

City of Blue Lake Climate Action Plan



A Guiding Document to Inform Future Policy Decisions

August 2014







CITY OF BLUE LAKE

111 Greenwood
Post Office Box 458
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Letter from the Mayor

Climate change and energy security may be the most significant long-term challenges that our community will face in the foreseeable future. Significant undeniable evidence shows that our actions are contributing to these challenges. At the root are our choices regarding what energy sources to use and how we choose to use them.

Local government and the community have important roles to play. Local government can influence planning and permitting decisions which influence how people live and drive. However, City residents and businesses ultimately make the final decision on how and when to walk instead of drive, use cold instead of hot water, and buy local food instead of products shipped from other states or countries.

On behalf of the City of Blue Lake, it is my pleasure to introduce the Blue Lake Climate Action Plan. This document serves as a guide to both the City government and the community. Included are a series of recommended actions that will help guide policy decisions and inform community action. These actions were developed with input from the City Council and the local public. The overarching goal of all of these actions is to:

- reduce the amount of carbon emissions caused by our actions,
- increase our energy security by minimizing our dependence on foreign energy sources,
- improve our local economy by purchasing local products.

This plan will take effort, determination, and dedication. But the result will create a healthier, stronger, and more independent community for ourselves and future generations. I look forward to working with everyone in making this vision a success.

Mayor Sherman Shapiro

CREDITS AND ACKNOWLEDGMENTS

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California Department of Conservation - Division of Land Resource Protection

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Disclaimer

The statements and conclusions of this report are those of the Grantee and/or Subcontractor and not necessarily those of the Strategic Growth Council or of the Department of Conservation, or its employees. The Strategic Growth Council and the Department of Conservation make no warranties, express or implied, and assume no liability for the information contained in the succeeding text.

Pacific Gas & Electric

Pacific Gas and Electric Company provides comprehensive climate planning assistance to local governments, from providing energy usage data and assistance with greenhouse gas inventories, to training and guidance on climate action plans.

Part of the effort towards the completion of this Climate Action Plan was funded by California utility customers and administered by PG&E under the auspices of the California Public Utilities Commission.

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SECTION 1 Introduction





INTRODUCTION

The City of Blue Lake has recognized the need to actively work together as a community to reduce our environmental and climate impacts. This impact is closely linked to the production and consumption of energy and material goods, and to land use planning and development.

The prime motivations leading to the City's decision include:

- increasing requirements by the State to address climate change;
- the rising costs of electricity and fuels placing a burden on residents and businesses;
- the national and international scientific consensus on societies' contribution to documented climate change;
- the Potential threat to regional resources such as reduced snow pack and increased risk of forest fires;
- a direct correlation between increased energy security and reduced energy consumption;
- a recognition that transitioning to more local energy sources, goods, and services to meet our community's needs can also benefit our local economy.

The City has thereby concluded that action is needed. For many of the same reasons that home owners carry fire insurance and car owners carry auto insurance, the City of Blue Lake has completed this climate action plan in order to inform decisions that will help insure the community against the risk of climate change and increasing energy scarcity and cost. Government and community action now will help buffer the residents and businesses of Blue Lake from these future challenges; this document serves as the City's first road map towards addressing these challenges.

1 INTRODUCTION

This Plan covers objectives and strategies for GHG emissions resulting from local government and community-wide activities within the City. It addresses the major sources of emissions in Blue Lake and sets forth objectives and strategies in 5 focus areas that both the City and community can implement together to achieve greenhouse gas reductions.

These focus areas are:

- Energy Efficient Homes
- Energy Efficient Businesses
- Improved Transportation Options
- Renewable Energy Sources
- Waste Reduction

The plan also creates a framework for documenting, coordinating, measuring, and adapting Climate Action Plan efforts. In addition to listing actions, where possible the plan discusses how each action will be implemented via timelines, financing, and assignment of responsibilities to departments, staff, or community partners.

The primary team who coordinated the effort and drafted the document included:

- Jerome Carman, Redwood Coast Energy Authority
- Matthew Marshall, Redwood Coast Energy Authority
- Garry Rees, Streamline Planning Consultants

With the following contributors and stakeholders:

- Blue Lake City Council
- Blue Lake Planning Commission
- John Berchtold, Blue Lake City Manager
- Bob Brown, Streamline Planning Consultants
- Blue Lake Rancheria

A town hall meeting was held on April 5th, 2014 to receive input from the community. A description of this meeting and a summary of the input received is given in Appendix A. While Blue Lake has already begun to reduce greenhouse gas emissions through a variety of actions, this plan is a critical component of a comprehensive approach to reducing Blue Lake's emissions.

The City also recognizes the need to address and mitigate impacts of climate change that have already occurred and are inevitable. This is not, however, the purpose of this document, and mitigation efforts are occurring through other efforts, such as disaster mitigation planning, water and wastewater improvements, and re-certification of the Mad River Levee.



SECTION 2

Purpose of This Climate Action Plan

2

PURPOSE OF THIS CLIMATE ACTION PLAN

Reducing electricity, natural gas, and fossil fuel use in the community can have many significant benefits to the community including;

- more efficient use of energy further decreases utility and transportation costs for residents and businesses,
- money not spent on energy is more likely to be spent at local businesses and add to the local economy,
- retrofitting homes and businesses to be more efficient creates local jobs,
- reducing fossil fuel use improves air quality and reduces pollution that impact the health of the community,
- supporting alternative transportation provides opportunities for walking and bicycling which improves residents' health,
- improving local and global environmental health,
- mitigating against the risks of climate change.

EVIDENCE OF CLIMATE CHANGE

Naturally occurring gases dispersed in the atmosphere determine the Earth's climate by trapping solar radiation. This phenomenon is known as the greenhouse effect. Conclusive evidence shows that human activities are increasing the concentration of greenhouse gases and changing the global climate. The most significant contributor is the burning of fossil fuels for transportation, electricity generation, and other purposes, which introduces large amounts of carbon dioxide and other greenhouse gases into the atmosphere. Collectively, these gases intensify the natural greenhouse effect, causing global average surface and lower atmospheric temperatures to rise.

There is international scientific consensus that the global climate is changing, and that human actions, primarily the burning of fossil fuels, are a main cause of those changes. The Intergovernmental Panel on Climate Change (IPCC) is the scientific body charged with bringing together the work of thousands of climate scientists. The IPCC's Fourth Assessment Report states that "warming of the climate system is unequivocal."¹ Furthermore, the report finds that "most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas (GHG) concentrations."

The year 2012 was the hottest year on record for the continental United States, with two dozen cities breaking or tying their all-time high temperature records.² Globally, the 12 years from 2001-2012 are among the hottest on record, and 1998 was the only year in the 20th century hotter than 2012.³ The year 1976 was the last year with a below average global temperature.

¹ IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp.

² Burt, Christopher C. "2012 a Record Warm Year for Continental U.S". January 2, 2013. <http://www.wunderground.com/blog/weatherhistorian/comment.html?entrynum=112>

³ NOAA: State of the Climate 2012 Summary. <http://www.ncdc.noaa.gov/sotc/>

In addition to the study of the global impacts of climate change, there has been significant scientific work looking at the Potential impacts of climate change at the regional level. Results say that the City of Blue Lake could be impacted by⁴;

- a possible fivefold increase in the number of days above 85 °F,
- an 80% to 90% loss in annual snow pack,
- a 3.6% increase in acreage burned by forest fires,
- a roughly 15% reduction in annual precipitation,
- increased vulnerability to extreme weather events (e.g. flooding),
- increased load and stress on community infrastructure such as roads, power lines, and communication systems.

CALIFORNIA POLICY

California has a number of state level policies that serve as regulatory drivers for climate action planning at the local government levels, which are described below.

1.1.1 Global Warming Solutions Act (AB 32)

California passed the Global Warming Solutions Act (AB 32) in 2006, which charged the California Air Resources Board (CARB) with implementing a comprehensive statewide program to reduce greenhouse gas emissions. AB 32 established the following greenhouse gas emissions reduction targets for the state of California:

- 2000 levels by 2010
- 1990 levels by 2020

1.1.2 SB 375

SB 375 enhances California's ability to reach its AB 32 goals by promoting good planning with the goal of more sustainable communities. SB 375 requires CARB to develop regional greenhouse gas emission reduction targets for passenger vehicles. CARB is to establish targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations (MPOs).

1.1.3 Executive Order S-3-05

Executive Order S-3-05, issued by Governor Schwarzenegger, reinforces these goals and also sets a schedule for the reporting of both the measured impacts of climate change upon California's natural environment and the emissions reduction efforts undertaken by a myriad of state, regional, and local groups. Executive Order S-3-05 establishes an additional target of 80% below 1990 levels by 2050. Blue Lake's GHG emissions inventory and climate action plan is intended to enable the City to develop effective GHG reduction policies and programs to contribute to meeting these targets and track emissions reduction progress.

1.1.4 California Environmental Quality Act (CEQA)

CEQA requires public agencies to evaluate the environmental impacts of discretionary development plans and projects in their jurisdictions. CEQA guidelines were updated in March 2010 to require

⁴ Local impact estimates obtained from <http://cal-adapt.org/> and the California Adaptation Planning Guide available at http://resources.ca.gov/climate_adaptation/docs/APG_Defining_Local_and_Regional_Impacts.pdf

2 PURPOSE OF THIS CLIMATE ACTION PLAN

analysis of climate change in CEQA documents. Many jurisdictions are finding that climate change impacts from local government activities are "significant" under CEQA, and are identifying emissions reductions targets and Climate Action Plans as mitigation measures to reduce climate change impacts to less-than-significant levels

3

SECTION 3 Community Profile



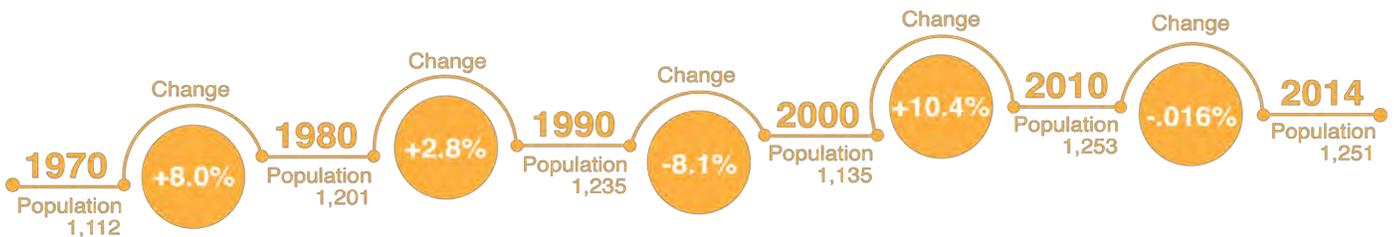
COMMUNITY PROFILE

Though founded years earlier, the city itself was incorporated in 1910 and has a current estimated population of 1,253 (2010 Census) living in an area of around 0.6 square miles. The city has a small downtown business district as well as an industrial park, but most residents are employed outside of town, primarily in the nearby cities of Arcata and Eureka.

CITY STATISTICS

According to the California Department of Finance (www.dof.ca.gov), the population in the City of Blue Lake decreased 0.3% from 1,255 in January 2013 to 1,251 in January 2014. According to the US Census, the City of Blue Lake’s population grew 11.1% from 1970-1990, decreased 8.1% from 1990-2000, and increased 10.4% from 2000-2010 (US Census). In general, Blue Lake’s population has been increasing as the City transitions out of a resource dependent economy (i.e. logging) into a bedroom community and economy with a more diverse mixture of smaller commercial and industrial uses.

Table 1: Change in City Population from 1970-2014.



Even though there are some small industries in the City Business Park, most of the employable population is affected by the County-wide job market. According to the State Employment Development Department (www.labormarketinfo.edd.ca.gov), the Humboldt County labor force expanded very slowly between 1990 and 2013, with an average annual growth rate of 0.16 percent (from 56,300 to 58,400).

GREENHOUSE GAS INVENTORY RESULTS

Through the completion of a local emissions study, or “greenhouse gas inventory,” our City has determined emissions levels for the community as a whole and for Blue Lake government operations. Community-wide emissions represent the sum total of emissions produced within City limits as well as emissions resulting from electricity use within the jurisdiction, even if said electricity is generated elsewhere. In this way, the community-wide figures represent all emissions for which the community is responsible.

In addition upstream emissions are quantified to provide additional information regarding the more global impact of the consumption associated with the activities of residents and businesses. This means that while a reduction in consumption of energy and fuel will reduce emissions locally, there is also an additional global reduction in upstream emissions that occur in those locations where raw materials are mined, processed, and shipped.

3 COMMUNITY PROFILE

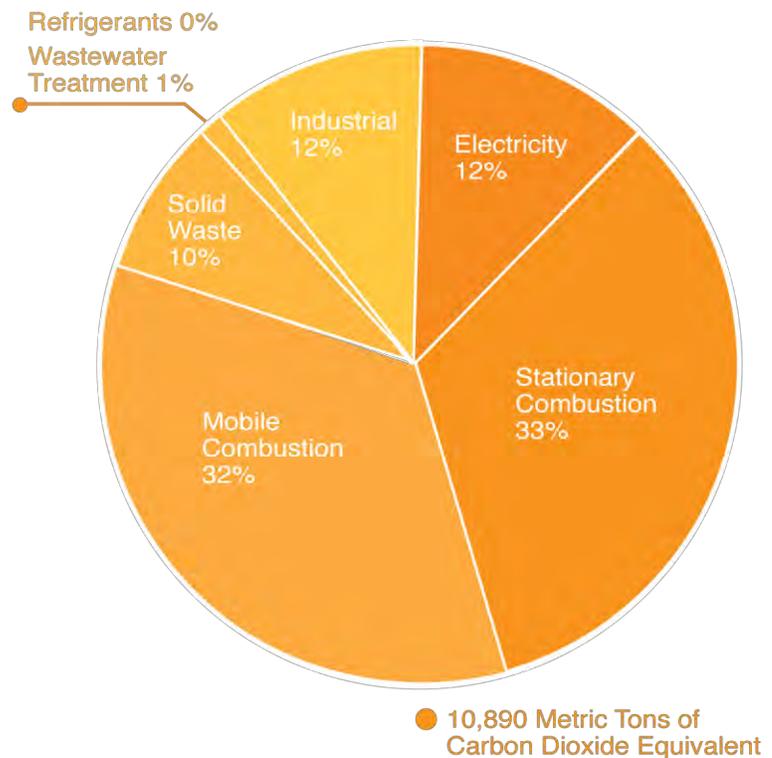
1.1.5 Community-Wide 2005 Greenhouse Gas Emissions Inventory

The first step toward achieving tangible greenhouse gas emission reductions requires identifying baseline emissions levels and sources and activities generating emissions in the community. Figure 1 shows the results of the 2005 baseline emissions inventory. Community-wide emissions totaled 10,890 metric tons of carbon dioxide equivalent (MT CO₂e). The different emissions sectors are defined in Table 2.

Table 2: Definitions of different emissions sectors covered in the greenhouse gas inventory.

EMISSIONS SECTOR	DESCRIPTION
Electricity:	Electricity from all buildings
Stationary Combustion:	Natural gas, propane, and firewood
Mobile Combustion:	Gasoline and diesel in on- and off-road vehicles
Solid Waste:	Transportation and decomposition of waste
Wastewater Treatment:	Methane and nitrous oxide emissions from wastewater treatment
Refrigerants:	Leakage of refrigerants from commercial units regulated by the air quality management district
Industrial Point Sources:	Reported or estimated emissions from businesses regulated by the air quality management district

Results suggest that future climate action initiatives focus primarily on the reduction of fossil fuel use associated with transportation, cooking and heating. The next two primary emissions sectors are associated with electricity consumption and the generation of solid waste.



3 COMMUNITY PROFILE

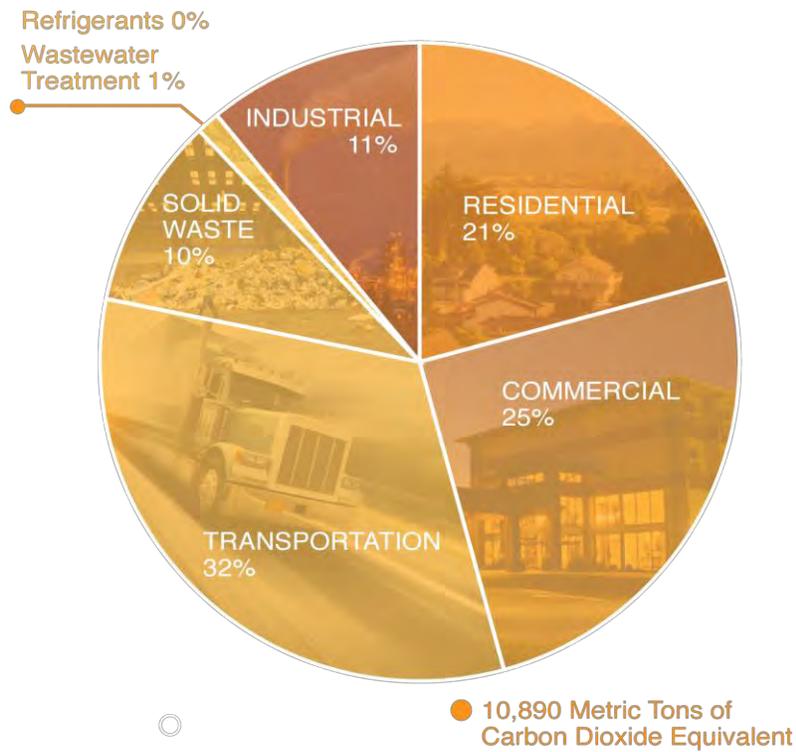
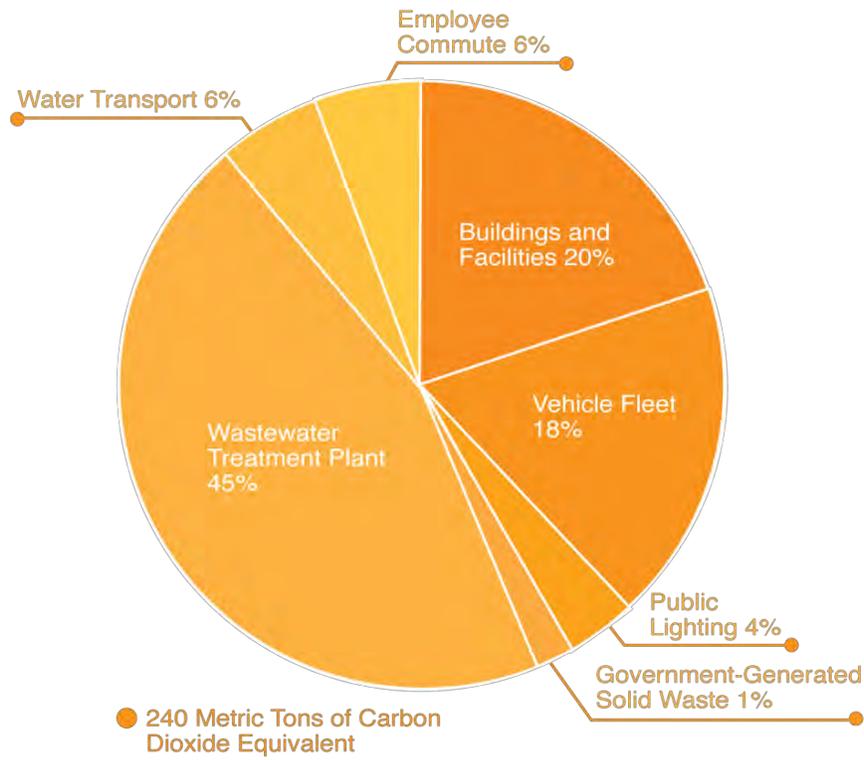


Figure 1: Baseline local community greenhouse gas emissions for the year 2005. The top graph shows the emissions by source and activity, the bottom by sector.

3 COMMUNITY PROFILE

The emissions inventory revealed that electricity, natural gas, and propane consumption contribute to 46% of total community emissions, transportation contributes 32%, industrial point sources⁵ contribute 11%, and the decomposition of solid waste contributes the majority of the rest. These results have guided this climate action plan by focusing the actions on these primary sectors.

An additional 2,010 MT CO₂e are emitted upstream from the location of use. These emissions are associated with the mining, processing, and shipping of fuels used to provide electricity, natural gas, propane, and transportation fuels to the community. Upstream emissions estimates are shown in Figure 2.

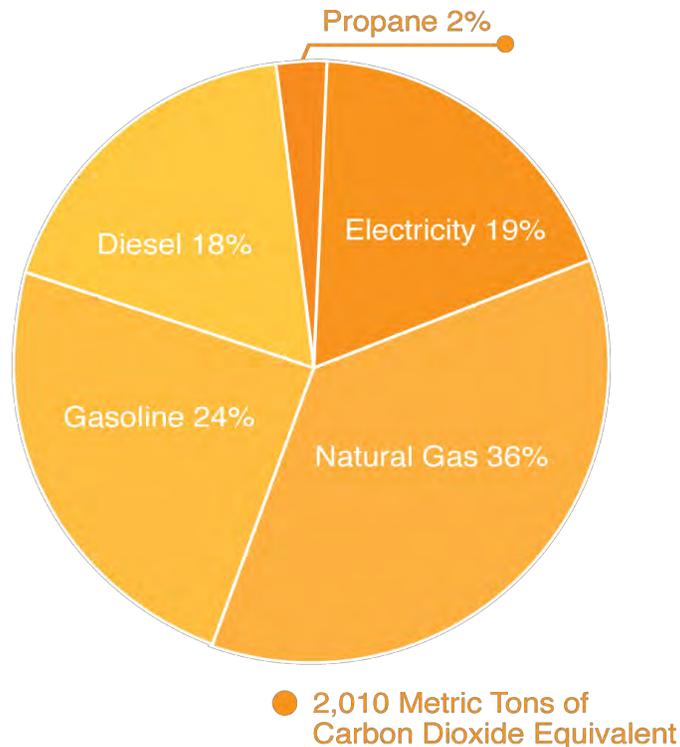


Figure 2: Baseline upstream community emissions associated with the local consumption of various energy sources for the year 2005.

MUNICIPAL OPERATIONS 2005 GREENHOUSE GAS EMISSIONS INVENTORY

The City government has also completed an emissions inventory for government operations only. The result is shown in Figure 3 totaling 240 MT CO₂e. This comprises roughly 2.1% of the total community emissions. Results are shown in Figure 3 below.

⁵ Industrial point sources estimates are taken from 2010 data as data for 2005 was not available. Industrial point sources do not include Blue Lake Power. This company is under contract with San Diego Gas and Electric such that this utility accounts for their emissions. Furthermore, industrial point source estimates include Calgon Carbon which was responsible for 75% of these emissions.

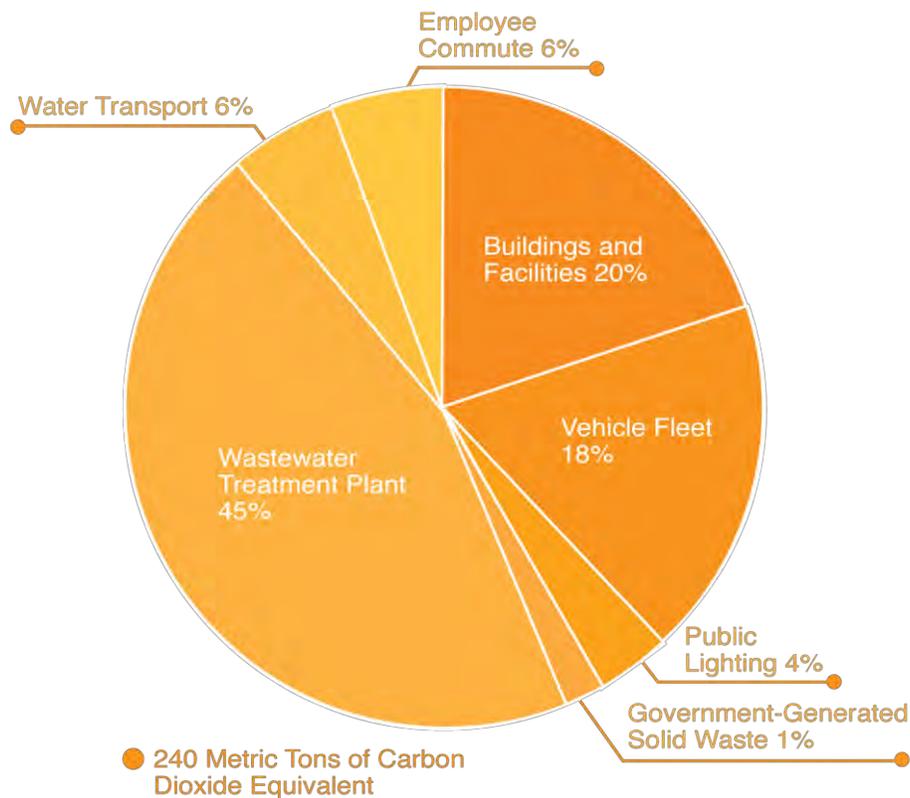


Figure 3: Baseline greenhouse gas emissions for municipal operations in the year 2005.

RELATED PROJECTS IMPLEMENTED SINCE 2005

Blue Lake has already taken significant steps that have or will lead to ancillary benefits in the form of community resilience, energy conservation and greenhouse gas mitigation. These include:

- incorporation of numerous climate adaptation measures into the Infrastructure Element of the 2013-2018 City of Blue Lake Strategic Plan,
- securing and implementing a grant from the Strategic Growth Council to complete a community greenhouse gas inventory and climate action plan,
- assistance with a pilot alternative energy distributed generation project being implemented at the Blue Lake Rancheria,
- completion of a 2005 baseline greenhouse gas inventory of municipal operations to help the City spearhead climate action measures

4

SECTION 4

Climate Action Plan Goals & Timeline



4 CLIMATE ACTION PLAN GOALS AND TIMELINE

CLIMATE ACTION PLAN GOALS AND TIMELINE

The goal of this climate action plan is to reduce emissions by 9% below business-as-usual by the year 2030. This goal will be **16% below 2005 baseline emissions**. Figure 4 represents this goal which is also compared with a common yet very aggressive goal of 80% below 2005 levels by 2050.

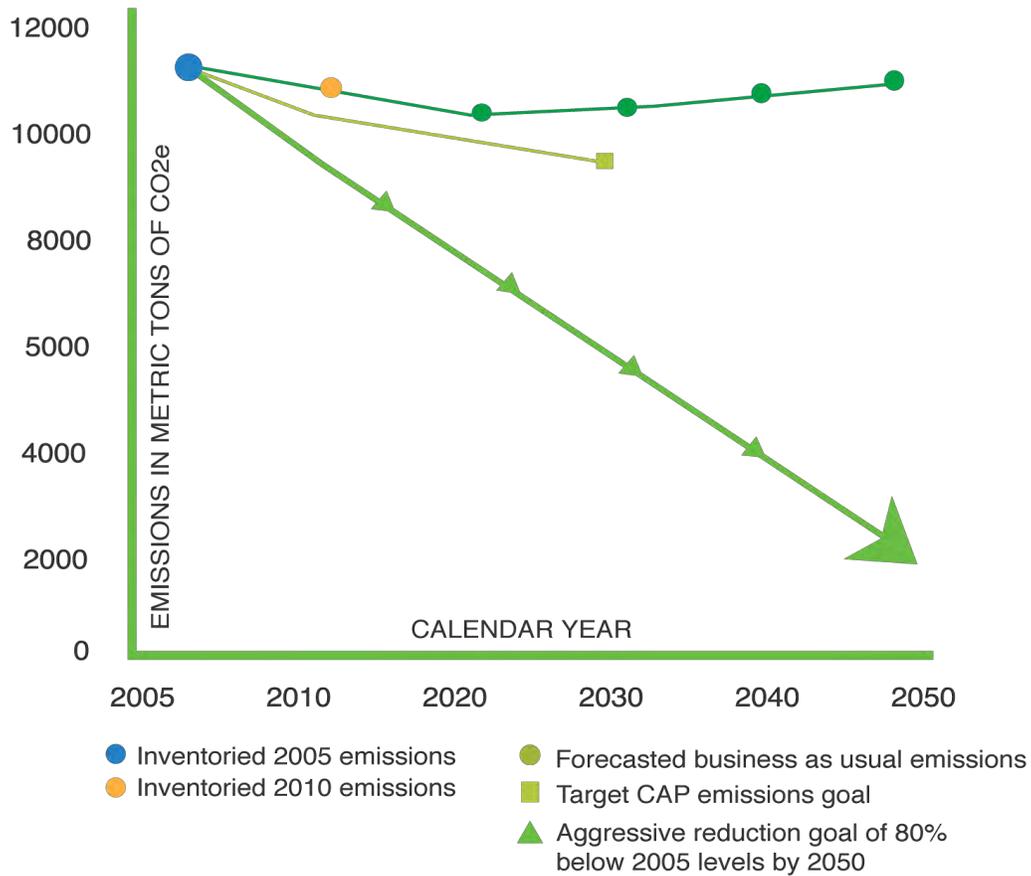


FIGURE 4: CLIMATE ACTION PLAN EMISSIONS REDUCTION GOAL (INDICATED BY THE STAR) COMPARED WITH FORECASTED BUSINESS-AS-USUAL EMISSIONS. THIS IS ALSO COMPARED WITH AN AGGRESSIVE EMISSIONS REDUCTION GOAL OF 80% BELOW 2005 BY 2050 FOR REFERENCE.

The actions recommended in this document are grouped by the applicable emissions sector that they will impact. For example, replacement of old inefficient water heaters with new Energy Star condensing water heaters impacts primarily the residential sector. The emissions reduction goal discussed above is displayed in Figure 5 below which shows the wedge of emissions removed from each sector by the actions proposed in this document. Also shown in this figure is the impact expected from state policies. These policies include:

- vehicle emissions regulations,
- expected changes in transportation fuels including ethanol, electricity, and hydrogen,
- utility regulations increasing the percentage of electricity generated from renewable sources.

4 CLIMATE ACTION PLAN GOALS AND TIMELINE

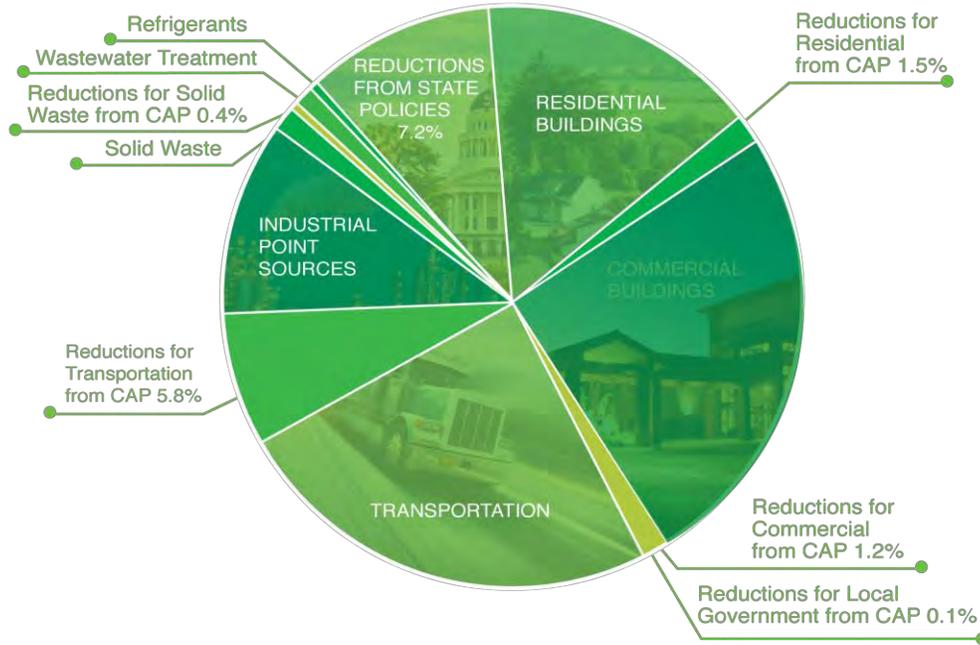
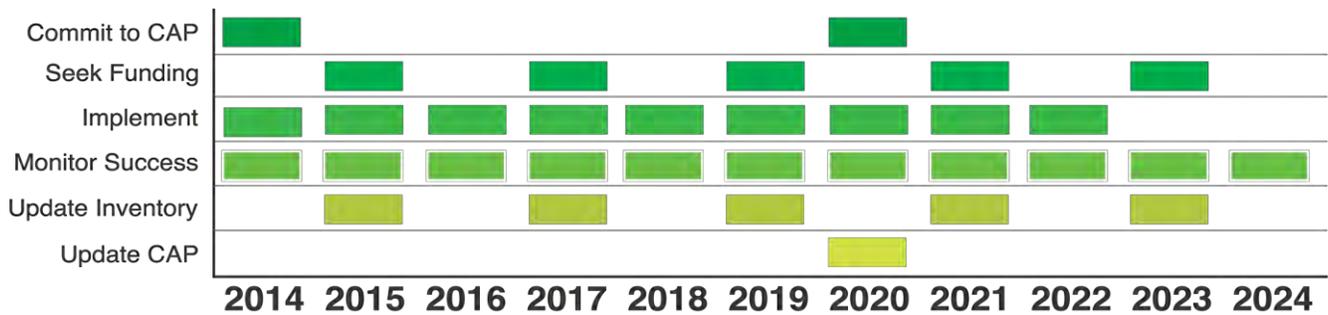


Figure 5: Representation of the impact of the actions within this Climate Action Plan on each emissions sector. Year 2005 baseline emissions represent the entire pie.

IMPLEMENTING YOUR CLIMATE ACTION PLAN

Each set of recommended actions contains a suggested timeline for implementation. This is intended to assist the City and Community in prioritizing efforts. In addition, a high level timeline is provided here which outlines the climate action plan process over the next ten years to facilitate continued and long term success.



4 CLIMATE ACTION PLAN GOALS AND TIMELINE

1.1.6 Getting the Ball Rolling

The first step in implementing this action plan is to commit to it. There are various methods of committing to a Climate Action Plan. These include:

- adoption by the City through formal resolution,
- formal recognition as a guiding document for the next general plan update.

Formal adoption by resolution is recommended as this establishes a commitment beyond the existing administration.

Once committed, the next step is to search for and secure funding for those actions that require it. Starting on this early will help accelerate those projects that the City and Community are interested in pursuing. Furthermore, since many actions are continuous, it is important to maintain the search for funding sources. Work with partner agencies listed for each action to help with this process, as well as other local agencies and non-profits that have experience securing funding. A list of funding sources to get started with is provided below:

- Federal Funding Resources
 - Grants.gov: covers all federal entities such as DOE, USDA, HUD, USEPA, BOR, etc.
- State Funding Resources
 - California Strategic Growth Council
 - Cool California Funding Wizard
 - California Natural Resources Agency
 - California Public Utilities Commission
- Local Funding Resources
 - Humboldt Area Foundation
 - Mel and Grace McLean Foundation

Finally, implementation of actions requires upfront planning. Use the agencies, organizations, and community groups listed for each action to identify and assign a manager for each action. Reach out to community partners to garner assistance and support. Seek commitment from partners and provide deadlines for deliverables. Use the suggested timelines for each group of actions as a starting point for planning out what is needed to implement each action successfully.

1.1.7 Assessing Results of Actions

Determining the success of actions and the lessons learned from implementation can be one of the most difficult parts of a Climate Action Plan. But it's also an important one. Identifying the impact that actions have had on the community is a critical component to:

- bolstering community engagement,
- making future funding applications really shine,
- improving on implemented actions,
- informing future greenhouse gas emissions inventories and climate action plans.



There are three primary methods of documenting the success of actions, all of which are important:

- estimate the emissions reductions and/or energy saved, such as electricity or gasoline,
- document or estimate the actual changes associated with those actions, such as the number of bike racks installed on buses, the amount of light bulbs installed, or the number of Earth Day events held,
- document or estimate the amount of money saved, such as reduced utility bills.

Furthermore, there are additional less tangible yet just as important indicators that are useful to keep track of. Examples include the level of community awareness regarding recycling or the perceived livability and attractiveness of downtown. This input can be received from a survey or local gossip. No matter the source, they are all important observations and it is worth documenting this type of community impact.

Assign the manager or lead agency of an action the task of documenting the success of that action. Identify a City staff member who will receive and store this information since community member involvement is a fluid process and documents can easily become lost. Maintain regular communication with Streamline Planning Consultants and Redwood Coast Energy Authority regarding this information as these two agencies will likely remain responsible for updating your greenhouse gas inventories and Climate Action Plan.

1.1.8 Update Greenhouse Gas Inventory and Climate Action Plan

Your greenhouse gas emissions inventory:

- is an officially recognized method of tracking the climate impact of your community,
- can serve as an important document for meeting CEQA requirements,
- is likely to be required by state law in the near future.

4 CLIMATE ACTION PLAN GOALS AND TIMELINE

For these reasons, maintaining an updated emissions inventory is important for the City. Furthermore, it is becoming, and will likely continue to be, an important component when searching for funding to implement these actions.

Redwood Coast Energy Authority is expected to be the agency that updates your inventory for the foreseeable future. Maintaining communication with this agency will be helpful for ensuring these updates happen in a timely manner. Furthermore, feedback on these inventory updates can help improve their usefulness to the City and the Community.

Updating your Climate Action Plan is also an important part of the process. An update addresses changes to the:

- applicability of actions to your community,
- scope of available actions,
- estimated greenhouse gas reduction impact of actions,
- goals and priorities of the City and the Community.

For these reasons it is important that the City pursue an updated Climate Action Plan. It is recommended that an update be completed roughly every five years to evaluate. The timeline suggested recommends the next evaluation occur in 2020.



5

SECTION 5
Recommended
Actions

RECOMMENDED ACTIONS

While the Blue Lake local government cannot address climate change by itself, government policies and practices can dramatically reduce greenhouse gas emissions from a range of sources and help prepare Blue Lake for the anticipated impacts of climate change. In addition, the City of Blue Lake will assist residents and businesses in their endeavors to reduce emissions through programs explained in this Plan. By working together, Blue Lake can not only do its part toward reducing the impacts of climate change - we can reap the benefits of healthier air, lower costs for utilities and services, improved transportation and accessibility, a more vibrant local economy, and many other positive effects of reducing our carbon footprint.

The summary table below identifies the focus areas within the Blue Lake Climate Action Plan, the number of strategies within each focus area, and the contribution of each focus area toward the emissions reduction goal. Each focus area has a dedicated section below where specific actions are described.

Table 3: Overview of all recommended actions

Focus Area	Description	Number of Actions	Emissions Reductions (MT CO ₂ e)	Percent of Reduction Goal
Local Government Actions	Actions directly impacting local government operations	4	13	1.3%
Taking Action at Home	Focus on actions that affect energy use at home	8	117	12.0%
Engaging Businesses, Non-Profits, and Community Spaces	Actions effecting energy use by non-residential buildings, and promoting climate action in community spaces	10	86	8.8%
Alternative Transportation	Focus on actions that effect how people get to and from Blue Lake	9	632	65.0%
Alternative Energy Sources	Focus on alternative energy options	4	86	8.8%
Solid Waste Reduction	Focus on ways to reduce the generation of waste	3	39	4.0%

In each focus area, a series of targets with suggested first implementation steps are explored. A “Target” is a goal, end result, or objective that can be measured, and the suggested first implementation steps are a possible means of realizing the objective to get the ball rolling. Each focus area draws on the actions of both the local government and Blue Lake residents and businesses, although some areas may be largely one or the other.

Each action is also rated based on its relative cost effectiveness. Cost effectiveness is defined as the amount of emissions reduced per incremental dollar spent. This is intended to assist in prioritizing policy decisions between now and 2030. Table 4 describes the different rating values. For actions where costs are not known, this rating is more subjective based on what the perceived relative benefit will be.

5 RECOMMENDED ACTIONS

In addition, each action is given a time range that is a recommended start time for the action. This range is intended to assist the City in committing to a reasonable timeline of actions to hopefully reduce the burden associated with increased commitment.

Table 4: Explanation of the cost effectiveness rating used for each action.

Cost Effectiveness Rating	Description
	Greater than 5 metric tons per \$10,000 incremental cost
	Between 1 and 5 metric tons per \$10,000 incremental cost
	Less than 1 metric ton per \$10,000 incremental cost

The following is a summary of the different sections within the tables that present each action, with examples that reference the action table example given below.

Activity Code	Code has letter and number format such as E1
Proposed Activity	Example Action
Emissions Savings	Total metric tons (MT) of CO ₂ e reduced if action target is met.
Cost Effectiveness Rating	
Potential Lead and Partner Agencies	The first agency is the suggested lead and is underlined. Additional agencies are suggested partner agencies that the lead can turn to for support. The agencies listed have not given approval of partnership and are provided only to help guide the implementation of the action. Note that Blue Lake Community Service Groups refers to groups such as- The Old Crows, The Ladies of the Lake, Friends of the Annie & Mary Trail, Wanikas, etc.
Suggested Implementation Steps	These are suggestions of possible first steps that the lead agency can take to begin implementation.
Target	The objective of the action.
Incremental Upfront Cost	This is the estimated cost associated with the difference between investing in this action and not investing in this action. For example, the incremental cost of purchasing a hybrid vehicle is the additional retail cost compared with an average traditional vehicle.
Incremental Cost Payback	The estimated time it will take for the incremental cost to be recovered by the savings from reduced energy consumption.
Burden of Cost	The group or agency that will likely bare the majority of the cost of implementation.

Finally, each action has an estimated emissions reduction associated with it. These are intended to be used to gauge the relative effectiveness of actions as well as for tracking purposes and funding applications. Unless otherwise noted, all emissions estimates were calculated using the Climate and Air Pollution Planning Assistant (CAPPA), version 1.5, developed by ICLEI.

5 RECOMMENDED ACTIONS

E1	Example Action	8 MT CO ₂ e	 
This is an example action. A brief explanation of the action is provided here.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Lead Agency</u> • Partner Agency 1 • Partner Agency 2 • Partner Agency 3 	<ol style="list-style-type: none"> 1. Suggestion 1 2. Suggestion 2 3. Suggestion 3 	Target, such as number of homes	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Estimated incremental cost compared with business-as-usual or doing nothing	Estimated simple payback associated with the incremental upfront cost	Predicted groups that will likely bear the majority of cost and/or effort	

LOCAL GOVERNMENT LEADING BY EXAMPLE

While consumption and emissions from local government operations is a small piece of the pie, the City government is in a strong position to lead by example. Actions taken by the local government help promote the goals of the climate action plan.

Summary of Potential Lead Agencies and Their Assigned Actions
Blue Lake City Hall
LG.1: LED Streetlights LG.2: EPA Procurement Guideline LG.3: Electric and/or Hybrid Vehicle LG.4: Green Employee Commute

A suggested implementation timeline for the actions within this category is given below.



The following tables outline different actions that the City can implement and promote in order to lead by example.

5 RECOMMENDED ACTIONS

LG.1	Convert City Streetlights to LED	6 MT CO ₂ e	
This action recommends that the City look into upgrading streetlights to LED.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> Blue Lake City Hall PG&E RCEA 	1. Coordinate with RCEA who will pursue this option and coordinate with PG&E.	All City Streetlights	
		Start Year	
		2016 - 2020	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City and PG&E	

LG.2	City Government Follows EPA Procurement Guide	? MT CO ₂ e	
This action recommends that the City make an effort to purchase materials using the EPA Comprehensive Procurement Guidelines.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> Blue Lake City Hall Other City government departments 	<ol style="list-style-type: none"> Acquire and review guidelines City Council adopt guidelines that the City is interested in pursuing 	Make a reasonable effort to follow the guide	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City	

LG.3	Purchase Alternative Fuel and/or Hybrid Vehicles	4 - 10 MT CO ₂ e	
This action recommends that the City make an effort to purchase an electric or hybrid car to replace two existing fleet vehicles. An electric vehicle is encouraged, is more cost effective than many other options, and would utilize the charging station currently planned for installation at City Hall. Biodiesel and/or E85 capable vehicles are also an option that can help support local efforts to bring these fuels to the region.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> Blue Lake City Hall 	<ol style="list-style-type: none"> Decide which vehicle would best fit the needs of the City. Purchase vehicles as fleet vehicles need to be replaced. 	2 alternative fuel or hybrid fleet vehicles	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$8,000 - \$12,000	4 - 9 years	City	

5 RECOMMENDED ACTIONS

LG.4	Incentivize Green Commuting by City Employees	? MT CO ₂ e	
This action recommends that the City make an effort to incentivize and promote alternative transportation options for City employees. This includes providing bus tickets, encourage carpooling, and incentivizing bike riding or other alternative modes of transportation.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake City Hall • Other City government departments 	<ol style="list-style-type: none"> 1. Identify a lead staff person 2. Devote a couple hours per month to organize and maintain the action. 	Make a reasonable effort to maintain incentive program	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City	

POSSIBLE RESOURCES

Resources that will help in the implementation of these actions include:

- Redwood Coast Energy Authority regarding LED street lights
- EPA Comprehensive Procurement Guidelines:
<http://www.epa.gov/epawaste/consERVE/tools/cpg/index.htm>
- The actions listed in Section 5.4

1.1.8.1 [Potential Implementation Barriers](#)

Primary barrier is upfront cost. Following EPA procurement guideline may result in higher material costs. The main challenges with incentivizing alternative modes of employee commute are the cost of incentives and the staff time required to maintain the program.

TAKING ACTION AT HOME

Electricity, natural gas, and propane consumption within the homes of Blue Lake residents contributes over 20% of all of Blue Lake's greenhouse gas emissions. Improving home energy efficiency is a key step in reducing emissions while saving residents money on utility bills and reducing the need for new infrastructure. This chapter focuses on opportunities to retrofit existing residential buildings, increase the quality of new construction, and to ensure that future activities in these sectors are compatible with our community's climate protection goals.

Furthermore, and perhaps more importantly, positive and consistent promotion of home energy efficiency can lead to increased awareness of energy consumption in daily life outside of the home. This can help reduce the impact of other activities such as driving and waste disposal.

Summary of Potential Lead Agencies and Their Assigned Actions			
Blue Lake City Hall	RCEA	RCAA	NCUAQMD
R2.b: Energy Retrofit at Time of Sale	R1: Energy Competition	R2.a: Weatherization	R3.c: Wood Stoves
R4.a: Drought Tolerant Landscape	R3.a: Upgrade Appliances		
R4.b: Rainwater catchment	R3.b: Heat Pumps		

5 RECOMMENDED ACTIONS

A suggested implementation timeline for the actions within this category is given below.



The following tables outline different actions that the City can implement and promote in order to encourage and assist local residents to reduce energy consumption in the home.

1.1.9 Community Engagement and Promotion

Community engagement and awareness is one of the more critical elements of a successful climate action plan. The community must be involved if emissions reduction targets and increased energy security are to be achieved. A competition can be an effective way to engage the community and make energy efficiency fun. Furthermore, the added benefit of increased awareness regarding energy consumption can have a significant impact on emissions from other sources such as vehicles, public events, and businesses.

R1	Home Energy Competition	19 MT CO ₂ e		
To promote the specific actions outlined to address home energy consumption, a competition is proposed to increase awareness and encourage residents to increase the efficiency of their homes and reduce their energy consumption.				
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target		
<ul style="list-style-type: none"> RCEA Blue Lake City Hall Blue Lake Parks and Recs PG&E 	<ol style="list-style-type: none"> Coordinate with all agencies to determine project implementation outline Secure funding in the first year Implement in the second and third year Work with RCEA who has implemented this type of competition in the past 	90 homes		
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost		
\$120,000 per Competition ⁶	11 years	<ul style="list-style-type: none"> City for program design and implementation Residents for any advanced energy saving actions 		

A competition can take many forms, such as:

⁶ Assumes \$1,300 per household based on the Redwood Coast Energy Authority Neighborhood Challenge Program.

5 RECOMMENDED ACTIONS

- between individual households,
- between schools,
- between different geographic regions of the City, such as east and west of Powers Creek.

To be effective over the long term, competitions should ideally be a regular event. Because of estimated cost for an effective competition, a competition every three to five years may provide a balance. It can be useful to coordinate specific competition milestones, such as the announcement of winners, during a community event such as an Earth Day celebration.

The implementation timeline suggests a single competition due to the high estimated cost. It is assumed that the estimated emissions reductions associated with a competition continue to be realized every year after the competition. However, this may not be the case. Repeated competitions could help insure that the energy savings associated with behavior changes continue to be realized.

1.1.9.1 Possible Resources

Redwood Coast Energy Authority has experience designing and implementing energy challenges locally. Their experience has resulted in a cost estimate of \$1,300 per household per competition. This cost is based on developing outreach collateral and social marketing campaigns, training community members to assist the competition as energy champions, holding participation workshops, conducting energy fitness home visits, monitoring energy consumption, and holding an awards event.

The CoolCalifornia City Challenge is an excellent tool to implement a City challenge. This is an interactive tool that is free for anyone to use. Cities sign up to participate for free, and challenges occur once per year. Promotion of the challenge is up to the City, information is entered by each household that is participating, and competition tracking is all done by the web-based software. Use of this resource could significantly reduce the cost to implement this action.

1.1.9.2 Potential Implementation Barriers

One of the hardest tasks with implementing a successful challenge is getting a high percentage of the community to participate. If the CoolCalifornia City Challenge program is used, this will be the most time consuming task. If a local challenge is implemented, there are numerous additional challenges associated with securing funding and program design. Reach out to Redwood Coast Energy Authority for guidance if a locally designed competition is the desired approach.

1.1.10 Weatherization and Basic Home Retrofits

Weatherization of homes is an important first step in reducing the heating load of the house. It is also one of the more cost effective things a home owner can do.

5 RECOMMENDED ACTIONS

R2.a	Home Weatherization	19 MT CO ₂ e	 
This involves sealing cracks around windows and doors, installing efficient windows, and adding insulation. This reduces heat loss from the house and reduces natural gas, propane, and fire wood consumption. Cost assumes \$2,900 per household.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • RCAA • RCEA • Blue Lake City Hall 	<ol style="list-style-type: none"> 1. The City coordinates with RCAA to solidify their role as lead agency. 2. RCAA identifies what weatherization services will be offered. 3. All agencies identify funding assistance sources 4. All agencies promote weatherization program 5. RCAA administers program 	90 homes	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$2,900 per home	17 years	Residents	

R2.b	Require Home Energy Retrofit at Time of Sale	8 MT CO ₂ e	 
This action recommends that the City adopt an ordinance that requires a basic home energy retrofit at the time of sale. The scale of the work is along the lines of the basic actions listed in the Energy Upgrade California program. Cost assumes \$1,000 per household.			
It is assumed that this action would be implemented as either an adopted ordinance or an encouraged voluntary action. In either case, it is recommended that a review of the success of the first implementation be done during the next Climate Action Plan update, and changes be made to the implementation design if needed.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake City Hall 	<ol style="list-style-type: none"> 1. Research other existing ordinances to determine desired language 2. Draft ordinance. 3. Hold Public Hearing(s) to receive community input. 4. Present to the City Council for adoption. 	12 homes	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$1,000 per home	5 years	Residents	

1.1.10.1 Possible Resources

For the Home Weatherization action Potential resources include:

- Redwood Coast Energy Authority
- Energy Upgrade California
- Redwood Community Action Agency
- California Weatherization Assistance Program (WAP)

5 RECOMMENDED ACTIONS

For the Home Energy Retrofit action, Potential resources include

- Local real estate agents and real estate listing providers

1.1.10.2 Potential Implementation Barriers

The largest barriers to the Home Weatherization Program are funding for the home owner and community education. Many of the resources provide incentives as well as funding for low income households. Work with the Redwood Coast Energy Authority to address community education challenges.

The most glaring challenge with the Home Energy Retrofit action is Potential opposition from home buyers and/or sellers due to extra costs. A City ordinance would be most effective but will likely receive the most opposition compared with a voluntary program. In addition, a "green label" campaign may be an effective path, but garnering real estate industry support may take some time.

1.1.11 Energy Efficient Appliances and Components

Replacing old technology with new technology is an important step in reducing energy consumption. Because rebates and incentives for appliances come from different sources, it is recommended that a one-stop program be designed where a single application allows residents to apply for rebates for all appliances listed here. Ideally the organization receiving the application applies for and/or organizes and implements the rebate process for all appliances via the different channels.

R3.a		Upgrade Existing Appliances and Components		64 MT CO ₂ e	 
Assist households in purchasing and installing more efficient appliances, light bulbs, etc. in order to reduce electricity, natural gas, and propane consumption.					
Potential Lead and Partner Agencies		Suggested First Implementation Steps		Target	
<ul style="list-style-type: none"> • RCEA • RCAA • Blue Lake City Hall • PG&E 		<ol style="list-style-type: none"> 1. Identify the lead agency that will be accepting "one-stop" applications 2. Develop a list of rebate sources and the application process required for each of them 3. Design the "one-stop" application 4. Design implementation model 5. Coordinate with Energy Upgrade California efforts 		90 of each item except dish washers 45 dish washers	
Incremental Upfront Cost		Incremental Cost Payback		Burden of Cost	
Faucet Aerator \$1 each Showerhead \$10 each Refrigerator \$40 each Dishwasher \$10 each LED and CFL \$0 Water Heater \$1,000 each Clothes Washer \$50 each Clothes Dryer \$0 each		Faucet Aerator < 1 year Showerhead < 1 year Refrigerator < 1 year Dishwasher < 1 year LED and CFL < 1 year Water Heater 10 years Clothes Washer 12 years Clothes Dryer < 1 year		Residents	

5 RECOMMENDED ACTIONS

R3.b	Fuel Switching to Heat Pumps	5 MT CO ₂ e	
<p>Heat pumps used for space heating can be an efficient alternative to gas furnaces. They also provide an opportunity to reduce community dependence on propane and natural gas, and can take advantage of renewable electricity sources provided locally or by the utility. Cost assumes \$3,000 per household.</p> <p>The RePower Project being implemented in the Mad River Valley is piloting the installation of heat pumps in the area. It is recommended that the City promote this project. When completed the project will assess the performance and economic viability of heat pumps for the region. It is recommended that the City review the RePower project results. If viable, the City is advised to continue promotion of the technology.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • RCEA • Blue Lake City Hall 	<ol style="list-style-type: none"> 1. Work with RCEA and the RePower project to identify the Potential performance and cost savings of heat pumps in the local climate. 2. Pending recommendations by the RePower project: <ul style="list-style-type: none"> ○ identify local contractors and obtain pricing and installation cost estimates; ○ develop marketing collateral; ○ encourage the community to adopt heat pumps through public service announcements, etc. 3. Coordinate with local Energy Upgrade California efforts. 	25 homes	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$3,000 per home	13.5 years	Residents	

5 RECOMMENDED ACTIONS

R3.c	EPA Certified Wood Burning Stoves	? MT CO ₂ e	
<p>Wood burning stoves contribute greenhouse gases as well as particulates which impact community health. More efficient stoves use less wood which reduces greenhouse gas emissions, and reduce particulates which improves local air quality.</p> <p>New EPA certified stoves emit roughly 100 lbs less particulates than older stoves per year. Cost assumes a rebate of \$500 which is the amount offered by the NCUAQMD assistance program.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • NCUAQMD • Blue Lake City Hall 	<ol style="list-style-type: none"> 1. Contact NCUAQMD to obtain information and promotion collateral 2. Include promotion collateral in public areas 3. Actively advertise program when the NCUAQMD is accepting applications. 4. Consider reducing the upfront cost by finding ways to provide the incentive prior to purchase. 	20 stoves	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$500 per stove	Varies	Residents	

1.1.11.1 Possible Resources

Good resources for the replacement of appliances and components are:

- Redwood Coast Energy Authority
- Redwood Community Action Agency
- Energy Upgrade California
- PG&E rebates and services

Good resources for the installation of heat pumps are:

- Redwood Coast Energy Authority
- Local contractors

The best resource for wood stove incentive program is the North Coast Unified Air Quality Management District (NCUAQMD) who currently manages a wood stove replacement incentive program. The incentive program is an annual application process. The rebate offered is \$500 per awardee. Typically between 10 and 20 awards are given per year across the County. Applications are accepted during a 30 day period sometime in July or August of each year pending continued funding.

1.1.11.2 Potential Implementation Barriers

The primary hurdle regarding the replacement of appliances and components is education and outreach. For large appliances, cost to the home owner can also be a challenge.

For the installation of heat pumps, this is a larger project that generally requires a contractor. Therefore cost is expected to be the main challenge. In addition, public input recommended focusing effort on education and information to help clarify what heat pumps are and why they are beneficial.

5 RECOMMENDED ACTIONS

For wood stoves, upfront cost is also an issue. The rebate program run by the NCUAQMD awards the rebate after the owner has purchased the stove. Awareness of the program is also a hurdle.

1.1.12 Outdoor Projects that Reduce Water Consumption

Although Blue Lake is fortunate to have the Mad River as a local source of water, water conservation is still a relevant and useful goal. The entire water cycle, from extracting, treating, and distributing potable water to distributing and treating waste water, takes a significant amount of energy.

Reducing water use reduces the energy needed to extract, distribute and treat that water.

R4.a	Drought Tolerant Landscaping	1 MT CO ₂ e	 
<p>Encouraging the use of drought tolerant and / or local plant species can reduce the energy consumption associated with extraction, treatment, and distribution of potable water. Furthermore, reducing the acreage of lawns and high maintenance landscaping can reduce the amount of emissions from landscaping equipment such as lawn mowers.</p>			
<p>Emissions impact estimates assume each house has 1/8 of an acre of landscaping and a 50% reduction in water consumption is achieved.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake City Hall • HBMWD 	<ol style="list-style-type: none"> 1. Coordinate with all agencies to determine project implementation outline 2. Secure funding for first implementation round 3. Work with RCEA who has implemented this type of competition in the past 	45 homes	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	11 years	<ul style="list-style-type: none"> • City for program promotion • Residents for any investments made 	

5 RECOMMENDED ACTIONS

R4.b	Water Catchment System	<1 MT CO ₂ e	
<p>According to the EPA, a water catchment system can replace up to 40% of total household water consumption. This can provide water security for homes and businesses and also reduce utility costs.</p> <p>Impact to greenhouse gas emissions assumes that 20% of household water consumption is offset for 45 homes within City limits. The cost of a rain catchment system varies widely depending on the system design.</p>			
Potential Lead and Partner Agencies		Suggested First Implementation Steps	Target
<ul style="list-style-type: none"> • Blue Lake City Hall • HBMWD 		<ol style="list-style-type: none"> 1. Research City sponsored rain water catchment programs. 2. Decide on the level of incentive the City wants to commit, if any. 3. Develop outreach and education material for the community, including cost estimates of example projects. 	45 homes
Incremental Upfront Cost		Incremental Cost Payback	Burden of Cost
\$200 - \$2,000 per home		Varies	Residents

1.1.12.1 Possible Resources

The state Save Our Water campaign has a lot of information and promotional tools for drought tolerant landscaping.

- <http://www.saveourh2o.org/>
- <http://www.water.ca.gov/wateruseefficiency/>

There are numerous resources for rain water catchment systems. A couple good ones include:

- SFPUC Rainwater Harvesting Program: <http://sfwater.org/index.aspx?page=178>
- HSU Study on Rainwater Catchment: <https://humboldt.edu/sustainability/node/102>
- Appropedia portal on rainwater harvesting: <http://www.appropedia.org/Rainwater>

1.1.12.2 Potential Implementation Barriers

For drought tolerant landscaping, the largest barrier is expected to be education. On the promotion side, the state provides a significant amount of collateral which reduces the the cost to the City. For rainwater catchment, again the largest hurdle is upfront cost. Small systems can be built for very little money, but to replace a significant amount of water with rain water requires a fairly large and complex system. Additionally, the low cost of City water creates a very long payback period for rainwater catchment projects.

ENGAGING BUSINESSES, NON-PROFITS, AND COMMUNITY SPACES

Energy consumed in non-residential buildings and industrial processes account for 44% of Blue Lake's total GHG emissions. Improving the efficiency of our commercial building stock and reducing the energy intensity of the local industrial sector will contribute significantly to achieving Blue Lake's greenhouse gas reduction target. This chapter focuses on opportunities to retrofit existing non-residential buildings to ensure that future activities in these sectors are compatible with our community's climate protection goals.

5 RECOMMENDED ACTIONS

Furthermore, community spaces and public events are where the community gets together to communicate and share ideas. Actions that engage the community and promote the goals of this climate action plan can be implemented at festivals, schools, churches, museums, and the like.

Summary of Potential Lead Agencies and Their Assigned Actions				
Blue Lake City Hall	Blue Lake Community Services Group	North Coast Growers Association	Community Member / Action Group	Zero Waste Humboldt
C1: Green Business Campaign	C3.b: Plant Trees	C4.b: Farmers Market	C3.a: Action Group	C4.a: Zero Waste Events
C2.a: Reach Codes	C3.c: Community Garden		C3.d: Land Trust	
C2.b: Title 24 Enforcement				
C4.c: Earth Day Event				

A suggested implementation timeline for the actions within this category is given below.



Furthermore, and perhaps more importantly, positive and consistent promotion of commercial energy efficiency can lead to increased awareness of energy consumption throughout the community. This can help reduce the impact of other activities such as driving and waste disposal.

The following tables outline different actions that the City can implement and promote in order to encourage and assist local residents to reduce energy consumption in the home.

1.1.13 Business Community Engagement and Education

To promote the specific actions outlined to address commercial energy consumption, an education campaign is proposed to increase awareness and encourage businesses to increase the efficiency of their operations and reduce their energy consumption. An education campaign can be an effective way to engage the community and increase awareness. It will also significantly improve the Blue Lake's ability to reach the targets of each of the actions.

5 RECOMMENDED ACTIONS

C1	Green Business Campaign	34 MT CO ₂ e	
<p>Create, implement, and sustain an energy awareness and conservation campaign targeted to the businesses of Blue Lake. The City provides a certification if the business completes a series of required actions. The certification can be used for publicity by the business.</p> <p>An implementation suggestion is to run this campaign in phases. The first phase runs for a few years. The City or organizing group then compiles lessons learned regarding the campaign, determines desired changes, and implements these changes in a second phase. This process can then be repeated again to fine tune the campaign.</p>			
Potential Lead and Partner Agencies		Suggested First Implementation Steps	Target
<ul style="list-style-type: none"> • Blue Lake City Hall • RCEA • Blue Lake Chamber and Businesses • Mad River Grange • Blue Lake Community Service Groups • Other cities interested in participating in a cooperative program 		<ol style="list-style-type: none"> 1. Establish a business owners group to organize and manage the campaign 2. Utilize economies of scale by coordinating with other cities in the County. Reach out to various chambers of commerce and similar organizations 3. Identify talking points and specific actions for businesses. Research programs implemented in other areas. 4. Create implementation model. 5. Design marketing collateral. 6. Engage the business community. 	10 Participating Businesses
Incremental Upfront Cost		Incremental Cost Payback	Primary Cost Burden
\$10,000		< 1 year	City for program design and implementation

1.1.13.1 Possible Resources

There are numerous cities across the Country that have implemented green business campaigns. A couple of resources from California programs are given here:

- Utilize resources from the Sacramento Area Sustainable Business program
 - <http://www.sacberc.org/SASB/Pages/Publications.aspx>
- List of other green business programs
 - <http://www.greenbiz.ca.gov/GreenResources.html>

Furthermore, the chamber of commerce is an excellent resource for engaging businesses. They may be able to assist in conducting surveys, promoting the campaign, and providing information. They can also participate in recognition awards.

1.1.13.2 Potential Implementation Barriers

The City will likely require funding to implement this action. This will be the first challenge. Another challenge will be garnering business participation. The program will need to be structured to incentivize participation.

1.1.14 New Construction and Retrofit Code Enforcement

Electricity and natural gas consumption in commercial buildings accounts for nearly a quarter of the City's greenhouse gas emissions. By enforcing energy codes for new construction and building retrofits energy savings can be realized. Since there is little room for growth within jurisdictional boundaries it is assumed that the majority of code enforcement would apply to building retrofits.

5 RECOMMENDED ACTIONS

C2.a	Establish Reach Codes for New Construction	19 MT CO ₂ e	 
<p>State law establishes a process that allows local adoption of energy standards that are more stringent than state requirements. The local codes are often called "reach codes". This action encourages the City to adopt reach codes that would apply to new construction in commercial and industrial zones. This means that new buildings would surpass current Title 24 requirements. This action can be implemented either as a promoted voluntary action or as an adopted City ordinance. An ordinance is likely to be a more effective path. Furthermore, an adopted ordinance that is approved by the California Energy Commission is legally enforceable.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake City Hall • Planning and building departments of County and Cities • Streamline Planning Consultants 	<ol style="list-style-type: none"> 1. Research other existing ordinances to determine desired language. 2. Draft ordinance. 3. Hold Public Hearing(s) to receive community input. 4. Present to City Council for adoption. 5. After a determined implementation length, draft lessons learned, implement changes if necessary, adopt revised ordinance. 	20,000 square feet of new construction	
Incremental Upfront Cost	Incremental Cost Payback	Primary Cost Burden	
\$105,000	9 years	Businesses	

C2.b	Title 24 Enforcement for Building Retrofits	4 MT CO ₂ e	 
<p>This action enrolls the City in actively promoting and enforcing State Title 24 requirements for building retrofits. While Title 24 already applies to many retrofits, it is often the case that permits are not pulled for retrofit work. Promotion by the City regarding the importance of the code, and the long term savings that will be realized by the facility owner, can increase the number of retrofit projects that meet Title 24 guidelines.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake City Hall • Planning and building departments of County and Cities • Streamline Planning Consultants • RCEA 	<ol style="list-style-type: none"> 1. Review Title 24 requirements with County and RCEA. 2. Draft promotional material 3. Draft ordinance 4. Hold Public Hearing(s) 5. Present to City Council for adoption 6. After a determined implementation length, draft lessons learned, implement changes if necessary, adopt revised ordinance. 	10,000 square feet of commercial space	
Incremental Upfront Cost	Incremental Cost Payback	Primary Cost Burden	
\$15,000	< 1 year	Businesses	

1.1.14.1 Possible Resources

Very useful resources on state code requirements are:

- <http://energycodeace.com/>
- CALGreen Program

5 RECOMMENDED ACTIONS

Resources on Reach Codes include

- Best Practices Guide: <http://californiaseec.org/documents/best-practices/local-reach-codes>
- U.S. Green Building Council LEED Program
- Build It Green GreenPoint Rated Program

1.1.14.2 Potential Implementation Barriers

Probably the most challenging barriers will be:

- assessing the impacts to the business community,
- overcoming Potential community and business opposition.

If the City chooses to adopt an ordinance, additional hurdles include:

- application submission process to the California Energy Commission,
- ordinance adoption process.

1.1.15 Actions in Community Spaces

There are numerous actions that can be taken within community spaces that publically promote the goals of this climate action plan. Pursuing the actions listed here can help promote the climate action plan while reducing greenhouse gas emissions and engaging the community.

C3.a	Community Climate Action Group	? MT CO ₂ e	
<p>A community action group may be one of the more critical actions needed to successfully implement this climate action plan. This group can assist the City Council and City staff in prioritizing and planning actions, and can be a valuable and powerful voice for the community.</p> <p>It is recommended that pros and cons be weighed between establishing a formal committee or a working group. Issues to consider include Brown Act requirements and the need for City staff.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Community Members</u> • Blue Lake Chamber and Businesses • Blue Lake City Hall • Blue Lake School • RCEA • Arcata and Eureka Energy Committees 	<ol style="list-style-type: none"> 1. Identify interested community members 2. Hold a kick off meeting 3. Identify chair, vice chair, and secretary roles 4. Draft group bylaws 5. Approach the City regarding the process for becoming a formal working group 6. Collaborate with Arcata and Eureka energy committees 	Sustained Community Action Group of 4 - 6 members with City liaison	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	<ul style="list-style-type: none"> • City for engagement • Community for creating and sustaining group 	

5 RECOMMENDED ACTIONS

C3.b	Plant Trees	25 MT CO ₂ e	
Planting trees helps absorb CO ₂ emitted into the atmosphere. In addition, they help create a more pleasant City environment.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake Community Service Groups • Mad River Grange • St. Joseph's Resource Center • Dell'Arte • Blue Lake City Hall • Blue Lake School • Blue Lake Chamber and Businesses • Parks and Recs. 	<ol style="list-style-type: none"> 1. Establish organizing team 2. Decide on tree types and source supplier 3. Decide on public locations and engage with private and business properties for additional locations 4. Raise funding to purchase trees 5. Organize Community tree planting events 	80 Trees	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown - upfront cost and continued maintenance of trees	Not Applicable	City, Residents, Businesses	

C3.c	Support Community Gardens	? MT CO ₂ e	
This action recommends that the City actively support the development of community gardens. This will help reduce waste, reduce emissions through the use of local resources, and strengthen community health and pride.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake Community Service Groups • Blue Lake City Hall • Mad River Grange • St. Joseph's Resource Center • RCAA Community Garden Collective • Parks and Recs. • Locally Delicious Food Fund 	<ol style="list-style-type: none"> 1. Identify areas of land that can be committed to community garden areas 2. Adopt guidelines regarding community gardens 3. Recruit volunteers and appoint an organizing and management group 4. Promote the community garden project 	One community garden area	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Cost of staff time and planning efforts	Unknown	City, Residents, and Businesses	

5 RECOMMENDED ACTIONS

C3.d	Support a Local Land Trust or Community Forest	? MT CO _{2e}	 
<p>This action suggests supporting local efforts to create a land trust or community forest in the Local Blue Lake area to protect open land. Land trusts can help protect the local environment and the resources that depend on its health such as water, animal life, and timber. Since the incorporated City is only 384 acres in size, creating a land trust or community forest is not very feasible. However, supporting actions within the Blue Lake area could help local efforts.</p> <p>The Potential emissions offset from a land trust is based on growth rate of the plant life and the alternative land use options that exist if the land was not acquired by a land trust or for a community forest. The literature and guidance on estimating the emissions offset Potential of open spaces varies significantly. For a 100 acre parcel, estimates range from 200 MT CO_{2e} to 2,000 MT CO_{2e} depending on the land use and assumed growth rate of the plant species.⁷</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Community Action Group</u> • Parks and Recs. • Local Land Trusts 	<ol style="list-style-type: none"> 1. Communicate with other land trusts in the area to begin developing a game plan. 2. Approach the City regarding their level of involvement. 3. Seek funding. 	100 acres	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	Land Trust or Community	

1.1.15.1 Possible Resources

The development of a community climate action group can benefit greatly from collaborating with

- Arcata Energy Committee
- Eureka Energy Committee

Contact other local jurisdictions, particularly Arcata, regarding assistance with how to effectively support community garden spaces. Contact the City of Eureka regarding the development of a tree planting program.

1.1.15.2 Potential Implementation Barriers

The primary barrier on all of these actions is the upfront time required to organize, plan, and promote. The development of a land trust and/or community forest will be a long process and require significant fund raising. However, there are numerous local land trusts locally that can assist with the process.

1.1.16 Public Events

Promoting the goals of the climate action plan can occur by encouraging organizers of existing public events to incorporate actions that reduce waste and consumption. Creating new public events that promote these goals is also another effective avenue. The following actions suggest a few ways to incorporate public events into the climate action plan.

⁷ Calculated from the CAPCOA guide entitled Quantifying Greenhouse Gas Emissions Mitigation Measures, August 2010. Assumes forest land and that emissions sequestration amounts occur over a 100 year time period.

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C4.a	Encourage Zero Waste Events	4 MT CO ₂ e	
<p>This action recommends that the City provide support to local event organizers to work towards zero waste events. Waste contributes to greenhouse gas emissions through transportation to landfills and decomposition of organic matter. Waste products also have upstream emissions associated with the production of the materials.</p> <p>Emissions reduction assumes a reduction from 4 lbs of waste per person to ½ lb of waste and ½ lb of recyclable waste and 2,000 event attendees over the course of a year.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Zero Waste Humboldt</u> • Parks and Recs. • HSU WRRAP Program • HWMA • Regional waste haulers 	<ol style="list-style-type: none"> 1. Create an organizing committee to reach out and engage local event organizers 2. Collaborate with active waste reduction groups 3. Coordinate with local waste haulers 	<p>½ lb waste and ½ lb of recycling per event attendee</p>	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City	

C4.b	Encourage a Blue Lake Farmers Market	? MT CO ₂ e	
<p>This action recommends that the City support the establishment of farmer's markets, farm stands and CSA's in the Blue Lake area.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>North Coast Growers Association</u> • Blue Lake Chamber and Businesses • Mad River Grange • St. Joseph's Resource Center • Blue Lake Community Service Groups • Blue Lake City Hall • Parks and Recs. 	<ol style="list-style-type: none"> 1. Plan an area for the event to occur 2. Contact the North Coast Growers Association and local CSA's and farmers 3. Set a recurring date and time for the market 4. Assign City staff to cover the event if needed 	<p>A seasonal farmers market one day per week</p>	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City and Businesses	

5 RECOMMENDED ACTIONS

C4.c	Hold an Annual Earth Day Celebration	? MT CO ₂ e	
This action recommends that the City provide plan and support an annual Earth Day celebration. The event would promote Earth Day, promote the actions that the City is or will be implementing, and recruit volunteers for those actions that require the support.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake City Hall • Parks and Recs. • Blue Lake Chamber and Businesses • Mad River Grange • St. Joseph's Resource Center • Blue Lake Community Service Groups • Blue Lake School • Dell'Arte 	1. Reach out to local businesses, schools, organizations, and service groups to participate.	A recurring annual event	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City, Lead and Partner Agencies	

1.1.16.1 Possible Resources

There are numerous resources to assist in planning zero waste events. These include

- Zero Waste Humboldt: <http://zerowastehumboldt.org>
- HSU Waste Reduction and Resource Awareness Program (WRRAP): www.humboldt.edu/wrrap/zero-waste
- Scrap Humboldt: <http://scraphumboldt.org/>

Furthermore, engaging with the Humboldt Waste Management Authority and local waste haulers will be critical for managing the waste stream.

Contact the North Coast Growers Association (NCGA) for information about getting a farmers market in the Blue Lake area. Contact local event organizers about starting an annual earth day celebration as well as incorporating consumption and waste reduction actions into their events.

1.1.16.2 Potential Implementation Barriers

The primary barrier on all of these actions is the upfront time required to organize, plan, and promote. The development of a land trust and/or community forest will be a long process and require significant fund raising. However, there are numerous local land trusts locally that can assist with the process.

ENCOURAGING ALTERNATIVE TRANSPORTATION

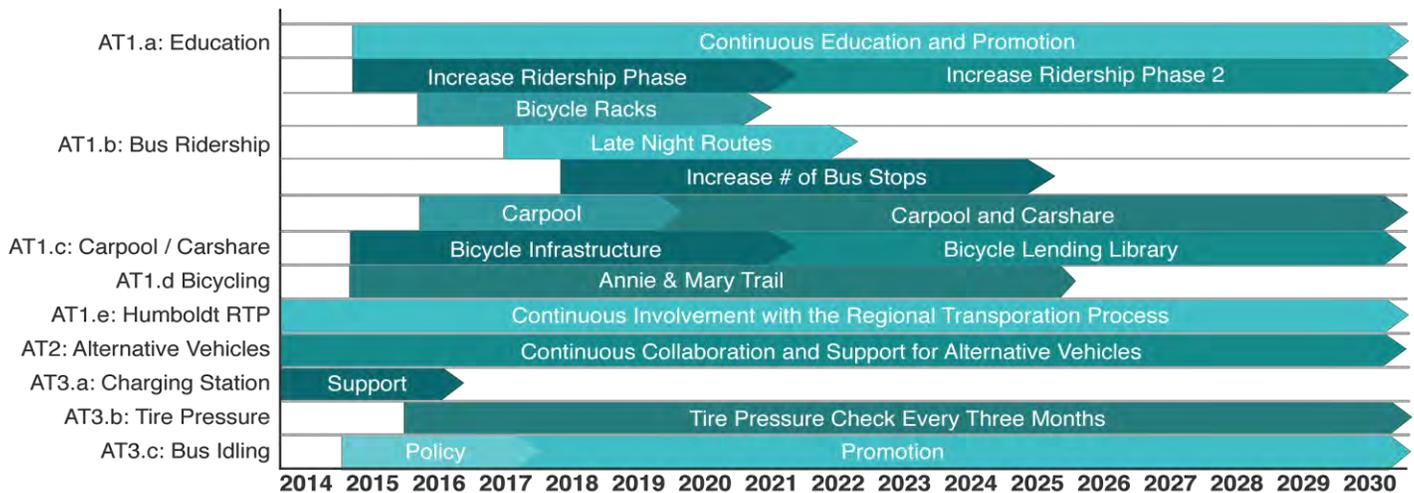
Emissions from transportation are a common sight to nearly everyone. Besides emitting greenhouse gases, transportation fossil fuels also produce a host of criteria air pollutants reducing local air quality and affecting our health. On-road transportation accounts for 20% of Blue Lake's total GHG emissions, and off-road vehicles and equipment account for an additional 16%. County-wide, transportation related emissions account for nearly half of all greenhouse gases produced. This chapter focuses on programs and policies to reduce emissions from on-road transportation and

5 RECOMMENDED ACTIONS

includes design-oriented approaches as well as expansion of alternate modes such as walking, biking, or public transportation to and from the most common destinations in Blue Lake.

Summary of Lead Agencies and Their Assigned Actions			
Blue Lake City Hall	RCEA	Blue Lake Rancheria	Humboldt Green Wheels
AT1.a: Education AT1.c: Carpool / Carshare AT1.e: Humboldt RTP AT3.b: Tire Pressure	AT2: Alternative Vehicles AT3.a: EV Charging Station	AT1.b: Bus Ridership	AT1.d: Bicycling

A suggested implementation timeline for the actions within this category is given below.



1.1.17 Low Carbon Transportation Options

Facilitating and promoting low carbon transportation options is critical for tackling the emissions and energy consumption from this sector. Low carbon transportation means alternatives such as bicycling, walking, buses, carpooling, and carsharing. Actions include developing new and existing plans and infrastructure.

5 RECOMMENDED ACTIONS

AT1.a	Education and Promotion	225 MT CO ₂ e	
<p>Education and promotion can have a significant impact in motivating people to choose alternative modes of transportation and will greatly increase the use of current and future transportation infrastructure. Providing information on multiple modes of transportation is more effective than marketing a single mode.</p>			
<p>Education campaign cost assumes \$15,000 per year based on a cost of \$29 per household obtained from the CAPP tool. This assumes a continuous active education and promotion campaign. Payback is based on the amount of money that residents are expected to save by reduced monthly fuel costs from choosing alternative transportation options.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Blue Lake City Hall</u> • RCEA • Blue Lake Rancheria • HCAOG • HTA 	<ol style="list-style-type: none"> 1. Research other programs existing in other communities. 2. Identify talking points and design marketing collateral. 3. Engage residents and businesses through public meetings, special events, availability of marketing material in key locations in the City, citizen's guide, mass mailings, etc. 	<p>All Residents</p>	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
<p>\$15,000 per year</p>	<p>3.5 years</p>	<p>City for design and implementation of program</p>	

5 RECOMMENDED ACTIONS

AT1.b	Support and Increase Bus Ridership	17 MT CO _{2e}	 
<p>The goal of this action is to implement multiple phases that will increase bus ridership. These phases are:</p> <ul style="list-style-type: none"> • Improve route options to correlate with work commute times and late night activities • Improve bicycle carrying capacity of buses • Coordinate the BLRTS system with other County bus systems • Increase the number of bus stops within the City <p>These phases involve both transit and land use planning. It is recommended that the City work closely with the Blue Lake Rancheria, HCAOG and HTA when designing each phase. Implementation will involve prioritizing phases, securing funding, and design and implementation. It is highly recommended that the success of each phase be reviewed at appropriate time intervals such that they can be adjusted to better serve the community.</p> <p>It is assumed that cost is equivalent to a resident bus pass subsidy by the City of \$1.00 per pass per day. Costs associated with increased route options, increased bicycle carrying capacity, and construction associated with increased number of bus stops are unknown and not considered in the incremental upfront cost. Payback is estimated based on the amount of money that residents are expected to save by reduced monthly fuel costs from choosing alternative transportation options.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Blue Lake Rancheria</u> • HTA • St. Joseph's Resource Center • HCAOG • Blue Lake City Hall • RCEA 	<ol style="list-style-type: none"> 1. Solicit participation of Potential Lead and Partner Agencies. 2. Organize a planning group to coordinate implementation of actions. 3. City Council liaison work with the Blue Lake Rancheria on transportation issues. 	100 rides per day <u>and</u> 5 additional bikes carried per day	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$35,000 per year	4 years	City for bus pass subsidies	

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AT1.c	Carpool and Carshare Programs	27 MT CO ₂ e	
<p>The goal of this action is to discourage single occupant driving and reduce the number of vehicles on the road. This action accomplishes this through two different programs:</p> <ul style="list-style-type: none"> • a carpool program that helps to facilitate carpool options for commuters, • a carshare program such as ZipCar. 			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Blue Lake City Hall</u> • HCAOG 	<ol style="list-style-type: none"> 1. Organize a planning group to coordinate implementation of actions 2. Design a city-supported carpool program <ul style="list-style-type: none"> ○ Secure funding ○ Establish a community accessible calendar of participants ○ Market and promote 3. Reach out to private carshare companies and solicit their services 	50 carpool participants <u>and</u> 5 carshare participants	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$50,000 for City to develop parking area for carshare program ⁸ <u>and</u> \$3,000 to setup carpool organizing tools	< 1 year	City for program development and support	

⁸ Carshare cost estimate obtained from http://www.calstart.org/Libraries/Policy_Documents/Compendium_Sustainable_Community_Transportation_Strategies_Preliminary_Draft.sflb.ashx

5 RECOMMENDED ACTIONS

AT1.d	Promote Bicycling and Walking	19 MT CO ₂ e	?
<p>The goal of this action is to encourage the use of a bicycle to do local errands rather than using a car. Recommended actions include:</p> <ul style="list-style-type: none"> • install supporting infrastructure such as bicycle parking areas, safe bike lanes, safe walking areas, etc. • design and implement a Blue Lake bicycle library program • complete the development of the Annie & Mary Trail 			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Green Wheels Humboldt</u> • Blue Lake Community Service Groups • Blue Lake School • Blue Lake Chamber and Businesses • Blue Lake City Hall • HCAOG • Humboldt County • RCAA • RCEA 	<ol style="list-style-type: none"> 1. Organize a planning group to coordinate implementation of actions 2. Design a bicycling and walking support program with phases that implement the various actions listed above 3. Seek funding to support the program 	Replace 75 car trips per week with bicycle or walking trips	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown cost of bike library and supporting infrastructure	Unknown	City for infrastructure and support	

AT1.e	Support the Humboldt Regional Transportation Plan	? MT CO ₂ e	?
<p>Actively support the regional transportation plan, particularly the environmental stewardship goal.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Blue Lake City Hall</u> • HCAOG 	<ol style="list-style-type: none"> 1. Reach out to HCAOG and coordinate on ways that the City can support HCAOG in their efforts in implementing the Plan 	No specific target	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City for engagement and support activities	

1.1.17.1 Possible Resources

Resources regarding an education campaign include:

- Luum, an online service that hosts commuter challenges: <http://www.luum.com/>
- Seattle's Way-To-Go Program: <http://www.seattle.gov/waytogo/>
- Portland's SmartTrips Program: <https://www.portlandoregon.gov/transportation/43801>

Resources regarding carpooling and carsharing include:

- San Mateo County Carpool Incentive Program:
<http://www.commute.org/index.php/programs/carpool-incentive-program>

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- Website that helps people and organizations for rideshares and carpools: <http://us.amovens.com/en/>
- Bay Area 511 Rideshare Program: <http://rideshare.511.org/>

Contact the Humboldt County Association of Governments (HCAOG) to collaborate on ways to increasing bus and bicycle ridership as well as for information regarding the Regional Transportation Plan. Visit their projects page at

- <http://hcaog.net/plans-and-documents>

A member of the City Council is also a member of the HCAOG board and could be a useful conduit for exploring a partnership regarding a number of the actions in this plan.

1.1.17.2 [Potential Implementation Barriers](#)

Education and Promotion

The cost for education and promotion is likely the largest barrier. Successfully promoting a campaign can also be challenging. It is recommended that the assistance of local organizations be enlisted to assist with promotion efforts to increase effectiveness.

Increasing Bus Ridership

The primary barrier for the proposed actions for increasing bus ridership is cost for adapting existing systems and infrastructure to accommodate increased ridership. Citizens traveling to and from Blue Lake encounter a few barriers concerning commuting to other areas using the Blue Lake Rancheria Transit System (BLRTS). These barriers include:

- a relatively limited route schedule, particularly for people who must work later than 5:30pm
- different bus pass systems for BLRTS and other bus systems in the County
- limited coordinated connectivity between BLRTS and other bus routes
- no trip planning support by HTA operated systems that incorporates BLRTS

Some suggested solutions to these barriers include working with BLRTS and HTA to identify and remove barriers associated with

- expanding the number of routes to serve early morning and evening commuters
- adding a stop in Blue Lake to the Willow Creek bus route
- integrating the BLRTS system into trip planning services offered by HTA
- creating a bus pass system offered by HTA that includes the BLRTS

Carpool and Carshare Programs

Carpool programs are relatively easy to initiate and low cost to operate. The City can play small or large role in this. If the City plays a small role, then the primary burden of initiating and operating would likely be on local business and/or local community service groups. The City could promote to businesses, and possibly act in a mediating role to facilitate and maintain communication between local businesses.

Carshare programs are traditionally operated by third party companies such as ZipCar. The primary cost for this action is likely the creation of a physical parking area where carshare vehicles would reside. However, the largest hurdle may be convincing a carshare company to place a vehicle in the Blue Lake area. Currently, the only known carshare location is on the Humboldt State University campus which is operated by ZipCar.

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Promote Bicycling and Walking

The proposed actions primarily include adding infrastructure which places a cost barrier. However, the bicycle library program could be initiated and operated by local community service groups and bicycle enthusiasts. This action may have the lowest cost barrier, but would still require a physical space to operate.

1.1.18 Alternative Vehicles and Fuels

Switching to vehicles that can utilize fuels other than gasoline and diesel can significantly reduce emissions and increase energy independence and security. Roughly 20% of the City's greenhouse gas emissions comes from on-road vehicles. County-wide, passenger and light duty vehicles contribute about 25% of emissions, and retail and commercial trucks contribute another 15%.

AT2	Efficient and Alternative Fuel Vehicles	116 – 528 MT CO ₂ e	 
<p>This action encourages the community to purchase the following more efficient and alternative fuel vehicles:</p> <ul style="list-style-type: none"> • Smaller vehicles • Electric vehicles • The use of B20 blended diesel in existing diesel vehicles • Hybrid gasoline vehicles • The purchase of flex-fuel vehicles that can utilize E85 gasoline <p>The range of the emissions impact estimate is the range associated with the mix of vehicles that are adopted by the community. The lowest value is realized if all 100 vehicles purchased were smaller gasoline vehicles. The high range is realized if all 100 vehicles used electricity, B20, and/or E85 fuels. Hybrid vehicles achieve roughly the middle of the range.</p>			
Potential Lead and Partner Agencies		Suggested First Implementation Steps	Target
<ul style="list-style-type: none"> • RCEA • Blue Lake City Hall • HCAOG 		<ol style="list-style-type: none"> 1. Include this action in the Education and Promotion action above (AT1.a). 2. Support RCEA in the promotion of purchasing smaller vehicles. 	Encourage 100 new vehicle owners to purchase one of these vehicles
Incremental Upfront Cost		Incremental Cost Payback	Burden of Cost
\$0 - \$600,000		< 1 year – does not pay back	Residents and Businesses

This action promotes the adoption of more efficient vehicles and alternative fuel vehicles by the community. The role of the City government for this action is education and promotion with a lead-by-example purchase of a couple alternative fuel fleet vehicles. The vehicles and fuels considered are

- Smaller vehicles: the vehicles inherently use less fuel per mile given their lighter weight and smaller profile. Purchasing a smaller vehicle for daily commuting and errands can save the owner a significant amount of money in fuel costs over the life of ownership. In addition, smaller vehicles can be purchased for less money than larger vehicles and trucks.
- Electric vehicles: the vehicles have zero local emissions which has significant positive health impacts on the local community. Furthermore, the greenhouse gas emissions per mile from the electricity consumed is nearly 85% lower than the greenhouse gas emissions per mile of

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a gasoline vehicle. Electricity can also be produced from renewable sources, and significant portion of which can be local which increases energy security and retains dollars within the local economy.

- **B20 Biodiesel Blend**: B20 blended biodiesel fuel consists of 20% biodiesel and 80% regular diesel. Most existing diesel vehicles can run B20 fuel with no engine modifications. While the actual tailpipe emissions are not reduced from the use of this fuel, 20% of these emissions are considered to originate from a renewable source. Furthermore, biodiesel can be produced from local resources which increases energy security and retains dollars within the local economy.
- **Hybrid vehicles**: the vehicles generally offer high mileage which reduces the quantity of greenhouse gas emissions. Plug-in hybrid vehicles offer even more emissions reductions since they generally allow 10 to 40 all electric miles before the engine kicks in.
- **E85 Gasoline**: the use of E85 gasoline, which is composed of 85% ethanol and 15% gasoline, results in a significant reduction in tracked greenhouse gas emissions since the combustion of biomass-derived ethanol is considered to be from a renewable resource.

The incremental cost of ownership ranges from \$0 for smaller vehicles, diesel vehicles burning B20, or E85 vehicles, up to \$600,000 for hybrid vehicles.

1.1.18.1 Possible Resources

Redwood Coast Energy Authority is leading regional planning efforts regarding adoption of alternative fuel vehicles. Reach out to them regarding education and promotion materials, and updates regarding planning activities.

There are State and Federal rebates and tax incentives for clean fuel vehicles. The amounts can be found at

- State rebates: <https://energycenter.org/clean-vehicle-rebate-project>
- Federal Tax Incentives: <http://www.fueleconomy.gov/feg/taxcenter.shtml>

Additionally, the federal government maintains a very useful website on efficient and alternative fuel vehicles. This site can be found at

- <http://www.fueleconomy.gov/>

1.1.18.2 Potential Implementation Barriers

The primary barrier will be cost. Vehicles are expensive, particularly new vehicles with relatively new technology. The public vehicle fleet is primarily composed of older vehicles so encouraging early adoption of alternative fuel vehicles will be challenging. Furthermore, public infrastructure supporting alternative fuels is still being built out which makes early adoption even more challenging. B20 biodiesel is available locally (although not at a scale that can accommodate significant widespread use), electric vehicle infrastructure is currently being developed, and E85 is currently not available in Humboldt County.

State emissions requirements are driving auto manufacturers to offer an increasing array of alternative fuel vehicle options. The State is also funding an accelerated installation of public fueling stations. The best role of the City is to work with the lead agency to provide education regarding

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alternative fuel options and available incentives. Furthermore, replacing one or two government vehicles with alternative fuel vehicles would help to lead by example.

1.1.19 Other Transportation Related Actions

Described are additional actions that the City can do to address emissions in the transportation sector.

AT3.a	Support the Installation of EV Charging Stations	2 MT CO ₂ e	
The RePower project, led by the Redwood Coast Energy Authority, plans to install two electric vehicle charging stations: one at City Hall and one near the City at the Blue Lake Casino. Support of this effort by the City will be valuable in the promotion of this service.			
Potential Lead and Partner Agencies		Suggested First Implementation Steps	Target
<ul style="list-style-type: none"> • <u>RCEA</u> • Blue Lake Rancheria • Blue Lake City Hall • Humboldt Electric Vehicle Association 		<ol style="list-style-type: none"> 1. Include location of chargers in the Education and Promotion action above (AT1.a). 2. Support RCEA in the development and promotion of electric vehicles 	1 charging station
Incremental Upfront Cost		Incremental Cost Payback	Burden of Cost
\$0		Not Applicable	City for campaign promotion

AT3.b	Voluntary Tire Pressure Checkpoint	15 MT CO ₂ e	
Low tire pressure can drop a vehicles mileage by up to 3.3%. Estimated increase in fuel cost can be from \$200 to \$400 per year depending on how long tires are underinflated and on how many miles are driven. This action recommends that the City promote proper tire inflation by organizing a regular campaign and voluntary tire checkpoint days.			
Potential Lead and Partner Agencies		Suggested First Implementation Steps	Target
<ul style="list-style-type: none"> • <u>Blue Lake City Hall</u> • St. Joseph's Resource Center • Blue Lake Community Service Groups • Blue Lake Chamber and Businesses 		<ol style="list-style-type: none"> 1. Develop campaign marketing materials 2. Plan a regular (semi-annual, quarterly, monthly) checkpoint day where morning commuters can stop and have their tires checked 3. Volunteers can be students, scouts, community service group members, etc. 4. Can be tied with a fund raising event 	30 cars checked per event
Incremental Upfront Cost		Incremental Cost Payback	Burden of Cost
Unknown		Immediate for vehicle owners	City for campaign promotion and organization

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AT3.c	Limit Idling of Buses	5 MT CO ₂ e	
This action recommends that the City request that buses limit their idling time by turning off their engines while not moving. This would likely be requested and promoted rather than enforced. Focus on public transit buses and school buses would likely be most effective.			
Potential Lead and Partner Agencies		Suggested First Implementation Steps	Target
<ul style="list-style-type: none"> • Blue Lake City Hall • Blue Lake Elementary • Blue Lake Rancheria • NCUAQMD 		<ol style="list-style-type: none"> 1. Develop campaign marketing materials 2. Plan a regular (semi-annual, quarterly, monthly) announcement and reminder 3. Reach out to applicable stakeholders and drivers to spread the word 	5 buses
Incremental Upfront Cost		Incremental Cost Payback	Burden of Cost
Unknown		Immediate for bus owners	City for campaign promotion

1.1.19.1 Possible Resources

Resources regarding tire pressure campaigns include:

- CalRecycle "Just Check It" campaign
 - <http://www.calrecycle.ca.gov/tires/Info/JustCheckIt/default.htm>
- Pima County, AZ tire inflation contest
 - <http://www.deq.pima.gov/air/tireinflation.html>

Regarding limiting bus idling, the EPA National Idle Reduction Campaign provides useful information and promotional materials available at:

- <http://www.epa.gov/cleanschoolbus/antiidling.htm>

The North Coast Air Quality Management District (NCAQMD) may also be a useful partner agency regarding limiting bus idling. They are mandated to reduce particulate emissions of which diesel engines are a major contributor. Contact NCAQMD to determine if they can provide support.

1.1.19.2 Potential Implementation Barriers

Funding is likely the largest barrier for implementing these actions. However, all of these actions should cost relatively little. The EV charging stations are currently being installed by RCEA so there should be no barriers to the implementation of this action. The Tire Checkpoint action requires recruitment of volunteers and City staff time for coordination. The bus idling program requires City staff time, development of education materials, and outreach time.

INCREASING ALTERNATIVE ENERGY SOURCES

Investing in clean local alternative energy sources provides an opportunity to both reduce greenhouse gas emissions as well as increase energy independence and security. This section recommends different options to diversify Blue Lake's energy sources.

5 RECOMMENDED ACTIONS

Summary of Lead Agencies and Their Assigned Actions	
	RCEA
	AE1.a
	AE1.b
	AE2.a
	AE2.b

A suggested implementation timeline for the actions within this category is given below.



1.1.20 Local Alternative Energy Options

Investing in clean local alternative energy sources provides an opportunity to both reduce greenhouse gas emissions as well as increase energy independence and security. This section recommends different options to diversify Blue Lake's energy sources.

AE1.a	Solar Electricity	6 MT CO ₂ e	
This action targets a total of 30kW of solar installed in the City. This is approximately equal to 15 homes. However, this target is not restricted to homes. The installation of solar on a business should also be considered. Costs are based on \$5,000 per watt, and payback assumes \$6,100 saved per year.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> RCEA RCAA Local Contractors Blue Lake City Hall 	<ol style="list-style-type: none"> Collaborate with the RePower project Implement local ordinances and expedited permitting processes that support renewable energy on new and existing homes Promote the development of a Property Assessed Clean Energy (PACE) program Develop education and promotion material on existing financial incentives Re-write and re-adopt ordinance and permitting process based on identified changes that are needed to make more successful 	30 kW	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$150,000	25	Residents and Businesses	

5 RECOMMENDED ACTIONS

AE1.b	Solar Hot Water	15 MT CO ₂ e	
This action targets the installation of solar hot water systems on 50 homes. Systems are assumed to offset 67% of fuel used to heat water. System cost is assumed to be \$5,000 per home. Annual savings per home are assumed to be \$143.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • RCEA • RCAA • Local Contractors • Blue Lake City Hall 	<ol style="list-style-type: none"> 1. Collaborate with the RePower project 2. Implement local ordinances and expedited permitting processes that support renewable energy on new and existing homes 3. Promote the development of a Property Assessed Clean Energy (PACE) program 4. Develop education and promotion material on existing financial incentives 5. Re-write and re-adopt ordinance and permitting process based on identified changes that are needed to make more successful 	25 homes	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$5,000 per home	35 years	Residents and Businesses	

1.1.20.1 Possible Resources

Resources regarding solar electricity:

- Redwood Coast Energy Authority
 - RePower Project
 - PACE
 - American Solar Transformation Initiative (ASTI)
- Local Contractors
- Database of State Incentives for Renewables and Efficiency (DSIRE)
- California Solar Initiative (CSI)

1.1.20.2 Potential Implementation Barriers

Solar has a high upfront capital cost which is likely to be the largest barrier. Local ordinances and streamlined permitting processes can significantly help incentivize installation by reducing regulatory hurdles.

1.1.21 Utility Alternative Energy Options

PG&E will begin offering a Green Option (www.pge.com/greenoption) for households and businesses starting Summer of 2015. This option allows PG&E customers to choose to purchase up to 100% of their electricity consumption from renewable sources that are acquired by PG&E. This provides an opportunity for those who do not have the ability to install renewable energy systems locally to still have some control over how their electricity is produced.

5 RECOMMENDED ACTIONS

AE2.a	PG&E Green Option Program	65 MT CO ₂ e	
This action recommends that the City promote the PG&E Green Option and encourage residents and business to enroll.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • RCEA • PG&E • Blue Lake City Hall 	<ol style="list-style-type: none"> 1. Monitor the progress of the Green Tariff program to track when it will begin. 2. Develop marketing collateral to advertise and encourage adoption. 3. Make the collateral available to residents and businesses. 	10% of total electricity consumption by City residents and businesses	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
\$17,500 per year at full participation	None, as cost of "green" electricity will be higher	Residents and Businesses	

AE2.b	Community Choice Aggregation	?? MT CO ₂ e	
<p>Community Choice Aggregation (CCA) is coordinated and implemented for defined region such as a County. A CCA procures electricity instead of PG&E. Residents and businesses purchase electricity from the CCA, and pay PG&E for use of the transmissions and distribution system.</p> <p>The benefit of a regional CCA is the CCA can attempt to procure a larger percentage of electricity from renewable sources compared with PG&E. Local governments can have direct influence over the procurement process and offer the community more control over where their electricity comes from.</p> <p>This action encourages the City and community to support local efforts in the pursuit of a local regional CCA.</p>			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • RCEA • Arcata • County and local jurisdictions • Blue Lake City Hall 	<ol style="list-style-type: none"> 1. Monitor existing local research and discussions 2. Engage with RCEA and Arcata to offer support 	Higher % renewable grid mix than PG&E	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
??	??	Local government	

1.1.21.1 Possible Resources

The PG&E website (www.pge.com/greenoption), offers information and program updates on their Green Option. Regarding CCAs, the following organizations are excellent resources for additional information:

- Marin Clean Energy
- Sonoma Clean Power

1.1.21.2 Potential Implementation Barriers

The main barrier to the PG&E Green Option is education. Informing the community of the option will require effort. Furthermore, enrollment is capped and it is likely to fill up quickly. Therefore, the Blue

5 RECOMMENDED ACTIONS

Lake community needs to actively promote the program early. There are numerous challenges to the formation of a CCA. To learn more contact RCEA.

REDUCING SOLID WASTE

In 2005 Blue Lake generated 1,183 tons of waste. All of this waste is trucked out of the County to either Anderson, CA or Dry Creek, OR. Furthermore, the vast majority of this waste was also trucked into the County in the form of products that were purchased in stores.

In 2005 the decomposition, transportation, and handling of solid waste generated 10% of the City's greenhouse gas emissions. However, with the upgrade of the Anderson Landfill to include methane capture and recovery this reduced the contribution from the solid waste sector down to 2%. Even so, reduction of solid waste has significant additional benefits, the primary being the reduced dependence on landfills outside of the County.

Embodied energy within the items that we throw away can be harnessed through reuse and recycling of materials. It is in Blue Lake's long-term interest to expand recycling efforts and enable the re-use of food and materials. This chapter focuses on opportunities to reduce waste, reuse materials, and recycle what cannot be reused. In addition, working to reduce waste at the point of purchase both emphasizes locally produced products and also reduces the upstream carbon footprint of the products you purchase.

Summary of Lead Agencies and Their Assigned Actions	
Blue Lake City Hall	
	SW.1: Curbside Recycling
	SW.2: Food Waste Digester Support
	SW.3: Incentivize Composting Systems

A suggested implementation timeline for the actions within this category is given below.



5 RECOMMENDED ACTIONS

SW.1 Curbside Recycling		1 MT CO ₂ e	
This action encourages the adoption of an ordinance requiring that residents and businesses obtain recycling service from their waste haulers.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Blue Lake City Hall</u> • Blue Lake Garbage • HWMA and local recycling companies • Blue Lake School • Blue Lake Chamber and Businesses • Dell'Arte School and Theatre 	<ol style="list-style-type: none"> 1. Research other local ordinances addressing recycling. 2. Develop marketing collateral promoting recycling and provide education and information to the community 3. Adopt an ordinance requiring residents to sign up for recycling services 4. Develop low or no cost city-wide curbside recycling services 	200 lbs per person per year	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City and/or Residents and Businesses	

SW.2 Support the Development of a Local Food Waste Digester		? MT CO ₂ e	
This action recommends that the City support local action towards developing a local food waste digester in the County. Food waste comprises roughly 23% of waste generated by weight. This food can be used in an anaerobic digester to generate methane which then can be used for the production of electricity, transportation fuels, and heat.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • <u>Blue Lake City Hall</u> • HWMA • HSU • Blue Lake Garbage 	<ol style="list-style-type: none"> 1. Coordinate with and support local active stakeholders 2. Consider establishing a food waste collection program in support of the project 	Completion of a food waste digester in the County	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City	

5 RECOMMENDED ACTIONS

SW.3	Provide Composting Systems and Support	38 MT CO _{2e}	
This action recommends that the City provide support for composting systems. This action can be modeled after the City of Arcata's program, or can use guidance from the many other programs that are in place in other areas.			
Potential Lead and Partner Agencies	Suggested First Implementation Steps	Target	
<ul style="list-style-type: none"> • Blue Lake City Hall • City of Arcata 	<ol style="list-style-type: none"> 1. Coordinate with the City of Arcata 2. Design composting program 3. Secure funding 4. Implement 	50 Composting Systems	
Incremental Upfront Cost	Incremental Cost Payback	Burden of Cost	
Unknown	Unknown	City and/or Residents and Businesses	

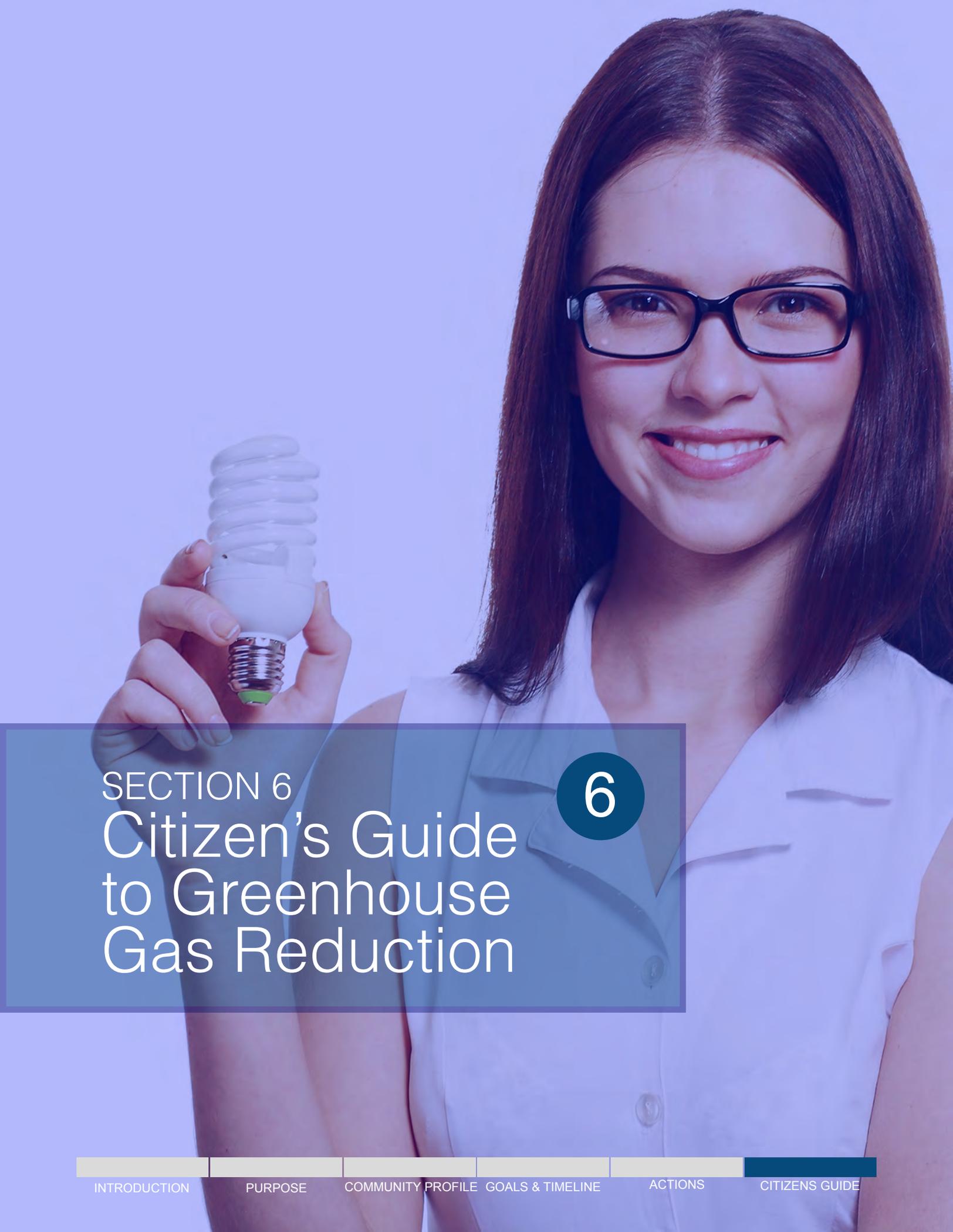
1.1.21.3 Possible Resources

Put resources here that will assist in the design and implementation of the action.

- HWMA sorting guidance and information for recycling
- City of Arcata Environmental Services Department regarding a backyard composting program

1.1.21.4 Potential Implementation Barriers

Barriers to mandatory curbside recycling are those associated with adopting an ordinance. There may be local push back to consider as well. The primary barrier to incentivizing home composting systems is obtaining funding.



SECTION 6
Citizen's Guide
to Greenhouse
Gas Reduction

6

Citizen's Guide to Greenhouse Gas Reductions

Good news! Climate change may be a global issue, but it can be tackled at the local level. Humboldt County and the City of Blue Lake have both taken initiative to create a Climate Action Plan in order to guide local policies and ensure a more sustainable future for the North Coast. The suggested measures outlined in your jurisdiction's Climate Action Plan are largely focused on municipal action, but many of these measures will not be successful without the support and participation from residents and businesses. In addition, individual actions and lifestyle changes can have a significant impact on reducing greenhouse gas emissions.

As citizens of Humboldt County, we have a responsibility to evaluate our own carbon footprints and make simple changes to our daily lives. This guide outlines actions that can be taken as a business or household to reduce carbon emissions and provides contacts for local resources.

How Can You Get Started?

Calculate your carbon footprint! Your carbon footprint measures the amount of carbon dioxide that is emitted from daily actions and choices you make. The University of California at Berkeley developed tools available online that will help you to figure out how much carbon dioxide you emit based on questions asked about your lifestyle. After you answer these questions, you will be able to see how your office or household compares to the average citizen's and pledge to take actions to reduce your footprint size!

FOR YOUR BUSINESS/OFFICE: coolclimate.berkeley.edu/business-calculator

FOR YOUR HOUSEHOLD: coolclimate.berkeley.edu/carboncalculator

Top 10 Easy Actions for your Business / Office

In order to reduce the carbon footprint of your office, employees and management need to work together to tackle some of these actions. Consider bringing up these suggestions at your next meeting and encourage everyone in your office to make these changes!

1. Set default printer settings to double-sided
2. Manage power to computers and appliances by using auto or manual power strips
3. Create an office recycling system
4. Upgrade to energy efficient appliances when they need to be replaced
5. Encourage employees to carpool
6. Designate an environmental champion to oversee office efforts
7. Encourage employees to work from home
8. Keep fleet vehicles properly maintained
9. Install lighting controls in your office
10. Avoid paper plates and plastic utensils in workplace kitchens

TOP 10 EASY ACTIONS FOR YOUR HOME

These greenhouse gas-reducing actions are quick, easy, and require little or no cost to you. Check these actions off your to-do list to conserve energy and save on your PG&E bill!

1. Capture rain water to irrigate your landscape
2. Plant drought tolerant or native plants in your landscaping
3. Use a push lawn mower if you have a lawn
4. Clean or replace air conditioning and/or furnace filter regularly
5. Set water heater temperature to 120 degrees
6. Wrap hot water pipes with insulation
7. Shop with reusable bags
8. Turn down the thermostat at night
9. Wash clothes in warm or cold water and line dry
10. Set water heater to "vacation" mode and turn down the thermostat when away on trips
11. Fill up dishwasher fully before you run it

GUIDE TO LIFESTYLE CHANGES

There are numerous more advanced actions you can take to adjust your lifestyle and make and reduce your footprint even more.

1.1.22 Driving Alternatives

The amount of miles driven by individuals adds up to one of the largest sources of greenhouse gas emissions. The best way to reduce emissions is to reduce the number of miles you drive. In order to accomplish this goal, individuals need to take responsibility for the amount of driving they do in their individual vehicle. Consider swapping your driving trips with an alternative transportation suggestion listed here:

1. Carpool to work, school, or events
2. Hop on one of Humboldt's Public Bus Routes
 - a. For more information about bus routes and schedules visit the Humboldt Transit Authority's webpage at hta.org
3. Ride your bike on Humboldt's bike-friendly roads + trail
4. Walk to work, school, events, and to run errands

1.1.23 Eco-Driving Practices

The next best thing to not driving your vehicle is practicing Eco-Driving. These tips will reduce the amount of gasoline your vehicle consumes as you drive where you need to go, saving you money and reducing your emissions!

1. Fully tighten your fuel cap to avoid gas evaporating out of your tank
2. Remove excess weight or additions to your vehicle such as roof-racks
3. Keep on top of vehicle maintenance:
 - a. Regularly check tire pressure
 - b. Change your oil, oil filter, and air filter regularly
 - c. Schedule regular tune-ups
4. Use Cruise Control on Highways
5. Keep highway speeds at or below 65 mph
6. Limit idling
7. Use your air conditioner sparingly
8. Avoid abrupt acceleration and breaking

1.1.24 Low Carbon Diet

This section outlines changes you can make to your diet that will help reduce the amount of carbon dioxide emitted throughout your food's lifecycle. It's time to start considering how your food was grown, processed, packaged, and shipped to local store before it ended up on your plate.

1. Shop Locally! There is power to impact climate change in your purchases. The food in grocery stores may have been transported from all across the country. Here on the North Coast, we have access to local produce, meat, and dairy that does not require large diesel freight trucks to travel long distances. Consider purchasing produce from the Farmer's Market and choosing dairy, eggs, and meat at the store that was produced within 50 miles of Humboldt. Check out HumFarm.org for information about the farmer's market seasons, vendors, and locations.
2. Reduce or eliminate your meat and/or dairy consumption. Growing and processing meat consumes a significant amount of fossil fuels that emit greenhouse gases into the atmosphere. Consider reducing the number of meals per week that include dairy and meat.

1.1.25 Managing Household Energy Use

Keeping track of your energy use at home may seem like a daunting task but can be accomplished one step at a time!

1. Begin with an energy efficient audit of your home! The Redwood Coast Energy Authority provides no-cost audits for your home or business through their Energy Watch Program, funded by PG&E. This assessment will generate a report of findings that will help guide your next steps to managing your home's energy use. Energy Watch provides no-cost CFL upgrades, faucet aerators, and shower heads that can be installed after your home's assessment. To apply for a No-Cost Energy Efficiency Assessment, call (707) 269-1700 or visit redwoodenergy.org.
2. If you have a low income, you may be eligible for additional energy saving services from the Redwood Community Action Agency (RCAA). To apply, (707) 476-8203 or visit rcaa.org.
3. Upgrade all incandescent light bulbs in your home with more efficient options such as CFLs or LEDs. Installing dimmer switches will allow you to adjust the amount of energy used when your lights are on and your personal brightness preference.
4. Plug small appliances into power-strips to eliminate the phantom energy load of your appliances that are constantly plugged-in. Switch off the power strip when not in use.
5. Manually or automatically adjust your thermostat depending on the season and time spent at home. Reducing your home temperature in winter by just a few degrees can make a big difference.

1.1.26 Recycling and Composting

1. Participate in your City's recycling program
2. Drop off electronic-waste (e-waste), batteries, + other hazardous material at your closest waste transfer station

3. Compost in your own backyard! Visit [2.epa.gov/recycle/composting-home](https://www.epa.gov/recycle/composting-home) to download the Composting Fact Sheet and How-To Guide

The Eureka Recycling Center pays the California Redemption Value (CRV) buy-back rate for the following items: CRV Glass, Aluminum, Plastic and Bi-Metal Bottles and Cans. Next to the Recycling Center, you can drop off garbage, green waste, and bulky items at the Transfer Station, or dump, for a fee.

Humboldt Waste Management Authority (HWMA) Recycling and Waste Reduction Hotline (707) 268-8030 provides information on recycling programs and alternative disposal methods for most household waste.

ADVANCED ACTIONS

Previous sections of this guide have suggested options that are relatively easy and low-cost. The Advanced Actions listed in this section will require both time and financial resources to accomplish, but will make a significant impact on your carbon footprint! Start investing in your energy-saving future here:

1. Upgrade your vehicle or vehicle fleet
 - a. Consider purchasing an alternative-fuel vehicle to save money and reduce emissions. For information about electric vehicles on the North Coast visit redwoodenergy.org/programs/electric-vehicles
2. Replace outdated appliances with energy star rated appliances
 - a. Energy Star rated appliances are the most energy efficient types of appliances to purchase and may even be eligible for rebates. Visit energystar.gov for more information.
3. Invest in home efficiency upgrades
 - a. Some examples of home upgrades that will make your home more efficient are duct sealing and adding insulation. Building Performance Institute (BPI) trained contractors will insure that projects completed on your home are certified energy efficient.
 - b. Upgrades to your home may qualify for the Energy Upgrade California rebate program. Visit energyupgradCA.org for qualifying upgrade projects!
4. Install solar PV panels
 - a. Schedule a solar site assessment for your home and work with contractors to find the best system to install in your home.
5. Purchase carbon offsets
 - a. Purchasing carbon offsets can finance eco-friendly projects world-wide, such as wind turbines, solar-rooftops, or reforestation. "Carbon offset projects can produce positive

quality of life impacts such as increasing economic and social development and support clean technology” (Cool Climate Network).

FINANCING OPTIONS

1. Umpqua Bank GreenStreet Lending: 1 (866) 790-2121, greenstreetloan.com

LOCAL RESOURCES GUIDE

Use the following list of local resources to get more information on actions as well as assist you in your efforts to reduce your carbon footprint.

BLUE LAKE RANCHERIA TRANSIT: (707) 668-5101, <http://www.bluelakerancheria-nasn.gov/boTransit.html>

- Bus route and fare information

REDWOOD COAST ENERGY AUTHORITY (RCEA): (707) 269-1700, redwoodenergy.org

- No-cost energy efficiency assessment for home or business
- Information about electric vehicles, solar, heat pumps, + financing

REDWOOD COMMUNITY ACTION AGENCY (RCAA): (707) 476-8203, rcaa.org/division/energy-services

- Income dependent energy efficiency retrofits + weatherization
- Educational energy demonstration center

ENERGY UPGRADE CALIFORNIA (EUC): (707) 269-1700 (RCEA), energyupgradeca.org

- Earn back up to \$4500 in rebates for home efficiency upgrades
- Informational homeowner's workshops held at Redwood Coast Energy Authority

PACIFIC GAS & ELECTRIC (PG&E): 1-800-933-9555, smarter-energy@pge.com

- Guide for installing home solar energy systems
- PG&E's special rate for PEV owners
- Rebates for energy efficient products + appliances

HUMBOLDT WASTE MANAGEMENT AUTHORITY (HWMA): (707) 268-8680, hwma.net/hawthorne-street/recycling-center, 1059 West Hawthorne Street, Eureka

- Information about local garbage + recycling pick up
- Recycling center pays California Redemption Value (CRV)
- Hazardous waste, batteries, electronic waste, + green waste disposal

HUMBOLDT TRANSIT AUTHORITY (HTA): (707) 443-0826, hta.org

- Bus route and fare information

NORTH COAST GROWERS ASSOCIATION FARMERS MARKETS: (707) 441-9999, humfarm.org

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CITIZEN'S GUIDE TO GREENHOUSE GAS REDUCTIONS

- Location, season, and times of local farmers markets
- Information about local farmers + produce
- EBT acceptance

BLUE LAKE GARBAGE CO.: (707) 444-2903

- Weekly garbage pick-up and/or curbside recycling

BLUE LAKE CITY HALL: (707) 668-5655, bluelake.ca.gov

- The City of Blue Lake offers free Green Waste disposal to its residents at various times throughout the year. You will find Notice of upcoming Green Waste Disposal Days on your monthly water/sewer bills



A

Appendix A





Appendix A PUBLIC INPUT FROM THE TOWN HALL MEETING

A town hall meeting was held to receive public input regarding a draft version of this climate action plan. The meeting was held at the Skinner Store, 111 Greenwood Ave., on Saturday April 5th, 2014, from 3pm - 4:30pm.

Meeting Representatives

- Lana Manzanita, Blue Lake Mayor Pro-Tem
- John Berchtold, Blue Lake City Manager
- Garry Rees, Streamline Planning – Blue Lake Consulting City Planner
- Lori Biondini, RCEA Energy Specialist
- Jerome Carman, RCEA Program Assistant
- Matthew Marshall, RCEA Executive Director
- Olivia Smith, RCEA Program Support Intern

Meeting Introduction

Lana Manzanita began meeting with an introduction of herself and the topic of the meeting. Lana introduced Garry Rees who briefly described work that has been completed so far under the SGC Grant and explained the purpose of holding the Town Hall meeting. Matthew Marshall gave introductions for representatives from the Redwood Coast Energy Authority. Jerome Carman reviewed the agenda of the meeting and lead straight into his prepared power point presentation.

Presentation on the Draft Climate Action Plan

Jerome Carman introduced the purpose and background of the Blue Lake Climate Action Plan. His presentation included information about the role of the community and the target emissions reduction goals. RCEA's Lori Biondini gave a brief description of the Mad River Valley RePower project that dovetails into Blue Lake's renewable energy and home energy use reduction goals.

Breakout Group Discussions

Meeting participants were split into four groups and assigned the actions from a specific sector. They were given an informational folder that included a copy of the Draft Climate Action Plan, a one page summary of the Greenhouse Gas Inventory Report, and a copy of the Citizen's Guide to Greenhouse Gas Reductions. Each participant filled out a discussion guidance worksheet that prompted the following questions:

- a) Which actions would you support the City of Blue Lake in pursuing? Why?
- b) Which actions listed do you not like or agree with? Why?
- c) What additional ideas do you have as options the City of Blue Lake could pursue?

Summary of Comments and Suggestions

Participants made the following comments/suggestions:

- 1) ENERGY EFFICIENT BUSINESSES
 - a) Create a business owner group to organize energy efficient actions
 - b) Provide information to businesses (coordinate w/ City for funding)
 - c) Planning/organizing to support local businesses
 - d) Chamber of Commerce:
 - i) Energy survey



PUBLIC INPUT FROM THE TOWN HALL MEETING

- ii) Ways to reduce energy: info and promotion
- iii) Track reductions (by %)
- iv) Business recognition award during town event
- 2) ENERGY EFFICIENT HOMES
 - a) Funding for time of sale mandate
 - b) For seller and/or buyer?
 - c) Dry upgrade
 - d) Organize energy efficiency community group
 - e) Heat pump action clarification and additional information
 - f) City supported water catchment
- 3) ALTERNATIVE TRANSPORTATION
 - a) “Affordable, Understandable, & Doable”
 - b) EV and alternative fuel vehicles affordable for Blue Lake?
 - c) Communication improvement between City and citizens
 - d) Safe biking trails
 - e) Commute-convenient timing of bus route
- 4) SOLID WASTE REDUCTION
 - a) Sorting guidance and information
 - b) Tie in compost soil/fertilizer with growing food locally
 - c) Collective Green waste collection
 - d) Pick-up is currently not mandatory and should be marketed to whole city
- 5) ALTERNATIVE ENERGY SOURCES
 - a) Wind power
 - b) PACE financing
- 6) OTHER ACTIONS
 - a) Address barriers:
 - i) Communication: step by step procedure
 - ii) Organizing group or energy committee to promote as “cool”
 - iii) Add info to/communicate through city website
 - b) Emphasize community cooperation
 - c) Blue Lake Nature Park
 - d) Restore old Blue Lake
 - e) Mad River Valley land trust
 - f) Powers Creek restoration
 - g) Form “energy committee”
 - h) Add climate adaptation section to Blue Lake CAP
 - i) Community forest

MEETING WRAP UP

After the public comments were made, there was not enough time to discuss part two of the discussion guidance worksheet that prompted the following questions:

- a) Many of these actions require active participation from the citizens if they are to be successful. Do you have any ideas for ways to engage residents/businesses and encourage participation?



PUBLIC INPUT FROM THE TOWN HALL MEETING

- b) Did you identify any issues or barriers that would prevent the Climate Action Plan from being successfully implemented?
- c) Do you have any general feedback or questions about the City's pursuit of a Climate Action Plan?
- d) Do you have any feedback or questions about the draft Climate Action Plan document itself?

Those participants who were interested in forming an energy committee left their contact information on the sign-in sheet and were sent to a Blue Lake citizen who expressed interest in leading this endeavor.



www.bluelake.ca.gov