development Commission and the Department of Fish and Game. This bill allows the new plants to be built quickly so federal stimulus funds can be used.

Co-Benefit: Alternative energy, air quality, jobs

Ranking: Incentive

Reference: “SBX8 34 (Padilla, Pavley).” Around the Capitol. http://www.aroundthecapitol.com/Bills/SBX8_34/ (accessed June 14, 2010).

“Steinberg & Green Tech executives highlight Legislation creating more than 50000 Jobs in CA.” California Chronicle. http://www.californiachronicle.com/articles/view/148913 (accessed June 14, 2010).

INCENTIVE PROGRAMS

15. California Farmland Conservancy Program

Incentives grants are available to retain green agricultural land, lessening the effect of urban sprawl.

The California Farmland Conservancy Program (CFCP) offers grants that support and make use of agricultural conservation easements. Currently planning and policy projects acquiring farmland are being funded with 10% of the total grant money available by the CFCP. Acquisitions should enhance the values of the land and promote sustainable use.

Co-Benefit: Reduced sprawl, land preservation

Ranking: Incentive

Reference: "California Farmland Conservancy Program ." State of California Department of Conservation. http://www.conservation.ca.gov/dlrp/cfcp/Pages/Index.aspx (accessed June 14, 2010).

16. Smart Rebates

Incentive rebates available for replacement of old water fixtures and appliances with new water conserving models.

The Smart rebates program offers rebates are available on a variety of water conservation products and appliances available for residential and commercial residents through the public utility. The program is offered by the California Urban Water Conservation Council and focuses on reaching new areas that have not previously participated in the program.

Co-Benefit: Water conservation and reduction of distribution, collection and treatment cost and energy

Ranking: Incentive

Reference: "Smart Rebates Program." California Urban Water Conservation Council. http://www.cuwcc.org/smart-rebates-main.aspx (accessed June 14, 2010).

17. Reuse Assistance Grant Program - CalRecycle

Competitive incentive grants are available to communities that show an initiative to reduce their waste stream.

CalRecycle established the competitive Reuse Assistance Grant Program to reimburse local agencies up to 50% on projects and programs that promote reuse of waste materials. Programs can include activities that incorporate reuse into waste management, and can potentially reduce the amount of time municipal waste trucks are needed on roads.

Co-Benefit: Reuse, air quality, landfill reduction, extended vehicle life

Ranking: Incentive

Reference: "Reuse Assistance Grant Program." CalRecycle. http://www.calrecycle.ca.gov/Reuse/Grants/ (accessed June 14, 2010).

COMMUNITY DEVELOPMENT

18. California Urban Water Conservation Council

The California Urban Water Conservation Council provides instructional resources, incentives and recognition for reducing urban water consumption.

The California Urban water council may be joined by local governments, private entities, and public interest groups. Members receive updates on related legislation and may participate in committees responding to new developments. Best management practices are also available though the council focusing on urban water use. Technical assistance is provided.

Co-Benefit: Water Efficiency, support network

Ranking: Voluntary

Reference: "About." California Urban Water Conservation Council. http://www.cuwcc.org/about/default.aspx (accessed June 14, 2010).

19. California Low Impact Development Program

Low impact developments (LID) help to mitigate the effect of large quanitys of dirty storm water in urban areas by offering green, and often visually appealing, methods of returning water back into the ground and local watershed.

LID techniques offer innovative solutions to increased flows after new construction and community growth which could possibly effect the compliance of businesses or the city with their National Pollutant Discharge Elimination System permit. LID methods that could potentially capture carbon include bio-retention and rain gardens, rooftop gardens, and vegetated swales. The state of California is offering water board partnerships, training, and tools to help make implementation of LID easier

Co-Benefit: Storm water, pollution prevention, water retention

Ranking: Voluntary

Reference: "Review of Low Impact Development Strategies." CA State Water Resources Control Board. http://www.waterboards.ca.gov/water_issues/programs/low_impact_development/docs/ca_lid_policy_review.pdf (accessed June 18, 2010).

"National Pollutant Discharge Elimination System (NPDES)." California EPA State Water Resources Control Board. http://www.swrcb.ca.gov/water_issues/programs/npdes/ (accessed June 14, 2010).

20. Green Roof Programs

Green roofs reduce storm water runoff and decrease the effect of city heat islands.

The EPA provides green roof guidance for local governments to reduce their energy and climate footprint through their Local Government Climate and Energy Strategy. Roofs provide additional benefits of reducing the heat island effect, sequestering carbon, extending the lifespan of roofing, and improving a building's energy efficiency. Cities can promote green roofs by providing example or creating incentives to residents.

Co-benefit: Storm water reduction, pollution reduction, and reduced heat island effect.

Ranking: Voluntary

Reference: "Local Government Climate and Energy Strategy Guides." US EPA State and Local Climate and Energy Program. http://www.epa.gov/slclimat/resources/strategy-guides.html (accessed June 14, 2010). "Green Roof Incentives,: A 2010 Resource Guide." DC Greenworks. http://www.dcgreenworks.org/storage/dcgreenworks/documents/dc%20greenworks%202010%20survey%20of%20green%20roof%20incentive%20policies.pdf (accessed June 18, 2010).

21. Urban Forest Programs and Ordinances

Trees located in urban areas generate a cleaner, friendlier, and cooler city environment.

Cities can create an atmosphere that promotes urban forestry using local ordinances, adopting voluntary programs, and by using available tools. Local ordinances may be utilized to require shade trees in new developments, or ensure a level of tree preservation. Voluntary programs would ideally educate and encourage residents with little cost to the city government, and record of the number of new trees planted.

Co-Benefit: Community involvement, reduced heat and energy use, carbon uptake, beautification, accountability

Ranking: Voluntary

Reference: "Livable Communities and Urban Forests." http://www.lgc.org/freepub/docs/community_design/fact_sheets/livcomm_urban_forests.pdf (accessed June 18, 2010).

22. California Urban Forests Council's Urban Forester Certification Program

The California Urban Forests Council's Certification Program which works to ensure the qualifications of urban forestry professionals.

The certification is specified for California's urban forest environment, and deals with a wide rang of issues from selecting trees and maintained them, to storm water runoff and air quality concerns. Certification is only offered to advanced professionals with professional and educational backgrounds within the field.

Co-Benefit: Quality assurance, education, beautification, carbon uptake

Ranking: Voluntary

Reference: "Urban Forester Certification." California Urban Forests Council. http://www.caufc.org/California%20Certified%20Urban%20Forester%20Program (accessed June 18, 2010).

23. i-Tree

Using the i-Tree tool enables cities to maximize return of money spent on trees by selectively planting and assessing maintenance costs.

The tool is available from the USDA forest service center for urban forestry research. i-Tree enables communities to utilize tree data to estimate cost savings , environmental, aesthetic benefits, forest specifies composition, and management needs.

Co-Benefit: Beautification, database/records, economic returns, smart planning, carbon uptake

Ranking: Voluntary,

Reference: "Application Overview." i-tree Streets. http://www.itreetools.org/streets/overview.php (accessed June 18, 2010).

24. Grants Available for Youth Involvement

Funding for youth activities instantly involves the community and can create long lasting areas that foster an appreciation of nature.

Many grants are available to community organizations, non-profit, and public institutions to finance youth involvement and learning in areas of water conservation, gardening, and wildlife restoration. Larger grants, such as The Nature Education Centers Program created under proposition 84, can be used towards buildings, structures and exhibits that work towards nature conservation. Smaller grants such as the Captain Planet Grants focus on the hands on involvement of youth ages elementary through high school.

Co-Benefit: Community involvement, incentive

Ranking: Voluntary and/or Incentive

Reference: "Apply for Grant. " Captain Planet Foundation. http://www.captainplanetfoundation.org/default.aspx?pid=3&tab=apply (accessed June 18, 2010).

"Nature Education Centers Program." CA Strategic Growth Plan. http://bondaccountability.resources.ca.gov/plevel1.aspx?id=51 (accessed June 18, 2010).

25. Community Gardens Programs and Ordinances

Community Gardens reduce heat compared to paved areas, and take carbon out of the air, and reduce the need for food trucked into the city from outside areas.

Community gardens encourage residents to take a hand's on approach to knowing the source of their food. Cities can promote community gardens by offering programs that make it easier to turn abandoned lots and open space into gardens or creating zoning for gardens. Promotion of farmers markets can also create similar benefits.

Co-benefit: Community involvement, carbon uptake, beatification, accountability

Ranking: Voluntary and/or Incentive

Reference: Cultivating Community Gardens. http://lgc.org/freepub/docs/community_design/fact_sheets/community_gardens.pdf (accessed June 18, 2010).

"Establishing Land Use Protections for Community Gardens." http://www.nplanonline.org/nplan/products/establishing-land-use-protections-community-gardens (accessed June 18, 2010).

APPENDIX E

Private Financing Programs

1. Power Purchase Agreements

Renewable energy has become increasingly more accessible and cost-effective due to Power Purchase Agreements (PPAs). In a PPA, a private company or third party installs a renewable energy technology, often solar panels, at no cost to the consumer and maintains ownership of the installed panels, selling customers the power produced on a per kilowatt-hour basis at a contractually established rate. The rate is often lower than what customers pay their utility today, and the rate increases at a fixed percentage (usually 2.5 to 4.0 percent) annually. In addition to installing the panels, the third party monitors and maintains the systems to ensure that they keep working. The contract period for a PPA is typically 15 years, at which point the third party will either uninstall the panels or sign a new agreement with the building owner. These agreements are ideal for either demonstration projects implemented by the City, or for residents or businesses with interests in reducing the energy consumptions in their homes and businesses.

Energy Performance Contract with Energy Service Provider Energy services performance contracting is a common way to implement energy efficiency improvements and frequently covers financing for the needed equipment. An energy services performance contract would be an agreement between the City of Piedmont and an energy services provider (ESP). The ESP would implement a renewable energy or energy efficiency program and guarantees that the energy savings will meet or exceed annual payments to cover all project costs.

Typical projects include:

- Lighting
- Heating, air conditioning and ventilation
- Control systems
- Building envelope improvements (insulation, roofs, windows, etc.)
- Cogeneration and CHP
- Demand Response
- Renewables and biomass
- Water and sewer – metering and use reduction
- Sustainable materials and operations

If the savings do not materialize, the ESP pays the difference. Performance contracts tend to contain three elements: a project development agreement, and energy services agreement, and a financing agreement.

2. Energy Savings Performance Contracting (ESPC)

The basic concept of the Energy Savings Performance Contract (ESPC) is that an Energy Services Company (ESCO) guarantees the amount of energy saved, and further guarantees that the value of

that energy would be sufficient to make the City of Piedmont Climate Action Plan debt service payments as long as the price of energy does not fall below a stipulated floor price. The main elements of the guaranteed savings are:

- The amount of energy saved is guaranteed
- The value of energy saved is guaranteed to meet debt service obligations down to a floor price
- The City carries the credit risk
- A smaller piece of the investment package goes to "buy" money
- Tax-exempt institutions can use their legal status for much lower interest rates
- ESCO carries only the performance risk

Typically, an ESPC project would have a simple payback of 10 years or less to allow for the cost of money and other fees to be included in the overall project payback. Lending institutions look for less than 15 years including all fees. Typical projects include:

- Energy management systems
- Interior and exterior lighting
- Boiler replacement and repair of steam distribution systems
- High-efficiency HVAC systems
- LED traffic systems
- Wastewater treatment plant pumps and motors

3. PG&E On-Bill Financing

Through partnering with PG&E, the City could facilitate the repayment of loans for efficiency upgrades on utility bills. PG&E is in the process of implementing a pilot on-bill financing program for small businesses. The system could function in one of two ways: through loans or tariffs. A loan is assigned directly to the customer who must pay it back even if he moves. In contrast, the tariff approach links the charge to the meter, meaning that whoever lives at the house or owns the business pays the fee. If the customer moves, the new occupant picks up the payment. The tariff approach allows for a long payment term and therefore lower monthly costs. It also encourages renters to participate in the program because they only pay for energy saving measures while they benefit from them, and remain in the premises. Upgrades would be selected by the building owner (in coordination with the City) such that the efficiency savings would pay for the investment over a fixed period of time. Customers would "share" monthly energy efficiency savings with the utility until the loan is paid back, at which point all savings would be reflected in lower monthly bills. The goal is to simplify loan repayment and (in combination with a funding source) reduce upfront cash outlay by property owners. In addition, some models of on-bill financing would allow for the loan to remain with the property City of Piedmont Climate Action Plan Implementation City of Piedmont Climate Action Plan IV-19 (even if sold by the current owner), thereby sharing the cost of upgrades over time with future beneficiaries of those upgrades.

4. Energy Efficiency Mortgages

Energy Efficiency Mortgages can provide owners additional financing (whether at time-of-sale or upon refinancing) for energy efficiency improvements at discounted interest rates. Energy efficiency upgrades could be chosen that would allow owners to realize a net monthly savings. The goal is to provide capital for energy efficiency upgrades at a discounted interest rate. Large public organizations such as ENERGY STAR and traditional lending institutions offer energy efficient mortgages.

ENERGY STAR mortgages encourage comprehensive energy efficiency improvements to new and existing homes by increasing the affordability and availability of energy efficiency mortgages for homeowners and homebuyers. This pilot mortgage pilot program offers borrowers an opportunity to lower their energy consumption while making significant, affordable improvements to their homes. These mortgages include the cost of energy efficiency investments in the loans themselves so that borrowers can pay for those investments over the life of their loans, as well as deduct the interest from their federal and state income taxes. One of the key benefits of an ENERGY STAR mortgage is that a borrower can finance energy-saving improvements to their homes without paying more than they would for a typical mortgage.

APPENDIX F

RESOLUTION NO. 2010-53

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MERCED, CALIFORNIA, APPROVING REGISTRATION AS A HEALTHY AIR LIVING PARTNER IN ACCORDANCE WITH SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT RULE 9410

WHEREAS, The San Joaquin Valley faces unprecedented challenges in realizing clean air due to our perfect environment for pollution created by our natural geography and topography; and,

WHEREAS, Although advancement toward clean air has been made through innovation and participation among all segments of the San Joaquin Valley, we have a long way to go; and,

WHEREAS, In order to meet health-based standards for clean air in the San Joaquin Valley, which will result in better health and an improved quality of life for Valley residents, steps need to be taken to reduce emissions Valley wide; and,

WHEREAS, Reducing emissions requires participation of every organization and individual; and,

WHEREAS, The City of Merced has embraced air-quality improvement; and,

WHEREAS, The San Joaquin Valley Air District's Healthy Air Living initiative encompasses a year-round approach to weaving choices into the fabrics of our lives on a daily basis that result in cleaner air and therefore better health for the San Joaquin Valley residents.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. The City Council hereby approves the City of Merced registering as a Healthy Air Living Partner in accordance with San Joaquin Valley Air Pollution Control District Rule 9410.

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the 6th day of July 2010, by the following vote:

AYES: Council Members: CARLISLE, PEDROZO, RAWLING, GABRIAULT-ACOSTA, BLAKE, LOR, SPRIGGS

NOES: Council Members: NONE

ABSENT: Council Members: NONE

ABSTAIN: Council Members: NONE

APPROVED:

William C. Blake
Mayor

ATTEST:
JOHN M. BRAMBLE, CITY CLERK

BY: Jana Lancon
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

City Attorney Date 6/10/10

RESOLUTION NO. 2010-_80_

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MERCED, CALIFORNIA, AGREEING TO TAKE STEPS TO REDUCE GREENHOUSE GAS EMISSIONS THROUGH FUTURE ADOPTION OF A CLIMATE ACTION PLAN; TO SEEK INPUT AND PARTICIPATION FROM THE COMMUNITY OF THE CITY OF MERCED TO DRAFT A PLAN; AND SETTING A SCHEDULE TO ADOPT SAID PLAN

WHEREAS, There is scientific evidence that global climate change arises from the emission of "Greenhouse Gases" (GHG), produced by burning fossil fuels for transportation and the generation of electricity; and,

WHEREAS, GHG emissions in specific projected amounts will likely lead to sufficient global climate change to produce rising sea levels, increased floods and droughts, severe changes in viability of agriculture in many parts of the world, and significant social and economic disruption; and,

WHEREAS, The State of California has taken steps to address GHG emission through the enactment of Assembly Bill 32 (2006 Session of the California Legislature); and,

WHEREAS, Cities and counties throughout the United States of America have begun taking local actions to reduce GHG emissions; and,

WHEREAS, The City of Merced will actively seek input and participation from a broad spectrum of community members to help draft a Climate Action Plan to reduce GHG emissions; and,

WHEREAS, Local government actions taken to reduce GHG emissions and increase energy efficiency provide multiple local benefits by decreasing air pollution, creating jobs, reducing energy expenditures, and saving money for the local government, its businesses, and its residents.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. The City Council of the City of Merced pledges to take a leadership role in reducing GHG emissions with the City of Merced.

SECTION 2. The City of Merced will undertake ICLEI's five milestones to help reduce both GHG and air pollution emissions throughout the community and specifically:

- Conduct a GHG emissions inventory and forecast to determine the source and quantity of GHG emissions in the jurisdiction;
- Establish a GHG emissions reduction target;
- Develop an action plan with both existing and future actions which when implemented will meet the local GHG reduction target;
- Implement the action plan; and,
- Monitor and report progress after plan adoption.

SECTION 3. The City Council of the City of Merced hereby establishes the following activity schedule based on the Energy Efficiencies and Conservation Block Grant awarded to the City. (However, the schedule may be modified through mutual agreement between the City and the grant provider.):

- By Winter 2011, the City Council of the City of Merced will select a Greenhouse Gas Reduction Target, and appoint a temporary Citizen Climate Action Plan Advisory Committee; and,
- By end of 2011, the City Council of the City of Merced will adopt a comprehensive Climate Action Plan.

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the 7th day of September 2010, by the following vote:

AYES: Council Members: CARLISLE, PEDROZO, RAWLING, GABRIAULT-ACOSTA, BLAKE, LOR, SPRIGGS

NOES: Council Members: NONE

ABSENT: Council Members: NONE

ABSTAIN: Council Members: NONE

APPROVED:

Mayor

ATTEST:
JOHN M. BRAMBLE, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

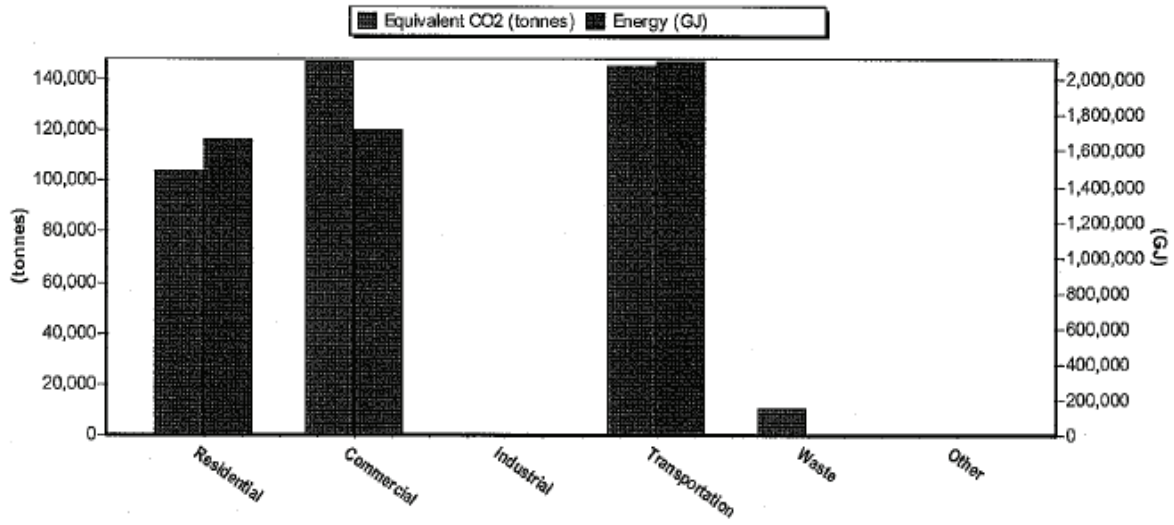
City Attorney Date

APPENDIX G

merced

Community Greenhouse Gas Emissions in 2008
Summary Report

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	(%)	Energy (kWh)
Residential	103,990	1,021	7,152	104,457	25.6	461,710,111
Commercial	147,339	1,575	6,977	147,974	36.2	478,490,032
Transportation	142,962	7,933	6,747	145,563	35.6	587,949,825
Waste	0	0	492,165	10,335	2.5	
Total	394,291	10,529	513,043	408,329	100.0	1,528,149,967



Community Greenhouse Gas Emissions in 2008
Report by Source

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	(%)	Energy (kWh)
Residential Sector						
Electricity	54,029	927	2,444	54,368	13.3	185,824,475
Natural Gas	49,961	94	4,708	50,089	12.3	275,885,636
Subtotal	103,990	1,021	7,152	104,457	25.6	461,710,111
Commercial Sector						
Electricity	115,698	1,516	3,996	116,251	28.5	303,762,353
Natural Gas	31,642	60	2,982	31,723	7.8	174,727,679
Subtotal	147,339	1,575	6,977	147,974	36.2	478,490,032
Transportation Sector						
Diesel	23,536	70	72	23,559	5.8	94,273,618
Gasoline	119,426	7,863	6,676	122,004	29.9	493,676,207
Subtotal	142,962	7,933	6,747	145,563	35.6	587,949,825
Waste Sector						
Food Waste	0	0	123,133	2,586	0.6	
Paper Products	0	0	290,970	6,110	1.5	
Plant Debris	0	0	30,221	635	0.2	
Wood or Textiles	0	0	47,841	1,005	0.2	
Subtotal	0	0	492,165	10,335	2.5	
Total	394,291	10,529	513,043	408,329	100.0	1,528,149,967

Community Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	(%)	Energy (kWh)
Residential						
merced, ca						
MID						
Electricity	7,391	127	334	7,438	1.8	25,420,988
Subtotal MID	7,391	127	334	7,438	1.8	25,420,988
PG&E						
Electricity	46,638	800	2,110	46,930	11.5	160,403,487
Natural Gas	49,961	94	4,708	50,089	12.3	275,885,636
Subtotal PG&E	96,598	894	6,818	97,019	23.8	436,289,123
Data provided by PG&E. Data was separated by "City",meaning city operated buildings and facilities, and "Non-government", meaning the community.						
Subtotal Residential	103,990	1,021	7,152	104,457	25.6	461,710,111
Commercial						
merced, ca						
MID						
Electricity	82,653	949	2,501	82,999	20.3	190,109,558
Subtotal MID	82,653	949	2,501	82,999	20.3	190,109,558
This contains commercial/industrial plus City water wells and WWTP to allow the subsector report to show these for comparison. Otherwise, they would be in the Commercia/Industrial category anyway but hidden in the total.						
PG&E						
Electricity	33,045	567	1,495	33,252	8.1	113,652,795
Natural Gas	31,642	60	2,982	31,723	7.8	174,727,679
Subtotal PG&E	64,687	627	4,477	64,975	15.9	288,380,474
Subtotal Commercial	147,339	1,575	6,977	147,974	36.2	478,490,032
Transportation						
merced, ca						
Local Roads						
Diesel	23,536	70	72	23,559	5.8	94,273,618
Gasoline	119,426	7,863	6,676	122,004	29.9	493,676,207
Subtotal Local Roads	142,962	7,933	6,747	145,563	35.6	587,949,825

Community Greenhouse Gas Emissions in 2008
Detailed Report

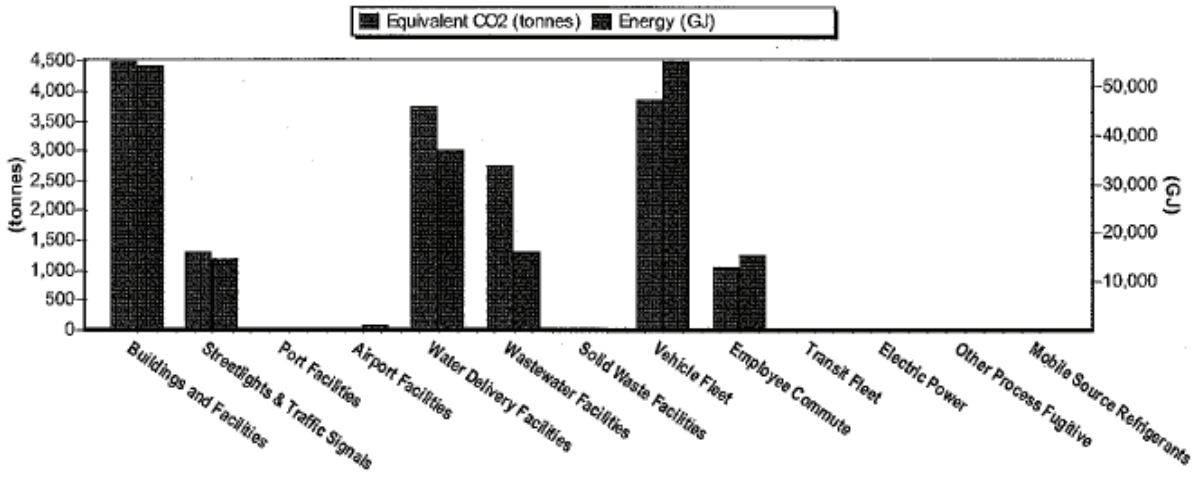
	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	Equiv CO_2 (%)	Energy (kWh)
Subtotal Transportation	142,962	7,933	6,747	145,563	35.6	587,949,825
Waste						
Merced,CA						
County landfill: not in City limits						*Disposal Method - Managed Landfill*
Paper Products	0	0	290,970	6,110	1.5	
Food Waste	0	0	123,133	2,586	0.6	
Plant Debris	0	0	30,221	635	0.2	
Wood or Textiles	0	0	47,841	1,005	0.2	
Subtotal County landfill: not in	0	0	492,165	10,335	2.5	
Waste share percentages are from the California 2008 Statewide Waste Characterization Study by the California Integrated Waste Management Board Table ES-3. 60,000 ton estimation provided by the City of Merced						
Subtotal Waste	0	0	492,165	10,335	2.5	
Total	394,291	10,529	513,043	408,329	100.0	1,528,149,967

merced

Government Greenhouse Gas Emissions in 2008

Summary Report

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	(%)	Energy (kWh)	Cost ($)
Buildings and Facilities	4,511	66	206	4,536	26.3	15,055,283	0
Streetlights & Traffic Signals	1,308	20	54	1,316	7.6	4,100,328	0
Airport Facilities	19	0	2	19	0.1	327,000	0
Water Delivery Facilities	3,732	51	134	3,750	21.7	10,182,630	0
Wastewater Facilities	1,944	2,386	3,661	2,761	16.0	4,472,400	0
Vehicle Fleet	3,815	80	95	3,841	22.3	15,442,764	0
Employee Commute	1,018	65	62	1,039	6.0	4,208,136	0
Total	16,347	2,669	4,213	17,263	100.0	53,788,540	0



Government Greenhouse Gas Emissions in 2008
Report by Source

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	(%)	Energy (kWh)	Cost ($)
Buildings and Facilities Sector							
Electricity	4,156	65	172	4,180	24.2	13,095,054	0
Natural Gas	355	1	33	356	2.1	1,960,229	0
Subtotal	4,511	66	206	4,536	26.3	15,055,283	0
Streetlights & Traffic Signals Sector							
Electricity	1,308	20	54	1,316	7.6	4,100,328	0
Subtotal	1,308	20	54	1,316	7.6	4,100,328	0
Airport Facilities Sector							
Electricity	0	0	0	0	0.0	219,645	0
Natural Gas	19	0	2	19	0.1	107,355	0
Subtotal	19	0	2	19	0.1	327,000	0
Water Delivery Facilities Sector							
Electricity	3,732	51	134	3,750	21.7	10,182,630	0
Subtotal	3,732	51	134	3,750	21.7	10,182,630	0
Wastewater Facilities Sector							
Electricity	1,944	22	59	1,953	11.3	4,472,400	0
Methane	0	0	3,602	76	0.4	0	0
Nitrous Oxide	0	2,364	0	733	4.2	0	0
Subtotal	1,944	2,386	3,661	2,761	16.0	4,472,400	0
Vehicle Fleet Sector							
Compressed Natural Gas	0	0	0	0	0.0	157	0
Diesel	2,540	8	8	2,543	14.7	10,174,656	0
Gasoline	1,274	73	87	1,299	7.5	5,267,951	0
Subtotal	3,815	80	95	3,841	22.3	15,442,764	0
Employee Commute Sector							
Gasoline	1,018	65	62	1,039	6.0	4,208,136	0
Subtotal	1,018	65	62	1,039	6.0	4,208,136	0
Total	16,347	2,669	4,213	17,263	100.0	53,788,540	0

Government Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	(%)	Energy (kWh)	Cost ($)
Buildings and Facilities							
merced, ca							
MID							
Electricity	1,052	12	32	1,056	6.1	2,418,930	0
Subtotal MID	1,052	12	32	1,056	6.1	2,418,930	0
For all electricity items, MID uses CARB CEC Grid Average. PG&E uses the PG&E region set based on third party verified data where the CO2 coefficient was decreased below the Average Grid. All other coefficients stayed the same.							
PG&E							
Electricity	3,104	53	140	3,124	18.1	10,676,124	0
Natural Gas	355	1	33	356	2.1	1,960,229	0
Subtotal PG&E	3,459	54	174	3,479	20.2	12,636,353	0
Subtotal Buildings and Facilities	4,511	66	206	4,536	26.3	15,055,283	0
Streetlights & Traffic Signals							
merced, ca							
MID Streetlights							
Electricity	348	4	11	350	2.0	801,132	0
Subtotal MID Streetlights	348	4	11	350	2.0	801,132	0
See buildings/Facilities notes MID data showed 801,132 KWH but 6,369 was added for M Street/Ironstone signal #6944							
MID Traffic Signal							
Electricity	3	0	0	3	0.0	6,369	0
Subtotal MID Traffic Signal	3	0	0	3	0.0	6,369	0
PG&E Streetlights and Traffic Signals							
Electricity	957	16	43	963	5.6	3,292,827	0
Subtotal PG&E Streetlights an	957	16	43	963	5.6	3,292,827	0
Customer owned and PGE owned street, highway lighting, traffic control services							

Government Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	Equiv CO_2 (%)	Energy (kWh)	Cost ($)
Subtotal Streetlights & Traffic Si	1,308	20	54	1,316	7.6	4,100,328	0
Airport Facilities							
merced, ca							
Facilities							
Electricity	0	0	0	0	0.0	96,750	0
Natural Gas	19	0	2	19	0.1	107,355	0
Subtotal Facilities	19	0	2	19	0.1	204,105	0
Information provided by PG&E. Manually sorted through data and added up electricity consumption of facilities. Also extracted runway light energy consumption							
Lights							
Electricity	0	0	0	0	0.0	122,895	0
Subtotal Lights	0	0	0	0	0.0	122,895	0
Subtotal Airport Facilities	19	0	2	19	0.1	327,000	0
Water Delivery Facilities							
merced, ca							
PG&E Wells							
Electricity	1,404	24	64	1,413	8.2	4,828,150	0
Subtotal PG&E Wells	1,404	24	64	1,413	8.2	4,828,150	0
Well numbers 1, 2, 3, 6, 8, 9, 13, 14, and 17. Data provided by PG&E. Waterwells were manually separated from overall data set provided.							
Water Wells MID							
Electricity	2,328	27	70	2,338	13.5	5,354,480	0
Subtotal Water Wells MID	2,328	27	70	2,338	13.5	5,354,480	0
Well numbers 5, 7, 10R2, 11, 15, and 16. See PG&E subsector for other wells.							
Subtotal Water Delivery Facilitie	3,732	51	134	3,750	21.7	10,182,630	0

Government Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	(%)	Energy (kWh)	Cost ($)
Wastewater Facilities							
merced, ca							
City WWTP MID							
Electricity	1,944	22	59	1,953	11.3	4,472,400	0
Subtotal City WWTP MID	1,944	22	59	1,953	11.3	4,472,400	0
MID provided the 4,472,400 kwh and CARB CEC California Grid Average was used. 2008-2020 at 1.5% per year							
City WWTP-Scope 1 on-site process emissions							
Methane	0	0	3,602	76	0.4	0	0
Nitrous Oxide	0	2,364	0	733	4.2	0	0
Subtotal City WWTP-Scope 1	0	2,364	3,602	808	4.7	0	0
Scope 1 is Methane and Nitrous oxide from ICLEI on-line wastewater calculator based on population served-approximately 81,000. 2008-2020 at 1.5% per year							
Subtotal Wastewater Facilities	1,944	2,386	3,661	2,761	16.0	4,472,400	0
Vehicle Fleet							
merced, ca							
City of Merced Fleet							
Compressed Natural Gas	0	0	0	0	0.0	157	0
Diesel	2,540	8	8	2,543	14.7	10,174,656	0
Gasoline	1,274	73	87	1,299	7.5	5,267,951	0
Subtotal City of Merced Fleet	3,815	80	95	3,841	22.3	15,442,764	0
Information provided by City of Merced. CNG gas to gallon equivalent =3,927gal. Unleaded = 144,733 gal. Diesel 250,410.38 gal.							
Subtotal Vehicle Fleet	3,815	80	95	3,841	22.3	15,442,764	0
Employee Commute							
merced, ca							
Employee Commute							
Gasoline	1,018	65	62	1,039	6.0	4,208,136	0
Subtotal Employee Commute	1,018	65	62	1,039	6.0	4,208,136	0
At 20 mpg and passenger car alternate method. Employee residency locations provided by City of Merced. Each location was found on Googlemap for approximate distance from the City Hall. 2008-2020 at 1.5% per year							

Government Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tonnes)	N_2O (kg)	CH_4 (kg)	Equiv CO_2 (tonnes)	Equiv CO_2 (%)	Energy (kWh)	Cost ($)
Subtotal Employee Commute	1,018	65	62	1,039	6.0	4,208,136	0
Total	16,347	2,669	4,213	17,263	100.0	53,788,540	0

APPENDIX H

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