CITY OF ELK GROVE
CITY COUNCIL STAFF REPORT

AGENDA TITLE:	**Adoption of the Sustainability Element and Climate Action Plan**
MEETING DATE:	**November 14, 2012**
PREPARED BY:	**Christopher Jordan, AICP, Planning Manager**
DEPARTMENT HEAD:	**Taro Echiburú, Planning Director**

RECOMMENDED ACTION:

Staff recommends that the City Council consider the draft Sustainability Element, revised draft Climate Action Plan, and revised draft Final Subsequent Environmental Impact Report and:

1. Adopt a Resolution certifying the Subsequent Environmental Impact Report for the Sustainability Element and Climate Action Plan, adopting Findings of Fact, and adopting a Mitigation Monitoring and Reporting Program (Attachment 1);

2. Adopt a Resolution amending the City of Elk Grove 2003 General Plan to add the Sustainability Element (Attachment 2); and

3. Adopting a Resolution adopting the City of Elk Grove Climate Action Plan (Attachment 3).

BACKGROUND INFORMATION:

In response to changes in State law, on March 25, 2009, the City Council directed staff to develop a Sustainability Element, as part of the General Plan, and a Climate Action Plan (CAP). As directed, the Sustainability Element would "establish policies such as greenhouse gas reduction

strategies or green building programs as well as other sustainability goals and policies that did not fit into other General Plan elements." The CAP would "identify ways in which the City can reduce greenhouse gas emissions in the community and within City facilities. [The] Climate Action Plan would also include measures to adapt to climate change impacts and remain resilient. The Climate Action Plan would analyze reduction and adaptation measures based on effectiveness, cost, and feasibility to create a comprehensive implementation plan."

On May 27, 2009, the City Council adopted a resolution to accept funds from the Federal Energy Efficiency and Conservation Block Grant (EECBG, part of the American Recovery and Reinvestment Act, or ARRA). Funds for the Sustainability Element and Climate Action Plan were programmed from the EECBG funds.

As part of the development of the Sustainability Element / Climate Action Plan (SE/CAP), the Council directed the creation of a Sustainability Element and Climate Action Plan Committee (the "Committee"). The Committee was tasked with providing strategic direction and input on the development of the SE/CAP and with overall outreach campaign. The Committee reviewed technical issues and policies, including consideration of potential carbon reduction measures, language for policies related to green building and green job creation, cost-benefit analyses, and the like. The Council-appointed members of the Committee were Thomas Campbell, Lyndon Hawkins, Bill Myers, Susan Oto, and Craig Sarmento. City Manager-appointed members were Jimmie Johnson and Bob Lilly.

Drafts of the SE/CAP were made available to the public in December 2010. The SECAP Committee held a public workshop with interested residents and stakeholders on January 19, 2011 to solicit feedback on the draft documents. The Committee concluded their work with a final meeting on March 30, 2011. Staff also conducted outreach with the Building Industry Association and Industry Working Group.

The City has prepared a Subsequent Environmental Impact Report (SEIR) for the SE/CAP, details of which are described in the Environmental Analysis section below.

The Planning Commission reviewed the draft SE/CAP and SEIR at three meetings on March 15, April 5, and April 19, 2012. The Planning Commission was split on a number of topics and concepts that appear in the two documents, but ultimately recommended the documents be referred to the City Council for consideration and approval (3-1, Maita). The Planning Commission's concerns with the documents included the following:

- Several members expressed concerns with adopting new regulations. They saw these documents as creating an additional burden for new development and businesses and potentially limiting job creation.
- The use of ambiguous terms, such as "green" and "environmental justice" should be limited. The documents include edits to remove/replace these terms with other descriptions as appropriate.
- Language in the CAP that potentially demonstrates the City taking a position on climate change. The document was modified to include a discussion of the science but to remove sentences or phrases that appeared to indicate the City taking a position on the matter.

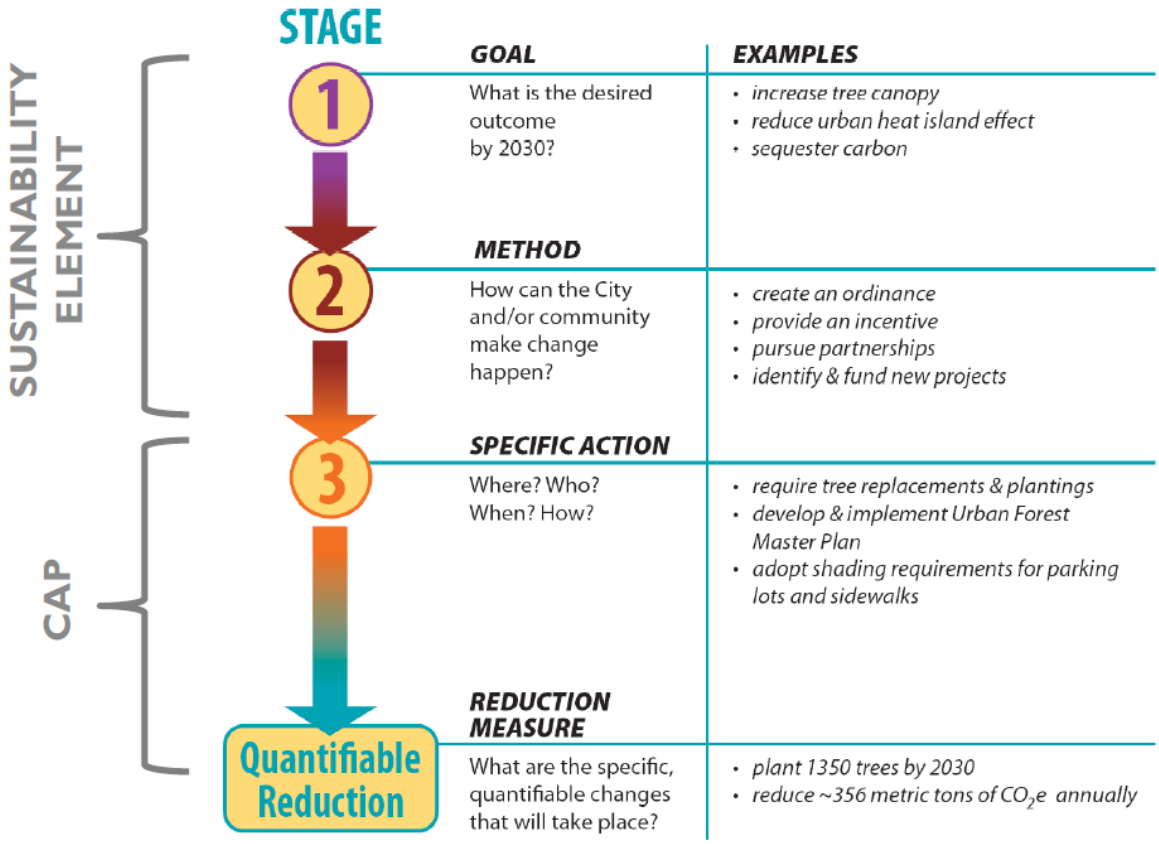
ANALYSIS:

The Sustainability Element and CAP are planning documents that guide the City's efforts in achieving a more sustainable community. Specifically:

- The Sustainability Element is a long-term (20+ year) component of the General Plan that provides vision, policies, and actions.
- The CAP is a short-term (through 2020) plan that focuses on strategies to reduce greenhouse gas (GHG) emissions. It directly implements Sustainability Element goals and policies.

The relationship of the two documents is described in Figure 1.

Figure 1
Relationship of the Sustainability Element and Climate Action Plan



Sustainability Element

The Sustainability Element includes the following components:

- A local definition of sustainability, which is the following:

  Sustainability in Elk Grove is the ability to live responsibly within our means, meeting present needs without compromising the ability for future generations to meet their own needs. It is the capacity to endure, and therefore applies to everything we do now and in the future. The challenge is to incorporate the three components of sustainability — the environment, the economy, and the community — into City policies and actions. All three components work together as an integrated system to achieve a sustainable community. The

City is committed to this challenge and to achieving our community's vision of a sustainable Elk Grove.

- Identification of sustainability topic areas;
- New General Plan policies relating to sustainability; and
- References to existing General Plan policies that relate to the City's sustainable objectives.

The policies and actions identified in the Sustainability Element are predicated on the concept that a sustainable community is made up of three sectors – the environment, the economy, and the community. Each sector is interconnected and dependent upon the others. The goal for these policies and actions is to support efforts toward achieving a sustainable community over the life of the General Plan.

Key policies of the draft Sustainability Element, as recommended by the Planning Commission, include the following:

- Reduce greenhouse gas (GHG) emissions from community-wide sources, including City facilities and operations, by a minimum of 15 percent below 2005 levels by 2020, consistent with the standards and requirements of AB 32.
- Promote the use of local and environmentally friendly products and services for municipal purchases and contracts. Balance the use of local and environmentally friendly products and services with their financial impact to the City and their benefits and effectiveness.
- Require all new municipal developments to exceed State Title 24 Energy Efficiency Standards by 15 percent to the extent such efficiencies are possible.
- Require all new private developments to meet and (as determined feasible by the City) exceed State Title 24 Energy Efficiency Standards.
- Require new commercial development for projects equal to and greater than 100,000 square feet to provide electric vehicle charging station and new residential development to pre-wire for plug-in electric vehicles.
- Consider implementation of a program that encourages and supports point-of-sale energy and water efficiency audits for residential and

commercial buildings, making the results of the audit available to potential buyers.

Climate Action Plan

The CAP is a plan to: 1) reduce local GHG emissions; 2) provide a link between all policies affecting air quality; and 3) quantify the policy impacts made in the Sustainability Element and CAP. The CAP presents an inventory of current GHG emissions in the community, and uses the growth anticipated in the General Plan to forecast future emissions. It then establishes a framework of reduction measures to reduce these emissions to achieve the reduction target established in the General Plan Sustainability Element.

The CAP is a necessary tool to achieve compliance with State mandates, including Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, which sets a target of reducing GHG emissions to 1990 levels by 2020. The California Air Resources Board has established that AB 32's reduction targets on a statewide basis would represent a 15 percent reduction from baseline 2005 conditions by 2020, and a 28 percent reduction by 2025. By having a CAP, the City becomes eligible for State and other funding for implementation of sustainability programs, including revenues anticipated from California's new Cap-and-Trade Program. It can also reduce the time and cost for new development by streamlining project-level GHG review under the California Environmental Quality Act (CEQA). The programs identified in the draft CAP achieve a reduction in greenhouse gasses of 16.18 percent from 2005 levels by 2020. By 2025, a 16.42 percent from 2005 levels would be achieved.

Key measures from the draft CAP include the following:

- Require new construction for both public and private projects to meet or exceed State energy efficiency standards in order to achieve the energy reductions specified in the CAP. This includes requiring new developments to achieve Tier 1 (above baseline) of the State Green Building Standards under the current edition. The City would review future updates to the Standards and require the level of efficiency above minimum standards necessary to achieve the energy reduction potential outlined in the CAP. Full implementation of this project will

require further actions by the City and approval by the California Energy Commission.

- Develop a Community Forest Master Plan that identifies best management practices for tree planning, planting, and maintenance, designates areas for tree preservation or future plantings, and includes a preferred tree list and specifications for street trees.
- Require the use of high-albedo materials (material that reflects solar heat) for future outdoor surfaces to the greatest extent feasible, including but not limited to parking lots, median barriers, roadway improvements and sidewalks.
- Update the City's bicycle parking requirements to provide more spaces and better long-term storage in multi-family developments.
- Facilitate the use of electric vehicles by providing charging stations with new development. The CAP anticipates a need for as many as 300 charging stations by 2025. The City would work with SMUD and local car dealers to track electric vehicle purchase and use.
- Convert the City vehicle fleet from petroleum-based vehicles to alternatives such as hybrids, compressed natural gas (CNG), or electric vehicles.

At the conclusion of the Planning Commission review, and prior to the City Council's consideration, two key stakeholder groups approached staff with concerns on the content of the CAP. The first, the Sacramento Metropolitan Air Quality Management District (SMAQMD), was concerned that the CAP used aggressive participation rates for voluntary programs that may not be achievable without mandating participation. The second group, the Sacramento Association of Realtors, was concerned that the CAP would impose new restrictions and requirements on existing development in a way that would be unsuccessful.

Based upon these concerns, staff conducted an audit of the draft CAP and identified a range of improvements that would address both groups' concerns. The modified language places greater emphasis on promoting improvements to existing development by homeowners and business owners and eliminates mandatory measures for these groups. It doing so, it identifies a variety of available programs from SMUD, PG&E, SMAQMD, City, State, and Federal programs, and other sources to assist homeowners and businesses with these improvements.

Subsequent actions implementing the CAP, such as formal adoption and implementation of the Tier 1 Green Building Standards requirements, are necessary. The draft 2012-13 Fiscal Year Budget will include the most immediate of these items.

An implementation and monitoring program will also be established for the CAP. As part of this program, City staff will track progress toward achieving the GHG emissions reduction goal using development and permit data, as well as commonly available regional and statewide indicators. Staff will present an annual update on CAP implementation in tandem with currently required annual updates to Council on implementation of the General Plan.

Public Comment

As previously mentioned, during the drafting of the SE/CAP, staff received comments from SMAQMD expressing concerns that the CAP used aggressive participation rates for voluntary programs that it may not be achievable without mandating participation. On October 18, 2012, staff met with SMAQMD staff to review draft revisions to the CAP and the draft monitoring program. SMAQMD staff has reviewed the materials and, as indicated in their letter of October 29, 2012 (Attachment 4), they support the revisions and encourage adoption of the CAP.

The concerns raised by the Sacramento Association of Realtors have been addressed through changes in the CAP that remove mandatory requirements for existing development. Rather, the CAP focuses on improvements that homeowners, property owners, and businesses can make through available Federal, State, local, and other community programs to improve the energy efficiency of their property. It does not require point of sale audits as had been explored in a previous draft.

ENVIRONMENTAL ANALYSIS:

The California Environmental Quality Act (Section 21000, et. seq. of the California Public Resources Code, hereafter CEQA) requires analysis of agency approvals of discretionary "projects." A "project," under CEQA, is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment."

Adoption and implementation of the Sustainability Element and CAP are projects under CEQA. One of the benefits of adopting these documents is that they can, through the environmental review process, provide clearance for future development projects that are completed consistent with the General Plan. To that end, a Subsequent Environmental Impact Report (SEIR) to the Elk Grove General Plan EIR (General Plan EIR) (SCH# 2002062082) has been prepared.

The CEQA Guidelines provide that a Subsequent EIR is warranted if the lead agency determines, among other things, that substantial changes have occurred to a project, or the circumstances under which the project will be undertaken, that will have one or more significant effects not discussed in the previous EIR. The Project would amend the General Plan to include an additional element, the Sustainability Element, and would also adopt the CAP, which will implement components of the Sustainability Element. These changes warrant a Subsequent EIR under Public Resources Code Section 21166 and CEQA Guidelines Section 15162 because they substantially change the project as analyzed under the General Plan EIR.

The environmental analysis contained in the Subsequent EIR is focused on two separate aspects of the Project. The first aspect of the analysis focuses on potential adverse environmental impacts that may occur as a result of implementation of the SE/CAP. The CAP includes measures that will be carried out by the City or by development project applicants, which include physical changes to the environment. The second aspect of the analysis focuses on the effectiveness of the SE/CAP at meeting the City's and State's identified goals for GHG reductions through the year 2020.

The Subsequent EIR provides broad CEQA coverage for subsequent development projects that are consistent with the General Plan. However, additional environmental review may be required for some projects depending upon their scope and consistency with the General Plan, principally the Sustainability Element. When subsequent projects or activities under are proposed, the City will examine the projects or activities to determine whether their effects were adequately analyzed and mitigated in the Subsequent EIR. If the projects or activities would have no effects beyond those disclosed in the Subsequent EIR, no further CEQA compliance would be required.

A Draft SEIR was circulated for public comment from September 30, 2011 to November 15, 2011. Three comment letters were received during the comment period – one from Caltrans, a second from the Delta Stewardship Council, and a third from the Governor's Office of Planning and Research (OPR). None of the comments identified a concern with the analysis presented in the Draft SEIR.

In December 2011, the City issued a Final SEIR that responded to the written comments and included minor edits to the Draft SEIR. Since the release of the Final SEIR, several revisions were made to the project in response to comments from SMAQMD and the Sacramento Association of Realtors. The revisions are discussed below. CEQA requires a lead agency to recirculate an EIR when "significant" new information is added to an EIR after public review but prior to certification (Public Resources Code Section 21092.1.8 and CEQA Guidelines Section 15088.5). Staff has reviewed the changes in the FSEIR and determined no "significant" new information was added. Therefore, the Draft SEIR does not require recirculation.

Revisions to the Draft SEIR contained in the revised Final SEIR include the following:

- Executive Summary: This chapter has been revised to reflect the change in significance of Impact 3.2 – 2.

- Chapter 1.0, Introduction: This chapter has been revised primarily to provide a description of how the SEIR may be used as a streamlining document for the environmental review of future projects, as provided for by CEQA Guidelines Sections 15168, 15183, and 15183.5.

- Chapter 2.0, Project Description: This chapter has been revised to provide a detailed description of the revised CAP, provide more information regarding the project's consistency with the General Plan, and describe how the SEIR and CAP will be used to streamline the analysis of GHGs for future projects, as provided for by State CEQA Guidelines Section 15183.5.

- Chapter 3.2, Greenhouse Gases: This chapter has been revised to reflect changes to the CAP and provide updated information regarding regional planning efforts. The regulatory framework discussion was modified to describe the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy, which was adopted after the original Final SEIR was published in December 2011.

  The analysis for Impact 3.2-2 was revised to reflect the changes in the CAP related to the implementation measures and the associated GHG emissions reductions. Mitigation Measure 1 was added to ensure that the CAP would be updated to ensure that the CAP results in GHG emission reductions to meet the City's reduction target. The significance conclusion was changed to less than significant with implementation of Mitigation Measure 1.

- Chapter 4.0, Other CEQA-Required Topics: The discussion of regional growth was revised to reflect the MTP/SCS and the discussion of significant and unavoidable impacts was revised to reflect the conclusion that Impact 3.2-2 would be less than significant with mitigation.

As previously described, the revisions to the Draft SEIR do not provide any significant new information as defined under State CEQA Guidelines Section 15088.5. Therefore, staff believes that the environmental review completed for this project through the Revised Final SEIR is adequate.

FISCAL IMPACT:

The costs to prepare and adopt the SE/CAP are funded through the City's Federal ARRA grant as well as the General Fund. These costs were identified in the FY 2009-10, 2010-11, and 2011-12 Budgets.

The costs for implementation of the SE/CAP are addressed in two ways. First, City-implemented programs identified in the SE/CAP have been/will be programmed into future fiscal year budgets. Second, for consistency with the SE/CAP, private development projects may be required to include certain components (i.e. upgraded, energy efficient HVAC units) when

applicable. Costs of including these components in a private development project would be borne by the developer.

ATTACHMENTS:

1. Resolution Certifying the Subsequent Environmental Impact Report For the Sustainability Element and Climate Action Plan, Adopting Findings of Fact, and Adopting a Mitigation Monitoring and Reporting Program
    a. Exhibit A – Revised Final Subsequent Environmental Impact Report
    b. Exhibit B - Findings of Fact and Statement of Overriding Considerations
    c. Exhibit C – Mitigation Monitoring and Reporting Program
2. Resolution amending the 2003 General Plan to add the Sustainability Element
    a. Exhibit A – Sustainability Element
3. Resolution adopting the 2012 Climate Action Plan
    a. Exhibit A – Climate Action Plan
4. SMAQMD letter of October 29, 2012

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ELK GROVE CERTIFYING A SUBSEQUENT ENVIRONMENTAL IMPACT REPORT FOR THE SUSTAINABILITY ELEMENT AND CLIMATE ACTION PLAN, ADOPTING FINDINGS OF FACT, AND ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM

WHEREAS, in 2003 the City adopted the Elk Grove General Plan; and

WHEREAS, as part of and prior to the adoption of the General Plan, the City Council certified an Environmental Impact Report for the General Plan as required by the California Environmental Quality Act (SCH No. 2002062082); and

WHEREAS, in 2006, the State of California adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, which sets a target of reducing greenhouse gases (GHG) emissions to 1990 levels by 2020; and

WHEREAS, the City, through direction of the City Council in March 2009, desires to adopt a Sustainability Element and Climate Action Plan as local implementation of AB 32 and to reduce the time and cost for new development by streamlining project-level greenhouse gas review; and

WHEREAS, the California Environmental Quality Act (CEQA), requires local agencies to consider the potential environmental impacts of their decisions prior to taking action; and

WHEREAS, the City determined that the adoption of the Sustainability Element and Climate Action Plan (also referred to herein as the "Project") is subject to the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq. and that an Subsequent Environmental Impact Report (SEIR) to the General Plan Environmental Impact Report needed be prepared to evaluate the potential environmental effects of the Project; and

WHEREAS, in compliance with Public Resources Code Section 21080.4, a Notice of Preparation (NOP) was prepared by the City of Elk Grove and was distributed to the State Clearinghouse, Office of Planning and Research, responsible agencies and other interested parties on June 10, 2011 with the comment period ending on July 1, 2011; and

WHEREAS, the City of Elk Grove distributed a Notice of Availability for the Project's Draft SEIR on September 30, 2011, which started the 45-day public review period, ending on November 15, 2011; and

WHEREAS, the Draft SEIR was filed with the State Clearinghouse (SCH No. 2011062031) and was distributed to public agencies and other interested parties for public review and comment; and

WHEREAS, the City of Elk Grove prepared a Final SEIR, which consists of: 1) Draft SEIR, 2) comments received on the Draft SEIR during the public review period, and 3) responses to comments received; and

WHEREAS, the City prepared revisions to the Final SEIR, which included revisions to the Draft SEIR, to reflect changes in the project (the Revised Final SEIR); and

WHEREAS, none of the changes in the Revised Final SEIR result in any significant new information that would, under State CEQA Guidelines Section 15088.5, require recirculation of the SEIR.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Elk Grove as follows:

1. **Certification of the Final SEIR**

   A. The City Council hereby certifies that the Revised Final SEIR, attached as Exhibit A, has been completed in compliance with the requirements of the California Environmental Quality Act.

   B. The City Council hereby certifies that the Revised Final SEIR was presented to the City Council and that the City Council reviewed and considered the information contained in the Revised Final SEIR prior to taking action on the Project.

   C. The City Council hereby certifies that the Revised Final SEIR reflects the independent judgment and analysis of the City Council.

2. **Findings on Alternatives**

   The City Council finds that the alternatives analyzed in the Revised Final EIR are rejected because the alternatives would not achieve the project objectives. The City Council makes the finding as set forth in Exhibit B, attached hereto and incorporated herein by reference.

3. **Other Findings**

   The City Council finds that issues raised during the public comment period and written comment letters submitted after the close of the public review period of the Draft SEIR do not involve any new significant impacts or “significant new information” that would require recirculation of the Draft SEIR pursuant to CEQA Guidelines Section 15088.5.

Further, the revisions to the Final SEIR contained in the Revised Final SEIR does not result in any significant new information that would, under State CEQA Guidelines Section 15088.5, require recirculation of the SEIR.

4. Adoption of the Mitigation Monitoring and Reporting Program

The City Council hereby adopts the Mitigation Monitoring and Reporting Program, as set forth in Exhibit C, attached hereto and incorporated herein by reference.

PASSED AND ADOPTED by the City Council of the City of Elk Grove this 14th day of November 2012.

JAMES COOPER, MAYOR of the
CITY OF ELK GROVE

ATTEST:

JASON LINDGREN, CITY CLERK

APPROVED AS TO FORM:

JONATHAN P. HOBBS,
CITY ATTORNEY

EXHIBIT A

REVISED FINAL
SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

FOR THE

SUSTAINABILITY ELEMENT AND CLIMATE ACTION PLAN

SCH# 2011062031

OCTOBER 2012

Prepared for:

City of Elk Grove
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A Land Use Planning, Design, and Environmental Firm

REVISED FINAL
SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

FOR THE

SUSTAINABILITY ELEMENT AND
CLIMATE ACTION PLAN

SCH# 2011062031

OCTOBER 2011

Prepared for:

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This document has received funding from an Energy Efficiency and Conservation Block Grant (EECBG) from the United States Department of Energy (DOE).

Chapters **Page Numbers**

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The City of Elk Grove (City) is the lead agency responsible for the environmental review of the proposed Sustainability Element and Climate Action Plan (CAP) project (Project) evaluated herein. The California Environmental Quality Act (CEQA) requires the preparation of an Environmental Impact Report (EIR) prior to the approval of any project that may have a significant impact on the environment.

1.1 PURPOSE AND INTENDED USES OF THE EIR

CEQA REQUIREMENTS FOR A FINAL EIR

This Revised Final Subsequent EIR (Revised Final SEIR) for the Project has been prepared in accordance with CEQA and the State CEQA Guidelines. State CEQA Guidelines Section 15132 requires that a Final EIR consist of the following:

- the Draft Environmental Impact Report (Draft EIR) or a revision of the draft;
- comments and recommendations received on the Draft EIR, either verbatim or in summary;
- a list of persons, organizations, and public agencies commenting on the Draft EIR;
- the responses of the lead agency to significant environmental concerns raised in the review and consultation process; and
- any other information added by the lead agency.

In accordance with State CEQA Guidelines Section 15132(a), the Draft Subsequent EIR (Draft SEIR) for the Sustainability Element and Climate Action Plan is incorporated by reference into this Final SEIR.

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

PURPOSE AND USE

The City, as the lead agency, has prepared this Revised Final SEIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from adoption and the subsequent implementation of the proposed project.

The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public

objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the Project. Subsequent actions that may be associated with the Project are identified in Chapter 2.0, Project Description, of the Draft SEIR.

RECIRCULATION OF AN EIR PRIOR TO CERTIFICATION

A lead agency is required to recirculate a draft EIR, prior to certification, when "significant new information" is added to the EIR after the public review period begins as described at CEQA Guidelines Section 15088.5. According to CEQA Guidelines Section 15088.5(a), new information is deemed significant if the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a new substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect, including a feasible project alternative, that the project proponent declines to implement. The CEQA Guidelines further state under Section 15088.5(a) that new information is deemed significant if it reveals the following:

> *"(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.*
>
> *(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.*
>
> *(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.*
>
> *(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded."*

Chapter 3.0 identifies revisions made to the Draft SEIR. The revisions to the Draft SEIR are made in response to comments received on the Draft SEIR (see Chapter 2.0 of this document) and revisions to the proposed CAP (see Chapter 3.0 – Revised Project Description (Draft SEIR Chapter 2.0).

The revisions to the Draft SEIR provide supplemental information and do not identify any new significant environmental impacts nor any increase in the severity of environmental impacts. The revisions to the Draft EIR do identify a new mitigation measure that will be adopted following City Council approval of the project. Therefore, the Draft SEIR does not require recirculation pursuant to CEQA.

1.2 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR involves the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City circulated a Notice of Preparation (NOP) of an EIR for the proposed project and an Initial Study on June 10, 2011 to trustee and responsible agencies, the State Clearinghouse, and the public. The comments received in response to the NOP were considered during preparation of the Draft SEIR. The NOP, Initial Study, and responses to the NOP by interested parties are presented in Appendix A of the Draft SEIR.

NOTICE OF AVAILABILITY AND DRAFT EIR

The City provided the State Clearinghouse with the Notice of Completion (NOC) and Draft SEIR for review on September 29, 2011. The City published a public notice of availability (NOA) for the Draft SEIR on September 30, 2011, inviting comment from the general public, trustee agencies, responsible agencies, organizations, and other interested parties. The Draft SEIR was available for review from September 29 through November 15, 2011. The Draft SEIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The Draft SEIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in the Draft SEIR.

RESPONSE TO COMMENTS/FINAL EIR

In December 2011, the City issued a Final EIR that responded to the two written comments received, as required by CEQA. The Final SEIR also contained minor edits to the Draft SEIR. The December 2011 Final SEIR is replaced by this Revised Final SEIR.

REVISED FINAL SEIR

Following issuance of the Final SEIR in December 2011, the City made changes to the proposed CAP. The Draft SEIR was revised to address the changes to the CAP. Following the revisions to the Draft SEIR, the City reviewed the changes to determine whether any “significant” new information was added. The City determined that no new significant information was added and, based upon the requirements established under CEQA Guidelines Section 15088.5, the Draft SEIR did not need to be recirculated.

This Revised Final SEIR provides responses to the two comment letters the City received regarding the Draft SEIR. This Revised Final SEIR also contains minor edits to the Draft SEIR, which are included in Section 3.0, Revisions to the Draft SEIR. This document and the Draft SEIR, as amended herein, constitute the Final SEIR.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the Final SEIR. If the City finds that the Final SEIR is "adequate and complete", the City Council may certify the Final SEIR in accordance with CEQA. Upon review

and consideration of the Final SEIR, the City Council may take action to approve, revise, or reject the Project. A decision to approve the Project, for which this SEIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and State CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. This Mitigation Monitoring Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.3 ORGANIZATION OF THE FINAL SEIR

This Revised Final EIR has been prepared consistently with Section 15132 of the State CEQA Guidelines, which identifies the content requirements for Final EIRs. This Revised Final SEIR is organized in the following manner:

CHAPTER 1.0 – INTRODUCTION

Chapter 1 briefly describes the purpose of the environmental evaluation, identifies the lead, agency, summarizes the process associated with preparation and certification of an EIR, and identifies the content requirements and organization of the Final SEIR.

CHAPTER 2.0 – COMMENTS ON THE DRAFT EIR AND RESPONSES

Chapter 2 provides a list of commentors, copies of written comments made on the Draft SEIR (coded for reference), and responses to those written comments.

CHAPTER 3.0 – REVISIONS TO THE DRAFT EIR

Chapter 3.0 consists of minor revisions to the Draft SEIR. The revisions include the following:

- Executive Summary: This chapter has been revised to reflect the change in significance of Impact 3.2-2.
- Chapter 1.0, Introduction: This chapter has been revised primarily to provide a description of how the SEIR may be used as a streamlining document for the environmental review of future projects, as provided for by CEQA Guidelines Sections 15168, 15183, and 15183.5.
- Chapter 2.0, Project Description: This chapter has been revised to provide a detailed description of the revised CAP, provide more information regarding the project's consistency with the General Plan, and describe how the SEIR and CAP will be used to streamline the analysis of greenhouse gases for future projects, as provided for by CEQA Guidelines Section 15183.5.
- Chapter 3.2, Greenhouse Gases: This chapter has been revised to reflect changes to the CAP and provide updated information regarding regional planning efforts. The regulatory framework discussion was modified to describe the Metropolitan Transportation

Plan/Sustainable Communities Strategy, which was adopted after the original Final SEIR was published in December 2011.

The analysis for Impact 3.2-2 was revised to reflect the changes in the CAP related to the implementation measures and the associated greenhouse gas emissions reductions. Mitigation Measure 1 was added to ensure that the CAP would be updated to ensure that the CAP results in greenhouse gas emission reductions to meet the City's reduction target. The significance conclusion was changed to less than significant with implementation of Mitigation Measure 1.

- Chapter 4.0, Other CEQA-Required Topics: The discussion of regional growth was revised to reflect the MTP/SCS and the discussion of significant and unavoidable impacts was revised to reflect the conclusion that Impact 3.2-2 would be less than significant with mitigation.

- Chapter 7.0, References: The list of references has been updated.

As previously described, the revisions to the Draft SEIR do not provide any significant new information as defined under CEQA Guidelines Section 15088.5.

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2.1 INTRODUCTION

No new significant environmental impacts or issues, beyond those already covered in the Draft Subsequent Environmental Impact Report (Draft SEIR) for the Sustainability Element and Climate Action Plan, were raised during the comment period. The City of Elk Grove (City), as lead agency, directed that responses to the Draft SEIR comments be prepared. Responses to comments received during the comment period do not involve any new significant impacts or "significant new information" that would require recirculation of the Draft SEIR pursuant to CEQA Guidelines Section 15088.5.

2.2 LIST OF COMMENTORS

Table 2-1 lists the comments on the Draft SEIR that were submitted to the City. The assigned comment letter number, letter date, letter author, and affiliation, if presented in the comment letter or if representing a public agency, are also listed. A comment letter was received by the Delta Stewardship Council (DSC); however, the DSC subsequently retracted their comment letter so it is not included and no response is provided.

TABLE 2-1: LIST OF COMMENTORS

RESPONSE LETTER/ NUMBER	INDIVIDUAL OR SIGNATORY	AFFILIATION	DATE
A	Jorge Rivas	California Department of Transportation District #3	November 15, 2011
B	Scott Morgan	Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	November 15, 2011

2.3 COMMENTS AND RESPONSES

REQUIREMENTS FOR RESPONDING TO COMMENTS ON A DRAFT SEIR

CEQA Guidelines Section 15088 requires that City, as lead agency, evaluate and respond to all comments on the Draft SEIR that regard an environmental issue. The written response must address the significant environmental issue raised and provide a detailed response, especially when specific comments or suggestions (e.g., additional mitigation measures) are not accepted. In addition, the written response must be a good faith and reasoned analysis. However, lead agencies need only respond to significant environmental issues associated with the project and do not need to provide all the information requested by the commentor, as long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Section 15204(a)).

CEQA Guidelines Section 15204 recommends that commentors provide detailed comments that focus on the sufficiency of the Draft EIR in identifying and analyzing the possible environmental impacts of the project and ways to avoid or mitigate the significant effects of the project, and that commentors

provide evidence supporting their comments. Pursuant to CEQA Guidelines Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

CEQA Guidelines Section 15088 also recommends that revisions to the Draft EIR be noted as a revision in the Draft EIR or as a separate section of the Final EIR. Chapter 3.0 of this Final SEIR identifies all revisions to the Draft SEIR for the Sustainability Element and Climate Action Plan.

RESPONSES TO COMMENT LETTERS

Written comments on the Draft SEIR are reproduced on the following pages, along with responses to those comments. To assist in referencing comments and responses, the following coding system is used:

- Each letter is lettered (i.e., Letter A) and each comment within each letter is numbered (i.e., comment A-1, comment A-2).

From: Jorge Rivas [mailto:jorge_rivas@dot.ca.gov]
Sent: Tuesday, November 15, 2011 5:26 PM
To: Christopher Jordan
Cc: Eric Fredericks
Subject: City of Elk Grove Sustainability Element and Climate Action Plan

03200SAC0051
03-SAC-VAR
City of Elk Grove Sustainability Element and Climate Action Plan
Subsequent Environmental Impact Report (SEIR)
SCH#2011062031

Dear Mr. Jordan:

Thank you for the opportunity to review and comment on the Subsequent Environmental Impact Report (SEIR) for the City of Elk Grove's Sustainability Element and Climate Action Plan. The Sustainability Element includes goals and policies to help the City achieve a wide range of desired results related to sustainability. In addition, to adopt the Climate Action Plan, this includes a range of measures to reduce greenhouse gas (GHG) emissions from many different sources within the city.

A-1

At this time we have no comments. We look forward to continue working with the City of Elk Grove on this and future projects. If you have any questions, please contact me at (916) 274-0679 or via email.

Thank you,
Jorge Rivas

.....

Jorge Rivas Jr.
California Department of Transportation District #3
A: 2379 Gateway Oaks Drive Ste. 150
Sacramento, CA 95833
E: jorge_rivas@dot.ca.gov
P: 916.274.0679

Response to Letter A Jorge Rivas, California Department of Transportation District #3

Response A-1: The commentor thanks the City for the opportunity to comment on the Draft SEIR. The commentor notes that the Sustainability Element includes goals and policies to help the City achieve a wide range of desired results related to sustainability and that the Climate Action Plan includes a range of measures to reduce greenhouse gas emissions. The commentor indicates that their agency has no comments and provides their contact information. The comment does not raise any issues regarding the adequacy of the Draft SEIR. The comment is noted.

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

RECEIVED
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CITY OF ELK GROVE
PLANNING

November 15, 2011

Christopher Jordan
City of Elk Grove
8401 Laguna Palms Way
Elk Grove, CA 95758

Subject: Sustainability Element and Climate Action Plan
SCH#: 2011062031

Dear Christopher Jordan:

The State Clearinghouse submitted the above named Supplemental EIR to selected state agencies for review. The review period closed on November 14, 2011, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

B-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	**2011062031**
Project Title	Sustainability Element and Climate Action Plan
Lead Agency	Elk Grove, City of
Type	**SIR** Supplemental EIR
Description	The project would: 1) Adopt the sustainability Element of the General Plan, as a General Plan amendment. 2) Adopt the Climate Action Plan. 3) Provide a mechanism for subsequent projects to streamline analysis of cumulative impacts associated with greenhouse gases, as allowed by Section 1518.5 of the CEQA Guidelines.

Lead Agency Contact

Name	Christopher Jordan		
Agency	City of Elk Grove		
Phone	916 478 2222	***Fax***	
email			
Address	8401 Laguna Palms Way		
City	Elk Grove	***State*** CA	***Zip*** 95758

Project Location

County	Sacramento		
City	Elk Grove		
Region			
Lat / Long	38° 24' 31.6" N / 121° 22' 17.8" W		
Cross Streets			
Parcel No.			
Township	***Range***	***Section***	***Base***

Proximity to:

Highways	I-5, SR 99
Airports	
Railways	
Waterways	Sacramento River, Cosumnes River
Schools	Elk Grove USD
Land Use	All - Project applies to future long term planning projects, development applications, and policy decisions within the City.
Project Issues	Air Quality; Noise; Population/Housing Balance; Traffic/Circulation; Other Issues
Reviewing Agencies	Resources Agency; Department of Fish and Game, Region 2; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 3; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission; Delta Stewardship Council

Date Received 09/29/2011 ***Start of Review*** 09/29/2011 ***End of Review*** 11/14/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.

Response to Letter B: Scott Morgan, State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit

Response B-1: The commentor states that the State Clearinghouse submitted the Draft SEIR to selected state agencies for review. The commentor states that no state agencies submitted comments [to the State Clearinghouse] by the close of the review period. The commentor indicates that the City has complied with State Clearinghouse review requirements for draft environmental documents. The commentor makes closing remarks and provides their contact information. The comment does not identify any issues related to the adequacy of the Draft SEIR. This comment is noted.

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Revisions to the Draft SEIR include changes to the Executive Summary, Chapters 1.0, 2.0, 3.2, 4.0, and 7.0. The chapters are shown in their entirety on the following pages for ease of reading and review. As discussed in Chapter 1.0, none of the revisions identify new significant environmental impacts nor do any of the revisions result in substantive changes to the Draft SEIR that would deprive the public of a meaningful opportunity to comment on a new substantial adverse impact or on methods of mitigation or project alternatives that the project proponent has declined to implement. Changes to the Draft SEIR are shown in track changes: new text is shown in underline and deleted text is shown in ~~strikethrough~~.

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REVISIONS TO THE DRAFT SEIR

INTRODUCTION

The City of Elk Grove (City), as lead agency, determined that the Sustainability Element and Climate Action Plan (Project) is a "project" within the definition of the California Environmental Quality Act (CEQA), and requires the preparation of an Environmental Impact Report (EIR). This Draft Subsequent Environmental Impact Report (Draft SEIR) has been prepared to evaluate the environmental impacts associated with implementation of the Project.

PROJECT DESCRIPTION

The Project would:

1) Adopt the Sustainability Element of the General Plan, as a General Plan amendment. The Sustainability Element includes goals and policies to help the City achieve a wide range of desired results related to sustainability;

2) Adopt the Climate Action Plan, which includes a range of measures to reduce greenhouse gas (GHG) emissions from a variety of sources throughout the City; and

3) Provide a mechanism for subsequent projects to streamline analysis of cumulative impacts associated with greenhouse gases, as allowed by Section 15183.5 of the CEQA Guidelines.

Please refer to Chapter 2.0, Project Description, for a detailed description of the Project, its objectives, and agency approvals associated with the Project.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Subsequent Draft EIR addresses environmental impacts associated with the Project that are known to the City or were raised during preparation of the Draft SEIR. This Draft SEIR is focused on the potentially significant impacts associated with air quality, greenhouse gases/climate change, noise, population/housing, and transportation/circulation impacts. During the NOP process, comments were received from California Department of Transportation.

California Department of Transportation stated that it had no comments at this time.

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed project. Since the proposed project affects the entire City, a discussion of alternative sites is not appropriate. The alternatives analyzed in this EIR include the following alternatives, plus the Project:

- No Project Alternative – Project is not adopted or implemented.
- Revised Project Alternative – Additional greenhouse gas reduction measures are included in the Climate Action Plan.

As summarized in Table ES-1 below, Alternative 2 (Revised Project) is the environmentally superior alternative because it provides the greatest reduction of potential impacts in comparison to the other alternatives. Alternative 1 (No Project) is worse than the Project. Please see Chapter 5 for a full discussion of alternatives to the Project.

TABLE ES-1: COMPARISON OF ALTERNATIVES TO THE PROJECT

ENVIRONMENTAL ISSUE	PROPOSED PROJECT	ALTERNATIVE 1 NO PROJECT	ALTERNATIVE 2 REVISED PROJECT
Greenhouse Gases and Climate Change	Same	Worse	Superior
Air Quality, Noise, and Transportation	Same	Worse	Superior
Overall	**No Change**	**5 (Worst)**	**1 (Best)**

SUMMARY OF IMPACTS AND MITIGATION MEASURES

In accordance with the CEQA Guidelines, this EIR focuses on the significant effects on the environment. The CEQA Guidelines defines a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Some impacts are reduced to a less than significant level with the implementation of mitigation measures and/or compliance with regulations. The definition of "beneficial" effect is not defined in the CEQA Guidelines, but for purposes of this EIR a beneficial effect is one in which an environmental condition is enhanced or improved.

The environmental impacts of the proposed project, the impact level of significance prior to mitigation, the proposed mitigation measures to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Air Quality			
Impact 3.1-1: Air quality impacts from improvements.	LS	None	LS
Impact 3.1-2: Air quality impacts from increased development intensities.	LS	None	LS
Impact 3.1-3: Expose sensitive receptors to substantial pollutant concentrations.	LS	None	LS
Impact 3.1-4: Create objectionable odors affecting a substantial number of people.	LS	None	LS
Greenhouse Gases and Climate Change			
Impact 3.2-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LS	None	LS
Impact 3.2-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	~~SU~~PS	**Mitigation Measure 1** Prior to adoption of the Sustainability Element and Climate Action Plan, Action 2.3 of Chapter 5 of the Climate Action Plan shall be amended to read as follows: "Action 2.3: Should the annual reporting and monitoring actions (Actions 1.1 through 1.6) identify that the reduction measures included herein are not collectively meeting the GHG reduction goal of 15% by 2020, Planning Department staff shall prepare and present to the City Council recommended revisions to the CAP that would modify or replace measures to the extent necessary to achieve the GHG reduction goal of 15%."~~None~~	~~SU~~LS

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Noise			
Impact 3.3-1: Exposure of persons to noise or vibration from improvements.	LS	None	LS
Impact 3.3-2: Noise exposure associated with higher building densities and intensities.	LS	None	LS
Population and Housing			
Impact 3.4-1: Induce substantial population growth in an area, either directly or indirectly.	LS	None	LS
Transportation			
Impact 3.5-1: Impacts to the multi-modal transportation system.	LS	None	LS
Impact 3.5-2: Impacts to traffic from increased building densities and intensities.	LS	None	LS
Cumulative			
Impact 4.-1: Cumulative impacts to air quality, noise, and transportation.	LCC	None	LCC

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

The City of Elk Grove (City), as lead agency, has determined that the Sustainability Element and Climate Action Plan (CAP) project (Project) is a "project" within the definition of CEQA. CEQA requires the preparation of an Environmental Impact Report (EIR) prior to the approval of any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

This Draft Subsequent EIR (Draft SEIR) has been prepared to evaluate the environmental impacts associated with implementation of the Project. This section provides a summary of the Project, describes the purpose and intended uses of the EIR, describes the EIR process, provides an overview of the contents of this Draft SEIR, and identifies effects found to not be significant.

1.1 SUMMARY OF THE PROPOSED PROJECT

The Project would:

1) Adopt the Sustainability Element of the General Plan, as a General Plan amendment. The Sustainability Element includes goals and policies to help the City achieve a wide range of desired results related to sustainability;

2) Adopt the CAP, which includes a range of measures to reduce greenhouse gas (GHG) emissions from a variety of sources throughout the City; and

3) Provide a mechanism for subsequent projects to streamline analysis of cumulative impacts associated with greenhouse gases, as allowed by Section 15183.5 of the CEQA Guidelines.

1.2 PURPOSE AND INTENDED USES OF THE EIR

This Draft SEIR has been prepared in compliance with the requirements of CEQA (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). As described in the State CEQA Guidelines Section 15126, an EIR must disclose the expected significant environmental impacts of a project, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts.

The Sustainability Element is a component of the City's General Plan and the CAP is an implementation measure of the Sustainability Element. The Project and associated Subsequent Environmental Impact Report (SEIR) are intended to serve as programmatic tiering documents for the purposes of CEQA as allowed under ~~Section 15183.5 of the~~ CEQA ~~Guidelines~~. A tiering document front-loads the analysis needed for many projects in order to decrease the time and money that would be needed for individual analyses for each subsequent project.

The CEQA Guidelines specifically identify the process for using the analysis in an EIR to streamline the environmental analysis of subsequent projects. Paragraphs (c) and (d) of CEQA Guidelines

Section 15168 describe how a Program EIR may be used with later activities and how the Program EIR may be used to simplify the analysis for subsequent EIRs. CEQA Guidelines Section 15168(d)(3), specifically allows subsequent EIRs to solely discuss new effects which had not been considered before in the Program EIR. As described under CEQA Guidelines Section 15183(a), CEQA mandates that projects that are consistent with the development density established by a general plan for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. CEQA Guidelines Section 15183(b) identifies that, in approving a project that meets the requirements of the section (that is, the project is consistent with development densities established in a community plan, general plan, or zoning for which an EIR was certified), the lead agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:

(1) Are peculiar to the project or the parcel on which the project would be located.

(2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent.

(3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action.

(4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.

CEQA Guidelines Section 15183(c) states:

"(c) If an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards, as contemplated by subdivision (e) below, then an additional EIR need not be prepared for the project solely on the basis of that impact."

CEQA Guidelines Section 15183.5 provides further support for this approach to tiering and streamlining the analysis of greenhouse gases, indicating that project-specific environmental documents may rely, through tiering or incorporation by reference, on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in Sections 15152 (tiering), 15167 (staged EIRs), 15168 (program EIRs), 15175–15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning). The Draft SEIR prepared by the City is intended to provide the analysis necessary for the City to use the document as a tiering and streamlining document as provided by CEQA Guidelines Sections 15168 and 15183, which is supported by the language in CEQA Guidelines Section 15183.5(a).

In the case of the CAP, the City is creating a tiering document that addresses the elements identified in CEQA Guidelines Section 15183.5(b)(1) and establishes the City's consistency with state GHG legislation such as AB 32 and SB 97 through the year 2020.

The City, as the lead agency, has prepared this SEIR to provide decision-makers, the public, responsible agencies, and trustee agencies with an objective analysis of the potential environmental impacts resulting from adoption of the Project and subsequent implementation of projects consistent with the Project. The environmental review process enables interested parties to evaluate the Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the Project. While CEQA requires public agencies to consider, and where feasible, minimize environmental impacts of a proposed project, CEQA also requires the lead agency to balance adverse environmental effects against other public objectives, including the economic, environmental, and social benefits of a project, in determining whether a project should be approved.

This EIR will be used by the City as a tool in evaluating the environmental impacts of the Project and will be used, in conjunction with the CAP, to streamline CEQA review of subsequent projects. Please see Chapter 2.0, Project Description, for a description of approvals and subsequent actions associated with the Project.

As the Lead Agency under the provisions of CEQA, the City has discretionary approval authority and the responsibility to consider the environmental effects of the Project. This EIR, in accordance with State CEQA Guidelines Section 15126, will serve as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the Project. The City will consider the Draft SEIR, comments received on the Draft SEIR, and responses to those comments before making a decision regarding the proposed project.

1.3 TYPE OF EIR AND RELATIONSHIP TO GENERAL PLAN EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Subsequent EIR to the General Plan EIR pursuant to CEQA Guidelines Section 15162. The certified Elk Grove General Plan EIR (General Plan EIR) (SCH# 2002062082) was prepared as a Program EIR consistent with the requirements of CEQA Guidelines Section 15168.

CEQA Guidelines Section 15162 provides that a Subsequent EIR is warranted if the lead agency determines, among other things, that substantial changes have occurred to a project that will have one or more significant effects not discussed in the previous EIR. The Project would amend the General Plan to include an additional element, the Sustainability Element, and would also adopt the CAP, which will implement components of the Sustainability Element. This Draft SEIR is appropriate under Public Resources Code Section 21166 and CEQA Guidelines Section 15162.

The environmental analysis contained in this document is focused on two separate aspects of the Project. The first aspect of the analysis will focus on potential adverse environmental impacts that

may occur as a result of implementation of the Sustainability Element and the CAP. For example, the CAP includes measures that will be carried out by the City or by development project applicants. Such actions may include, but are not limited to, roadway connectivity improvements, the installation of additional bus stops, energy retrofits of existing buildings, and changes in allowable densities on properties with a General Plan designation of Transit-Oriented Development (TOD). These types of improvements have the potential to result in environmental impacts, which will be addressed in this document. The exact location and timing of the potential improvements and actions that may result from adoption of the Sustainability Element and CAP are not known at this time. Therefore, the environmental analysis in this document will be conducted at the program-level, and will address the reasonably foreseeable consequences of implementing the Project. The second aspect of the analysis will focus on the effectiveness of the Sustainability Element and CAP at meeting the City's and the State of California's identified goals for GHG reductions through the year 2020.

The program-level analysis considers the broad environmental effects of the Project. This EIR will be used to evaluate subsequent projects and activities under the Project. This EIR is intended to provide the information and environmental analysis necessary to assist public agency decision-makers in considering approval of the proposed project, but not to the level of detail to consider approval of each transportation project identified in the proposed project.

Additional environmental review under CEQA may be required for subsequent projects and would be generally based on the subsequent project's consistency with the proposed project and the analysis in this EIR, as required under CEQA. It may be determined that some future projects or activities under the proposed project may be exempt from environmental review. When subsequent projects or activities under the proposed project are proposed, the City will examine the projects or activities to determine whether their effects were adequately analyzed in this Program EIR (CEQA Guidelines Section 15168). If the projects or activities would have no effects beyond those disclosed in this EIR, no further CEQA compliance would be required.

1.4 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the Project or an aspect of the Project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). No Responsible Agencies or Trustee Agencies are responsible for approvals associated with adoption of the Project or other actions to support implementation of the Project.

1.5 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for this EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City circulated a Notice of Preparation (NOP) of an EIR for the Project and an Initial Study on January 22, 2011 to Trustee and Responsible Agencies, the State Clearinghouse, and the public. The NOP and Initial Study are presented in Appendix A. One comment was received in response to the NOP from the California Department of Transportation (CalTrans), which indicated that CalTrans had no comment.

During the review period of the NOP/Initial Study, City staff noted an error in the language regarding residential solid waste services. Residential solid waste services in the City are provided by Allied Waste Services, not Central Valley Waste Services as identified on p. 3.0-55 of the Initial Study (Appendix A). Residential solid waste generated in Elk Grove is taken to the Forward Landfill in San Joaquin County. This correction does not result in the need to changes the significance conclusions associated with solid waste issues because the Project would not result in a significant increase in demand for public services or impacts to public service facilities, as described in the Initial Study."

DRAFT SEIR

This document constitutes the Draft SEIR. The Draft SEIR contains a description of the Project, description of the environmental setting, identification of the project's direct and indirect impacts on the environment, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft SEIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft SEIR, the City will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City will provide a public notice of availability for the Draft SEIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft SEIR is forty-five (45) days. Public comment on the Draft SEIR will be accepted both in written form and oral form. All comments or questions regarding the Draft SEIR should be addressed to:

City of Elk Grove
Attn: Taro Echiburú, Planning Director
8401 Laguna Palms Way
Elk Grove, CA 95758

RESPONSE TO COMMENTS/FINAL SEIR

Following the public review period, a Final SEIR will be prepared. The Final SEIR will respond to written comments received during the public review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the Final SEIR. If the City finds that the Final SEIR is "adequate and complete", the City Council may certify the Final SEIR in accordance with CEQA. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed project that intelligently take account of environmental consequences.

Upon review and consideration of the Final SEIR, the City Council may take action to approve, revise, or reject the project. A decision to approve the proposed project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. This Mitigation Monitoring Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the Final SEIR.

1.6 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft SEIR was established through review of environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the City and responses to the NOP.

This Draft SEIR is organized in the following manner:

EXECUTIVE SUMMARY

The Executive Summary summarizes the characteristics of the Project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the Project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the Project, the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft SEIR, and summarizes comments received on the NOP.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the Project, including the location, intended objectives, background information, the physical and technical characteristics, including the

decisions subject to CEQA, subsequent projects and activities, and a list of related agency action requirements.

CHAPTER 3.0 - ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the Project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this section:

- Air Quality
- Greenhouse Gases and Climate Change
- Noise
- Population and Housing
- Transportation

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 - ALTERNATIVES TO THE PROJECT

Chapter 5.0 provides a comparative analysis between the merits of the Project and the selected alternatives. State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the Project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the Project.

CHAPTER 6 - REPORT PREPARERS

Chapter 6.0 lists all authors and agencies that assisted in the preparation of the Draft SEIR, by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the Draft SEIR, as well as technical material prepared to support the analysis.

1.7 EFFECTS FOUND NOT TO BE SIGNIFICANT

Under the CEQA statutes and the State CEQA Guidelines, a lead agency may limit an EIR's discussion of environmental effects when they are not considered potentially significant (Public Resources Code Section 21002.1(e); State CEQA Guidelines Sections 15128 and 15143). Information used to determine which impacts would be potentially significant was derived from a review of applicable planning and CEQA documentation, field work, a review of the Project, feedback from ongoing public and agency consultation, and comments received on the Notice of Preparation (Appendix A). Following the issuance of the Notice of Preparation, comments were received and reviewed to determine the final scope of the Draft SEIR. As a result of the review of existing information and the scoping process, effects on the following resources were found not to be significant, and therefore, are not included in the detailed analysis of potential project impacts:

- Aesthetics
- Agricultural Resources
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning
- Mineral Resources
- Public Services
- Recreation
- Utilities

Approval of the Project would not result in any new development or grant any entitlements for development in areas other than those addressed in the Elk Grove General Plan and considered in the Elk Grove General Plan Final EIR. Approval of the Project would in no way entitle or otherwise approve development, and as such, would not result in any adverse impacts associated with the above topic areas, as described in the Initial Study (Appendix A).

1.8 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received one comment letter in response to the NOP. The correspondence was from CalTrans, which indicated that it had no comments at this time. A copy of the letter is provided in Appendix B of this Draft SEIR.

1.9 TERMINOLOGY USED IN THIS EIR

This Draft SEIR uses the following terminology, as described in Article 20 of the State CEQA Guidelines:

"Project" means the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment directly or ultimately.

"Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

"Environment" means the physical conditions that exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

"Effects" and "impacts" as used in this document are synonymous. Effects analyzed under CEQA must be related to a physical change. Effects include:

- direct or primary effects that are caused by the project and occur at the same time and place, and
- indirect or secondary effects that are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.

"Mitigation" includes:

- avoiding the impact altogether by not taking a certain action or parts of an action;
- minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
- reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
- compensating for the impact by replacing or providing substitute resources or environments.

"Cumulative impacts" refers to two or more individual effects that, when considered together, are

- considerable or which compound or increase other environmental impacts:
- The individual effects may be changes resulting from a single project or a number of separate projects.

– The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

This Draft SEIR uses a variety of terms to describe the level of significance of adverse impacts identified during the course of the environmental analysis. These terms are defined below.

- A "less-than-significant impact" is an impact that is adverse but that does not exceed the defined standards of significance. Less-than-significant impacts do not require mitigation.
- A "potentially significant impact" is an impact for which there is not enough information to make a finding of less-than-significant impact; however, for the purpose of this Draft SEIR, the impact is considered significant. A potentially significant impact is equivalent to a significant impact and requires the identification of feasible mitigation measures or alternatives.
- A "significant impact" is an impact that exceeds the defined standards of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.
- A "significant and unavoidable impact" is an impact that exceeds the defined standards of significance and that cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

In addition to the terminology described above, the following terms and acronyms are used in this EIR:

CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
City	City of Elk Grove
CO_2e	carbon dioxide equivalents
County	Sacramento County
CWA	Clean Water Act
Draft SEIR	Draft Subsequent Environmental Impact Report

DOE	United States Department of Energy
DOT	Department of Transportation
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
F	Fahrenheit
FCAA	Federal Clean Air Act
Final SEIR	Final Subsequent Environmental Impact Report
GHG	Greenhouse Gas
MSL	mean sea level
NAAQS	National Ambient Air Quality Standards
NOC	Notice of Completion
NOP	Notice of Preparation
OHWM	Ordinary High water Mark
Project	Sustainability Element and Climate Action Plan project
SACOG	Sacramento Area Council of Governments
SOI	sphere of influence
SVAB	Sacramento Valley Air Basin
SWRCB	State Water Resources Control Board
TOD	Transit-oriented Development
USC	United States Code

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The proposed Sustainability Element and Climate Action Plan project (Project) would: 1) amend the City of Elk Grove General Plan (General Plan) to include a Sustainability Element as part of the adopted General Plan, and 2) adopt a stand-alone Climate Action Plan (CAP), as described in this chapter.

2.1 PROJECT LOCATION

REGIONAL SETTING

The Project location is the General Plan Planning Area (Planning Area), the same location and setting that was analyzed in the General Plan Environmental Impact Report. The Planning Area (Planning Area consists of approximately 146 square miles (93,560 acres) in the southern portion of Sacramento County (County) as shown in Figure 1. The Planning Area includes the City, its existing (and proposed) Sphere of Influence, and land in the unincorporated area of the County. The Planning Area is generally bordered by the City of Sacramento, Gerber Road, and Jackson Highway to the north; Cosumnes River to the east and southeast; Twin Cities Road to the south; and Sacramento River to the west (see Figure 2 for Project area).

Consistent with the State General Plan Guidelines, the Planning Area represents the area that the City envisions may ultimately be included either in a Sphere of Influence or in the incorporated City limits or otherwise related to the City and its General Plan policies. For the area within the City limits, as shown in Figure 1, the General Plan provides a detailed Land Use Map and other specific policies and actions relating to land use and other issues. For the area outside the City limits but within the Planning Area, the General Plan provides land use designations at a more conceptual level. Since the City does not have land use authority in these unincorporated areas, detailed land use categories are not assigned, and the policies of the General Plan with regard to other issues (circulation, housing, noise, etc.) are advisory only and are intended to be considered by the County in its review and approval of development projects and other matters.

While the City has no jurisdiction over the determination of land use policy in the unincorporated portion of the Planning Area, it can comment on the County's land use policies and decisions. Therefore, the General Plan is purely advisory in regards to the Planning Area outside of the City limits, although it does provide a statement of the uses the City desires in this area.

The General Plan and Zoning, Title 23 of the Elk Grove Municipal Code, guide the land uses in the City and would also guide the use of any land in the Planning Area if annexed by the City.

Natural features in the area include the Stone Lakes National Wildlife Refuge, the Cosumnes River, the Sacramento River and associated tributaries (e.g., Deer Creek, Morrison Creek, and Laguna Creek), and vegetation communities consisting of valley oak woodland, annual grassland, valley foothill riparian, and agricultural lands.

2.2 PROJECT BACKGROUND AND HISTORY

Greenhouse gas emissions have become a topic of concern for lawmakers and elected officials across California. Recent laws such as Assembly Bill (AB) 32, Senate Bill (SB) 375, and SB 97 require local governments to address greenhouse gas (GHG) emissions in their development processes and to work to achieve state-recommended GHG reduction targets. The goal of this effort is to create more sustainable communities while promoting public health, improving air quality, and responding to the potential effects of climate change.

In June 2009, the County finalized a greenhouse gas inventory (Inventory) for each jurisdiction in the County. The Inventory calculates municipal and community-wide emissions caused by activities in 2005, including transportation, waste, water, and energy-related activities. The Inventory established a baseline against which future changes in emissions can be measured and provides an understanding of major sources of GHG emissions in the City and the region.

In December 2009, the City was awarded an Energy Efficiency and Conservation Block Grant (EECBG) from the United States Department of Energy (DOE). The City dedicated a portion of its EECBG funds to prepare a Climate Action Plan together with a General Plan Sustainability Element.

The City held an initial public workshop on the concepts of sustainability, seeking input from the community on prioritization of concepts and ideas, and providing education about the City's existing programs and policies related to sustainability. The City also created the Sustainability Element and Climate Action Plan (SECAP) Advisory Committee to guide sustainability initiatives within the community. The committee's role is to inform the creation of the Sustainability Element and Climate Action Plan while also working to implement local and regional sustainability goals.

2.3 PROJECT OBJECTIVES

The following objectives have been identified for the Project:

- Provide energy use, transportation, land use, water use, and solid waste strategies to reduce Elk Grove's greenhouse gas emissions levels to 15 percent below 2005 levels by 2020.
- Provide methods for reducing Elk Grove's greenhouse gas emissions consistent with the direction of the State of California through the Global Warming Solutions Act (AB 32), Governor's Order S-03-05, and Public Resources Code Section 21083.3.
- Create a programmatic tiering document that addresses the elements identified at CEQA Guidelines Section 15183.5(b)(1) and establishes the City's consistency with state GHG legislation such as AB 32 and Senate Bill (SB) 97 through the year 2020.

2.4 PROJECT CHARACTERISTICS

This Draft SEIR evaluates the potential environmental impacts associated with the adoption and implementation of the Sustainability Element of the General Plan and CAP. The characteristics of the Sustainability Element and the CAP are described below, as well as the inter-relationship

between these two documents and the relationship of each document with the City's adopted General Plan. The Project consists of two policy documents (the Sustainability Element of the General Plan and the CAP) and would not approve or entitle any development projects in the City.

SUSTAINABILITY ELEMENT

The Sustainability Element is an optional element of the General Plan, and is not mandated by the State of California (State). The City worked closely with the community to define sustainability and identify the policy topics contained within the Sustainability Element.

The Sustainability Element includes the following components:

- A definition of sustainability, as defined by the community through public workshops;
- A description of relevant State laws;
- Identification and description of sustainability policy areas addressed in the General Plan;
- An explanation of the relationship of the Sustainability Element to other elements in the General Plan, including a matrix identifying the element in which policies relating to each sustainability policy area can be found;
- An explanation of the relationship of the Sustainability Element to the CAP; and
- A set of focused sustainability policies and actions not addressed in other elements of the General Plan.

Sustainability Components

The Sustainability Element identified three primary components of sustainability:

- **Environment** - Environmental sustainability is achieved by being a steward of the natural environment and reducing the impact of human activities on natural resources and systems that support the community.
- **Economy** - A sustainable economy is one that is strong, resilient, and conscientious. It is achieved by supporting education, jobs, businesses, green industries, innovation and economic development.
- **Community** - A sustainable community is one that is accessible, healthy, safe, and diverse and promotes well-being. It is achieved by supporting public participation, healthy living, access to social services, cultural diversity, historic preservation and the arts.

Sustainability Policy Areas

The Sustainability Element provides a planning framework to address sustainability while adhering to the Guiding Goals and Focus Goals of the adopted General Plan. The Sustainability Element establishes policies and actions in the following five issue areas:

1. Municipal Responsibility:

   a. Sustainable decision-making and partnerships;

   b. Sustainability and Climate Action Plan Monitoring;

   c. Environmentally preferred purchasing; and

   d. Financing strategies.

2. Innovative Low Carbon Transportation and Development:

   a. Green building;

   b. Transit-oriented development (TOD); and

   c. Transportation and parking demand management.

3. Healthy Natural Environment and Resource Stewardship:

   a. Air quality, greenhouse gasses and resource conservation;

   b. Community forest;

   c. Native and drought-tolerant landscaping;

   d. Energy efficiency, conservation and renewable;

   e. Sustainable stormwater management;

   f. Waste management; and

   g. Water conservation and efficiency.

4. Healthy Community and Cultural Diversity:

   a. Child, youth and senior services;

   b. Community character and placemaking;

   c. Community involvement;

   d. Environmental justice;

   e. Public education and awareness; and

   f. Public health and safety.

5. Robust Green Economy:

   a. Community food systems; and

b. Green jobs and businesses.

CLIMATE ACTION PLAN

The City's Climate Action Plan is a culmination of existing and proposed initiatives to reduce greenhouse gas emissions. The CAP ensures that the City's future activities and development patterns conform to California climate change legislation. The CAP will also make future development easier by acting as a tiering document for GHG emissions under the California Environmental Quality Act.

The purpose of the CAP is to identify how the City will achieve the state-recommended GHG emission reduction target of 15 percent by the year 2020 and to create a path to obtain 2050 State targets associated with Governor's Order S-03-05. The CAP provides goals and associated measures, also referred to as GHG reduction measures, in the sectors of energy use, transportation, land use, water, and solid waste. In addition, the CAP provides goals and measures for longer-term adaptation to the potential risks associated with climate change.

More specifically, the CAP:

- Identifies sources of greenhouse gas emissions from sources within the City's jurisdictional/political boundary and estimates how these emissions may change over time.
- Discusses the various outcomes of reduction efforts and how these reduction efforts can be implemented and advertised.
- Provides energy use, transportation, land use, water use, and solid waste strategies to reduce Elk Grove's greenhouse gas emissions levels to 15 percent below 2005 levels by 2020.
- Provides methods for reducing the City's greenhouse gas emissions consistent with the direction of the State of California through the Global Warming Solutions Act (AB 32), Governor's Order S-03-05, Public Resources Code Section 21083.3(b,d), and CEQA Guidelines Section 15064.4. [The California Environmental Quality Act (CEQA) Guidelines encourage the adoption of policies or programs as a means of addressing comprehensively the cumulative impacts of projects. See State CEQA Guidelines, §15064(h)(3), §15130(d).]
- Provides substantial evidence that the emissions reductions estimated in the Climate Action Plan are feasible.

CAP Components

The CAP includes all of the elements identified under CEQA Guidelines Section 15183.5(b)(1), which identifies the elements that a plan for the reduction of GHGs should include. Specifically, the CAP complies with the provisions of CEQA Guidelines Section 15183(b)(1) by providing a quantified inventory of GHG emissions and by providing a level based on substantial evidence below which activities subject to the plan will not make a cumulatively considerable contribution to GHG impacts. That level is based on the State's AB 32 goals. The CAP also identifies and

analyzes the emissions associated with specific actions, and sets forth performance standards to achieve the specified emissions goals. The analysis in the CAP and supporting appendices demonstrates that the specified emissions goals will be achieved by the measures identified in the CAP. Finally, the CAP includes monitoring measures, and the CAP will be adopted in a public process following environmental review.

Executive Summary: The Executive Summary describes the need for the CAP and provides an overview of the information presented in the CAP.

Chapter 1: - Introduction. In this chapter, the reader is introduced to the general purpose and mechanics of the CAP. Further, the chapter provides background on sustainability efforts and public outreach that informed the CAP.

Chapter 2: Background. Chapter 2 describes the context of overall GHG science and regulation as related to the CAP. The chapter concludes with an explanation of the relationship of the CAP to the Sustainability Element and General Plan.

Chapter 3: Greenhouse Gas Emissions Inventory & Forecast. This chapter provides the primary, big-picture results of the CAP, summarizing the foundation for the CAP, and success of the Plan at achieving its reduction targets. This chapter establishes the City's reduction target of 15 percent below 2005 GHG emissions levels by 2020.

Chapter 4: Reduction Strategy. This chapter details all actions that will be implemented in the city to reduce GHG emissions and describes the basis for the reductions summarized in Chapter 3. The total reductions by policy topic and sector are summarized at the beginning of the section. For each policy topic, a set of measures to reduce emissions from both municipal and community-wide sources is identified. The measures are grouped into four policy topics: an Innovative and Efficient Built Environment, Resource Conservation, Transportation Alternatives and Congestion Management, and Municipal Programs. Each measure includes a description of the measure and specific actions that the City will take to implement the measure. Chapter 3.2 of this EIR, Greenhouse Gases and Climate Change, identifies 2005 GHG emissions (Tables 3.2-1 and 3.2-2) projected 2020 and 2025 business-as-usual GHG emissions (Table 3.2-3), GHG reductions associated with CAP implementation by policy topic (Table 3.2-4), and GHG reductions associated with CAP implementation by sector (Table 3.2-6). The measures presented in the Chapter 4 are listed below.

BUILT ENVIRONMENT

BE-1. Building Stock: Existing. Promote energy conservation by residents and businesses in existing structures in close coordination with other agencies and local energy providers, including the Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric (PG&E).

BE-2. Building Stock: Residential Appliances in Existing Development. Support residential upgrades to more energy-efficient, cost-saving appliances for existing homes, leveraging regional and state resources to target indoor and outdoor appliances and equipment in existing homes.

BE-3. Building Stock: Nonresidential Appliances in Existing Development. Equip businesses in Elk Grove to reduce operational expenses and maximize energy efficiency through the use of energy-efficient and cost-effective indoor and outdoor appliances and equipment.

BE-4. Building Stock: Retrofits to the Existing Housing Stock. Promote retrofits in the existing residential housing stock, leveraging existing local programs and regional resources to reduce household energy costs and increase home values.

BE-5. Building Stock: Nonresidential Retrofits. Facilitate retrofits and energy efficiency improvements within the existing nonresidential building stock that reduce maintenance and operation costs.

BE-6. Building Stock: New Construction. Adopt CALGreen Tier 1 standards to require all new construction to achieve a 15 percent improvement over minimum Title 24 CALGreen energy requirements. BE-7. Building Stock: Appliances and equipment in new development. Encourage use of energy-efficient appliances and equipment in new buildings.

BE-7. Building Stock: Appliances and Equipment in New Development. Encourage the use of energy-efficient appliances and equipment in new buildings that maximize efficiency.

BE-8. Community Forestry. Plant trees in appropriate densities and locations that will maximize energy conservation and air quality benefits.

BE-9. Cool Paving Materials. Require the use of high-albedo material for future outdoor surfaces to the greatest extent feasible, including but not limited to parking lots, median barriers, roadway improvements, and sidewalks.

BE-10. On-Site Renewable Energy Installations. Promote voluntary installations of on-site solar photovoltaics in new and existing development, and revise standards to facilitate the transition to solar water heaters and solar photovoltaics in new development.

BE-11. Off-Site Renewable Energy. Encourage participation in SMUD's off-site renewable energy programs, which allow building renters and owners to choose locally produced cleaner electricity sources.

RESOURCE CONSERVATION

RC-1. Waste Reduction. The City shall facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste sent to the landfill from Elk Grove and achieve an 80% diversion by 2020.

RC-2. Water Conservation. Reduce the amount of water used by residential and nonresidential uses.

RC-3. Recycled Water. Promote and remove barriers to use of greywater and recycled water for irrigation.

TRANSPORTATION ALTERNATIVES AND CONGESTION MANAGEMENT

TACM-1. Local Goods. Promote policies, programs, and services that support the local movement of goods in order to reduce the need for travel.

TACM-2. Transit-Oriented Development (TOD). Support higher-density, compact development along transit by placing high-density, mixed-use sites near transit opportunities.

TACM-3. Intracity Transportation Demand Management. The City shall continue to implement strategies and policies that reduce the demand for personal motor vehicle travel for intracity (local) trips.

TACM-4. Intercity Transportation Demand Management. The City shall support and contribute to regional efforts to reduce demand for intercity (regional) personal vehicle travel.

TACM-5. Pedestrian and Bicycle Travel. Provide for safe and convenient pedestrian and bicycle travel through implementation of the Bicycle and Pedestrian Master Plan and increased bicycle parking standards.

TACM-6. Public Transit. Continue to improve and expand transit services for commuters and non-commuters traveling within Elk Grove and regionally, providing the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove residents to use public transit to commute to jobs outside the City.

TACM-7. Jobs/Housing Balance. Continue to improve Elk Grove's jobs/ housing ratio and seek to achieve sufficient employment opportunities in Elk Grove for all persons living in the City.

TACM-8. Affordable and Senior Housing. Continue to promote and require the development of affordable and senior housing in Elk Grove.

TACM-9. Efficient and Alternative Vehicles. Promote alternative fuels and efficient vehicles throughout the community.

TACM-10. Car Sharing. Promote the use of vehicles and transportation options other than single-occupant vehicles.

TACM-11. Safe Routes to School. Implement SACOG's Safe Routes to School policy.

TACM-12. Traffic Calming and Anti-Idling. Improve traffic flow and reduce unnecessary idling through use of traffic calming devices and enforcement of idling restrictions.

MUNICIPAL PROGRAMS

MP-1. Employee Commute. Establish an employee incentive program to encourage the use of transportation alternatives

MP-2. Municipal Facilities: New. All City facilities shall incorporate energy-conserving design and construction techniques.

MP-3. Fleet Vehicles. Adopt a policy to incrementally upgrade the vehicle fleet.

MP-4. Environmentally Preferable Purchasing. Implement a consolidated and comprehensive environmentally preferable purchasing effort.

MP-5. Municipal Facilities: Existing. Implement the recommendations of the City's energy audits.

MP-6. Fleet Operations. Efficiently use and maintain existing vehicles.

MP-7. Municipal Water Use. Improve the efficiency of municipal water use through retrofits and employee education.

MP-8. Municipal Waste. Reduce municipal waste through employee education and environmentally preferable purchasing.

Chapter 5: Conclusion and Next Steps. Chapter 5 provides a set of strategies to ensure that CAP policies will be continuously implemented, integrated, and updated.

Chapter 6: Glossary. This is a list of terms used throughout the document, exclusive to Elk Grove and this Plan.

Chapter 7: Works Cited. This section includes all citations from the body of the report and excludes citations that are included in either of the appendices.

Appendix A. This appendix presents a simplified version of the GHG inventory peer review and update, in addition to a description of the methodology used to account for state actions in the forecast.

Appendix B. This section presents the assumptions and reductions in GHG emissions for each reduction measure that was accounted for in Chapter 4.

Relationship of the CAP to the Sustainability Element

The Sustainability Element provides a vision and strategy to guide sustainability in the City over the next 20 years. The CAP is a tool that is linked to the General Plan through the Sustainability Element, but focuses specifically on greenhouse gas emissions reductions. The CAP is a shorter-term plan that will be updated on a more frequent basis. Future updates to the CAP may warrant subsequent General Plan amendments to ensure that relevant measures are incorporated as appropriate into the City's primary planning document.

The CAP identifies and quantifies the impact of the City's sustainability vision, policies, and programs on GHG emissions. The General Plan Sustainability Element and Climate Action Plan function together as part of the City's comprehensive toolkit to achieve a vibrant and sustainable community.

GHG reduction measures identified in the CAP are integrated into the policies and actions in the Sustainability Element. Each policy or action in the Sustainability Element that has related CAP reduction measures is identified with a cross-reference to the CAP.

2.5 CONSISTENCY WITH THE ELK GROVE GENERAL PLAN

State Law requires that "…the general plan and elements and parts thereof comprise an integrated, internally consistent, and compatible statement of policies…". The purpose of requiring internal consistency is to avoid policy conflict and provide a clear policy guide for the future maintenance, improvement and development of housing within the City. All elements of the General Plan have been reviewed for consistency in coordination with the preparation of the Sustainability Element and CAP. The following paragraphs outline the relationship of the Sustainability Element and its policies to other elements of the adopted General Plan. Future development, infrastructure, policy documents, and other projects would continue to be required to be consistent with all relevant policies and programs of the elements of the General Plan.

The Elk Grove General Plan establishes the City's goals and policies related to a broad range of planning issues, including, but not limited to, land use, development, conservation of natural resources, circulation, and provision of public services and utilities. The General Plan establishes guiding goals, which are broad statements of purpose and direction. The General Plan policies ~~that~~ serve as a framework for future decision-making. The General Plan also identifies specific actions that the City will take to implement the General Plan. The Guiding Goals of the General Plan are:

Guiding Goal 1: A High Quality of Life for All Residents

Guidling Goal 2: Diversified Economic Base

Guidling Goal 3: Protection of the Natural Environment

Guidling Goal 4: Preservation and Enhancement of Elk Grove's Unique Historic and Natural Features

Guidling Goal 5: Preservation of the Rural Character of Elk Grove

The Sustainability Element builds upon the guiding goals as well as the sustainability principles established in the goal, policy, and action item language in the elements of the adopted General Plan. All elements of the General Plan contribute policies and actions that address sustainability. For example, the Land Use Element includes policies to promote compact and mixed-use development, and the Circulation Element promotes enhanced connectivity between developments. The Housing Element supports equity through affordable housing opportunities, and the Economic Development Element includes policies to grow a strong local economy and promotes employment opportunities for all segments of the community. The Sustainability Element provides a matrix that summarizes which sustainability issues are addressed in each element of the General Plan. The Sustainability Element provides additional sustainability policies and actions to address components of sustainability that are not addressed in the other General Plan elements. The CAP is linked to the General Plan through the proposed General Plan

Sustainability Element. The Sustainability Element and Climate Action Plan are two separate but related components of the City's sustainability strategy. The Sustainability Element organizes and highlights the City's goals related to sustainability and provides new direction and vision to maintain a healthy, balanced community.

The CAP implements the sustainability principles of the General Plan. The CAP focuses specifically on strategies to reduce GHG emissions and provides direction to reduce emissions consistent with State law and the CEQA Guidelines. The CAP is a tool that allows the City to look at its impact on GHG emissions, establish goals for GHG emissions reductions, and create steps to achieve these reduction targets. The CAP builds on the goals and vision of the Sustainability Element and implements specific policies and actions from the Conservation and Air Quality, Circulation, Economic Development, Housing, Sustainability Elements as described in Chapter 4 of the CAP. The CAP then translates the implementation of the General Plan goals, policies, and actions~~, but translates these goals~~ into numeric thresholds and targets for GHG emissions. The measures identified in the CAP implements The CAP will be linked to the General Plan as a stand-alone policy and implementation item of ~~with~~ the Sustainability Element, which, upon adoption, will be a binding element of the General Plan.

2.6 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This SEIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed project.

CITY OF ELK GROVE

Project Approval

The City is the lead agency for the proposed Project. The Project will be presented to the City Council for comment, review, and action after a review and recommendation by the Planning Commission. The City Council has the sole discretionary authority to approve the proposed Project. In order to approve the proposed Project, the City Council would consider the following actions:

- Certification of the Sustainability Element and Climate Action Plan Environmental Impact Report;
- Adoption of a General Plan Amendment to include the Sustainability Element in the General Plan; and
- Adoption of the Climate Action Plan.

Subsequent Use

This SEIR discloses environmental effects associated with implementation of the proposed Project. When considering approval of subsequent activities under the proposed Project, the City would utilize this SEIR as the basis in determining potential environmental effects and the appropriate level of environmental review, if any, of a subsequent activity. The City may perform or consider the following subsequent activities to implement the proposed Project:

- Amendment of the General Plan Land Use Map and/or Zoning Map to implement various measures of the CAP and actions of the Sustainability Element;
- Approval, construction, and operation of subsequent public facility and infrastructure improvement projects;
- Approval, construction, and operation of subsequent development proposals;
- Implementation of various improvements identified in measures within the CAP; and
- Ongoing monitoring of implementation efforts aimed at reducing GHGs, including but not limited to, updates and revisions to the Sustainability Element and CAP.

APPLICATION OF THIS SEIR AND THE CAP TO FUTURE CEQA REVIEWS AND SPECIFIC PROJECTS

CEQA Guidelines Section 15183.5 provides support for streamlined analysis of greenhouse gases impacts associated with later project-specific environmental documents. As described in Section 1.0, Introduction, this SEIR and CAP provide a programmatic analysis of greenhouse gas emissions and mitigation. The City intends to use this SEIR as a tiering and streamlining document as allowed under Section 15183.5 of the CEQA Guidelines.

Section 15183.5(b) further allows for the City to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions; the CAP analyzes and mitigates greenhouse gas emissions and is consistent with the requirements of Section 15183(b)(1). As set forth in Section 15183.5(b) and pursuant to Sections 15064(h)(3) and 15130(d), the City may use the CAP to determine that a subsequent project's incremental contribution to greenhouse gas and climate change impacts is not cumulatively considerable if the project complies with the CAP.

Any project that is not consistent with the CAP would be required to analyze greenhouse gas emissions in a project-level environmental document and would not be able to tier from this SEIR.

OTHER GOVERNMENTAL AGENCY APPROVALS

Adoption and implementation of the Sustainability Element and CAP, including implementation of subsequent reasonably foreseeable actions, are not anticipated to require any approvals or permits from other local, regional, state or federal agencies.

This section addresses the Project's potential to result in adverse impacts related to the generation of GHGs and contributions to global climate change. This section includes a discussion of existing GHG emissions levels and sources within the City, as well as the potential adverse effects associated with climate change. This section addresses GHGs and climate change from two perspectives: The first perspective is the Project's direct contribution to climate change and GHG as a result of Project implementation. The second perspective is the Project's effectiveness at meeting local, regional, and statewide GHG reduction goals. There were no comments received during the NOP comment period related to this environmental topic.

3.2.1 GREENHOUSE GASES AND CLIMATE CHANGE

ENVIRONMENTAL SETTING

Greenhouse Gases and Climate Change Linkages

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Human-caused emissions of these GHGs, in excess of natural ambient concentrations, are responsible for enhancing the greenhouse effect (Ahrens 2003). Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission 2006a). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (California Energy Commission 2006a).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California is the 12th to 16th largest emitter of CO_2 in the world and produced 492 million gross metric tons of carbon dioxide equivalents in 2004 (California Energy Commission 2006a).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG

emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 40.7% of total GHG emissions in the state (California Energy Commission 2006a). This category was followed by the electric power sector (including both in-state and out of-state sources) (22.2%) and the industrial sector (20.5%) (California Energy Commission 2006a).

Effects of Global Climate Change

The effects of increasing global temperature are far reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change and has found that increases in the ambient global temperature as a result of increased GHGs is anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion. This also threatens levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. According to a California Energy Commission report, the snowpack portion of the supply could potentially decline by 70% to 90% by the end of the 21st century (CEC 2006c). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this could increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and, according to the CEC report, it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (CEC 2006c). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands (CEC 2006c). As the existing climate throughout California changes over times, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (California Climate Change Center 2006), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25 to 35 percent under the lower warming range, to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine

particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The state's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major state fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25 percent of the water supply they need; and decrease the potential for hydropower production within the state (although the effects on hydropower are uncertain).

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70 to 90 percent. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, and hamper hydropower generation.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development will change, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures could worsen ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than optimal development for many crops, so

rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products that could be most affected include wine grapes, fruits and nuts, and milk.

In addition, continued global warming could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global warming could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to intensify this threat by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30 percent toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90 percent.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the state. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

GREENHOUSE GAS EMISSIONS INVENTORY

The CAP includes an inventory of GHG emissions in the City in the year 2005. The inventory is broken into two categories: municipal operations emissions and community-wide emissions.

Background

In June 2009, the Sacramento County Department of Environmental Review and Assessment completed a greenhouse gas (GHG) emissions inventory (Inventory) of each jurisdiction in the County. The Inventory calculated GHG emissions produced from government operations and community-wide activities in 2005.

The Inventory used the baseline year of 2005 because of the availability of reliable data and also to maintain consistency with California's Assembly Bill (AB) 32 and other agencies throughout the State. The Inventory is an important first step for the City to create a baseline against which it can measure future progress. The largest GHG emitters and opportunities for reduction are revealed through the Inventory, making it an integral component of the City's sustainability efforts.

It should be noted that GHG emissions inventorying is not an exact science. There is no standard protocol for community-wide inventories, and the protocol for calculating the GHG impact of City government operations is continually being improved by the State. There are sources of GHG emissions (e.g. refrigerants and water reservoirs) that scientists know contribute to GHGs, but are difficult or impossible to calculate at the local level. Furthermore, it is likely that new sources of GHGs will be able to be assessed in the future, and that the way of calculating present emissions will change drastically as technology and science develop. The City's Inventory should therefore be viewed as a study to inform policy decisions rather than a scientific measurement of GHGs.

In 2010, City staff completed an update to the data provided for the City in Chapter 3 of the GHG Emissions Inventory for Incorporated and Unincorporated Sacramento County (Inventory) published by Sacramento County in June 2009. The update ensured that the City's Inventory utilizes accurate and up-to-date information and methodology. Modifications to the Inventory were completed in order to streamline CAP analysis. The review and update is not intended to be a formal revision or addendum to the Inventory; rather, the review and update presents a new approach to the City Inventory for the purposes of the CAP.

The City updated the government operations inventory to adhere to the Local Government Operations Protocol v1.1 released in May 2010 by CARB. Unlike municipal GHG inventories, community-wide inventories do not have a State protocol to follow. Inventories instead rely on best practices and a draft international protocol named the International Local Government GHG Emissions Analysis Protocol (IEAP) version 1.0 developed by ICLEI – Local Governments for Sustainability.

2005 Municipal GHG Emissions Inventory

For the baseline year of 2005, municipal operations in the City resulted in approximately 8,662 metric tons of carbon dioxide equivalent (CO2e). As shown in Table 3.2-1, the City vehicle fleet was the largest emitter, producing 86 percent of all municipal emissions.

TABLE 3.2-1: 2005 GREENHOUSE GAS EMISSIONS FROM CITY OPERATIONS

Sector	*Metric Tons CO2e*	*Percentage*
Buildings	514	5.93%
Vehicle Fleet	7,418	85.64%
Employee Commute	461	5.32%
Streetlights and Traffic Signals	73	0.84%
Waste	139	1.60%
Other Fuel Use	57	0.66%
Total	**8,662**	**100.00%**

SOURCE: CITY OF ELK GROVE, DECEMBER 2010, DRAFT CLIMATE ACTION PLAN, TABLE 3-1.

2005 Community-Wide GHG Emissions Inventory

Table 3.2-2 shows GHG emissions associated with community-wide activities, inclusive of municipal operations. As shown in Table 3.2-2, community-wide activities resulted in the generation of approximately 737,838 metric tons of CO2e in 2005. The transportation sector generated the most emissions, creating approximately 357,309 metric tons of CO2e, or 48.43 percent of total emissions. Transportation sector emissions are the result of diesel and gasoline combustion in vehicles traveling on local roads and state highways (e.g., State Route 99) that pass through the jurisdictional boundaries of the City.

TABLE 3.2-2: 2005 COMMUNITY-WIDE GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	*Metric Tons CO2e*	*Percentage*
Residential	229,841	31.15%
Commercial/Industrial	101,607	13.77%
Transportation	357,309	48.43%
Waste	39,791	5.39%
Water-Related	4,371	0.59%
Agriculture[1]	4,919	0.67%
Total	**737,838**	**100.00%**

SOURCE: CITY OF ELK GROVE, DECEMBER 2010, DRAFT CLIMATE ACTION PLAN, TABLE 3-2.

1: AGRICULTURE INCLUDES EMISSIONS FROM OFF-ROAD VEHICLES AND OTHER AGRICULTURAL ACTIVITIES.

3.2.2 REGULATORY SETTING

FEDERAL

The EPA is the federal agency responsible for implementing the Federal Clean Air Act (FCAA). The Supreme Court of the United States ruled on April 2, 2007 that CO2 is an air pollutant as defined under the FCAA, and that EPA has the authority to regulate emissions of GHGs. In response to the mounting issue of climate change, EPA has taken actions to regulate, monitor, and potentially reduce GHG emissions.

Greenhouse Gas Permitting Requirements on Large Industrial Facilities

On May 13, 2010, EPA issued the Prevention of Significant Deterioration and Title V Greenhouse Gas Tailor Rule. This final rule sets thresholds for greenhouse gas (GHG) emissions that define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

The rule establishes a schedule that will initially focus permitting programs on the largest sources and then expands beyond certain permitting programs to cover the largest sources of GHG that may not have been previously covered by the FCAA for other pollutants. During Step 1, from January 2, 2011 to June 30, 2011, only sources currently subject to the PSD permitting program (i.e., those that are newly-constructed or modified in a way that significantly increases emissions of a pollutant other than GHGs) would be subject to permitting requirements for their GHG emissions under PSD; and, for these projects, only GHG increases of 75,000 tons (68,039 MT) per year or more, on a CO2e basis, would need to determine the Best Available Control Technology

(BACT) for their GHG emissions. Similarly for the operating permit program, only sources currently subject to the program (i.e., newly constructed or existing major sources for a pollutant other than GHGs) would be subject to Title V requirements for GHG. During this time, no sources would be subject to Clean Air Act permitting requirements due solely to GHG emissions.

Step 2 will build on Step 1. During Step 2, from July 1, 2011 to June 30, 2013, PSD permitting requirements will cover for the first time new construction projects that emit GHG emissions of at least 100,000 tons (90,718 MT) per year even if they do not exceed the permitting thresholds for any other pollutant. Modifications at existing facilities that increase GHG emissions by at least 75,000 tons (68,039 MT) per year will be subject to permitting requirements, even if they do not significantly increase emissions of any other pollutant. In Step 2, operating permit requirements will, for the first time, apply to sources based on their GHG emissions even if they would not apply based on emissions of any other pollutant. Facilities that emit at least 100,000 tons (90,718 MT) per year of CO2e will be subject to Title V permitting requirements.

As part of this rule, EPA also commits to undertake another rulemaking, to begin in 2011 and conclude no later than July 1, 2012. That action will consist of an additional Step 3 for phasing in GHG permitting. Step three, if established, will not require permitting for sources with greenhouse gas emissions below 50,000 tons (45,359 MT) per year.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO2 per year. This publically available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States (U.S.). Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion

of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the U.S. Environmental Protection Agency (EPA), was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

STATE

California Strategy to Reduce Petroleum Dependence (AB 2076)

AB 2076 (Chapter 936, Statutes of 2000) requires the CEC and the ARB to develop and submit to the Legislature a strategy to reduce petroleum dependence in California. The statute requires the strategy to include goals for reducing the rate of growth in the demand for petroleum fuels. In addition, the strategy is required to include recommendations to increase transportation energy efficiency as well as the use of non-petroleum fuels and advanced transportation technologies including alternative fuel vehicles, hybrid vehicles, and high-fuel efficiency vehicles.

The strategy, *Reducing California's Petroleum Dependence*, was adopted by the CEC and CARB in 2003. The strategy recommends that California reduce inroad gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and sport utility vehicles (SUVs); and increase the use of non- petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the State to meet a target for use of biomass electricity, including biomass cogeneration facilities.

Governor's Low Carbon Fuel Standard (Executive Order #S-01-07)

Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard. The Low Carbon Fuel Standard shall be incorporated into the State Alternative Fuels Plan required by AB 1007 and is one of the proposed discrete early action GHG reduction measures identified by CARB pursuant to AB 32.

Senate Bill 97 (SB 97)

Senate Bill 97 was signed by the Governor on August 24, 2007. The bill required the Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010. The OPR is required to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to the California Global Warming Solutions Act of 2006.

Climate Action Program at Caltrans

In December 2006, the California Department of Transportation, Business, Transportation, and Housing Agency, issued a Climate Action Program. The goal of the Climate Action Program is to promote clean and energy efficient transportation, and provide guidance for mainstreaming energy and climate change issues into business operations. The overall approach to lower fuel consumption and CO_2 from transportation is twofold: (1) reduce congestion and improve efficiency of transportation systems through smart land use, operational improvements, and Intelligent Transportation Systems; and (2) institutionalize energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

The reasoning underlying the Climate Action Program is the conclusion that "the most effective approach to addressing GHG reduction, in the short-to-medium term, is strong technology policy and market mechanisms to encourage innovations. Rapid development and availability of alternative fuels and vehicles, increased efficiency in new cars and trucks (light and heavy duty), and super clean fuels are the most direct approach to reducing GHG emissions from motor vehicles (emission performance standards and fuel or carbon performance standards)."

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG emission reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

Assembly Bill 1493

In 2002, then Governor Gray Davis signed AB 1493. AB 1493 required the CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty truck and other vehicles determined by the ARB to be vehicles whose primary use is noncommercial personal transportation in the state." To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004.

Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961), and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016. For passenger cars and light-duty trucks 3,750 pounds or less loaded vehicle weight (LVW), the 2016 GHG emission limits are approximately 37 percent lower than the during the first year of the regulations in 2009. For medium-duty passenger vehicles and light-duty trucks 3,751 LVW to 8,500 pounds gross vehicle weight (GVW), GHG emissions are reduced approximately 24 percent between 2009 and 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufactures filed suit against the CARB to prevent enforcement of CCR 13 1900 and CCR 13 1961 as amended by AB 1493 and CCR 13 1961.1 (Central Valley Chrysler-Jeep et al., v. Catherine E. Witherspoon, in her official capacity as Executive Director of the California Air Resources Board et al.). Implementation of AB 1493 lapsed due to delays in receiving proper approvals from EPA to implement this law under the CAA. California received the necessary approvals on June 30, 2009; however, the State has agreed to allow the federal government to implement similar legislation (see above discussion of National Program to Cut Greenhouse Gas Emissions and Improve Fuel Economy for Cars and Trucks).

California Executive Orders S-3-05 and S-20-06, and Assembly Bill 32

On June 1, 2005, then Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order was to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by 2020 and 3) 80% below the 1990 levels by the year 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

CARB, which is part of Cal-EPA, develops air quality regulations at the state level. The state regulations mirror federal regulations by establishing industry-specific pollution controls for criteria, toxic, and nuisance pollutants. California also requires areas to develop plans and strategies for attaining state ambient air quality standards as set forth in the California Clean Air Act of 1988. In addition to developing regulations, CARB develops motor vehicle emission standards for California vehicles.

Assembly Bill 32- Climate Change Scoping Plan

On December 11, 2008 ARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of ARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce CO_2e emissions by 169 million metric tons (MMT), or approximately 30%, from the State's projected 2020 emissions level of 596 MMT of CO_2e under a business-as-usual scenario. (This is a reduction of 42 MMT CO_2e, or almost 10%, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.) The Scoping Plan also breaks down the amount of GHG emissions reductions ARB recommends for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO2e),
- the Low-Carbon Fuel Standard (15.0 MMT CO2e),
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO2e), and
- a renewable portfolio standard for electricity production (21.3 MMT CO2e).

Senate Bill 1368

SB 1368 requires the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC) to set a global warming emissions standard for electricity used in California — regardless of whether it's generated in-state or purchased from plants in other states. The new standard applies to any new long-term financial contracts for base load electricity, and applies both to investor-owned utilities and municipal utilities. The standard for baseload generation owned by, or under long-term contract to publicly owned utilities, is and emissions performance standard (EPS) of 1,100 lbs CO_2 per megawatt-hour (MWh). However, the CPUC has determined that biomass generation of electricity is EPS compliant because alternative means of disposing biomass such as open air burning and landfill deposition have the potential to generate greater concentrations of greenhouse gas in the atmosphere, including methane. This concept is described in greater detail under the impact analysis below.

Senate Bills 1078 and 107 and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20% of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33% renewable power by 2020.

LOCAL

Metropolitan Transportation Plan/Sustainable Communities Strategy

On April 19, 2012, the Sacramento Area Council of Governments (SACOG) adopted its Sustainable Communities Strategy (SCS), as required by Senate Bill (SB) 375 as part of the concurrent update of the Metropolitan Transportation Plan (MTP). As required by SB 375, the adopted SCS promotes and encourages development in areas defined by SACOG as Transit Priority Areas (TPAs). TPAs are areas of the region within one-half mile of a major transit stop (existing or planned light rail, street car, or train station) or an existing or planned high-quality transit corridor included in the MTP/SCS.

The MTP/SCS, as provided for in SB 375, is designed to provide an incentive-based approach, which provides for CEQA incentives whereby, among other things, the CEQA analysis of greenhouse gas emissions for passenger vehicles can be avoided if a project is consistent with the MTP/ SCS map. The SCS recognizes and protects local land use authority and does not preclude a local jurisdiction from planning and approving growth that is different in terms of total units or geographic extent. Moreover, the SCS does not establish a threshold of significance under CEQA Guidelines Section 15064.7 or a legal presumption that a project inconsistent with the SCS does not meet greenhouse gas emissions reduction targets or AB 32 goals. In short, the SCS is a tool to address greenhouse gas compliance and it provides incentives for development projects that are consistent with the SCS.

The MTP/SCS identifies the general location of land uses, residential densities, and building intensities within the region; identifies areas within the region sufficient to house all the population of the region; identifies areas within the region sufficient to house an eight-year projection of the regional housing need; identifies a transportation network to serve the regional transportation needs; considers the best practically available scientific information regarding resource areas and farmland in the region; considers the state housing goals; sets forth a forecasted development pattern for the region; and provides for the MTP compliance with the federal Clean Air Act.

The MTP/SCS addresses the needs of the region's population by increasing maintenance of existing roads; adding more sidewalks and bike lanes; restoring, maintaining and expanding transit; making it possible for more people to live and work in the same community; and helping people live independently as they age. It also plans for roads and transit projects where new houses and jobs are added to serve the existing population as well as new residents anticipated to move to the region over the next few decades. The MTP/SCS provides a framework to improve on past efforts to invest regional funding wisely, reduce traveler time spent in congestion and support goods movement, reduce greenhouse gas emissions, and increase the number of residents with access to transit. The MTP/SCS includes 31 policies and supportive strategies as the framework for implementing the plan. The policies are higher-level actions and the strategies are more specific actions that implement the policies. The policies and strategies are separated into four interrelated categories: Land Use and Environmental Sustainability; Finance; System Maintenance and Operations; and System Expansion.

City of Elk Grove General Plan

The Elk Grove General Plan guides development within the City limits as well as the annexation and any subsequent development of areas outside the City limits. The Conservation and Air Quality Element includes a number of measures aimed toward air quality improvement and sustainability. However, the General Plan does not include goals, policies, or actions that directly address greenhouse gas emissions. Policy H-9 supports energy conserving programs related to the production and rehabilitation of affordable housing in order to improve air quality and mitigate potential impacts of climate change.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the State CEQA Guidelines, the Project will have a significant impact related to greenhouse gases and climate change if it will:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

IMPACTS AND MITIGATION

Impact 3.2-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (less than significant)

The Project consists of goals, policies, and measures that would reduce GHG emissions from a wide range of sources and promote and increase sustainability within the City. Overall, the Project is would have a significantly positive impact on GHGs and climate change since the Project would result in a reduction in GHG emissions by 2020, as described under Impact 3.2-2 below. While approval of the Project would not directly result in any new development or grant any entitlements for development beyond what has been identified in the General Plan and analyzed in the General Plan EIR, the Project includes measures that may result in future improvements to municipal buildings, the City's circulation network, and private buildings throughout the City. The improvements would primarily consist of energy efficiency upgrades, sidewalk connectivity, tree planting, the use of on-site solar energy generation, and other measures to reduce GHGs within areas of the City that have been previously developed. These types of improvements would generally be allowed under the adopted General Plan.

Implementation of the improvements identified above would temporarily result in construction emissions, which would generate small amounts of GHGs over the short-term. Construction-related GHGs are generated primarily from diesel exhaust and employee commute trips. Given the global and cumulative nature of GHGs, and the relatively short-term and small levels of GHGs that may be generated during the construction of energy efficiency improvements identified by the Project and the Project's long-term reduction in GHG emissions, the Project would not result in a significant direct or indirect generation of GHGs. This is a **less than significant** impact and no mitigation is required.

Impact 3.2-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (~~significant and unavoidable~~less than significant with mitigation)

As described above, the Project represents a comprehensive and long-term commitment by the City to reduce GHGs and the effects of climate change from community-wide and municipal operations over the life of the City's General Plan. For consistency with State direction from the ~~AB 32~~ARB Climate Change Scoping Plan, the City has set an emissions reduction target of 15 percent below 2005 levels by 2020. Substantial evidence for establishing the emission reduction target is provided by the ARB Climate Change Scoping Plan. The Sustainability Element and the CAP include goals, policies and measures that will be implemented by the City and by future development projects within the City over the life of the General Plan.

In order to determine whether or not the emissions reduction strategies set forth by the Project would meet the target reduction goal of 15 percent below 2005 levels by 2020, the City completed emissions forecasts for the years 2020 and 2025. Emissions forecasts depict what will happen if existing trends continue unchecked by the actions established by the Project.

The City modeled future emissions growth based on projected trends in energy use, driving habits, job growth, and population growth in 2020 and 2025. Forecasts allow the City to assess the effectiveness of various reduction strategies. Forecasts also provide a snapshot of how annual emissions levels will likely change under various scenarios. The basis for all growth scenarios is a business-as-usual (BAU) projection. A BAU projection predicts how greenhouse gas emissions will increase if consumption behavior and efficiencies do not change from baseline levels, yet population, households, and vehicle miles traveled continue to increase. Under a BAU scenario, the City's emissions will grow by approximately 37.9 percent by the year 2020, from 737,838 to 1,017,499 metric tons CO2e. By 2025, the City's BAU emissions are modeled to increase 52,6 percent to 1,125,691 metric tons CO2e. Table 3.2-3 shows the results of the forecast.

TABLE 3.2-3: BUSINESS-AS-USUAL (BAU) GHG EMISSIONS FORECAST- 2020 AND 2025

Sector	*Metric Tons CO2e*		
	2005	*2020*	*2025*
Residential	229,841	311,554	345,748
Commercial/Industrial	101,607	181,758	203,498
Transportation	357,309	462,210	508,997
Agriculture[1]	4,919	1,230	0
Waste	39,791	53,937	59,857
Water-Related	4,371	6,811	7,591
Total	**737,838**	**1,017,499**	**1,125,691**
Percentage Increase from 2005	**--**	**37.90%**	**52.57%**

SOURCE: CITY OF ELK GROVE, DECEMBER 2010, DRAFT CLIMATE ACTION PLAN, TABLE 3-3.

[1] *AGRICULTURE INCLUDES EMISSIONS FROM OFF-ROAD VEHICLES AND OTHER AGRICULTURAL ACTIVITIES.*

The City's actions to reduce GHG emissions contained within the CAP are referred to as *measures*. All measures are grouped and presented in four policy topics: an Innovative and Efficient Built Environment, Resource Conservation, Transportation Alternatives and Congestion Management, and Municipal Programs. Detailed greenhouse gas reduction calculations are presented in Appendix B of the CAP. Reductions for all measures, aggregated by policy topic and sector, are described below and ~~–~~presented ~~below~~ in summary form in Tables 3.2-4 and 3.2-5. The Sustainability Element includes policies and actions that would reduce GHG emissions; most of these are also represented in the CAP.

~~transportation planning rom,of~~ As described above, the CAP includes a range of measures designed to reduce GHG emissions in the City of Elk Grove. The measures included in the CAP have the potential to reduce greenhouse gas emissions by ~~191,699~~178,987 metric tons (MT) of CO_2e by 2020. These reductions are equivalent to a ~~16.18~~15.43 percent change from 2005 baseline levels. By 2025, the City of Elk Grove may achieve a reduction of ~~248,317~~215,682 $MTCO_2e$, or a ~~16.42~~14.62 percent reduction from 2005 levels.

Local implementation of all proposed measures in the CAP and implementation of applicable CAP measures by subsequent development projects, coupled with state-mandated efforts, would allow the City to achieve its reduction target of 15 percent below baseline levels by 2020. The City's 2020 target is consistent with AB 32; therefore, implementation of the goals and measures in the

Climate Action Plan will place the City on a trajectory to be consistent with the State's recommended goal for local governments.

~~The City's 2025 reduction achievement of 16.42 percent does not follow a trajectory towards the State's 2050 reduction target of 80 percent below 1990 levels by 2050. However, it is possible that the City's actual 2050 reduction achievements will surpass that which can be calculated at this time due to technical innovations and developments to state policy. For example, the State is expected to increase the Renewable Portfolio Standard and have more stringent carbon fuels standards after 2020; however, until the State does so, the CAP assumes a constant reduction from these policies after 2020.~~

Tables 3.2-4 and 3.2-5 present the potential GHG emissions reductions (MT CO2e) for 2020 and 2025 by policy topic and then by sector.

TABLE 3.2-4: GHG REDUCTIONS BY POLICY TOPIC

Policy Topic	Metric Tons CO2e/year	
	2020 GHG Reductions	2025 GHG Reductions
An Innovative and Efficient Built Environment	-~~66,263~~40,395	-~~93,003~~51,609
Resource Conservation	-~~15,065~~28,221	-~~22,545~~31,304
Transportation Alternatives and Congestion Management	-108,221	-129,166
Municipal Programs	-2,149	-3,604
Total Reductions	**-~~191,699~~178,987**	**-~~248,317~~215,682**
Emissions Forecast	~~810,135~~802,959	~~864,985~~845,612
Net Emissions with Cap Reductions	**~~618,436~~623,972**	**~~616,668~~629,931**
Percentage Change from 2005 Levels (737,838 MTCO2e)	**-~~16.18~~15.43%**	**-~~16.42~~14.62%**

SOURCE: CITY OF ELK GROVE, ~~DECEMBER 2010~~AUGUST 2012, REVISED DRAFT CLIMATE ACTION PLAN, TABLE 4-1.

TABLE 3.2-5: GHG REDUCTIONS BY SECTOR

~~Policy Topic~~Sector	Metric Tons CO2e			
	2020	%	2025	%
Residential Development	-~~42,800~~26,426	14.7%	-~~59,878~~34,030	15.8%
Commercial/Industrial Development	-~~23,597~~14,103	7.8%	-~~33,301~~17,755	8.2%
Transportation	-110,137	61.2%	-132,446	61.4%
Waste	-~~14,571~~27,726	15.4%	-~~22,046~~30,805	14.3%
Water	-595	0.3%	-646	0.3%
Agriculture	0	0.0%	0	0.0%
Total	**-~~191,699~~178,987**	**100.0%**	**-~~248,317~~215,682**	**100.0%**

SOURCE: CITY OF ELK GROVE, ~~DECEMBER 2010~~AUGUST 2012, REVISED DRAFT CLIMATE ACTION PLAN, TABLE 4-2.

As shown in the tables above, full implementation of the Project would result in the City achieving the target threshold of a 15 percent GHG reduction below 2005 levels by 2020. In comparing the 2005 emissions with the 2020 BAU and 2020 GHG reductions, the greatest reductions are achieved in transportation (61.2%) followed by waste (15.4%) and residential, commercial, and industrial development (22.5%).

As the sector with the greatest 2005 emissions (48.4% of 2005 emissions are from on-road vehicles as shown in Table 3.2-2), the transportation sector also provides the greatest potential for GHG reductions. There is a strong regional transportation planning framework, including the MTP/SCS, Sacramento Region 511, park-and-ride lots, a regional commuter club, and a regional vanpool incentive program, that will support implementation of the Transportation Alternatives and Congestion Management (TACM) measures related to regional transportation, including but not limited to TACM-2, TACM-4, TACM-6, and TACM-10. The City's existing transportation demand management program actively promotes public transit (e-trans), ridesharing, bicycling, and other alternatives to single-occupant vehicle trips and provides an effective transportation demand system for the CAP to build on, supporting TACM-3, TACM-4, TACM-5, TACM-6, TACM-9, TACM-10, TACM-11, and TACM-12. Existing participation in the City's public transit and TDMP evidences interest and participation in alternative transportation options by City residents, employees, and commuters.

Reductions from residential, commercial, and industrial development would result in a 14.7% reduction in GHG emissions by 2020 associated with existing and new residential uses and a 7.8% reduction associated with existing and new commercial uses through implementation of Built Environment (BE) measures BE_1 through BE-11. Measures for development include mandatory measures for new development and incentivized measures for existing development. New development would demonstrate consistency with the CAP through application of mandatory measures, including compliance with CALGreen Tier 1 standards to achieve a 15% improvement over minimum Title 24 CALGreen energy requirements (BE-6), installation of on-site renewable energy systems for large non-residential developments (BE-10), and provision of a solar option for homes in new residential subdivisions (BE-10), as part of the development review and approval process. Additional energy-efficient measures for residential and commercial/industrial uses, including BE-1, BE-2, BE-3, BE-4, BE-5, and BE-11, would leverage state, regional, and City incentives, including low interest financing, reduced or no charge permits, cash incentives, and recognition programs, for residential, commercial, and industrial development in order to encourage retrofits of existing development to increase energy-efficiency, the use of energy-efficient appliances, installation and use of on-site photovoltaic systems, and participation in off-site renewable energy programs.

The CAP's Resource Conservation (RC) measures would increase solid waste diversions from 59% in 2005 to 80% by 2020 to achieve a 15.4% reduction in GHG emissions associated with waste and would also yield reductions associated with water usage (RC-2 and RC-3). While RC-1 will require the City to work with residents and businesses to increase diversion, this measure is strongly supported by AB 341, which requires CalRecycle to implement a plan involving statewide

improvements to recycling infrastructure, mandatory recycling requirements for commercial users, and other methods to achieve a 75% diversion of solid waste by 2020.

While a number of the measures are voluntary, particularly those regarding existing development, the majority of reductions would occur in association with non-voluntary measures related to transportation and solid waste. Many of the measures contained in the CAP would apply to future subsequent development projects. Future development projects must be reviewed for consistency with the General Plan, consistency with the CAP, and must implement all applicable CAP measures during project planning, design, construction, and implementation. By implementing applicable measures in the CAP, subsequent development projects would assist the City in meeting the target reduction threshold of 15 percent below BAU projections.

In the event that the implementation of various measures may not reach the full target reduction potential due to the voluntary nature of some measures and the need for cooperation from outside organizations and agencies associated with other measures, the CAP includes implementation and monitoring measures to assist in realizing the reduction targets. Chapter 5 of the CAP requires annual monitoring and reporting on the City's progress toward achieving the reduction targets. If specific measures are identified as not providing the estimated reduction level, Action 2.3 provides for consideration of amendments to the CAP; however, Action 2.3 does not require that the CAP be amended if reduction requirements are not met.

~~However, given the uncertainties of the development market, the recent lack of funding available to local governments, and the voluntary nature of some of the measures contained in the Project, the City cannot guarantee with certainty that all measures included in the CAP will be fully implemented by 2020.~~

~~For example, Measure TACM-9: Efficient And Alternative Vehicles, contained in the CAP, achieves reductions in vehicle miles traveled (VMT) by facilitating the use of electric vehicles by providing charging stations with new development. In order to achieve the reductions calculated for this measure, the City would need to ensure the provision of 200 charging stations by 2020 and 300 charging stations by 2025 (and additional 100 stations from 2020), at a rate of approximately 20 charging stations per year. Even if new charging stations are required to be included in new development projects, the City cannot guarantee that new development over the next 10-15 years will occur at a pace that would meet the CAP's target for new charging stations. Additionally, it is possible that the City will not have funding in place in the next 10-15 years to fund the installation of the projected charging stations that are not installed by private sector development.~~

The City has taken extraordinary steps to develop a comprehensive and meaningful Climate Action Plan and Sustainability Element that will result in significant reductions in GHGs over the life of the General Plan. The Project represents a comprehensive effort to significantly reduce GHG emissions across a broad spectrum of community-wide and municipal emissions sectors. The City will have achieved compliance with AB 32 by adopting a CAP that meets the statewide reduction targets.

The CAP provides specific and concrete direction to the City and development community and includes numerous specific and enforceable measures that would apply to new development in order to reduce individual subsequent projects' contributions to climate change. Compliance with the CAP and implementation of applicable CAP measures would ensure that subsequent projects, which are consistent with the General Plan, would have a less than cumulatively considerable contribution to climate change and greenhouse gases. The analysis presented above demonstrates that the implementation of the CAP for all subsequent development projects would assist the City in meeting the projected BAU reduction of more than 15.43 percent. Therefore, subsequent projects, including development projects, that are consistent with the General Plan and implement applicable CAP measures, would not result in a significant or considerable cumulative contribution to climate change and the generation of GHGs, beyond what has been analyzed and addressed in this EIR.

However, some of the CAP measures that would be implemented by the City are voluntary, require public funds, and/or require funding and implementation from outside agencies. If all of the measures included in the CAP and Sustainability Element were fully implemented, the proposed project would achieve the CAP reduction targets and would result in a less than cumulatively considerable impact. Given the uncertainties of the measures that require voluntary participation, coordination with outside agencies, and the funding availability for municipal reduction measures, the City cannot guarantee with certainty that all measures included in the CAP will be implemented and achieve the identified reduction targets by 2020.

For example, Measure TACM-9: Efficient And Alternative Vehicles, contained in the CAP, achieves reductions in vehicle miles traveled (VMT) by facilitating the use of electric vehicles by providing charging stations with new development. In order to achieve the reductions calculated for this measure, the City would need to ensure the provision of 200 charging stations by 2020 and 300 charging stations by 2025 (and additional 100 stations from 2020), at a rate of approximately 20 charging stations per year. Even if new charging stations are required to be included in new development projects, the City cannot guarantee that new development over the next 10-15 years will occur at a pace that would meet the CAP's target for new charging stations. Additionally, it is possible that the City will not have funding in place in the next 10-15 years to fund the installation of the projected charging stations that are not installed by private sector development.

Therefore, although annual review and monitoring of the effectiveness and implementation status of the reduction measures is required by the CAP, the CAP does not fully guarantee and require that adequate steps will be taken to revise the CAP in the event that some measures are found that they are not meeting the intended GHG reductions levels, which may result in the 15% reduction goal not being achieved. This impact is potentially significant. ~~However, given the uncertainties associated with implementation of the measures contained in the CAP, and the fact that many of the measures will rely on private development in an uncertain building market, the City cannot guarantee that the CAP will be fully implemented by 2020. Therefore, this impact is considered **significant and unavoidable**.~~

Mitigation Measures

Mitigation Measure 1 *Prior to adoption of the Sustainability Element and Climate Action Plan, Action 2.3 of Chapter 5 of the Climate Action Plan shall be amended to read as follows:*

"Action 2.3: Should the annual reporting and monitoring actions (Actions 1.1 through 1.6) identify that the reduction measures included herein are not collectively meeting the GHG reduction goal of 15% by 2020, Planning Department staff shall prepare and present to the City Council recommended revisions to the CAP that would modify or replace measures to the extent necessary to achieve the GHG reduction goal of 15%."

Implementation of Mitigation Measure 1 would ensure that the CAP and sustainability element meet the requirements of AB 32 and result in significant reductions in GHG levels in order to achieve the identified target. Should the timing, funding, and/or participation rates projected for the measures in the CAP be determined to be less than adequate to meet the GHG reduction goal, Mitigation Measure 1 would ensure that the CAP is modified appropriately. If the need for additional or revised reduction measures is identified, potential revisions could include measures to require development projects to purchase carbon credits/offsets, to encourage energy efficiency audits at the time of building permit application for significant remodels, and to coordinate with SACOG to extend light rail beyond the currently planned extensions and for an expedited timeframe on the extension of light rail. Therefore, with implementation of Mitigation Measure 1, this impact would be **less than significant**.

~~The adoption of the CAP and Sustainability Element represents a thorough and comprehensive effort on behalf of the City to meet the requirements of AB 32 and to implement a plan that will result in significant reductions in GHG levels over the next 10 to 15 years. The significance of this impact is not due to inadequate measures in the CAP, but rather is due to the uncertainties of funding and the timing/pace of implementation of the measures. While additional measures may be considered, these measures would also be subject to uncertainties regarding funding and the pace of development. Thus, there are no additional feasible mitigation measures available to the City. This impact remains **significant and unavoidable**.~~

CEQA requires an EIR to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents a detailed discussion, consistent with the requirements of CEQA, of the cumulative impacts, growth-inducing impacts, and significant and irreversible effects of the Project, and growth inducement associated with the Project.

4.1 CUMULATIVE IMPACTS

This Draft SEIR provides an analysis of overall cumulative impacts of the Project taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). The goal of this analysis is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the Project itself would cause a "cumulatively considerable" incremental contribution to any such cumulatively significant impacts. (See State CEQA Guidelines Sections 15130[a]-[b], Section 15355[b], Section 15064[h], Section 15065[c]; *Communities for a Better Environment v. California Resources Agency* [2002] 103 Ca1.App.4th 98, 120.) In other words, the required analysis intends to first create a broad context in which to assess the project's incremental contribution to anticipated cumulative impacts, viewed on a geographic scale well beyond the project area itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable" in CEQA parlance).

Pursuant to Section 15130(b) of the State CEQA Guidelines, "(t)he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

The State CEQA Guidelines Section 15130(b)(1) provides two approaches to analyzing cumulative impacts. The first is the list approach, which requires a listing of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency. The second is the plan approach, wherein the relevant projections contained in an adopted general plan or related planning document that is designed to evaluate regional or area-wide conditions contributing to the cumulative effect. For this Draft SEIR, the plan approach has been used to analyze cumulative impacts.

CUMULATIVE DEVELOPMENT ASSUMPTIONS

The cumulative scenario for the proposed project includes growth planned for the City in the City's General Plan. The analysis of cumulative effects considered the General Plan growth under cumulative conditions, as described below.

Population

Between 1990 and 2000, the population of what would become the City increased by 71 percent, an average annual increase of seven percent. Elk Grove began to rapidly develop as a result of an increase in jobs in the Sacramento County region and the availability of land outside the downtown Sacramento area. Previous population projections from the Sacramento Area Council of Governments (SACOG) estimated growth through 2015 and had anticipated a gradual increase of four to six percent per year. However, SACOG's current projections show an increase in population at an average rate of 1.4 percent per year from 2010 (based on Department of Finance 2011 demographic report benchmarked to the 2010 Census) through 2035. Growth in recent years can be attributed to new construction (people moving to Elk Grove) and the annexation of the Laguna West-Lakeside Census Designated Place (adding 25,000 residents to the City). The City's population is anticipated to increase to approximately 192,889 persons by 2035.

TABLE 4-1 POPULATION TRENDS

YEAR	POPULATION	CHANGE	AVERAGE ANNUAL % CHANGE
1990[1]	42,626	N/A	N/A
2000[1]	72,665	30,039	7.0
2005[2]	121,803	49,138	13.5
2010[3]	153,015	31,212	5.1
2025[4]	197,460	44,445	1.9

SOURCE:

[1] City of Elk Grove, 2009. Housing Element of the Elk Grove General Plan.
[2] State of California, Department of Finance. 2010. E-5 Population and Housing Estimates for Cities, Counties and the State, 2000-2010, with 2010 Benchmark. Sacramento, California.
[3] State of California, Department of Finance. 2011. E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2011, with 2010 Benchmark. Sacramento, California.
[4] City of Elk Grove, 2011.

Employment

The work force in the Sacramento metropolitan area encompasses professional, technical, production, transportation, and service occupations. The region's manufacturing sector has grown steadily since the late 1970s, spurred by the expansion of high-technology industries.

According to SACOG projections, the City had 11,147 jobs in 2000. The City anticipates job growth increase of 24,722 jobs between the years 2005 and 2025. As shown in Table 4-2, Elk Grove can expect a steady increase in job growth through 20~~23~~25.

TABLE 4-2 CITY OF ELK GROVE JOBS PROJECTIONS

YEAR	JOBS	PERCENTAGE CHANGE
2000	11,147	--
2005	24,653	121.1%
2025	49,375	100.3%

SOURCE: SACOG, 2002; SACOG, 2008.; CITY OF ELK GROVE, 2011

CUMULATIVE EFFECTS OF THE PROJECT

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines Section 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (State CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. Because of the programmatic nature of the proposed project, this EIR uses the projection approach for the cumulative analysis and considers buildout of the General Plan.

Cumulative Impacts

Under CEQA, the discussion of cumulative impacts should focus on the severity of the impacts and the likelihood of their occurrence. The cumulative scenario for the proposed project includes growth planned for the City; as described in Chapter 2.0, the Project would not approve or entitle any development projects in the City.. The analysis of cumulative effects considered the cumulative projected General Plan buildout.

Previously Analyzed Cumulative Impacts

With the exception of impacts to air quality, greenhouse gases, noise, population/housing, and transportation, the Project would be consistent with the cumulative impacts that were evaluated in the General Plan EIR. As described in Chapter 2.0, the Sustainability Element has been prepared to be consistent with the General Plan and integrates sustainability principles identified throughout the General Plan. The CAP is a tool used to implement the Sustainability Element. The CAP includes measures that implement many of the conservation and sustainability policies and actions identified in the General Plan. Neither the Sustainability Element nor CAP envision a growth pattern, development rate, circulation system, or other feature that conflicts with the goals, policies, and growth patterns envisioned in the General Plan. As the project builds upon the adopted General Plan's goals and policies and does not propose development or other activities that conflict with the development, infrastructure, growth, and conservation activities envisioned by the General Plan, t~~T~~he Project is generally consistent with the adopted General Plan.

Subsequent ~~and future~~ development activities would be required to be consistent with the General Plan.

Section 15130(d) and (e) of the State CEQA Guidelines provides the following guidance regarding analysis of cumulative impacts that were addressed in a prior EIR:

"(d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or areawide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan."

"(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impacts, as provided in Section 15183(j)."

The City's General Plan was adopted by the City Council on November 19, 2003 and reflects amendments through February 2011. An Environmental Impact Report was prepared to analyze and disclose the environmental impacts associated with General Plan implementation. With the exception of issues associated with air quality, greenhouse gases, noise, population/housing, and transportation that are analyzed in this SEIR, the Project is consistent with the environmental analysis and conclusions of ~~City's General Plan and the cumulative impacts associated with the General Plan were evaluated in~~ the General Plan EIR. As previously described in this section and in Chapter 2.0, the Project is consistent with the General Plan and integrates and implements sustainability principles identified throughout the General plan. Therefore, further analysis of cumulative impacts is limited to those issues that were not identified in the General Plan EIR and would be considered peculiar to the Project. These issues are described below under the heading "Cumulative Impacts Specific to the Proposed Project."

The General Plan EIR (City of Elk Grove, 2003d; SCH#: 2002062082) is hereby incorporated by reference, consistent with State CEQA Guidelines Section 15150. The General Plan EIR is available for review at the City's Planning Department and on the City's website. The General Plan EIR evaluated the full range of environmental impacts anticipated with buildout of the General Plan land uses. The following is a summary of the cumulative impacts identified in the General Plan EIR that are relevant to subsequent development activities that may involve implementation of various measures associated with the Project. These subsequent development activities would be reviewed for compliance with the General Plan and would be required to comply with relevant mitigation measures adopted to mitigate cumulative impacts.

Impact 4.1.3 - Cumulative Impacts to Agricultural Resources. Implementation of the proposed General Plan along with potential development in the Urban Study Areas would contribute significantly to the conversion of important farmland and agriculture/urban interface conflicts. This would be a cumulative significant impact.

Impact 4.2.3 - Consistency with Relevant Planning Documents in the Planning Area. Implementation of the proposed General Plan could impact land use plans or study areas outside of the city limits, but within the Planning Area. This is a cumulative significant impact.

Impact 4.2.4 - Land Use Conflicts in the Planning Area. Implementation of the proposed General Plan would increase the potential for land use conflicts outside of the City and within the Planning Area. This is a less than significant cumulative impact.

Impact 4.4.5 - Cumulative Hazard Impacts. Implementation of the proposed General Plan and potential development in the Urban Study Areas could result in site-specific hazards being encountered. This is considered a cumulative significant impact.

Impact 4.4.6 - Cumulative Exposure to Hazards Associated with Facilities Utilizing Hazardous Materials. Implementation of the proposed General Plan and the potential development of the Urban Study Areas could result in the exposure of populated areas to accidental incidents and intentional acts at existing and future facilities utilizing hazardous materials. This is considered a less than significant cumulative impact.

Impact 4.8.6 - Cumulative Water Quality Impacts. Implementation of the proposed General Plan along with the potential development of the Urban Study Areas, could contribute to cumulative water quality impacts. This is considered a cumulative significant impact.

Impact 4.8.7 - Cumulative Flood Hazards. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions in the Sacramento River, Cosumnes River, and inland creeks. This is considered a cumulative significant impact.

Impact 4.8.8 - Cumulative Water Supply Impacts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas, would contribute to an increased demand for water supply requiring increased groundwater production and the use of surface water supplies that could result in significant environmental impacts. This is considered a cumulative significant impact.

Impact 4.9.4 - Soil Erosion. Implementation of the proposed General Plan along with potential development of the Urban Study Areas could contribute to cumulative soil erosion impacts. This is considered a less than significant cumulative impact.

Impact 4.9.5 - Expansive Soils and Seismic Hazards. Implementation of the proposed General Plan along with potential development of the Urban Study Areas could result in cumulative impacts to expansive soils and seismic hazards. This is considered a less than significant cumulative impact.

Impact 4.10.4 - Cumulative Biological Resource Impacts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would contribute to cumulative impacts associated with significant effects to special-status plant and wildlife species and habitat loss. This would be a cumulative significant impact.

Impact 4.11.3 - Cumulative Impacts to Prehistoric and Historic Resources. Implementation of the proposed General Plan along with potential development in the Urban Study Areas could contribute to the disturbance of known and undiscovered prehistoric and historic resources in the Elk Grove area. This is considered a less than significant cumulative impact.

Impact 4.11.4 - Cumulative Impacts to Paleontological Resources. Implementation of the proposed General Plan along with potential development of the Urban Study Areas could contribute to the loss of paleontological resources in the Elk Grove area. This is considered a less than significant cumulative impact.

Impact 4.12.1.2 - Cumulative Fire Protection and Emergency Medical Services. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would contribute to the cumulative demand for fire protection and emergency medical services. This is considered a less than significant cumulative impact.

Impact 4.12.2.2 - Cumulative Law Enforcement Impacts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would result in the increase of the demand for cumulative law enforcement services. This is considered a less than significant impact.

Impact 4.12.3.2 - Cumulative Public School Impacts. Implementation of the proposed General Plan as well as potential development of the Urban Study Areas, would result in cumulative public school impacts. These cumulative public school impacts are considered less than significant.

Impact 4.12.4.4 - Cumulative Wastewater Demands. Implementation of the proposed General Plan along with potential development of the Urban Study Areas and growth in the SRCSD service area would result in cumulative wastewater impacts. This is considered a cumulative significant impact.

Impact 4.12.5.2 - Cumulative Solid Waste Impacts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would result in cumulative solid waste impacts. This is considered a less than significant cumulative impact.

Impact 4.12.6.2 - Cumulative Park and Recreation Demands. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would result in cumulative park and recreation impacts. These cumulative impacts are considered less the significant.

Impact 4.12.7.3 - Cumulative Electrical, Telephone and Natural Gas Impacts. Implementation of the proposed General Plan along with potential development in the Urban Study Areas would result in cumulative electric, telephone and natural gas service impacts. These are considered less than significant cumulative impacts.

Impact 4.13.4 - Cumulative Impacts to Visual Resources. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would result in the further conversion of the region's rural landscape to residential, commercial, and other land uses. This would contribute to the alteration of the visual resources in the region. This is considered a cumulative significant impact.

Cumulative Impacts Specific to the Proposed Project

GREENHOUSE GASES AND CLIMATE CHANGE

Environmental effects associated with greenhouse gases and climate change are cumulative in nature; see Chapter 3.2 for a description of environmental impacts associated with greenhouse gases and climate change.

AIR QUALITY, NOISE, AND TRANSPORTATION

Impact 4-1: Cumulative Impacts to Air Quality, Noise, and Transportation (Not a Considerable Contribution and Less than Significant)

Any conversion of land to an urban use in California must be consistent with the General Plan and General Plan EIR for the land use agency in which the land conversion is located. The cumulative setting for air quality, noise, and transportation impacts is Sacramento County. While air quality is a basin-wide issue, the contribution of the Project to cumulative impacts is not considerable, so this discussion has been limited to Sacramento County.

According to SACOG's estimates, approximately 60 percent of the region's population lives in incorporated cities. The largest populations lie in the Cities of Sacramento and Elk Grove, while there is also a considerable population in the City of Rancho Cordova and the adjacent unincorporated Sacramento County area. The Cities of Galt and Isleton are two of the smaller incorporated cities in the region.

Each of these agencies has an adopted General Plan that plans for urban development, open space, and conservation. SACOG recently adopted the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) as discussed in Chapter 3.2. The MTP/SCS was developed in compliance with SB 375 to assist the region in attaining greenhouse gas emissions reductions including the goals established by AB 32. SACOG estimates that from 2008~~5~~ to 2035 the regional population will grow by approximately ~~54~~ 39 percent. Growth in Sacramento County~~, which will~~ is anticipated to mostly occur in the Cities of Sacramento, Rancho Cordova, and Elk

Grove, and areas of unincorporated Sacramento County. Table 4-4 presents the population, housing, and jobs growth estimates for the SACOG region.

TABLE 4-3: REGIONAL GROWTH

DEMOGRAPHIC	*2008~~5~~*	*2035*	*INCREASE 2008~~5~~-2035*	*% INCREASE 2008~~5~~-2035*
Population	2,215,044 ~~1,283,234~~	3,086,213 ~~1,986,543~~	871,169 ~~703,309~~	39%~~54.4%~~
Housing	884,725 ~~506,003~~	1,187,744 ~~797,633~~	303,019 ~~291,630~~	34%~~55.5%~~
Jobs	966,316 ~~678,503~~	1,327,424 ~~967,986~~	361,108 ~~289,483~~	37%~~54.0%~~

SOURCE: SACOG, 2012~~08~~.

Regional development, including residential, commercial, industrial, recreational, and other uses, is anticipated to occur regardless of adoption of the Project as development and other projects could continue to be approved and implemented by each local land use agency in accordance with their General Plan. The environmental effects of any new development would remain consistent with those impacts disclosed and analyzed in the General Plan and General Plan EIR for each land use agency.

The City's General Plan EIR identified the following cumulative impacts associated with air quality, noise, and transportation:

Impact 4.5.6 Cumulative Traffic Impacts on Local Roadways and State Highways. Implementation of the proposed General Plan as well as potential development of the Urban Study Areas would contribute to significant impacts on local roadways and state highways under cumulative conditions. This is considered a cumulative significant impact.

Impact 4.5.7 - Cumulative Transit System, Bicycle and Pedestrian Impacts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would contribute to a cumulative increase in the demand for transit service as well as bicycle and pedestrian usage. This is considered a less than significant impact.

Impact 4.6.6 - Cumulative Traffic Noise Conflicts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas could result in increased traffic noise conflicts. This is considered a less than significant cumulative impact.

Impact 4.6.7 - Cumulative Airport Noise Conflicts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas could result in noise conflicts with the Sunset Skyranch Airport. This is considered a cumulative significant impact.

Impact 4.6.8 - Regional Traffic Noise Impacts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would result in impacts to regional noise attenuation levels. This is considered a cumulative significant impact.

Impact 4.7.4 - Regional Air Plan Impacts. Implementation of the proposed General Plan along with potential development of the Urban Study Areas would exacerbate existing regional problems with ozone and particulate matter. This is considered a cumulative significant impact.

The Project would not approve or entitle any development projects in the City. Project implementation would result in short-term noise, construction, and air quality impacts associated with implementation of various measures of the Sustainability Element and CAP as described in Chapters 3.1, 3.3, and 3.5. Under cumulative conditions, implementation of the Project is anticipated to have beneficial effects associated with air quality, noise, and transportation. The Project would encourage placement of high density housing near transit and employment centers, reducing vehicle trips and associated air quality, noise, and transportation impacts. The Project would encourage increased use of pedestrian, bicycle, carpool, and public transit travel modes, particularly local bus service, which would result in a reduction in vehicle trips and associated air quality, noise, and transportation impacts. The Project would require increased energy efficiency and conservation in development and would also encourage use of alternative fuel vehicles, resulting in a decrease in the air quality and noise impacts associated with energy production. The Project would encourage local stores, restaurants, and other vendors to carry local goods and agriculture and would also encourage residents to shop locally, reducing vehicle trips associated with the transport of goods and foods, as well as trips associated with out-of-town travel for goods and foods. The Project would also encourage an improved jobs/housing balance, to provide additional opportunities for residents to work locally, reducing commuter travel and associated air quality, noise, and transportation impacts. The Project would also require the City to incorporate energy conservation, water conservation, and solid waste reduction in its projects and business practices, reducing associated air quality, noise, and transportation impacts. The cumulative effect of the project would have a beneficial effect on air quality, noise, and transportation effects due to the reduction in vehicle trips, increased energy efficiency, increased water conservation, reduction in solid waste, and development techniques that encourage healthy, sustainable communities. Therefore, the Project would have a **less than cumulatively considerable contribution** to cumulative air quality, transportation, and noise impacts. This is considered **less than significant**.

POPULATION AND HOUSING

Cumulative impacts associated with population and housing are discussed in Section 4.2 below.

4.2 GROWTH-INDUCING EFFECTS

INTRODUCTION

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> *The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove*

> *obstacles to population growth…It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

Based on the State CEQA Guidelines, growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without implementation of the Project. A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand *(Napa Citizens for Honest Government v. Napa County Board of Supervisors* (Cal. App. 1st Dist., 2001)). Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The State CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

Components of Growth

The timing, magnitude, and location of land development and population growth in a region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

GROWTH EFFECTS OF THE PROJECT

Population Growth

The City's population in the year 2000 was 72,665 persons, compared to Sacramento's population of 1,223,499 (U.S. Census Bureau, 2000). Prior to the City's incorporation in 2000, the population of Elk Grove increased at an average rate of seven percent annually, or a 70.5 percent increase since 1990 (Elk Grove, 2003a). Sacramento County experienced a much slower rate of growth during that time period, with population increasing only 17.5 percent from 1,041,219 in 1990 to 1,223,499 in 2000 (U.S. Census Bureau 2000, 1990). The City experienced rapid population growth after its incorporation in 2000.

Population growth in the City is anticipated to account for approximately 12 percent of the County's total growth from 2005 to 2035. SACOG projects that the population of Sacramento County will increase to approximately 1,283,234 persons by 2035 (SACOG, 2008).

Growth Effects Associated with the Proposed Project

The Project would not directly result in population growth. The Project does not propose nor entitle any development projects. While the Project encourages improved public transit and infrastructure to support alternative modes of travel, such as pedestrian and bicycle trips, these infrastructure improvements are not anticipated to result in increased population growth. Rather, these improvements will accommodate planned population growth and will result in beneficial environmental effects related to growth.

The Project encourages increased residential densities near transit locations and would revise the definition of Transit Oriented Development to encourage a mix of uses, including higher density residential development. The City has one location designated for Transit Oriented Development; this location is currently designated by the General Plan to accommodate a mix of uses, including high density residential, commercial, and office development. The Project is not anticipated to result in a change in the types of development that could occur on the existing TOD site. Additional sites would be designated TOD with implementation of the Project. These sites would be located near transit and would encourage a mixture of high-density residential and commercial development oriented to transit users. It is not known where these additional TOD sites would be located, but it is anticipated that the sites would be located along existing and proposed transit corridors, which are typically in areas designated for urban uses. The Project indicates that consideration should be given to the SACOG Blueprint in identifying future TOD sites. The application of the TOD designation on specific sites may increase the density of that site, but is not anticipated to result in a significant population increase in the City or region.

The population figures used to estimate emissions for the CAP anticipate a higher population in 2025 (197,460) than is anticipated in SACOG's 2008 estimates, which project that the population of the City will be 192,889 in 2035. However, the population figures used for the CAP were based on more recent population data than was used by SACOG for its 2008 estimates. The use of different population figures in the CAP compared to the figures used by SACOG for its 2008 estimates does not mean that the Project would exceed growth estimates, but rather that the Project used more up to date data in projecting potential growth. SACOG's population estimates for the City are based on a population in 2005 of 110,843. This figure is much less than

Department of Finance annual estimate of 121,803. Based on the 2010 Census numbers, the DOF estimate appears much closer to accurate than the SACOG number. The population growth rates used for the CAP were based on current growth trends and development that may be accommodated under the General Plan. The difference in population projections appears to be largely due to an error in SACOG's 2005 base data for the City rather than any significant population increase in Elk Grove that would result from the Project.

It is noted that growth is anticipated to occur regardless of adoption of the proposed project as development and other growth projects could continue to be approved and implemented by the City and its neighboring communities. Growth will primarily occur as a result of external market forces, such as the availability of financing, the employment rate, and construction costs. The City's General Plan will accommodate future housing growth and will help to ensure that the City can accommodate its fair share of housing for all income groups. While the proposed project would not result in a significant increase in the amount of growth, it would encourage growth to be developed in an orderly fashion, and encourage more compact, high density growth near transit and public services.

The General Plan EIR found that implementation of the General Plan may result in population and housing increases at buildout of the General Plan that exceed SACOG's population and housing projections for the Planning Area (Impact 4.3.3). This impact was determined to be a less than significant cumulative impact. The Project would not significantly change this impact or result in an increased contribution to a cumulatively considerable population or growth impact. The environmental effects of this growth would remain consistent with those impacts disclosed and analyzed in Sections 4.1 through 7.0 of the General Plan Draft EIR and in Chapters 3.1 through 3.5 and 4.0 of this Subsequent DEIR.

4.3 SIGNIFICANT IRREVERSIBLE EFFECTS

CEQA requires that EIRs prepared for the adoption of a plan, policy, or ordinance of a public agency must include a discussion of significant irreversible environmental changes as a result of project implementation. State CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as:

> *"Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."*

Implementation of the proposed project would not result in the conversion of undeveloped natural areas, open space, or agricultural areas to a developed or urbanized condition. Implementation of the Project may encourage small infrastructure projects, such as pedestrian

walkways, bike paths, transit stops, and retrofitting of structures to increase energy conservation that would involve the irretrievable commitment of lumber, asphalt, and other building materials. These subsequent projects would be allowed under the adopted General Plan regardless of approval of the Project. The General Plan EIR disclosed this type of impact, identifying that future development allowed under the General Plan would have significant and irreversible effects, including conversion of open space to developed uses, permanent commitment of building materials and energy resources, and an increased demand on public services and utilities. However, the Project would reduce irretrievable commitment of nonrenewable resources by encouraging reduced solid waste associated with construction and operation of development and by encouraging energy conservation and alternative transportation measures to reduce the consumption of gas, natural gas, and other nonrenewable fuel sources. These requirements would apply to all future development under the General Plan. Therefore, the proposed project would have a beneficial long-term effect on the commitment of nonrenewable resources and would therefore have less than significant irreversible effects.

4.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

State CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. As discussed in Chapters 3.1 through 3.5, the potential environmental impacts associated with implementation of the proposed project would be less than significant or would be less than significant with mitigation. No significant and unavoidable impacts would occur with implementation of the proposed project. ~~The following significant and unavoidable impacts of the Project are discussed in Chapters 3 and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impact identified below:~~

~~•**Impact 3.2-2: *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases* (significant and unavoidable).** While the proposed Project would result in a reduction of greenhouse gases and associated climate change effects, the Project may not result in the attainment of the 15 percent emissions reductions identified in the AB 32 Scoping Plan, as described in Chapter 3.2 under Impact 3.2-2. The significance of this impact is not due to an inadequacy of the General Plan nor to inadequate measures in the CAP, but rather is due to the uncertainties of funding that may affect the implementation of the measures. This is a significant and unavoidable impact and the General Plan may result in a cumulatively considerable contribution to greenhouse gas emissions and climate change effects.~~

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EXHIBIT B

FINDINGS REQUIRED UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT
(Public Resources Code, Section 21000 et seq)

FOR THE CITY OF ELK GROVE SUSTAINABILITY ELEMENT AND CLIMATE ACTION PLAN
State Clearinghouse No. 2011062031

I. Introduction

The City of Elk Grove (City), as lead agency, determined that the Sustainability Element and Climate Action Plan (Project) is a "project" within the definition of the California Environmental Quality Act (CEQA), and requires the preparation of an Environmental Impact Report (EIR). A Subsequent Environmental Impact Report (SEIR) has been prepared to evaluate the environmental impacts associated with implementation of the Project.

The Project would:

1. Adopt the Sustainability Element of the General Plan, as a General Plan amendment. The Sustainability Element includes goals and policies to help the City achieve a wide range of desired results related to sustainability;

2. Adopt the Climate Action Plan, which includes a range of measures to reduce greenhouse gas (GHG) emissions from a variety of sources throughout the City; and

3. Provide a mechanism for subsequent projects to streamline analysis of cumulative impacts associated with greenhouse gases, as allowed by Section 15183.5 of the CEQA Guidelines.

The California Environmental Quality Act (CEQA) requires the City, as the CEQA lead agency, to make written findings when it approves a project for which an environmental impact report (EIR) was certified. No significant and unavoidable impacts were identified in the SEIR, so a statement of overriding considerations is not required for the project.

These Findings of Fact (Findings) explain how the City, as the lead agency, approached the significant and potentially significant impacts identified in the SEIR prepared for the Project. As required under CEQA, the Final SEIR (which includes the Draft SEIR, comments, responses to comments, and revisions to the Draft SEIR) describes the Project, adverse environmental impacts of the project, and mitigation measures and alternatives that would substantially reduce or avoid those impacts. The information and conclusions contained in the SEIR reflect the City's independent judgment regarding the potential adverse environmental impacts of the Project.

II. General Findings and Overview

The Findings set forth below are presented for adoption by the City Council, as the City's findings under (CEQA) (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.) relating to the Project. The Findings provide the written analysis and conclusions of the City Council regarding the Project's

environmental impacts, mitigation measure, and alternatives to the Project which in the City Council's view, justify approval of the Project, despite its environmental effects.

A. Relationship to the City of Elk Grove General Plan

The City adopted its General Plan (General Plan) in November 2003. The Elk Grove General Plan establishes the City's goals and policies related to a broad range of planning issues, including, but not limited to, land use, development, conservation of natural resources, circulation, and provision of public services and utilities. The General Plan establishes policies that serve as a framework for future decision-making. The General Plan also identifies specific actions that the City will take to implement the General Plan.

All elements of the General Plan contribute policies and actions that address sustainability. For example, the Land Use Element includes policies to promote compact and mixed—use development, and the Circulation Element promotes enhanced connectivity between developments. The Housing Element supports equity through affordable housing opportunities, and the Economic Development Element includes policies to grow a strong local economy and promotes employment opportunities for all segments of the community. The Sustainability Element provides a matrix that summarizes which sustainability issues are addressed in each element of the General Plan. The Sustainability Element provides additional sustainability policies and actions to address components of sustainability that are not addressed in the other General Plan elements. The Climate Action Plan (CAP) is linked to the General Plan through the proposed General Plan Sustainability Element. The Sustainability Element and CAP are two separate but related components of the City's sustainability strategy. The Sustainability Element organizes and highlights the City's goals related to sustainability and provides new direction and vision to maintain a healthy, balanced community.

The CAP focuses specifically on strategies to reduce GHG emissions and provides direction to reduce emissions consistent with State law and the CEQA Guidelines. The CAP is a tool that allows the City to look at its impact on GHG emissions, establish goals for GHG emissions reductions, and create steps to achieve these reduction targets. The CAP builds on the goals and vision of the Sustainability Element, but translates these goals into numeric thresholds and targets for GHG emissions. The CAP will be linked to the General Plan as a stand-alone policy and implementation item of the Sustainability Element, which, upon adoption, will be a binding element of the General Plan.

B. Procedural Background

In accordance with Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) of an EIR for the Project and an Initial Study on June 10, 2011 to trustee and responsible agencies, the State Clearinghouse, and the public. The NOP and Initial Study are included as Appendix A to the Draft SEIR. One comment was received in response to the NOP; the comment is included in Appendix B of the Draft SEIR and was considered during preparation of the Draft SEIR.

Pursuant to Section 15087 of the CEQA Guidelines, the City published a Notice of Availability (NOA) for the Draft SEIR on September 30, 2011, inviting comment from the general public, agencies, organizations, and other interested parties. The Draft SEIR was available for a 45-day public review period from September 30 through November 15, 2011. The Draft SEIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft SEIR is focused on the potentially significant impacts associated with air quality, greenhouse gases/climate change, noise, population/housing, and transportation/circulation impacts. Comments received in response to the NOP were considered in preparing the analysis in the Draft SEIR.

No new significant environmental issues, beyond those already covered in the Draft SEIR, were raised during the comment period and the Final SEIR was prepared.

Following preparation of the Final SEIR, revisions were made to the CAP. The Final SEIR was revised to include revisions to the Draft SEIR which address the changes made to the CAP. The revised Final SEIR document and the Draft SEIR, as amended by the revised Final SEIR, constitute the Final SEIR. Comments received on the Draft SEIR and responses to those comments are presented in Chapter 3 of the Final SEIR.

As described on pages 1.0-2 and 1.0-5 of the revised Final SEIR, the revisions to the Final and Draft SEIRs, including revisions made in responses to comments received on the Draft SEIR, did not involve any changes to the Project that would create new significant impacts nor do the revisions provide significant new information that would require recirculation of the Draft SEIR pursuant to CEQA Guidelines Section 15088.5. Responses to comments received on the Draft SEIR were provided in the Final SEIR, and responses were sent to public agencies that commented on the Draft SEIR 10 days prior to certification of the Final SEIR.

C. Project History

On March 25, 2009, the City Council directed staff to begin the process of developing a Sustainability Element as part of the General Plan and a CAP. As directed, the Sustainability Element would "establish policies such as greenhouse gas reduction strategies or green building programs as well as other sustainability goals and policies that did not fit into other General Plan elements." The CAP would "identify ways in which the City can reduce greenhouse gas emissions in the community and within City facilities. [The] Climate Action Plan would also include measures to adapt to climate change impacts and remain resilient. The Climate Action Plan would analyze reduction and adaptation measures based on effectiveness, cost, and feasibility to create a comprehensive implementation plan."

On May 27, 2009, the City Council adopted a resolution to accept funds from the Federal Energy Efficiency and Conservation Block Grant (EECBG), part of the American Recovery and Reinvestment Act (ARRA). Funds for the Sustainability Element and CAP were programmed from the EECBG funds.

As part of the development of the Sustainability Element and CAP, the Council directed the creation of a Sustainability Element and Climate Action Plan Committee (the "SECAP Committee"). The SECAP Committee was tasked with providing strategic direction and input on the development of the Sustainability Element and CAP and overall outreach campaign. The SECAP Committee reviewed technical issues and policies, including consideration of potential carbon reduction measures, language for policies related to green building and green job creation, cost-benefit analyses, and the like. The Council-appointed members of the Committee were Thomas Campbell, Lyndon Hawkins, Jimmie Johnson, Bob Lilly, Bill Myers, and Susan Oto.

Drafts of the Sustainability Element and CAP were made available to the public in December 2010. The SECAP Committee held a public workshop with interested residents and stakeholders on January 19, 2011 to solicit feedback on the draft documents. The SECAP Committee concluded their work with a final meeting on March 30, 2011.

D. Record of Proceedings and Custodian of Record

For purposes of CEQA and the findings set forth herein, the record of proceedings for the Project consists of the following documents and testimony, at a minimum:

- Notice of Preparation, Notice of Availability, and all other public notices issued by the City in conjunction with the Project (June 10, 2011, and September 30, 2011);
- Final Subsequent Environmental Impact Report for the Elk Grove Sustainability Element and Climate Action Plan project, prepared by De Novo Planning Group (October 2012);
- All comments submitted by agencies or members of the public during the 30-day public comment period on the NOP, the 45-day public comment period on the Draft SEIR;
- All comments and correspondence submitted to the City with respect to the Project, in addition to comments on the NOP and Draft SEIR;
- Minutes and transcripts of the discussions regarding the Project and/or Project components at public hearings held by the City;
- Staff reports associated with Planning Commission and City Council meetings regarding the Project;
- All findings and resolutions adopted by City decision-makers in connection with the Project, and all documents cited or referred to therein;
- All non-draft and/or nonconfidential reports, studies, memoranda, maps, staff reports, or other planning documents relating to the Project prepared by the City, consultants to the City, or responsible or trustee agencies with respect to the City's compliance with the requirements of CEQA and with respect to the City's actions on the Project;

- City of Elk Grove General Plan, adopted November 2003 and as amended through November 2011;
- City of Elk Grove Zoning Code, as adopted July 2006 and amended through November 2011; and
- Any other materials required for the record of proceedings by Public Resources Code Section 21167.6(e).

The custodian of the documents and materials comprising the record of proceedings is the Environmental Planning Manager, City of Elk Grove, Development Services, Planning, whose office is located at 8401 Laguna Palms Way in Elk Grove, California, 95758. Office hours are from 8:00 a.m. through 5:00 p.m. Monday through Friday. The City of Elk Grove Planning Department may be reached by phone at (916) 478-2265.

E. Consideration of the Environmental Impact Report

In adopting these Findings, the City Council finds that the Final SEIR was presented to the City Council, which reviewed and considered the information in the Final SEIR prior to approving the Sustainability Element and Climate Action Plan project. By adopting these findings, the City Council ratifies, adopts, and incorporates the analysis, explanation, findings, responses to comments, and conclusions of the Final SEIR. The City Council finds that the Final SEIR was completed in compliance with CEQA. The Final SEIR represents the independent judgment of the City.

F. Severability

If any term, provision, or portion of these Findings or the application of these Findings to a particular situation is held by a court to be invalid, void, or unenforceable, the remaining provisions of these Findings, or their application to other actions related to the Project, shall continue in full force and effect unless amended or modified by the City.

III. CEQA Findings

Public Resources Code Section 21002 provides that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would *substantially lessen* the significant environmental effects of such project" [italics added]. The same statute states that the procedures required by CEQA "are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will *avoid* or *substantially lessen* such significant effects" [italics added]. Section 21002 goes on to state that "in the event [that] specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof."

The mandate and principles announced in Public Resources Code Section 21002 are implemented, in part, through the requirement that agencies must adopt findings before approving projects for which EIRs are required (see Public Resources Code, Section 21081, subd. (a); CEQA Guidelines Section 15091, subd. (a)). For each significant environmental effect identified in an EIR for a proposed project, the approving agency must issue a written finding reaching one or more of three permissible conclusions. The first such finding is that "[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR" (CEQA Guidelines Section 15091, subd. (a)(1)). The second permissible finding is that "[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency" (CEQA Guidelines Section 15091, subd. (a)(2)). The third potential conclusion is that "[s]pecific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR" (CEQA Guidelines Section 15091, subd. (a)(3)).

Public Resources Code Section 21061.1 defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." CEQA Guidelines Section 15364 adds another factor: "legal" considerations (see also *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 565). The concept of feasibility also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 417). "'[Feasibility' under CEQA encompasses 'desirability' to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors" (Ibid; see also *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 715).

The CEQA Guidelines do not define the difference between "avoiding" a significant environmental effect and merely "substantially lessening" such an effect. The City must therefore glean the meaning of these terms from the other contexts in which the terms are used. Public Resources Code Section 21081, on which CEQA Guidelines Section 15091 is based, uses the term "mitigate" rather than "substantially lessen." The CEQA Guidelines therefore equate mitigating with substantially lessening. Such an understanding of the statutory term is consistent with the policies underlying CEQA, which include the policy that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects" (Public Resources Code Section 21002).

Although CEQA Guidelines Section 15091, read literally, does not require findings to address environmental effects that an EIR identifies as merely "potentially significant," these Findings will nevertheless fully account for all such effects identified in the Final SEIR.

CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environmental impacts that would otherwise occur.

These Findings constitute the City's best efforts to set forth the evidentiary and policy basis for its decision to approve the Project in a manner consistent with the requirements of CEQA. To the extent these Findings conclude that the proposed mitigation measures outlined in the Final SEIR are feasible and have not been modified, superseded or withdrawn, the City hereby binds itself to implement these measures. These Findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when the City adopts a resolution approving the project.

A. Findings and Recommendations Regarding Significant Impacts Which Are Mitigated to a Less than Significant Level

1. Greenhouse Gas and Climate Change: Impact 3.1-2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

(a) **Potential Impact**. The potential for the Project to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases is discussed at pages 3.2-14 through 3.2-20 of the Draft SEIR.

(b) **Mitigation Measures.** The following mitigation measure is hereby adopted and will be implemented by amending the Project as described in the mitigation measure:

Mitigation Measure 1.

(c) **Findings**. Based upon the SEIR and the entire record before the City, the City Council finds that changes have been required to the project which avoid the potentially significant environmental effect as identified in the Final SEIR. The City Council finds that impacts associated with potential conflicts with an applicable plan, policy, or regulation adopted for the purpose of regulating greenhouse gases will be mitigated to a less than significant level through implementation of Mitigation Measure 1. Mitigation Measure 1 would ensure that the Project would meet the requirements of AB 32 and result in significant reductions in greenhouse gases emission levels in order to achieve the City's reduction target. Should the timing, funding, and/or participation rates projected for the measures in the CAP be determined to be less than adequate to meet the GHG reduction goal, Mitigation Measure 1 would ensure that the CAP is modified appropriately. Therefore, any remaining impacts after implementation of Mitigation Measure 1 would not be significant.

B. Findings and Recommendations Regarding Those Impacts Which are Less Than Significant

The SEIR determined that the following impacts are less than significant for the Project.

1. **Air Quality:** Impact 3.1-1: Air quality impacts from improvements (pages 3.1-9 through 3.1-10), Impact 3.1-2: Air quality impacts from increased development intensities (page 3.1-10), Impact 3.1-3: Expose sensitive receptors to substantial pollutant concentrations (pages 3.1-10 through 3.1-11), and Impact 3.1-4: Create objectionable odors affecting a substantial number of people (page 3.1-11).

2. **Greenhouse Gases and Climate Change:** Impact 3.2-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (page 3.2-14).

3. **Noise:** Impact 3.3-1: Exposure of persons to noise or vibration from improvements (pages 3.3-11 through 3.3-12) and Impact 3.3-2: Noise exposure associated with higher building densities and intensities (page 3.3-12).

4. **Population and Housing:** Impact 3.4-1: Induce substantial population growth in an area, either directly or indirectly (pages 3.4-4 through 3.4-5).

5. **Transportation:** Impact 3.5-1: Impacts to the multi-modal and transportation system (pages 3.5-7 through 3.5-8) and Impact 3.5-2: Impacts to traffic from increased building densities and intensities (page 3.5-8).

C. Findings and Recommendations Regarding Those Impacts Which are Less Than Significant or Less Than Cumulatively Considerable

The SEIR determined that the Project would have a less than cumulatively considerable contribution to the following impact.

1. **Impact 4-1:** Cumulative Impacts to air quality, noise, and transportation (pages 4.0-7 through 4.0-9).

VI. Project Alternatives

Public Resources Code Section 21002 provides that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects" [italics added]. The same statute states that the procedures required by CEQA "are intended to assist public agencies in systematically identifying both the significant effects of proposed projects

and the feasible alternatives or feasible mitigation measures which will *avoid* or *substantially lessen* such significant effects" [italics added]. Section 21002 goes on to state that "in the event [that] specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof."

CEQA defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (Public Resources Code Section 21061.1). The CEQA Guidelines add another factor: "legal" considerations (CEQA Guidelines Section 15364; see also *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 565). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (CEQA Guidelines Section 15126.6, subd. (f)(1)). The concept of feasibility also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project [*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 417).

Where a significant impact can be substantially lessened or avoided solely by the adoption of mitigation measures, the lead agency, in drafting its findings, has no obligation to consider the feasibility of alternatives with respect to that impact, even if the alternative would mitigate the impact to a greater degree than the project (Public Resources Code Section 21002; *Laurel Hills Homeowners Association, supra*, 83 Cal.App.3d at p. 521; see also *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 691, 730-731 and *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376, 400-403). In short, CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environmental impacts that would otherwise occur. Project modification or alternatives are not required, however, where such changes are infeasible or where the responsibility of modifying the project lies with some other agency (CEQA Guidelines Section 15091, subds. (a), (b)).

Section III(A) of these Findings identify that the City will implement mitigation to avoid the only potentially significant impact associated with the Project. There are no other significant or significant and unavoidable impacts associated with the Project nor are there adverse cumulative impacts to which the Project would have a considerable contribution.. Therefore, because the City has made a change in the Project through Mitigation Measure 1 that would reduce Impact 3.2-2 to a less than significant level, a discussion of Project Alternatives is not required.

EXHIBIT C

MITIGATION MONITORING AND REPORTING PROGRAM FOR THE CITY OF ELK GROVE SUSTAINABILITY ELEMENT AND CLIMATE ACTION PLAN

Pursuant to Section 21081.6 of the Public Resources Code and Chapter 20.02 of the City of Elk Grove Code, a Mitigation Monitoring and Reporting Program has been established for the project entitled **CITY OF ELK GROVE SUSTAINABILITY ELEMENT AND CLIMATE ACTION PLAN.** The purpose of this program is to assure diligent and good faith compliance with the Mitigation Measure which has been recommended in the environmental document, and adopted as part of the project, in order to avoid or mitigate potentially significant effects on the environment.

Chapter 20.02 of the City of Elk Grove Code permits civil remedies and criminal penalties to be imposed in the event of non-compliance with an adopted Mitigation Monitoring and Reporting Program.

MITIGATION MEASURES

	Mitigation Measures	**Timing, Implementation and Notification** (action by the project applicant):	**Monitoring / Verification** (action by the City): (date & sign)
1.	Amend Action 2.3 of Chapter 5 of the Climate Action Plan to read as follows: "Action 2.3: Should the annual reporting and monitoring actions (Actions 1.1 through 1.6) identify that the reduction measures included herein are not collectively meeting the GHG reduction goal of 15% by 2020, Planning Department staff shall prepare and present to the City Council recommended revisions to the CAP that would modify or replace measures to the extent necessary to achieve the GHG reduction goal of 15%".	Prior to adoption of the Climate Action Plan	Ongoing Planning Department

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ELK GROVE AMENDING THE CITY OF ELK GROVE 2003 GENERAL PLAN TO ADD THE SUSTAINABILITY ELEMENT

WHEREAS, in 2003 the City adopted the Elk Grove General Plan; and

WHEREAS, as part of and prior to the adoption of the General Plan, the City Council certified an Environmental Impact Report for the General Plan as required by the California Environmental Quality Act; and

WHEREAS, in 2006, the State of California adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, which sets a target of reducing greenhouse gases (GHG) emissions to 1990 levels by 2020; and

WHEREAS, the City, through direction of the City Council in March 2009, desires to adopt a Sustainability Element as part of the General Plan as a way to provide local implementation of AB 32; and

WHEREAS, the City Council established the Sustainability Element and Climate Action Plan Committee (the "Committee"), tasked with providing strategic direction and input on the development of the Sustainability Element/Climate Action Plan and overall outreach campaign. The Committee reviewed technical issues and policies, including consideration of potential carbon reduction measures, language for policies related to green building and green job creation, cost-benefit analyses, and the like; and

WHEREAS, the State CEQA Guidelines (Chapter 3 of Division 6 of Title 14 of the California Code of Regulations) identify several types of Environmental Impact Reports (EIRs), each applicable to different project circumstances. The CEQA Guidelines provide that a Subsequent EIR is warranted if the lead agency determines, among other things, that substantial changes have occurred to a project, or the circumstances under which the project will be undertaken, that will have one or more significant effects not discussed in the previous EIR; and

WHEREAS, the Project would amend the General Plan to include an additional element, the Sustainability Element. A Subsequent EIR is appropriate under Public Resources Code Section 21166 and CEQA Guidelines Section 15162; and

WHEREAS, the Planning Commission held public meetings on May 5, 2011 and June 2, 2011 to review the draft Sustainability Element and Climate Action Plan; and

WHEREAS, on March 15, 2012, April 5, 2012, and April 19, 2012 the Planning Commission held a duly noticed public hearings to review and accept public comments on the draft Sustainability Element, voting 3-1 on April 19, 2012 to recommend approval of the draft Element; and

WHEREAS, on November 14, 2012, the City Council held a duly noticed public hearing to review and accept public comments on the draft Sustainability Element; and

WHEREAS, on November 14, 2012, at the conclusion of the public hearing, the City Council adopted Resolution _____, certifying the Subsequent Environmental Impact Report, adopting Findings of Fact, and adopting a Mitigation Monitoring and Reporting Program for the Sustainability Element and Climate Action Plan;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Elk Grove hereby amends the City of Elk Grove General Plan to include the Sustainability Element as an optional element of the General Plan, as provided in Exhibit A hereto, with all changes accepted and does so based upon the following findings:

California Environmental Quality Act (CEQA)
Finding: The Subsequent Environmental Impact Report has been prepared in accordance with the California Environmental Quality Act (CEQA) and it reflects the independent judgment and analysis of the City.

Evidence: The CEQA Guidelines provide that a Subsequent EIR (SEIR) is warranted if the lead agency determines, among other things, that substantial changes have occurred to a project, or the circumstances under which the project will be undertaken, that will have one or more significant effects not discussed in the previous EIR. The Project would amend the General Plan to include an additional element, the Sustainability Element, and would also adopt the CAP, which will implement components of the Sustainability Element. A SEIR is appropriate under Public Resources Code Section 21166 and CEQA Guidelines Section 15162.

A Notice of Preparation for the SEIR was published on June 10, 2011 and a Notice of Availability was published on September 30, 2011. The Draft SEIR was distributed to the State Clearinghouse (SCH No. 2011062031) and to other public agencies and interested parties. A 45-day public comment period for the Draft SEIR was from September 30, 2011 through November 15, 2011. Comments from public agencies were received during the public review period.

Since the release of the Final SEIR, several revisions have been made to the project, as discussed in this report. Staff has reviewed these changes to determine whether any "significant" new information has been added to the project. No such information has been identified and, based upon the requirements in State CEQA Guidelines Section 15088.5, revisions to the Draft SEIR have been made to reflect these changes and the Draft SEIR does not need to be re-circulated.

General Plan Consistency
Finding: The proposed General Plan amendment is consistent with the balance of the General Plan and does not create an internal conflict within the Plan.

Evidence: The Sustainability Element has been crafted for consistency with the existing General Plan. The new Element utilizes the same form and structure as the rest of the General Plan and builds off of the existing Guiding and Focused Goals. The draft policies have been reviewed by staff and the Planning Commission against the balance of the General Plan and no conflicts have been identified. Additionally, Table SE-1 identifies the various policy topic areas covered in the Sustainability Element and how they relate to the other elements of the General Plan.

PASSED AND ADOPTED by the City Council of the City of Elk Grove this 14th day of November 2012.

JAMES COOPER, MAYOR of the
CITY OF ELK GROVE

ATTEST:

JASON LINDGREN, CITY CLERK

APPROVED AS TO FORM:

JONATHAN P. HOBBS,
CITY ATTORNEY

Sustainability Element - Draft

The Sustainability Element is an optional element of the General Plan and is not mandated by the State of California. Its inclusion in the General Plan demonstrates the City of Elk Grove's (City) commitment to the long-term health and viability of the community. The City worked closely with the community to define sustainability and identify the policy topics contained within this Element.

This Element of the General Plan includes:

- A **definition of sustainability,** as defined by the community through public workshops;
- A description of **relevant state laws**;
- Identification and description of **sustainability policy areas** addressed in this General Plan;
- An explanation of the **relationship of this Element to other Elements** in the General Plan, including a matrix identifying the Element in which policies relating to each sustainability policy area can be found;
- An explanation of the **relationship of this Element to the Climate Action Plan (CAP)**;
- A set of **focused sustainability goals, policies, and actions** not addressed in other Elements of this General Plan.

DEFINITION OF SUSTAINABILITY

Sustainability *in Elk Grove is the ability to live responsibly within our means, meeting present needs without compromising the ability for future generations to meet their own needs. It is the capacity to endure, and therefore applies to everything we do now and in the future. The challenge is to incorporate the three components of sustainability — the environment, the economy, and the community — into City policies and actions. All three components work together as an integrated system to achieve a sustainable community. The City is committed to this challenge and to achieving our community's vision of a sustainable Elk Grove.*

The graphic below illustrates the concept of a sustainable community, where each circle represents one of the three components and each component is linked and dependent upon the others. The shaded area in the middle represents a union of all three components of sustainability. The goal is for the General Plan policies and actions, together as a whole, to support efforts toward achieving a sustainable community over the life of the General Plan.

During the public outreach process, the community identified the following five characteristics in their vision of a sustainable city:

1. Municipal Responsibility
2. Innovative and Energy Efficient Transportation & Development
3. Healthy Natural Environment & Resource Stewardship
4. Healthy Community & Cultural Diversity
5. Robust Sustainable Economy

The sustainability characteristics above directly address the three components of sustainability: environment, community, and economy. The final characteristic, fiscal responsibility, addresses the City's involvement in ensuring that the vitality of the community endures.

SUSTAINABILITY COMPONENTS

The three components of sustainability — the environment, the economy, and the community — are interrelated and individually and collectively important in achieving a sustainable community. All three components should be carefully considered when making decisions on behalf of the City. A key challenge will be to balance the demands of each component and the evolving needs of Elk Grove over the life of the General Plan.

Environment – Environmental sustainability is achieved by being a steward of the natural environment and reducing the impact of human activities on natural resources and systems that support the community.

Economy – A sustainable economy is one that is strong and resilient. It is achieved by supporting education, jobs, businesses, green industries, innovation, and economic development.

Community – A sustainable community is one that is accessible, healthy, safe, and diverse and promotes well-being. It is achieved by supporting public participation, healthy living, access to social services, cultural diversity, historic preservation, and the arts.

SUSTAINABILITY IN DECISION-MAKING

The General Plan's policies and actions support the principle of sustainability. Creating and maintaining a sustainable community will require integrating sustainable principles into the City's everyday actions and decisions, adapting to changing conditions and technologies, and staying informed of innovations and current best practices. The General Plan incorporates sustainable principles in every Element. Therefore, decisions that are consistent with the goals, policies, and actions identified in the General Plan will forward the principle of sustainability and, through time, will result in a sustainable Elk Grove. Local decisions will be made through a holistic approach that includes consideration of the environment, the economy, and the community. We refer to this holistic approach as the "sustainability lens."

RELEVANT STATE LAWS

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050. The General Plan recognizes the City's role in statewide mitigation efforts and works toward reducing greenhouse gas emissions to levels established by the City Council.

Assembly Bill (AB) 32

AB 32, also known as the California Climate Solutions Act of 2006, was authorized in September 2006 by Governor Arnold Schwarzenegger. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. AB 32 institutes a schedule to meet the emissions cap and to develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in greenhouse gas emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Senate Bill (SB) 97

SB 97, enacted in 2007, amends the California Environmental Quality Act (CEQA) statute to clearly establish that greenhouse gas emissions and their effects are appropriate subjects for CEQA analysis. It directs the Governor's Office of Planning and Research to develop draft CEQA Guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009, and directs the Resources Agency to certify and adopt the CEQA Guidelines. The General Plan is designed to address the environmental impacts associated with the bill's policies and programs and to meet the State's intent in adding this topic to CEQA.

Senate Bill (SB) 375

In August 2008, the Governor signed SB 375, a platform to implement AB 32 by linking regional transportation plans with state greenhouse gas reduction goals. Under SB 375, state agencies and local metropolitan planning organizations (such as the Sacramento Area Council of Governments) are to develop preferred growth scenarios to cut greenhouse gas emissions. SB 375 will tie state transportation funds to projects that conform to those scenarios. SB 375 also requires cities to revise their Housing Elements every eight years in conjunction with the regional transportation plan. The General Plan is designed to address these requirements and allow the City to meet its emissions reduction goals in coordination with planning for housing and overall community growth.

Other Relevant State Laws

In addition to the above state laws, a number of relevant laws promote sustainable development. These laws include, but are not limited to, the California Building Code and state historic preservation laws.

Sustainability Policy Areas

The five sustainability characteristics identified during the public outreach process are outlined below and categorize each of the policy topic areas addressed in this Element. The policy topic areas are shown in the bulleted list below.

1) Municipal Responsibility

- Sustainable Decision-Making & Partnerships
- Sustainability & Climate Action Plan Monitoring
- Environmentally Preferable Purchasing
- Financing Strategies

2) Innovative and Efficient Transportation & Development

- Green Building
- Transit-Oriented Development (TOD)
- Transportation & Parking Demand Management

3) Healthy Natural Environment & Resource Stewardship

- Air Quality, Greenhouse Gases & Resource Conservation
- Community Forest
- Native & Drought-Tolerant Landscaping
- Energy Efficiency, Conservation & Renewables
- Sustainable Stormwater Management
- Waste Management
- Water Conservation & Efficiency

4) Healthy Community & Cultural Diversity

- Child, Youth & Senior Services
- Community Character & Placemaking
- Community Involvement
- Environmental Justice
- Public Education & Awareness
- Public Health & Safety

5) Robust Economy

- Community Food Systems
- Jobs & Businesses





Relationship to Other Elements

All Elements of the General Plan contribute policies and actions that further the City's sustainability goals. For example, the Land Use Element includes policies to promote compact and mixed-use development, and the Circulation Element promotes enhanced connectivity between

developments, the Housing Element supports equity through affordable housing opportunities, and the Economic Development Element includes policies to grow a strong local economy and promotes employment opportunities for all segments of the community. **Figure S.1** illustrates how the various Elements of this General Plan address sustainability and how the Sustainability Element provides additional sustainability policies and actions not fully addressed in other Elements. The public outreach process helped to identify the sustainability policy areas important to the community and those are identified in the previous list.

RELATIONSHIP TO THE CLIMATE ACTION PLAN

The Sustainability Element provides an adopted vision and strategy to guide sustainability in the City over the next 20 years. The Climate Action Plan (CAP) is a tool that is linked to the General Plan through the Sustainability Element, but focuses specifically on greenhouse gas emissions reductions. The CAP is a shorter-term plan that will be updated on a more frequent basis. Any future updates to the CAP may warrant subsequent General Plan amendments to ensure that relevant measures are incorporated as appropriate into the City's primary policy document.

The CAP identifies and quantifies the impact of the City's sustainability vision, policies, and programs on greenhouse gas emissions. The General Plan, Sustainability Element, and Climate Action Plan function together as part of the City's comprehensive toolkit to achieve a vibrant and sustainable community.

Greenhouse gas reduction measures identified in the CAP are integrated into the policies and actions of this Element. Each policy or action that has related CAP reduction measures is identified with a cross-reference to the CAP. The final column of Figure S.1 illustrates the relationship between the sustainability policy areas in this Element and the CAP.

The Sustainability Element and Climate Action Plan are part of the framework for developing a greenhouse gas emissions reduction strategy in compliance with Section 15183.5(b) of the California Environmental Quality Act (CEQA) Guidelines. Section 15183.5(b) refers to the development of a plan that can be used to streamline future development proposed as a part of the programmatic policy structure in place at the City. Several actions are needed to develop a reduction plan consistent with this section, including:

1) Prepare a greenhouse gas inventory that includes projected emissions

2) Develop an emissions reduction target

3) Include emissions associated with specific actions in the City

4) Identify emissions reduction measures and quantify their benefits

5) Establish a procedure to monitor and update the CAP

6) Go through a public process and appropriate level of environmental review

The approach taken by the City to develop the CAP and Sustainability Element satisfies all of the criteria outlined in Section 15183.5(b) of the CEQA Guidelines.

Figure S.1: Sustainability Policy Topics Matrix
Relationship between the Sustainability Element, other General Plan Elements, and the Climate Action Plan

KEY

Cells highlighted in green indicate that the topic area is addressed completely or partially within that Element or

Cells highlighted in peach indicate topics not addressed in the Sustainability Element, but elsewhere in the General Plan and/or Climate Action Plan.

		EXISTING GENERAL PLAN ELEMENTS & CITY DOCUMENTS										
	Sustainabiliy Policy Topic Area	Circulation	Conservation & Air Quality	Economic Development	Historic Resources	Housing	Land use	Parks, Trails, and Open Space	Public Facilities & Finance	Safety	Climate Action Plan	**Sustainability Element**
Low Carbon Transportation and Development	Climate Change (sea level rise, flooding, emissions)											
	Green Building											
	Connectivity											
	Transit Oriented Development											
	Transportation/Parking Demand Management Strategies											
Healthy Natural Environment	Air Quality / Greenhouse Gases											
	Resource Conservation											
	Parks & Recreation											
	Open Space											
	Landscaping - Native & Drought Tolerant											
	Community Forest											
Resource Stewardship	Energy Efficiency, Conservation, & Renewables											
	Sustainable Stormwater Management/ Green Infrastructure											
	Waste Management											
	Water Conservation & Efficiency											
Healthy Community & Cultural Diversity	Affordable Housing											
	Child, Youth & Senior Services											
	Community Character & Placemaking											
	Historic Preservation											
	Community Involvement											
	Environmental Justice											
	Public Education & Awareness											
	Public Health & Safety											
Robust Economy	Community Food Systems											
	Economic Development & Jobs/Housing Balance											
	Green Jobs & Businesses											
Municipal Responsibility	Sustainable Decision Making & Partnerships											
	Environmentally Preferable Purchasing											
	Sustainability & Climate Action Plan Monitoring											
	Financing Strategies											

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The sustainability policies of the General Plan implement all of the Guiding Goals identified in the General Plan Goals chapter. These goals unify this General Plan and are restated below:

Guiding Goal 1: A High Quality of Life for All Residents

Focused Goal 1-1: A safe community, free from manmade and natural hazards

Focused Goal 1-2: Outdoor recreation opportunities for all residents

Focused Goal 1-3: A balanced and efficient transportation system

Focused Goal 1-4: High quality public facilities and services

Focused Goal 1-5: Excellence in the design of new development

Focused Goal 1-6: Safe and affordable housing for all persons

Focused Goal 1-7: Active and passive park facilities and recreation programs that satisfy the leisure time and recreation needs of all residents

Focused Goal 1-8: Creation and maintenance of a strong, positive community image for Elk Grove

Focused Goal 1-9: A pattern of land use which enhances the community character of Elk Grove, provides employment and shopping opportunities to serve residents and the region, which provides for use of transit, and which protects Elk Grove's unique historical and natural features

Guiding Goal 2: Diversified Economic Base

Focused Goal 2-1: A business community which includes a diversity of office uses, locally oriented and regionally oriented retail and services, and a diversity of residential types

Focused Goal 2-2: A balance between the numbers and types of workers residing in Elk Grove and opportunities for employment in the city

Focused Goal 2-3: A positive environment for business retention and expansion

Focused Goal 2-4: Creation of Elk Grove as a desired place to locate major employment-generating uses

Focused Goal 2-6: A balanced municipal budget which will allow the City to provide a high level of service to all residents and businesses

Guiding Goal 3: Protection of the Natural Environment

Focused Goal 3-1: Development which recognizes environmental constraints and is designed and operated to minimize impacts on the environment

Focused Goal 3-3: Natural resources managed and protected for the use and enjoyment of current and future generations

Focused Goal 3-4: Preservation and enhancement of Elk Grove's natural areas, in particular the areas within the floodplain of the Cosumnes River

Guiding Goal 4: Preservation and Enhancement of Elk Grove's Unique Historic and Natural Features

Focused Goal 4-1: Preservation and enhancement of Elk Grove's historic structures and districts

Focused Goal 4-2: Preservation of the large oak and other tree species which are an important part of the City's historic and aesthetic character

Guiding Goal 5: Preservation of the Rural Character of Elk Grove

Focused Goal 5-2: Maintenance of those features that provide the character of Elk Grove's rural areas, including: large oak and other trees, small local roadways, animal keeping and raising, equestrians, agriculture, and limited commercial opportunities

The following policies and action items implement these goals. The policies and actions in this chapter are organized by the sustainability topics previously identified in the Sustainability Policy Areas section of this Element. The incentives identified throughout this Element to aid in implementation are intended to utilize a combination of rewards and penalties to induce behavior.

SUSTAINABILITY POLICIES: SUSTAINABLE DECISION-MAKING & PARTNERSHIPS

The following policies establish partnerships and integrate the components of sustainability into the decision-making process. This will lead to well-informed choices that take into consideration the fundamental links among the economy, the environment, and the community. These connections help the City work toward its sustainability goals.

S-1 Consider the three components of sustainability — the environment, the economy, and the community — in decision-making for new development projects, special projects, and proposed policies and programs.

S-2 Partner with public and private agencies to efficiently enforce the policies of this Element, and encourage innovation in new development.

S-3 Participate in local, regional, and statewide sustainability efforts and programs that further the goals and policies outlined in the General Plan.

SUSTAINABILITY POLICIES: SUSTAINABILITY & CLIMATE ACTION PLAN MONITORING

These policies formalize the approach for keeping informed of current sustainable practices, implementing sustainability policies and programs, and measuring the City's success in achieving sustainability targets.

S-4 Assess the City's progress toward achieving its sustainability objectives.

- **S-4-Action 1** Establish a City-staff working group that monitors the City's sustainability progress and stays informed of current best management practices (BMPs).
- **S-4-Action 2** Monitor progress on sustainability through the City-staff working group. The group's initial work plan shall include the following tasks:
  - Identify sustainability indicators;
  - Develop measurable targets;
  - Research current BMPs and provide links to public agency BMPS on the City's website as a resource for the community;
  - Participate in conferences and meetings that promote sustainability; and
  - Annually assess and report on these targets and indicators to monitor the City's progress toward sustainability and make recommendations based on current best practices and innovation.
- **S-4-Action 3** Provide regular training to ensure that Planning Department staff are able to implement the sustainability policies identified in this Element, and utilize current best management practices identified by the Sustainability Committee when enforcing these policies.
- **S-4-Action 4** Provide opportunities for public involvement and interaction with the City-staff working group. Examples include, but are not limited to:
  - Public workshops
  - Community forums

S-5 Reduce greenhouse gas emissions from community-wide sources, including City facilities and operations, by a minimum of 15 percent below 2005 levels by 2020, consistent with the standards and requirements of AB 32.

- **S-5-Action 1** Adopt and implement a Climate Action Plan that will identify goals, measures, and actions to achieve the City's greenhouse gas reduction target.

- **S-5-Action 2** Regularly monitor and track the progress toward the City's greenhouse gas reduction goals.

    - Annually report on the implementation status of the Climate Action Plan.

    - Update the City's Climate Action Plan as necessary to make progress toward the City's greenhouse gas reduction goals.

SUSTAINABILITY POLICIES: ENVIRONMENTALLY PREFERABLE PURCHASING

These policies establish the City's commitment to purchasing local and environmentally responsible products and services to improve the health of the environment, its people, and local businesses.

S-6 Promote the use of local and environmentally friendly products and services for municipal purchases and contracts. (Please see CAP reduction measures.)

- **S-6-Action 1** Review and implement the City's environmentally preferable purchasing program, and consider the inclusion of standards for locally produced goods, environmentally friendly cleaning products, recycled content for paper products, street furnishings, roadways, and construction materials, alternative fuel vehicles, and hiring local and/or sustainable businesses for contract services. Balance the use of local and environmentally friendly products and services with their financial impact to the City and their benefits and effectiveness.

Please see the Economic Development Element of this General Plan for additional policies that support local goods and services.

SUSTAINABILITY POLICIES: FINANCING STRATEGIES

These policies will financially support the City's ongoing commitment to sustainability issues.

S-7 Use funding and financing mechanisms to support sustainability and environmentally-friendly government programs.

- **S-7-Action 1** Seek additional grant funding to support sustainability programs and demonstration projects.

- **S-7-Action 2** Formalize interagency partnerships to support water conservation.

- **S-7-Action 3** Promote public-private partnerships to upgrade existing buildings for energy efficiency and water conservation.

- **S-7-Action 4** Utilize or update existing funding mechanisms or establish new mechanisms to fund low impact development and green infrastructure (e.g., permeable paving, rain gardens, bioretention) .

Please see the Public Facilities and Finance Element of this General Plan for additional policies related to public facility financing strategies.

SUSTAINABILITY POLICIES: GREEN BUILDING [PUBLIC DEVELOPMENT]

Green building techniques are an effective way of reducing the environmental impacts created by development, and green buildings have been shown to use significantly less energy than traditional buildings. These policies demonstrate the City's leadership in promoting sustainable development in Elk Grove.

S-8 Incorporate green building techniques and best management practices in the site design, construction, and renovation of all public projects. (Please see CAP reduction measures.)

- **S-8-Action 1** Require all new municipal developments to exceed state Title 24 Energy Efficiency Standards by 15

percent to the extent such efficiencies are possible.

- **S-8-Action 2** Design new municipal facilities to be at a minimum the baseline LEED certification.

- **S-8-Action 3** Implement measures identified during the energy audit process to reduce energy use in existing municipal buildings.

SUSTAINABILITY POLICIES: GREEN BUILDING [PRIVATE DEVELOPMENT]

S-9 Support innovation and green building best management practices for all new private development.

- **S-9-Action 1** Require all new private developments to meet and (as determined feasible by the City) exceed state Title 24 Energy Efficiency Building Standards. (Please see CAP reduction measures.)

- **S-9-Action 2** Include a Green Building & Development Resource List and supporting materials with City planning and building permit applications that outline ways to integrate green building principles into project design.

- **S-9-Action 3** Establish a green building incentive program to encourage developers to integrate green design techniques above and beyond the requirements of Action 1. Incentives may include, but are not limited to, expedited review, plan/permit review fee reduction, density bonuses, tax credits, and/or technical assistance.

- **S-9-Action 4** Establish partnerships with the U.S. Department of Housing & Urban Development (HUD) and utility and water districts and providers to initiate pilot projects that demonstrate green building best practices.

- **S-9-Action 5** Create a program to recognize exemplary projects in the city that exhibit innovation and best practices in green building design.

- **S-9-Action 6** Provide regular training to ensure that Planning Department and Building Safety & Inspection Department staff are able to implement the State's Green Building Code and review or rate green building projects.

Please see the Housing Element and Conservation & Air Quality Element of this General Plan for additional policies related to green building.

SUSTAINABILITY POLICIES: CONNECTIVITY

Policies related to connectivity are found in the Circulation Element of this General Plan.

SUSTAINABILITY POLICIES: TRANSIT-ORIENTED DEVELOPMENT (TOD)

Transit-oriented development is characterized by a higher density and intensity of development than typical suburban development and located in close proximity to public transit. TODs discourage automobile use and encourage alternative modes of transport, which have numerous benefits including reduced use of fossil fuels, improved air quality, and increased physical activity. A compact TOD pattern can avoid further encroachment upon open space and natural resources, helping to safeguard these resources for our well-being and those of future generations.

S-10 Support higher-density, compact, residential development along transit by placing high-density residential or mixed-use sites near transit opportunities. (Please see CAP reduction measures.)

- **S-10-Action 1** Review the existing TOD designation in the Land Use Plan to determine if additional opportunities exist. Review should give consideration to the recommendations presented in the SACOG Blueprint Growth Principles. (Please see CAP.)

- **S-10-Action 2** Review the existing TOD designation in the Land Use Plan and revise the definition to emphasize mixed-

use, compact, higher-density development around transit stations.

- **S-10-Action 3** Review and update the City's design guidelines to ensure appropriate design of TODs, and establish standards to prioritize pedestrians, cyclists, and public transit over private vehicles.

Please see the Circulation and Housing Elements of this General Plan for additional policies related to TOD.

SUSTAINABILITY POLICIES: TRANSPORTATION & PARKING DEMAND MANAGEMENT

Transportation and Parking Demand Management strategies discourage private automobile travel and reduce the amount of land given to parking spaces, which have a number of environmental benefits including reduced reliance on fossil fuels, improved air quality, increased physical activity, and more efficient use of developable land.

S-11 Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport. (Please see CAP reduction measures.)

- **S-11-Action 1** Continue to support and operate the City's Transit Services Transportation Demand Management (TDM) Program, and continue to develop new and innovative TDM strategies based on current best practices.

- **S-11-Action 2** Require new commercial development for projects equal to and greater than 100,000 square feet to provide electric vehicle charging station and new residential development to pre-wire for plug-in electric vehicles.

- **S-11-Action 3** Develop incentives for existing commercial and residential properties seeking to provide for electric vehicle recharging.

- **S-11-Action 4** Ensure new multi-family and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.

- **S-11-Action 5** Work with private entities to implement a citywide car-sharing program.

- **S-11-Action 6** Continue to implement the Safe Routes to School policy. Continue working with the Sacramento Area Council of Governments (SACOG) on implementation.

- **S-11-Action 7** Establish an employee incentive program to encourage the use of transportation alternatives, such as a parking space cash-out program.

- **S-11-Action 8** Review and revise parking standards to reduce parking requirements in mixed-use and transit-oriented developments to reinforce alternative modes of transport.

- **S-11-Action 9** Develop incentives that promote shared access and shared parking between adjacent developments.

- **S-11-Action 10** Work with the local public transit agencies to improve and expand services to reduce overcrowding on existing routes and entice more residents to ride transit rather than drive alone.

Please see the Alternative Transportation Policies section of the Circulation Element and the Air Quality section of the Conservation & Air Quality Element of this General Plan for additional policies regarding transportation demand management.

SUSTAINABILITY POLICIES: PARKS & RECREATION

Policies related to parks and recreation are found in the Parks, Trails, and Open Space Element of this General Plan.

SUSTAINABILITY POLICIES: AIR QUALITY, GREENHOUSE GASES & RESOURCE CONSERVATION

Implementing measures to reduce greenhouse gas emissions is important in order to minimize the environmental effects of climate change and to

protect public health. These policies aim to safeguard the health of the environment to assure future generations of the resources they will need to survive and progress.

S-12 Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that contribute to climate change.

- **S-12-Action 1** Ensure that new development is consistent with the City's Climate Action Plan.

S-13 Preserve, protect, and enhance, as appropriate, the community's carbon sequestration resources, also referred to as "carbon sinks," to improve air quality and reduce net carbon emissions.

- **S-13-Action 1** Identify and develop a baseline inventory of existing opportunities for carbon sequestration resources in the city, including woodlands, grasslands, wetlands, stream corridors, trees, and plants.

- **S-13-Action 2** Create a Resource Management Report, in which the City collects data to inventory citywide natural resources. The report shall be published annually and posted on the City's website.

Please see the Parks, Trails, and Open Space Element and Conservation & Air Quality Element of this General Plan for additional policies related to air quality, open space preservation, and resource conservation.

SUSTAINABILITY POLICIES: COMMUNITY FOREST

Providing a tree canopy throughout the city can help filter pollutants from the air, provide shade, reduce energy use for cooling, mitigate the heat island effect of the built environment, and provide places for relaxation and refuge from busy city life.

S-14 Maintain and enhance a community forest by preserving and planting trees in appropriate densities and locations to maximize energy conservation and air quality benefits. (Please see CAP reduction measures.)

- **S-14-Action 1** Continue partnerships that work to preserve and promote the planting of oaks.

- **S-14-Action 2** Develop a Community Forest Master Plan to include, but not be limited to, the following:

  - Best management practices for tree planning, planting, and maintenance;

  - Designated areas for preservation or future planting;

  - Implementation of Chapter 19.12 (Tree Preservation and Protection) of the Municipal Code;

  - Shade requirements for new multi-family and non-residential development to promote planting shade trees and require, where feasible, site design that uses trees to shade rooftops, air conditioning units, parking facilities, streets, and other facilities to provide cool air temperatures and minimize heat island effects;

  - Preferred tree list, and specifications for street trees;

  - Proper spacing, plant diversity, and planting requirements.

Please see the Conservation and Air Quality Element of this General Plan for additional policies relating to community forest.

SUSTAINABILITY POLICIES: NATIVE & DROUGHT-TOLERANT LANDSCAPING

Implementing regulations to encourage or require native and drought-tolerant landscaping provide a means to reduce water usage, introduce vegetation that is native to the area, decrease maintenance, and protect against invasive plant species.

S-15 Advocate for native and/or drought-tolerant landscaping in public and private projects.

- **S-15-Action 1** Require the planting of native and/or drought-tolerant landscaping at the site of new/existing City facilities, landscaped medians, and parkway strips to reduce water use and maintenance costs.
- **S-15-Action 2** Establish incentives to replace private lawns with drought-tolerant landscaping and native plants.
- **S-15-Action 3** Establish pilot programs and projects that demonstrate the benefits and beauty of drought-tolerant and native landscaping through collaboration with external agencies, such as local watershed organizations and utility districts.
- **S-15-Action 4** Promote the use of drought-tolerant and/or native vegetation to minimize water consumption by providing information to developers and designers and partnering with local nurseries. (Please see CAP reduction measures.)
- **S-15-Action 5** Encourage use of drought-tolerant and/or native planting and grading/improvement design within private development projects to maximize runoff into designated planter areas. (Please see CAP reduction measures.)
- **S-15-Action 6** Develop a recommended drought-tolerant and native tree and plant species list and make it available on the City's website, along with information about the benefits of using drought-tolerant and/or native vegetation.

Please see the Conservation of Water section of the Conservation & Air Quality Element of this General Plan for additional policies relating to drought-tolerant landscaping.

SUSTAINABILITY POLICIES: ENERGY EFFICIENCY, CONSERVATION & RENEWABLES

Increased energy efficiency and the use of renewable energy sources contribute to reduced dependence on fossil fuels for heat and power, and lessen concentrations of greenhouse gases in the atmosphere. The use of alternative energy sources contributes to more stable local economies due to decreased reliance on traditional energy sources whose economic future is uncertain.

S-16 Promote innovation in energy efficiency. (Please see CAP reduction measures.)

- **S-16-Action 1** Support a cost-effective approach to staying on top of best practices toward energy efficiency.
- **S-16-Action 2** Connect residents and businesses with programs that provide free or low-cost energy efficiency audits and retrofits in existing buildings.

- **S-16-Action 3** Consider implementing a program that encourages and supports energy efficiency audits for residential and commercial buildings.

- **S-16-Action 4** Partner with the local utility district to develop a pilot program to demonstrate energy-efficient upgrades in existing municipal buildings.

- **S-16-Action 5** Partner with the local utility district to develop a pilot program to demonstrate energy-efficient techniques and products in new municipal buildings.

- **S-16-Action 6** Incentivize and analyze impediments in the City Municipal Code to the placement of small-scale renewable energy facilities within the city limits.

- **S-16-Action 7** Assess the cost-effectiveness of retrofitting existing City facilities with appropriate renewable energy technologies such as photovoltaics, wind, biofuel, cogeneration, and geothermal.

- **S-16-Action 8** Require the use of high-albedo material for public outdoor surfaces such as rooftops, parking lots, median barriers, roadway improvements (where feasible), and sidewalks.

Please see the Air Quality section of the Conservation & Air Quality Element of this General Plan for additional policies regarding energy conservation.

SUSTAINABILITY POLICIES: SUSTAINABLE STORMWATER MANAGEMENT/GREEN INFRASTRUCTURE

Sustainable stormwater management strategies are a design approach that use natural processes to mitigate impacts of increased runoff and stormwater pollution that occur as a result of urban development. These negative environmental impacts include erosion and pollution of local water bodies. Green infrastructure techniques and practices include bioretention facilities, vegetated rooftops, vegetated bioswales, tree box filters, and permeable pavements. These strategies recharge the groundwater, filter out contaminants from runoff, capture water which can be used for irrigation, and reduce the need for expensive curb and gutter infrastructure and maintenance.

S-17 Integrate sustainable stormwater management techniques in site design to reduce stormwater runoff and control erosion.

- **S-17-Action 1** Encourage minimization of the amount of impervious surface areas at new development sites. Possible solutions may include the use of permeable paving materials (e.g., porous concrete, porous asphalt, modular paving, gravel, lattice concrete blocks, and porous bricks) for parking

areas, pedestrian paths, and vehicular circulation, where feasible.

- **S-17-Action 2** Where feasible, employ on-site natural systems such as vegetated bioswales, living roofs, and rain gardens in the treatment of stormwater, where possible, to encourage infiltration, detention, retention, groundwater recharge, and/or water reuse on-site.

- **S-17-Action 3** Develop a Sustainable Stormwater Management/Low Impact Development (LID) Ordinance that goes beyond the initial discussion of the Storm Drainage Master Plan to set specific standards for new construction of both public and private projects.

- **S-17-Action 4** Partner with the local mosquito abatement district to ensure adequate precautions are taken to minimize mosquito production in the planning for new major stormwater management schemes.

Please see the Conservation & Air Quality Element and the Safety Element of this General Plan for additional policies regarding sustainable stormwater management.

SUSTAINABILITY POLICIES: WASTE MANAGEMENT

Regulations to manage waste and promote the reduction, reuse, and recycling of materials, which minimize use of natural resources and encourage the use of innovative materials and technologies.

S-18 Facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste sent to landfill from Elk Grove. (Please see CAP reduction measures.)

- **S-18-Action 1** Develop and implement an education campaign to encourage businesses to take an active role in recycling and composting, focusing on businesses that generate a large amount of compostable and/or recyclable waste.

- **S-18-Action 2** Monitor the recycling services contract to ensure that the range of materials accepted is consistent with the latest technology and best practices.

- **S-18-Action 3** Work with the waste and recycling services provider to ensure that recycling is available and convenient for businesses.

- **S-18-Action 4** Enforce the Construction and Demolition (C&D) Debris Recycling Program for applicable construction projects and all demolition projects and increase the requirements to a 65 percent waste diversion.

- **S-18-Action 5** Create incentives for the use of recycled concrete in all base material utilized in private road construction.

- **S-18-Action 6** Consider adopting a policy to reduce or restrict the use of disposable plastic shopping bags and polystyrene foam (Styrofoam) to-go containers.

Please see the Conservation & Air Quality Element of this General Plan for additional actions relating to recycling and recycled content products.

S-19 Reduce municipal waste through recycling programs and employee education. (Please see CAP reduction measures.)

- **S-19-Action 1** Continue the educational program for City employees on appropriate waste and recycling protocols.

- **S-19-Action 2** Continue to provide City employees with recycling bins at each desk.

- **S-19-Action 3** Recycle waste materials for all municipal construction and demolition projects.

SUSTAINABILITY POLICIES: WATER CONSERVATION & EFFICIENCY

Water conservation and efficiency regulation minimize impacts on this strained resource and decrease energy use required to pump water from source to tap.

S-20 Reduce the amount of water used by residential and nonresidential uses. (Please see CAP reduction measures.)

- **S-20-Action 1** Implement incentives to encourage water-efficient retrofit improvements to existing private buildings.
- **S-20-Action 2** Establish a program that provides water efficiency audits for residential and commercial buildings.
- **S-20-Action 3** Continue to require new commercial and multi-family residential developments to install low-flow fixtures.
- **S-20-Action 4** Continue requiring landscaping in surface parking and large paved areas for water uptake.
- **S-20-Action 5** Inform the public of water conservation and efficiency strategies and best practices by making this information available on the City's website.
- **S-20-Action 6** Continue to partner with water agencies on water efficient design for new construction.

S-21 Promote the use of and analyze barriers to the use of greywater systems and recycled water for irrigation purposes. (Please see CAP reduction measures.)

S-22 Improve the efficiency of municipal water use through retrofits and employee education. (Please see CAP reduction measures.)

- **S-22-Action 1** Conduct a water conservation audit of existing municipal facilities, and improve efficiency of municipal water use through retrofits and employee education.

Please see the Native & Drought Tolerant Landscaping section of this Element and the Conservation & Air Quality Element for additional policies related to water conservation.

SUSTAINABILITY POLICIES: AFFORDABLE HOUSING & HOUSING CHOICE

Policies related to affordable housing and housing choice are found in the Housing Element of this General Plan.

SUSTAINABILITY POLICIES: CHILD, YOUTH & SENIOR SERVICES

The provision of human services to vulnerable populations supports community members in leading long, healthy, and fulfilling lives, and contributes to a more positive and satisfied community. Regulations that support community services will help to sustain our current population and secure a promising future for our children.

S-23 Continue to establish public and private partnerships to promote community events, services, and/or programs for children, youth, and seniors.

- **S-23-Action 1** Continue to support the City's Youth Services program.
- **S-23-Action 2** Continue supporting programs offering services to seniors, to include opportunities for social interaction, access to public transportation, and assistance programs and services.
- **S-23-Action 3** Establish funding and review available sites to develop a community center to support events and recreational programs for children, youth, and seniors.

SUSTAINABILITY POLICIES: COMMUNITY CHARACTER & PLACEMAKING

Places that have a strong identify and unique character instill a sense of pride in the community.

These are the types of places where people want to be and businesses want to locate. Community design that emphasizes the city's natural beauty, while enhancing the built environment through public art, attractive streetscapes, and pedestrian-oriented design, can help sustain the community as a desirable place to live, work, and visit. These types of places create a sustainable community because they encourage people to be part of their community and increase opportunities for economic vitality and civic engagement.

S-24 Emphasize placemaking design principles in new development projects.

- **S-24-Action 1** Identify locations for major streetscape improvements such as landscaped medians, enhanced crosswalks, street trees, directional signage, benches, and public art.
- **S-24-Action 2** Identify key entry points into the city and provide major entry features or monuments at these locations to create a sense of arrival to Elk Grove.
- **S-24-Action 3** Review the Land Use Plan to develop community focal points by allowing greater densities and a mix of uses at key locations.
- **S-24-Action 4** New development should prioritize the pedestrian by implementing the following measures:
  - Parking areas and curb cuts should be minimized along commercial street frontages;
  - Encourage a vertical and horizontal mix of land uses;
  - Provide urban plazas and gathering spaces in commercial and multi-family development;
  - Provide pedestrian amenities such as lighting, landscaping, and benches.
- **S-24-Action 5** Ensure development minimizes disruption of viewsheds within the community (e.g., view to the Sierras).
- **S-24-Action 6** Continue to support the Committee for the Arts.
- **S-24-Action 7** Encourage public art in all new large-scale development projects equal to and greater than 100,000 square feet.

Please see the Land Use Element and Economic Development Element of this General Plan for additional policies that promote urban design and placemaking principles.

SUSTAINABILITY POLICIES: HISTORIC PRESERVATION

Policies related to historic preservation are found in the Historic Preservation Element of this General Plan.

SUSTAINABILITY POLICIES: COMMUNITY INVOLVEMENT

Citizen-based planning better reflects the needs and desires of the community. Engaging the public in social activities, programs, and events strengthens community bonds, enhances civic pride, and fosters a sense of investment in the future of the community.

S-25 Promote community involvement and public participation.

- **S-25-Action 1** Continue to provide opportunities for public participation in City planning decisions. Provide a range of participation methods that meet the needs of all residents, with a particular emphasis on encouraging participation among youth.
- **S-25-Action 2** Support and organize community events throughout the city. Examples of events include art walks, film night, live music, crafts for children, cultural events, and food festivals.
- **S-25-Action 3** Continue to provide information on the City's website and other electronic media and methods regarding upcoming events, public hearings and meetings, municipal services, city news, and other important civic information.

- **S-25-Action 4** Create a City Employee Volunteer Program to encourage City staff to participate in community service programs.

- **S-25-Action 5** Continue to support and participate in the Cosumnes Community Services District Community Giving program.

SUSTAINABILITY POLICIES: EQUITABLE DISTRIBUTION OF SERVICES AND USES

Provide equal environmental protection and equal access to economic opportunities and public facilities for all communities regardless of income status, race, gender, or ethnicity.

S-26 Promote community equity.

- **S-26-Action 1** Support equal access to jobs by working with organizations to provide job training.

- **S-26-Action 2** Work with social services organizations to provide safe places for day laborers.

- **S-26-Action 3** Promote community programs and services that foster awareness of cultural diversity and heritage.

- **S-26-Action 4** Locate community facilities equitably so that they are accessible to all members of the community.

- **S-26-Action 5** Do not unfairly burden any one area in the community that may be negatively impacted by any environmental factor.

Please see the Circulation, Public Facilities & Finance, Housing, and Economic Development Elements of this General Plan for additional policies relating to environmental justice.

SUSTAINABILITY POLICIES: PUBLIC EDUCATION & AWARENESS

Educating the community about sustainability issues will raise public understanding of and regard for the future consequences of their decisions and action. This can ultimately lead to behavior changes that promote sustainability principles. Continuing education increases employment opportunities, financial security, and personal well-being for employees and sustains a skilled and specialized workforce for employers.

S-27 Promote continuing education and job training for all residents.

- **S-27-Action 1** Continue to partner with EGUSD to optimize the joint use of school facilities for community and neighborhood programs and services.

- **S-27-Action 2** Continue to support early education programs for children.

- **S-27-Action 3** Develop a City of Elk Grove Student Internship Program to provide eligible students with the opportunity to work in departments within the City.

- **S-27-Action 4** Partner with Los Rios Community College District (e.g., Cosumnes River College) on training and education programs for Elk Grove residents.

S-28 Seek to provide all segments of the community with information relating to sustainability, climate change, and innovative development strategies.

- **S-28-Action 1** Establish a Sustainability & Climate Change webpage on the City website with content to include, but not be limited to:

  - The efforts the City is undertaking toward sustainability;

  - Information on opportunities as to how community members can get involved in sustainable efforts; and

  - Links to useful resources, including best management practices posted by other public agencies.

- **S-28-Action 2** Work with local schools and universities to develop an awareness program relating to the three

components of sustainability: environment, economy, and community.

- **S-28-Action 3** Sponsor an energy and water efficiency education program for the agricultural and business communities.

Please see the Safety and Economic Development Elements of this General Plan for additional policies relating to public information and education.

SUSTAINABILITY POLICIES: PUBLIC HEALTH & SAFETY

A safe and healthy community allows people of all ages and abilities to lead full, productive, and enjoyable lives.

S-29 Support programs that promote healthy living.

- **S-29-Action 1** Demonstrate leadership in efforts to promote community health by implementing a Healthy Living at Work Program for City employees.

  A Healthy Living at Work Program may include, but should not be limited to, (a) provision of healthy food at meetings, on-site cafeterias, vending machines and food vendors; (b) flexible work hours so that employees have more opportunities to participate in fitness programs as part of their working day; (c) Employee Assistance Program; (d) health education programs and online Web tools that help employees work toward their health goals; (e) a healthy commuter program that encourages or offers incentives for employees to walk and/or bike to work; and (f) planned events and group activities to encourage employees to become active, such as team sports or lunchtime walks.

- **S-29-Action 2** Work with businesses to implement and participate in healthy living programs.

- **S-29-Action 3** Continue to support the Neighborhood Livability Program, which is dedicated to improving safety in residential areas through traffic calming.

- **S-29-Action 4** Continue to support the Cosumnes Community Services recreational activity programs for people of all ages and abilities.

- **S-29-Action 5** Support SACOG in the development and implementation of a Safe Routes to School program. (Please see CAP reduction measures)

Please see the Circulation Element of this General Plan for policies that promote walking and biking as primary modes of transport; the Parks, Trails, and Open Space Element for policies that promote outdoor recreational opportunities; the Land Use Element for policies supporting mixed-use development that allows for walking/biking between origins in close proximity to destinations; and the Safety Element for policies related to Safety and Crime Prevention Through Environmental Design principles.

SUSTAINABILITY POLICIES: COMMUNITY FOOD SYSTEMS

Connecting the community with local food production and distribution enhances community health through improved access to healthy food, strengthens the local agricultural economy, and reduces energy needed to transport food products from greater distances.

S-30 Cultivate local food systems that encourage healthy eating and support the regional economy.

- **S-30-Action** 1 Encourage the marketing and selling of local agricultural products to local residents, vendors, and restaurants through farmers markets and other direct farm-to-table sales.

- **S-30-Action 2** Ensure that local development regulations allow for small-scale, compatible agricultural use of property, including edible landscaping, community gardens, and roadside food stands in appropriate areas of the city.

Please see the Conservation & Air Quality Element and Economic Development Element of this General Plan for additional policies relating to community food systems.

SUSTAINABILITY POLICIES: ECONOMIC DEVELOPMENT

Policies related to economic development and jobs/housing balance are found in the Economic Development Element of this General Plan. In addition, see reduction measures relating to economic development and jobs/housing balance that are included in the CAP.

SUSTAINABILITY POLICIES: JOBS & BUSINESSES

Jobs and businesses provide exciting opportunities to establish a viable local economy that acknowledges the value of the environment and promotes technology, innovation, and sustainable business practices. People living and working in the community can create a sustainable community. Establish a viable local economy that promotes innovation and sustainable business practices. Promote Elk Grove as a center for jobs and businesses.

S-31 Promote Elk Grove as a center for jobs and businesses.

- **S-31-Action 1** Establish a sustainable business certification and identification program to spotlight sustainable business operations in the community.
- **S-31-Action 2** Support companies by encouraging them to locate and stay in Elk Grove.
- **S-31-Action 3** Work with community groups and education programs to create more jobs and job training opportunities.
- **S-31-Action 4** Implement the Think, Shop, Live Elk Grove program to encourage residents and businesses to shop locally and spur local economic activity. (Please see CAP reduction measures.)

Please see the Economic Development Element of this General Plan for additional policies that supports local businesses.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ELK GROVE ADOPTING THE 2012 CLIMATE ACTION PLAN

WHEREAS, in 2003 the City adopted the Elk Grove General Plan; and

WHEREAS, as part of and prior to the adoption of the General Plan, the City Council certified an Environmental Impact Report (EIR) for the General Plan as required by the California Environmental Quality Act (CEQA); and

WHEREAS, in 2006, the State of California adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, which sets a target of reducing greenhouse gases (GHG) emissions to 1990 levels by 2020; and

WHEREAS, the City Council has adopted Resolution No. 2012-___, a Resolution of the City Council of the City of Elk Grove Amending the City of Elk Grove General Plan to Add the Sustainability Element; and

WHEREAS, the City desires to further the implementation of the Sustainability Element and other General Plan goals and policies through the creation and adoption of a Climate Action Plan (the "Project"); and

WHEREAS, the City Council established the Sustainability Element and Climate Action Plan Committee (the "Committee"), tasked with providing strategic direction and input on the development of the Sustainability Element/Climate Action Plan and overall outreach campaign. The Committee reviewed technical issues and policies, including consideration of potential carbon reduction measures, language for policies related to green building and green job creation, cost-benefit analyses, and the like; and

WHEREAS, the State CEQA Guidelines (Chapter 3 of Division 6 of Title 14 of the California Code of Regulations) identify several types of EIRs, each applicable to different project circumstances. The CEQA Guidelines provide that a Subsequent EIR is warranted if the lead agency determines, among other things, that substantial changes have occurred to a project, or the circumstances under which the project will be undertaken, that will have one or more significant effects not discussed in the previous EIR; and

WHEREAS, the Project would adopt a Climate Action Plan as part of the adoption of the Sustainability Element of the General Plan. A Subsequent EIR is appropriate under Public Resources Code Section 21166 and CEQA Guidelines Section 15162; and

WHEREAS, the Planning Commission held public meetings on May 5, 2011 and June 2, 2011 to review the draft Sustainability Element and Climate Action Plan; and

WHEREAS, on March 15, 2012, April 5, 2012, and April 19, 2012 the Planning Commission held duly noticed public hearings to review and accept public comments on

the draft Climate Action Plan, voting 3-1 on April 19, 2012 to recommend approval of the draft 2012 Climate Action Plan; and

WHEREAS, on November 14, 2012, the City Council held a duly noticed public hearing to review and accept public comments on the draft Climate Action Plan;

WHEREAS, on November 14, 2012, at the conclusion of the public hearing, the City Council adopted Resolution _____, certifying the Subsequent Environmental Impact Report, adopting Findings of Fact, and adopting a Mitigation Monitoring and Reporting Program for the Sustainability Element and Climate Action Plan;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Elk Grove hereby adopts the Climate Action Plan, as provided in Exhibit A hereto, with all changes accepted and does so based upon the following findings:

California Environmental Quality Act (CEQA)
Finding: The Subsequent Environmental Impact Report has been prepared in accordance with the California Environmental Quality Act (CEQA) and it reflects the independent judgment and analysis of the City.

Evidence: The CEQA Guidelines provide that a Subsequent EIR (SEIR) is warranted if the lead agency determines, among other things, that substantial changes have occurred to a project, or the circumstances under which the project will be undertaken, that will have one or more significant effects not discussed in the previous EIR. The Project would amend the General Plan to include an additional element, the Sustainability Element, and would also adopt the CAP, which will implement components of the Sustainability Element. A SEIR is appropriate under Public Resources Code Section 21166 and CEQA Guidelines Section 15162.

A Notice of Preparation for the SEIR was published on June 10, 2011 and a Notice of Availability was published on September 30, 2011. The Draft SEIR was distributed to the State Clearinghouse (SCH No. 2011062031) and to other public agencies and interested parties. A 45-day public comment period for the Draft SEIR was from September 30, 2011 through November 15, 2011. Comments from public agencies were received during the public review period.

Since the release of the Final SEIR, several revisions have been made to the project, as discussed in this report. Staff has reviewed these changes to determine whether any "significant" new information has been added to the project. No such information has been identified and, based upon the requirements in State CEQA Guidelines Section 15088.5, revisions to the Draft SEIR have been made to reflect these changes and the Draft SEIR does not need to be re-circulated.

General Plan Consistency
Finding: The proposed Climate Action Plan is consistent with the General Plan.

Evidence: As provided through the Sustainability Element, the draft Climate Action Plan is consistent with and implements the General Plan. The Sustainability Element and Climate Action Plan were prepared in tandem. The various programs generally described in the Element are identified and described in greater detail, with implementation steps, in the Climate Action Plan. Therefore, the Climate Action Plan is consistent with the General Plan.

PASSED AND ADOPTED by the City Council of the City of Elk Grove this 14th day of November 2012.

JAMES COOPER, MAYOR of the
CITY OF ELK GROVE

ATTEST:

JASON LINDGREN, CITY CLERK

APPROVED AS TO FORM:

JONATHAN P. HOBBS,
CITY ATTORNEY

EXHIBIT A

City of Elk Grove

Climate Action Plan

November 14, 2012

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Acknowledgements

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Executive Summary

Greenhouse Gas Emissions and California

Greenhouse gas emissions are a topic of concern. Lawmakers and elected officials across California are turning their attention to this matter. New laws such as Assembly Bill (AB) 32, Senate Bill (SB) 375, and SB 97 require local governments to address greenhouse gas (GHG) emissions in their development processes and to work to achieve State-recommended GHG reduction targets. The goal of this effort is to create more sustainable communities while promoting public health, improving air quality, and responding to the potential effects of climate change.

GHG emissions include carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), and various types of fluorocarbons. These gases are created from both natural processes and human activities, including driving, industrial processes, landfilling of waste, water filtration, treatment and movement, and energy production. The large-scale industrialization and urbanization of the last 100 years have increased the amount of GHG emissions in the atmosphere.

Local governments and communities can reduce GHG emissions through sustainable development patterns, waste conservation, water conservation, vehicle efficiency, alternative transportation modes, and energy efficiency.

The City of Elk Grove's Local Leadership and Sustainability Strategy

The City of Elk Grove (City) is taking proactive steps to become a more environmentally sustainable community and respond to state requirements related to GHG emissions. The City of Elk Grove Climate Action Plan (CAP or Plan) is a culmination of existing and proposed initiatives to reduce greenhouse gas emissions through goals and measures related to transportation, land use, energy use, waste, and water use. The CAP ensures that the City's future activities and development patterns conform to California state law. The CAP will also make future development easier by acting as a tiering document for GHG emissions under the California Environmental Quality Act.

Concurrently with the CAP, the City is establishing a new Sustainability Element of the General Plan. The Sustainability Element and Climate Action Plan are two separate but related components of the City's sustainability strategy.

The Sustainability Element organizes and highlights the City's goals related to sustainability and provides new direction and vision to maintain a healthy, balanced community. The CAP focuses specifically on strategies to reduce greenhouse gas emissions and provides direction to reduce emissions consistent with state law. It also builds on the goals and vision of the Sustainability Element, but translates these goals into numeric estimates of GHG reduction potential.

While the CAP is not an adopted component of the General Plan, it will be linked to the General Plan as an implementation item of the adopted Sustainability Element, which is a legally binding element of the General Plan. The Sustainability Element and Climate Action Plan Advisory Committee was created in spring 2010 to guide the City through its efforts to create the Sustainability Element and CAP and implement local and regional sustainability goals.

The CAP will build upon and incorporate related City efforts to date, such as employer-based commuter programs that serve the local workforce and reduce reliance on personal vehicles. The City has introduced a number of similar policies, programs, and development standards that enhance the local quality of life and reduce GHG emissions. All such actions are addressed and, to the extent possible, quantified in the CAP.

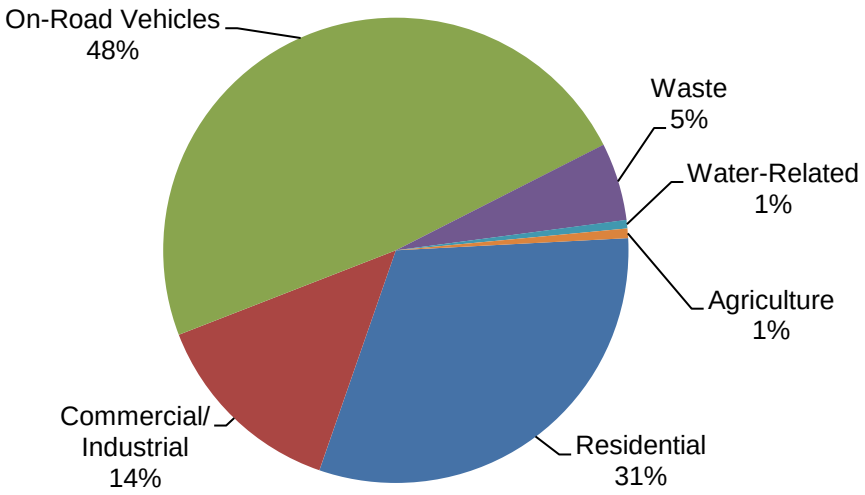
2005 Greenhouse Gas Inventory and Forecast

In June 2009, Sacramento County finalized a greenhouse gas inventory (Inventory) for each jurisdiction in Sacramento County. The Inventory calculates municipal and community-wide emissions caused by activities in 2005, including transportation, waste, water, and energy-related activities. The Inventory established a baseline against which future changes in emissions can be measured and provides an understanding of major sources of GHG emissions in the City and the region.

Staff reviewed and updated the June 2009 Inventory as part of the CAP development process. These updates incorporate new data, protocol, and best practices to ensure that the CAP is methodologically up to date.

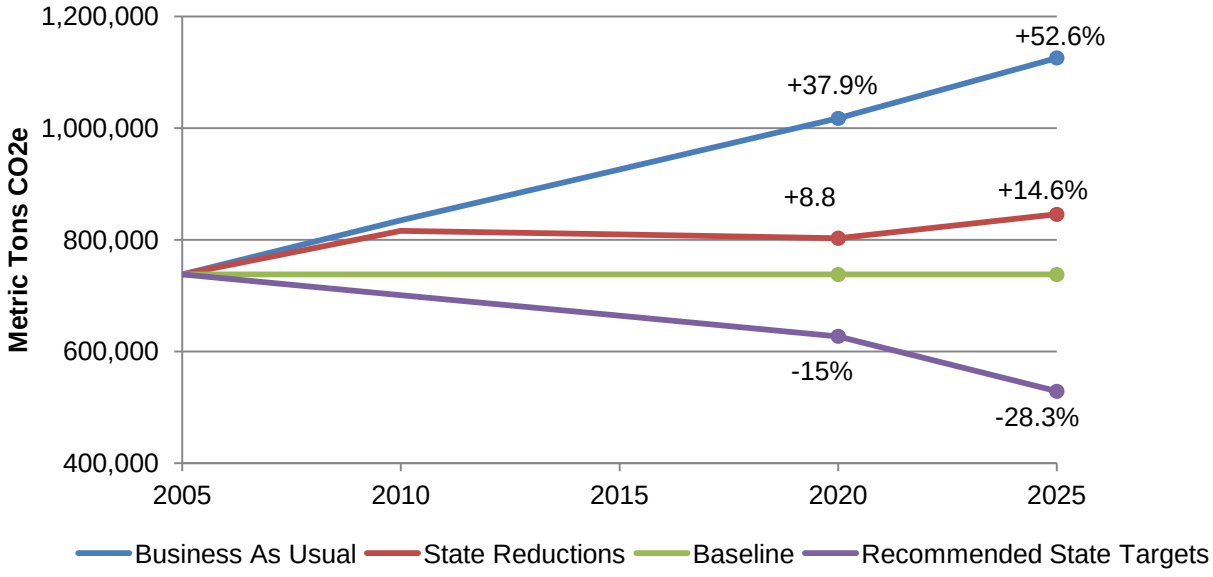
The Inventory update found that the Elk Grove community emitted 737,838 metric tons of carbon dioxide equivalent (CO_2e). CO_2e is a universal way to equalize the different potencies of the six greenhouse gas emissions in one comparable unit. Updated community-wide total emissions by sector are shown in **Figure ES-1.** On-road vehicles were by far the greatest contributor to the City's baseline emissions (48 percent). Residential and commercial energy use was the second largest contributor, with 14 percent and 31 percent of overall emissions, respectively.

Figure ES-1. *2005 Greenhouse Gas Emissions (CO_2e) from Community-Wide Sources*



Using data in the updated 2005 Inventory, the City created an estimate of how emissions will grow by 2020 and 2025 with Elk Grove's expected population, household, and nonresidential growth. This estimate, also known as an emissions forecast or projection, conservatively assumes that per capita consumption trends will remain the same as in 2005. The forecast is depicted in **Figure ES-2** as a blue line.

Figure ES-2. *GHG Emissions Forecast and State Recommended Targets – 2020 and 2025*



The City then adjusted the forecast to account for state and federal actions such as mandated fuel efficiency standards, renewable electricity standards, California's new building code, and federal vehicle efficiency standards. Accounting for these actions provides a more accurate picture of future emissions growth and the responsibility and ability of local governments versus the state to reduce greenhouse gas emissions. The State-adjusted forecast is shown in **Figure ES-2** as a red line**.** The figure also shows the State-recommended reduction target of 15 percent below 2005 levels by 2020, and reductions continuing through 2025, showing consistency with the Governor's Executive Order (EO) S-03-05 to reduce emissions by an additional 80 percent by 2050. The objective of this Plan is to bridge the gap between the City's growth forecast and the state's recommended reduction targets.

Attainment of Reduction Targets

In the General Plan Sustainability Element, the City establishes a policy to reduce GHG emissions within the community by a minimum of 15 percent below 2005 levels by 2020. This will require significant action at the local, regional, and state level. The Climate Action Plan outlines the City's strategies to achieve these reduction targets locally and consolidates local actions with regional and state strategies in one plan to analyze their effectiveness in reducing Elk Grove's greenhouse gas emissions. This approach recognizes the importance of large-scale coordination and confronts the fact that

many important reduction strategies are almost entirely out of the hands of the local government and dependent on state action.

Elk Grove's local actions to reduce emissions in this CAP fall into four policy topics: an Innovative and Efficient Built Environment, Resource Conservation, Transportation Alternatives and Congestion Management, and Municipal Programs.

Total reductions in emissions are summarized below in **Table ES-1**.

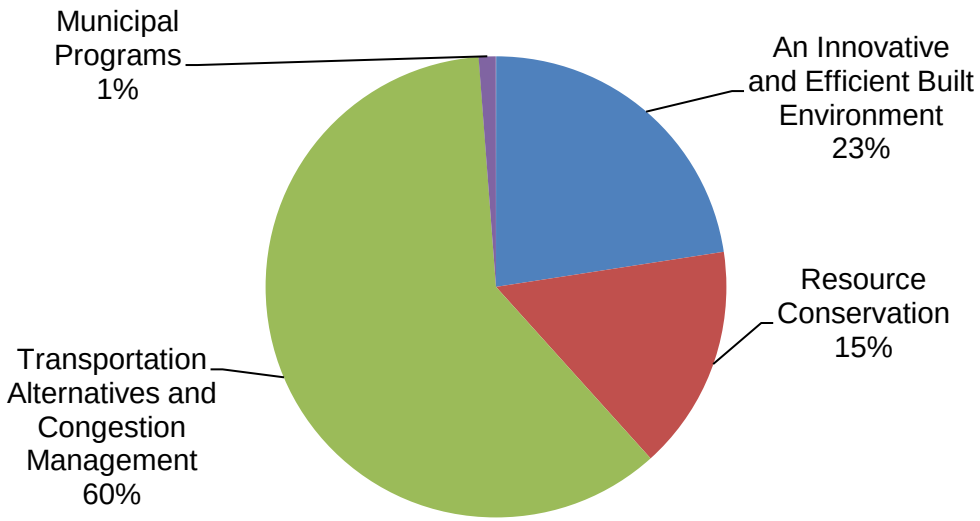
Table ES-1. *GHG Reductions by Policy Topic*

Policy Topic	2010 GHG Reductions ($MTCO_2e/yr$)	2020 GHG Reductions ($MTCO_2e/yr$)	2025 GHG Reductions ($MTCO_2e/yr$)
An Innovative and Efficient Built Environment	-217	-40,395	-51,609
Resource Conservation	-2,162	-28,221	-31,304
Transportation Alternatives and Congestion Management	-29,904	-108,221	-129,166
Municipal Programs	-94	-2,149	-3,604
Total Reductions	-32,377	-178,987	-215,682
Emissions Forecast	**816,001**	**802,959**	**845,612**
Net Emissions with CAP Reductions	**783,624**	**623,972**	**629,931**
Percentage Change from 2005 Levels (737,838 $MTCO_2e/yr$)	**6.21%**	**-15.43%**	**-14.62%**

Implementation of each CAP measure, in combination with the state actions, will allow the City to achieve a 15.43 percent reduction by 2020. Due to higher forecast rates of growth in emissions sectors between 2020 and 2025, the forecast emissions reduction by 2025 drops slightly to 14.62 percent below baseline by 2025. Further, the City's 2020 reduction achievement is consistent with AB 32 targets; therefore, implementation of the goals and measures would be consistent with the State's 2020 goal for local governments. **Figure ES-3** depicts the percentage of reduction for each policy topic for the 2020 target year. It is important to note that these reductions depict only actions to be implemented at the local level; they assume implementation of State-led and State-induced

actions (including the Sacramento Municipal Utility District Renewables Portfolio Standard).

Figure ES-3. *2020 Reductions by Policy Topic ($MTCO_2e$)*



The City's 2025 reduction achievement of 14.62 percent does not follow a trajectory toward the State's 2050 reduction target of 80 percent below 1990 levels by 2020. However, it demonstrates ongoing progress and the City's commitment to work toward sustained, long-term reductions. It is likely that the City's actual 2025 reduction achievement will surpass that which can be calculated at this time due to technical innovations and developments to state policy.

Next Steps

To achieve these reductions, the City must take concerted action. While the type of action required for success is a natural extension of the City's existing activities and priorities, the CAP nonetheless necessitates that the City go above and beyond its normal practice. The Plan outlines recommended responsibilities for implementation of each measure and provides cost estimates.

This Climate Action Plan is being completed concurrently with and will be integrated into the City's Sustainability Element. The new Sustainability Element will reference this Plan for actions to implement reductions in greenhouse gases. Because it is a separate document from the General Plan, the CAP can be updated on a regular basis, ensuring that the General Plan and Elk Grove's climate efforts are always up to date. Regular updates and modifications to this Plan will be required to respond to new emerging knowledge, statewide regulations, policies, and

best practices for reducing greenhouse gas emissions. Maintaining this flexibility in the CAP will be critical to its ultimate success.

Achievement of the reductions established in this CAP requires timely implementation complemented with the initiative of each resident, employee, and business in Elk Grove. This coordinated and comprehensive approach will help the City protect the earth and the local community for generations to come and ensure that Elk Grove is positioned to excel in spite of anticipated challenges resulting from greenhouse gas emissions.

A Climate Action Plan Readers' Guide

The following guide to the CAP's structure will help readers to easily locate the sections of greatest interest and importance to them.

1. Introduction. In this chapter, the reader is introduced to the general purpose and mechanics of the CAP. Further, the chapter provides background on sustainability efforts and public outreach that informed the CAP. This chapter also identifies the City's commitment to ongoing monitoring of CAP implementation progress.

2. Background. In this chapter, the CAP is placed within the context of overall greenhouse gas science and regulation. The chapter concludes with an explanation of the relationship of the CAP to the Sustainability Element and General Plan.

3. Greenhouse Gas Emissions Inventory and Forecast. This chapter provides the primary, big-picture results of the CAP, summarizing the foundation for the CAP and success of the Plan at achieving its reduction targets.

4. Reduction Strategy. This chapter details all actions that will be implemented in the City to reduce GHG emissions; it elucidates the basis for the reductions summarized in Chapter 3. The chapter includes strategies to reduce emissions from both municipal and community-wide sources. Key highlights for this chapter include:

Emissions targeted for City action. This section presents local actions to reduce GHG emissions.

Simplified presentation of each policy topic. This section groups individual reduction strategies into four policy topics: an Innovative and Efficient Built Environment, Resource Conservation, Transportation Alternatives and Congestion Management, and Municipal Programs.

The total reductions by policy topic and sector are summarized at the beginning of the section. Subsequently, the GHG reduction potential and implementation information is presented in a table.

5. Conclusion and Next Steps. Chapter 5 provides a set of strategies to ensure that CAP policies will be continuously implemented, integrated, and updated.

6. Glossary. This is a list of terms used throughout the document, exclusive to Elk Grove and this Plan.

7. Works Cited. This section includes all citations from the body of the report and excludes citations that are included in either of the appendices.

Appendix A. This appendix presents a simplified version of the GHG inventory peer review and update, in addition to a description of the methodology used to account for state actions in the forecast.

Appendix B. This section presents the assumptions and reductions in GHG emissions for each reduction measure that was accounted for in Chapter 4.

Introduction

This climate action plan demonstrates the City of Elk Grove's commitment to reducing greenhouse gas (GHG) emissions consistent with state legislation. The City will reduce GHG emissions caused by City operations and facilitate reductions in the community through the goals, measures, and actions identified herein. These efforts will not only reduce emissions, but create a healthier, more sustainable Elk Grove.

Purpose and Scope

Local governments play an important role in reducing greenhouse gas (GHG) emissions. While state and federal governments retain control of the "big hitters" such as vehicle efficiency, fuel efficiency, and renewable power, local governments have influence over other, more local influences to GHG emissions such as land use, transit, recycling, water conservation, and more. In addition, these efforts have co-benefits such as lower energy bills, improved air quality, economic growth, reduced emissions, and an enhanced quality of life.

In December 2009, the City was awarded an Energy Efficiency and Conservation Block Grant (EECBG) from the United States Department of Energy (DOE). The City dedicated a portion of its EECBG funds to prepare this Climate Action Plan together with a General Plan Sustainability Element. The Climate Action Plan was adopted by the City Council on XX ___, 2012.

The Elk Grove Climate Action Plan (CAP) is the beginning of an ongoing planning process that enables the City to comply with state legislation related to GHG emissions. The purpose of this Plan is to identify how the City will achieve the state-recommended GHG emission reduction target of 15 percent by the year 2020 and to create a path to obtain 2050 State targets associated with Governor's Order S-03-05. The CAP provides goals and associated measures, also referred to as GHG reduction measures, in the sectors of energy use, transportation, land use, water, and solid waste.

Specifically, this Plan:

- Identifies sources of greenhouse gas emissions from sources within the City of Elk Grove's jurisdictional/political boundary and estimates how these emissions may change over time.
- Discusses the various outcomes of reduction efforts and how these reduction efforts can be implemented and advertised.
- Provides energy use, transportation, land use, water use, and solid waste strategies to reduce Elk Grove's greenhouse gas emissions levels to 15 percent below 2005 levels by 2020.
- Provides methods for reducing Elk Grove's greenhouse gas emissions consistent with the direction of the State of California

through the Global Warming Solutions Act (AB 32), Governor's Order S-03-05, and Public Resources Code Section 21083.05. [The California Environmental Quality Act (CEQA) Guidelines encourage the adoption of policies or programs as a means of addressing comprehensively the cumulative impacts of projects. See State CEQA Guidelines, Chapter 3 of Division 6 of Title 14 of the California Code of Regulations, § 15064, subd. (h)(3), § 15130, subd. (d).]

- Provides substantial evidence that the emissions reductions estimated in the Climate Action Plan are feasible.

Relationship to the General Plan

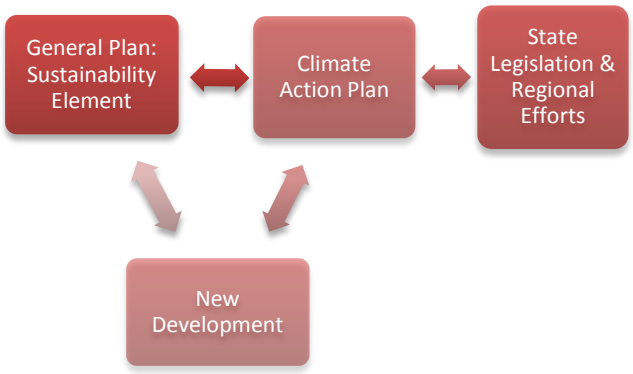
The CAP is linked to the General Plan through the General Plan Sustainability Element. The Sustainability Element and Climate Action Plan are two separate but related components of the City's sustainability strategy. The Sustainability Element organizes and highlights the City's goals related to sustainability and provides new direction and vision to maintain a healthy, balanced community. The CAP focuses specifically on strategies to reduce greenhouse gas (GHG) emissions and provides direction to reduce emissions consistent with state law and the CEQA Guidelines. The CAP is a tool that allows the City to look at its impact on GHG emissions, establish goals for GHG emissions reductions, and create steps to achieve these reduction targets. The CAP builds on the goals and vision of the Sustainability Element, but translates these goals into numeric thresholds and targets for GHG emissions. The CAP will be linked to the General Plan as a stand-alone policy and implementation item coordinated with the adopted Sustainability Element, a legally binding element of the General Plan.

This CAP is intended to be an adaptively managed document with the flexibility to change and be modified as the science and regulatory framework is further refined in coming years. It is recommended that the CAP be reviewed every five years to ensure the most appropriate information and emission reduction measures are included in the Plan.

This CAP encompasses the current and future efforts to reduce greenhouse gas emissions. By incorporating the goals and measures of this CAP into the General Plan, Elk Grove is ensuring that future development and planning activities within the City conform to the objectives of the CAP and state legislation.

This CAP will be an integral part of planning and development in Elk Grove in the coming years. As illustrated in **Figure 1-1**, the CAP serves as an analytical link for the City between local development, state requirements, and regional efforts. It will also be a way for the City to determine consistency with state legislation, such as AB 32, SB 375, and SB 97, which mandate that local governments address greenhouse gas emissions in local planning and environmental documents.

Figure 1-1. Context of the CAP in Relation to Other Planning Documents and Legislation



Relationship to the California Environmental Quality Act

This CAP is structured to serve as a programmatic tiering document for the purposes of CEQA. A tiering document front-loads the analysis needed for many projects in order to decrease the time and money that would be needed for individual analyses per project.

While this CAP identifies numerous mandatory and voluntary measures, the City will ensure appropriate use of the CAP for CEQA streamlining by maintaining the prerogative to use both mandatory and voluntary measures as standards for new development, as appropriate. The City will work with applicants on a project-by-project basis to determine appropriate use of the CEQA benefits of the CAP, identifying appropriate measures to integrate into project design or mitigation. For projects seeking to use CEQA streamlining provisions, the City may require voluntary measures in this CAP as mandatory conditions of approval or mitigation in a mitigated negative declaration or an environmental impact report, as appropriate, on a project-by-project basis. This approach allows the City to ensure that new development can benefit from CEQA streamlining while also ensuring that the City is on target to achieve the reduction targets outlined in this Plan.

Public Involvement in the CAP Development Process

Public engagement is integral to creating a document that is reflective of community-specific needs. Engaging community members early in order to identify ways the City and community can reduce greenhouse gas emissions will lead to more successful implementation of these programs and projects in the future.

Public Workshop One. The City held an initial public workshop on the concepts of sustainability, seeking input from the community on prioritization of concepts and ideas, and providing education about the City's existing programs and policies related to sustainability. Participants learned about the City's new sustainability initiatives and provided feedback on the community vision for a sustainable Elk Grove.

Participants engaged in a facilitated discussion about what a sustainable Elk Grove looks like, what the challenges are to achieving this vision, and the strategies that the City and community can employ to achieve their vision of local sustainability.

They identified the following characteristics in their vision of a "Sustainable Elk Grove":

- Low carbon transportation and development
- Low carbon innovative buildings
- Resource stewardship
- Cultural and lifestyle diversity
- A healthy community and culture
- A healthy natural environment
- A robust green economy

Workshop participants also noted challenges to achieving this vision, including lack of money, concerns over special interests, lack of public awareness and education, existing regulations, pollution, and urban sprawl. Participants were also asked to identify possible solutions to addressing these challenges. Some of the key strategies identified by participants included:

- Outreach and education programs
- User fees
- A focus on livable growth, using best practices, green buildings, and other methods for livable growth
- Regional and governmental partnerships
- A commitment by business to the community

These results provided the City with valuable insight into what the Elk Grove community envisions for a sustainable future.

Public Workshop Two. A second public workshop was held after the release of the public draft Sustainability Element and Climate Action Plan. The purpose of this workshop was to:

- Provide opportunities to learn about the Draft Climate Action Plan and Draft General Plan Sustainability Element; and
- Receive direction from the community regarding the prioritization of the actions contained in the CAP and Sustainability Element.

Following a presentation by staff, workshop participants were invited to participate in a prioritization activity and to provide any other feedback on the actions and policies proposed for inclusion in the CAP and Sustainability Element.

Overall, the results from the prioritization exercise show significant support, from meeting participants, for the implementation of CAP and Sustainability Element actions in the short term (0–3 years).

Additional comments provided to staff were focused on the need to incentivize change, to account for the cost of new programs, and to clarify the potential for sustainability requirements to change over time. A complete record of participant comments is maintained as part of the administrative record of this project.

Sustainability Element and Climate Action Plan Advisory Committee

The City created the Sustainability Element and Climate Action Plan (SECAP) Advisory Committee to guide sustainability initiatives within the community. The committee's role is to inform the creation of the Climate Action Plan and Sustainability Element while also working to implement local and regional sustainability goals. The committee is responsible for providing feedback and comments on the Climate Action Plan and Sustainability Element, helping to reflect the community's desired direction for these documents. The following members were selected from the community to serve on the SECAP Advisory Committee:

- Thomas Campbell
- Lyndon Hawkins
- Jimmie Johnson
- Bob Lilly
- Bill Myers
- Susan Oto
- Craig Sarmento

The SECAP Advisory Committee met four times throughout the planning process. Each meeting focused on a specific element of each document, for example, Sustainability Element policies or CAP reduction measures. During each meeting, SECAP committee members provided feedback on suggested policy language, helping to identify gaps, proposing new policies and programs for Elk Grove, and ensuring the documents address community concerns and priorities.

Implementation

Implementation of the CAP, in coordination with the Sustainability Element, will help Elk Grove to become an environmentally sustainable community while complying with state requirements to reduce GHG emissions 15 percent below baseline levels by 2020. To facilitate timely implementation of the CAP, each reduction measure identifies the department or agency responsible for implementation and provides public and/or private cost estimates. As outlined in Chapter 5, the City has also committed to conduct annual monitoring and reporting on progress of CAP implementation. The City will also develop additional implementation tools to help staff integrate the CAP into ongoing planning activities, including a monitoring and reporting tool and a development compliance checklist.

Background

An Overview of Climate Change

Awareness of climate change, greenhouse gas emissions, and global warming has increased significantly in recent years. Although used interchangeably, there is a difference between the terms "climate change" and "global warming." According to the National Academy of Sciences, climate change refers to any significant, measurable change of climate lasting for an extended period. Global warming, on the other hand, is an average increase in the temperature of the atmosphere caused by increased greenhouse gas emissions. The use of the term climate change is becoming more prevalent because it encompasses all changes to the climate, not just temperature.

Climate change scientists are not certain how climate change will affect the planet over time. Although much of the attention to the topic is global in scale, it is important to realize that climate change affects every community at the local level and that there are changes that can be made to mitigate anticipated effects.

To fully understand climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHG) that contribute to this phenomenon.

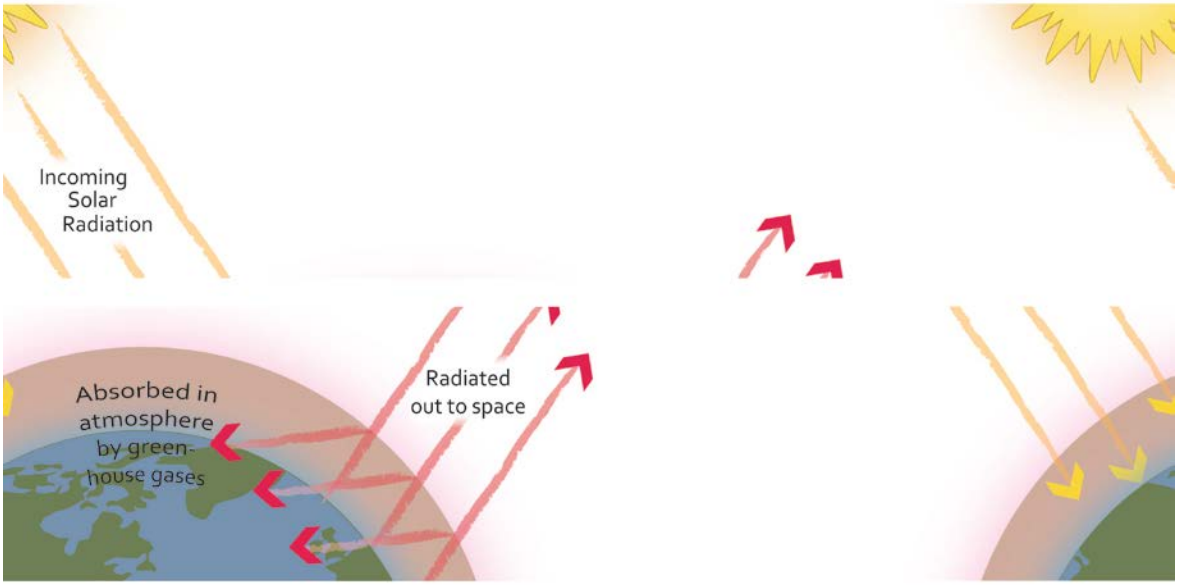
Our planet relies on the natural greenhouse effect. This effect results when the atmosphere captures heat that radiates away from the earth toward space. By retaining heat and warming the planet's surface, life on earth is possible. Several gases in the atmosphere function as barriers and trap heat within the planet's atmosphere, including water vapor, carbon dioxide, methane, nitrous oxides, and chlorofluorocarbons. These gases function similarly to glass on a greenhouse; the glass panes of a greenhouse allow sunlight to pass into the building but trap heat within it, preventing heat from escaping.[1] (Refer to **Figure 2-1.**)

Greenhouse gases are transparent to certain wavelengths of the sun's radiant energy, allowing them to penetrate deep into the atmosphere or all the way to the earth's surface. Clouds, ice caps, and particles in the air reflect about 30 percent of this radiation, but oceans and land masses absorb the rest (70 percent of the radiation received from the sun) before releasing it back toward space as infrared radiation. Greenhouse gases and clouds effectively prevent some of the infrared radiation from escaping; they trap the heat near the earth's surface where it warms the lower atmosphere. If this natural barrier of atmospheric gases were not present, the heat would escape into space and the earth's average global temperatures could be as much as 61 degrees Fahrenheit cooler.[2]

[1] NASA 2009.

[2] NASA 2009.

Figure 2-1. *The Greenhouse Gas Effect*



While the greenhouse effect is a natural process, human activities have accelerated the generation of greenhouse gas emissions beyond natural levels. This overabundance of greenhouse gases has led to an unexpected warming of the earth, which has the potential to severely impact the earth's climate system.

How Are Greenhouse Gases Measured?

"Carbon dioxide equivalent" (CO_2e) is a way to equalize the different potencies of the six internationally recognized greenhouse gases (carbon dioxide, methane, nitrous oxides, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride). For example, methane (CH_4) has 21 times the potency of carbon dioxide (CO_2); therefore, 21 metric tons CO_2e could be 21 metric tons of carbon dioxide or 1 metric ton of methane.

Climate Change Impacts

GLOBAL IMPACTS

The Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report's Working Group I Summary for Policymakers synthesizes current scientific understanding of global climate change and projects future climate change using the most comprehensive set of established global climate models.[3] The report incorporates findings of the current effects of global climate change. These findings include an increase in tropical cyclone (hurricane) intensity, a loss in seasonally frozen ground in the Northern Hemisphere, and an increase in drought intensity since the 1970s.

As asserted in the IPCC Fourth Assessment Report, if trends remain unchanged, continued GHG emissions at or above current rates will induce further warming changes in the global climate system that will exceed trends observed to date and pose even greater risks than those currently witnessed.[4]

Given the scientific basis of basic climate change facts and expected trends, the challenge remains to prepare for and mitigate climate change through deliberate global and local action.

The IPCC and Climate Change Science

What does the IPCC do? The role of the Intergovernmental Panel on Climate Change (IPCC) is to transparently and objectively assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

Why is the IPCC's work important? Work produced by the IPCC has become the "international gold standard in scientific assessments of climate change," reflecting the most current state of knowledge about the field.

Who contributes to IPCC work? IPCC reports are constructed through the work of thousands of unpaid scientists from leading research institutions, universities, and scientific organizations; the members of the IPCC (the world's national governments); and the IPCC's elected leadership.[5]

Adaptation or mitigation alone cannot avoid all of the anticipated impacts of climate change, but in coordination, these two strategies can complement each other and reduce climate change risks.[6] The burden to implement these strategies falls to governments. However, this burden also creates tremendous opportunity—acting on these

[3] IPCC 2007.

[4] IPCC 2007.

[5] IPCC 2010a, b, c.

[6] Ibid.

strategies yields both mitigation and economic benefits.

STATE AND LOCAL IMPACTS

Research suggests that California will experience hotter and drier conditions, reductions in winter snow and increases in winter rains, sea level rise, and an increased occurrence of extreme weather events. Such compounded impacts will affect economic systems throughout the state. To refrain from action is costly and risky; the California Climate Adaptation Strategy estimates that no action to address the potential impacts of climate change will lead to sector-wide losses of " 'tens of billions of dollars per year in direct costs' and 'expose trillions of dollars of assets to collateral risk.' "[7]

The City of Elk Grove continues to study hydrology patterns, water quality issues, land use, native species, and many other sectors that could be affected by climate change. While it is difficult to predict exactly how climate change will affect these community-specific issues, it is important to be aware of the general risks and implement mitigation strategies according to local needs.

INCREASED RATE OF WILDFIRES

Wildfire risk is based on a combination of factors including precipitation, winds, temperature, and vegetation. Wildfires are likely to grow in number and size throughout the state as a result of increased temperatures induced by climate change. Even under the "medium" warming scenario predicted by the Intergovernmental Panel on Climate Change, wildfire risk will likely increase by 55 percent in California.[8] Further, as wildfires increase in frequency and size, they will also increase in intensity.[9]

NEGATIVE IMPACTS ON WILDLIFE

As temperatures rise, species are moving north in California or to higher elevations. This change in migration disrupts the food chain and prevents some plant species from being pollinated. Water and food supplies are expected to be more variable and to shift as the seasons change on different time frames. Further, those species that are unable to migrate face the danger of extinction: "The amount of future warming expected in California may likely exceed the tolerance of endemic species (i.e., those that are native to a specific location and that only occur there) given their limited distribution and microclimate."[10]

With vegetation, reduction in soil moisture will result in early dieback of many plants, potentially leading to conflicts with animal breeding seasons and other natural processes. Many of the potential effects on wildlife are still being studied, but

[7] California Natural Resources Agency 2009.

[8] California Climate Change Center 2006.

[9] California Natural Resources Agency 2009.

[10] California Natural Resources Agency 2009.

due to an inability to adapt to new climates, the potential for severe species loss is present.

Several potential hydrological changes associated with global climate change could also specifically influence the ecology of aquatic life in California and have several negative effects on cold-water fish. For example, if a rise in air temperature by just a few degrees Celsius occurs, this change could be enough to raise the water temperatures above the tolerance of salmon and trout in many streams, favoring instead non-native fishes such as sunfish and carp. Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults or juveniles or both.

DETERIORATING PUBLIC HEALTH

Heat waves are expected to have a major impact on public health, as well as decreasing air quality and increasing mosquito breeding and mosquito-borne diseases. Further, climate change is expected to alter the spread and prevalence of disease vectors, in addition to leading to a possible decrease in food quality and security.[11] Vector control districts throughout the state are already evaluating how they will address the expected changes to California's climate.

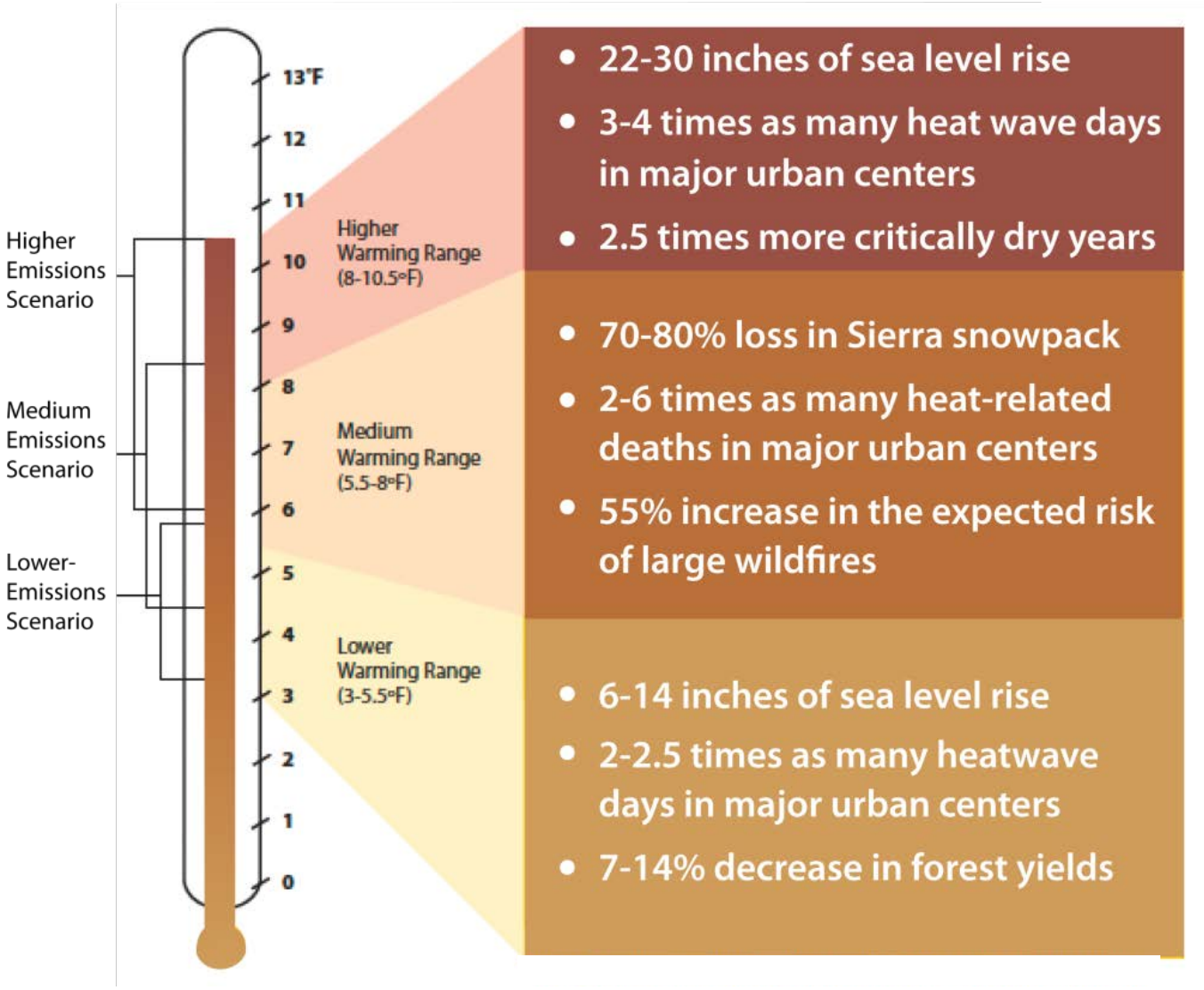
According to a new report from the Air Resources Board, the warming climate will increase ozone levels in California's major air basins, leading to upwards of 6 to 30 more days per year with ozone concentrations that exceed federal clean-air standards.

Taking cost-effective measures to reduce greenhouse gas emissions and protect public health is important for local governments. The new study provides evidence of what is becoming known as the "climate penalty," where rising temperatures increase ground-level ozone and airborne health-damaging particles, despite the reductions achieved by programs targeting smog-forming emissions from cars, trucks, and industrial sources.[12] The elderly, young, and vulnerable populations most likely to be impacted by climate change are also those that often lack sufficient resources to adapt. Such vulnerable demographics are likely to need assistance to respond to climate change. Social equity issues related to the unequal distribution of resources and increased costs to address community-wide health risks will need to be addressed proactively to reduce the potential for financial strain on local governments.

[11] Ibid.

[12] Ibid.

Figure 2-2. *California Climate Change Impacts* [13]



[13] California Department of Water Resources 2008.

A DECREASING SUPPLY OF FRESH WATER

The state's water supply is already under stress and is anticipated to shrink under even the most conservative climate change scenario. Warmer average global temperatures cause more rainfall than snowfall, making the winter snowfall season shorter and accelerating the rate at which the snowpacks melt in the spring. The Sierra snow-pack is estimated to experience a 25 to 40 per-cent reduction from its average by 2050.[14] With rain and snow events becoming less predictable and more variable, the rate of flooding could increase and California's ability to store and transport fresh water for consumption could decrease. Further, warmer weather will lead to longer growing seasons and increased agricultural demand for water.[15]

INCREASED SEVERITY AND FREQUENCY OF FLOOD EVENTS

Forecasts indicate more intense rainfall events, generating more frequent or extensive runoff, and flooding may result from a changing climate. Localized flood events may increase in periods of heavy rain. As explained by the Climate Adaptation Strategy, California's water system is structured and operated to balance between water storage for dry months and flood protection during rainy seasons.16 Although climate change is likely to lead to a drier climate overall, risks from regular, more intense rainfall events can generate more frequent and/or more severe flooding that upsets this managed balance between storage and protection. Several areas in Elk Grove have been determined by the Federal Emergency Management Agency (FEMA) to fall within 500- and 100-year floodplains.17 Areas within the floodplains will likely be more vulnerable to the heightened flooding threats that are anticipated to result from climate change. Additionally, erosion may increase and water quality may decrease as a result of increased rainfall amounts.

State and Federal Regulatory Framework

The State of California's elected officials have taken an aggressive stance on reducing greenhouse gas emissions. The State has developed a framework of legislation that provides a method for local and state governments to address climate change. The framework is described below.

[14] Department of Water Resources 2008.

[15] California Natural Resources Agency 2009.

[16] California Natural Resources Agency 2009.

[17] City of Elk Grove 2003.

CALIFORNIA'S LEGISLATIVE DIRECTION

The State of California is the 15th largest emitter in the world of greenhouse gas emissions, ultimately accounting for 2 percent of global emissions.[18] However, the State has been working proactively to reduce emissions. California has a long history of proven leadership in addressing these issues that spans the last 20 years. In 1988, Assembly Bill (AB) 4420 (Sher, Chapter 1506, Statutes of 1988) designated the California Energy Commission (CEC) as the lead agency for GHG issues in California.[19] Since that time, there has been a flurry of initiatives in California, with the majority of legislation passed between 2000 and now. These initiatives have strengthened the ability of entities in California to engage in accurate data collection and have created ambitious targets and regulations that will directly lead to reductions in greenhouse gas (GHG) emissions. Not only have California's efforts earned it a role as the leader in the United States for climate planning strategies, but the state has received world attention and accolades for its efforts.

A Brief History of California's Landmark Climate Change Legislation and Actions

1988 – AB 4420 (Sher Chapter 1506, Statutes of 1988): Designates the California Energy Commission (CEC) as the lead agency for climate change issues in California

2000 – SB 1771 (Sher, Chapter 1018, Statutes of 2000): Creation of the California Climate Action Registry (CCAR), a nonprofit entity established to assist entities in California working to create GHG emissions baseline inventories.

2001 – SB 527: Directed the CEC to provide specific guidance to the CCAR on issues including the development of GHG emissions protocols and the qualifications of third parties providing technical assistance and certification of inventories.

2002 – AB 1493 (Pavley, Chapter 200, Statutes of 2002): Directed CARB to create regulations that would lead to reductions in greenhouse gas emissions from passenger vehicles, light-duty trucks, and noncommercial vehicles sold in California.

[18] California Air Resources Board, CCAR, and ICLEI 2008.

[19] California Energy Commission 2009.

2005 – EO S-3-05: Establishes progressive greenhouse gas emissions reduction targets for the state:

- By 2010, reduce greenhouse gas emissions to 2000 levels;
- By 2020 reduce greenhouse gas emissions to 1990 levels;
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

2006 – AB 32: Known as the California Global Warming Solutions Act, the law requires the California Air Resources Board to develop regulatory and market mechanisms that will reduce greenhouse gas emissions to 1990 levels by 2020.

2006 – SB 1368 (Perata, Chapter 598, Statutes of 2006): Established greenhouse gas emission performance standards for longer-term financial investments in base-load electricity generation to catalyze the transition to cleaner energy use.

2008 – SB 97 (Dutton, Chapter 185, Statutes of 2008): Clarified responsibilities for analyzing GHG emissions per the California Environmental Quality Act (CEQA).

2008 – AB 32 Scoping Plan: CARB approves the AB 32 Scoping Plan outlining regulatory and market mechanisms to achieve the goal of AB32. The plan cites local government action as an integral partner to achieving the State's goals.

2008 – SB 375: Aims to reduce GHG emissions by linking transportation funding to land use planning. It requires Metropolitan Planning Organizations (MPOs) to create Sustainable Communities Strategies (SCSs) in their regional transportation plans (RTPs) for the purpose of reducing urban sprawl. Compliance is encouraged with new CEQA streamlining provisions and an allowance for an extended Regional Housing Needs Allocation (RHNA) cycle when assessments are coordinated with the regional transportation planning process.

2010 – State Resources Agency adopts guidelines developed by the Governor's Office of Planning and Research (OPR) to address climate change in CEQA documents, per SB 97. Guidelines Section 15183.5(b) outlines the approach to structuring plans for reduction GHG emissions to serve as tiering documents.

FEDERAL DIRECTION

The federal government has yet to enact legislative targets for GHG emissions reductions. However, numerous proposals are under way at the federal level to limit emissions from power plants, impose pricing on carbon emissions, and provide federal energy legislation. In 2011, the federal government announced a proposal to enact stronger national fuel economy and greenhouse gas pollution standards for 2017–2025 vehicle model years, increasing fuel economy to 54.5 miles per gallon for cars and light-duty trucks by model year 2025. The federal government also previously granted California

with authority to implement groundbreaking vehicle efficiency standards in 2009. However, with the release of the national fuel economy standards, the California Air Resources Board committed to collaborate with the United States Environmental Protection Agency and the Department of Transportation to jointly coordinate the development of regulations. In addition, the federal government has addressed GHG emissions though the approval of the American Reinvestment and Recovery Act (ARRA), also referred to as the federal stimulus package. Through the Energy Efficiency and Conservation Block Grant (EECBG) program, a division of ARRA, the US Department of Energy (DOE) is providing a total of $3.2 billion to cities and counties to reduce fossil fuel emissions; reduce total energy use; improve energy efficiency in the transportation, building, and other appropriate sectors; and create and retain jobs.[20] Using this money, jurisdictions across the United States are allocating funds to achieve reductions in greenhouse gas emissions.

Existing Sustainability Efforts in Elk Grove

The City has implemented ambitious and innovative policies, programs, and development standards that enhance the local quality of life and reduce GHG emissions. All such actions are addressed and, to the extent possible, integrated into the Climate Action Plan. This approach gives the City credit for all GHG emissions reductions that have resulted since the baseline inventory. All reductions achieved to date are depicted in this Plan as progress toward GHG emissions reduction targets. Below are examples of current sustainability initiatives—both public and private. These initiatives provide an important foundation for the vision established in the Sustainability Element and the actions proposed in this Plan.

- **Energy.** The City is in the process of subgranting EECBG funds to the Sacramento Regional Energy Alliance (the Alliance) for energy efficiency education, energy surveys, rebates, and financing programs that will help to promote and ease the cost of undertaking energy efficiency and renewable energy projects in businesses and homes. Further, adopted policies encourage energy efficiency conservation features in new development.
- **Land Use.** The City strives for a balance of local land uses that will reduce the need to utilize personal vehicles for all aspects of daily living. The Elk Grove Economic Development Corporation (EGEDC) and Shop Elk Grove program promote local economic activity, encouraging the localization of employment and recreational shopping. Programs and policies also promote affordable, mixed-use, and multi-family development that is integrated into the community.
- **Transportation.** The City's workforce is served by multiple commuting programs. Options include the paratransit E-Van and E-Tran, in addition to the Sacramento Region

[20] US Department of Energy 2010.

Commuter Club and resources provided by local employer-based Employee Transportation Coordinators. An Intelligent Transportation System (ITS) is currently being implemented with stimulus funds that will enhance transportation flow and reduce emissions. The City has also actively encouraged the use of alternative transit. The City has completed numerous bus stop improvements and is working to install new bus shelters citywide. The City is also using stimulus funds to upgrade E-Tran buses to compressed natural gas (CNG) vehicles. Bicycle and pedestrian travel is facilitated through improvement programs as directed by the Bicycle and Pedestrian Master Plan, adopted in 2004, and the Trails Master Plan, adopted in 2007.

- **Waste Reduction.** Numerous programs facilitate recycling and reduce landfilled waste, including curbside e-waste pickup, curbside recycling, a restaurant waste program, and a proposed Business Recycling Ordinance. The City also hosted a successful composting workshop for local residents as well as other education programs.
- **Water Conservation.** The Elk Grove Water Service (EGWS) provides rebates for clothes washers and toilets that conserve water. In partnership with the Sacramento Municipal Utilities District (SMUD), the EGWS also provides free mulch that reduces moisture evaporation in outdoor landscaping.

This CAP incorporates these efforts to date and builds a framework for what more can be done between now and 2025.

Greenhouse Gas Emissions Inventory & Forecast

An inventory of greenhouse gas emissions is an important first step in the climate action planning process. It identifies major sources of greenhouse gas emissions and provides a baseline against which progress can be measured.

2005 Greenhouse Gas Emissions Inventory Background

In June 2009, the Sacramento County Department of Environmental Review and Assessment completed a greenhouse gas (GHG) emissions inventory (Inventory) of each jurisdiction in the county. The Inventory calculated GHG emissions produced from government operations and community-wide activities in 2005.

The Inventory consists of two distinct inventories: 1) the inventory of emissions from government operations, and 2) the inventory of emissions caused by community-wide activities. The government, or municipal, operations inventory is a subset of the community-wide inventory. Emissions from the government operations inventory mostly take place within the community of Elk Grove, meaning that all government operations are included in the nonresidential, transportation, waste, and other sectors of the community-wide inventory.

The Inventory used the baseline year of 2005 because of the availability of reliable data and also to maintain consistency with California's Assembly Bill (AB) 32 and other agencies throughout the state. The Inventory is an important first step for the City to create a baseline against which it can measure future progress. The largest GHG emitters and opportunities for reduction are revealed through the Inventory, making it an integral component of the City's sustainability efforts.

It should be noted that GHG emissions inventorying is not an exact science. There is no standard protocol for community-wide inventories, and the protocol for calculating the GHG impact of City government operations is continually being improved by the State. There are sources of GHG emissions (e.g., refrigerants and water reservoirs) that scientists know contribute to GHGs but are difficult or impossible to calculate at the local level. Furthermore, it is likely that new sources of GHG will be able to be assessed in the future and that our way of calculating present emissions will change drastically as technology and science develop. Elk Grove's Inventory should therefore be viewed as a study to inform policy decisions rather than as a scientific measurement of GHGs.

Greenhouse Gas Emissions Inventory Update

PURPOSE OF THE UPDATE

In 2010, staff completed an update of the City's June 2009 Inventory to ensure that it utilizes accurate and up-to-date information and methodology.

The revised Inventory still retains a baseline year of 2005, but modifications to the Inventory were completed to both the government operations inventory and the community-wide inventory in order to streamline Climate Action Plan analysis. The review and update is not intended to be a formal revision or addendum to the adopted Inventory; rather, the review and update presents a new approach to the City Inventory for the purposes of the Climate Action Plan.

The City updated the government operations inventory to adhere to the Local Government Operations Protocol v1.1 released in May 2010 by the California Air Resources Board. Unlike municipal GHG inventories, community-wide inventories do not have a state protocol to follow. Inventories instead rely on best practices and a draft international protocol named the International Local Government GHG Emissions Analysis Protocol (IEAP) version 1.0 developed by ICLEI – Local Governments for Sustainability.

Following IEAP principles and best practices among California local government greenhouse gas inventories, staff modified the community-wide inventory to exclude some emissions sources that the City has no power to control or affect through this CAP or any other action. The City also omitted some emissions sources or sectors where the methodology was not supported by protocol or best practices, Several sectors excluded from the updated inventory include high global warming potential GHGs for electricity transmission, emissions from waste-in-place generated outside of Elk Grove but landfilled within the community, and off-road emissions from activities not occurring in Elk Grove such as watercraft operation.

The City also updated the transportation analysis of the Inventory with new data from the County. The original analysis calculated emissions from all vehicle miles in the jurisdictional boundary of Elk Grove, regardless of origin or destination. The updated analysis calculates emissions from vehicle miles that have an origin and/or a destination in Elk Grove. The new methodology was developed by the State in its efforts to implement SB 375 (see Chapter 2, Background).

The update to the transportation sector and exclusion of irrelevant GHG emissions decreased the City's community-wide inventory by 124,436 metric tons of carbon dioxide equivalent (CO_2e). For additional details on the 2010 Inventory review and update, please refer to **Appendix A.**

INVENTORY STRUCTURE

The Inventory is separated into two sections, or distinct inventories: community-wide and City government operations. The community-wide section provides an assessment of activities throughout the community, and the City government operations section provides a more detailed analysis of the City government's contribution to GHG emissions, including those from streetlights, building energy use, fleet vehicles, and more. It is important to note that the City government operations (municipal) inventory

is a subset of the community inventory, meaning that all City government operations are included in the commercial/industrial, transportation, waste, or "other" categories of the community-wide inventory. The City's government operations inventory should not be added to the community analysis; rather it should be looked at as a slice of the complete picture of local emissions trends.

Although City operations are a small contributor to the community's overall emissions levels, an inventory allows the City to track its individual facilities and vehicles and to evaluate the effectiveness of its emissions reduction efforts at a more detailed level. Specifying municipal emissions and establishing programs for municipal emissions reductions also demonstrates the City's leadership in achieving this Climate Action Plan's targets.

UPDATED 2005 GREENHOUSE GAS EMISSIONS INVENTORY

For the baseline year of 2005, government operations resulted in approximately 8,662 metric tons of carbon dioxide equivalent (CO_2e). As shown in **Figure 3-1** and **Table 3-1**, the City vehicle fleet was the largest emitter, producing 86 percent of all municipal emissions. **Figure 3-2** and **Table 3-2** show that community-wide activities (including municipal operations) resulted in approximately 737,838 metric tons of CO_2e. The transportation sector generated the most emissions, creating approximately 357,309 metric tons of CO_2e, or 48.43 percent of total emissions. Transportation sector emissions are the result of diesel and gasoline combustion in vehicles traveling on local roads and state highways (e.g., State Route 99) that pass through the jurisdictional boundaries of Elk Grove.

The transportation sector generated the most emissions in the City of Elk Grove, creating approximately 48 percent of total emissions.

Figure 3-1. *2005 Greenhouse Gas Emissions (CO_2e) from City Operations*

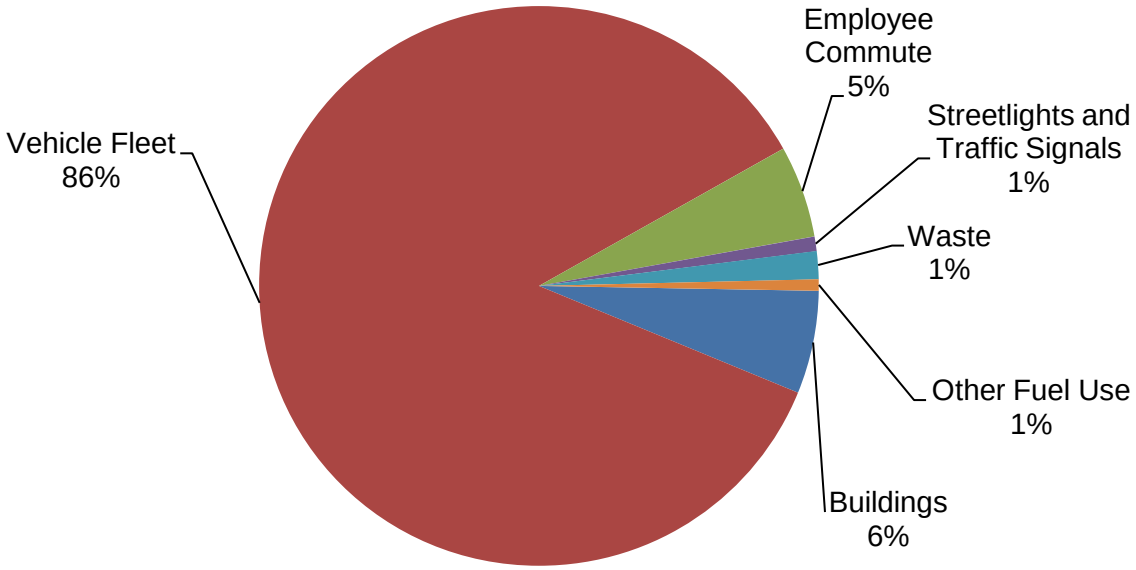


Table 3-1. *2005 Greenhouse Gas Emissions from City Operations*

Sector	Metric Tons CO_2e	Percentage
Buildings	514	5.93%
Vehicle Fleet	7,418	85.64%
Employee Commute	461	5.32%
Streetlights and Traffic Signals	73	0.84%
Waste	139	1.60%
Other Fuel Use	57	0.66%
Total	**8,662**	**100.00%**

Figure 3-2. *2005 Greenhouse Gas Emissions (CO_2e) from Community-Wide Sources*

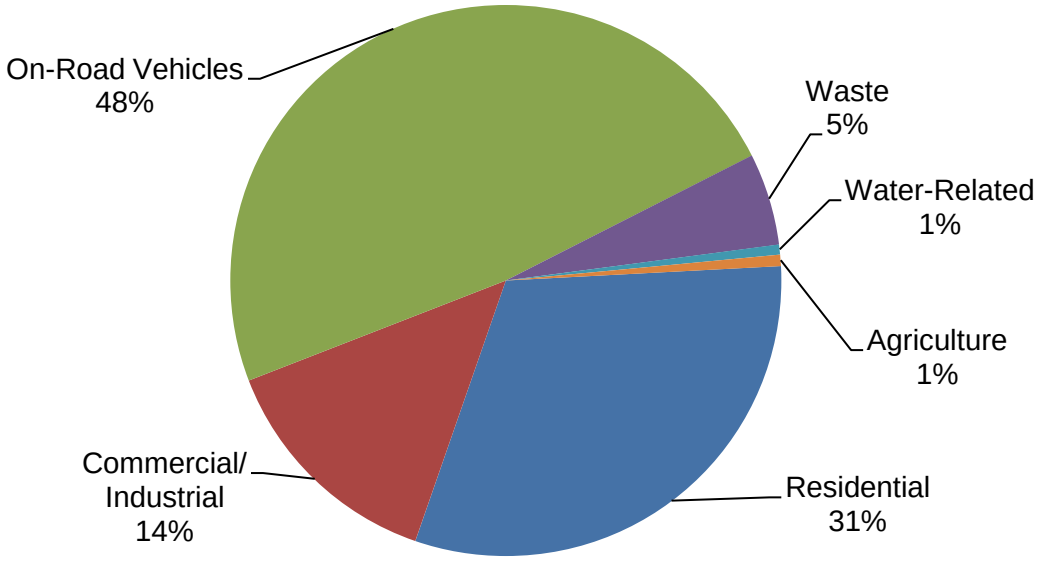


Table 3-2. *2005 Community-Wide Greenhouse Gas Emissions by Sector*

Sector	Metric Tons CO_2e	Percentage
Residential	229,841	31.15%
Commercial/Industrial	101,607	13.77%
Transportation	357,309	48.43%
Waste	39,791	5.39%
Water-Related	4,371	0.59%
Agriculture[1]	4,919	0.67%
Total	**737,838**	**100.00%**

Notes:
[1] Agriculture includes emissions from off-road vehicles and other agricultural activities.

2020 and 2025 Greenhouse Gas Emissions Forecast

Emission forecasts depict what will happen if existing trends continue unchecked by the actions established in this Plan.

COMMUNITY-WIDE FORECAST

The City modeled future emissions growth based on projected trends in energy use, driving habits, job growth, and population growth in 2020 and 2025. Forecasts allow the City to assess the effectiveness of various reduction strategies. Forecasts also provide a snapshot of how annual emissions levels will likely change under various scenarios.

WHY 2020 AND 2025 FORECAST YEARS? The City chose the forecast year of 2020 to align with Assembly Bill 32, which creates a statewide emission reduction target of 15 percent below 2005 levels by 2020. The City also modeled the forecast year 2025 because it is the Elk Grove General Plan buildout[1] year which allows the City to evaluate the effectiveness of reduction measures that are also General Plan measures.

The basis for all growth scenarios is a business-as-usual (BAU) projection. A BAU projection predicts how greenhouse gas emissions will increase if consumption behavior and efficiencies do not change from baseline levels, yet population, households, and vehicle miles traveled continue to increase. Under a BAU

[1] Consistent with state law, "buildout" is the maximum amount of development and population growth that the City could expect under the General Plan land use designations.

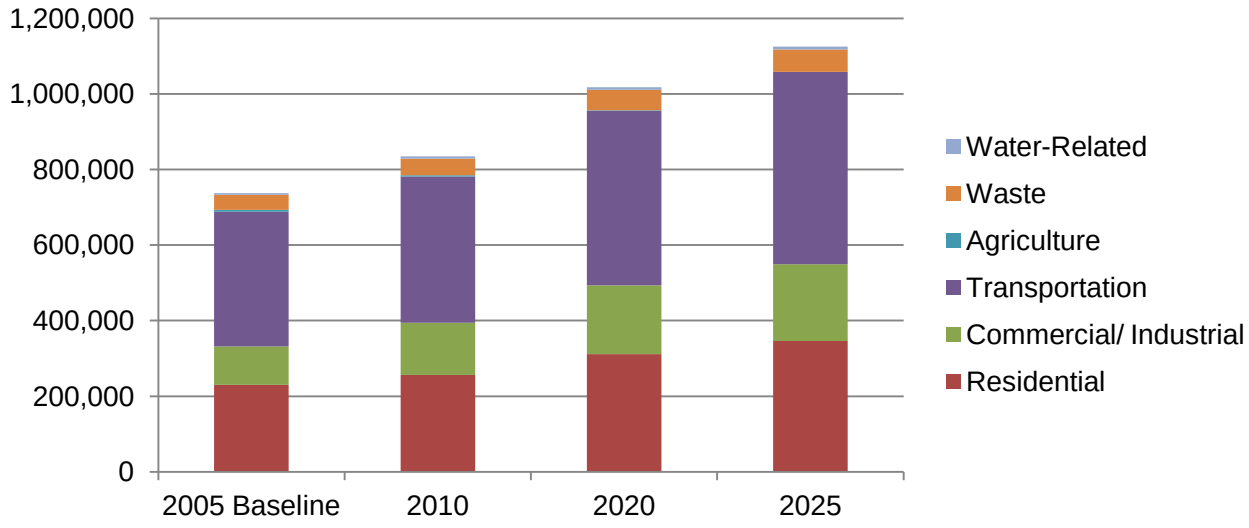
scenario, the City of Elk Grove's emissions will grow by approximately 37.9 percent by the year 2020, from 737,838 to 1,017,499 metric tons CO_2e. By 2020, the City's BAU emissions are modeled to increase 52.6 percent to 1,125,691 metric tons CO_2e. **Table 3-3** and **Figure 3-3** show the results of the forecast.

Table 3-3. *Business-as-Usual (BAU) Greenhouse Gas Emissions Forecast – 2020 and 2025*

GHG BAU Forecast	Metric Tons CO_2e		
	2005	2020	2025
Residential	229,841	311,554	345,748
Commercial/Industrial	101,607	181,758	203,498
Transportation	357,309	462,210	508,997
Agriculture[1]	4,919	1,230	0
Waste	39,791	53,937	59,857
Water-Related	4,371	6,811	7,591
Total	737,838	**1,017,499**	**1,125,691**
Percentage Increase from 2005	–	**37.90%**	**52.57%**

Notes:
[1] *Agriculture includes emissions from off-road vehicles and other agricultural activities.*

Figure 3-3. *Comparison of Business-as-Usual Emission Forecast by Sector – 2020 and 2025*



The business-as-usual forecast depicted above in **Figure 3-3** excludes anticipated reductions that will occur at the statewide level, which are discussed below.

INCORPORATION OF STATE REDUCTIONS INTO FORECASTS

Pursuant to standard practice, the City adjusted the BAU forecast to demonstrate how the State's actions will impact local emissions, even if no local actions are taken. The state actions included in this adjustment have been approved, programmed, and/or adopted by the state, or, in the case of the Sacramento Municipal Utility District-Renewable Portfolio Standard (SMUD-RPS), the utility provider has elected to voluntarily comply with a State-recommended goal. Furthermore, they are programs or projects that require no local involvement. Incorporating them into the forecast and reduction assessment provides a more accurate picture of future emissions growth and the responsibility and ability of local governments versus the state to reduce greenhouse gas emissions. A brief description of each of these items is provided below.

- **Assembly Bill 1493 (Pavley).** Signed into law in 2002, AB 1493 will require carmakers to reduce greenhouse gas emissions from new passenger cars and light trucks beginning in 2011. Regulations were adopted by the California Air Resources Board (CARB). It is expected that new vehicles sold in California will result in an average of 16 percent less greenhouse gas emissions than current models. These standards were recently adopted by the US EPA and will become national standards through 2016. CARB will continue to coordinate with the US EPA and the Department of Transportation to develop fuel standards for 2017–2025 vehicle model years.
- **Low Carbon Fuel Standard.** The State is proposing to reduce the carbon intensity of transportation fuels consumed in California through a Low Carbon Fuel Standard (LCFS) being developed by CARB. Standards would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 and 20 percent by 2035 as called for by Governor Schwarzenegger in Executive Order S-01-07. The LCFS will also incorporate compliance mechanisms that provide flexibility to fuel providers in how they meet the requirements to reduce greenhouse gas emissions. Although a federal district court judge ruled in late 2011 that California's Low Carbon Fuel Standard violates the dormant commerce clause by discriminating out of state ethanol products and that CARB failed to identify alternative methods for achieving greenhouse gas reductions, the ruling has been appealed by CARB, and CARB is proceeding with rulemaking development for LCFS implementation.
- **Title 24 (CALGreen) – 2008 Standards.** The 2008 Title 24 update went into effect on January 1, 2010. The energy reductions quantified in the forecast are the mandatory improvements over the 2005 Title 24 Code that were established by the 2010 update,

which will remain in effect until the effective date of the 2013 triennial edition. The 2013 triennial update was adopted on May 31, 2012, and will go into effect on January 1, 2014. This inventory focuses on two sections of Title 24: Part 6 (the California Energy Code) and Part 11 (the California Green Building Standards Code). These two sections require direct electricity, natural gas, and water savings for every new home or business built in California. Title 24 is a statewide standard applied at the local level by local agencies through project review. Title 24 requirements apply to energy use associated with water heating, space cooling, space heating, and other building processes.

- Although Title 24 standards apply statewide, application of these standards takes place at the local level by local agencies through project review. The revamped CALGreen standards that come into effect January 1, 2011, do not provide additional mandatory reductions in energy consumption that can be quantified as an anticipated alteration to business-as-usual trends; rather, CALGreen establishes optional tiers for enhanced energy efficiency and conservation that can be implemented at the discretion of local governments. These optional reductions are captured as a local reduction measure in **Chapter 4**, since they will only be achieved through local action.

In addition to these state-led reductions, the Sacramento Municipal Utility District (SMUD) has committed to a Renewables Portfolio Standard (RPS) that aligns with state legislation. Established in 2002 in Senate Bill 1078, the state-mandated RPS requires investor-owned utility providers to increase the portion of energy that comes from renewable sources to 20 percent by 2010 and by 33 percent by 2020. In April of 2011, Governor Brown signed Senate Bill X1-2, which expanded the application of RPS to all electricity retailers, including public utilities. All public utilities are required to adopt the RPS target of 20 percent renewable electricity sources by 2013, 25 percent by 2016, and 33 percent by 2020. Prior to Senate Bill X1-2, SMUD, a publicly owned utility, had already elected to comply with the RPS standards. SMUD's 2010 electricity mix achieved the 2010 RPS goal of 20 percent renewable electricity supply.

Other state initiatives such as funding mechanisms and loan programs are not included in state reductions. Rather, they are included within the local reductions as appropriate because of the need for or requirement for local government implementation or contribution to the effort.

The state- and utility-led efforts described above are anticipated to decrease the BAU forecast by approximately 21.1 percent or by 214,539 metric tons CO_2e by 2020. By 2025, state- and utility-led efforts are expected to decrease BAU emissions by 24.9 percent or 280,077 metric tons CO_2e. Since these reductions will occur with or without local action, they are accounted for in the adjusted GHG forecast rather than in the Climate Action Plan reduction summary. The BAU and adjusted forecasts are shown in **Figure 3-4**.

MUNICIPAL FORECASTS

To depict municipal emissions growth for the forecast years 2020 and 2025, existing trends, planned expansions, and levels of service were taken into account. Municipal forecasts and reductions will be captured within the umbrella of community-wide reductions. All changes in municipal emission trends will ultimately feed into achievement of community-wide targets and are therefore credited as community-wide progress toward reduction goals.

Numerous factors informed municipal forecasts. Some City services are expected to expand proportional to population growth while others were connected to the City's plans to expand or create new City services and facilities. In general, the size of municipal facilities was correlated with energy consumption and waste generation to determine rates of change. Emissions from the vehicle fleet account for planned fleet expansion and anticipated improvements in vehicle fuel efficiency.

Greenhouse Gas Emissions Reduction Target

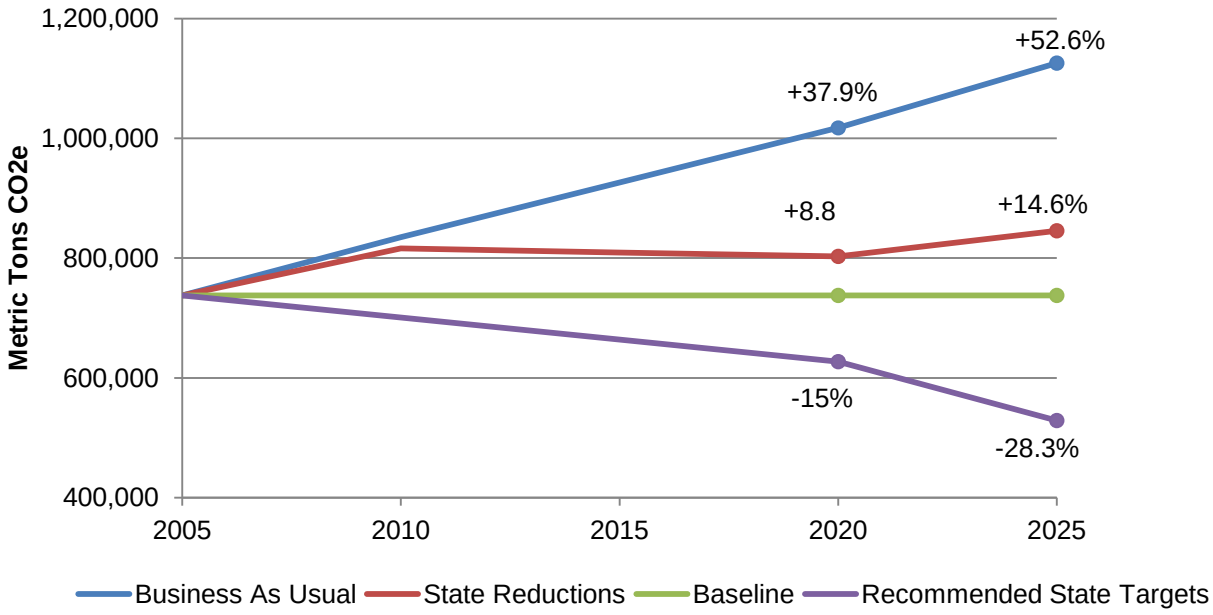
The CAP implements the following General Plan Sustainability Element policy:

> ***S-5*** *Reduce greenhouse gas emissions from community-wide sources, including City facilities and operations, by a minimum of 15 percent below 2005 levels by 2020.*

Based on the 2005 emissions inventory and forecasts presented in this chapter, the 2020 community-wide emissions reduction target is 627,162 metric tons CO_2e. This binding and enforceable target represents a 2020 emissions level below which the contribution to community-wide GHG emissions from activities consistent with the General Plan and this CAP would not be cumulatively considerable under CEQA. The City's target is consistent with statewide efforts established in the CARB *Climate Change Scoping Plan* to reduce statewide GHG emissions to 1990 levels by 2020, and 80% below 1990 levels by 2050.

Figure 3-4 provides a comparison of the business-as-usual forecasts for 2020 and 2025 to the 2005 baseline year and the 15 percent reduction target. **Figure 3-4** is also a depiction of the challenge that Elk Grove will face in attempting to meet its reduction target. Emissions will continue to increase along the forecast scenario while reduction efforts are initiated. Achieving the target is therefore more than a 15 percent decrease; rather, it is a 28 percent reduction from 2020 emissions levels after state adjustments. In 2025, the gap between future growth and target reduction levels increases to 34.8 percent. In **Figure 3-4,** this gap is depicted by the difference between the red line and the purple line, both of which show projected increases or desired decreases relative to the green-colored baseline.

Figure 3-4. *Comparison of 2020 and 2025 Forecasts to Baseline and Reduction Target, Shown by Percentage Change from Baseline*



Reduction Strategy

This chapter summarizes the Climate Action Plan's measures to reduce greenhouse gas emissions from municipal operations and community-wide sources within City boundaries.

Summary of Policy Topics and Measures

The City's actions to reduce greenhouse gas (GHG) emissions are referred to as *measures*. All measures are grouped and presented in four policy topics: an Innovative and Efficient Built Environment, Resource Conservation, Transportation Alternatives and Congestion Management, and Municipal Programs. Detailed greenhouse gas reduction calculations are presented in **Appendix B**. Reductions for all measures, aggregated by policy topic, are presented below in summary form. Detailed descriptions of each policy topic follow on page 4-4.

Each policy topic yields a quantifiable reduction in GHG emissions.

The following summary information is presented for each of the four policy topics when available:

2010 Existing and In-Progress Reductions: The annual reductions in GHGs in calendar year 2010 resulting from implementation of the goal prior to or concurrent with this Plan (2005–2010).

2020 and 2025 Reductions: The annual reductions in GHGs in calendar years 2020 and 2025 as a result of staggered policy implementation and ramp-up.

Responsible City Department(s)/Agency: City department or outside agency responsible for implementation.

Cost to City: Net cost to the City for implementation of the goal after revenues and rebates. Incremental costs were estimated in current (2010) dollars (e.g., 2030 costs are in addition to 2010 and 2020 costs, not inclusive of 2010 and 2020 costs).

- Negligible = $0 or less (requires no investment or generates a profit)
- Low = under $25,000 (uses existing staff)
- Low-Mid = $25,000 to $100,000 (existing staff can implement but will require reprioritization of workload)
- Medium = $100,000 to $200,000 (requires new staff or contracts to implement)
- Medium-High = $200,000 to $500,000 (requires new staff or contract(s) to implement)
- High = over $500,000 (requires new staff or contract(s) to implement)

Private Investment: The level of private investment needed for the goal assumptions to come to fruition. (Example: The overall cost of solar panel installations before year 2020 or 2030.) Costs are incremental and in current (2010) dollars (e.g., 2030 costs are in addition to 2010 and 2020 costs, not inclusive of 2010 and 2020 costs).

- Minimal = less than $25,000
- Low = $25,000 to $500,000
- Low-Mid = $500,000 to $1,000,000
- Medium = $1,000,000 to $10,000,000
- Medium-High = $10,000,000 to $30,000,000
- High = Over $30,000,000

This information is provided for each policy topic as an aggregated summary of all measures within that policy topic. Following this aggregated summary, each supporting measure is listed and detailed. Directly following each measure are parenthetical notes of which existing City plans or documents are aligned with the measure, such as General Plan policies and Housing Element strategies. A full description of the methodology and assumptions utilized for each measure is provided in **Appendix B.**

Attainment of Reduction Targets

The measures presented here have the potential to reduce greenhouse gas emissions by 178,987 metric tons (MT) of CO_2e by 2020. These reductions are equivalent to a 15.43 percent change from 2005 baseline levels (also refer to **Figures 4-1** and **4-2**). Due to higher forecast rates of growth in emissions sectors between 2020 and 2025, the forecast emissions reduction by 2025 drops slightly to 14.62 percent below baseline by 2025, equivalent to a reduction of 215,682 $MTCO_2e$.

Local implementation of all proposed measures and State-mandated efforts would allow the City to achieve its reduction target of 15 percent below baseline levels by 2020. The City's 2020 target is consistent with AB 32; therefore, implementation of the goals and measures in this Climate Action Plan (CAP or Plan) will place the City on a trajectory to be consistent with the State's recommended goal for local governments.

The City's 2025 reduction achievement of 14.62 percent does not follow a trajectory toward the State's 2050 reduction target of 80 percent below 1990 levels by 2020. However, it is likely that the City's actual 2025 reduction achievement will surpass that which can be calculated at this time due to technical innovations and developments to state policy. For example, the State is expected to increase the RPS, AB 1493, and LCFS standards after 2020; however, until the State does so, the CAP assumes a constant reduction from these policies after 2020.

Tables 4-1 and **4-2** present the potential GHG emissions reductions ($MTCO_2e$) for 2020 and 2025 by policy topic and then by sector. **Figures 4-1** and **4-2** display the proportion of 2020 GHG reductions from each policy topic and sector. The tables and figures also identify Elk Grove's progress in achieving these goals since the baseline year of 2005. Policy topics and

measures are summarized in detail later in this chapter.

What is the difference between a policy topic and a sector?

Policy topics are aggregate groups of Elk Grove's measures that correspond to emission sources in the GHG Inventory. They are simply a way to present and communicate emission reduction measures clearly.

Sectors refer to the source or activity that creates GHG emissions, regardless of the policy topic it falls under. Sectors are more universal and demonstrate the types of emissions-generating activities that are being affected through the CAP. For instance, commercial, residential, waste, and transportation are common sectors.

Together, policy topics and sectors paint a more comprehensive picture of how the CAP affects GHG emissions in the City of Elk Grove.

Table 4-1. *GHG Reductions by Policy Topic ($MTCO_2e$)*

Policy Topic	2010 GHG Reductions ($MTCO_2e$/yr)	2020 GHG Reductions ($MTCO_2e$/yr)	2025 GHG Reductions ($MTCO_2e$/yr)
An Innovative and Efficient Built Environment	-217	-40,395	-51,609
Resource Conservation	-2,162	-28,221	-31,304
Transportation Alternatives and Congestion Management	-29,904	-108,221	-129,166
Municipal Programs	-94	-2,149	-3,604
Total Reductions	**-32,377**	**-178,987**	**-215,682**
Emissions Forecast	**816,001**	**802,959**	**845,612**
Net Emissions with CAP Reductions	**783,624**	**623,972**	**629,931**

Percentage Change from 2005 Levels (737,838 $MTCO_2e$)	**6.21%**	**-15.43%**	**-14.62%**

Figure 4-1. *2020 Reductions by Policy Topic (CO_2e)*

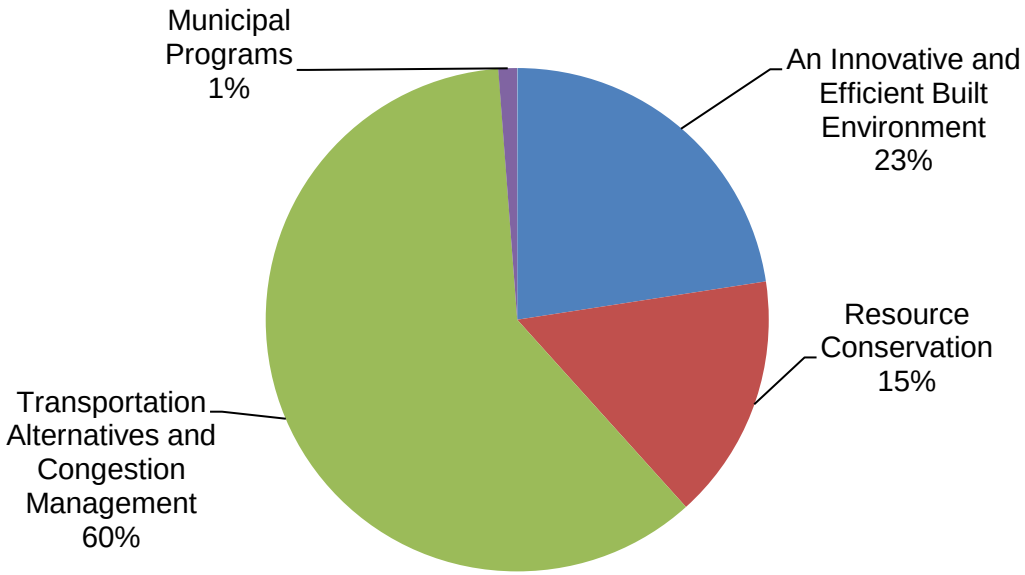


Figure 4-2. *2020 Reductions by Sector (CO_2e)*

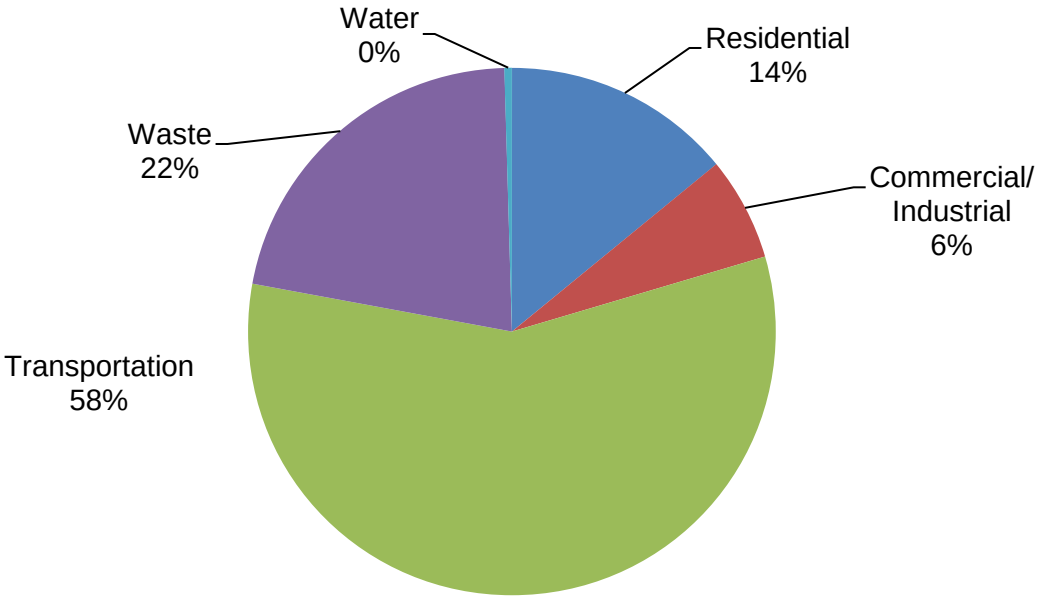
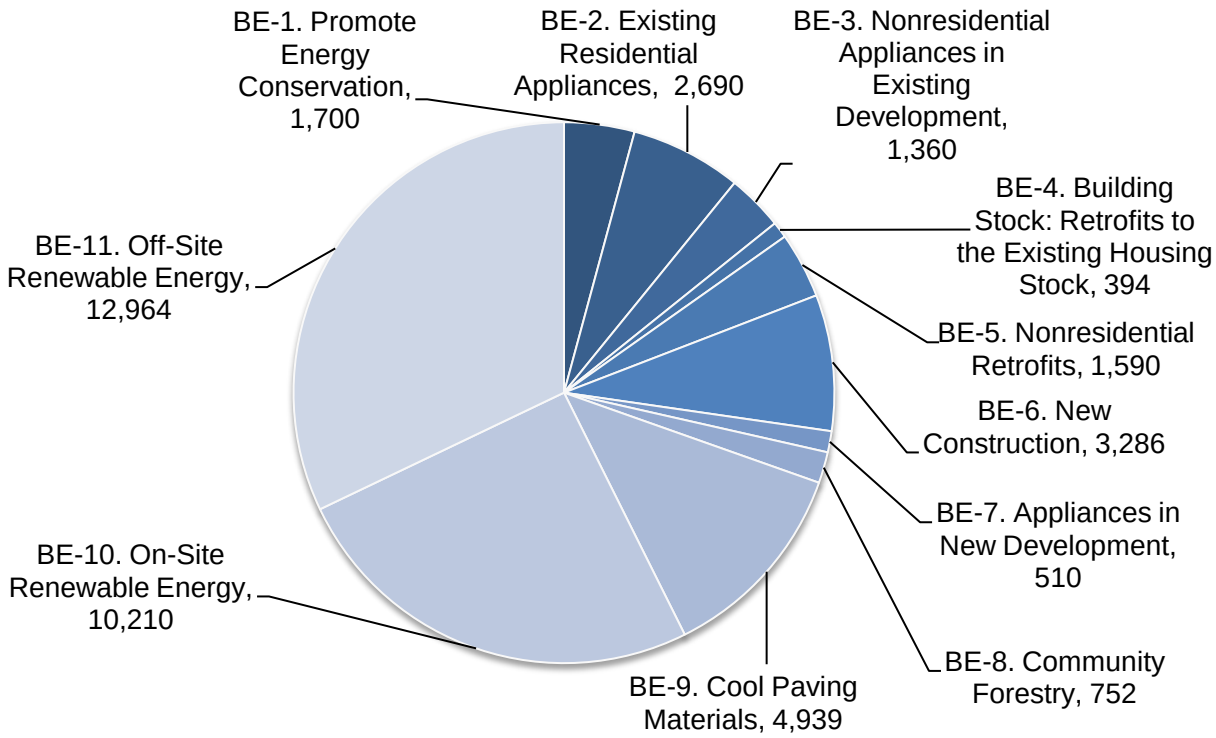

Water
0%
Residential
14%
Waste
22%
Commercial/
Industrial
6%
Transportation
58%

Table 4-1. *Reductions by Sector (CO_2e)*

	2020	2025
Residential	-26,426	-34,030
Commercial/Industrial	-14,103	-17,755
Transportation	-110,137	-132,446
Waste	-27,726	-30,805
Water	-595	-646
Agriculture	0	0
Total	-179,987	-215,682

An Innovative and Efficient Built Environment (BE)

Figure 4-3. *BE Greenhouse Gas Reductions by Measure in 2020 (CO_2e)*



GHG Reductions per Year (Metric Tons CO_2e)	
To Date:	-217
2020:	-40,395
2025:	-51,609
Responsible City Department/ Public Agency	
Planning, Building, and Public Works	
Cost to the City	
Medium	
Private Investment	
High	

The built environment is a dynamic system, in which settings characterized by human intervention depend on a constant energy supply. Through the consumption of energy, the built environment creates GHG emissions. However, the existing level of energy consumption is not necessary to support existing or future communities. Energy consumption is often inefficient and wasteful, and can be changed to reduce GHG emissions and conserve natural resources. Often, actions that reduce GHG emissions also have the co-benefit of improving standards of living and reducing energy costs.

The following reduction measures target the relationship between Elk Grove's built environment and energy consumption, depicting how changes in construction, achievement of enhanced energy efficiencies, and a more energy-efficient production strategy will reduce GHG emissions and ensure Elk Grove's long-term energy security.

SUPPORTING MEASURES FOR THE BUILT ENVIRONMENT (BE)

BE-1. Building Stock: Promote Energy Conservation

Promote energy conservation by residents and businesses in existing structures in close coordination with other agencies and local energy providers, including the Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric (PG&E).

Energy conservation can be achieved through small changes to daily behaviors with little to no upfront investment. Simple actions such as turning off lights or cleaning refrigerator coils will yield energy savings without the need for financial investment. Through this measure, the City of Elk Grove will encourage similar small-scale changes that will yield energy reductions and cost savings for residents and businesses.

In addition, this measure relies on statewide programs and regulations that facilitate ongoing energy benchmarking and tracking as tools that help energy users to understand and efficiently consume energy.

The City will also use funding from the Energy Efficiency and Conservation Block Grant (EECBG) to conduct customized marketing to identify opportunities for local actions that can reduce energy use. There is often a decision gap between energy use and awareness of energy

trends. Feedback is critical to improved decision-making by connecting decisions with outcomes. According to the American Council for an Energy-Efficient Economy (2010), achieving energy efficiency targets requires self-motivated action. This measure works to promote voluntary energy efficiency opportunities to close the decision gap between energy consumption and available opportunities for energy efficiency. This approach will help to identify and incentivize energy efficiency programs

SMUD and PG&E are implementing "smart grid" initiatives as part of a statewide shift to update and enhance the infrastructure necessary to support efficient energy service. These programs include the installation of smart meters for all energy accounts and the deployment of new customer programs for informed energy use. At an individual scale, users will be able to use smart meters to monitor electricity consumption in real time and understand the relationship between electricity usage and costs.

California Assembly Bill 1103 also requires that all owner-occupied nonresidential buildings report energy consumption in a manner that is compatible with the Energy Star Portfolio Manager and that owners or operators disclose benchmarking data and ratings to prospective buyers. Initial compliance with AB 1103 is scheduled to begin January 1, 2013. This measure anticipates the reductions in energy use from appliances that can be facilitated through more informed energy tracking.

Action Items

- Use the City's EECBG funding to conduct a targeted outreach campaign to identify unique energy behaviors and opportunities in Elk Grove.
- Work closely with SMUD, PG&E, and other private partners to support widespread social marketing and prepare tools to encourage conservation and greater efficiency in energy behaviors.
- Partner with the Elk Grove Chamber of Commerce, the Sacramento Sustainability Forum, and utility providers to launch an energy efficiency program for local businesses that promotes cost-effective business behaviors.
- Support PG&E and SMUD in-home monitoring program participation through smart grid programs and advocate for pilot neighborhood competitions throughout Elk Grove.
- Leverage resources from PG&E and SMUD to support enhanced local education to local businesses on the nonresidential energy use disclosure program (AB 1103) and programs for energy monitoring, such as the Energy Star Portfolio Manager.
- Provide educational materials to encourage participation in energy monitoring programs at large multi-tenant commercial developments through SMUD and PG&E programs or via the Energy Star Portfolio Manager.

BE-2. Building Stock: Residential Appliances in Existing Development
Support residential upgrades to more energy-efficient, cost-saving appliances for existing homes, leveraging regional and state resources to target indoor and outdoor appliances and equipment in existing homes.

As houses age, their appliances, water heaters, HVAC units, windows, and insulation often become outdated or decrease in efficiency. This measure facilitates upgrades by connecting residents to cash incentives for appliances that reduce energy bills and maintenance costs. The State of California, Sacramento County, SMUD, PG&E, and Sacramento Area Council of Governments (SACOG) offer numerous rebates for residential appliances. Elk Grove will work to inform residents and businesses of these available programs via the City website, newsletter, and handouts at community events.

The City's additional outreach will help to educate residents about cost-effective appliance upgrades. For instance, many Elk Grove homes have outdoor pools. Pool pumps and filtration systems are commonly oversized and operate at a single speed, expending more energy than is necessary to maintain a pool. Older pool pumps are commonly energy-intense, single-speed models. Newer two-speed or variable-speed pool pumps allow the system to shift speeds as appropriate, functioning at lower speed while maintaining adequate water circulation. According to SMUD, an upfront investment in a more efficient pool pump may yield significant ongoing energy savings between 25 percent and 60 percent of average residential energy costs.

Action Items

- Educate City residents about rebate offerings for appliances and equipment as programs become available for Energy Star and other qualified appliances, including those offered by utility providers, the California Energy Commission, and the Sacramento Metropolitan Air Quality Management District.
- Work with SMUD and Sacramento County to conduct targeted mailings to homeowners with pools to promote financial incentives for upgrades of residential pool pumps to more efficient, variable-speed pumps. Pool owners will be identified with County assessors parcel data and GIS files.
- Identify opportunities to partner with other Sacramento communities to pursue bulk procurement of discounted variable-speed pool pumps in order to offer efficient pumps at affordable rates to residents.
- Promote free utility assessments of appliances and heating, ventilation, and air conditioning units in partnership with SMUD and PG&E. Opportunities likely exist in the community's older suburbs, and City staff may leverage efforts with existing resources, such as the City's Home Repair and Rehabilitation Program.
- Partner with SMUD to promote SMUD's multi-family prescriptive rebates for multi-family improvements to appliances, lighting, and other equipment upgrades.

BE-3. Building Stock: Nonresidential Appliances in Existing Development

Equip businesses in Elk Grove to reduce operational expenses and maximize energy efficiency through the use of energy-efficient and cost-effective indoor and outdoor appliances and equipment.

Energy use is an operational expense that takes revenues out of a company's bottom line. Further, newer, energy-efficient equipment typically reduces ongoing maintenance costs. Statewide, California businesses' electricity expenditures as a percentage of total operating expenses are 15 percent below the rest of the country. From 1992 to 2007, operating costs spent on electricity dropped in California by 21 percent, whereas the rest of the United States only experienced an 18 percent drop. Efficiency and conservation of resources is a strategy not only to save money but also to improve a company's resilience to external shocks, enhancing a competitive market edge (Next10, 2010).

The City of Elk Grove will encourage local businesses to transition to appliances that help them to save money and operate more effectively. Numerous programs through PG&E and SMUD provide free to low-cost appliances, lighting, and installation services. The City will leverage these resources as a strategy to support economic development throughout the community.

Action Items

- Work with SMUD and PG&E to promote free appliance improvements and rebate programs, including rebates for lighting, motors, office equipment, and heating and cooling systems.
- Integrate materials on energy efficiency resources and opportunities into the City's economic development resources.
- Create a standardized tenant improvement checklist and informational materials to encourage the installation of Energy Star and energy-efficient appliances through the tenant-improvement process.
- Partner with SMUD and PG&E to promote the optimization of information technology systems in office complexes to reduce energy expenses and equipment maintenance costs, including plug load sensors, server virtualization, the use of remote desktops, and more.
- Encourage energy-intense uses to incorporate energy management practices in business operations.
- Promote SMUD's custom and prescriptive lighting standards and rebates for qualifying commercial lighting systems, and support outreach efforts through targeted mailings or direct outreach to the business community through the Chamber of Commerce and other networks.
- Work collaboratively with other cities in the region to establish a regional Property Assessed Clean Energy (PACE) program that will allow Elk Grove property owners to obtain low-interest financing for energy efficiency improvements.

- Continue to connect businesses and residents with programs that provide free or low-cost energy efficiency audits and retrofits.
- Conduct public outreach to inform residents about energy usage and energy costs.
- Partner with local energy providers to develop a pilot program to demonstrate energy efficient upgrades in existing municipal buildings.

BE-4. Building Stock: Retrofits to the Existing Housing Stock

Promote retrofits in the existing residential housing stock, leveraging existing local programs and regional resources to reduce household energy costs and increase home values.

Existing buildings are often a major contributor to a city's energy use, especially for buildings built before the California Building Code became more stringent in the early 1990s. Through retrofits and improvements to the building envelope, homes can become more energy-efficient and increase in resale value. The City will actively promote voluntary improvements to the existing housing stock, leveraging regional rebates, financing, and other retrofit incentives.

The Sacramento region has a strong history of implementing successful voluntary residential efficiency programs. This measure builds on these regional efforts, relying on the regional resources provided by SMUD, PG&E, SMAQMD, other partners, and grant sources. For example, the City will work closely with SMUD to identify older target neighborhoods that are good candidates for a universal set of prescriptive retrofit improvements. Such efforts build on SMUD's Neighborhood Program, which has already been deployed in two other neighborhoods in Sacramento County. The City will also work closely with regional partners to promote the resale benefits of residential green rating systems, such as GreenPoint Rated. Homeowners may be able to benefit from such voluntary certification programs while improving the quality of the residential housing stock in Elk Grove.

Action Items

- Partner with SMUD, PG&E, and other communities in the Sacramento region to encourage residents to participate in regional and State-funded retrofit rebate programs, such as Energy Upgrade California.
- Promote the SMUD Home Performance Program to homeowners, which provides tiered rebates for electricity savings achieved through energy upgrades.
- Promote energy and green building labeling as a tool to increase property values in partnership with utility providers, the Sacramento Association of Realtors, Sacramento County, the Sacramento Metropolitan Air Quality Management District, and the Sacramento Region Public Agency Council.
- Work with regional partners, the real estate community, and Sacramento County to develop a regional green building labeling pilot project, through which remodels or

additions complying with the GreenPoint Rated label or other green building certification would be eligible for financial incentives.

- Work with SMUD to develop a neighborhood program or other effort for older developments in Elk Grove, targeting similar residential neighborhoods for the deployment of cost-effective upgrade packages applicable to all homes.
- Create a list of neighborhoods with uniform building types to target for audits that may be applicable to identify feasible, cost-effective improvements for an entire subdivision or neighborhood.
- Integrate energy efficiency strategies into the City's Community Development Block Grant planning process and implementation, specifically to address the needs of the community's affordable housing stock, as identified in the CBDG Strategic Plan.
- Continue to implement home energy efficiency improvements through SMUD's Energy Efficient Remodel Demonstration Program, building on past innovative partnerships with private groups such as Towne Development of Sacramento and Neighborworks that allowed the City to use Neighborhood Stabilization Program funds for energy-efficient home improvements.
- Identify local funding institutions willing to provide affordable, low-interest loans for residential energy efficiency improvements.
- Continue to partner with SMUD and the Sacramento Housing Alliance to retrofit affordable and/or multi-family homes within Elk Grove.
- Promote Property Assessed Clean Energy (PACE) financing for multi-family complexes through the Figtree PACE progam.

BE-5. Building Stock: Nonresidential Retrofits

Facilitate retrofits and energy efficiency improvements within the existing nonresidential building stock that reduce maintenance and operation costs.

Businesses in California are eligible for a wide variety of financing options for energy efficiency improvements. The City of Elk Grove is participating in a unique Property Assessed Clean Energy (PACE) program, the Figtree PACE program. This financing program provides low-interest loans, with loan value determined by the property value. The loan requires no money down and is paid back annual over a period of up to 20 years. Upon property sale, the loan is transferred to the new owner.

In addition to the Figtree PACE program, commercial property owners can also obtain financing through several other vehicles, including traditional capital leases. A business can finance energy improvements through an energy service company (ESCO), which can develop and install energy projects that are financed based on energy savings or other contract structures. While some financing agreements may require upfront investment, the intent of this measure is to encourage the

transition to more cost-effective and energy-efficient buildings. These improvements also typically reduce maintenance costs and enhance the quality value and quality of building stock. The City will work closely with the business community to promote all opportunities and continue to advocate for local funding programs and financial incentives.

Action Items

- Continue to promote commercial retrofit financing through programs such as the Figtree Property Assessed Clean Energy (PACE) program, which provides low-interest loans to commercial and industrial uses for building energy improvements.
- Partner with SMUD, PG&E, the Chamber of Commerce, and other business partners to identify high opportunity local business candidates for cost-saving improvements and large energy reductions through deep retrofit or retrocomissioning programs.
- Work with the Elk Grove Chamber of Commerce and Sacramento County jurisdictions to educate business property owners on additional feasible options for retrofit financing options, such as including integration of retrofit costs into capital leases, mortgage refinancing, and agreements with energy savings performance companies.
- Promote retrofit opportunities and energy efficiency programs for local businesses through the City's economic development efforts.
- Disseminate resources to multi-tenant complexes and renter-occupied businesses to remove barriers to energy improvements, including model energy aligned lease provisions.
- Consider revising the City's Best in Business Award Program to recognize local businesses achieving significant energy reductions.

BE-6. Building Stock: New Construction
Adopt CALGreen Tier 1 standards to require all new construction to achieve a 15 percent improvement over minimum Title 24 CALGreen energy requirements. (General Plan Policy H-9, Actions 1–2; Policy CAQ-27, Action 1; and Policy CAQ-30)

This measure requires new development in Elk Grove to meet and exceed California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 11, of the California Code of Regulations, or CALGreen).

The California Code of Regulations (CCR), Title 24 (California Building Standards Code, hereinafter Title 24) includes requirements for the structural, plumbing, electrical, and mechanical systems of buildings and for fire and life safety, energy conservation, green design, and accessibility in and around buildings. The 2010 triennial edition of Title 24 applies to all occupancies that applied for a building permit on or after January 1, 2011, and remains in effect until the effective date of the 2013 triennial edition. This reduction measure is focused on two sections of Title 24: Part 6, the California Energy Code, and Part 11, the California Green Building Standards Code, or CALGreen Code.

The CALGreen Code includes mandatory minimum energy efficiency requirements for buildings. It also establishes two tiers of voluntary measures to achieve greater energy efficiencies and other benefits. Tier 1 is a 15 percent improvement over minimum requirements, and Tier 2 is a 30 percent improvement over minimum requirements.

As an immediate step to implement this reduction measure, all new construction shall achieve Tier I compliance (15 percent above the 2010 Title 24 CALGreen standards). The City will also continue to encourage voluntary actions such as compliance with Leadership in Energy and Environmental Design (LEED) or Build It Green (BIG) GreenPoint rating systems.

Going forward, the City will evaluate the energy reduction potential of each Title 24 update and determine if a higher standard is necessary to achieve the building-related greenhouse gas reduction targets of this Climate Action Plan. The City's achievement of AB 32 reduction targets by 2020 depends on the assumption that Title 24 will be updated every three to five years and that new development will adhere to a higher standard than the minimum. The increase in efficiency with each Title 24 update is assumed to be consistent with past trends. Energy reductions for this measure are detailed in **Appendix B**.

Following each update to Title 24, the City will explore whether a level of energy efficiency is appropriate for the local economy and construction industry of the time. If the City determines that a higher Title 24 standard is not appropriate or feasible, then it is within the City's ability to determine a new or improved alternate strategy for achieving AB 32 targets by 2020.

Action Items

- Provide information to the public and builders on available energy conservation techniques and products to promote green building standards. (Policy CAQ-27, Action 1)
- Require all new development and major remodels to achieve Tier 1 of Title 24, Part 11 green building standards until the next Title 24 update becomes effective. (Policy H-9, Action 2)
- Analyze future Title 24 updates released by the California Energy Commission (CEC) and require the level of efficiency above minimum standards necessary to achieve the energy reduction potential outlined in this Plan.
- Partner with local energy provider(s) to develop a pilot program to demonstrate energy-efficient techniques and products in new municipal buildings.
- Support the use of innovative and alternative building materials and designs to improve efficiency, encouraging voluntary action such as compliance with Leadership in Energy and Environmental Design (LEED) or Build It Green (BIG) GreenPoint rating systems.
- Update the City's website and proactively work with applicants to make compliance with the energy efficiency standards as effective and efficient as possible.

- Partner with SMUD to promote SMUD's Savings By Design program, which provides cash incentives and technical assistance to help new commercial projects maximize energy efficiency.
- Collaborate with the Northern California Chapter of the US Green Building Council, SMUD, and PG&E to provide local training and workshops for energy efficiency and green building training.
- Continue to enforce zoning provisions that require outdoor lighting fixtures in parking areas to be energy efficient. (EGMC. 23.58.090.E).

BE-7. Building Stock: Appliances and Equipment in New Development

Encourage the use of energy-efficient appliances and equipment in new buildings that maximize efficiency.

New development has a greater opportunity to install energy-efficient appliances that save costs and reduce energy use. Through this measure, the City will promote the voluntary incorporation of Energy Star and high-efficiency equipment and appliances in both residential and nonresidential development. The incremental costs of such equipment and appliances will be offset from utility and state rebates.

The City will also work with the Sacramento Metropolitan Air Quality Management District to encourage integration of high-efficiency equipment into industrial uses. The City will support integration of best performance standards for all new stationary engines, including reciprocating engines, natural gas reciprocating engines, and liquefied petroleum gas boiler engines. These activities provide power for a variety of industrial and commercial processes. Best performance standards yield higher operating efficiencies with less comparative GHG emissions than standard equipment.

Action Items

- Provide educational information on the use of smart-grid-integrated appliances through the City's website and through plan review meetings.
- Encourage the use smart-grid and Enery Star appliances in new development.
- As applicable, work with the Sacramento Metropolitan Air Quality Management District to encourage all new industrial projects to install high-efficiency engines that comply with best performance standards.
- During plan review for nonresidential developments, work with SMUD and PG&E to promote the use of combined heat and power equipment or cogeneration, as applicable.
- Partner with SMUD and PG&E to promote the installation of variable-speed pool pumps and solar thermal pool heaters in new development.

BE-8. Community Forestry
Plant trees in appropriate densities and locations that will maximize energy conservation and air quality benefits. (General Plan Policy CAQ-27, Action 2)

With the help of local partners (e.g., Sacramento Tree Foundation), the City of Elk Grove has established a 40-year urban forest canopy goal and is developing an Urban Community Master Plan to meet that goal. This measure quantifies the goals and actions of the Community Forestry Master Plan and calls for stricter tree coverage requirements in new development. The City's zoning code (Title 23 of the Municipal Code) will be updated to require more trees in parking lots and on private property, with special attention to east and west sides of lots to maximize shading in the summer.

The SMUD and Sacramento Tree Foundation shade tree program allows Sacramento County residents to receive up to 10 free trees to plant at their home, business, school, or parking lot to shade the structure on the property.

The energy and greenhouse gas benefits of this measure result from increased shading on buildings and pavements. Increased shading results in lower urban temperatures, thus reducing the urban heat island effect.

Co-benefits of this measure include carbon sequestration, extended life of paved surfaces, improved water quality from trapping runoff, increased traffic safety, aesthetic improvements, increased real estate values, and increased sociological benefits.

Action Items

- Develop a Community Forestry Master Plan to include, but not be limited to, the following:
  - Best management practices for tree planning, planting, and maintenance;
  - Designatation of areas for preservation or future planting;
  - Shade requirements for new multi-family and nonresidential development;
  - Preferred tree list, and specifications for street trees;
  - Proper spacing, plant diversity, and planting requirements.
- Encourage participation in local shade tree giveaways, such as those provided by SMUD and the Sacramento Tree Foundation.
- Implement the City's Tree Preservation Ordinance (codified as EGMC 19.12). (Policy CAQ-8, Action 4)
- Provide funds for education, programs, and materials emphasizing the value and importance of trees. Support private foundations with local funds for their tree planting efforts. Encourage the harvesting of native seeds and plants prior to the clearing of project sites. (Policy CAQ-8, Action 9)
- Update the City's design guidelines to ensure appropriate placement of street and accent trees as shade and seasonal climate control. (Policies CWDG-3.A.2.20 & 21)

BE-9. Cool Paving Materials
Require the use of high-albedo material for future outdoor surfaces to the greatest extent feasible, including but not limited to parking lots, median barriers, roadway improvements, and sidewalks.

Increasing urban albedo can reduce summertime temperatures, resulting in better air quality and savings from reduced air-conditioning costs. Albedo is the measure of an object's reflectivity. Lighter-colored materials absorb less heat and therefore have a higher albedo ratio.

What is a high-albedo material?

Albedo is the ratio of the amount of solar radiation (heat) reflected from a surface to the total amount reaching that surface. A high-albedo material is one that reflects a significant amount of incoming solar heat. Materials that are light in color reflect this heat, rather than absorbing it. By contrast, a low-albedo material absorbs solar heat. An example of a low-albedo material is asphalt, as the dark color absorbs solar heat.

High-albedo paving materials include, but are not limited to, concrete, pavement resins, and painted asphalt,

Increasing urban albedo can result in less absorption of incoming solar radiation by the surface-troposphere system, countering to some extent the global-scale effects of increasing greenhouse gas concentrations. Pavements and roofs typically constitute over 60 percent of urban surfaces (roofs 20–25 percent, pavements about 40 percent). By using reflective materials, both roof and pavement albedo can be increased by about 0.25 and 0.15, respectively, resulting in a net albedo increase for urban areas of about 30 percent. To maximize the albedo of both types of pavement, lighter-colored aggregate can be used in the pavement mix. Alternatively, asphalt pavements can be covered with high-albedo sealcoats, small rocks set in binder, or a thin layer of concrete. For concrete applications, using lighter-colored sand and cement can increase reflectivity. Cool (light-colored) pavements increase nighttime visibility and pavement durability, in addition to lowering energy costs.

This program encourages and facilitates the use of high-albedo material for future outdoor surfaces such as parking lots, median barriers, roadway improvements, and sidewalks, with the goal of achieving 80 percent of paved area being high-albedo pavements by 2020 and 100 percent of paved surfaces being high-albedo pavements by 2035. If the City finds through ongoing monitoring that the total paved surface areas using high-albedo pavements are falling short of the 2020 target, the City will consider additional voluntary and mandatory programs to achieve the targets outlined in this measure.

Action Items

- Require the use of high-albedo materials in municipal facilities and capital improvement projects.
- Revise design guidelines and development standards to require the use of high-albedo materials in new development.

BE-10. On-Site Renewable Energy Installations

Promote voluntary installations of on-site solar photovoltaics in new and existing development, and revise standards to facilitate the transition to solar water heaters and solar photovoltaics in new development. (EGMC 16.90.030; General Plan Policy H-9, Action 3; and Policies CWDG-3.B.2.5 and CWDG-5.A.2.62)

The goal of this measure is to reduce GHG emissions related to residential and commercial energy use by facilitating the development of small-scale distributed renewable energy production. Renewable energy installations are expected to increase dramatically throughout the next few decades due to innovative financing strategies, lower costs of renewable energy equipment, and new regulations that require the provision of solar photovoltaic options and solar offsets for new subdivisions. Furthermore, the City's climate is well suited for on-site solar installations. This measure would ensure that the Zoning Code (Title 23 of the Municipal Code) and applicable design guideline standards safely allow renewable energy installations within residential and commercial zones.

Building on SMUD's SolarSmart Homes program and developments in Elk Grove certified through SMUD's SolarSmart Homes program, the City will encourage new development to participate in programs for solar photovoltaic systems. The City will continue to waive permit fees related to installations. In addition, the City will implement new requirements for renewable energy systems in applicable new development. Large nonresidential projects will have to meet a minimum of 15 percent of energy needs from solar. Subdivisions will have to comply with statewide regulations established by the Homebuyer Solar Option, which requires all new developers of subdivisions to offer solar systems to customers or to pay into an offset system managed by the California Energy Commission.

Action Items

- Promote innovative private development projects in Elk Grove that have constructed SolarSmart Home projects, including Aria at Madiera by Lennar and Gardner Square by Centex.
- Partner with prviate developers and SMUD to encourage new developments to achieve certification through SMUD's SolarSmart Homes program, with standards including installation of a rooftop solar photovoltaic system, roofing with a radiant barrier, a 90 percent efficiency furnace, and high-efficiency air conditioning systems. (Policy H-9, Action 3; EGMC 16.90.030)
- Require new commercial, office, commercial, and industrial development greater than 25,000 square feet to install renewable energy systems to generate a minimum of 15 percent of the project's energy demand on site, including technologies such as solar photovoltaic systems.
- Work with Sacramento County, SMUD, and private developers to prepare locally specific preapproved single-family plans for the SolarSmart Home program.

- Support implementation of the Homebuyer Solar Option for all subdivision projects, and encourage developers of new medium- and high-density residential projects to supply 20 percent of projected electricity use of each building from renewable resources.
- Continue to issue photovoltaic system permits at no charge upon SMUD's approval (Policy H-9, Action 3; EGMC 16.90.030), and consider expanding this permitting incentive to apply to solar water heaters as well.
- Promote the Figtree Property Assessed Clean Energy (PACE) program to multi-family and commercial property owners, which provides low-interest financing for renewable energy system installations.
- Facilitate building siting for solar access and setbacks to allow for small-lot development (Policies CWDG-3.B.2.5 & CWDG-5.A.2.62).
- Update the Citywide Design Guidelines and the Zoning Code (Title 23 of the Municipal Code) to remove impediments to the installation of renewable energy facilities and provide solar-ready building guidelines.

BE-11. Off-Site Renewable Energy

Encourage participation in SMUD's off-site renewable energy programs, which allow building renters and owners to choose locally produced cleaner electricity sources.

Elk Grove residents and businesses have the opportunity to purchase electricity from local, renewable sources through two innovative SMUD programs: Greenergy and SolarShares. Leveraging these existing resources, the City of Elk Grove will actively promote SMUD's initiatives that allow local residents to achieve an electricity mix that is cleaner than the mandatory standards established by the Renewables Portfolio Standard. Through SMUD's SolarShares program, electricity customers can participate in a community program that allows renters and building owners to pay a monthly fee for electricity from a solar photovoltaic system. On each electricity bill, the participant receives energy credits based on the amount of solar power generated by the SolarShare in that billing cycle. This innovative program removes the upfront investment otherwise needed to install a solar system. Greenergy is a separate opt-in program that allows customers to pay SMUD a flat monthly fee for SMUD to supply 50 percent or 100 percent of electricity use with power from renewable sources, including wind, water, sun, and biomass.

Actions

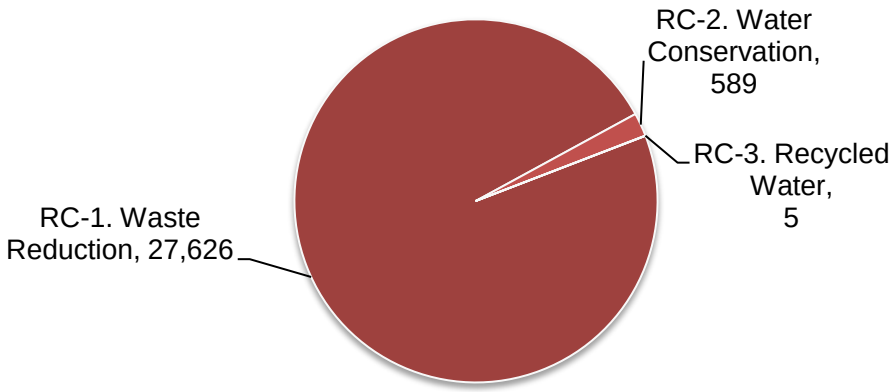
- Promote participation in SMUD's Greenergy program, which allows all electricity customers to pay low monthly fees to meet electricity needs from either 50 percent or 100 percent renewable sources.
- Promote participation in SMUD's SolarShares program, which allows all account holders to pay a fixed monthly fee to purchase solar electricity produced on a local solar farm.
- Update the City's website and materials for residents and businesses to promote SMUD's affordable green electricity source options.

- Work closely with SMUD to conduct local outreach, events, and promotions for SMUD's clean energy programs.

Resource Conservation (RC)

Conservation of resources is a basic tenet of sustainability that also reduces GHG emissions. Both the consumption and disposal of resources requires energy and emits greenhouse gases. For instance, emissions are generated by the energy used to transport and treat water, while emissions also result from the decomposition of resources that have been converted into waste. By reducing the consumption of such resources, the City is able to reduce its impact on GHG emissions while fostering environmental stewardship throughout the community.

Figure 4-4. *RC Greenhouse Gas Reductions by Measure in 2020 (CO_2e)]*



GHG Reductions per Year (Metric Tons CO_2e)	
To Date:	-2,162
2020:	-28,221
2025:	-31,304
Responsible City Department	
Waste and Recycling, Planning, Building	
Cost to the City	
Medium	
Private Investment	
Medium	

SUPPORTING MEASURES FOR RESOURCE CONSERVATION (RC)

RC-1. Waste Reduction
The City shall facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste sent to the landfill from Elk Grove and achieve an 80 percent diversion by 2020. (General Plan Policies CAQ-25 & CWDG-5.A.2.35)

The City of Elk Grove has already implemented several waste reduction programs for residents and businesses in Elk Grove. The City will continue to identify local and regional programs as they become available to increase the proportion of waste diverted from the landfill. The community of Elk Grove currently diverts 59 percent of its waste through recycling, composting, and green waste pickup.

Residents of Elk Grove are able to dispose of green waste, recyclable materials, and e-waste along with their normal garbage through the City's curbside pickup program. The City also hosts composting workshops for residents interested in converting their food scraps and yard waste into nutrient-rich soil.

Businesses in Elk Grove may have their food waste and grease picked up for a fee. The City has also created a business recycling ordinance (codified as EGMC 30.60), requiring businesses to provide appropriate recycling facilities, and training for employees.

In addition to the waste diversion programs, the City is creating a new waste transfer station, which will reduce the distance waste haulers currently travel to other transfer stations in Sacramento County.

Action Items

- Continue to provide curbside green waste opportunities for residents and businesses.
- Encourage and create incentives for the use of recycled concrete in all base material utilized in City and private road construction. (Policy CAQ-25, Action 3)
- Where required or feasible, storage and/or recycling centers should be incorporated into the initial site planning for nonresidential developments. (Policy CWDG-5.A.2.35)
- Expand the current construction and demolition ordinance (codified as EGMC 30.70) to require 65 percent waste diversion (Tier 1 CALGreen).
- Develop and implement an education campaign to encourage businesses to take an active role in recycling and composting, focusing on businesses that generate a large amount of compostable and/or recyclable waste.
- Monitor reycling services contracts to ensure that the range of materials accepted is consistent with the latest technology and best practices.
- Consider a policy to reduce or restrict the use of polystyrene foam (styrofoam) to-go containers.

RC-2. Water Conservation
Reduce the amount of water used by residential and nonresidential uses. (General Plan Policy CAQ-1)

To complete this measure, the City will rely on local actions by residents and water rationing by the local water districts. The City's water services are provided by the Elk Grove Water District and the Sacramento County Water Agency. The City shall partner with each water provider to further publicize these conservation efforts and educate residents to ensure achievement of reduction goals.

This measure relies on statewide averages in order to quantify the energy reductions that would result from conserved water use. The California Energy Commission estimates all total possible reductions for water use, including local programs and water conservation efforts.

With increased water efficiencies, not only will total kWh for transport of water be decreased, but the community's water supply will be better protected and preserved for future needs. Results from this measure are assumed to result from increased water efficiency community-wide and decreased overall water use, and do not include upgrades to infrastructure.

Action Items

- Implement the City's Water Conservation Ordinance (codified as EGMC 14.10). (Policy CAQ-1, Action 1)
- Actively encourage water conservation by both agricultural and urban water users. (Policy CAQ-1, Action 2)
- Work with urban and agricultural water purveyors to establish long-range conservation plans which set specific conservation objectives and utilize, to the extent possible, a common planning horizon, plan framework, and estimating/forecasting procedures. (Policy CAQ-1, Action 3)
- Promote the use of drought-tolerant vegetation to minimize water consumption by providing information to developers and designers. (Policy CAQ-1, Action 4)
- Encourage use of drought-tolerant planting and grading/improvement design to maximize runoff into designated planter areas. (Policies CWDG-3.A.2.4.a & CWDG-3.B.2.17)

RC-3. Recycled Water
Promote and remove barriers to the use of greywater systems and recycled water for irrigation purposes. (new language based on best-practice standards)

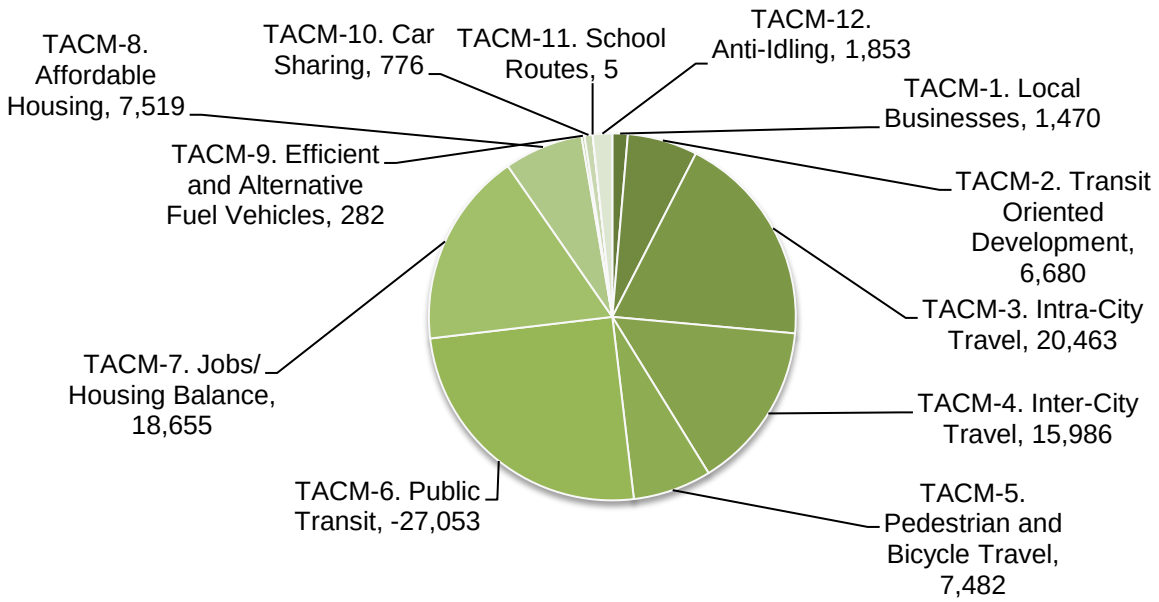
Using non-potable water for landscape and irrigation purposes is less energy-intensive than the process of treating and pumping potable water. Recycled water can be sent to the water treatment plant and then sent to properties with dual plumbing for irrigation purposes or the water can be treated on-site through the installation of a greywater treatment system. Using recycled water will help to preserve the local water supply and reduce the amount of electricity needed to convey, pump, and treat the water used in households and businesses.

Action Items

- Update the municipal code to allow for residential greywater systems.
- Investigate the feasibility of using recycled water for public landscaping.

Transportation Alternatives and Congestion Management (TACM)

Figure 4-5. *Figure 4-5: TACM Greenhouse Gas Reductions by Measure in 2020*



GHG Reductions per Year (Metric Tons CO_2e)	
To Date:	-29,904
2020:	-108,221
2025:	-129,166
Responsible City Department	
Transit Services, Planning, Public Works	
Cost to the City	
High	
Private Investment	
High	

Land use patterns and transportation have a complex interrelationship. The distribution of land uses throughout a community shape transportation choices; in order to take part in the tasks of daily living, each day people must make choices about transportation that have direct impacts on GHG emissions. Likewise, transportation options and accessibility in turn shape daily lifestyle choices. Transportation is often the largest contributor of GHGs within a community and one of the most complex sectors to address. Economic considerations, political will, and other factors complicate actions to optimize land use and transportation options

The following measures investigate more specifically the connection between transportation and land use, and provide a strategy to wield it for the maximum benefit of residents while reducing the impact on GHG emissions.

SUPPORTING MEASURES FOR TRANSPORTATION ALTERNATIVES AND CONGESTION MANAGEMENT (TACM)

TACM-1. Local Goods

Promote policies, programs, and services that support the local movement of goods in order to reduce the need for travel. (General Plan Policy ED-6)

Promoting commerce between local businesses and residents reduces the amount of travel required to meet the service needs of residents. Elk Grove's Think, Shop, Live campaign and the Fantastic Fridays program encourage participating businesses to host events and provide incentives or discounts to residents to shop at local and independently owned stores on the second weekend of every month. Elk Grove also has a weekly Farmers' Market, where residents can purchase food and produce from local farmers and reduce the distance that their food must travel.

Shopping locally increases the tax revenues that the City receives and can help to fund other emissions reduction programs.

Action Items

- Support efforts that encourage Elk Grove residents and businesses to buy goods and services locally. (Policy ED-6, Action 1)
- Support strategies to increase business-to-business commerce in Elk Grove. (Policy ED-6, Action 3)
- Create a program to recognize employers that contribute to the quality of life in the community. (Policy ED-11, Action 4)
- Actively promote revitalization and strong sales in Old Town Elk Grove and along major commercial thoroughfares. (Policy ED-12 Action 1)
- Assist local merchants and business organizations interested in forming mutual benefit organizations such as merchants associations and business improvement districts. (Policy ED-12, Action 2)
- Support strategies to increase business-to-business commerce in Elk Grove. (Policy ED-9, Action 3)

TACM-2. Transit-Oriented Development (TOD)

Support higher-density, compact development along transit by placing high-density, mixed-use sites near transit opportunities. (General Plan Policy H-3, Action 2)

This measure would ensure that new development is directed toward areas close to existing or proposed transit or bike thoroughfares in order to decrease Elk Grove's dependency on single-occupant vehicle trips. The measure would also allow new developments within transit-oriented areas to be built at higher densities and encourage a mix of commercial and residential uses.

Action Items

- Identify and designate opportunity areas for transit-oriented development.
- Change General Plan and zoning maps to include TOD opportunity sites.
- Review the TOD designation in the General Plan and Zoning Code (Title 23 of the Municipal Code) to revise the definition to include mixed-use, compact, higher density development around transit stops.

TACM-3. Intracity Transportation Demand Management

The City shall continue to implement strategies and policies that reduce the demand for personal motor vehicle travel for intracity (local) trips. (General Plan Policies C1-5, C1-6, C-15, CAQ-28, CAQ-29; Short Range Transportation Plan 1 and 2; and EGMC 10.64)

The City of Elk Grove Transit Services has created a new transportation demand management (TDM) program to reduce the dependence of Elk Grove residents and employees on personal vehicle travel. The City is developing partnerships with public and private employers in the City to work together in addressing local transportation and air quality issues. The goal of the program is to make Elk Grove a better place to live, work, and shop by promoting innovative solutions to parking, commuting, and air quality problems. Services provided include:

- Ridematching (carpools/vanpools/bicycling)
- Emergency ride home with a taxi or rental car
- Promotion of alternative transportation (walking, biking, public transit, or ride-sharing) to all residents
- Promotion of Sacramento Region 511 and other regional alternative transportation programs
- Management and maintenance of the Elk Grove/South Sacramento Commuter Club
- Outreach to employers about alternative transportation
- Technical assistance to employer transportation coordinators and employers in preparing a trip reduction plan or developing a transportation demand management program
- Information for residents and employees on transit routes and schedules, bicycle and pedestrian trails, paths, and routes, rideshare programs, and opportunities for telecommuting
- Promotion of best workplaces for commuters
- Business attraction and retention program that promotes the City's transit services.

The program aims to reduce local commute traffic by 20 percent, which is equivalent to each person taking alternative transportation modes once a week. More information can be found on the City's website at http://www.e-tran.org/commuter-alternatives.asp.

Action Items

- Implement policies and actions in the General Plan Conservation/Air Quality Element which

seek to encourage non-vehicular transportation alternatives in Elk Grove. (Policy CI-5, Action 2)

- The City shall support positive incentives such as carpool and vanpool parking, bus turnouts, and pedestrian-friendly project designs to promote the use of transportation alternatives. (Policy C1-5, Action 3; Policy C1-3)
- The City shall participate in the preparation and implementation of a Congestion Management Plan (CMP) consistent with legal requirements, which gives priority to air quality goals, alternatives to automobile travel, and the development of demand reduction measures over additional road capacity. (Policy CI-5, Action 4)
- Implement the requirements for designated carpool and vanpool parking for all new office developments and update standards to meet vehicle miles traveled (VMT) reduction targets. (Policy CAQ-28, Action 1)
- Facilitate SACOG's partnership with community and employer organizations that is intended to support proactive and innovative transportation demand management programs covering all parts of the urbanized area, to offer a variety of choices to driving alone. (MTP Policy 22)
- Continue to implement trip reduction programs for businesses with 100 or more employees. (EGMC 10.64)
- Consider expanding the standards for trip reduction permits.
- Adopt a standard for shopping center carpool parking spaces near store entries to encourage multiple occupant vehicle visitors.

TACM-4. Intercity Transportation Demand Management

The City shall support and contribute to regional efforts to reduce demand for intercity (regional) personal vehicle travel. (General Plan Policy CI-7)

As part of the larger Sacramento region, the City must account for intercity travel to, from, and through the City. The Sacramento region is a leader in regional land use and transportation planning through development of the 2030 Sacramento Regional Blueprint and corresponding Metropolitan Transportation Plan (MTP). The MTP is a 28-year plan for transportation improvements in the region, such as bus rapid transit, commuter rail, high occupancy vehicle (HOV) lanes, and highway improvements. This measure calls for the City to support regional initiatives such as those in the MTP that provide alternative transportation options appropriate for longer distance travel. It also calls for the City's continued support of flexible work schedules, telecommuting, and carpooling within the region.

Action Items

- The City shall encourage commuter rail transportation by providing for a potential train station location for Amtrak and/or other rail service providers along the Union Pacific railroad near the southwest of the intersection

of Sheldon Road and Elk Grove-Florin Road. (Policy C1-26)

- Light rail service in Elk Grove shall be designed to serve major employment centers and the future regional mall at Kammerer Road/State Route 99. (Policy C1-8)
- Support regional programs, including SACOG's Bike Commute Month, SACOG's 511 Brochures, SACOG's regional vanpool incentive program, www.sacregion511.org, and SACOG's joint park-and-ride lots, in addition to the Sacramento Region Commuter Club and e-tran.
- Encourage the use of flexible work schedules and telecommuting in new businesses that locate in the area.

TACM-5. Pedestrian and Bicycle Travel
Provide for safe and convenient pedestrian and bicycle travel through implementation of the Bicycle and Pedestrian Master Plan and increased bicycle parking standards. (General Plan Policy CI-5, Action 5)

The City's Bicycle and Pedestrian Master Plan was completed in 2004 and details the City's anticipated future bikeways and bike and pedestrian facility improvements. As of 2010, the City had installed 6.5 miles of bikeways since the 2005 baseline year. This measure quantifies the increase in the number of trips made by bicyclists and pedestrians based on existing and planned improvements in bike and pedestrian infrastructure outlined in the Bicycle and Pedestrian Master Plan and the Trails Master Plan. Trips made by biking or walking are assumed to replace a trip that would have been made by a single occupant in a vehicle.

Action Items

- Commercial parking standards will be revised to require a ratio of one bicycle parking space per 20 vehicle parking spaces. Multi-family parking standards will be revised to require one long-term bicycle storage space per unit. Storage options may include a multitude of options that provide secured storage.
- Standards will be revised to require the provision of bicycle support facilities (lockers, shower rooms, etc.) for appropriate development.
- New multi-family development developed by the target years will be characterized by internal and off-site pedestrian and bicycle connections that are in excess of those called for in the Bicycle and Pedestrian Master Plan.
- Ensure that applications for new office and mixed-use development analyze the project's connection and orientation to pedestrian paths, bicycle paths, and existing transit stops within 1/2 mile of the project site. The project must be oriented toward an existing transit, bicycle, or pedestrian corridor with minimum setbacks.
- Require applications for new office and mixed-use development to minimize setbacks from the street and provide pedestrian pathways. Primary entrances shall be located on street frontage, with the parking lot designed to include clearly marked and

shaded pedestrian pathways between transit facilities and building entrances.

- Encourage pedestrian-oriented plazas, walkways, bike trails, bike lanes, and street furniture and connections to other community areas.
- Promote pedestrian convenience and recreational opportunities through development conditions requiring sidewalks, walking paths, or hiking trails connecting various land uses and including safety amenities such as lighting and signage.

TACM-6. Public Transit

Continue to improve and expand transit services for commuters and non-commuters traveling within Elk Grove and regionally, providing the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove residents to use public transit to commute to jobs outside the City.

In 2005, the City approved an e-tran Short Range Transit Plan outlining ways in which to improve and expand local public transit. From 2005 to 2008, the City saw a 108 percent increase in the amount of passenger-miles traveled on its regional and local e-tran lines. The City anticipates that public transit use will only grow as highway and local road congestion increases.

Action Items

- Expand and improve commuter services to reduce overcrowding on existing routes and entice more residents to ride transit rather than drive alone (e-tran Short Range Transit Plan).
- Create broader coverage and mobility goals, in addition to productivity goals, in order to create a basic mobility network throughout the City. (e-tran Short Range Transit Plan).
- Increase the number of bus shelters provided through the citywide bus shelters program.
- Consider implementation of a development impact fee to provide funding for the development of new public transit facilities and rolling stock expansion in Elk Grove (CAQ-29-Action).

TACM-7. Jobs/Housing Balance

Continue to improve Elk Grove's jobs/ housing ratio and seek to achieve sufficient employment opportunities in Elk Grove for all persons living in the City. (General Plan Policy ED-7, Action 1)

Elk Grove's jobs/housing balance refers to the match between both the type and quantity of housing opportunities and job opportunities within an area. A better jobs/housing balance means that Elk Grove residents will have employment opportunities available near their home, and Elk Grove employees will have housing opportunities near their work. A better jobs/housing balance will reduce the amount of time it takes to commute to work, thus reducing VMT and congestion.

Action Items

- Continue to expand opportunities for economically sustainable, job-creating uses in the City.
- Continue to pursue innovative public-private partnerships that will spur job creation, such

as the Civic Center partnership and work with the Chamber of Commerce, and use the Economic Development Coordinator for enhanced efficiency and coordination that will result in maximum job creation for the community.

- Implement the Think, Shop, Live Elk Grove program to encourage residents and businesses to shop locally and spur local economic activity.
- Continue to implement incentive programs that spur the creation and/or retention of jobs with salaries equal to at least 75 percent of area median income.

TACM-8. Affordable and Senior Housing
Continue to promote and require the development of affordable and senior housing in Elk Grove.

A significant amount of evidence points to the fact that lower-income households and senior citizens own fewer vehicles and drive less. Furthermore, affordable housing ensures an equitable and just community in which people of all income levels can live in Elk Grove.

The 2008 Housing Element Update provides for over 2,600 affordable units to be constructed by 2013. Given the housing market at the time of this Plan's adoption, this measure provides a conservative estimate for the reduction in VMT and associated greenhouse gas emissions resulting from increased affordable housing in Elk Grove.

Action Items

- Promote and require affordable housing development in Elk Grove consistent with the goals and actions of the 2008 Housing Element Update.

TACM-9. Efficient and Alternative Vehicles
Promote alternative fuels and efficient vehicles throughout the community. (General Plan Policy CAQ-33)

This measure achieves reductions in VMT by facilitating the use of electric vehicles by providing charging stations with new development. In order to achieve these reductions, the City will need to ensure the provision of charging stations consistent with the rate of adoption of electric vehicles. The City anticipates the need for as many as 300 stations by 2025 at a rate of approximately 20 per year. This measure quantifies the increased use of electric vehicles based on the number of charging stations installed by the City or private corporations for public use.

To increase the use of compressed natural gas (CNG) vehicles, Elk Grove has partnered with Clean Energy, a private corporation, to create a CNG fast-fuel station in the City. The station will be used by the City's transit fleet and will be available for private fleet vehicle use.

Action Items

- The City will install electric vehicle charging stations in new and existing civic facilities.
- Require new commercial construction over a certain size to be determined by City staff to

provide an electric vehicle charging station and new residential construction to pre-wire for plug-in electric vehicles.

- Expedite the permit process for existing commercial and residential properties seeking to provide for electric vehicle recharging.
- Provide for the use of Neighborhood Electric Vehicles.
- Work with SMUD and local car dealers to track the demand and market absorbution for electric vehicles and track residenital station installation through building permit issuance.

TACM-10. Car Sharing
Promote the use of vehicles and transportation options other than single-occupant vehicles. (new language based on best-practice standards)

This measure achieves reductions in VMT by getting more workers community-wide to participate in ride-sharing programs.

Action Items

- Continue to develop transportation demand management strategies for employers in Elk Grove through the use of the City's employee transportation coordinators.
- Continue to partner with and encourage region-wide reductions through the Sacramento Region Commuter Club and the use of SACOG park-and-ride lots and vanpool incentives.
- Work with private entities to implement a citywide car-sharing program.

TACM-11. Safe Routes to School
Implement SACOG's Safe Routes to School policy.

Elk Grove will actively promote walking as a safe mode of local travel, particularly for children attending local schools, by employing traffic calming methods such as median landscaping and provision of bike or transit lanes to slow traffic, improving roadway capacity, and addressing safety issues. This measure is intended to quantify the local impacts of a region-wide (SACOG) Safe Routes to School program.

According to the most recent census data, approximately 34,415 school-age children lived in Elk Grove (ages 6–18).[1] Until a few decades ago, most grade-school students walked or bicycled to school. Now, only a small portion (typically about 20 percent) walk or bicycle to school in North American communities. Travel to school represents 10–15 percent of peak period motor vehicle trips in many urban areas. Chauffeuring children to school often results in two vehicle trips, one to the school and one returning home, or four additional trips per day. There are currently few detailed studies of the effectiveness of school transport management programs, but anecdotal evidence indicates that total reductions in automobile trips of 10–20 percent or more are possible at a particular school, and much greater reductions are possible when schools are sited and designed for good accessibility.

[1] ACS 2007.

School transport management can provide financial savings to schools and parents, help reduce parking and traffic problems, reduce pollution, and provide safety and health benefits.

Action Items

- Support SACOG in the development of a Safe Routes to School program.
- The City will utilize leveraged resources and implement the SACOG program through local infrastructure improvements and outreach programs.
- TACM-12. Traffic Calming and Anti-Idling
- Improve traffic flow and reduce unecessary idling through use of traffic calming devices and enforcement of idling restrictions.

TACM-12. Traffic Calming and Anti-Idling

Improve traffic flow and reduce unnecessary idling through use of traffic calming devices and enforcement of idling restrictions.

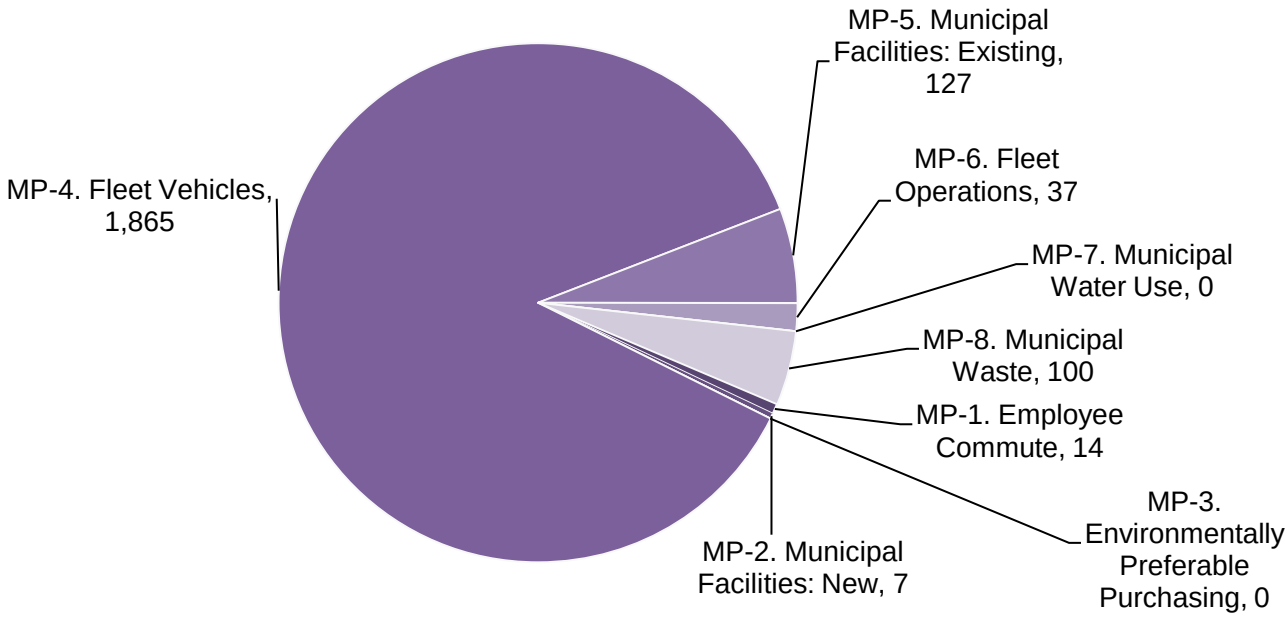
The goal of this measure is to reduce GHG emissions from transportation sources by reducing idling times and improving traffic flow. Under this measure, the City will continue to synchronize traffic signals along major corridors and arterials to reduce the amount of idle time at intersections. The City will also make an effort to use traffic calming devices that slow speeds, lead to safer pedestrian environments, and reduce greenhouse gas emissions.

Action Items

- Continue to synchronize traffic signals along major corridors and adjust synchronization on a regular basis to accommodate traffic patterns.
- Prioritize traffic circles over 4- or 2-way stop signs at residential intersections.
- Work with the police department to enforce vehicle idling limitations for commercial and construction vehicles, and buses pursuant to state law.
- Work with local schools to encourage guardians and caretakers to shut off their engines when waiting to pick up children from school.

Municipal Programs (Mp)

Figure 4-6. *MP Greenhouse Gas Reductions by Measure in 2020*



GHG Reductions per Year (Metric Tons CO_2e)	
To Date:	-94
2020:	-2,149
2025:	-3,604
Responsible City Department	
City Manager's Office	
Cost to the City	
Medium	
Private Investment	
Low	

Municipal emissions account for a small subset of overall community-wide emissions, and therefore municipal measures alone are not sufficient to achieve the comprehensive bulk of the City's targets. However, the City can utilize its control over internal operations to showcase itself as a leader in achieving GHG emissions reductions and lead by example.

SUPPORTING MEASURES FOR MUNICIPAL PROGRAMS (MP)

MP-1. Employee Commute

Establish an employee incentive program to encourage the use of transportation alternatives.

Provide incentives to City employees for carpooling or using alternative forms of transportation that will reduce the number of employees making single-occupant vehicle trips to and from work.

Action Items

- Provide incentives to employees for the use of transportation alternatives.

MP-2. Municipal Facilities: New

All City facilities shall incorporate energy-conserving design and construction techniques. (General Plan Policy CAQ-26, Action 2)

As Elk Grove continues to grow in population, the City will need to construct additional facilities to meet the governmental, social, and recreational needs of its citizens. Requiring each new City facility to comply with green building guidelines like Leadership in Energy and Environmental Design (LEED) will reduce the energy needs of new facilities. New facilities that are constructed using green building techniques will provide the City with cost savings, serve as an example of green building practices to residents and businesses, and improve the health and comfort of the building occupants.

The City has plans to construct a new Civic Center in the years to come; however, the design and size of the buildings have not been determined. As a result, this measure does not include an estimate of the green building benefit of a future Civic Center site. Rather, it includes the greenhouse gas reductions from green building practices in facilities constructed or under construction since 2005.

Action Items

- Design new municipal facilities to be LEED certified.

MP-3. Fleet Vehicles

Adopt a policy to incrementally upgrade the vehicle fleet.

Incrementally converting the City's vehicle fleet from petroleum-based vehicles to alternatives like hybrids, CNG vehicles, or electric vehicles will reduce emissions related to vehicle fuel combustion.

Action Items

- The City shall consider pollutant emissions as one criterion for vehicle purchasing decisions, seeking to purchase lower-emitting vehicles. (Policy CAQ-31, Action 1)
- Purchase alernative and/or hybrid vehicles when feasible, with the overall goal of 12–15 percent alternative/hybrid by 2020.

MP-4. Environmentally Preferable Purchasing
Implement a consolidated and comprehensive environmentally preferable purchasing effort.

The City will provide a preference or incentives to service providers, vendors, and contractors who follow climate-friendly practices, such as the use of recycled content materials, Energy Star, or equivalent materials and equipment, as well as alternative fuel vehicles. The City's current policy allows a 5 percent increase in costs for the purchase of environmentally preferable products.

MP-5. Municipal Facilities: Existing
Implement the recommendations of the City's energy audits.

Elk Grove has conducted energy audits of existing City facilities to determine the baseline energy use of each facility and identify measures that can be implemented to reduce energy use. Motion sensors have been placed in some facilities to turn lights off in rooms when not in use.

MP-6. Fleet Operations
Efficiently use and maintain existing vehicles.

Proper vehicle maintenance can increase the fuel efficiency of vehicles and reduce emissions related to fuel combustion. Regular maintenance will also extend the life cycle of City fleet vehicles and reduce costs associated with vehicle purchases.

Action Items

- Establish a mandatory vehicle maintenance schedule to ensure optimal performance and maximized life cycle.

MP-7. Municipal Water Use
Improve the efficiency of municipal water use through retrofits and employee education. (new language based on existing best-practice standards)

Retrofits to water fixtures in City facilities reduce the amount of water used in sinks, irrigation, toilets, and other water appliances. Combined with employee and user education, the reduction in water use from these retrofits will decrease the electricity needed to pump and treat the water.

MP-8. Municipal Waste
Reduce municipal waste through employee education and environmentally preferable purchasing.

Municipal waste is generated at each facility, including parks and public facilities. Reducing the waste generated by these facilities through recycling and other diversion programs will reduce the hauling of loads to and from the transfer station and the methane released once the waste is landfilled.

The City has implemented an educational program for employees on appropriate waste and recycling protocols and has provided employees with recycling bins at each desk.

Conclusion and Next Steps

Reducing greenhouse gas emissions by 15 percent below 2008 levels in the next decade will be a significant task. This chapter outlines ways for the City to monitor progress toward that target and see that the Plan's goals, measures, and actions are implemented in a timely manner.

Plan Implementation and Integration

For this Plan to be successful, it must be integrated with regional and local plans and operations. This strategy will serve as a living document that will be updated on a regular basis to incorporate new programs and emissions reduction strategies as they are developed and as technological advancements are made. The CAP's relationship to the General Plan Sustainability Element gives the CAP a tie to all new development in the City. As the City moves forward with zoning code (Title 23 of the Municipal Code) updates, specific plans, housing elements, and other planning documents, staff will make sure that these documents support and are consistent with the CAP. City staff will implement the CAP through ongoing planning activities, programs, and the discretionary review process. As part of implementation, City staff will develop tools such as a checklist to identify all mandatory and voluntary CAP measures for development projects.

Furthermore, as a programmatic tiering document under the California Environmental Quality Act (CEQA), the CAP will be the City's one-stop shop for greenhouse gas analysis and mitigation under CEQA. Although this CAP identifies numerous mandatory and voluntary measures, the City will ensure appropriate use of the CAP for CEQA streamlining by maintaining the prerogative to use both mandatory and voluntary measures in this CAP as standards for new development, as appropriate. The City will work with applicants on a project-by-project basis to determine appropriate use of the CEQA benefits of the CAP, identifying appropriate mandatory and voluntary measures to integrate into project design or mitigation.

For developments wishing to benefit from CEQA streamlining provisions, the City may require measures in this CAP as mandatory conditions of approval or as mitigation in a mitigated negative declaration or an environmental impact report, as appropriate, on a project-by-project basis. This approach allows the City to ensure that new development can benefit from CEQA streamlining provisions while also ensuring that the City is on target to achieve the reduction targets outlined in this Plan. Plan Implementation

CAP implementation also requires strong leadership. The City will designate a staff person to conduct annual monitoring and reporting on implementation of CAP measures and overall progress toward CAP reduction targets. This Plan

outlines responsible departments (see Chapter 4) for each policy area and offers potential partner agencies for each measure (see Appendix A). Lastly, successful implementation requires regular monitoring and reporting. The City is committed to monitoring the CAP's implementation progress on an annual basis and reporting to the City Council on the CAP's progress on an annual basis. If the City determines during annual review that the City is falling short of reduction targets, the City will investigate the need to create additional voluntary and mandatory measures to attain the City's overall reduction goals. The City is also committed to updating the inventory, forecast, and reduction measures a minimum of once every five years. .Development of an implementation and monitoring tool will assist in tracking progress. The following policies are presented to ensure the City is successful in the implementation of the CAP.

IMPLEMENTATION MEASURES

The City is committed to the following implementation measures as the path to achieve the target 15 percent reduction below 2005 levels by 2020.

Implementation Measure 1: Monitoring

Annually monitor and report the City's progress toward achieving the reduction target.

Action Items

- Action 1.1: Facilitate implementation of measures and actions related to municipal operations.
- Action 1.2: Provide support to City staff to facilitate implementation of measures and actions.
- Action 1.3: Prepare an annual progress report for review and consideration by the City Council, Planning Commission, and other applicable advisory bodies.
- Action 1.4: Develop and utilize a monitoring and reporting tool to assist with annual reports, which will include an implementation matrix for consolidated tracking and reporting on measure-by-measure progress.
- Action 1.5: Identify key staff responsible for annual reporting and monitoring.
- Action 1.6: Integrate the results of the annual monitoring and reporting into the General Plan annual report or other annual monitoring exercises.

Implementation Measure 2: Update GHG Inventory and Plan

Update the baseline greenhouse gas emissions inventory and Climate Action Plan at a minimum every five years.

Action Items

- Action 2.1: Inventory 2010 GHG emissions no later than 2017.
- Action 2.2: Update the Climate Action Plan no later than 2017 to incorporate new technology, programs, and policies to reduce GHG emissions.
- Action 2.3: Should the annual reporting and monitoring actions (Actions 1.1 through 1.6) identify that the reduction measures included herein are not collectively meeting the GHG reduction goal of 15% by 2020, Planning Department staff shall prepare and present to the City Council recommended revisions to the CAP that would modify or replace measures to the extent necessary to achieve the GHG reduction goal of 15%.

Implementation Measure 3: Collaborative Partnerships

Continue to develop partnerships that support implementation of the Climate Action Plan.

Action Items

- Action 3.1: Continue formal memberships and participation in local and regional organizations that provide tools and support for energy efficiency, energy conservation, greenhouse gas emissions reductions, adaptation, education, and implementation of this Plan, including the Sacramento Municipal Utility District (SMUD), the Sacramento Metropolitan Air Quality Management District (SMAQMD), and other jurisdictions in the Sacarmento region.

Implementation Measure 4: Funding Sources

Secure necessary funding to implement the Climate Action Plan.

Action Items

- Action 4.1: Identify funding sources for reduction measures as part of annual reporting.
- Action 4.2: Ensure implementation through the inclusion of emissions reduction and adaptation measures in department budgets, the capital improvement program, and other plans as appropriate.
- Action 4.3: Pursue local, regional, state, and federal grants as appropriate to support implementation.

Monitoring and Updating this Plan

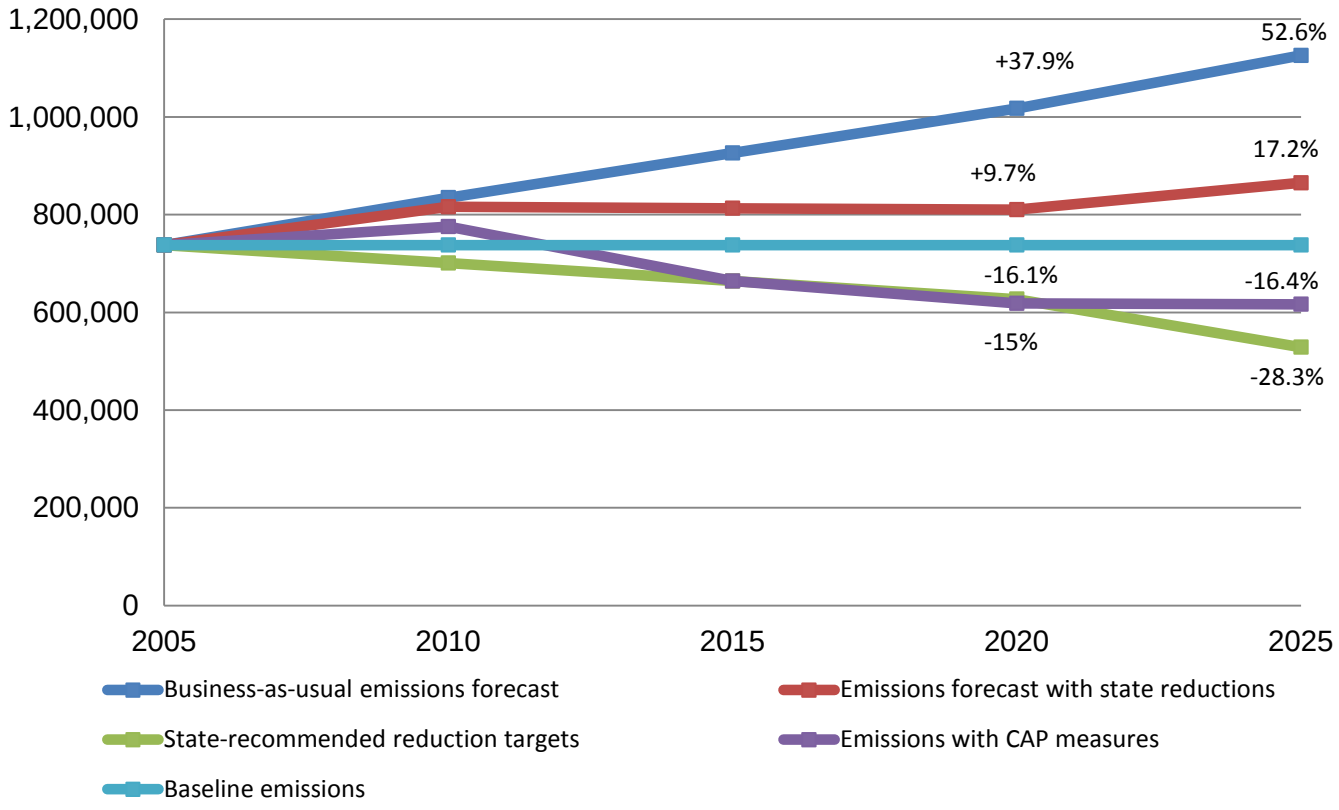
The City will develop a monitoring and reporting tool with an implementation matrix to track, monitor, and update the CAP. As the City reports on progress in implementing the CAP, staff will evaluate the effectiveness of each measure to ensure that the anticipated GHG reductions are occurring. In the event that GHG reductions do not occur as expected, the City will be able to

modify and add further policies to the CAP to ensure the City meets the local reduction target.

Outcome of the Climate Action Plan

The CAP outlines ways in which the City will be able to reduce greenhouse gas emissions by 15.43 percent below 2005 levels by 2020 and set the path for reductions in line with 2050 State emission reduction goals set forth in Governor's Order S-03-05 (see Figure 5-1). This significant effort not only makes the City compliant with State-recommended targets, but also creates a safer, healthier, sustainable, and more economically viable City.

Figure 5-1. *Elk Grove Climate Action Plan GHG Summary*



Glossary of Terms

This section includes an explanation or description of terms used throughout the Climate Action Plan. These terms are exclusive to this CAP and Elk Grove.

1. Adaptation: Adaptation refers to adjustments in natural or human systems to reduce vulnerability to climate change and global warming.

2. Baseline: The first year a greenhouse gas inventory is completed; a calculated level of emissions against which future inventories can be compared.

3. Composting: A process by which organic materials such as yard waste, grass, tree trimmings, fruit, and sometimes meat products and sewage sludge are converted to fertilizer through controlled decomposition.

4. Density: The number of people within one unit of land, often expressed in the number of dwelling units per acre.

5. Greywater or Gray Water: Greywater is wastewater generated from domestic activities such as laundry, dishwashing, and bathing which can be recycled on-site for uses such as landscape irrigation, and constructed wetlands.

6. Light-emitting Diode (LED): LEDs are a semiconductor light source that use less energy and have a longer life than incandescent light bulbs.

7. Land use: The manner in which a parcel of land is used or occupied.

8. Metric Ton: A metric ton is slightly smaller than a short ton, equal to about 1.1 short tons of 2205 pounds.

9. Mixed-use: Development that includes a mix of uses in one area within close proximity, such as residential, commercial, and/or business.

10. Open space: Open space includes land that is used for recreation, farm land, and land that is not developed.

11. Transit-oriented development (TOD): The development of housing, commercial space, services and job opportunities in close proximity to public transit nodes.

12. Transportation demand management (TDM): Transportation demand management or travel demand management (both TDM) is the application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles), or to redistribute this demand in space or in time.

13. Renewable Energy: Energy from non-fossil fuel sources like solar, wind, tidal, and biogas.

14. Zoning: Zoning is a device of land use regulation used by local governments in most developed countries. The word is derived from the practice of designating permitted uses of land based on mapped zones which separate one set of land uses from another.

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City of Elk Grove GHG Inventory and Forecast

Background

In June 2009, the Sacramento County Department of Environmental Review and Assessment completed the Greenhouse Gas Emissions Inventory for Sacramento County. The Inventory included government and community-wide emissions inventories for the unincorporated county and cities of Citrus Heights, Elk Grove, Folsom, Galt, Isleton, Rancho Cordova, and Sacramento. The Inventory used the baseline year of 2005 to maintain consistency with other agencies throughout the state as well as with California's Assembly Bill 32.

The City is currently in the process of developing a Climate Action Plan, which will be a road map to reducing community-wide and municipal emissions. The Climate Action Plan relies on the Inventory as a baseline against which we can measure future progress and growth. As such, it is important that the baseline inventory be as accurate and up to date as possible in order to streamline the Climate Action Plan analysis.

This review is not intended to be a formal revision or addendum to the adopted inventory developed by SACOG. This review presents a new approach to the City Inventory for the purposes of the Climate Action Plan. This review also includes two options for an emissions forecast, which will be used to calculate future reductions in emissions. The "business-as-usual" forecast is an estimate of how future emissions will grow with population, housing, and job growth in the City if no action is taken to reduce current consumption trends. A forecast was not included in the original inventory.

CITY OPERATIONS INVENTORY REVIEW AND RECOMMENDED UPDATES

Staff found that the municipal inventory adhered strictly to the Local Government Operations Protocol v1.0 developed by the Air Resources Board. It does not warrant any change.

COMMUNITY-WIDE INVENTORY REVIEW AND RECOMMENDED UPDATES

The City of Elk Grove citywide (hereafter referred to as community-wide) inventory calculated greenhouse gas emissions resulting from activity within the geopolitical boundary of Elk Grove in calendar year 2005. Unlike municipal greenhouse gas (GHG) inventories, California has not adopted a protocol for community-wide greenhouse gas emissions analysis. Inventories instead rely on best practices and a draft

international protocol named the International Local Government GHG Emissions Analysis Protocol (IEAP) version 1.0 developed by ICLEI – Local Governments for Sustainability.

The IEAP recommends that community-wide inventories at the local government level adhere to the following principles:

- **Relevance:** The greenhouse gas inventory shall appropriately reflect the greenhouse gas emissions of the local government or the community within the local government area and should be organized to reflect the areas over which local governments exert control and hold responsibility in order to serve the decision-making needs of users.
- **Completeness:** All greenhouse gas emissions sources and activities within the chosen inventory boundary shall be accounted for if data is available. Any specific exclusion should be disclosed.
- **Consistency:** Consistent methodologies to allow for meaningful comparisons of emissions over time shall be used. Any changes to the data, inventory boundary, methods, or any relevant factors in the time series shall be disclosed.
- **Transparency:** All relevant issues shall be addressed in a factual and coherent manner to provide a clear audit trail, should auditing be required. Any relevant assumptions shall be disclosed and include appropriate references to the accounting calculation methodologies and data sources used, which may include the IEAP protocol and any relevant supplements.
- **Accuracy:** The quantification of greenhouse gas emissions should not be systematically over or under the actual emissions. Accuracy should be sufficient to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

Staff reviewed the City's community-wide inventory for consistency with these principles as well as best practices among California local government greenhouse gas inventories. Staff also updated the Inventory with new transportation data developed by the County in fall 2010. Staff's inventory review recommends that the following actions be taken to update the City's GHG Inventory for the purposes of the Climate Action Plan:

- **Residential energy** – Omit greenhouse gas emissions associated with residential wood burning due to lack of accuracy and consistency in appropriating emissions to Elk Grove relative to other communities.
- **Commercial and industrial energy** – No change.
- **Industrial specific** – No change.
- **On-road transportation** – Update with new vehicle miles traveled (VMT) numbers provided by the County to be consistent with the VMT appropriation method recommended by the state through Senate Bill (SB) 375 implementation.

- **Off-road equipment and vehicles** – Omit off-road emissions from the Inventory for lack of accuracy and consistency in appropriating countywide emissions for each jurisdiction. Include off-road emissions from agricultural off-road emissions, which will be appropriated based on the percentage of farmland in the City compared to the rest of Sacramento County.
- **Waste** – Exclude waste-in-place emissions from the GHG Inventory for reasons of accuracy and relevance. Include emissions from alternative daily cover (ADC) for reasons of accuracy, relevance, and completeness.
- **Wastewater treatment** – Omit emissions from wastewater treatment and discharge due to lack of relevance, consistency, and accuracy.
- **Water-related energy** – No change.
- **Agriculture** – No change.
- **High Global Warming Potential (GWP) GHGs** – Omit High Global Warming Potential GHGs from the GHG Inventory for reasons of relevance, consistency, and accuracy.

The City's community-wide greenhouse gas inventory would decrease by 105,133 metric tons of carbon dioxide equivalent (CO_2e) under these recommendations as shown in the table below.

Table A-1. *Peer Review and Update Recommendations*

Sector	2009 Sacramento County GHG Inventory	Update for CAP Purposes
Residential	234,771	229,841
Commercial/Industrial	101,607	101,607
On-Road Vehicles	338,005	357,309
Off-Road Vehicles	55,171	2,288
Waste	40,350	39,791
Wastewater Treatment	12,691	–
Water-Related	4,371	4,371
Agriculture	2,631	2,631
High GWP GHGs	53,374	–
Total	842,971	737,838

Modified sectors of the GHG Inventory are qualified below.

Residential Energy

Recommendation: Omit greenhouse gas emissions associated with residential wood burning due to lack of accuracy and consistency in appropriating emissions to Elk Grove relative to other communities. This recommendation will reduce GHGs by 4,930 metric tons of CO_2e.

The Inventory calculated emissions from residential electricity consumption, natural gas consumption, and wood and other solid-fuel burning activities. Electricity and natural gas emissions were calculated in a manner consistent with the International Protocol and best practices. The amount of wood burned within the County was provided by the Sacramento Metropolitan Air Quality Management District (SMAQMD) and converted to British Thermal Units (BTUs) using a heat fuel comparison published by the Energy Information Administration (EIA). The BTUs from wood burning countywide were then allocated to member cities based on population.

Distributing emissions from fireplace, stove, and pellet stove wood burning by population is not consistent with the principles of a community-wide inventory. This method is also inaccurate because it does not reflect Elk Grove's actual consumption patterns, which are likely lower due to the relatively new housing stock. Jurisdictions with an older housing stock are more likely to have functioning wood-burning fireplaces and fireplaces installed before efficiency regulations were codified by SMAQMD.

On-Road Emissions

Recommendation: Update the on-road emissions with new transportation figures provided by the County consistent with new state recommendations. The former inventory calculated emissions from VMT figures provided by the state for local VMT in each jurisdiction and highway VMT in the county. Highway VMT was appropriated to each Sacramento jurisdiction based on the length of highway miles in the jurisdiction.

In August 2010, the County contracted with Fehr & Peers, a transportation engineering consulting firm, to model VMT based on trip origins and destinations for each jurisdiction in Sacramento County. The model appropriates VMT in the following manner per trip type:

- Internal-Internal (I-I): 100%
  The model appropriates all VMT for trips with an origin and a destination in Elk Grove with no stops in between.
- Internal-External (I-X): 50%
  The model appropriates half of the VMT for trips that begin in the City and end outside of the City.
- External-Internal (X-I): 50%
  The model appropriates half of the VMT for trips that begin outside of the City and end inside the City.

This methodology was developed by the California Regional Targets Advisory Committee (RTAC), a committee responsible for the methodology used for regional target setting

under SB 375. Using this new methodology will better position the CAP for use in other planning documents both locally and regionally.

This change would increase emissions by 19,304 metric tons CO_2e.

Off-Road Emissions

Recommendation: Omit off-road emissions from the Inventory for lack of accuracy and consistency in appropriating countywide emissions for each jurisdiction. Include off-road emissions from agricultural off-road emissions, which will be appropriated based on the percentage of farmland in the City compared to the rest of Sacramento County.

The Inventory calculated emissions from off-road vehicles in Sacramento County in 2005 using the California Air Resources Board (CARB) OFFROAD 2007 software. OFFROAD accounts for the following main types of off-road equipment and vehicles:

- Recreational boats and vehicles
- Industrial equipment
- Construction equipment
- Lawn and garden equipment
- Airport ground support
- Military operations
- Agricultural equipment
- Rail operations equipment

Countywide emissions were apportioned to each jurisdiction within Sacramento County by population. This method is inconsistent with the inventory principles as outlined because it does not account for actual activity within the geopolitical boundary of Elk Grove. The City does not have a military base, body of water, or airport within its geopolitical boundary and therefore should not receive an equal per capita share of these emissions.

The alternative approach recommended herein is to appropriate emissions based on a factor of activity. For instance, if the City had 80 percent of recreational vehicle activity in 2005, we would appropriate 80 percent of recreational vehicle emissions to Elk Grove. Under this approach, Elk Grove would not receive any portion of emissions from airport ground support, military operations, and boat emissions.

Lawn and garden, construction equipment, and rail operations are difficult to appropriate as there is no available data on the level of these activities from one jurisdiction to another. However, one type of off-road emissions that we can properly allocate to Elk Grove are those from agricultural equipment. The amount of farmland in each jurisdiction is detailed in Appendix B of the City's inventory. Assuming constant use of agricultural equipment among all farmland in the county, we can estimate that 3.53 percent of off-road agricultural emissions are from Elk Grove. This percentage equates to approximately 2,288 metric tons of greenhouse gas emissions.

Waste

Recommendation: Exclude waste-in-place emissions from the GHG Inventory for reasons of accuracy and relevance. This recommendation will reduce GHGs by 2,246 metric tons of CO_2e. Include emissions from alternative daily cover (ADC) for reasons of accuracy, relevance, and completeness. This recommendation will increase GHGs by 1,687 metric tons of CO_2e.

The inventory includes two types of emissions from waste:

1) Landfill Emissions from Waste Generation in 2005 – Emissions from waste generated by Elk Grove residents and businesses in 2005, regardless of where the waste is landfilled
2) Landfill Emissions from Waste-In-Place in 2005 – "Waste-in-place" emissions for all waste landfilled within the City in 2005, regardless of where the waste came from or who operates the landfill.

The first type of emissions accounts for activity in 2005, while the second type accounts for historical activity up until 2005. The waste-in-place method calculates methane released in 2005 from landfills within the geopolitical boundary of the City. The City does not own or operate these landfills. One of the landfills is closed while the other accepts waste from throughout the region.

In order to create consistency among all sectors and avoid double-counting, staff recommends that only landfill emissions from waste generation in 2005 are included in the inventory. This figure better represents actual behavior in the baseline year rather than historical behavior. Furthermore, it accounts for emissions that result from the behavior of Elk Grove residents and businesses. Waste-in-place, on the other hand, accounts for methane released from all waste in the landfill, regardless of where it came from. This could mean that the same metric ton of methane emissions is being accounted for in Elk Grove's waste-in-place calculation and in another city's landfill emissions from waste generation in that year.

Staff also recommends that the calculation of landfill emissions from waste generation in 2005 include emissions from alternative daily cover, or ADC. ADC is material other than soil such as tire pellets, ash, plant material, and compost that is placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging.[1] ADC is recorded separately from landfilled waste; however, the materials that compose ADC, especially compost and plant material, contribute to the overall methane emissions of the landfill.

The California Department of Resources Recycling and Recovery (CalRecycle) reports that Elk Grove produced approximately 20,000 tons of ADC in 2005. Assuming that the ADC is 90 percent organic material, this amount of ADC

[1] CalRecycle 2010.

equates to an additional 1,687 metric tons of greenhouse gas emissions.

Wastewater Treatment

Recommendation: Omit emissions from wastewater treatment and discharge due to lack of relevance, consistency, and accuracy. This recommendation will decrease GHGs by 12,691 metric tons CO_2e.

The Inventory includes an estimate of emissions from wastewater treatment and discharge based on state averages. The Inventory used a California Air Resources Board (CARB) statewide per capita emissions figure for domestic wastewater treatment and discharge in 2004 to estimate emissions in Sacramento County. These emissions were then applied to the population of each city and the county in 2005 to estimate overall emissions.

Calculating emissions based on a statewide average per capita figure does not account for multiple factors, including:

- Varying efficiencies in the wastewater treatment and discharge systems throughout the state of California.
- Varying water efficiency standards from jurisdiction to jurisdiction.
- Actual activity within the City.

These emissions also lack relevance. Unless the facilities are owned and operated by the City, the community and City has little control over their efficiencies.

High Global Warming Potential GHGs

Recommendation: Omit High Global Warming Potential GHGs from the GHG Inventory for reasons of relevance, consistency, and accuracy. This recommendation will decrease emissions by 53,374 metric tons of CO_2e.

High Global Warming Potential (GWP) GHGs are a result of refrigerants and electric utility transmission and distribution equipment. High GWP GHGs are also emitted during semiconductor manufacturing. The Inventory appropriates this type of emissions to Elk Grove using a statewide high GWP GHG emissions trendline from 1990 to 2004. This trendline was used to estimate 2005 high GWP emissions, which were then distributed to Elk Grove based on population.

Calculating emissions based on a statewide average per capita figure does not account for multiple factors, including:

- The amount of refrigerants in Elk Grove as opposed to other communities.
- The amount of utility transmission and distribution equipment within Elk Grove.
- The amount of semiconductor manufacturing processes occurring in Elk Grove.

It is therefore staff's recommendation that this emissions source be omitted from the inventory.

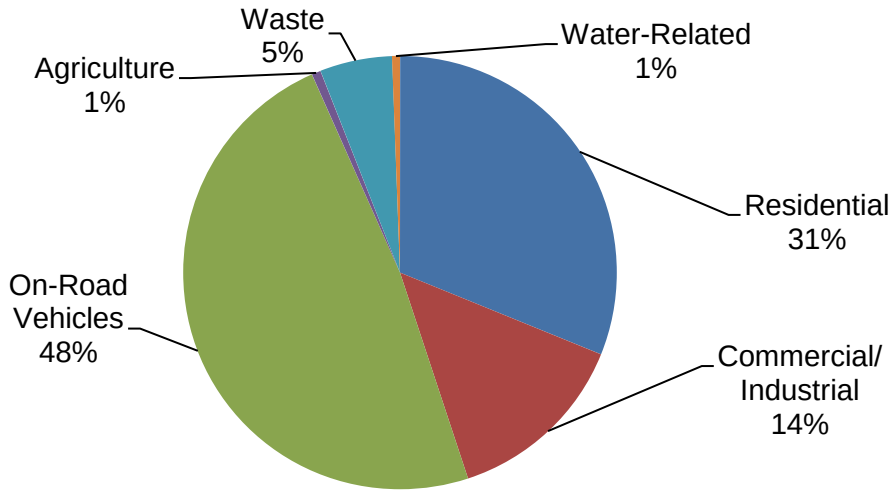
SUMMARY

The recommended updates would result in a new emissions total of 737,838 metric tons of CO_2e, or roughly 105,133 metric tons less than the 2009 Sacramento County Inventory. Since off-road emissions were restricted to agricultural off-road emissions as part of the Inventory update, off-road emissions were re-categorized as agricultural emissions. As illustrated in the figures and tables below, the transportation sector is responsible for the majority of emissions released in the Elk Grove community (48.43 percent). Electricity and natural gas consumption in the residential and commercial/industrial sector constitute the second largest sector (31.15 percent and 13.77 percent, respectively). Waste comprises the third largest sector with 5.39 percent of emissions, while off-road vehicles and agriculture contribute the smallest amount (0.3 percent and 0.4 percent, respectively).

Table A-2. *Updated Emissions by Sector*

Sector	Metric Tons CO_2e	Percentage of Total
Residential	229,841	31.15%
Commercial/Industrial	101,607	13.77%
On-Road Vehicles	357,309	48.43%
Waste	39,791	5.39%
Water-Related	4,371	0.59%
Agriculture	4,919	0.67%
Total	737,838	100.00%

Figure A-1. *Updated Emissions by Sector, 2005*



COMMUNITY-WIDE FORECAST RECOMMENDATION

Business-as-Usual Forecast

A business-as-usual forecast determines how baseline greenhouse gas emissions will grow with future population, housing, and job growth if current consumption trends and efficiencies do not change. A forecast serves as the essential "no project" scenario to demonstrate how conditions will change without Climate Action Plan implementation.

The forecast year of 2020 was chosen to align with Assembly Bill 32, which creates a statewide emission reduction target of 15 percent below 2005 levels by 2020. The forecast year 2025 was also chosen to be consistent with the Elk Grove General Plan buildout year.

The energy, waste, and agriculture sectors are based on growth projections for population, household, and job growth in the Elk Grove area.

Table A-3. *GHG Inventory "Business-as-Usual" Forecast Results*

Emissions Growth	2005 Baseline	2010	2020	2025
Residential	229,841	255,971	311,554	345,748
Commercial/Industrial	101,607	138,482	181,758	203,498
Transportation	357,309	386,925	462,210	508,997
Agriculture	4,919	3,689	1,230	0
Waste	39,791	44,314	53,937	59,857
Water-Related	4,371	5,391	6,811	7,591
Total	737,838	834,773	1,017,499	1,125,691
Percentage Increase from Baseline	0.00%	13.14%	37.90%	52.57%

INCORPORATION OF STATE REDUCTIONS INTO FORECASTS

State-led and State-induced reduction strategies included in the AB 32 Scoping Plan are accounted for in the City's adjustment of the business-as-usual forecast. To clarify, the State of California has approved, programmed, and/or adopted these actions. Furthermore, they are programs or projects that require no local involvement. Incorporating them into the forecast and reduction assessment provides a more accurate picture of future emissions growth and the responsibility and ability of local governments

versus the State to reduce greenhouse gas emissions. A description for each of these actions is provided below, together with the methodology used to quantify the impact of each action on GHG emissions.

State Reductions

AB 1493 (Pavley)

Assembly Bill 1493 (Pavley), signed into law in 2002, will require carmakers to reduce greenhouse gas emissions from new passenger cars and light trucks beginning in 2011. The California Air Resources Board (CARB) adopted regulations in September 2004 that create two phases of increasingly stringent standards for car manufacturers between 2009 and 2020. It is expected that new vehicles sold in California will create an average of 16 percent fewer greenhouse gas emissions than current models.

Calculation Background

The Pavley rules establish GHG emission standards for two different groups of passenger vehicles: (1) passenger cars (PC) and light-duty trucks with test weights under 3,751 pounds loaded vehicle weight (LDT1); and (2) light-duty trucks with test weights between 3,751 pounds loaded vehicle weight and 8,500 pounds gross vehicle weight (GVW) (LDT2). Medium-duty passenger vehicles (LDT3) between 8,500 and 10,000 pounds GVW are included with manufacturers' LDT2 vehicles when determining compliance with California's GHG standards. For the purposes of this analysis, only vehicles up through 8,500 pounds were considered since the majority of LDT3 vehicles are commercial and therefore do not fall under the scope of the Pavley rules.

The GHG emission standards established by the Pavley regulation reflect not only exhaust CO_2 emissions resulting directly from operation of the vehicle, but also: (1) tailpipe emissions of methane and nitrous oxide; (2) CO_2 emissions resulting from operating the air conditioning system (indirect AC emissions); and (3) hydrofluorocarbon refrigerant emissions released from the air conditioning system due to either leakage, losses during recharging, sudden releases due to accidents, or release from scrappage of the vehicle at end of life (direct AC emissions). In this analysis, we're only accounting for CO_2 from tailpipe emissions (1). Air conditioning is not included in EMFAC estimates of CO_2e and methane and therefore is not accounted for in the reductions.

Low Carbon Fuel Standard

The State is proposing to reduce the carbon intensity of transportation fuels consumed in California. To reduce the carbon intensity of transportation fuels, CARB is developing a Low Carbon Fuel Standard (LCFS), which would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 and 20 percent by 2035 as called for by Governor Schwarzenegger in Executive Order S-01-07. LCFS will incorporate compliance mechanisms that provide flexibility to fuel providers in how they meet the requirements to reduce greenhouse gas emissions.

Calculation Background

Pursuant to the AB 32 Scoping Plan, the LCFS will examine the full fuel cycle impacts of transportation fuels and CARB will work to design the regulation in a way that most effectively addresses the issues raised by the Environmental Justice Advisory Committee and other stakeholders. CARB identified the LCFS as a discrete early action item and is developing a regulation for Board consideration in March 2009. A 10 percent reduction in the intensity of transportation fuels is expected to equate to a reduction of 16.5 $MMTCO_2e$ in 2020. However, in order to account for possible overlap of benefits between LCFS and the Pavley greenhouse gas standards, CARB has discounted the contribution of LCFS to 15 $MMTCO_2e$.

Therefore, LCFS will be responsible for a 9 percent reduction in global warming intensity (GWI) by 2020 and assumes a 10 percent reduction in GWI by 2025.

Other Reductions

In addition to the state-led reductions accounted for in the City's business-as-usual forecast, additional initiatives have been initiated by entities other than the City that will affect emissions at the local level. These utility-led and state-induced actions are accounted for in the forecast, but are more dependent on regional or local action for implementation. Hence, the impetus for reductions that result from these actions originates outside of the realm of the City's influence, but achievement of reductions is dependent on local action.

Other state initiatives such as funding mechanisms and loan programs are not included in state reductions that are accounted for in the business-as-usual forecast, or here as utility-led or state-induced measures. Rather, they are included within the local reductions as appropriate because of the need for or requirement for local government implementation or contribution to the effort.

SMUD RPS: Renewable Portfolio Standard – Increase the portion of energy that comes from renewable sources to 20% by 2010 and by 33% by 2020.

Established in 2002 in Senate Bill 1078, the Renewable Portfolio Standard (RPS) establishes targets for utility providers to utilize energy that results from renewable sources. While RPS only requires investor-owned utilities to achieve these standards, Sacramento Municipal Utilities District (SMUD), a publicly owned utility, has elected to comply with the RPS standards. A June 2009 report from the California Public Utilities Commission (CPUC) indicated that it is unlikely that the State and its investor-owned utilities will be able to reach the RPS goal of 33 percent by 2020. SMUD is the only major utility expected to achieve the 2010 RPS goal, though they have indicated that meeting the 2020 goal of 33 percent will be challenging unless transmission, permitting, and supply barriers can be overcome.

Calculation Background

Calculations assume SMUD will achieve 33 percent renewable sources by 2025, based on the following:

- CPUC (July 2008). Renewables Portfolio Standard Quarterly Report. http://docs.cpuc.ca.gov/ published/REPORT/85936.htm#P31_3968 (accessed June 25, 2010).
- CPUC (June 2010) Renewables Portfolio Standard Quarterly Report. http://www.cpuc.ca.gov/NR/ rdonlyres/66FBACA7-173F-47FF-A5F4-BE8F9D70DD59/0/Q22010RPSReporttotheLegislature.pdf (accessed July 1, 2010).
- SMUD (September 2009) 2008 Renewable Energy Status Report at SMUD. http://www.smud.org/ en/community-environment/solar-renewables/Documents/SMUD%20Brief%20on%20RPS%2009-28-09-S%20ML%20MD.pdf (accessed July 27, 2010).

Title 24 (CALGreen) – 2008 Standards

Title 24 of the California Code of Regulations mandates how each new home and business is built in California. It includes requirements for the structural, plumbing, electrical, and mechanical systems of buildings and for fire and life safety, energy conservation, green design, and accessibility in and around buildings. The 2010 triennial edition of Title 24 pertains to all occupancies that applied for a building permit on or after January 1, 2011, and remains in effect until the effective date of the 2013 triennial edition. This Inventory focuses on two sections of Title 24: Part 6 (the California Energy Code) and Part 11 (the California Green Building Standards Code). These two sections require direct electricity, natural gas, and water savings for every new home or business built in California. Title 24 is a statewide standard applied at the local level by local agencies through project review. Title 24 requirements apply to energy use associated with water heating, space cooling, space heating, and other building processes. The updates do not directly create new requirements for energy use associated with appliances or plug-load activity.

This forecast incorporates the net energy benefit of new Title 24 requirements that did not exist in the baseline year. These estimates are based on California Energy Commission studies that compare each new update of Title 24 to its former version. The AB 32 Scoping Plan calls for ongoing triennial updates to Title 24 that yield regular increases in mandatory energy and water savings for new construction. As such, the GHG forecast also includes a conservative estimate of the energy and water reductions due to future updates of Title 24 based on historic growth rates. The energy reductions quantified in the forecast from Part 6 Energy Code updates are based on the assumption that the triennial updates to the code will yield regular decreases in the maximum allowable amount of energy used from new construction. The adjusted forecast is a conservative estimate of energy reductions, anticipating ongoing improvements relative to the previous adopted code. In May of 2012, the California Energy Commission adopted the 2013 update to Title 24 that goes into effect on January 1, 2014. This update exceeded the expectations of this forecast, identifying a 25 percent improvement in efficiency over the previous code for residential construction and a 30 percent improvement in efficiency for nonresidential

construction. Reduction measures in the Climate Action Plan capture the remaining credit for the 2013 code update, which is not calculated in this forecast.

Calculation Background

- Assumes that all development between 2010 and 2025 meets Title 24 2008 minimum efficiency standards
- Assumes all growth in natural gas and electricity sectors is from new construction
- Calculations for reductions to residential and nonresidential development are applied to energy use associated with the end-use processes affected by Title 24, based on information from the California Energy Commission, in addition to end-use information for climate zone 12 as identifed by the Commercial End-Use Survey and the Residential Appliance Saturation Survey.
- Calculates an average improvement of 3 percent electricity efficiency and 7 percent natural gas efficiency in commercial construction for cooling, process energy, and ventilation end uses.
- Calculates an average improvement of 16 percent electricity efficiency and 7 percent natural gas efficiency in residential construction for air conditioning, evaporative cooling, room cooling, and primary and auxiliary heating.

Calculations for the forecast are informed by the following sources:

2008 Title 24 Energy Efficiency Improvements in comparison to 2005 baseline Title efficiency standards (California Energy Commission, Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings, November 2007).

Itron, Inc. California Commercial End-Use Survey – Results Page. 2007. http://capabilities.itron.com/CeusWeb/Chart.aspx.

KEMA, Inc. 2010. 2009 California Residential Appliance Saturation Study, Volume 2: Results. CEC-200-2010-004.

ADJUSTED FORECASTS

Reductions that result from State-led or State-induced actions are provided below. These represent reductions that will be achieved in the target years but that the City is not responsible for implementing.

Table A-4. *State Reductions*

	2005	2010 ($MTCO_2e/yr$)	2020 ($MTCO_2e/yr$)	2025 ($MTCO_2e/yr$)
Business-as-Usual Projection		834,773	1,017,499	1,125,691
SMUD Renewable Portfolio Standard (RPS)		-17,404	-102,452	-121,063
CALGreen Code		0	-17,305	-34,786
AB 1493 (Pavley)		-1,366	-65,140	-93,657
Low Carbon Fuel Standard (LCFS)		0	-29,642	-30,571
Subtotal State Reductions		-18,770	-214,539	-280,077
Emissions Forecast	**737,838**	816,002	802,960	845,614

The updated emissions forecast that accounts for these reductions is provided below.

Table A-5. *Adjusted Emissions Forecast*

Emissions Growth	2005 Baseline	2010	2020	2025
Residential	229,841	244,825	245,089	260,251
Commercial/Industrial	101,607	132,432	129,561	134,441
Transportation	357,309	385,559	367,428	384,770
Agriculture*	4,919	3,689	1,230	0
Waste	39,791	44,314	53,937	59,857
Water-Related	4,371	5,181	5,714	6,294
Total	737,838	816,001	802,959	845,612
Percentage Increase from Baseline	0.00%	10.59%	8.83%	14.61%

**Agriculture emissions include off-road equipment and vehicles associated with agriculture and direct emissions from fertilizer and cows.*

Reduction Measure Assumptions

This appendix outlines the greenhouse gas (GHG) reductions for each measure, along with the methodology and assumptions that contributed to each calculation.

Supporting Measures for the Built Environment (BE)

BE-1. Building Stock: Existing
Promote energy conservation by residents and businesses in existing structures in close coordination with other agencies and local energy providers, including the Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric (PG&E).

GHG Reductions

- 2020 reductions ($MTCO_2e$): 1,700
- 2025 reductions ($MTCO_2e$): 2,700

Target Indicators

- 25% household and business participation in conservation programs
- 25% household participation in monitoring programs that are supported by the smart grid

Method: Based on a 2011 Residential Behavior Profile and findings for the Sacramento identified by ICF, assumed participation rates in outreach programs and in-home monitoring programs calculated for existing households. Energy reductions based on case studies and SMUD reports on smart-grid efficacy.

Sources

Bonneville Power Administration. 2011. Residential Behavior-Based Energy Efficiency Program Profiles 2011. http://www.bpa.gov/Energy/n/pdf/BBEE_Res_Profiles_Dec_2011.pdf.

ICF. 2011. GHG Reduction Measure Analysis for SMUD.

SMUD Smart Grid Activities 2010 Presentation. https://www.smud.org/en/residential/customer-service/smart-meters/.

Additional Performance Summary

- Outreach – reduction per household (kWh): 100
- Outreach – reduction per household (therms): 5
- Outreach – number of households: 10,689
- Monitoring – reduction per household (kWh): 410
- Monitoring – reduction per household (therms): 18
- Monitoring – number of households participating: 10,689
- Outreach – reduction per business (kWh): 770
- Outreach – reduction per business (therms): 14
- Outreach – number of businesses: 854

BE-2. Building Stock: Residential Appliances in Existing Development
Support residential upgrades to more energy-efficient, cost-saving appliances for existing homes, leveraging regional and state resources to target indoor and outdoor appliances and equipment in existing homes.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 2,690

- 2025 reductions ($MTCO_2e$): 3,930

Target Indicators

- 20% single-family household participation in energy-efficient appliance programs
- 5% multi-family household participation in energy-efficient appliance programs
- 10% of single-family households to install in solar water heaters
- 5% of multi-family households to install solar water heaters
- 15% of single-family households to upgrade pool pumps
- 5% of multi-family developments to upgrade pool pumps

Method: Calculation assesses impact of appliance upgrades for existing development only. Reductions for each category of appliance upgrades were calculated using single-family and multi-family household electricity from CAPCOA Table BE 4-2 for climate zone 12 and applied to baseline electricity usage per household to render reductions by household. A target utilization rate of 50% was applied to all participating households and total reductions to reflect the likelihood that not all appliances, internal to the CAPCOA assumption, will be retrofitted in the participating homes. Solar water heater reductions calculated based on the amount of natural gas offset on average in comparison to conventional water heaters in climate zone 12.

Pool pump savings calculated using the 2010 Residential Appliance Saturation Study, assuming the average amount of electricity used per household on pool pumps. Usage data for PG&E service territory was used; usage data was not available for SMUD territory or climate zone 12 information. As the use is not climate-dependent, usage in PG&E's service territory was used as a proxy. Information provided by the City of Elk Grove was used to calculate the average annual number of pool permits issued since incorporation. This estimate of the number of pools was combined with the target participation rates and the CEC source below for reductions from retrofitting a conventional pump to a variable-speed-drive pool pump.

Sources

California Energy Commission. 2007. Draft Residential Swimming Pool Report. http://www.energy.ca.gov/title24/2008standards/prerulemaking/documents/2007-02-26-27_workshop/supporting/PGE-DRAFT_REPORT_RESIDENTIAL_SWIMMING_POOL.PDF.

CAPCOA. 2010. Quantifying Greenhouse Gas Mitigation Measures. http://capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

Additional Performance Summary

- Target single-family household participation rate in energy-efficient appliance program (percentage of all homes): 20%
- Target multi-family household participation rate in energy efficient appliance program (percentage of all homes): 5%
- Appliance utilization rate: 70%
- Target single-family household participation rate in solar hot water program (percentage of all homes): 10%
- Target multi-family household participation rate in solar hot water program (percentage of all homes): 5%
- Target single-family household participation rate in pool pump program (percentage of homes with pools): 15%

- Target multi-family household participation rate in pool pump program (percentage of homes with pools): 5%

BE-3. Building Stock: Nonresidential Appliances in Existing Development

Equip businesses in Elk Grove to reduce operational expenses and maximize energy efficiency through the use of energy-efficient and cost-effective indoor and outdoor appliances and equipment.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 1,360
- 2025 reductions ($MTCO_2e$): 2,460

Target Indicators: 25% participation of businesses or the equivalent of a million square feet of nonresidential square feet participating in appliance upgrades by 2020

Method: Nonresidential electricity and natural gas use was assessed by end-use using the 2007 California Commercial End-Use Survey. Energy savings by end-use function calculated based on case studies. A target utilization rate was applied to reflect the likelihood that not all efficiency measures would take place in participating businesses. Reductions only include savings for end-uses associated with nonresidential appliances. An estimated number of square feet per employee was calculated based on an assumption of 400 square feet per employee. Participation rates were assumed based on regional assessments prepared by SMUD in a 2011 analysis for SMUD.

Sources

Brown, Rich, Sam Borgeson, Jon Koomey, and Peter Biermayer. 2008. U.S. Building-Sector Energy Efficiency Potential. Ernest Orlando Lawrence Berkeley National Laboratory, University of California. http://enduse.lbl.gov/info/LBNL-1096E.pdf.

ICF. 2011. GHG Reduction Measure Analysis for SMUD.

Itron, Inc. 2007. California Commercial End-Use Survey – Results Page. http://capabilities.itron.com/CeusWeb/Chart.aspx.

Additional Performance Summary

- kWh saved per participating business: 7,290
- Therms saved per participating business: 30
- kWh saved per participating square foot: 2.52
- Therms saved per participating square foot: 0.01
- Target appliance utilization rate: 0.5

BE-4. Building Stock: Retrofits to the Existing Housing Stock

Promote retrofits in the existing residential housing stock, leveraging existing local programs and regional resources to reduce household energy costs and increase home values.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 394
- 2025 reductions ($MTCO_2e$): 588

Target Indicators

- 10% of single-family homes constructed before 1990 to complete energy efficiency retrofits
- 1% of total multi-family homes constructed before 1990 to complete energy efficiency retrofits

Method: Focuses on energy-saving potential for existing homes based on energy efficiency potential identified by ICF in a 2011 analysis for SMUD for

single-family homes. Measure targets participation of homes constructed before 1990 to maximize energy-savings potential. Multi-family savings calculated assuming results from a City-funded retrofit of a multi-family complex owned by the Sacramento Housing Regional Alliance.

Sources

ICF. 2011. GHG Reduction Measure Analysis for SMUD.

KEMA, Inc. 2010. 2009 California Residential Appliance Saturation Study, Volume 2: Results. CEC-200-2010-004.

Additional Performance Summary

- kWh saved per single-family household: 2,737
- Total kWh percentage reduction per single-family household: 25%
- Therms saved per single-family household: 24
- Total therm percentage reduction per single-family household: 5%
- kWh saved per multi-family household: 981
- Total kWh percentage reduction per multi-family household: 18%
- Average therms saved per multi-family household: 19
- Total therm percentage reduction per multi-family household: 21%

BE-5. Building Stock: Nonresidential Retrofits

Facilitate retrofits and energy efficiency improvements within the existing nonresidential building stock that reduce maintenance and operation costs.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 1,590
- 2025 reductions ($MTCO_2e$): 2,810

Target Indicator

- 25% participation of nonresidential square footage to undergo retrofits

Method: Nonresidential energy use was calculated by end-uses using the 2007 California Commercial End-Use Survey. Savings were identified by end-use category, assuming average energy reduction potential for end-uses associated with heating, air conditioning, and ventilation systems. An estimated number of 400 square feet per employee was applied to the number of businesses. Participation rate identified by ICF in the Sacramento region for SMUD. A target utilization rate was also applied to reflect the likelihood that not all efficiency measures would take place in participating businesses.

Sources

Brown, Rich, Sam Borgeson, Jon Koomey, and Peter Biermayer. 2008. U.S. Building-Sector Energy Efficiency Potential. Ernest Orlando Lawrence Berkeley National Laboratory, University of California. http://enduse.lbl.gov/info/LBNL-1096E.pdf.

Itron, Inc. 2007. California Commercial End-Use Survey – Results Page. http://capabilities.itron.com/CeusWeb/Chart.aspx.

Additional Performance Summary

- kWh saved per participating business:5,600
- Therms saved per participating business: 140
- kWh saved per participating square feet: 1.94
- Therms saved per participating square feet: 0.05

BE-6. Building Stock: New Construction

Adopt CALGreen Tier 1 standards to require all new construction to achieve a 15 percent improvement over minimum Title 24 CALGreen energy requirements.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 3,286
- 2025 reductions ($MTCO_2e$): 4,614

Target Indicators

- Adoption of Tier 1 standards
- 80% participation of new development from 2012 to 2020 to comply with Tier 1 standards
- 100% participation of new development from 2021 to 2035 to comply with Tier 1 standards

Method: Identifies the additional incremental energy benefit from the end-uses affected by Title 24, assuming the additional benefit of Tier 1 standards beyond the improving levels of energy efficiency assumed in the adjusted business-as-usual forecast. The increased level of energy performance for the 2013 code was calculated by residential and nonresidential end-use, based on California Energy Commission assessments. For residential uses, assumes increased efficiency for central air conditioning, room air conditioning, and evaporative cooling averages for climate zone 12 as identified by the Residential Appliance Saturation Survey. For nonresidential uses, assumes increased efficiency of cooling, process energy use, and ventilation, as identified by the Commercial End-Use Survey. Identifies the effective impact of increased Title 24 standards using CAPCOA's rates of actual energy reduction by land use type for each percentage improvement over Title 24.

Sources

Brook M., B. Chrisman, P. David, T. Ealey, D. Eden, K. Moore, K. Rider, P. Strait, G. D. Taylor, and J. Wu. 2011. Draft Staff Report: Achieving Energy Savings in California Buildings (11-IEP-1F). California Energy Commission, Efficiency and Renewables Division. CEC-400-2011-007-SD.

California Energy Commission. 2012. 2013 Building Energy Efficiency Standards. http://www.energy.ca.gov/title24/2013standards/rulemaking/documents/2012-5-31-Item-05-Adoption_Hearing_Presentation.pdf.

Itron, Inc. 2007. California Commercial End-Use Survey – Results Page. http://capabilities.itron.com/CeusWeb/Chart.aspx

KEMA, Inc. 2010. 2009 California Residential Appliance Saturation Study, Volume 2: Results. CEC-200-2010-004.

Additional Performance Summary

- Number of homes participating: 5,312
- Total square footage participating:3,360,000
- kWh saved per home: 643
- Therms saved per home: 57
- kWh saved per business square foot: 1.3125
- Therms saved per businesss square foot: 0.0078

BE-7. Building Stock: Appliances and Equipment in New Development

Encourage the use of energy-efficient appliances and equipment in new buildings that maximize efficiency.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 510
- 2025 reductions ($MTCO_2e$): 920

Target Indicators

- Approximately 2,000 new single-family homes participating in appliance upgrades
- Approximately 20 new multi-family households participating in appliance upgrades
- Approximately 350 new single-family homes installing solar water heaters
- Approximately 600 new homes or multi-family complexes installing variable- or multi-speed pool pumps

Method: The number of 2020 households was divided by the community 2020 residential kWh projection to determine 2020 kWh per household. The number of existing households was subtracted from the 2020 household estimate to identify the number of new households that will be constructed and addressed by this measure. Average energy-efficient appliance reduction rates were applied to these figures to estimate reductions, using information from the Residential Appliance Saturation Survey, the Commercial End-Use Survey, and energy trends for pool pumps identified by the California Energy Commission. The total number of new pools was estimated assuming the annual average pool permits approved by the City since 2005.

Sources

Brown, Rich, Sam Borgeson, Jon Koomey, and Peter Biermayer. 2008. U.S. Building-Sector Energy Efficiency Potential. Ernest Orlando Lawrence Berkeley National Laboratory, University of California. http://enduse.lbl.gov/info/LBNL-1096E.pdf.

California Energy Commission. 2007. Draft Residential Swimming Pool Report. http://www.energy.ca.gov/title24/2008standards/prerulemaking/documents/2007-02-26-27_workshop/supporting/PGE-DRAFT_REPORT_RESIDENTIAL_SWIMMING_POOL.PDF.

CAPCOA. 2010. Quantifying Greenhouse Gas Mitigation Measures. http://capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

Itron, Inc. 2007. California Commercial End-Use Survey – Results Page. http://capabilities.itron.com/CeusWeb/Chart.aspx.

KEMA, Inc. 2010. 2009 California Residential Appliance Saturation Study, Volume 2: Results. CEC-200-2010-004.

Additional Performance Summary

- Appliances – energy reduction per participating single-family home (kWh): 150
- Appliances – energy reduction per participating multi-familly home (kWh): 210
- Solar water heater reduction per household (therms): 150
- Pool pumps – reduction per participating household (kWh): 1,300

BE-8. Community Forestry

Plant trees in appropriate densities and locations that will maximize energy conservation and air quality benefits.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 752
- 2025 reductions ($MTCO_2e$): 376

Target Indicators

- 25,000 new trees to shade buildings by 2020

Method: Calculates the energy credit for reduced building air conditioning and climate cooling associated with tree plantings by increasing the tree canopy above 20% (baseline statistic). Assumes distribution of 70% deciduous and 30% evergreen trees planted through this program; the distribution of trees is proportional to the distribution of the age of the City's building stock based on regional averages. Total emissions reductions include annual sequestration during a 40-year life cycle of a forestry program, avoided emissions from the reduction in electricity consumption as a result of direct shading, and overall climate cooling.

Sources

City of Elk Grove. 2007. City of Elk Grove Urban Forest Canopy Assessment.

McPherson, et al. 2000. "The potential of urban tree plantings to be cost effective in a carbon market."

Additional Performance Summary

- Deciduous trees planted:17,500
- Evergreen trees planted: 7,500
- Average emissions reduction per year per tree ($MTCO_2e$): 0.030066489

BE-9. Cool Paving Materials

Require the use of high-albedo material for future outdoor surfaces to the greatest extent feasible, including but not limited to parking lots, median barriers, roadway improvements, and sidewalks.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 4,939
- 2025 reductions ($MTCO_2e$): 6,673

Target Indicators

- Assumes achievement of half of urban area paved with high-albedo surfaces

Method: Based on sources cited below. Assumes total of 30% of all existing pavement will be replaced with high-albedo content, as supported by the literature. Pavement has a potential for a .15 increase in albedo. 0.40 * 0.30 * 0.15 = net change of 0.018 by 2030. Assumes half will be achieved by 2020, or .009, based on case studies.

Sources

Akbari, Hashem. 2001. Cool Surfaces and Shade Trees to Reduce Energy Use and Improve Air Quality in Urban Areas. http://www.fs.fed.us/ccrc/topics/urban-forests/docs/cool%20surfaces%20and%20shade%20trees%20to%20improve%20air%20quality.pdf.

Akbari, Hashem. n.d. Energy Saving Potentials and Air Quality Benefits of Urban Heat Island Mitigation. http://www.osti.gov/bridge/servlets/purl/860475-UlHWIq/860475.pdf.

EPA. 2003. Cooling Summertime Temperatures: Strategies to Reduce Urban Heat Islands. http://www.epa.gov/heatisland/resources/pdf/HIRIbrochure.pdf.

Rosenfeld, Arthur. 2008. Energy Efficiency: The first and most profitable way to delay Climate Change.

http://www.energy.ca.gov/2008publications/CEC-999-2008-015/CEC-999-2008-015.ppt#264,1.

Additional Performance Summary

- Temperature decrease (Celsius) per percentage increase in high-albedo surfaces: 0.8
- Percentage reduction in total energy demand: 0.024

BE-10. On-Site Renewable Energy Installations

Promote voluntary installations of on-site solar photovoltaics in new and existing development, and revise standards to facilitate the transition to solar water heaters and solar photovoltaics in new development.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 10,210
- 2025 reductions ($MTCO_2e$): 8,744

Target Indicators

- Total of 10,000 homes to install solar photovoltaic systems by 2020 and 1,500 homes to install by 2025
- Total of 1,000 businesses to install solar photovoltaic systems by 2020 and 1,500 businesses to install by 2025

Method: Assumes the transition to renewable solar photovoltaics. Participation in the mandatory Homebuyer Solar Option based on the assumption that 35% of new homes will be subject to the provision, with a 20% participation rate as anticipated by the California Energy Commission. Participation of existing homes based on the provision of renewable financing and existing trends within the SMUD territory. Assumes that 25% of new businesses will exceed the 5,000 minimum square footage threshold that will require a provision of 15% of energy needs with on-site renewable sources.

Sources

California Energy Commission. 2010. Homebuyer Solar. CEC-300-2010-009. http://www.energy.ca.gov/2010publications/CEC-300-2010-009/CEC-300-2010-009-SF.PDF.

ICF. 2011. GHG Reduction Measure Analysis for SMUD.

Additional Performance Summary

- Average annual kW generated by solar photovoltaic systems for existing buildings, based on regional trends: 4,519
- Average annual kWh generated by solar photovoltaic systems for new homes in climate zone 12, as estimated by the California Energy Commission: 3,942

BE-11. Off-Site Renewable Energy

Encourage participation in SMUD's off-site renewable energy programs, which allow building renters and owners to choose cleaner electricity sources.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 12,964
- 2025 reductions ($MTCO_2e$): 17,794

Target Indicators

- 15% participation in Greenergy by 2020
- 20% participation in Greenergy by 2025

Method: SMUD allows customers to opt into the Greenergy program in order to achieve up to a 100% renewable energy mix. To ensure that the renewable credit goes toward participating customers, SMUD retains the Renewable Energy Credits for this

program. Based on existing Greenergy trends identified by ICF, assumes an existing regional customer participation rate of 9% in the SMUD territory. Assumes an equivalent participation rate in Elk Grove. City will support up to a 15% market penetration for local participation in the Greenergy program. This measure assumes the incremental benefit for participating customers to exceed the minimum Renewables Portfolio Standard's energy mix assumed in the adjusted forecast. Greenergy provides option for participants to receive either 50% or 100% renewable energy, depending on the monthly payment. Measure assumes an average 75% renewable energy mix to account for participation across both program options.

Sources

ICF. 2011. GHG Reduction Measure Analysis for SMUD.

SMUD. 2010. Greenergy Label. http://www.energy.ca.gov/sb1305/labels/2010_labels/SMUD_PCL.pdf.

SMUD. 2012. Greenergy Program. https://www.smud.org/en/residential/environment/greenergy/.

Additional Performance Summary

- Market penetration for Greenergy: 15%
- Forecast electricity mix – Renewables Portfolio Standard: 33%
- Greenergy opt-in option 1: renewable electricity mix: 50%
- Greenergy opt-in option 2: renewable elecrticity mix: 100%
- Average Greenergy opt-in renewable electricity mix: 75%
- Additional renewable electricity credit in addition to Renewables Portfolio Standard: 42%
- Target market penetration for Greenergy in Elk Grove: 15%

Supporting Measures for Resource Conservation (RC)

RC-1. Waste Reduction

The City shall facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste generated in Elk Grove.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 27,626
- 2025 reductions ($MTCO_2e$): 30,658

Target Indicator

- Achieve an 80% diversion rate by 2020.

Method: In 2005, the City of Elk Grove reported a 59% diversion rate for solid waste. The measure calculates the reduction in emissions that will result from achieving an 80% diversion rate. Through the enactment of AB 341, CalRecyle is tasked with implementing a plan to achieve a policy goal of 75% diversion of the solid waste generated to be source-reduced, recycled, or composted by 2020. This will be achieved through statewide improvements to recycling infrastructure, an increase in services for organics, and mandatory recycling requirements for commercial uses.

Sources

CalRecycle. 2010. Jurisdiction Profile. Accessed June 2010. http://www.calrecycle.ca.gov/Profiles/Juris.

CalRecycle. 2012. California's New Goal: 75% Recycling. http://www.calrecycle.ca.gov/75percent/Plan.pdf.

Additional Performance Summary

- Business-as-usual tonnage in 2020: 151,816
- Baseline diversion rate: 0.59
- Target diversion rate by 2020: 0.8
- Additional tonnage diverted through measure by 2020: 77,759

RC-2. Water Conservation

Reduce the amount of water used by residential and nonresidential uses. (CAQ-1)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 589
- 2025 reductions ($MTCO_2e$): 637

Target Indicators

- Achieve a 28% reduction in water consumed within city limits by 2020.

Method: The average potential of all possible water reductions in millions of gallons for residential indoor, residential outdoor, commercial/institutional, and industrial uses was identified, assuming achievement of regional and statewide water reduction goals identified by California's 20X20 target. To determine the amount of water consumed in the City, the average of annual million gallons (MG) of water consumption per person was applied to the City's population to get a total water consumption figure, using average consumption rates for Sacramento County in 2005.

Sources

California Department of Water Resources. 2010. 20X2020 Water Conservation Plan. http://www.water.ca.gov/wateruseefficiency/sb7/docs/20x2020plan.pdf.

US Geological Survey. 2010. http://water.usgs.gov/watuse/data/2005/index.html.

Additional Performance Summary

- Estimated water consumed (MG) in 2020: 14,288
- Estimated annual water reduction (MG) by 2020: 4,001
- Percentage reduction in annual water use by 2020: 0.28

RC-3. Recycled Water

Promote and remove barriers to the use of greywater systems and recycled water for irrigation purposes. (New language based on best-practice standards)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 5
- 2025 reductions ($MTCO_2e$): 9

Target Indicators

- Meet 10% of local water needs by 2020 with recycled sources.

Method: Based on case studies, quantifies the impact of increased recycled water use on reduced electricity use for water suppply and transport. Electricity benefits are achieved thorugh recycled water by reducing the need to treat and transport additional potable water, since recycled water can be supplied from local sources after wastewater treatment.

Sources

California Sustainability Alliance. 2008. The Role of Recycled Water in Energy Efficiency and Greenhouse Gas Reduction. http://www.fypower.org/pdf/CSA_RecycledH20.pdf.

US Geological Survey. 2010. http://water.usgs.gov/watuse/data/2005/index.html

Additional Performance Summary

- Percentage decrease in energy consumption per MG of recycled water: 55%
- Reduction in annual water consumption (MG): 1,968
- Reduction in annual kWh for water consumption (kWh): 27,541

Supporting Measures for Transportation Alternatives and Congestion Management (TACM)

TACM-1. Local Goods

Promote policies, programs, and services that support the local movement of goods in order to reduce the need for travel.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 1,470
- 2025 reductions ($MTCO_2e$): 2,309

Target Indicators

- Divert 10% of local VMT to alternative modes through increased business serving local residents to achieve a 20% reduction in VMT by 2020 and a 30% reduction in VMT by 2025.

Method: Quantifies the benefit of reduced heavy trucking vehicle miles traveled (VMT), based on a case study identifying a relationship between a 10% increase in local production and consumption supporting a 30% reduction in local heavy trucking VMT. Measure quantifies the impact on local trucking VMT using data from EMFAC 2007, which identifies that heavy-duty trucks contribute 20% of VMT in Sacramento County.

Sources

EMFAC 2007.

Leopold Center for Sustainable Agriculture. 2001. Food, Fuel, and Freeways, Table 9 http://www.leopold.iastate.edu/pubs/staff/ppp/food_mil.pdf.

Additional Performance Summary

- Annual VMT attributed to trucking/shipping in Elk Grove in 2020: 18,030,828
- Annual VMT attributed to trucking/shipping in Elk Grove in 2025: 19,860,752

TACM-2. Transit-Oriented Development

Support higher-density, compact, residential development along transit by placing high-density residential or mixed-use sites near transit opportunities. (General Plan Policy H-3 Action 2)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 6,680
- 2025 reductions ($MTCO_2e$): 9,899

Target Indicators

- 36% increase in citywide density by 2020
- 50% increase in citywide density by 2025

Method: The performance of this measure is related to the elasticity of increased density and reduced travel associated with the increased mixture of uses. Case studies support a range of reductions for vehicle miles traveled based on increase in density and increase in convenience to jobs access. CAPCOA identifies a range of VMT reduction potential for increased density of up to 30%. To calculate the net increase in density in the City between 2005 and the target years, calculates the increased density through population and employees per acre, assuming a constrained 5% reduction for citywide VMT due to co-location of homes and other uses for increased density, and a 0.5% reduction in new VMT associated with density for jobs, work commutes, and shopping.

Sources

CAPCOA. 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. (Appendix B). Citing TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.

CAPCOA. 2010. Quantifying Greenhouse Mitigation Measures. A resource for local governments to assess emission reductions from greenhouse gas mitigation measures.

Oak Ridge National Laboratory. 2004. Transportation Energy Book. US Department. of Energy http://cta.ornl.gov/data/index.shtml.

San Joaquin Valley Air Pollution Control District. 2009. Climate Change Action Plan: Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act; Draft Staff Report, June 30, 2009. CCAP Transportation Emission Guidebook.

Additional Performance Summary

2020 Performance:

- Percentage increase density from 2005 (citywide): 35.55%
- Percentage decrease in VMT (citywide) for increased density: 1.78%
- Annual citywide decrease in VMT for increased density: 16,025,220
- Percentage decrease in VMT (citywide) for mixed use and jobs/housing concentration: 0.18%
- Annual decrease in new local shopping and commute VMT for increased mixed use and jobs/housing concentration: 364,243

2035 Performance:

- Percentage increase density from 2005 (citywide): 50.43%
- Percentage decrease in VMT (citywide) for increased density: 2.52%
- Annual citywide decrease in VMT for increased density: 25,038,141
- Percentage decrease in VMT (citywide) for mixed use and jobs/housing concentration: 0.25%
- Annual decrease in new local shopping and commute VMT for increased mixed use and jobs/housing concentration: 511,094

TACM-3. Intracity Transportation Demand Management

The City shall continue to implement strategies and policies that reduce the demand for personal motor vehicle travel for intracity (local) trips. (General Plan Policy C1-5, C1-6, C-15, CAQ-28, CAQ-29; Short Range Transportation Plan 1 and 2;and Municipal Code Section 10.64)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 20,463
- 2025 reductions ($MTCO_2e$): 21,428

Target Indicators

- Implementation of the City's Transportation Demand Management program to achieve a 30% reduction in local road VMT

Methods: The literature supports a 30% reduction in overall VMT through the implementation of a local transportation demand management (TDM) program. Assumes only VMT on local roads will be affected by the TDM program. Effectiveness of a TDM program

will be incremental, with the full VMT reduction potential being reached by 2025.

Source

Victoria Transport Policy Institute. 2010. Transportation Management Programs. http://www.vtpi.org/tdm/tdm42.htm.

Additional Performance Summary

- Percentage reduction in local road VMT: 30%
- Annual local road VMT, 2020: 167,359,976
- Annual local road VMT, 2025: 50,207,993

TACM-4. Intercity Transportation Demand Management

The City shall support and contribute to regional efforts to reduce demand for intercity (regional) personal vehicle travel. (CI-7)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 15,986
- 2025 reductions ($MTCO_2e$): 22,246

Target Indicators

- Implementation of the SACOG Metropolitan Transportation Plan, incldluing light rail, commuter, and other transit programs
- 30% market penetration for commuting and teleconferencing programs

Method: This measure quantifies the GHG reduction benefit of the SACOG Metropolitan Transportation Plan (MTP), which is a 28-year plan for transportation improvements in the six-county region based on projections for growth in population, housing, and jobs. The MTP studies transportation projects connecting Elk Grove and the region such as bus rapid transit lines, increased transit, and rail lines. The MTP estimates that these projects will reduce region-wide VMT by 6% by 2035. This reduction was applied to Elk Grove's 2020 and 2035 VMT as a linear projection. 2010 VMT reflects actual 2005–2009 Sacramento County VMT, which reduced 0.2%. Additionally, the measure quantifies credit for the impact of commuter and flex schedule programs, which are identified as a 2.1% decrease in external telecommuting VMT.

Additional Performance Summary

- Elk Grove business-as-usual VMT (external), 2020: 734,181,432.21
- Elk Grove business-as-usual VMT (external), 2025: 808,692,503.26
- Percentage of external trips for commuting: 70%
- Percentage reduction for workday VMT: 10%
- Market penetration: 30%
- Scaled percentage reduction for VMT due to telecommuting and flex schedules: 2.10%

TACM-5. Pedestrian and Bicycle Travel

Implement the Pedestrian and Bikeway Master Plans to provide safe and convenient pedestrian and bicycle travel. (General Plan Policy CI-5 Action 5)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 4,245
- 2025 reductions ($MTCO_2e$): 5,860

Target Indicators

- Pedestrian design to be integrated into new development
- Bicycle parking in all new multi-family and nonresidential development
- Completion of the projects in the Bicycle Plan

Method: Quantifies impact of increased bikeways and residential density, based on case studies demonstrating that each mile of bikeway per 100,000 residents increases bicycle commuting 0.075 percent, all else being equal Assumes the increase in bicycle commuting through the cumulative amount of bike lanes—both new lanes planned for construction and those already existing. The development of bike lanes will be phased in, with 75% of improvements in the Bicycle Plan completed by 2020 and 100% completed by 2025. 2010 reductions take credit for existing bike lanes, as stated by the Draft Bicycle Plan. Assumes completion of 5.75 miles of Class II bikeways and .79 miles of Class I bikeways to be completed between 2007 and 2010, as identified by Elk Grove's 2007-2012 CIP.

Impact of pedestrian facilities is quantified based on findings of the CCAP guidebook, which attributes emissions reductions for a variety of pedestrian measures. Applicable measures include a 0.5% reduction for connectivity to transit, as the increased density and ridership will facilitate improvement in transit frequency, a 1.5% reduction for measures which relegate parking to the rear of structures so that public entrances are oriented toward the pedestrian, a 0.5% reduction related to providing shaded pedestrian pathways between transit facilities and building entrances to increase the comfort of the user while walking to the building entrance, and a 1% reduction for minimizing barriers to pedestrian access of neighboring facilities and sites. Quantifies impact of pedestrian connectivity between residential and nonresidential land uses, applying the impact to all new VMT.

CAPCOA also demonstrates that the provision of long-term bike parking at the rate of 1 per unit supports a 0.625% reduction in emissions. According to the 2001 National Household Travel Survey, average annual VMT per household is 21,187 and the "to or from work" subcategory is 5,724 (27.0%). Shopping is 3,062 (14.5%). Other family and personal business is 3,956 (18.7%). Social and recreational driving is 5,186 (24.5%). Therefore, VMT is attributed to residents and businesses is 18.7% + 24.5% = 43.5%. VMT attributed to commercial uses is also based on the 2001 National Household Travel Survey, which shows that average annual VMT per household is 21,187 and the "to or from work" subcategory is 5,724 (27.0%). Shopping is 3,062 (14.5%). Other family and personal business is 3,956 (18.7%). Social and recreational driving is 5,186 (24.5%). Therefore, VMT attributed to commercial businesses is 27% + 14.5% = 41.5%.

Sources

CAPCOA. 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. (Appendix B). Citing TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.

City of Elk Grove Capital Investment Program FY 2007–2012.

Dierkers, G., E. Silsbe, S. Stott, S. Winkelman, and M. Wubben. 2007. CCAP Transportation Emissions Guidebook. Washington, DC: Center for Clean Air Policy. http://www.ccap.org/safe/guidebook.php. As cited in CEQA and Climate Change (CAPCOA 2008).

San Joaquin Valley Air Pollution Control District. 2009. Climate Change Action Plan: Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act; Draft Staff Report, June 30, 2009.

Victoria Transportation Planning Institute. 2012. http//www.vtpi.org/tdm/tdm93.htm.

Additional Performance Summary

- Current assumed percentage of bicycle commuters: 2%
- Percentage increase of bicycle commuting: 14%

- Percentage decrease in VMT based on increase in bicycle commuting: 0%
- VMT from new development, 2020: 226,942,525
- VMT from new development, 2025: 318,438,731
- Percentage decrease in VMT for new development from pedestrian connections: 4%
- VMT attributed to new commercial and multi-family development, 2020: 105,264,094
- VMT attributed to new commercial and multi-family development, 2025: 126,750,290
- Percentage decrease in new VMT for commercial and multi-family development for increased bicycle parking: 1%

TACM-6. Public Transit

Continue to improve and expand transit services for commuters and non-commuters traveling within Elk Grove and regionally, providing the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove residents to use public transit to commute to jobs outside the City.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 27,053
- 2025 reductions ($MTCO_2e$): 32,040

Target Indicators

- Continued annual increase in e-tran passenger miles at a compound annual growth rate of 23%

Methods: From 2006 to 2008, e-tran saw a 102% increase in passenger miles for its local and commuter lines. Realizing that this growth rate was largely due to economic and service changes, and that transit ridership must taper at some point in time, e-tran passenger miles were projected using 55% of that growth rate per year.

Additional Performance Summary

- e-tran passenger miles, 2006: 3,753,339
- e-tran passenger miles, 2008: 7,599,211
- 55% of compound annual growth rate from 2006 to 2008: 23%

TACM-7. Jobs/Housing Balance

Continue to improve Elk Grove's jobs/housing ratio and seek to achieve sufficient employment opportunities in Elk Grove for all persons living in the City. (General Plan Policy ED-7 Action 1)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 18,655
- 2025 reductions ($MTCO_2e$): 19,718

Target Indicators

- 5% decrease in VMT through increased jobs/housing location efficiency

Methods: Identifies a reduction in trips associated with the increased co-location of housing and jobs within the City. CAPCOA identifies a range of reduction potential for increased density and location efficiency from 65% in urban areas to 10% for suburban areas. This quantification assumes a constrained reduction potential and quantifies a 5% reduction in VMT due to jobs/housing balance achieved through increased location efficiency.

Sources

CAPCOA. 2010. Quantifying Greenhouse Mitigation Measures: A resource for local governments to assess

emission reductions from greenhouse gas mitigation measures.

Nelson/Nygaard Consulting Associates. 2005. Creating Low-Traffic Developments: Adjusting Site-Level Vehicle Trip Generation Using URBEMIS.

SMAQMD. 2007. Recommended Guidance for Land Use Emission Reductions, Version 2.4.

URBEMIS 2007. Version 9.2.4. Rimpo and Associates.

Additional Performance Summary

- Percentage decrease in VMT: 5%
- Annual decrease in VMT, 2020: 45,772,231
- Annual decrease in VMT, 2025: 50,889,114

TACM-8. Affordable Housing

Continue to promote and require the development of affordable housing in Elk Grove.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 7,519
- 2025 reductions ($MTCO_2e$): 7,874

Target Indicators

- Approximately 15,000 housing units below market rate by 2020
- Approximately 21,600 homes below market rate by 2025

Methods: CAPCOA provides a 4% reduction in vehicle trips for each deed-restricted below-market-rate unit. Thus, the total reduction is as follows: The 2008 Housing Element Update provides for 2,645 new affordable housing units by 2013. Assuming that these units are operational by 2015, these units will constitute 51% of total new housing units in Elk Grove. Assuming a constant percentage of new units, affordable housing will result in a 2% decrease in VMT (4% * 51%).

Sources

CAPCOA. 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act (Appendix B MSG-21).

CAPCOA. 2010. Quantifying Greenhouse Mitigation Measures: A resource for local governments to assess emission reductions from greenhouse gas mitigation measures.

Nelson/Nygaard Consulting Associates. 2005. Creating Low-Traffic Developments: Adjusting Site-Level Vehicle Trip Generation Using URBEMIS.

Additional Performance Summary

- New households that are below market rate through Housing Element implementation, 2020: 15,201
- New households that are below market rate through Housing Element implementation, 2025: 21,562
- Percentage decrease in VMT for below-market-rate housing: 2%

TACM-9. Efficient and Alternative Vehicles

Promote alternative fuels and efficient vehicles throughout the community. (General Plan Policy CAQ-33)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 282
- 2025 reductions ($MTCO_2e$): 395

Target Indicators

- 200 electric vehicle charging stations by 2020
- 300 electric charging stations by 2025

Methods: Electric vehicles (EV) are much more efficient than standard internal combustion engine

vehicles. The performance of this measure is related to the replacement of standard vehicles with EVs once the necessary infrastructure is available. The literature supports the fuel use reduction equivalent to one 10-mile trip for every charging station available. The energy use needed to service the charging stations was then calculated to discount the emissions reductions. Assumes that stations will be installed through civic and private development at the rate of 20 per year. Identifies estimated VMT associated with parking spaces used for commuting, assuming trip length from the National Household Travel Survey.

Sources

Idaho National Laboratory. 2006. "Full-Size Electric Vehicles." Advanced Vehicle Testing Reports. avt.inel.gov.

National Household Travel Survey. 2001. www.fueleconomy.gov/feg.findacar.html.

Additional Performance Summary

- Average miles per gallon of vehicles replaced with EVs: 20
- Average annual vehicle miles per space: 4,704
- Annual gallons of fuel saved: 47,040
- Average annual kWh of electricity used per space: 11.1

TACM-10. Carsharing

Promote the use of vehicles and transportation options other than single-occupant vehicles. (New language based on best-practice standards)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 776
- 2025 reductions ($MTCO_2e$): 819

Target Indicators

- 2.5% household participation in car-share programs in 2020 (approximately 1,500 households) and 2025 (approximately 1,600 households)

Methods: Participation in carsharing programs in a typical region is 10–20% of residents living in neighborhoods suitable for carsharing, and perhaps 3–5% of those residents would car share rather than own a private vehicle if the service were available. Carsharing is found to typically be used by residents who drive 6,000 miles a year or less. Reduction is approximately 50%, or 3,000 miles a year. We assume that half of these miles are within the City of Elk Grove. Estimated number of vehicles in Elk Grove calculated by assuming that the number of cars per household is constant with the countywide car per household figure. Car population derived from EMFAC2007, which uses historical DMV registration data. 754,277 cars ÷ 344,129 = 2.19 cars per household, which is in line with the national average.

Sources

EMFAC 2007.

Victoria Transport Policy Institute. 2012. Carsharing. http://www.vtpi.org/tdm/tdm7.htm.

Additional Performance Summary

- Cars per household: 2.19
- Effective rate of participation: 3%
- Annual VMT reduced per car share participant: 1,500

TACM-11. Safe Routes to School

Implement SACOG's Safe Routes to School policy.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 4.9
- 2025 reductions ($MTCO_2e$): 5.1

Target Indicators

- Reduction of 15% of school-related commute trips by 2020 through Safe Routes to School or bus programs

Methods: Quantifies effective impact of a Safe Routes to School program on eliminating drop-off and pick-up school trips. The National Center for Safe Routes to School Baseline Survey indicated that 62% of elementary and middle school children live within 2 miles of school. Case studies indicate that total reductions in automobile trips of 10–20% or more are possible at a particular school under programs such as a walking school bus. Quantification assumes a 15% reduction in automobile trips, assuming an average round-trip drop-off distance for parents of 3 miles and that the number of school-age children increases evenly with population growth.

Sources

CAPCOA. 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act (Appendix B MSG-2).

National Center for Safe Routes to School. 2010. Safe Routes to School Travel Data: A Look at the Baseline Results from Parent Surveys and Student Travel Tallies.

National Center for Safe Routes to School. n.d. http://www.saferoutesinfo.org/resources/collateral/srts_talkingpoints.doc.

US Census Bureau. http://factfinder.census.gov.

Additional Performance Summary

- Estimated number of students, 2020: 42,704
- Estimated VMT for student commute, 2020: 79,429
- Estimated number of students, 2025: 47,390
- Estimated VMT for student commute, 2025: 88,146

TACM-12. Anti-Idling

Improve traffic flow and reduce unnecessary idling through use of traffic calming devices and enforcement of idling restrictions.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 1,853
- 2025 reductions ($MTCO_2e$): 2,255

Target Indicators

- Implement synchronization along major trucking routes to decrease heavy-duty truck idling

Methods: Decrease in trip length from traffic signal synchronization based on a range of 8–25%, assuming the median reduction of 16% supported by the traffic light synchronization project in Los Angeles. Decrease applied to the portion of local trips traveled on arterials. Heavy-duty truck idling derived from EMFAC 2007. Assumes half of all heavy-duty trucks will be targeted by increased enforcement.

Sources

Halkias, J., and M. Schauer. 2004. Public Roads Journal, U.S. DOT. Red Light, Green Light. http://www.itsbenefits.its.dot.gov/its/benecost.nsf/ID/8D5E4B72F890856C8525733A006D547C?OpenDocu

ment&Query=BApp. *Additional Performance Summary*

- Percentage of VMT attributed to local roads: 29%
- Average local trip length (miles): 4
- Decrease in trip length from traffic signal synch: 16%
- Hours per year truck idling impacted by measure: 60,000
- Decrease in diesel consumption (gallons): 55,000
- Decrease in gasoline consumption (gallons): 229,901
- Equivalent VMT reduction: 4,546,203

Supporting Measures for Municipal Programs (MP)

MP-1. Employee Commute

Establish an employee incentive program to encourage the use of transportation alternatives, such as a parking space "cash-out" program.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 14
- 2025 reductions ($MTCO_2e$): 12

Target Indicators

- Provision of a transit subsidy of $2 per day for Elk Grove employees

Methods: Assumes the City of Elk Grove will provide a parking subsidy of $2 per day. According to the Victoria Transport Policy Institute, with a $2 per day parking subsidy in a low-density, travel mode neutral setting, a 3.3% decrease in annual VMT attributed to employee commute is achieved.

Sources

Victoria Transport Policy Institute. 2011. Commuter Financial Incentives. http://www.vtpi.org/tdm/tdm8.htm.

MP-2. Municipal Facilities: New

All City facilities shall incorporate energy-conserving design and construction techniques. (CAQ-26-Action 2).

GHG Reductions

- 2020 reductions ($MTCO_2e$): 7
- 2025 reductions ($MTCO_2e$): 7

Target Indicators

- New household hazardous waste facility to supply electricity needs with on-site renewable solar photovoltaics

Methods: Assumes net energy reductions from proposed household hazardous waste facility and renewable energy plant. Estimated energy savings retrieved from City of Elk Grove EECBG grant application (June 2009).

MP-3. Fleet Vehicles

Adopt a policy to incrementally upgrade the vehicle fleet.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 1,865
- 2025 reductions ($MTCO_2e$): 3,231

Target Indicators

- Replace approximately 60 vehicles with electric or hybrid models by 2020
- Replace approximately 86 vehicles with electric or hybrid models by 2025

Methods: This measure quantifies hybrid and electric replacements for 35% of City vehicles by 2020 and

50% by 2025. Police Department vehicles and motorcycles are excluded from this analysis as they are required to maintain pursuit capabilities. The City had 81 vehicles in 2005 in the Public Works Department. Analysis assumes a quarter (20) will be replaced with hybrid vehicles before 2020 and half (40) will be replaced before 2025. Rate of fleet upgrades anticipated to remain constant.

MP-4. Environmentally Preferable Purchasing

Implement a consolidated and comprehensive Environmentally Preferable Purchasing effort.

GHG Reductions

Supportive measure (not quantified)

MP-5. Municipal Facilities: Existing

Implement the recommendations of the City's energy audits.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 127
- 2025 reductions ($MTCO_2e$): 169

Target Indicators

- Retrofits to 75% of City Hall by 2020 and 100% of City Hall by 2025, to achieve an average energy reduction of 20%

Methods: Quantifies impact of comprehensive retrofits to City Hall, based on the recommendations of energy audits. Measure assumes completion of EECBG-funded retrofits, in addition to completion of retrofits to 75% of existing aquare footage by 2020 and completion of 100% of retrofits by 2025. Building retrofits estimated to result in a 20% reduction in energy consumption per square foot.

Sources

California Energy Commission. 2007. Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings.

MP-6. Fleet Operations

Efficiently use and maintain existing vehicles.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 37
- 2025 reductions ($MTCO_2e$): 37

Target Indicators

- Creation of a municipal maintenance program to enhance efficiency of all City vehicles

Methods: Assumes a 0.5% decrease in emissions from proper maintenance of vehicles and equipment.

Source

US Environmental Protection Agency. 2009. EPA Potential for Reducing Greenhouse Gas Emissions in the Construction Sector.

MP-7. Municipal Water Use

Improve the efficiency of municipal water use through retrofits and employee education. (New language based on existing best-practice standards)

GHG Reductions

- 2020 reductions ($MTCO_2e$): 0.05
- 2025 reductions ($MTCO_2e$): 0.04

Target Indicators

- Installation of energy-efficient sprinklers and irrigation systems

Methods: Assumes proportion of total emissions associated with water use in municipal operations is equal to the proportion of water use community-wide

(0.6%). The percentage of municipal energy consumption for water is based on baseline data in the 2005 GHG inventory. It was assumed that the proportion of municipal energy use for municipal sprinklers, irrigation, and pumps compared to total municipal energy use in 2005 would remain constant in the target years. Quantifies impact of a 1.8% reduction to projected energy consumption for municipal water use for municipal sprinklers, irrigation, and pumps, based on co-investment by utilities for municipal water efficiency consistent with estimates for water efficiency potential from the CEC.

Sources

California Energy Commission. 2005. Final Staff Report: California's Water-Energy Relationship, pp. 154–155. http://www.energy.ca.gov /2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF. Citing "Waste Not, Want Not: The Potential for Urban Water Conservation in California," The Pacific Institute, November 2003.

City of Novato. 2005. Greenhouse Gas Inventory.

MP-8. Municipal Waste

Reduce municipal waste through employee education and EPP.

GHG Reductions

- 2020 reductions ($MTCO_2e$): 100
- 2025 reductions ($MTCO_2e$): 147

Target Indicators

- Achieve an 80% municipal solid waste diversion rate by 2020
- Achieve a 90% municipal solid waste diversion rate by 2025

Methods: Assumes 2010 municipal solid waste diversion rate is consistent with community-wide solid waste diversion rate. Quantifies impact of achieving 80% diversion by 2020 and 90% by 2025.

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

October 29, 2012

SENT VIA EMAIL

Mr. Christopher Jordan
Planning Manager
City of Elk Grove
8401 Laguna Palms Way
Elk Grove, CA 95758

RE: Elk Grove Climate Action Plan, Sustainability Element and Revised Final Subsequent Environmental Impact Report; SMAQMD# SAC201101395

Dear Mr. Jordan:

Thank you for providing the Sacramento Metropolitan Air Quality Management District (SMAQMD) the opportunity to comment on the work that has been undertaken to revise the Elk Grove Climate Action Plan (CAP) and Subsequent Environmental Impact Report (SEIR) since the April 19, 2012 Planning Commission meeting. At that meeting I expressed our agency's concerns over recommended changes to the CAP that, in our view, weakened the original draft document (May 2011) by relying too heavily on voluntary (rather than mandatory) measures for greenhouse gas reductions. In addition, I expressed strong concern that there was no monitoring plan or contingency measures to ensure that progress continued toward the emission reduction goal. My recommendation to the Planning Commission at that time was for our respective staffs to continue to work together on solutions that would be mutually satisfactory and further strengthen the CAP.

I am glad to report that through the cooperation of our respective staffs and great work on the part of Elk Grove staff in particular, the revised versions of both the CAP and the SEIR being presented to the City Council on November 14, 2012, addresses SMAQMD concerns in the following ways:

Climate Action Plan

- Voluntary vs. Mandatory Measures - though voluntary measures are still a large part of the CAP staff's additional analysis and subsequent revisions have made the associated GHG reductions more realistic. In addition, the provision of contingencies if anticipated results are not achieved also strengthens the commitment to the CAP success.
- Monitoring and Reporting Tool – the development of an evaluative monitoring tool to assist with assessing the CAP's progress toward the 15% GHG emission reduction goal is an important proactive step to ensure success.

Subsequent EIR

- Mitigation Measure 1 – this mitigation may be the most important revision to the two documents as it will better ensure the CAP continues making progress toward AB32 goals by modifying measures in the CAP where necessary if annual monitoring indicates a shortfall. This "back stop" is important to ensure the voluntary measures are achieving their desired results given tight timeframes and economic considerations.
- Tiering from SEIR for future CEQA review – it is clearly stated that any future project that is not consistent with the CAP will be required to analyze greenhouse gas emissions on a project-level basis and will not be able to "tier" off the SIER. This offers additional incentive for future

projects to incorporate CAP measures and, therefore, streamline CEQA analysis of greenhouse gases.

I believe these changes as presented represent a much stronger Climate Action Plan for both the City of Elk Grove and for the Sacramento region as we work toward meeting the goals of AB32. I would like to take this opportunity to once again commend the City of Elk Grove, and Elk Grove staff specifically, for the foresight being demonstrated by pursuing the development of a Climate Action Plan and Sustainability Element at this time.

Please contact Larry Robinson of my staff if there are any questions regarding these comments or if the SMAQMD can be of any assistance now or in the future with greenhouse gas or other air quality impacts.

Regards,

Larry Greene
Executive Director/Air Pollution Control Officer

c: Taro Echiburu, City of Elk Grove
Larry Robinson, Sacramento Metropolitan AQMD
Charlene McGhee, Sacramento Metropolitan AQMD
Jeane Berry, Sacramento Metropolitan AQMD

Incorporated July 1, 2000

CITY OF ELK GROVE

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City of Elk Grove – City Council

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that on **Wednesday, November 14, 2012 at the hour of 6:00 p.m.,** or as soon thereafter as the matter may be heard, the Elk Grove City Council will conduct a public hearing at City Hall in the Council Chambers, 8400 Laguna Palms Way, Elk Grove, California, to consider the following matter:

SUSTAINABILITY ELEMENT AND CLIMATE ACTION PLAN

The City Council will consider adoption of a Sustainability Element to the General Plan and a Climate Action Plan. These documents identify the policies and programs the City will or may implement pursuant to Assembly Bill 32 (The Global Warming Solutions Act). The Planning Commission considered these documents over three meetings in March and April 2012 and voted 3-1 on April 17, 2012 to recommend approval to the City Council.

PROJECT LOCATION:	Citywide
ENVIRONMENTAL:	A Subsequent Environmental Impact Report (SEIR) to the General Plan EIR has been prepared for this project and will be considered for certification by the Council prior to action on the Sustainability Element and Climate Action Plan.

Information or questions regarding this item should be referred to Development Services – Planning, 8401 Laguna Palms Way, Elk Grove, California, or 916-683-7111. All interested persons are invited to present their views and comments on this matter. Written statements may be filed with the City Clerk at any time prior to the close of the hearing scheduled herein, and oral statements may be made at said hearing.

If you challenge the subject matter in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice or in written correspondence delivered to the City Clerk, 8401 Laguna Palms Way, Elk Grove, CA, 95758, at or prior to the close of the public hearing.

This meeting notice is provided pursuant to Section 23.14.040 of the City's Municipal Code.

Dated / Published: November 2, 2012

JASON LINDGREN
CITY CLERK, CITY OF ELK GROVE

ADA COMPLIANCE STATEMENT
In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Office of the City Clerk at (916) 478-3635. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.