

Bill King

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**CITY OF MERCED CLIMATE ACTION PLAN IMPLEMENTATION
TECHNICAL MEMO I: CAP IMPLEMENTATION APPROACH**

The Merced Climate Action Plan (CAP) provides a clear statement of community values as they relate to climate conditions. PMC is pleased to assist with implementation of the CAP by creating tools to achieve CAP targets, protect natural resources, encourage appropriate development, and streamline environmental review. As described in greater detail below, this will be accomplished by preparing a Climate Action Plan implementation plan, or Programmatic Climate Action Plan (PCAP), that focuses on the following:

1. Addresses California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b).
2. Reflects reductions that will result from state and regional programs.
3. Conforms to the San Joaquin Valley Air Pollution Control District (SJVAPCD) Guidance.
4. Addresses SJVAPCD's Indirect Source Review Program.
5. Expands the monitoring and implementation functions of the CAP.

The purpose of this memo presents our approach to accomplish these objectives with the CAP implementation program. PMC is developing the implementation plan in collaboration with City staff, drawing on the City's recently adopted CAP to meet the criteria of state guidance and simplify the City's review of new development. Streamlining new development with CAP implementation tools will provide multiple benefits, including predictability in the discretionary review process and new tools for developers. The CAP implementation program will also facilitate improved air quality, more healthy communities, and improved quality of natural resources.

The following sections provide an overview of considerations and recommendations for next steps to develop implementing tools for the CAP. This memo includes a summary of the following:

1. State guidance and regulations that define opportunities and requirements for climate action plans.
2. Regional guidance and standards of the SJVAPCD.
3. Status and evaluation of the City's adopted CAP.
4. Recommended next steps to develop the CAP implementation program to reduce redundancy with regional regulations, encourage appropriate new development, and simplify the discretionary review process.

For items #1–3, each section is introduced with a summary of key considerations that inform the recommended approach to the CAP implementation program. These considerations are further summarized in section #4, recommendations for next steps. Additional resources for reference are provided at the conclusion of this memo. We look forward to your feedback.

I. STATE GUIDANCE & REQUIREMENTS

I.1. AB 32 AND THE STATE SCOPING PLAN

Summary: *Targets for local agencies follow state guidance to achieve a 15% reduction below “existing” emission levels by 2020; state guidance further recommends identification of a 2030 and/or 2050 target.*

The California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, sets a target for the state to reduce its total greenhouse gas (GHG) emissions to 1990 levels by 2020. In 2008, the California Air Resources Board (CARB) prepared the AB 32 Climate Change Scoping Plan (Scoping Plan) that identifies 1990 emissions as the equivalent of 15% below existing, or current, emission levels, and recommends that local jurisdictions also reduce their emissions 15% below existing levels. Agencies throughout California have generally interpreted “existing emission levels” as baseline emissions occurring between 2005 and 2008.

In October 2013, CARB released a draft update of the Scoping Plan that details progress toward the 2020 reduction goal and discusses the need for additional GHG reductions beyond 2020. While the draft Scoping Plan does not propose a specific long-term reduction target, it discusses a goal of 80% below 1990 levels by 2050, consistent with Executive Order S-3-05. The 2050 target reflects existing state goals for certain activities and international reduction targets. As an interim step, the draft Scoping Plan suggests a 2030 reduction target, such as the 40% below 1990 levels target that is recommended for adoption by the European Union¹, or the 33% below 1990 levels that the U.S. expressed a desire to achieve in support of the Copenhagen Accord², and declares that “this level of reduction is achievable in California.” The final version of the updated Scoping Plan is scheduled for adoption in the spring of 2014. To date, the state has not yet adopted any binding reduction targets for local governments beyond the 2020 horizon.

I.2. CAPs AND CEQA GUIDELINES

Summary: *CEQA Guidelines Section 15183.5(b) identifies six criteria for qualified plans to provide streamlining of project-level GHG analysis.*

Under the guidelines for CEQA, GHG reduction plans, such as a climate action plan (CAP), that can demonstrate consistency with the guidelines can be considered “qualified”. A qualified GHG reduction plan is designed to streamline the GHG emissions component of the environmental review process of future projects.

In order for projects to use a CAP or other GHG reduction plan for the environmental review under state law for purposes of GHG emissions, a CAP or other GHG reduction plan must satisfy the six requirements contained in the state CEQA Guidelines Section 15183.5(b):

1. Quantify GHG emissions, both existing and forecasted over a set time period, resulting from activities within a defined geographic area.
2. Based on substantive evidence, establish a level below which GHG emissions from activities covered by the plan are not cumulatively considerable.

¹ Hof, A., et. al. 2012. *Greenhouse gas emission reduction targets for 2030. Conditions for an EU target of 40%*. PBL Netherlands Environmental Assessment Agency.

² Stern, T. 2010. Letter to Yvo de Boer. U.S. Department of State, Office of the Special Envoy for Climate Change. January 28.

3. Identify and analyze the GHG emissions as a result of specific actions or categories of actions anticipated within the defined geographic area.
4. Specify measures or a group of measures, including performance standards, which substantive evidence demonstrates would collectively achieve the specified emissions level if implemented on a project-by-project basis.
5. Establish a mechanism to monitor the plan's progress toward achieving the level, and to require revisions to the plan if it is not achieving the specified levels.
6. Be adopted in a public process following environmental review.

Lead agencies may use adopted GHG reduction plans that are consistent with CEQA Guidelines Section 15183.5(b) in order to analyze and mitigate the significant effects of GHGs under CEQA at a programmatic level. Following adoption of the CAP, as individual projects are proposed in a jurisdiction with a qualified CAP, environmental documents for individual projects may tier from and/or incorporate by reference the existing programmatic GHG review into their cumulative impact analysis. Projects that are consistent with the General Plan, GHG reduction plan, and other planning documents may rely on the programmatic analysis of GHGs in the reduction plan for their project-specific environmental analysis.

A project-specific environmental document that relies on a GHG reduction plan for its cumulative impact analysis must identify specific measures in the reduction plan that are applicable to the project and demonstrate how these measures are incorporated into the project. This approach provides the opportunity for a project to streamline GHG analysis using the findings of the environmental document for GHG impacts. A project that uses the environmental document of a GHG reduction plan could potentially address all GHG impacts of the project through an initial study or mitigated negative declaration, using information from the GHG reduction plan's environmental document. For instance, a large-scale subdivision could address GHG impacts through an initial study by referencing a GHG reduction plan's findings. Project applicants and staff for the lead agency would identify the specific measures that are applicable to each project during the project review. Should a project rely on the environmental review of a reduction plan, applicable measures that are not otherwise binding and enforceable must be included in the project description, as mitigation measures, or as conditions of approval.

The streamlining benefits provided by CEQA primarily benefit projects that are large enough to trigger CEQA but generally consistent with the type and scale of development that already exists within a community. Intensive industrial projects that require extensive energy or are largely regulated by the state or SJVAPCD may benefit less from a qualified GHG reduction plan. If there is substantial evidence that the GHG emissions of a proposed project are cumulatively considerable, even if the project complies with specific measures in the reduction plan, an environmental impact report (EIR) may need to be prepared for the project. For instance, development of a power plant or large-scale industrial project that exceeds expected development would likely require an environmental impact report due to extensive impacts that could potentially exceed conditions analyzed in the GHG reduction plan. Energy intensive projects of this scale are less likely to benefit from a qualified GHG reduction plan.

2. AIR DISTRICT GUIDANCE

2.1. SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT PLAN-LEVEL GUIDANCE

Summary: SJVAPCD does not provide plan-level guidance for interpreting state CEQA guidelines for plan-level analysis within its region. The air district has chosen to address GHG reductions through project-level standards.

The standards in the state CEQA Guidelines Section 15183.5(b) discussed above create the framework for a qualified GHG reduction strategy. Lead agencies are responsible for interpreting and applying CEQA. Any jurisdiction wishing to benefit from CEQA streamlining provisions is responsible for interpreting available guidance and asserting consistency with CEQA guidelines. Air districts have direct and indirect regulatory authority over sources of air pollution and GHGs within their territory, and therefore can guide and inform how federal and state law on air pollution and GHGs are applied within their jurisdiction. Air districts can play a critical role by providing support and guidance to jurisdictions, but currently do not officially certify qualified CAPs. The City of Merced lies entirely within the territory of the SJVAPCD. At the time this report was prepared, the SJVAPCD has not adopted plan-level GHG reduction guidance for jurisdictions within its territory.

The absence of plan-level guidance from the SJVAPCD on GHG reduction strategies has resulted in no unified framework for jurisdictions in SJVAPCD territory to create plans that are consistent with Section 15183.5 of the CEQA guidelines. As a result, CAPs and similar plans in SJVAPCD territory use a variety of methods. Many of these CAPs focus on achieving consistency with their community's General Plan.

In December 2009, the SJVAPCD released a Climate Change Action Plan which notes that cumulative impacts are "best addressed by requiring all projects subject to CEQA to reduce their GHG emissions through project design elements." The Climate Change Action Plan does not provide plan-level guidance for interpretation of the CEQA Guidelines. The update to the CEQA Guidelines with the plan-level GHG criteria of Section 15183.5 was released in December 2009 and went into effect in early 2010, at the same time of the SJVAPCD's release of the Climate Change Action Plan. While the SJVAPCD has not provided plan-level standards, it has provided guidance for individual projects as discussed in further detail below.

Other air districts have adopted CEQA Guidelines that include standards for a Qualified GHG Reduction Plan which interpret and expand upon the criteria in state CEQA Guidelines Section 15183.5(b). Notably, the guidelines of another district clearly interpret a GHG reduction target of 15% below 2005-2008 levels as the goal that satisfies Section 15183.5(b). While this is a common interpretation of the AB 32 Scoping Plan, the State CEQA guidelines do not identify any specific reduction level in order for a GHG reduction plan to be considered qualified. Rather, the CEQA Guidelines stipulate that the plan identify a level below which GHG impacts would not be cumulatively considerable.

2.2. BEST PERFORMANCE STANDARDS FOR GHGS

Summary: The SJVPACD has developed a set of Best Performance Standards for projects of various types that may provide mitigations to leverage for a plan-level approach.

The SJVAPCD's approach to reduce GHG emissions from projects within its jurisdiction is to apply Best Performance Standards (BPS) to new developments. There are two categories of BPS: 1) one set for development projects that addresses indirect emissions from energy use and transportation, and 2) another set for large-scale industrial emitters addressing both direct (e.g., on-site burning of fossil fuels) and indirect emissions (e.g., use of electricity generated elsewhere).

The SJVAPCD chose not to develop a single set of BPS for all new development projects, determining that this would be infeasible given the diversity of development projects within its territory. Instead, the SJVAPCD developed a set of reduction measures and identified the average GHG reduction from each. Projects that achieve at least a 29% reduction from a business-as-usual scenario are deemed by the SJVAPCD to have a GHG impact that is less than significant, both individually and cumulatively, for the purposes of CEQA.

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BPS for industrial emitters require equipment to include particular energy efficiency features or meet certain performance standards. Different types of equipment are addressed through unique BPS. For equipment types that do not have a BPS, the lead agency or project applicant may request that the SJVAPCD develop a project-specific BPS by evaluating technologically feasible reduction measures applicable to the project in question to see which measures achieve the greatest GHG reduction. Alternatively, the lead agency may develop the BPS internally. Projects that comply with the applicable BPS are considered to have a GHG impact that is less than significant for the purposes of CEQA, both individually and cumulatively.

2.3. INDIRECT SOURCE REVIEW

Summary: The SJVAPCD's Indirect Source Review program applies to a wide range of new development projects and indirectly reduces GHG emissions by requiring reductions in air pollution.

Another set of SJVAPCD rules, known as Indirect Source Review (ISR), reduces project-level GHG emissions indirectly through regulations that target other types of air pollution. The ISR went into effect in 2006 and seeks to reduce emissions resulting from the construction and operation of new development projects by requiring projects to 1) identify and implement appropriate mitigation standards, or 2) payment of additional fees to the SJVAPCD that the SJVAPCD uses to fund emission reduction projects. While the ISR rules are intended to reduce air pollution levels by focusing on nitrogen oxides (NO_x) and particulate matter (PM₁₀), GHG emissions from on-road transportation are likely to be reduced by this effort.

The ISR applies to any development project that is subject to discretionary review, or development projects that include any of the following components at full build-out:

- 50 residential units
- 2,000 square feet of commercial space
- 25,000 square feet of light industrial space
- 100,000 square feet of heavy industrial space
- 20,000 square feet of medical office space
- 39,000 square feet of general office space
- 9,000 square feet of educational space
- 10,000 square feet of government space
- 20,000 square feet of recreational space
- 9,000 square feet of miscellaneous space

Additionally, the ISR applies to any transportation-related project that is expected to emit at least two tons of NO_x or PM₁₀ during construction. A number of industrial projects are exempt. For each additional ton of pollutant reduction needed to achieve the target, projects pay a mitigation fee to the SJVAPCD. The current mitigation fees are \$9,350 for NO_x and \$9,011 for PM₁₀.

The ISR does not specifically regulate GHG emissions, but some of the suggested mitigation efforts reduce GHG emissions as a co-benefit. Mitigation measures that help to meet the ISR goals will also reduce GHG emissions and streamline future development in Merced. Strategies such as these mitigation efforts are indicative of the actions that projects subject to the ISR would implement to reduce ISR fees, potentially providing a list of priority mitigations for consideration in the CAP implementation program. A sample of the ISR's suggested mitigations that also reduce GHG emissions

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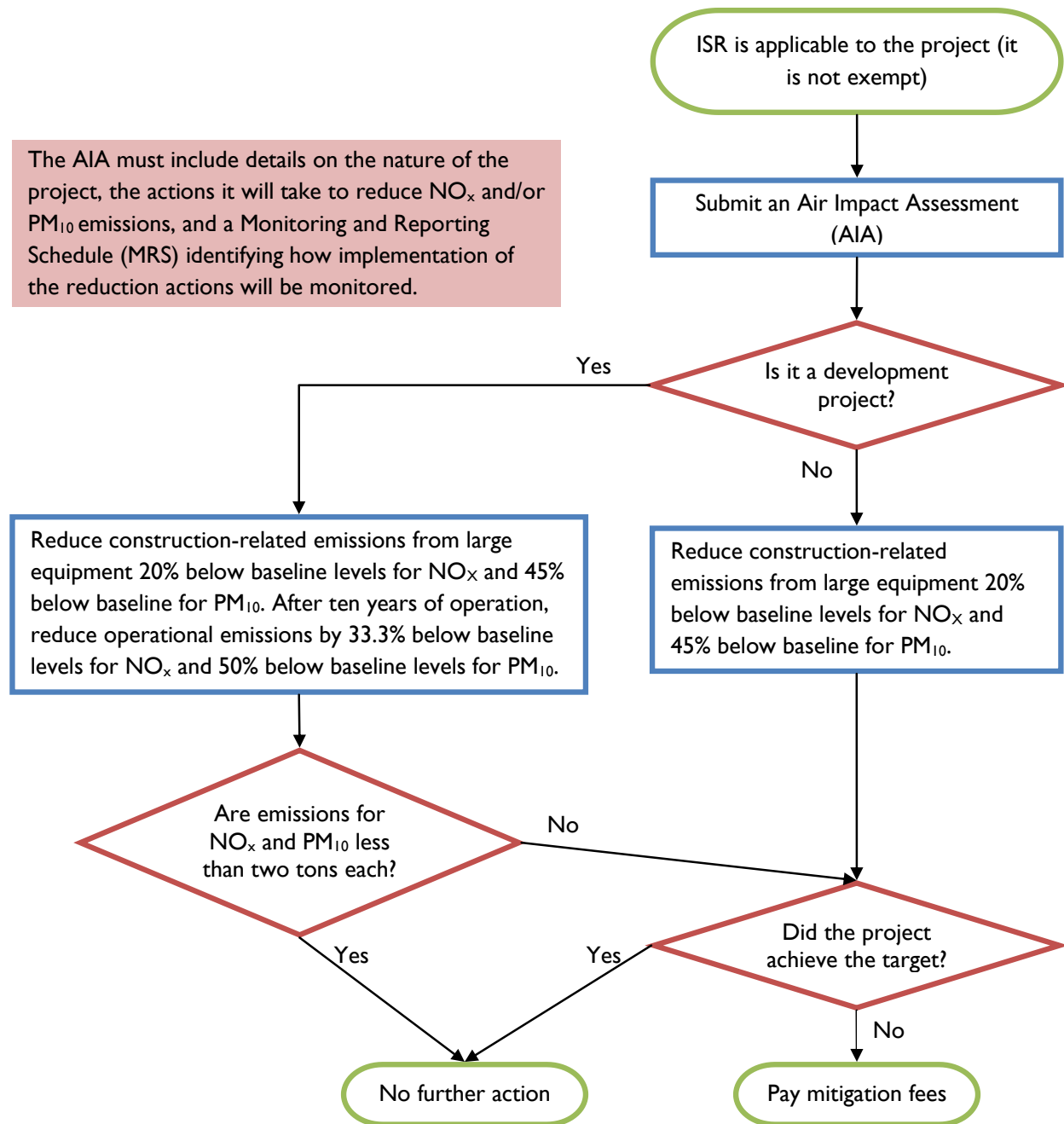
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are included in **Table I**; note that this is not an exhaustive list of all SJVAPCD-suggested mitigation measures that reduce GHG emissions. The SJVAPCD also encourages projects to propose additional measures. **Figure I** summarizes the process for projects that are subject to ISR.

Table I: Sample of Existing Mitigations for the SJVAPCD ISR Program

Category	Mitigation Measures
Land Use	Locate the project center within ½ mile of high-density residential, mixed use, or retail/commercial areas.
	Increase residential density.
Transportation	Provide at least one bicycle parking space for every 20 vehicle parking spaces, in a spot that is easy to locate and access.
	Install Class I or Class II bike lanes.
	Locate the project within ¼ - ½ mile of a transit stop.
	Provide a shuttle to shopping, health care, and/or public service sites.
Building Energy Use	Install heaters and other appliances that exceed Title 24 requirements.
	Use passive solar design principles.
	Install electrical outlets on the front and back of building exterior walls to promote the use of electric landscaping maintenance equipment.
Fleet and Equipment	Prohibit the use of gas-powered landscape maintenance equipment.
	Adopt a policy requiring all company vehicles to reduce idling time to five minutes or less.

Figure 1: Summary of SJVAPCD ISR Process



3. MERCED CAP STATUS

3.1. ADOPTED MERCED CAP

Summary: Merced has a CAP intended to help streamline development and save money in addition to achieving GHG reductions.

Merced’s existing CAP was adopted in October 2012 following an extensive planning effort by City staff. The CAP is organized around four community values selected by a City Council-appointed advisory committee: healthy communities, quality natural resources, clean energy resources, and leaders and partners. The CAP has a goal of reducing GHG emissions 15% below 2008 levels by 2020, and many of its reduction strategies implement or build upon the policies included in Merced’s General Plan. In addition to providing a GHG reduction approach, the CAP seeks to 1) save residents and businesses money by reducing energy bills, 2) provide opportunities for the City to apply for grant funding, and 3) allow for streamlining of development projects. Merced’s CAP relies primarily on voluntary measures and programs to achieve GHG reductions, such as providing educational opportunities and offering incentives for businesses. The CAP document describes itself as a “business-friendly climate action plan” and does not create new fees or other charges. The CAP does not currently require monitoring of emissions or reduction measures or establish new fees or other charges.

3.2. CAP EVALUATION

Summary: Include additional components not found in the existing CAP, in order to help achieve consistency with state CEQA guidelines.

The key criteria for a qualified plan are provided by Section 15183.5(b) of the state CEQA guidelines. **Table 2** compares the adopted CAP for the City of Merced to these six requirements and other best practices and opportunities reviewed above.

Table 2: City of Merced CAP Compliance with CEQA Criteria

CEQA Criteria	Current CAP Status
<i>Quantify existing and forecasted GHG emissions for a set geographic area.</i>	Includes 2008 emissions and forecasts 2020 emissions with a business-as-usual scenario.
<i>Establish a level below which GHG emissions are not considered cumulatively considerable.</i>	Provides a target to reduce emissions to 1990 levels by 2020.
<i>Identify the GHG emissions from anticipated actions or types of actions in the geographic area.</i>	Forecasts emissions reductions from ongoing and future City actions.
<i>Specify strategies to reduce GHG emissions to the specified level.</i>	Contains 154 GHG reduction actions organized around eight goals.
<i>Establish a mechanism to monitor progress toward the specified level and to revise the plan as needed.</i>	Includes a plan for monitoring, evaluating, and updating.
<i>Be adopted in a public process following environmental review.</i>	City Council adopted the CAP with a Negative Declaration.

In order to ensure consistency with state guidelines and to incorporate local guidance and opportunities for streamlining, the PMC team recommends the following approach to develop the CAP implementation program:

- I. Review and confirm the City’s revised inventory being prepared by the Great Valley Center that is anticipated to be released by early 2014. PMC will peer review the inventory and revise the forecast as necessary to include emissions from water and wastewater, agriculture, and off-road equipment. This review will help ensure consistency with the U.S. Community Protocol for Accounting and Report of Greenhouse Gas Emissions, which is recommended by California’s Office of Planning and Research.

2. As appropriate, clarify the City's 2020 GHG emissions reduction target of 1990 emissions levels that is consistent with state guidance as a 15% reduction below total 2008 levels. This approach will maintain consistency with the Scoping Plan and provides greater flexibility to reduce emissions in emissions sectors with the greatest opportunities. Note that this target can be achieved through any combination of emissions sectors; state guidance does not prescribe a minimum contribution from each sector. Rather, PMC recommends achieving reductions through the highest opportunity sectors, based on the results of quantification and early progress to date.
3. Recommend a 2030 or 2050 reduction level for Council adoption that would provide local CEQA guidance for analyzing GHG emissions beyond 2020. The longer-term reduction target would also guide local reduction efforts should the City opt to extend the life of the CAP beyond 2020.
4. Forecast anticipated GHG emission reductions from state actions, such as the Renewables Portfolio Standard, the Pavley vehicle emission standards, and updates to the California building code. Including these state actions will help to ensure that the forecast is comprehensive, allowing the CAP to more easily achieve the reduction target. Providing a wider menu of reductions that recognizes these existing state efforts also better demonstrates the feasibility of achieving target CAP emissions levels.
5. Expand the monitoring, evaluating, and updating plan in the existing CAP to include specific strategies and actions. New content should focus on specific actions for the City and standards that projects must implement to achieve consistency with the CAP. Providing greater clarity for CAP implementation ensures that the CAP is a user-friendly tool that simplifies the review of new development.
6. Discuss the tools and methods that will be used to monitor CAP implementation, and establish a recurring time frame for conducting future inventories and CAP updates. The CEQA Guidelines identify that qualified plans must provide mechanisms to monitor progress toward CAP targets. The CAP will equip the City to monitor progress through indicators and clear reporting processes.
7. Provide a menu of actionable strategies to implement the CAP, which demonstrate feasible reductions in GHG emissions. The CAP implementation program will present effective actions that will be implemented by the state, regional agencies, the City of Merced, developers, and businesses and residents within the community. Only priority actions will be included that are necessary to achieve the CAP reduction target.

4. SUMMARY: NEXT STEPS

4.1 PROCESS TO REFINE THE CAP AS A QUALIFIED GHG REDUCTION PLAN

Although the SJVAPCD has not created plan-level GHG reduction guidance, development of the CAP implementation program provides opportunities to efficiently leverage existing requirements of the SJVAPCD. Relying on existing SJVAPCD requirements could reduce regulations for new development. By developing a focused CAP program that responds to the CEQA Guidelines, the City can present one consolidated set of standards and programs that may satisfy both City of Merced and SJVAPCD requirements. Rather than develop a single list of required reduction strategies, PMC will develop a flexible range of strategies to better suit a diverse range of projects. CAP measures could facilitate selection of measures best suited for the project that provide minimum levels of GHG reductions.

The PMC team will use local data to quantify the 2020 GHG reductions from these strategies, as well as from existing activities that are already under way in the community, compared to business-as-usual

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activities. This is a critical step to determine if full implementation of the CAP policies will be sufficient to achieve the reduction target of 15% below baseline levels and put Merced on track to achieve any longer-term goals. In addition to identifying the GHG reductions from each strategy, the PMC team will also calculate the financial cost of implementing the strategy and the cost savings that will result. This benefit/cost analysis will be combined with the strategy quantification and the GHG emissions forecast to create a prioritized list of strategies for implementation.

Following development of reduction strategies that have been developed, analyzed, and prioritized, it will be necessary for the City of Merced to track implementation and whether the community is meeting its GHG reduction goals. The PMC team will create an Excel-based tool that will allow City staff to easily collect data on each strategy, enabling them to monitor progress relative to anticipated targets.

4.2. SUMMARY OF TASKS TO COMPLETE THE CAP IMPLEMENTATION PROGRAM

A summary of the PMC team's next steps to provide CEQA streamlining is summarized in **Table 3**. These tasks are based on the guidance of Section 15183.5 of the CEQA Guidelines. The PMC team will continue to collaborate with City staff throughout all tasks to maximize the benefit of the CAP to new development.

Table 3: CAP Tasks to Streamline Development

CEQA Criteria	Next Steps for CAP to Provide Streamlining
<i>Quantify existing and forecasted GHG emissions for a set geographic area.</i>	Include water/wastewater, agriculture, and off-road emissions sectors to inventory and forecast.
<i>Establish a level below which GHG emissions are not considered cumulatively considerable.</i>	Establish a 2020 target for all sectors of 15% below baseline levels. Consider a long-range (2030 and/or 2050) reduction goal consistent with start targets.
<i>Identify the GHG emissions from anticipated actions or types of actions in the geographic area.</i>	Evaluate the reductions from state-level actions.
<i>Specify strategies to reduce GHG emissions to the specified level.</i>	Develop strategies to reduce emissions in new sectors. Incorporate SJVAPCD project-level standards and General Plan measures into reduction strategies. Ensure that full implementation of reduction strategies will meet or exceed targets. Create cost/benefit analysis for each reduction strategy. Complete code updates to integrate key CAP concepts. Provide stand-alone implementations for developers, including a Unified Design Manual and development checklist. Provide a user-friendly development checklist identifying CAP standards applicable to development projects, for use in project review.
<i>Establish a mechanism to monitor progress toward the specified level and to revise the plan as needed.</i>	Develop performance indicators for each reduction strategy. Create Excel-based tool to track emission reductions. Use data from development projects to track progress.
<i>Be adopted in a public process following environmental review.</i>	The CAP is subject to CEQA. The City Council will initiate proper environmental review prior to adoption of the CAP implementation program.

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ADDITIONAL RESOURCES

Association of Environmental Professionals. 2012. Forecasting Community-Wide Greenhouse Gas Emissions and Setting Reduction Targets. Accessed November 2013. http://califaep.org/docs/AEP_Next_Steps_White_Paper.pdf.

CARB (California Air Resources Board). 2013. Discussion Draft Scoping Plan Update. Accessed November 2013. <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>.

CoolCalifornia.org. 2013. Climate Action Planning. Accessed November 2013. <http://www.coolcalifornia.org/article/climate-action-planning>.

SJVAPCD (San Joaquin Valley Air Pollution Control District). 2009. Climate Change Action Plan (CCAP) Resources. Accessed November 2013. http://www.valleyair.org/programs/CCAP/CCAP_idx.htm.

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