Regular Meeting Agenda

Monday, May 16, 2022 at 6:00 pm

621 11th Street, Fortuna CA

- We May Disagree, But We Will Be Respectful of One Another
- All Comments Will Be Directed to the Issue at Hand, and Addressed to the City Council
- Personal Attacks are Unacceptable
- The City Council May Take Action on any Item on this Agenda.

AMENDED AGENDA

1. **CALL TO ORDER / FLAG SALUTE / ROLL CALL**

   Council

   - Council Member Mike Johnson
   - Council Member Mike Losey
   - Council Member Jeremy Stanfield
   - Mayor Pro Tem Tami Trent
   - Mayor Sue Long

   Staff

   - City Manager Merritt Perry
   - City Clerk Siana L. Emmons

2. **PRESENTATIONS / PROCLAMATIONS**
   a. **Climate Action Plan**
3. **ORAL COMMENTS FROM THE PUBLIC**

   Members of the Public may be heard at this time on any item within the subject matter jurisdiction of the City that is not on the Public Meeting Agenda. It is the practice of this Council to hold public comment for every item of business on the agenda at the time

that item is heard. If a speaker cannot stay for a particular item of business, they may be heard during this time. Comments concerning the Consent Calendar may also be heard at this time. Speakers addressing the Council will be limited to 3 minutes per speaker. Be advised that, by law, the City Council can only deliberate or take action on items that are included on the agenda.

(See zoom meeting details above)

4. **CONSENT CALENDAR**

   These matters are routine in nature and are usually approved by a single vote. Any member of the Council may pull a particular item for further discussion.

   a. **City Council Minutes – May 2, 2022 (Special Meeting) & May 2, 2022 (Regular Meeting)**
   b. **Administrative Department Monthly Report**
   c. **Community Development Department Monthly Report**
   d. **Finance Department Monthly Report**
   e. **Parks & Recreation Monthly Report**
   f. **Police Department Monthly Report**
   g. **Public Works Monthly Report**
   h. **River Lodge Monthly Report**
   i. **Report of Disbursements**
   j. **Declaration of Surplus Property and Authorization to Dispose of Surplus Property; Resolution 2022-14**
   k. **Authorization to File the Final Subdivision Map for Smith Lane Subdivision**

5. **CITY COUNCIL BUSINESS**
   a. **Second Reading: Zoning Map Amendment**
   b. **First Reading: Mandatory Organic Waste Disposal Ordinance**
6. **DISCUSSION**
   a. **Fortuna Business Improvement District**
7. **CITY MANAGER'S REPORT**
8. **FUTURE AGENDA ITEMS**

   At this time, members of the Council may consider or request items to be placed on a future agenda through a consensus of the majority.

9. **CITY COUNCIL REPORTS AND COMMENTS**
   a. **Council Member Mike Johnson**
      Humboldt County Association of Governments (HCAOG), Historical Commission, League of California Cities Transportation, Communication, & Public Works Commission, Indian Gaming Commission Alternate, Redwood Coast Energy Authority Alternate

   b. **Council Member Mike Losey**
      Redwood Coast Energy Authority, Local Agency Formation Commission (LAFCO), Humboldt Transit Authority Alternate, Parks & Recreation Alternate

c. **Council Member Jeremy Stanfield**
   Fortuna Business Improvement District (FBID), Parks & Recreation Commission, Redwood Region Economic Development Corporation (RREDC) Alternate, Historical Commission Alternate

d. **Mayor Pro Tem Tami Trent**
   Humboldt Transit Authority (HTA), Indian Gaming Commission, League of California Cities Public Safety Commission, Fortuna Business Improvement District (FBID) Alternate

e. **Mayor Sue Long**
   Redwood Region Economic Development Corporation (RREDC), Humboldt County Redevelopment Oversight Board, Humboldt County Association of Governments (HCAOG) Alternate, LOCC Housing, Community, & Economic Development Committee, Humboldt County Access Network

10. **ADJOURN TO CLOSED SESSION**
    a. **CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION, Initiation of litigation pursuant to paragraph (4) of subdivision (d) of section 54956.9: 1 Case**
11. **REPORT OUT AND ADJOURN**

Contact: Siana L. Emmons, City Clerk (semmons@ci.fortuna.ca.us 707-725-1409) | Agenda published on 05/10/2022 at 4:21 PM

STAFF REPORT
City Council Presentation

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Liz Shorey, Deputy Director of Community Development

THROUGH: Merritt Perry, City Manager

SUBJECT: **Presentation on the Public Review Draft Climate Action Plan**

STAFF RECOMMENDATION:

Staff recommends the Council receive an update of the Public Review Draft Climate Action Plan.

INTRODUCTION

The City has been working with Humboldt County Planning, Redwood Coast Energy Authority (RCEA), and numerous cities (Rio Dell, Ferndale, Eureka, Arcata, and Blue Lake) on a regional Climate Action Plan (Plan). The Council authorized a Memorandum of Understanding to conduct this work on April 15, 2019. Staff has met regularly with the regional working group to develop the plan elements. An update presentation was made to the Fortuna City Council on May 17, 2021. The purpose of this presentation is to provide the Public Review Draft Climate Action Plan and describe next steps.

BACKGROUND:

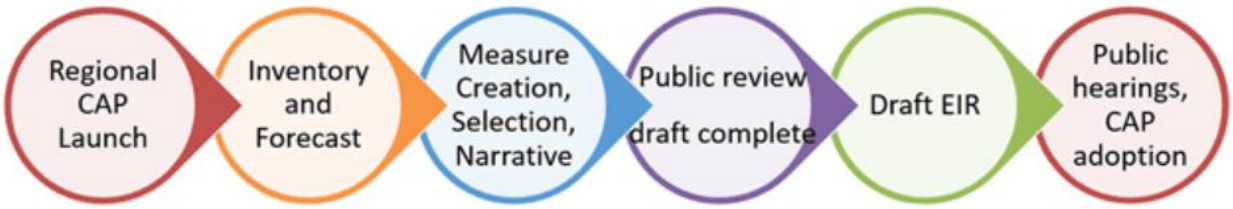
A Climate Action Plan (CAP) is a long-range strategy to reduce emissions of greenhouse gases, which include carbon dioxide, methane, nitrous oxide and water vapor. Climate action plans set a baseline for past and current emissions, forecast future emissions and establish targets to reduce future emissions. In 2006 the California Legislature passed the Global Warming Solutions Act, also known as AB 32, which established the 2020 emissions target and gave the California Air Resources Board the task of developing a plan to hit the target. In 2008 the Legislature amended the California Environmental Quality Act (CEQA) to require that projects analyze greenhouse gas emissions as a potential impact to the environment.

Climate Action Plans may provide CEQA streamlining for projects that comply with a qualified Plan. The intent is that the Plan will meet the CEQA thresholds for streamlining, which will allow development projects to tier off the Plan and avoid a project-specific greenhouse gas (GHG) inventory as otherwise required by CEQA. Developing a CAP is the most cost-effective and legally defensible way for a local government to meet this requirement.

DISCUSSION:

The Public Review Draft Plan was released on April 7, 2022, with a review period through May 26, 2022 (see attached Public Review Draft Climate Action Plan; also available online at https://humboldtgov.org/2464/Climate-Action-Plan). Thereafter, the Humboldt County Board of Supervisors will authorize County staff to have a Draft Environmental Impact Report to be

prepared, then circulated, followed by additional public review and public hearings, and CAP/Plan adoption:



PLAN COMPONENTS

The CAP consists of the following components:

Chapter 1 provides the purpose and scope of the CAP, overview of greenhouse cases, climate science and policy, as well as context on existing efforts to curb GHG emissions within the community.

Chapter 2 details GHG emissions in Humboldt County. GHG inventories are presented by sector with a discussion of baseline inventory years, data collection and the choice of sectors included in the analysis. Results are presented by sector and jurisdiction.

Chapter 3 presents a vision for the region in the coming decades, as well as broad goals to help achieve that vision. These goals are translated into GHG emissions targets and compared to business-as-usual forecasts. This vision and set of goals and targets are placed in the context of State, national, and global efforts.

Chapter 4 presents a plan for reducing the region's emissions to meet local targets. Strategies for each sector, including the potential for emissions reduction for individual sectors, are presented at the beginning of each sub-section. The rationale for focusing on certain strategies, legal and regulatory limitations, and the impacts of existing legislation and rulemaking are provided. Individual measures are the "tactics" that fit into these overall, sector-based strategies. Co-benefits are also described.

Chapter 5 includes high-level actions to enhance carbon storage on Humboldt County's natural and working lands (forest lands, agricultural lands, and wetlands) and in its urban areas.

Chapter 6 describes how the region will work together in the coming years to maximize the effectiveness of the CAP and contains jurisdiction commitments, along with specifics of implementation, updating, monitoring, and adaptive management.

FISCAL IMPACT:

The City committed $5,000 towards the Plan in the Memorandum of Understanding (MOU). It also received a $5,000 grant from RCEA for the work. The MOU also committed a minimum $5,000 of City staff resources. Staff has contributed significantly more hours towards the project. These are unreimbursed hours. The Humboldt County Association of Governments (HCAOG) has received grant funds to cover the cost of the CEQA review for the Plan adoption.

ATTACHMENTS:

Public Review Draft Climate Action Plan

Humboldt Regional Climate Action Plan

Public Review Draft

April 7, 2022

Preparers of this draft included staff from each of the cites; Jerome Carman, Environmental Indicator Accounting Services (EIAS); Aisha Cissna, Redwood Coast Energy Authority (RCEA); Michael Furniss, Furniss and Associates; Katy Gurin, EIAS; Connor McGuigan, County of Humboldt; Michael Richardson, County of Humboldt; and Sam Smith, RCEA

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List of Acronyms and Abbreviations

Acronym	Expansion
A	Amp
AB	Assembly Bill
AC	Alternating Current
AMRTS	Arcata-Mad River Transit System
BAU	Business As Usual
BEV	Battery Electric Vehicle
BMP	Best Management Practice
C&D	Construction and Demolition
CAISO	California Independent Systems Operator
CalEPA	California Environmental Protection Agency
CAP	Climate Action Plan
CAPE	Comprehensive Action Plan for Energy
CARB	California Air Resources Board
CAT	California Action Team
CCE	Community Choice Energy
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CNG	Compressed Natural Gas
CO_2	Carbon Dioxide
CPUC	California Public Utilities Commission
CSU	California State University
EIAS	Environmental Indicator Accounting Services
EIR	Environmental Impact Report
EO	Executive Order
EV	Electric Vehicle
FCEV	Fuel Cell Electric Vehicle
FIT	Feed-in Tariff
FTE	Full Time Equivalent

FY	Fiscal Year
GHG	Greenhouse Gases
GPU	General Plan Update
HCAOG	Humboldt County Association of Governments
HFC	Hydrofluorocarbon
HSU	Humboldt State University
HTA	Humboldt Transit Authority
HWMA	Humboldt Waste Management Authority
ICLEI	International Council for Local Environmental Initiatives
ICT	Innovative Clean Transit
IEPR	Integrated Energy Policy Report
IPCC	Intergovernmental Panel on Climate Change
LCA	Life Cycle Analysis
LEED	Leadership in Energy and Environmental Design
MFH	Multi-Family Home
MMT	Million Metric Tons
MT	Metric Tons
MW	Megawatt
NCRAQMD	North Coast Regional Air Quality Management District
NCRP	North Coast Resource Partnership
NCUAQMD	North Coast Unified Air Quality Management District
NEM	Net Energy Metering
O&M	Operations and Maintenance
OPR	Office of Planning and Research
PEV_FleEt	PEV Fleet Evaluation Tool
PG&E	Pacific Gas & Electric
PHEV	Plug-in Hybrid Vehicle
PRC	Public Resources Code
PSPS	Public Safety Power Shutoff
RCAA	Redwood Community Action Agency
RCEA	Redwood Coast Energy Authority

RPS	Renewable Portfolio Standard
RTS	Redwood Transit System
SB	Senate Bill
SCS	Sustainable Communities Strategies
SEEC	Statewide Energy Efficiency Collaborative
SERC	Schatz Energy Research Center
SIP	State Implementation Plan
SLCP	Short-Lived Climate Pollutants
SOC	Soil Organic Carbon
SUV	Sport Utility Vehicle
TMA	Transportation Management Association
U.S. EPA	United States Environmental Protection Agency
UNFCCC	United Nations Framework Convention on Climate Change
V	Volt
VMT	Vehicle Miles Traveled
WUI	Wildland Urban Interface
ZEB	Zero Emission Bus
ZEV	Zero Emission Vehicle

EXECUTIVE SUMMARY

This Public Review Draft Humboldt Regional Climate Action Plan (CAP) is a collaborative effort between the County of Humboldt, City of Arcata, City of Blue Lake, City of Eureka, City of Ferndale, City of Fortuna, City of Rio Dell, and City of Trinidad to craft a regional approach for addressing the challenges of climate change. A regional approach leverages staff time and resources, making the overall effort less of a burden compared to each jurisdiction drafting a CAP from scratch. It also enables improved coordination which will maximize the effectiveness of GHG reduction measures and may prove useful in securing grant funding.

The primary goal of the CAP is to reduce greenhouse gas (GHG) emissions from local sources because the scientific consensus is that significant reductions in human-caused GHG emissions are needed by the mid-21st century to prevent the most catastrophic effects of climate change.

The CAP begins with an inventory of baseline GHG emissions for the region in 2015 which leads to an understanding of where emissions are being generated and begins to reveal where effective emission-reduction strategies might be targeted. The inventory shows most local emissions come from transportation (53%), a difficult sector to address. Most of the remaining emissions are from livestock (13%), stationary combustion sources such as the use of natural gas and propane within buildings (12%), and electricity consumption (11%).

Geographically, emission sources loosely follow population figures, so Humboldt County with more than half of the region's population contributes the most (61%), followed by the Cities of Eureka (18%) and Arcata (12%). All the other cities combined contribute less than 10% of the countywide GHG emissions.

Based on the inventory results, the CAP makes forecasts of what countywide GHG emissions will be in the future out to the year 2040. Several scenarios are compared - one scenario uses a "Business as Usual" prediction assuming no GHG emission reduction measures will occur, and this scenario results in the highest emission rate in the future – 1.4 million metric tons of carbon dioxide equivalent ($MTCO_2e$) per year for the region by 2030.

A second scenario incorporates emissions reductions anticipated as the result of previous State and local actions, such as the waste reduction requirements mandated by SB 1383, without considering the measures in the CAP. This "legislative adjusted" emissions scenario forecasts a reduction in the emission rate to 1.2 $MTCO_2e$ by 2030. This amount is well short of the statewide goal of 0.96 $MTCO_2e$ per year for the region by 2030.

The third scenario assumes all the emission reduction measures in the CAP are implemented as well as the statewide measures. Only this third scenario – the one involving local efforts – is forecasted to achieve the statewide planning goals. It results in a forecasted GHG emission rate of 0.54 $MTCO_2e$ per year in 2030 for the region. This scenario meets the State's 2030 goals and puts the region in position to meet the longer-term goal of net-zero emissions by 2045 per Executive Order B-55-18.

Following examples from other CAPs and guidance from the International Council for Local Environmental Initiatives' *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions* (Community Protocol) the draft CAP proposes an inventory that

excludes project-level industrial sources of GHG emissions, also known as "point source" emissions. This approach makes sense considering local governments normally have no discretion over industrial air pollutants which are regulated by the North Coast Unified Air Quality Management District.

But there is room for debate on this issue, and because of the closure of pulp mills on the Samoa Peninsula and other industrial uses since 1990, an inventory that includes point source industrial emissions would show the County is closer to meeting statewide planning targets for 2030. This will be a topic of discussion for jurisdictions as the draft CAP moves forward to adoption.

The proposed GHG reduction measures in the CAP build on a long history of Humboldt residents' actions on climate change. The City of Arcata took an early lead in addressing GHG emissions in 2000 by establishing an Energy Committee and joined the International Council for Local Environmental Initiatives' (ICLEI) Cities for Climate Protection campaign. The City of Blue Lake adopted its first Climate Action Plan in 2014, and Humboldt County and the local energy provider Redwood Coast Energy Authority committed to 100% renewable energy sources by 2025.

The primary GHG reduction measures identified in the CAP will result in measurable, quantifiable reductions in emissions. Supporting measures are qualitative measures that are difficult to quantify but will still contribute to achieving local GHG reductions.

The top five measures in the CAP that achieve the most local GHG emissions reductions by

the year 2030 include:

- Measures 1.1.1.2 and 1.1.1.3: Replacing gas powered vehicles with electric vehicles will reduce annual emissions by 69,301 $MTCO_2e$.
- Measures 3.2.1.1 and 3.2.1.2: Replacing gas/propane residential water heating systems with electrically-powered systems will reduce emissions annually by 38,623 $MTCO_2e$.
- Measure 3.2.6.1: Replacing gas/propane commercial heating systems with electrically-powered systems will reduce emissions annually by 20,928 $MTCO_2e$.

While the measures included in the CAP are geared towards reducing GHG emissions, many will also result in environmental or economic "co-benefits," including improvements to public health. The CAP also discusses some GHG reduction measures that have not yet been quantified, but with further study may make important contributions to meeting the GHG reduction targets. For example, wetland restoration and enhancement projects such as those in the sloughs around Humboldt Bay are highly effective in sequestering additional carbon over time and holding it out of the atmosphere for long periods. Wetland restoration and enhancement projects also achieve the co-benefits of improvements in aquatic diversity and ecosystem health and productivity, and increase the resilience of these biologically rich systems to climate warming and sea level rise.

Implementation of the measures in the CAP will require the jurisdictions adopt new ordinances, programs and projects. Monitoring is an important aspect of the CAP to ensure the region is on track to achieve the GHG reduction targets. The CAP assumes regular

updates of the baseline information at least once every five years to track the community's progress on CAP implementation.

If statewide targets are met, jurisdictions may use the CAP to streamline the analysis of project-level GHG emissions during environmental review, pursuant to CEQA Guidelines Section 15183.5. Projects that are consistent with the CAP have no further GHG impact analysis requirements, which could save applicants thousands of dollars in permitting large projects.

Local actions to reduce GHG emissions and adapt to climate change require active and ongoing partnerships between residents, businesses, the cities and County, and many other agencies and organizations in the region. Refinement and adoption of the CAP is an important step in a long series of local actions that have and will be taken toward reducing the effects of climate change.

1. Introduction: The Framework for Humboldt County Climate Action

The Humboldt Regional Climate Action Plan (CAP) is the product of a multi-year, collaborative effort between:

- the County of Humboldt,
- City of Arcata,
- City of Blue Lake,
- City of Eureka,
- City of Ferndale,
- City of Fortuna,
- City of Rio Dell
- City of Trinidad, and
- the Redwood Coast Energy Authority (RCEA).

The following paragraphs summarize the chapters in the CAP:

Chapter 1 provides background on how and why this plan was created and how it will work. This chapter also contains a brief overview of GHG's, climate science and policy, as well as context on existing efforts to curb GHG emissions within the community.

Chapter 2 details GHG emissions in Humboldt County. In this chapter, GHG inventories are presented by sector with a discussion of baseline inventory years, data collection and the choice of sectors included in the analysis. Results are presented by sector and jurisdiction.

Chapter 3 presents a vision for our region in the coming decades, as well as broad goals to help achieve that vision. These goals are translated into GHG emissions targets and compared to business-as-usual forecasts. This vision and set of goals and targets are placed in the context of State, national, and global efforts.

Chapter 4 presents a plan for reducing our region's emissions to meet our targets. Strategies for each sector, including the potential for emissions reduction for individual sectors, are presented at the beginning of each sub-section. The rationale for focusing on certain strategies, legal and regulatory limitations, and the impacts of existing legislation and rulemaking are provided. Individual measures are the "tactics" that fit into these overall, sector-based strategies.

Co-benefits are also described in Chapter 4. These are other noteworthy benefits of the implementation measures beyond GHG reduction. For instance, encouraging commuters to use bikes instead of gas-powered vehicles to get to work not only reduces GHG emissions, but has health co-benefits as well.

Chapter 5 includes high-level actions to enhance carbon storage on Humboldt County's natural and working lands (forest lands, agricultural lands, and wetlands) and in its urban areas.

Chapter 6 describes how the region will work together in the coming years to maximize the effectiveness of the CAP and contains jurisdiction commitments, along with specifics of implementation, updating, monitoring, and adaptive management. It also includes reference citations for each chapter.

1.1 KEY OUTCOMES

Key outcomes of the Humboldt Regional Climate Action Plan include:

Reduce greenhouse gas emissions. The immediate goal of the draft CAP is to reduce greenhouse gas emissions to 40% below 1990 levels consistent with statewide targets. Achieving this goal will improve the chances our region can meet the state's longer term goal to become carbon neutral by 2045.

An integrated approach. This effort was founded on the principle that more can be achieved by working together. An important outcome of this plan will be enhanced regional coordination on GHG emission reduction programs and other initiatives addressing climate change. A staff position dedicated to CAP coordination, referred hereafter as the "CAP Coordinator" and described in section 6.1, will be created to facilitate coordination between jurisdictions and implementation of the CAP.

Public engagement. Development of the draft CAP was guided by public input at several workshops, and an extensive public outreach effort will be undertaken for environmental review and adoption of the CAP. Implementation of this plan will require active participation and engagement from the community, as well as with agencies' management and elected officials. A stakeholder group is anticipated to be convened after adoption of this CAP, and public education and outreach will occur throughout implementation of the CAP's action items.

Permit Streamlining. Adoption of a CAP that meets State requirements enables a streamlined path through the analysis of project-level GHG emissions during environmental review. Finding consistency with the CAP is the only documentation needed for analysis of GHG emissions, which could save applicants thousands of dollars in permitting large projects.

Clean energy jobs. This plan encourages investments in renewable energy workforce development and clean energy infrastructure. By 2030 local electricity is expected to be 100% renewable which will support this new workforce.

Waste diversion. SB 1383 Short-Lived Climate Pollutants, adopted in 2016 by the State Legislature, establishes a target to divert 75 percent more waste from landfills by 2025 to help reduce carbon emissions. Measures to divert organic waste from landfills will help our community achieve State mandates as emissions are cut. Limiting the amount of waste sent to landfills helps conserve valuable materials and reduces burden on the environment.

More accessible communities. Implementing this CAP will make it easier, cheaper, and more fun to get around the County and the cities by improving accessibility of public transit, expanding shared mobility, promoting active transportation modes like walking and biking; and making communities more compact and connected.

Leveraging the carbon sequestration ability of natural and working lands. Efforts to restore, manage, and conserve natural and working lands (forest and agricultural lands) can have profound impacts on the climate and our ability to adapt. This CAP includes a high-level overview of carbon sequestration and wildland adaptation, along with measures to support conservation and restoration of natural and working lands.

Cleaner indoor and outdoor air. Several CAP measures encourage fuel-switching from fossil fuels like gasoline, diesel, natural gas and propane to all-electric in homes and vehicles. In addition to emitting GHGs, the burning of fossil fuels releases pollutants that can harm human health. Electrification measures presented in Chapter 4 of the CAP helps us reduce GHG emissions and breathe healthier air.

1.2 OVERVIEW

Climate change is increasingly negatively affecting local ecosystems, human health, economic values, infrastructure, and water supplies. For example, the Humboldt Bay region is experiencing the highest rate of sea level rise on the west coast of North America, and flooding in coastal communities such as Fairhaven, Fields Landing, and King Salmon is expected to become more commonplace in the coming decades. In California, wildfire hazards are intensifying due to higher temperatures, which affects air quality, and in turn, health. As global GHG emissions continue to rise, these problems are expected to intensify.

In the meantime, communities, governments, and businesses have been working to cut emissions and end fossil fuel dependence. Per Executive Order N-79-20, California will no longer allow sales of new gas or diesel-powered vehicles in the State past 2035. General Motors, one of the world's largest automakers, has pledged to stop making gasoline or diesel-powered vehicles by 2035 as well. In California, communities are ending the construction of new fossil fuel infrastructure in homes by passing decarbonization ordinances. For instance, the City of Petaluma recently banned the construction of new gas stations to become carbon neutral by 2030. It is clear that an energy transition is coming, but how will that affect Humboldt County?

Climate action planning provides an opportunity to make global and statewide efforts relevant at the local level. Cities and counties typically control land use, infrastructure, and community services; thus, local governments have an important role to play in collaborative efforts to address climate change.

This CAP recognizes local actions to reduce GHG emissions and adapt to climate change requires active and ongoing partnerships between residents, businesses, the cities and County, and many other agencies and organizations in the region. This CAP outlines strategies to be implemented between 2022 and 2030 to reduce county-wide GHG emissions[1] to 40% below 1990 levels by 2030 and make progress toward the State's goal of zero net emissions by 2045.

In California, local climate action planning is typically comprised of the following six planning steps:

[1] Net-zero emissions means that any greenhouse gas emissions from human activity are balanced by additional efforts to capture and store carbon

Approval of this draft CAP by jurisdictions will complete the first three steps and sets a course for completion of all the rest.

The GHG inventories in Chapter 2 of this CAP (Step 1) include the following sectors:

- Mobile Combustion (transportation)
- Livestock
- Electricity
- Stationary Combustion (e.g. home heating)
- Solid Waste
- Wastewater Treatment
- Leaked Refrigerants

Site-specific or "point source" industrial sources of GHG emissions are also described in some detail. The draft CAP proposes to exclude these emissions from the inventory following examples from other CAPs and guidance from the International Council for Local Environmental Initiatives' *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions* (Community Protocol). While this approach has merit, other considerations suggest industrial point sources should be included in the GHG inventory, so it will be an alternative for discussion. More information on the issue is presented in Chapters 2 and 3.

Based on the inventory of GHG emissions this CAP articulates a set of goals, strategies, objectives and quantified measures to reduce emissions from:

- Mobile Combustion (transportation)
- Electricity
- Stationary Combustion (e.g. gas and propane appliances)
- Solid Waste

High-level unquantified measures to sequester carbon on working lands and natural areas will supplement the measures reducing GHG emissions and position the region to become carbon-neutral by 2045. These measures were reviewed by representatives from each jurisdiction with input from public workshops, and they will be refined by more extensive public outreach during the environmental review and adoption phases. Community meetings in 2022 will help each jurisdiction select the measures that best fit, and they will all be combined together to form the Regional CAP.

The proposed measures in this CAP achieve GHG emission reductions that meet the State's target for 2030 (40% below 1990 levels), and if the final adopted version also meets that target, the CAP will be helpful for streamlining environmental review of future development. It should be noted that some communities in California have chosen a different path, approving instead CAPs that are more aspirational and don't meet State targets. In these communities, permitting development of large projects can be more cumbersome because of the project-level GHG analysis required, which adds time and costs to the permit review process. While to date there has been no support expressed for this alternate approach for the CAP, it is an option available to Humboldt County jurisdictions.

Ultimately, this CAP will be a commitment by the County of Humboldt and the seven cities within its boundaries to a set of measurable, concrete actions that will enable meeting targets agreed upon by member jurisdictions. It is anticipated a staff position will be created and a stakeholder group formed after the CAP is approved to assist local governments implement and monitor the CAP measures, and guide future updates.

In developing and implementing the CAP, this region recognizes its place in solving a global problem. It demonstrates how Humboldt County's local governments are committed to working in partnership with the State to address the impacts of climate change.

1.3 CLIMATE SCIENCE BACKGROUND

There is broad consensus in the scientific community that the Earth's climate is changing rapidly, primarily because of human activity—namely, the release of heat-trapping GHGs into the atmosphere. The impacts of rising temperatures will be wide-ranging, with different areas facing unique sets of challenges. A 2018 study of projected climate change impacts in California's North Coast region—encompassing Mendocino, Humboldt, Del Norte, Lake, Trinity and Siskiyou Counties—found the following:[2]

- Average annual maximum temperatures are likely to increase by 5-9 °F throughout the region through the end of the 21st century. Interior regions will experience the greatest degree of warming, with less warming projected along the coast.
- Annual precipitation is not expected to change significantly but will likely be delivered in more intense storms and within a shorter wet season. As a result, the region is expected to experience prolonged dry seasons and reduced soil moisture, even if annual precipitation stays the same or moderately increases. Less precipitation will fall as snow, snow will tend to melt more quickly and average snowpack will fall to historically low levels.
- A rise in extreme precipitation events is likely to increase the frequency and extent of flooding in low-lying areas, particularly along the coast, where food production will be impacted by rising sea levels.

[2] Grantham, Theodore (University of California, Berkeley). 2018. North Coast Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCC4A-2018-001. Disclaimer: This report summarizes recent climate research, including work sponsored by the California Natural Resources Agency and California Energy Commission. The information presented here does not necessarily represent the views of the coordinating agencies of the State of California.

- Streamflow in the dry season is expected to decline, and peak flows in the winter are likely to increase.
- Sea level rise projections vary along the coast but are greatest for the Humboldt Bay region and Eel River delta, threatening communities, prime agricultural land, critical infrastructure and wildlife habitat. Rising sea levels will result in rising groundwater levels near the coast, causing increased backwater flooding from reduced stormwater drainage capacity and emerging groundwater.
- Wildfires will continue to be a significant disturbance in the region. Future wildfire projections suggest a longer fire season, an increase in wildfire frequency and severity and an expansion of the area susceptible to wildfire.

These changes will have significant consequences for ecosystems, working lands and the built environment. These include:

- Increased flood and landslide risks to critical infrastructure, including major transportation corridors, water supply systems, wastewater treatment plants and energy and communication networks.
- Increased public health risks from wildfire, floods, heat waves, and disease. These risks are greatest for vulnerable populations along the coast and in remote inland communities.
- Reduced productivity of rangelands.
- Habitat loss for sensitive plant and wildlife species, including cold-water fish species such as salmon.

The Humboldt Bay Area Plan Sea Level Rise Assessment, released in 2018, projects the impacts of sea level rise in the coming decades. With a sea level rise of three feet near Humboldt Bay, which, in a business-as-usual emissions scenario, is projected to occur by 2070, “roughly 35 miles of barrier shoreline could be overtopped. King tides could reach that level as early as 2050, based on current high projections for sea level rise. In addition, approximately 10,000 acres of agricultural land; Highways 101 and 255; municipal water and wastewater lines; electrical distribution infrastructure, gas lines, and optical fiber communications lines; and the communities of King Salmon, Fields Landing and Fairhaven, could all become tidally inundated if tidal waters on Humboldt Bay rise three feet.”

The findings of two reports mentioned above likely represent just a fraction of potential impacts of climate change on Humboldt County. Research on potential climate change outcomes is ongoing; these impacts are complex and will ripple throughout communities.

These planning documents have been prepared to reflect a “business-as-usual” or “high” emissions scenario where emissions continue to rise to the end of the century. Much of the harm done to communities, infrastructure and ecosystems is unavoidable because of the emissions that have already been released and the warming that has already occurred; however, there is still time to reduce emissions and stave off some of the very worst impacts of climate change.

In December of 2015, most of the world’s countries came together at the United Nations Framework Convention on Climate Change (UNFCCC) annual meeting in Paris. The international treaty adopted there, known as the “Paris Agreement,” set a goal of limiting global average temperature rise to below 2° Celsius relative to pre-industrial average temperatures. Current data suggests global average temperatures have risen 1° Celsius since the beginning of the industrial revolution, so we are halfway to the limit set by the Paris Agreement.

Emissions targets set at the local, state and federal levels reflect targets set in international agreements. International agreements are based on recommendations from the IPCC. The IPCC collaboratively evaluates worldwide scientific efforts to model climate change and its impact on earth systems. To achieve the goal of the Paris Agreement, nations will need to transition to renewable energy resources for transportation, home heating, and electricity generation by 2045. As that transition progresses, vehicles and buildings will need to become more energy efficient. To offset any remaining human-caused GHG emissions, we must also find ways to maximize carbon sequestration in forests and agricultural lands, and develop technological solutions and other innovations to sequester carbon.

1.4 Regulatory, Legislative, and Agreements Framework

To stabilize GHG emissions and reduce the impacts of climate change, international agreements, as well as federal and State actions have been occurring since as early as 1988. This section highlights some key State agencies, programs and regulations that are relevant to this climate action planning effort.

California Air Resources Board

The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and State air pollution control programs in California. In this capacity, CARB conducts research, sets air quality standards, compiles emissions inventories for GHGs and other pollutants and develops suggested control measures.

Assembly Bill 32, "Global Warming Solutions Act of 2006" and Senate Bill 32 (2016)

In 2006, the California State Legislature passed the Global Warming Solutions Act, a bill that established GHG reduction targets for the State and sketched out a program of action to reach those targets. AB 32 required CARB to adopt rules and regulations directing State actions to reduce GHG emissions to 1990 statewide levels by 2020.

In October 2007, CARB published its Final Report for Proposed Early Actions to Mitigate Climate Change in California. Resulting from this were three new regulations, including a low carbon fuel standard and improved standards for landfill methane capture.

In 2008, CARB adopted the Climate Change Scoping Plan, detailing California's strategy to achieve its 2020 GHG target. The Scoping Plan proposes a comprehensive set of actions designed to reduce overall GHG emissions in the State, improve the environment, reduce dependence on oil, diversify energy sources, save energy, create new jobs and enhance public health. An update to the Scoping Plan occurred in 2017, and a 2022 Scoping Plan Update is currently in development.

In 2016 with passage of Senate Bill 32 the California State Legislature updated the 2006 law to set a new target ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below 1990 levels no later than December 31, 2030.

California Code of Regulations (CCR) Title 24, Parts 6 and 11 Building Code Energy Efficiency Standards

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Title 24 update includes a requirement for all new residential buildings under three stories to install solar panels.

On January 12, 2010, the California Building Standards Commission adopted the 2010 California Green Building Standards Code, otherwise known as CALGreen (CCR Title 24, Part 11). Like Part 6 described above, these standards are updated every three years with 2019 being the most current version (soon to be 2022). The list below identifies the most significant CALGreen requirements. Additionally, CALGreen encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce air pollutant emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. CALGreen includes the following provisions (amongst other requirements):

- A 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30 percent, 35 percent, and 40 percent reductions.
- Separate indoor and outdoor water meters to measure nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects.
- Diversion of 50 percent of construction waste from landfills.
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure all are working at their maximum capacity according to their design efficiencies.
- Mandatory use of low-pollutant-emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.

CEQA Guidelines (Section 15183.5): Tiering and Streamlining the Analysis of Greenhouse Gas Emissions

In 2010, the State revised California Environmental Quality (CEQA) Guidelines to address the analysis and mitigation of GHG emissions. CEQA Guidelines Section 15183.5 allows a Climate Action Plan to provide streamlining benefits for agencies leading the CEQA process for a project if the CAP meets certain requirements, including demonstration that the CAP's emission reduction measures, implemented on a project-by-project basis, will collectively achieve the plan's target. This Climate Action Plan is designed to fulfill these requirements. Once the CAP is adopted, future projects subject to CEQA may address GHG impacts by demonstrating compliance with the applicable measures in the CAP.

Renewable Portfolio Standard

The State's Renewable Portfolio Standard (RPS) was established in 2006. The RPS program requires sellers of electricity to provide renewable energy. The initial goal of RPS was 20% renewable energy production by 2010. In 2018, the State adopted RPS goals of 60% renewable electricity by 2030 and 100% carbon-free electricity by 2045.

Vehicular Emissions Regulations

In 2002, Assembly Bill (AB) 1493 ("Clean Car Standards") was passed, which required CARB to develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by the ARB to be vehicles whose primary use is noncommercial personal transportation in the state." These regulations required automakers to produce vehicles that, on average, reduced GHGs by approximately 30% from 2002 levels by 2016. A second set of regulations "Low Emission Vehicle (LEV) III GHG" covers model years 2017 through 2025.

Executive Order S-1-07 (2007). established a goal of reducing the carbon intensity of transportation fuels sold in California. A recent update established a goal to reduce the carbon intensity of transportation fuels by 20% by 2030.

Organic Waste Regulations

In September 2016, the State Legislature set methane emissions reduction targets for California in a statewide effort to reduce emissions of "short-lived climate pollutants" (SLCP). The targets must reduce organic waste disposal 50% by 2020 and 75% by 2025, and reduce by 20% the amount of currently disposed surplus food by 2025.

1.5 Building on Existing Climate Action Efforts in Humboldt County

In addition to advancing local government efforts, this CAP seeks to build on existing initiatives outside the scope of city and county agencies. Throughout Humboldt County, educational institutions, nonprofits and tribal governments have shown leadership in climate action. A few examples of such leadership are highlighted below.

California Polytechnic University, Humboldt

Cal Poly Humboldt (formerly "Humboldt State University" or "HSU") adopted a Climate Action Plan on December 12, 2016, that sets goals to reduce GHG emissions to 1990 levels by 2020, to 80% below 1990 levels by 2040, and to become carbon neutral by 2050. Cal Poly Humboldt's CAP includes strategies to curb GHG emissions resulting from the university's energy consumption and indirect emissions from related activities – business travel, student and employee commute, and solid waste disposal. The plan calls for cutting energy-related emissions through energy efficiency and energy conservation projects, on-site renewable energy generation and the purchase of power generated by renewable sources. Cal Poly Humboldt's CAP calls for reducing indirect emissions through campus-wide waste reduction strategies and alternative transportation and public transit programs that will lessen business travel and lead to reductions in single-occupant vehicle commuter trips.

Tracking and reporting progress towards achieving reduction targets takes place on an annual basis. The Cal Poly Humboldt reviews its CAP every five years to update its strategies and reduction targets. The university released a draft update, "CAP 2.0," in early 2022 and will publish a final draft in April 2022.

North Coast Resource Partnership (NCRP)

The North Coast Resource Partnership (NCRP) is a stakeholder-driven collaboration among local governments, watershed groups, Tribes and interested partners focused on a sustainable environmental and socio-economic framework for the North Coast. The NCRP coalition (formerly known as the North Coast Integrated Regional Water Management Plan) consists of seven north coast counties (Del Norte, Siskiyou, Modoc, Humboldt, Trinity, Mendocino, and Sonoma), the Sonoma County Water Agency, the Mendocino County Water Agency, and North Coast Tribes. The NCRP focuses on attracting funding to the North Coast Region.

The NCRP planning team has identified and described key issues of concern in the North Coast region. The themes that have guided the NCRP's work are:

- Beneficial uses of water
- Salmonid enhancement
- Energy independence
- Climate adaptation/mitigation
- Economic vitality
- Local autonomy
- Intraregional cooperation
- Adaptive management

Redwood Coast Energy Authority (RCEA)

RCEA is a local government Joint Powers Agency founded in 2003 whose members include the County of Humboldt, the Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell,

and Trinidad and the Humboldt Bay Municipal Water District. RCEA develops and implements sustainable energy initiatives that reduce energy demand, increase energy efficiency and advance the use of renewable resources.

RCEA's guiding strategic document is RePower Humboldt. It was initially adopted in 2012 and updated in 2019. The first RePower plan outlined how Humboldt County could transition to a low-carbon, renewable energy-powered economy by 2030. A key recommendation in the plan was to create a local Community Choice Energy (CCE) program. In 2017, RCEA launched Humboldt County's CCE program, which provides service to most Humboldt County electricity customers.

The State's Renewable Portfolio Standard (RPS) puts California on a path toward 100% zero-carbon electricity by 2045. RCEA plans to meet this goal in an accelerated timeframe for Humboldt County. The RePower Plan update establishes a goal to procure only local renewable sources of electricity by 2030.

Native American Tribes

(Note: this discussion will be added with tribal consultation during the review of the Environmental Draft. It is acknowledged some tribes are way out in front of many jurisdictions in their climate action planning efforts.)

- Blue Lake Rancheria
- Bear River Band of the Rohnerville Rancheria
- Hoopa Valley Tribe
- Karuk Tribe
- Trinidad Rancheria
- Wiyot Tribe
- Yurok Tribe

2 GHG Emissions in Humboldt County

2.1 Introduction to GHG emission inventories

GHG emissions inventories identify and quantify emissions sources in the community which is critical for development of effective emission-reduction strategies.

To Initiate the Climate Action Plan (CAP) process, Redwood Coast Energy Authority (RCEA) inventoried local emissions in the past, present and future.

The **2015 Emissions Inventory** described in detail later in this chapter beginning on page 2-5 gives a snapshot of local emissions from a variety of sources and activities in the year 2015. For the purposes of this CAP, it serves as an estimate of present-day emissions.

The **1990 Emissions Inventory** provides historical information that puts current emissions levels in perspective. This historic data serves as a baseline for this CAP's target of reducing emissions 40% below 1990 levels by 2030. The participating cities and the County chose 1990 as a baseline year to follow the State of California's lead—Assembly Bill (AB) 32 and Senate Bill (SB) 32 set statewide targets that use 1990 emissions levels as a baseline.

The **Countywide Emissions Forecasts** model future emissions scenarios using the 2015 inventory data as a starting point.

The inventories use RCEA's Humboldt County GHG Inventory tool which was developed in accordance with the International Council for Local Environmental Initiatives' (ICLEI) *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions* (Community Protocol). The Community Protocol is the standard methodology for emissions accounting in local government Climate Action Plans. For more information on RCEA's inventory methodology, see Appendix G - County-Wide 2015 Emissions Inventory Report.

The inventories serve primarily as a tool to inform policies, rather than a comprehensive analysis of all the ways our communities contribute to climate change. They estimate the primary sources of emissions that can be reduced through the actions of local governments and regional entities. The Inventory Methodology in Appendix G details the rationale used to select the categories included in the inventory.

Following adoption of this CAP, it is anticipated RCEA will regularly prepare inventory updates to monitor progress towards emissions targets.

2.2 Comparing GHGs

The largest contributor to climate change is CO_2, and it is also the most recognized GHG. However, the Humboldt County inventories also include emissions of other GHGs such as methane, nitrous oxide, and refrigerant gases. Compared to CO_2, these GHGs are emitted in lower quantities locally. Still, they are important to include in the analysis due to their potency in trapping heat in the atmosphere.

Global Warming Potential (GWP) is the most common means of comparing the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of one ton of a gas will absorb over a given period of time (how much heat it will trap in our atmosphere), relative to the emissions of one ton of carbon dioxide (CO_2). The time period usually used for GWPs is 100 years.

GHG	Atmospheric Lifetime (yrs.)	Global Warming Potential (GWP)	Primary Current Sources
Carbon Dioxide (CO_2)	200 - 500	1	Fossil fuel use, land use, cement
Methane (CH_4)	12	21	Fossil fuel use, agriculture
Nitrous Oxide (N_2O)	120	310	Agriculture
Hydrofluorocarbons (HFCs)	2,600-50,000	150 to 11,700	Refrigeration systems

Table 2-1. Global warming potential of some GHGs. Source US EPA
https://www.epa.gov/ghgemissions/overview-greenhouse-gases

To allow for comparison of different GHGs, emissions inventories typically use 100-year GWP values to convert emissions of GHGs like methane, nitrous oxide, and refrigerants into a measurement known as **carbon dioxide equivalent (CO_2e).** The standard unit for GHGs in an inventory is Metric Tons (MT) CO_2e. The CO_2e measurement can be useful to translate amounts of other GHGs into an equivalent amount of CO_2 for an "apples to apples" comparison. In the case of methane, 1 MT of methane is converted to 28 MT CO_2e, because one unit of methane absorbs 28 times more energy (trapping more heat in our atmosphere) than one unit of CO_2.

2.3 Overview of Sources and Activities Included in the Inventories

There are two categories of emissions captured in the CAP's GHG inventories:

1) **GHG emissions produced by sources located within the community boundary**. For example, transportation is considered an emissions source, because GHGs from vehicle use are produced within the community boundary. For this CAP, the community boundary is the entirety of Humboldt County.

2) **GHG emissions resulting from community activities**. For example, emissions from power plants that provide electricity to local homes and businesses are included, even though many of the power plants may not be located within the county.

The inventory primarily focuses on emissions sources. Some activities that generate emissions outside county boundaries are included, but only to the extent that such emissions are the direct result of community activities that can be reduced through local government actions.

Below is a brief overview of the sources and activities included in the GHG inventories:

ACTIVITY: ELECTRICITY CONSUMPTION

Emissions associated with electricity used in Humboldt County are generated at fossil fuel-fired power plants both within and outside county boundaries.

SOURCE: STATIONARY COMBUSTION

Stationary combustion refers to the on-site use of natural gas, propane, and wood in residential and commercial buildings. The combustion of these fuels directly emits GHGs

SOURCE: TRANSPORTATION

GHGs like CO_2 are a byproduct of fuel combustion within a vehicle's engine. This category captures emissions from the combustion of gasoline, diesel, and other fuels by on and off-road vehicles traveling within Humboldt County.

ACTIVITY: SOLID WASTE GENERATION

The decomposition of solid waste releases GHGs—primarily methane—into the atmosphere. This inventory activity captures emissions associated with the decomposition of the most common types of landfilled waste (paper, food, plant, animal, wood, and textile wastes) generated within Humboldt County, regardless of landfill location. Humboldt County no longer has any active landfills, and landfill-bound waste generated here is trucked to facilities outside of the county. Emissions resulting from the transport of waste are accounted for in the transportation sector.

SOURCE: CUMMINGS ROAD LANDFILL

The Cummings Road Landfill was slated for closure in 2000 and has not received any solid waste since 2005. Though the landfill is closed and capped with sand and soil, it still releases some methane.

SOURCE: WASTEWATER TREATMENT

GHGs are emitted directly from the processing of wastewater. The inventories include emissions from wastewater treatment plants and fugitive emissions from septic tanks.

SOURCE: LEAKED REFRIGERANTS

Even though the quantity of leaked refrigerants is generally small, refrigerant gases can be hundreds or even thousands of times more potent than CO_2 in terms of their heat-trapping effects. The Humboldt County inventory estimates the emissions associated with stationary and mobile refrigeration equipment (such as refrigeration units carried by food delivery trucks) operated within county boundaries.

SOURCE: INDUSTRIAL POINT SOURCES

"Point source" emissions are generated directly from processes at industrial facilities within the county, such as lumber mills, cement plants, asphalt plants, and other goods and materials manufacturing facilities. Industrial facilities are required to monitor pollutant emissions, and this data is tracked by the North Coast Unified Air Quality Management District (NCUAQMD).

ACTIVITY: AIR TRAVEL

Air travel contributed a very minor percentage of County-wide emissions in each of the inventory years. Emissions associated with commercial and private airplane flights are estimated using total fuel sales data obtained from the County Public Works Department of Aviation.

SOURCE: **MARINE VESSELS**

Emissions from marine vessels also constitute a small percentage of the inventory totals. This source includes emissions associated with marine freight and passenger vessels. Freight-carrying vessels may include ships, barges, tugboats, towboats, fishing vessels, patrol boats, and industrial boats (such as drilling boats and dredges). Passenger-carrying vessels consist of recreational boats. This source is only likely to be significant if an operating port exists within the community, which is the case for Humboldt Bay.

SOURCE: **LIVESTOCK**

The digestion process of ruminant animals like cows and sheep produces the GHG methane. The inventory includes estimates of emissions generated by beef cattle, dairy cows, and sheep in Humboldt County, as well as emissions resulting from manure management.

2.4 2015 GHG Inventory

In the year 2015, sources and activities in the County generated the equivalent of 1.5 million tons of carbon dioxide. This is comparable to a single car driving four billion miles, or roughly a year's worth of carbon sequestration in two million acres of U.S. forests.

The 2015 countywide inventory presented in the chart below reveals four categories of GHG emissions are responsible for the vast majority (83%) of emissions in he region: transportation, livestock, stationary combustion, and electricity consumption.

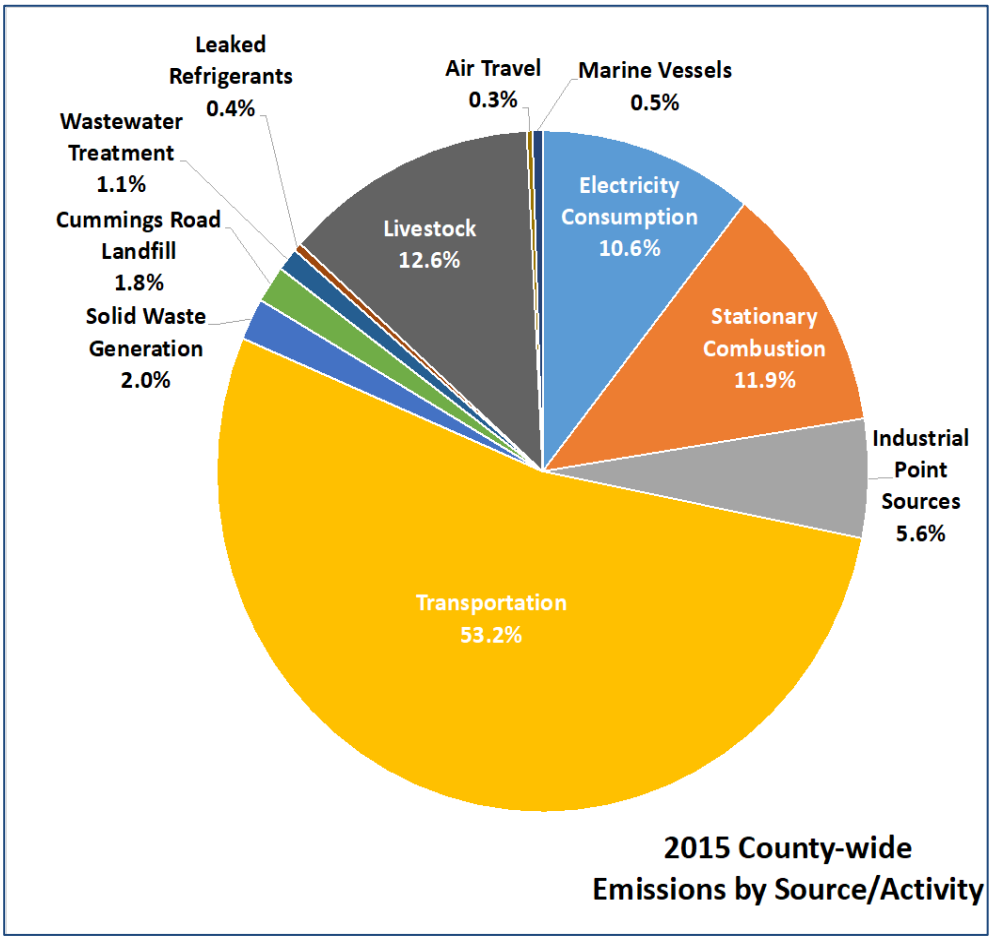

Figure 2-1. Total 2015 emissions broken down by source and activity in Humboldt County, including Industrial Point Source emissions.

Looking closely at these categories allows us to develop climate action strategies to effectively address the primary drivers of emissions in our community.

TRANSPORTATION (53%)

Mobile combustion accounts for 53% of total countywide emissions. The transportation inventory category includes emissions from passenger vehicles, retail and commercial trucks and off-road vehicles and equipment.

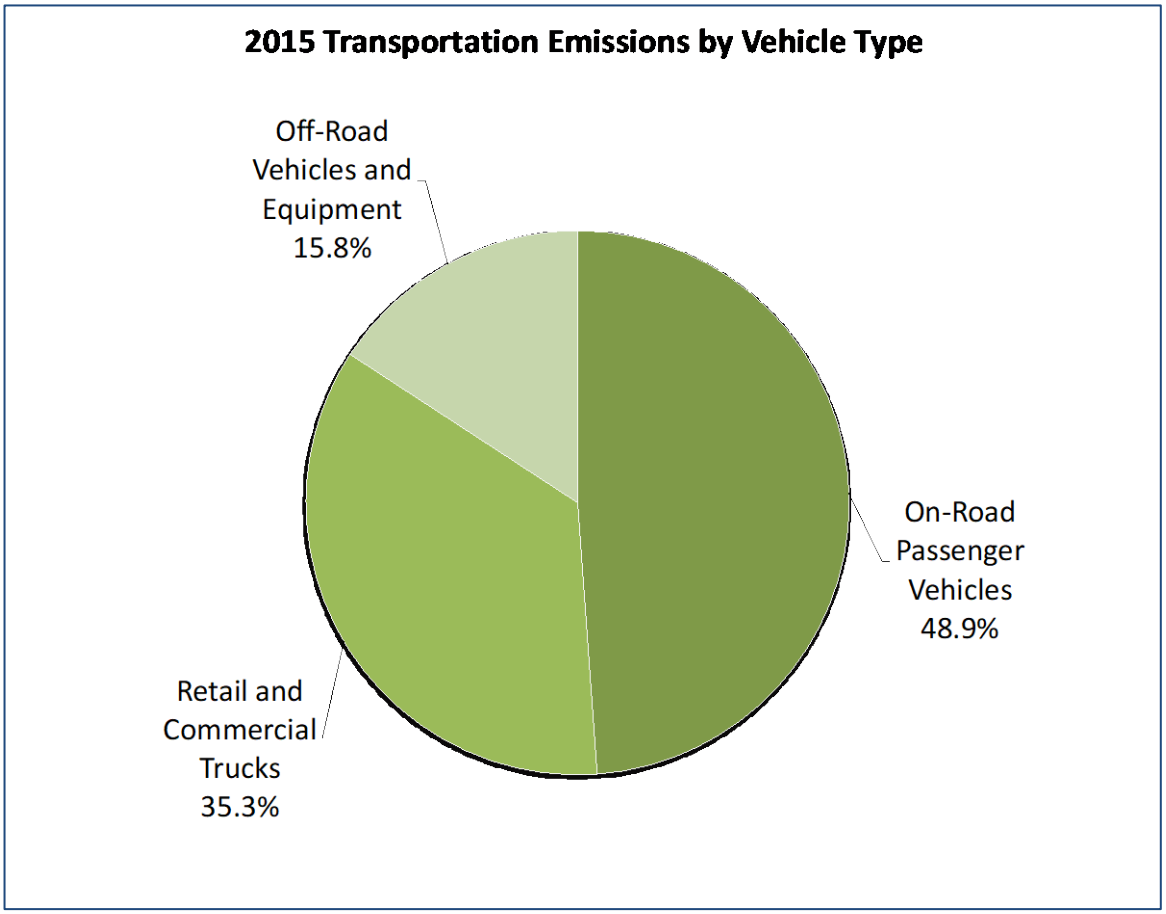

Figure 2-2. Breakdown of transportation emissions

To calculate transportation emissions, RCEA relied on a Caltrans' estimate of the total miles traveled by vehicles within Humboldt County in the year 2015. Emissions vary with vehicle and fuel type, so RCEA also incorporated data on fuel consumption and types of vehicles registered in the county.

LIVESTOCK (13%)

Agricultural land uses make up about one quarter of total land area in Humboldt County. The vast majority of these farms and ranches are located in unincorporated areas.

Using head count data from the County Agricultural Commissioner, RCEA estimated the methane and nitrous oxide generated by beef cattle, dairy cows and sheep in Humboldt County, as well as manure from those animals.

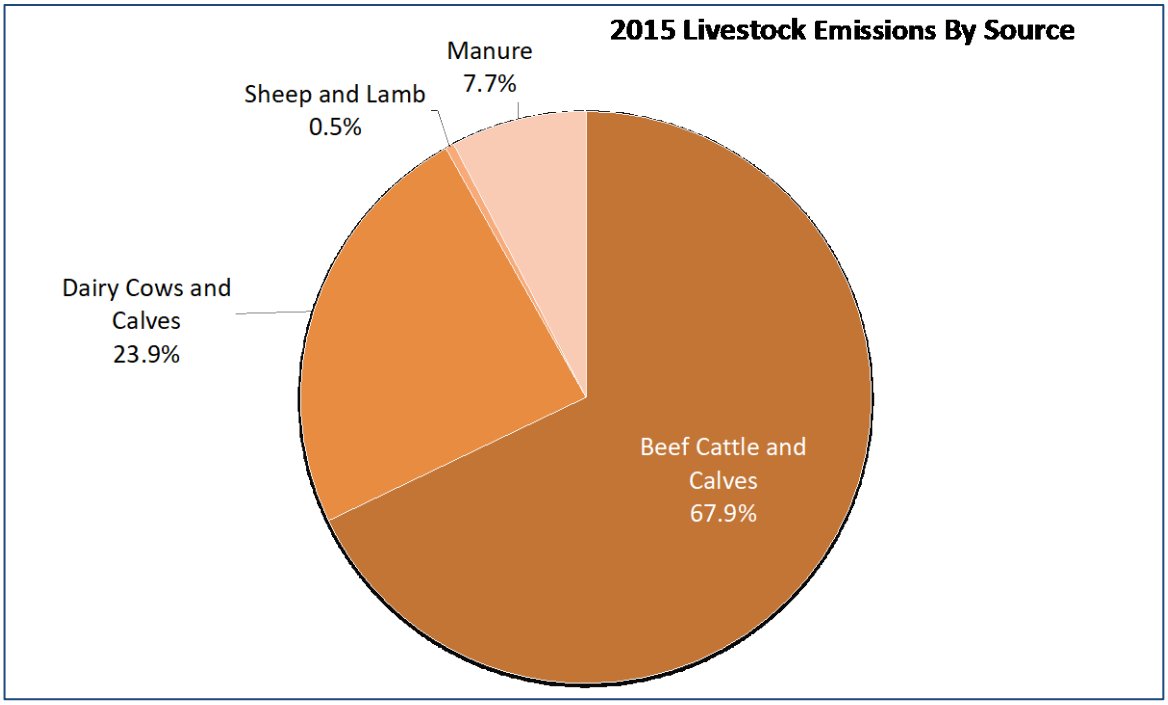

Figure 2-3. Breakdown of livestock emissions

In the 2015 inventory, 73% of total livestock emissions are attributed to beef cattle. Dairy cows produce more methane per cow than beef cattle; however in 2015 there were nearly four times as many beef cattle in Humboldt County than dairy cows.

The methodology used for the inventory may have overestimated the climate impacts of pasture-raised cattle, which is the method used for local beef cows.[3]

STATIONARY COMBUSTION (12%)

This inventory category estimates the emissions from three fuel sources used in buildings: natural gas, propane and wood. In Humboldt County buildings, these fuels are primarily used for cooking and space heating. PG&E provides natural gas service in many areas of Humboldt County. Homes and businesses in Trinidad, Ferndale and many unincorporated areas rely on propane and wood for fuel.

[3] UC Davis. Rethinking methane. https://clear.ucdavis.edu/news/methane-has-been-achilles-heel-cattle-emissions-it-may-be-part-climate-solution

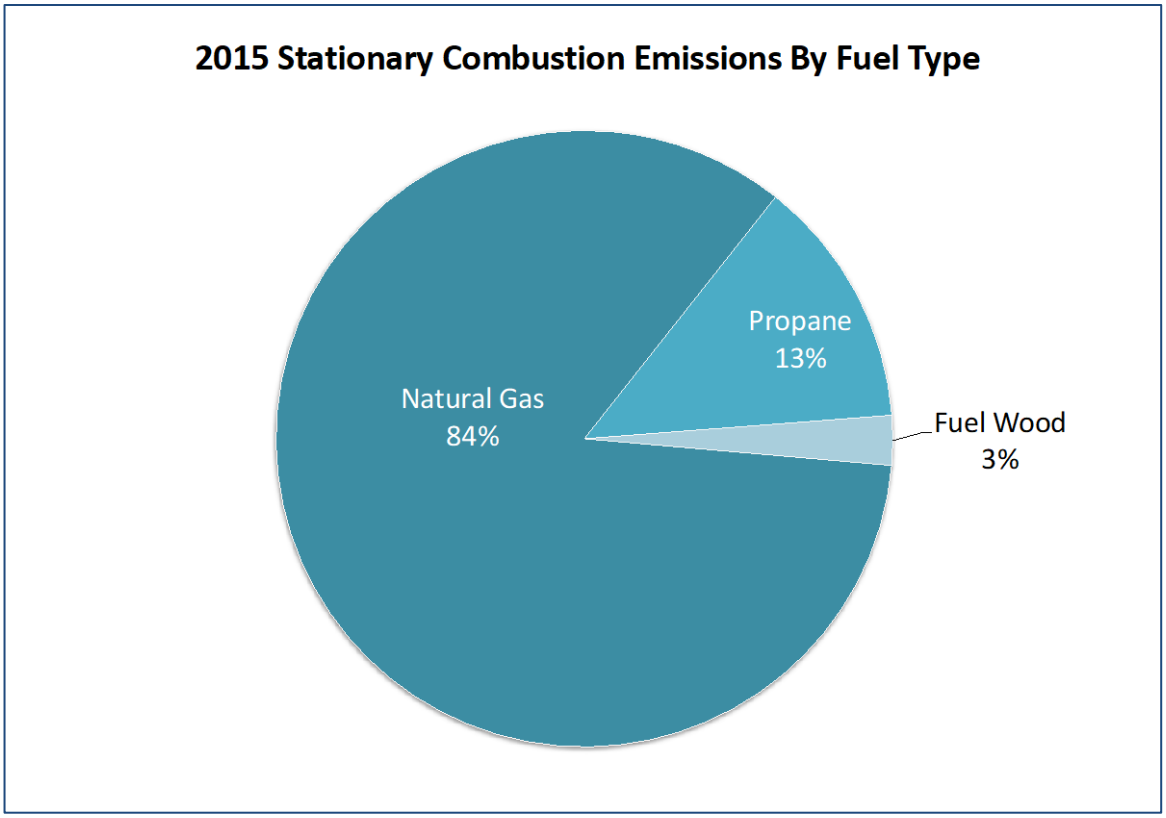

Figure 2-3. Breakdown of emissions from stationary combustion

Data on natural gas consumption is sourced from PG&E. Propane and wood usage estimates are limited to residential buildings only and based on US census data.

ELECTRICITY CONSUMPTION (11%)

In the 2015 inventory, electricity consumption emissions are based on two factors: the amount of electricity consumed in Humboldt County and where that power came from.

Different electricity sources have different "emissions factors"—for example, in producing 1 MW of electricity, a coal-fired power plant generates more GHGs than a natural gas facility does. The emissions factors used to convert electricity consumption into GHG emissions were sourced from Pacific Gas & Electric (PG&E) and reflect the average mix of electricity procured in the inventory year. Figure 1 below depicts PG&E's power mix in the year 2015.

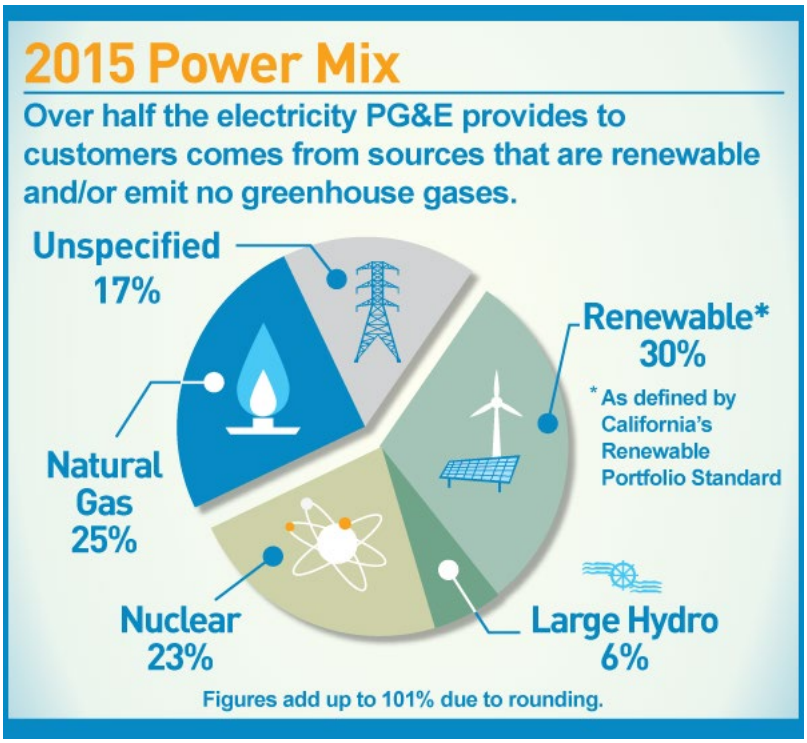

Figure 2-4. 2015 PG&E Power Mix. According to PG&E, "Unspecified" sources of power means "electricity from transactions that are not traceable to specific generation sources". Source: https://www.pgecurrents.com/2016/04/25/infographic-power-mix-2015/

As mentioned in Figure 2-4 above, PG&E uses the State's definition of "renewable" sources of electricity, which includes wind, solar, geothermal and biomass. Following the State's lead, these sources were assigned an emissions factor of zero in the Humboldt County GHG inventories.

Emissions by Jurisdiction

RCEA's GHG analysis for the year 2015 also includes a separate inventory for each jurisdiction participating in this CAP. An overview of emissions data for the unincorporated areas and the cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell and Trinidad can be found in Appendix G: County-Wide 2015 Emissions Inventory Report.

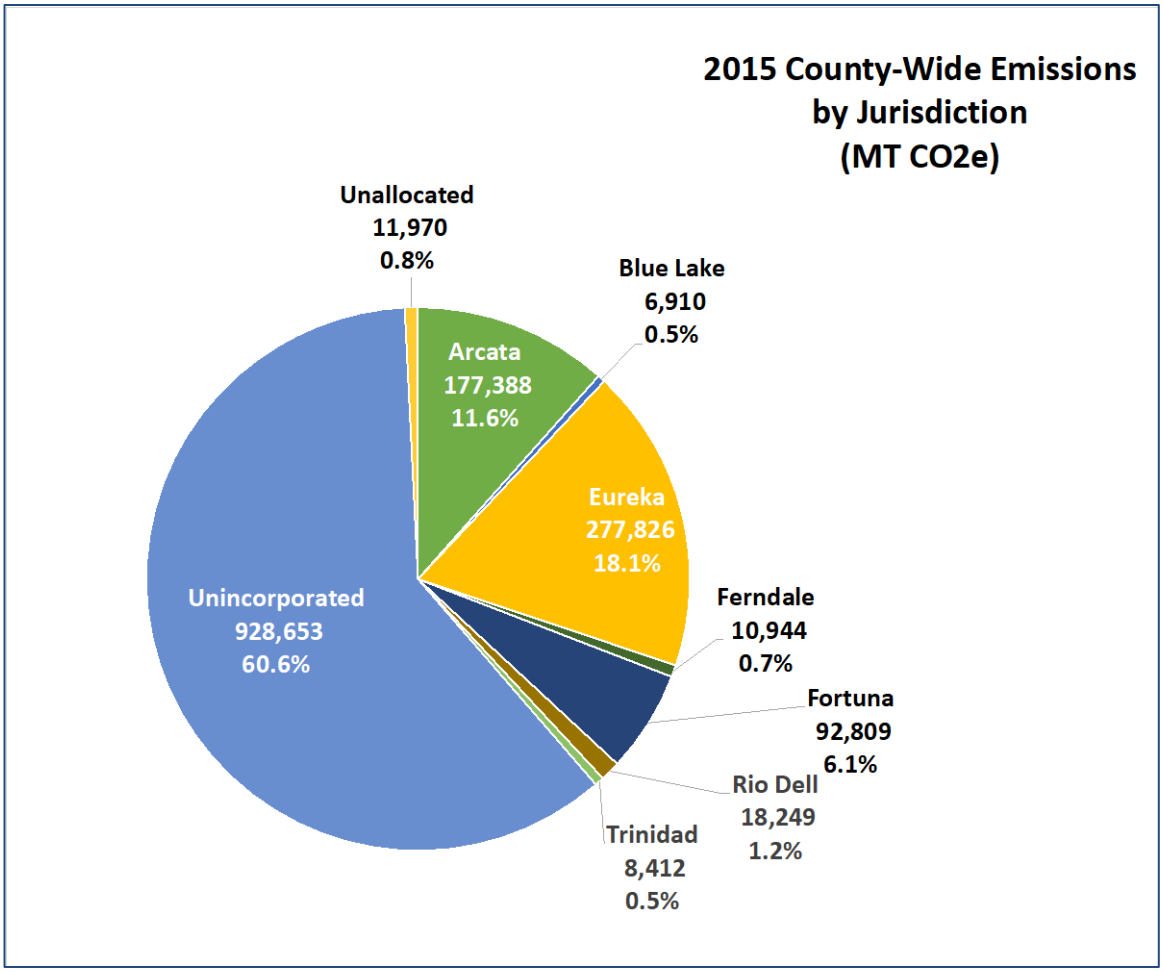

Figure 2-5. Total 2015 emissions in each jurisdiction in Humboldt County. The "Unallocated" category is the sum of air travel and marine vessel emissions. These sources can't be attributed to any one jurisdiction.

The relative emissions total for each jurisdiction (shown above in Figure 2-5) generally corresponds to the population share of each jurisdiction. Most local drivers of emissions, such as vehicle use and energy consumption, are closely correlated to population size. Livestock presents an exception to this trend, as the vast majority of dairy and cattle operations are located in unincorporated areas. Largely as a result, unincorporated areas have 53% of the total County population but generated 63% of total GHG emissions in 2015.

2.5 1990 GHG Inventory

An estimate of community-wide emissions levels in 1990 was developed to understand historic trends and provide a baseline for measuring future GHG reductions. This baseline year aligns with the statewide GHG targets established by AB 32 and SB 32, which also use 1990 as a benchmark year.

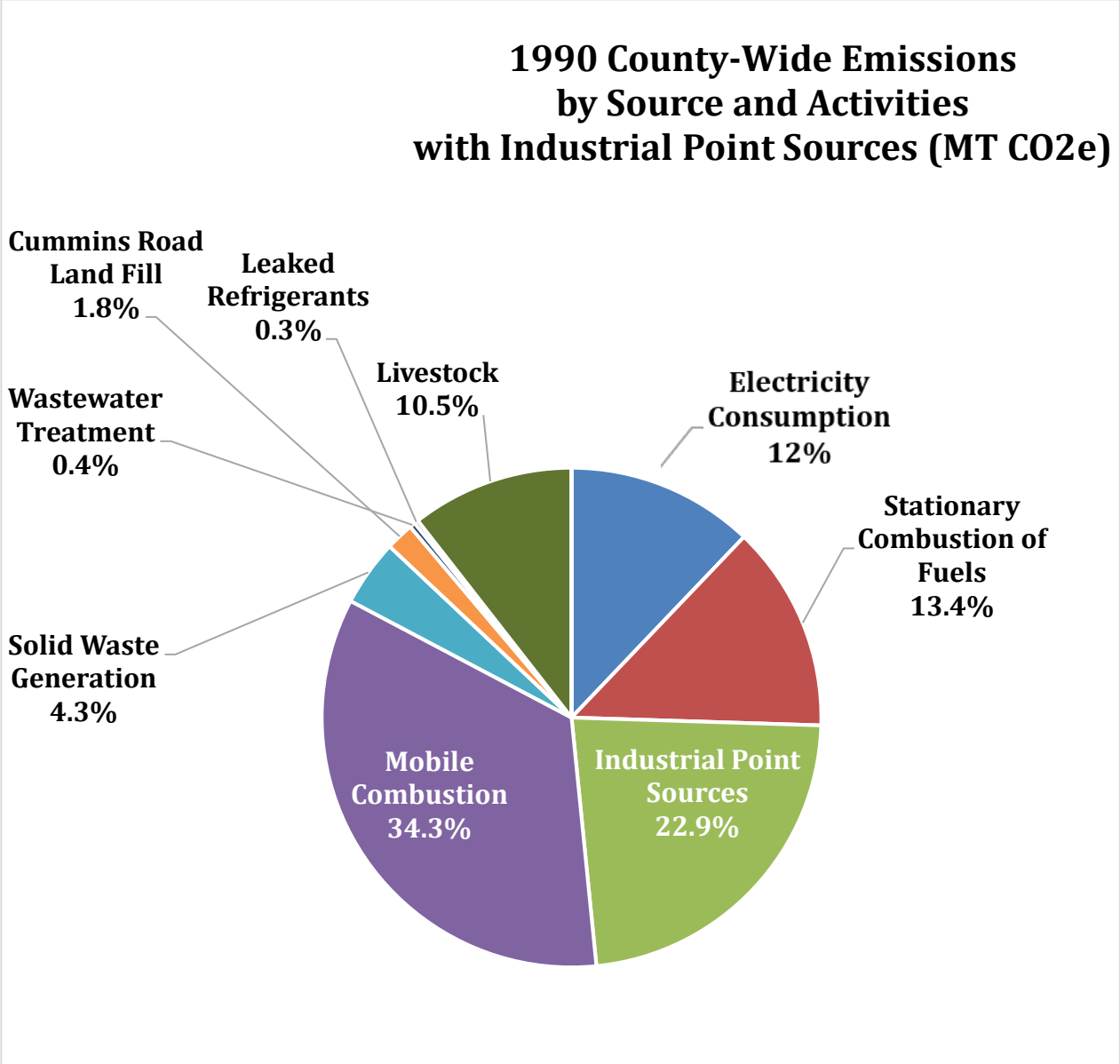

Figure 2-6. Total 1990 emissions broken down by source and activities in Humboldt County. Air travel and marine vessel emissions are excluded from the 1990 inventory due to lack of reliable data sources

Humboldt County experienced a significant decrease in emissions between 1990 and 2015, a period over which our region experienced modest population growth. This trend is primarily due to the closure of timber processing facilities, such as the Samoa pulp mill. By 2015, industrial point source emissions had dropped to around 83,000 MT CO_2e—16% of 1990 levels. This change accounts for nearly 75% of the decline in emissions observed between 2015 and 1990.

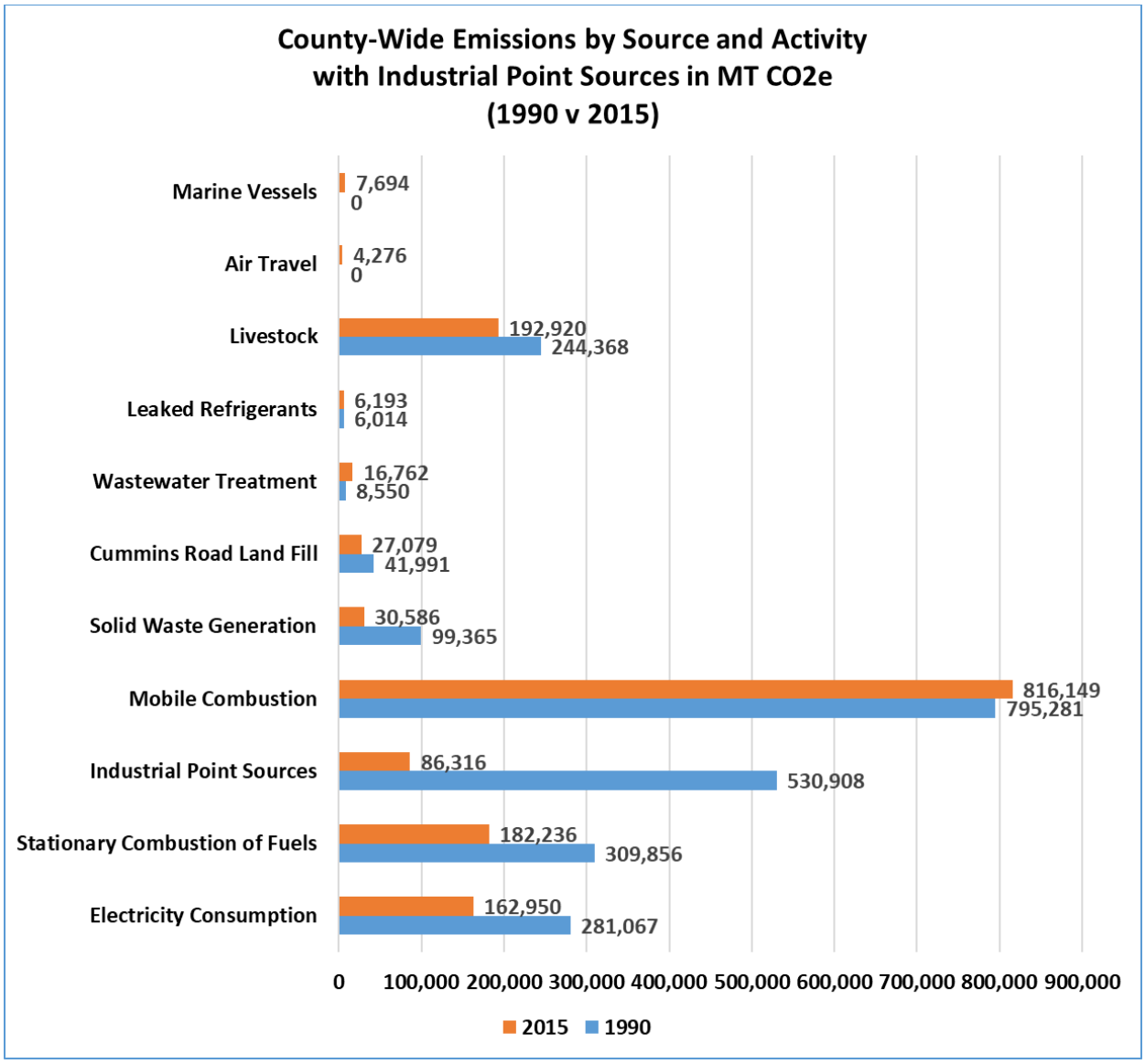

Figure 2-7. Comparison of emission by source/activity between 1990 and 2015 inventories.

California's emissions inventories reveal a different trend: statewide emissions increased by 2% between 1990 and 2015. Many city and county inventories match the statewide trajectory, showing minimal reductions or even an increase in emissions between 1990 and 2015.

As is evident in Figure 2-8 below, Humboldt County is an exception to this trend. When including industrial point sources in the inventories, 2015 emissions are around 29% below 1990 levels, and forecasted 2030 emissions (presented in Chapter 3) are more than 40% below 1990 levels – the State target. Recognizing the State target would be reached without any new local programs, staff from the cities and the County decided for this public review draft to **exclude** industrial point sources from the 1990 baseline in the GHG forecasts (Chapter 3) and modeling of measures to reach the target (Chapter 4). Further rationale for this decision is presented in Chapter 3 Section 3.1.

While this approach has merit, good arguments can also be made to support a different approach, one that **includes** industrial point sources in the 1990 baseline. For instance, one reason the GHG inventory excludes industrial point sources is because local governments typically do not regulate air pollutants from industrial sources. However new industrial uses around Humboldt Bay require GHG analysis because they occur within the coastal zone, and coastal development permits must be approved before construction can occur in these areas. The merits of including or excluding industrial point sources from the GHG inventory will be evaluated in the environmental review of the CAP and informed by public comment in the adoption phase. The chart below compares GHG emissions for the region under each alternative.

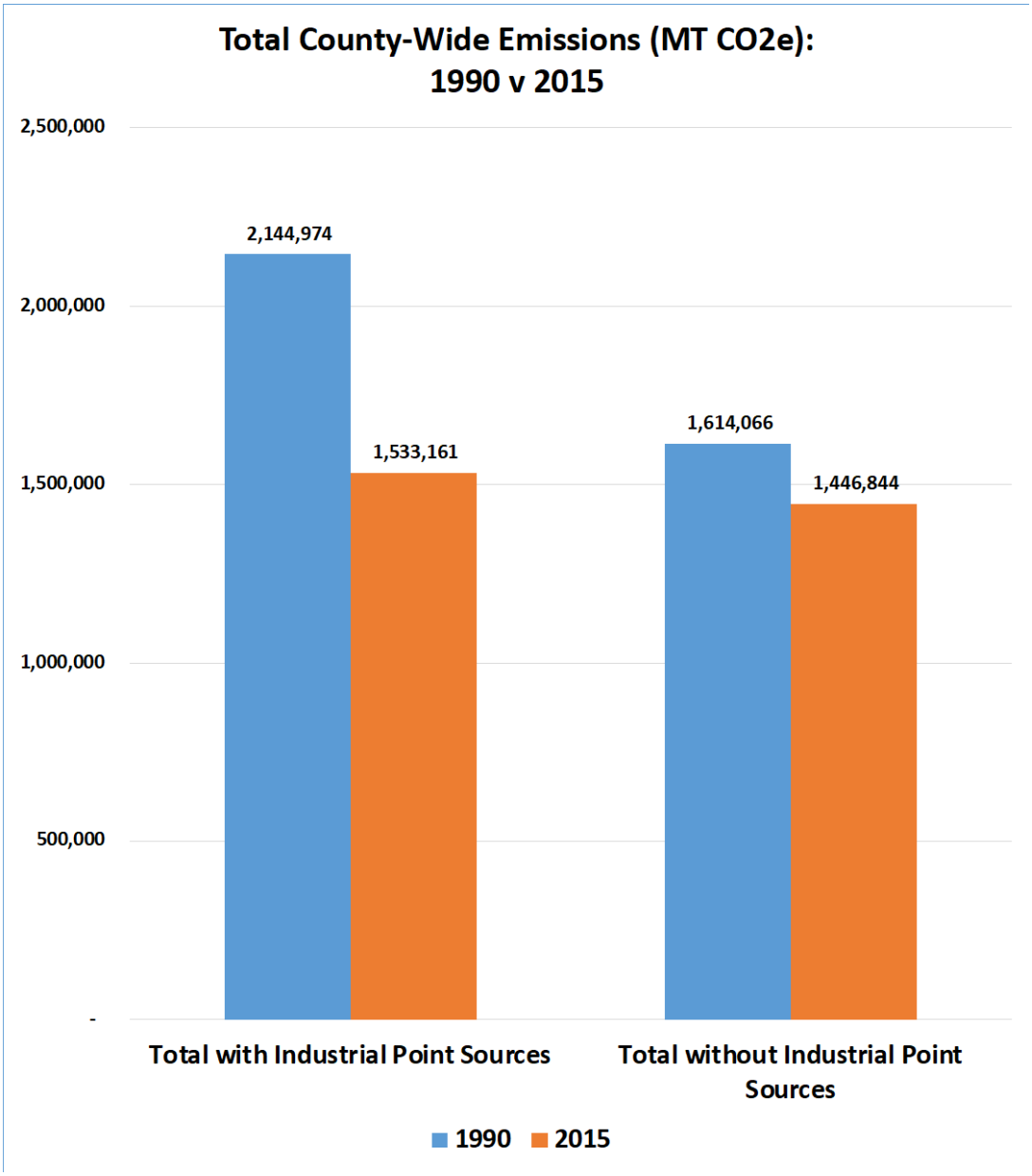

Figure 2-8. 1990 and 2015 inventory totals, with and without industrial point sources.

3 GHG Emissions Reduction Goals

3.1 Countywide GHG Emissions Forecasts

Forecasting future community GHG emissions gives us information about the magnitude of emissions reductions needed in the future and are an integral part of climate action planning. Three forecasting scenarios were developed for the CAP described below. These scenarios all assume no technological advances or new federal regulations or policies significantly reducing GHG emissions or improvements to sequestering carbon.

- A **business-as-usual (BAU) emissions forecast,** which is an estimate of what the volume of emissions will be in the future without any State or local actions to reduce emissions. The ICLEI ClearPath emissions accounting tool was used to develop the BAU forecast. It is an online suite of emissions management tools packaged together to allow jurisdictions to calculate, forecast, plan, and monitor emissions.

- A **legislative adjusted BAU emissions forecast (leg-adj BAU)**, which is an estimate of emissions reductions resulting from State and local actions without considering the measures in the CAP. This forecast includes all the following:

  State programs implementing the Clean Car Standards (AB 1493)

  - Advanced Clean Trucks (State program)
  - Innovative Clean Transit
  - Advanced Clean Cars
  - CARB Mobile Source Strategy requirements for off-road vehicles
  - Executive Order N-79-20 (All new vehicle registrations to be ZEVs by 2035)
  - Waste requirements per SB 1383

  Local programs

  - RCEA RePower Plan goals
  - RCEA Community Choice Energy 100% clean and renewable energy by 2025 goal

- A **CAP- adjusted forecast**, which assumes all proposed CAP measures are implemented.

Figure 13 shows the BAU, leg-adj BAU, and CAP-adjusted emissions forecasts relative to SB32 targets. The leg-adj BAU forecast does not meet the State's goals, so the measures in this CAP are proposed to get us to the 2030 goal of 40% below 1990 levels by 2030. Significant additional cuts will be necessary to reach the State's 2045 carbon neutrality goal.

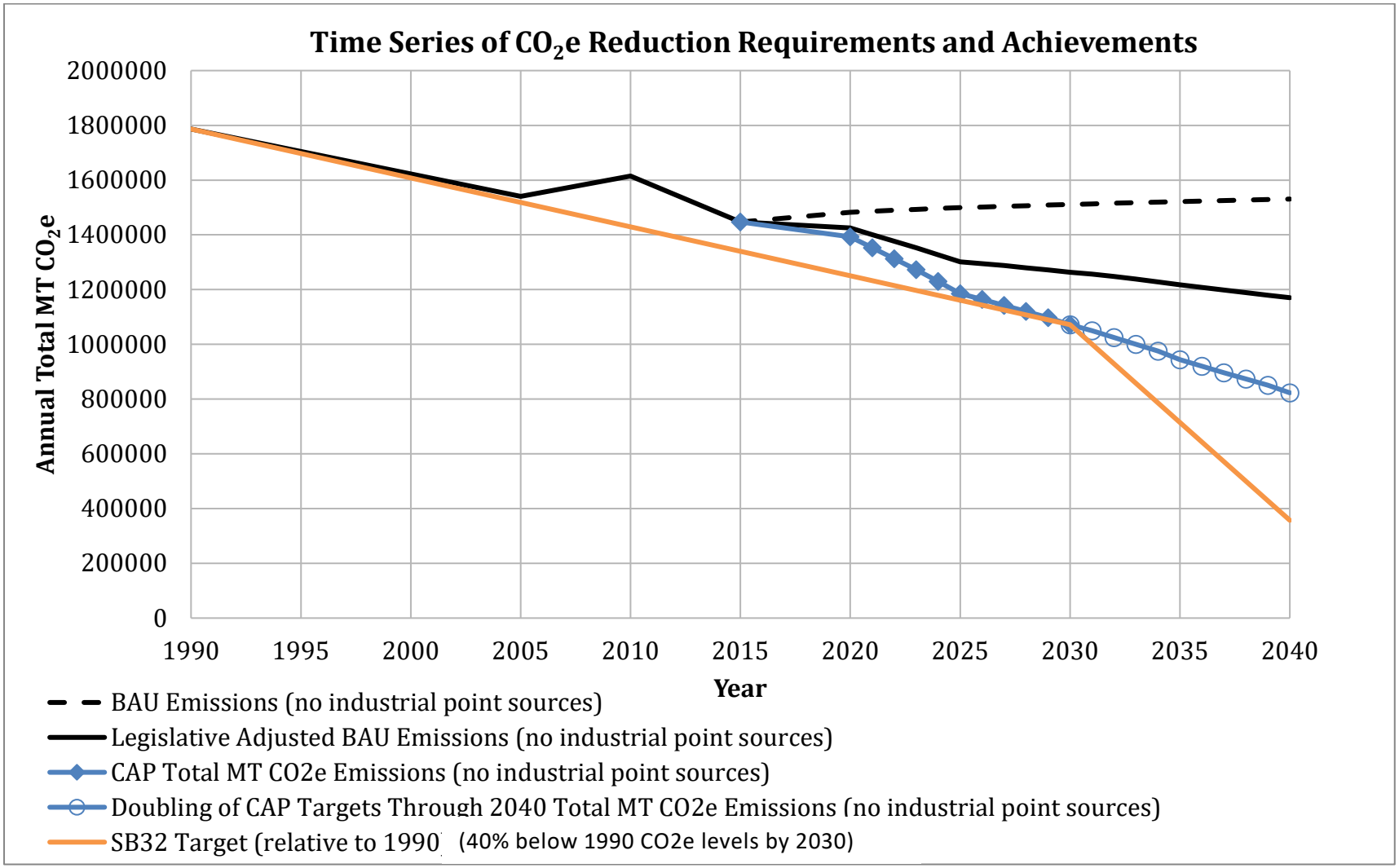

Figure 13. Time Series of CO2e Reduction Requirements and Achievements

3.2 COUNTYWIDE EMISSIONS TARGETS

The State has established the following GHG reduction goals: 1990 levels by 2020 per AB 32, 40% below 1990 levels by 2030 per SB 32, an 80% reduction below 1990 levels by 2050 per Executive Order S-3-05, and net-zero emissions by 2045 per Executive Order B-55-18.

CARB guidance to local governments recommends using 1990 as a baseline year as a preferred way to demonstrate compliance with State targets.

This CAP proposes a goal of reducing GHGs to 40% below the 1990 level by 2030. Staff from Humboldt County jurisdictions considered numerous reduction targets and the 40% reduction from 1990 levels by 2030 target was selected because it was the target most consistent with State planning per SB 32 and the 2017 CARB Scoping Plan Update.

As described briefly in Chapter 2, this target is *non-inclusive* of industrial point sources. In other words, the 1990 emissions baseline does not include emissions from industrial point sources, and emission reductions associated with the decrease of industrial point source emissions do not count toward achieving the 2030 target. The decision to exclude point sources from the draft CAP aligns the CAP's emissions reporting with ICLE's Community Protocol (referenced in Section 2.2), which recommends that cities and counties include in their inventories sources of emissions over which they have a "significant influence." An argument can be made that Humboldt County jurisdictions do not have great authority or ability to control GHG emissions from industrial point sources; instead, permitting and regulating emissions from point sources is largely within the State's and local Air Quality Management Districts' purview. In addition, city and county CAPs in California typically do not address industrial point source emissions because they are largely not controlled by Humboldt County local governments.

On the other hand, new development on all 1,000 acres of Humboldt County's Coastal Dependent Industrial zoned properties in the Humboldt Bay region require coastal development permits, so the County does have authority through that mechanism to regulate GHG emissions of new development on those properties. Good arguments can be made supporting both sides. Whether or not to include industrial point sources in the approved CAP inventories and forecasts will be a future decision informed by public comment and alternatives evaluated in the environmental impact report for this draft CAP.

Table 2 below compares the 1990 GHG emissions with the 2030 target per SB32 (40% below 1990 levels), and the forecasted emissions if all the CAP measures are implemented. Both countywide and per-capita figures are provided. The table shows that with all the CAP measures implemented, the total GHG emissions for the region will be just below the SB32 target level for 2030.

1990 GHG Emissions Rate (MT CO2e/Yr.)	2030 Target Emissions Level per SB32 (40% below 1990 level - MT CO2e/Yr.)	CAP-adjusted 2030 Forecasted Emissions (MT CO2e/Yr.)
1,786,493	1,071,896	1,071,863

Table 1. Comparison of 1990 Inventory GHG Emissions, SB32 Target Level and Cap-adjusted Forecasted 2030 Level

The GHG emission forecasts incorporate the modest population growth rate predicted for the region, which is shown in the table below.

Year	Total County Population	Average Annual Increase (Countywide Total)	Total Percent Change Over Period (Countywide Total)
1980	108,525		
1990	119,118	0.94%	9.76%
2000	126,518	0.60%	6.21%
2010	134,623	0.62%	6.41%
2020	139,033	0.72%	2.90%
2030	140,608	0.11%	1.13%
2040	138,307	-0.16%	-1.64%
Source: Humboldt County General Plan, 2016			

Table 2. Historic and Projected Population Growth in Humboldt County, 1980-2040

4 GHG Emissions Reduction Measures

4.1 Measure Development and Selection Process

Introduction

The CAP measures in this chapter were developed by staff from the County of Humboldt, Redwood Coast Energy Authority (RCEA), and Environmental Indicator Accounting Services (EIAS) in consultation with city staff and stakeholders. This project team audited previous Humboldt County climate action plans and climate action plans from other regions to gain an understanding of common GHG emissions reductions measures. They specifically sought out measures from CAPs in rural regions to better align with local conditions. In addition to researching published climate action plans, they reviewed Redwood Coast Energy Authority's (RCEA) RePower Humboldt Plan. The draft measures were refined by comment at several public workshops.

The project team prioritized measures which would lead to the largest GHG reduction per dollar spent. Other criteria used in selecting measures were feasibility, local control, desirability to local jurisdictions and community members. Many CAP strategies presented in this chapter work in tandem with the RePower strategies described in Chapter 1 (page 1-25); the objectives and measures for grid decarbonization are drawn directly from RePower.

Goal, Strategy, Objective, and Implementation Measure Format

The presentation of emissions reduction measures is organized into four tiers:

- A **Goal** is a broad, primary outcome.
- A **Strategy** is an approach taken to achieve that Goal.
- An **Objective** is a step used to fulfill that Strategy. Some Objectives are so direct they can be quantified, and those targets are provided.
- **Implementation Measures** are discrete and quantifiable subsets of Objectives that can be monitored and reported. Related Implementation Measures are presented together with specific targets where appropriate. **Implementation Actions** are ways for jurisdictions to achieve the targets quantified in Objectives and Implementation Measures.

Timelines, funding and financing mechanisms, and estimated staff time for each Implementation Measure are provided in Appendix E: Implementation and Monitoring Table & Funding Matrix.

Figure 16. The relations between Goals, Strategies, Objectives, and Implementation Measures

4.2 Climate Action Plan Goals, Strategies, Objectives and Implementation Measures

Goal 1: Transition transportation systems and mobile sources from fossil fuels to renewable fuels

Countywide, transportation emissions account for more than half of total GHG emissions. If we are to achieve our GHG targets of a 40% reduction from 1990 levels by 2030 and carbon neutrality by 2045, Humboldt County needs to drastically cut transportation emissions over the next few decades. This can be accomplished by reducing vehicle miles traveled (the focus of the following goal, Goal 1) and transitioning different vehicle fleets—including passenger vehicles, transit, municipal vehicles and heavy-duty trucks—away from fossil fuels (the subject of this Goal). As the electricity grid becomes carbon neutral (per State and local commitments), GHG emissions from electric vehicles will become insignificant. Electrifying transportation will also substantially enhance the quality of life - streets will be quieter and safer, the air will be cleaner, and stormwater runoff from streets will be less polluted.[4]

Electric vehicles (EVs) include battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs) and fuel cell electric vehicles (FCEVs):

- BEVs are solely powered by electricity, and many models can go hundreds of miles on a single charge.
- PHEVs run on electricity for shorter ranges (up to ~50 miles) then switch over to an internal combustion engine running on gasoline when the battery is depleted.[5] BEVs and PHEVs have much lower fuel costs on average than conventional gasoline vehicles, as electricity is less expensive than gasoline.

[4] California Energy Commission. 2017. Preliminary Analysis of Benefits From 5 Million Battery-Electric Passenger Vehicles in California. https://ww2.energy.ca.gov/2017publications/CEC-999-2017-008/CEC-999-2017-008.pdf

[5] US Office of Energy Efficiency and Renewable Energy. Electric Vehicle Basics. https://www.energy.gov/eere/electricvehicles/electric-vehicle-basics

- FCEVs use compressed hydrogen gas as fuel, which is then fed into a fuel cell in the vehicle to combine with oxygen to form water. This process generates the electricity which propels the car's motor. FCEVs are quiet and fuel-efficient, just like their other EV counterparts, but have much longer ranges (up to 360 miles) and only take approximately 3 to 5 minutes to refuel.

Zero emissions vehicles (ZEVs) is another term used in this CAP for vehicles that do not emit GHGs from the onboard source of power, such as BEVs and FCEVs.

Electricity is not the only alternative to gasoline. Renewable biomass feedstocks and renewable diesel made from waste oils are also viable options. Both fuels have advantages in certain circumstances. Renewable diesel can be used in all existing diesel engines. When renewable diesel is made from waste, it has a carbon intensity of approximately one-third of petroleum-derived diesel.[6]

STRATEGY 1.1: PROVIDE INFRASTRUCTURE AND INCENTIVES FOR ELECTRIFICATION IN PASSENGER VEHICLES

In 2020, Governor Newson adopted Executive Order N-79-20 requiring that all new passenger vehicle registrations be all-electric by 2035. The Governor also adopted a goal for EVs to make up 100% of vehicle ownership by 2050. The State is implementing and planning a variety of regulations, infrastructure investments, incentives and educational programs to achieve these goals, including several financing and rebate programs for new EV owners coordinated by CARB.

Locally, Redwood Coast Energy Authority's (RCEA) RePower Plan establishes a goal to accelerate the adoption of EVs in Humboldt County from 6,000 in 2025 to 22,000 EVs in 2030. RCEA's goal is to "maintain a trajectory of emissions reduction to eliminate the use of fossil fuels by 2050." To do this, RCEA will conduct outreach campaigns, complete fleet analyses, provide ZEV decision support, and support low-carbon transportation initiatives at other agencies. RCEA currently provides an incentive for ZEVs and has identified priority areas for charging station development.

[6] RCEA and Schatz Energy Research Center. 2016. Northwest California Alternative Fuels Readiness Plan. https://redwoodenergy.org/wp-content/uploads/2019/02/Northwest-California-Alternative-Fuels-Readiness-Plan.pdf

Objective 1.1.1. Public Light Duty BEV Adoption

2030 TARGET: 34% OF PASSENGER VEHICLES IN HUMBOLDT COUNTY ARE ZEVS (18,301 ZEVS PURCHASED).

With these measures, cities, the County, RCEA, and others will take action toward a target of 34% ZEV ownership in Humboldt County by 2030. This goal is in line with where the State needs to be in 2030 if it is to reach its 2050 EV ownership target of 100% of vehicles. Currently, less than 1% of passenger vehicles in Humboldt County are ZEVs. To reach 34% by 2030, local governments and other agencies will have to collaborate on promoting ZEVs, implementing incentive programs and expanding charging station networks.

Implementation Measure 1.1.1.1 Promote Purchasing of Electric Vehicles Through Outreach

2030 TARGET: ANNUAL PROMOTION EVENTS

ZEVs are a relatively new technology to some people, and outreach is needed to build interest and understanding through the following actions:

Implementation actions

- Conduct promotional events to disseminate information about charging station options, BEV or FCEV servicing, and buying a BEV or FCEV. Promotional events could include ZEV car shows.
- Develop educational materials pertaining to EV purchase incentives and charging infrastructure.
- Disseminate educational materials pertaining to EV purchase incentives and charging stations at planning and building offices and websites.

Implementation Measures 1.1.1.2. and 1.1.1.3: Provide Incentives for ZEV Adoption

2030 TARGET: 34% OF PASSENGER VEHICLES IN HUMBOLDT COUNTY ARE ZEVS (17,652 EVS PURCHASED)

To increase ZEV adoption, local governments and agencies will also need to take actions to make it as easy as possible for people to purchase and own these types of vehicles.

Implementation actions

- Expand the charging station network (further detailed under 1.1.1.3 and 1.1.1.4)
- Continue and expand existing programs providing incentives, rebates, and financing for ZEVs and FCEVs.
- Create a retire-and-replace program* to incentivize replacement of older, more polluting gas- or diesel-powered vehicles with EVs.
- Investigate implementation of the State's Enhanced Fleet Modernization Program by the North Coast Unified Air Quality District to fund old vehicle trade-ins.

*One example of a retire-and-replace program is Clean Cars for All, an initiative implemented by the Bay Area Air Quality Management District that provides grants for Bay Area residents to retire their older vehicles and replace them with a ZEV alternative. Programs like Clean Cars for All can help retire old, polluting gas or diesel vehicles while expediting ZEV adoption.

Implementation Measure 1.1.1.4 & 1.1.1.5: Install Public and Workplace L2 and L3 Charging Stations

2030 TARGET: 2,486 L2 PLUGS INSTALLED; 83 L3 PLUGS INSTALLED

Expanding Humboldt County's charging station network is necessary if we are to achieve and exceed State targets for EV adoption. There are three types of EV chargers: Level 1, Level 2, and Level 3.

Most public charging stations are Level 2 (L2) or Level 3 (L3). Level 3 (L3) charging stations offer a fast charge, averaging less than an hour to completely refill an EV's battery. Level 3 stations are expensive and, in Humboldt County, primarily installed by private entities such as Tesla. As of March 2021, there are five L3 charging locations in the County.

L2 charging stations take longer—usually about eight hours—to fully charge a vehicle. They are more common than L3 stations and are found throughout Humboldt County at many offices and businesses. Currently, RCEA maintains a local network of L2 EV charging stations and plans to expand this network.

Light utility poles may be another low-cost option for public charging infrastructure. Unlike most other public ZEV chargers, utility pole chargers can be installed without trenching or electrical upgrades; when fitted with an LED bulb, light utility poles typically have available load capacity. If all streetlight bulbs in Eureka are switched to LEDs, 12 level-two chargers could be added to light poles without electrical upgrades. Research conducted at Cal Poly Humboldt involved mapping to determine light pole charging locations in Eureka, located near multi-unit dwellings where residents might not have access to off-street parking.

Office and commercial buildings are priority locations for EV charging stations. 36% of EV charging occurs at the workplace.[7] Given that an L2 charger can charge up to 20 miles per hour, EVs with a battery capacity of up to 200 miles could fully recharge their battery during an eight-hour workday.

Implementation actions

- Identify potential installation sites, including municipal facilities.
- Implement the North Coast Plug-In Vehicle Readiness Plans (North-Coast-Plug-in-Electric-Vehicle-Readiness-Plan.pdf).
- Install light utility pole chargers.
- Adopt an ordinance allowing EV charging on the street.
- Adopt an ordinance requiring a certain number of charging stations at workplaces with over 25 employees.
- Secure funding for electrical panel upgrades.
- Develop streamlined permitting for EV charging infrastructure.
- Adopt building codes requiring EV charging infrastructure in new buildings.
- Adopt building codes requiring homes to have EV charging infrastructure in major remodels.
- Develop educational materials pertaining to EV charging infrastructure.

[7] Idaho National Laboratory. Plugged In: How Americans Charge Their Electric Vehicles. https://avt.inl.gov/sites/default/files/pdf/arra/PluggedInSummaryReport.pdf

- Disseminate educational materials pertaining to EV charging at planning and building offices and websites.

Implementation Measure 1.1.1.6: Install Home EV Charging Infrastructure

2030 TARGET: 5,296 HOME CHARGING PLUGS INSTALLED

The majority of EV charging (60%) occurs at home.[8] L1 and L2 chargers are used for home charging. L2 chargers require a higher-voltage circuit, so homes with limited electrical capacity may require electrical upgrades prior to installation. L1 chargers can simply be plugged into a 110V outlet and are an affordable alternative to L2 and L3 charging. Implementation actions listed below that involve adoption of new building codes may be required or encouraged by the 2022 Energy Code currently under review with an effective date of January 1, 2023.

Implementation actions

- Adopt building codes requiring EV charging infrastructure in new buildings.
- Adopt building codes requiring homes to have EV charging infrastructure in major remodels.
- Secure funding for electrical panel upgrades.
- Adopt ordinances allowing EV charging on the street.
- Develop streamlined permitting for EV charging infrastructure.
- Develop educational materials pertaining to EV charging infrastructure.
- Disseminate educational materials pertaining to EV charging at planning and building offices and websites.

Objective 1.1.2: Encourage Public Light Duty FCEV Adoption

Fuel cell electric vehicles are an important element of the State's clean transportation goals. This vehicle type must be refueled with liquid hydrogen. There are several ways to harness liquid hydrogen as a fuel source. If done by electrolysis, a process by which an electric current splits water, hydrogen fuel can be considered renewable if the electricity used is renewable. State law requires 33% of all hydrogen dispensed through State-funded hydrogen fueling stations to be produced using renewable sources of energy.[9]

The California Air Resources Board aims to have 200 hydrogen refueling stations in California by 2025 and 1,000 stations by 2030. The "North Coast and Upstate FCEV Readiness Plan," prepared by RCEA, is intended to prepare nine of California's northernmost counties - including Humboldt - for the introduction of FCEVs. The plan identifies priority locations for hydrogen fueling in the Humboldt Bay area. The measures below identify recommended targets for encouraging fuel cell electric vehicle use.

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[8] Smart, John Galloway, and Salisbury, Shawn Douglas. Plugged In: How Americans Charge Their Electric Vehicles. United States: N. p., 2015. Web. doi:10.2172/1369632.

[9] Redwood Coast Energy Authority et al. 2017. Regional Hydrogen Readiness Plan. https://redwoodenergy.org/wp-content/uploads/2017/08/10_19_17.FINAL_FCEV_Infrastructure_Plan.pdf

Implementation Measure 1.1.2.1 Promote Public Adoption of FCEVs

2030 Target 2030 Target: Garner one or more fleet commitments per year through Outreach Campaigns

Implementation Measure 1.1.2.2 Install Hydrogen Fueling Stations to Support Light Duty Vehicles

2030 Target: Seven Hydrogen Fueling Stations Permitted

Implementation actions

- Work with RCEA to discuss the feasibility of hosting a hydrogen fueling station within each city's and the County's jurisdictional boundary as described in the "North Coast and Upstate FCEV Readiness Plan."
- Use media and various promotional outlets to conduct FCEV outreach campaigns.
- Provide permitting support for hydrogen fueling stations.
- Work with owners of existing fueling stations to provide hydrogen fuel.

Strategy 1.2: Transition to a carbon-neutral goods-movement system

As of 2015, retail and commercial trucks account for nearly 35% of the emissions associated with transportation in Humboldt County. The State is taking action to address these emissions and transition to a carbon-neutral goods-movement system. For example, the Advanced Clean Truck Regulation is part of a strategy to accelerate a large-scale transition to zero-emission medium-and heavy-duty vehicles.[10] The regulation has two components:

- Manufacturers of light/medium to heavy-duty trucks are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2030.
- Large employers including retailers, manufacturers, brokers and others are required to report information about shipments and shuttle services. Fleet owners, with 100 or more trucks, are required to report their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service.

Objective 1.2.1: Electrify Heavy Duty Fleets

2030 Target: 13% of Medium and Heavy-Duty Vehicles on the Road in Humboldt County are ZEVs (489 trucks incentivized)

[10] California Air Resources Board. 2019. Advanced Clean Trucks Fact Sheet. https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-trucks-fact-sheet

Local planning and external incentives could be used to accelerate EV truck adoption above Advanced Clean Trucks requirements. State and federal incentives exist for decarbonizing this sector (see Appendix E for a funding matrix). In their Regional Transportation Plan (RTP), adopted in 2022, the Humboldt County Association of Governments (HCAOG) outlines policies to decarbonize the goods movement system. The proposed Implementation Measures and Actions below support the 2022 RTP (*VROOM 2022-2042*).

Implementation Measure 1.2.1.1: Convene a Freight/Offroad Electrification Working Group

2030 TARGET: WORKING GROUP CONVENED

Implementation Measure 1.2.1.2: Incentivize Accelerated Zero-emission Freight Ahead of Advanced Clean Truck Adoption Rates

2030 TARGET: 489 VEHICLES PURCHASED

Implementation Measure 1.2.1.3: Install "On-route" Charging Stations for Battery Electric heavy duty trucks

2030 TARGET: 268 CHARGING STATIONS INSTALLED

Implementation Measure 1.2.1.4: Install Hydrogen Fueling for Fuel Cell Electric Heavy Duty Trucks

2030 TARGET: 5 CHARGING STATIONS INSTALLED

Implementation actions

- Support HCAOG in its efforts to decarbonize Humboldt's goods-movement system.
- Incentivize retirement of diesel- or gas-powered trucks or purchase of a BEV/FCEV.
- Convene a freight/off-road electrification working group to pursue funding and identify ways to develop charging infrastructure.
- Expand the charging station network as outlined in 1.1.1 above.
- Facilitate installation of hydrogen fueling stations as outlined in 1.1.2 above.

STRATEGY 1.3: DECARBONIZE MUNICIPAL FLEETS

In 2019, the State of California began prohibiting State agencies from buying any sedans with internal combustion engines.[11] While there are no current State mandates for municipal fleets at this time, per Executive Order N-79-20, all in-State sales of new passenger cars and trucks will be zero emission by 2035. jurisdictions have direct control over GHG emissions for their own vehicle fleets. By purchasing EVs and installing EV charging infrastructure, cities and the County can lead by example and realize substantial emissions reductions.

Objective 1.3.1: Electrification of Light Duty Municipal Fleets

2030 TARGET: 1,023,944 ELECTRIFIED MILES (BEV AND FCEV)

As part of the North Coast PEV Readiness Plan, the Schatz Energy Research Center (SERC) developed a tool to help cities and the County incorporate zero emission vehicles into their fleets. This tool, called the PEV Fleet Evaluation Tool (PEVFleET), uses a set of inputs to calculate lifetime GHG reductions and payback time on various ZEV purchases. The proposed Implementation Measures and Actions below anticipates local jurisdictions will use this tool to include zero emission vehicles in their fleets.

Implementation Measure 1.3.1.1: Install Fueling infrastructure

Implementation Measure 1.3.1.2: Replace High Mileage Vehicles with BEVs

2030 TARGET: 724,612 ELECTRIFIED MILES

Implementation Measure 1.3.1.3: Replace high-mileage Vehicles with FCEVs

2030 TARGET: 299,332 ELECTRIFIED MILES

Implementation actions

- Install fueling infrastructure for municipal ZEVs.
- Replace all light-duty municipal vehicles with BEVs or FCEVs.
- Complete fleet analysis (or work with RCEA to update current fleet analysis).

[11] Thompson, Don. 2019. California Rules set Lower Emissions for State Vehicle Fleet. https://apnews.com/020d5674b2e34641960ff1fefbd36ba3

Strategy 1.4: Work with Humboldt Transit Authority to Decarbonize Public Transit

The California Air Resources Board's Innovative Clean Transit (ICT) Regulation was adopted in December 2018 and requires all public transit agencies to gradually transition to a 100% zero-emissions bus fleet. Beginning in 2026, 25% of new bus purchases by small transit agencies must be zero-emission buses; and by 2029, 100% of new bus purchases by all transit agencies must be zero-emission buses[12], with a goal of full transition by 2040. The Schatz Energy Research Center and Humboldt Transit Authority (HTA) developed the Climate Resilient Electrified Transit Plan to meet these requirements. HTA brought its first ZEB online in 2019, and owns and operates 33 buses across four transit systems that may be transitioned to ZEBs.

Objective 1.4.1: Achieve and Exceed Statewide Transit Electrification Targets

2030 Targets: 16 battery electric buses purchased; 24 fuel cell electric buses purchased

With this CAP measure, cities and the County commit to supporting HTA in purchasing electric buses at an accelerated rate above State requirements. This means that HTA would purchase electric buses before 2026 and/or exceed a 25% zero emission bus purchase rate between 2026 and 2029.

Implementation Measure 1.4.1.1: Install Fueling infrastructure

Implementation Measure 1.4.1.2: Purchase Battery Electric Buses

2030 Target: 16 ZEBs

Implementation Measure 1.4.1.3: Purchase Fuel Cell Electric Buses

2030 Target: 24 ZEBs

Implementation actions

- Assist HTA in installing fueling infrastructure for new transit vehicles.
- If needed, devote staff time to assist HTA and/or other transit systems in pursuing funding for electric buses.

[12] California Air Resources Board Innovative Clean Transit Rule. https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit

LOW-CARBON TRANSPORTATION – COMMUNITY CO-BENEFIT OUTCOMES:

The following paragraphs describe other benefits of the implementation measures for this goal which are outside the focus of the CAP, but noteworthy for other reasons.

Electric vehicles (EVs) will save drivers money in the long-term, as fuel and maintenance expenses are significantly lower than those of their conventional gas-fueled counterparts.

A transition from fossil fuel combustion vehicles to electric vehicles will also improve air and water quality. Emissions of criteria pollutants like carbon monoxide and particulate matter will be reduced, as EVs do not emit these pollutants directly from tailpipes like combustion engine vehicles. As a result of reduced air pollution, the community could see resulting health benefits like reductions in asthma and lung health related conditions[12].

Regarding water pollution, almost half of the vehicles currently driven in the United States leak fluids that can be toxic to people and to wildlife[13]. Antifreeze, engine oil, transmission fluid, and other fluids leak, often onto impermeable pavement, and drain off into waterways or soil and wildlife areas. Electric vehicles do not use many of the hazardous fluids needed in combustion vehicles. This includes petroleum, which leaks into our environment through small accidents at gas stations at a rate of over half a million gallons per year in California alone[14].

STRATEGY 1.5: PROMOTE BIOFUELS AS A TRANSITION STRATEGY

Biofuels and renewable diesel are non-fossil, low-carbon transportation fuel options. To promote biofuels and renewable diesel locally, jurisdictions can use them in their operations and support RCEA in relevant initiatives.

Objective 1.5.1: Increase Consumption of Renewable Diesel

Renewable diesel is a direct substitute for diesel fuel. Renewable diesel is refined from lower carbon and renewable sources, and can be produced from a variety of different feedstocks such as animal fats, corn, soybean and used cooking oil. Renewable diesel is an ideal and cost-effective fuel option for medium and heavy-duty vehicles for which there are not currently electric alternatives. Current diesel vehicles can be fueled by renewable diesel without the need for retrofits. Additionally, renewable diesel can be distributed using existing fueling station infrastructure.

In terms of greenhouse emissions, the State considers all common renewable diesel feedstocks are considered by the State to be more climate-friendly than petroleum-based diesel. However, different

[13] Litman, Todd. 2011. Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications Second Edition. Victoria Transport Policy Institute.

[14] Hilpert, Markus, and Patrick N. Breysse. 2014. "Infiltration and Evaporation of Small Hydrocarbon Spills at Gas Stations." Journal of Contaminant Hydrology 170: 39-52. doi: 10.1016/j.jconhyd.2014.08.004.

feedstocks have varying carbon intensities. An average of the carbon intensities of all certified renewable diesel feedstocks was used in the GHG reduction calculations for this measure.

Implementation Measure 1.5.1.1: Increase Use of Renewable Diesel

2030 TARGET: 277,351 GALLONS OF RENEWABLE DIESEL SOLD. RENEWABLE DIESEL MAKES UP 0.75% OF DIESEL CONSUMPTION FROM RETAIL/COMMERCIAL VEHICLES; 36 GAS STATIONS IN THE COUNTY SUPPLY RENEWABLE DIESEL

Implementation actions

All the following implementation actions will help achieve the 2030 target for this measure:

- Purchase renewable diesel annually to fuel municipal vehicles.
- Hire contractors who use renewable diesel or alternative fuels.
- Work with RCEA to explore opportunities for the development of renewable diesel and advanced fuels.

STRATEGY 1.6: PROMOTE ELECTRIFICATION OF YARD EQUIPMENT

Gas-powered yard equipment can harm air quality as well as emitting GHGs. A new gas-powered mower running for 1 hour produces similar emissions to the average car driving for 100 miles. Electric lawn and garden equipment models are widely available, and some landscapers and lawn maintenance companies use all-electric equipment. The objectives and implementation measures proposed below would incentivize the conversion of gas-powered yard equipment to electric powered yard equipment.

Objective 1.6.1: Gas-Powered Yard Equipment trade-in program

Implementation Measure 1.6.1.1: Trade in Gas Powered Lawn Mowers

TARGET: 420 LAWN MOWERS TRADED IN FOR AN ELECTRIC VERSION

Implementation Measure 1.6.1.2: Trade in Gas Powered Chainsaws

TARGET: 340 CHAIN SAWS TRADED IN FOR AN ELECTRIC VERSION

Implementation Measure 1.6.1.3: Trade in Gas Powered Trimmers

2030 TARGET: 420 TRIMMERS TRADED IN FOR AN ELECTRIC VERSION

GOAL 2: MODE SHIFT FROM SINGLE-OCCUPANCY VEHICLES TO ACTIVE TRANSPORTATION AND SUSTAINABLE MASS TRANSIT

As mentioned under the previous goal, transportation emissions account for more than half of total GHG emissions Countywide, and reducing vehicle miles traveled (VMT) is a critical component of reaching our 2030 emissions reduction goal, and our 2045 carbon neutrality goal. Making our communities more connected and accessible without the use of personal vehicles will also greatly improve our quality of life, as discussed in the co-benefits section below.

VMT reduction goals articulated in the State's Climate Change Scoping Plan include quadrupling the number of trips taken by foot by 2030 and striving for a nine-fold increase in the proportion of trips taken by bicycle by 2030. Locally, RCEA's RePower Plan pledges to assist HCAOG and HTA in their efforts to reduce VMT by 400 million miles traveled by 2030 (a 25% reduction from 2020 VMT levels). Modeling for the CAP is more conservative; implementing the following measures results in a 12% reduction in VMT by 2030.

High-level CAP strategies include designing communities to be more walkable and bikeable and promoting ridesharing, carsharing, and bike and scooter sharing programs that allow people to get around without owning a car. In this Plan, the term ridesharing includes carpooling and refers to services such as Uber and Lyft. Carsharing is distinct from ridesharing and refers to a service that provides users with access to a fleet of vehicles (or one vehicle) on a time-limited basis[15]. Similarly, bike and scooter sharing are services that provides users with access to a fleet of scooters or bicycles.

One important tool to encourage and facilitate development projects that further this CAP's VMT goals is the CAP consistency checklist in Appendix E. When a new development project is proposed, the Cities and County can use the CAP consistency checklist to evaluate the consistency of proposed new development projects with this CAP. If a project design is consistent with all required elements of the checklist, the project can show that it is consistent with the CAP and thus the emissions it generates are not cumulatively considerable under CEQA. This CEQA streamlining can be a significant incentive for furthering CAP goals.

STRATEGY 2.1: BUILD MORE ACCESSIBLE COMMUNITIES

Increased density reduces the distance people have to travel between destinations (work, home, store, etc.), lowering VMT and providing greater options for travel modes. Infill development—developing vacant parcels in existing urban areas—improves density in already developed areas. Infill also improves access to transit, as Humboldt County's urban and suburban centers are the most well-served areas by our local transit system. Active transportation and mass transit become more viable options for Humboldt County residents when new development is located near transit corridors and bike and pedestrian networks. All the cities in the County have good examples of infill residential development in and near the downtown areas, which allow residents to eat out, go shopping, recreate or even commute to work without getting in a personal vehicle.

Shifting the housing balance to areas with access to key services reduces the need for vehicle trips to access those services. Mixed-use development combines residential and commercial spaces, making

[15] Millard-Ball A., Murray G., Ter Schure J., Fox C., Burkhardt J. (2005). Transit Cooperative Research Program Report 108: Car Sharing: Where and How It Succeeds.

communities more accessible for pedestrians. Eureka's Old Town neighborhood, where many buildings host both storefronts and apartments, is an excellent example of mixed-use development in Humboldt County. The cities of Rio Dell, Fortuna, Blue Lake and Trinidad all have historic downtowns that are further excellent examples of mixed use. Several jurisdictions, including Eureka, Arcata, and the County have set goals in their Housing Elements to encourage mixed-use development.

Objective 2.1.1: Increase Density and Mixed Use Development in Infill Priority Areas

2030 TARGET: 3,439 NEW RESIDENCES CONSTRUCTED IN MIXED USE AREAS

Density is usually measured in terms of persons, jobs, floor area or dwellings per unit area. With this measure, cities and the County commit to increasing density in urban areas, downtowns, and suburban centers ("infill priority areas").

The balance of jobs and housing is a good indicator of the mix of uses in an area. With a more equal ratio of jobs and housing, people can live close to where they work and more easily walk, bike, or use transit to access critical services. With these measures, cities and the County also commit to zoning more areas for mixed-use development.

Implementation Measure 2.1.1.1: Infill Development

2030 TARGET: INCREASE HOUSING AND/OR JOB DENSITY BY 200% IN INFILL PRIORITY AREAS

Implementation Measure 2.1.1.2: Increase Mixed Use

2030 TARGET: INCREASE MIXED USES TO ACHIEVE A RATIO OF 1.5 JOBS PER HOUSEHOLD IN INFILL PRIORITY AREAS

Implementation actions

- Update zoning codes to facilitate infill and mixed-use development in infill priority areas.
- Use the CAP consistency checklist in Appendix E to encourage new development in infill areas.

Objective 2.1.2: Improve Accessibility of New Development by Transit, Walking and Biking

2030 TARGET: 3,439 NEW RESIDENCES CONSTRUCTED IN AREAS SERVED BY PUBLIC TRANSIT AND BICYCLE AND PEDESTRIAN PATH NETWORKS

With this objective and related measures, participating jurisdictions will employ a variety of strategies to incentivize low-carbon, transportation-friendly development. This will primarily be accomplished through changes to local zoning regulations that incentivize siting development near transit/bicycle/pedestrian infrastructure and designing development to support use of that infrastructure.

Implementation Measure 2.1.2.1: Increase Location Efficiency

NEW RESIDENCES ARE CONSTRUCTED IN URBAN AREAS, DOWNTOWN BUSINESS DISTRICT OR SUBURBAN CENTERS

Implementation Measure 2.1.2.2: Increase Destination Accessibility

NEW RESIDENCES ARE CONSTRUCTED NEAR DOWNTOWNS OR MAJOR JOB CENTERS

Implementation Measure 2.1.2.3: Increase Transit Accessibility

NEW RESIDENCES ARE CONSTRUCTED WITHIN ¼ MILE OF A TRANSIT STOP

Implementation Measure 2.1.2.4: Orient Towards Non-Auto Corridors

NEW RESIDENCES ARE CONSTRUCTED THAT ENCOURAGE USE OF MULTI-MODAL TRAVEL

Implementation Measure 2.1.2.5: Improve Location of Development

NEW RESIDENCES ARE CONSTRUCTED IN AREAS WITH A HIGH PERCENTAGE OF MULTI-MODEL AND/OR PEDESTRIAN-ORIENTED INTERSECTIONS

Implementation Measure 2.1.2.6: Provide Pedestrian Network Improvements

NEW RESIDENCES ARE CONSTRUCTED WITH PEDESTRIAN ACCOMMODATIONS ON-SITE AND CONNECTING TO OFF-SITE INFRASTRUCTURE

Implementation Measure 2.1.2.7: Provide Traffic Calming Measures

PEDESTRIAN/BICYCLE SAFETY AND TRAFFIC CALMING MEASURES ON STREETS AND INTERSECTIONS

Implementation actions

- Update zoning codes to facilitate development in areas accessible to existing bicycle, pedestrian, and transit infrastructure.
- Update zoning codes to include standards/incentives for new development to provide on-site bicycle/pedestrian accommodations that connect to off-site bicycle and pedestrian infrastructure.

- Use the CAP consistency checklist in Appendix E to encourage new development in areas with access to public transit and bicycle/pedestrian networks.
- Construct traffic calming measures on streets and intersections.

Objective 2.1.3: Include Bicycle Accommodations in New Commercial and Multifamily Residential Development

2030 TARGET: 3,439 NEW RESIDENCES CONSTRUCTED THAT ENCOURAGE BICYCLE USE

Cities and the County can establish standards and incentives that facilitate bicycle use associated with new commercial and multifamily residential developments.

Implementation Measure 2.1.3.1: Increase Destination Accessibility

NEW RESIDENCES ARE CONSTRUCTED WITHIN 3.5 MILES OF DOWNTOWN BUSINESS DISTRICT OR MAJOR JOB CENTERS

Implementation Measure 2.1.3.2: Locate Project Near Bike Path

NEW RESIDENCES ARE CONSTRUCTED WITHIN ½ MILE OF CLASS I OR CLASS II BIKE LANES

Implementation Measure 2.1.3.3: Improve Design of Development

NEW RESIDENCES ARE CONSTRUCTED IN AREAS WITH A HIGH PERCENTAGE OF MULTI-MODEL AND/OR PEDESTRIAN-ORIENTED INTERSECTIONS

Implementation Measure 2.1.3.4: Incorporate On-Site Bike Lane Street Design

NEW RESIDENCES ARE CONSTRUCTED IN AREAS WITH A MINIMUM OF ONE MILE OF BIKE LANE PER PROJECT SQUARE MILE

Implementation Measure 2.1.3.5: Provide Bike Parking In New Development

NEW RESIDENCES ARE CONSTRUCTED IN AREAS WITH BIKE PARKING

Implementation Measure 2.1.3.6: Dedicate Land for Bike Trails

NEW RESIDENCES ARE CONSTRUCTED IN AREAS WITH BIKE TRAILS

Implementation actions

- Update zoning codes to provide incentives for projects that meet the implementation measures above based on their location.
- Require bike parking in new multifamily and commercial developments.
- For larger projects, dedicate land for onsite bike trails, or contribute to the development and maintenance of off-site bike trails that link the project to designated bicycle routes with a minimum one mile of bike lane per project square mile.

Strategy 2.2: Traffic Impact Fee With VMT Waiver

This strategy would establish traffic impact fees to fund transportation infrastructure consistent with CAP goals, and a fee waiver for projects that include features to reduce VMT.

Strategy 2.3: Eliminate minimum parking requirements and establish maximums

Local building requirements often incentivize vehicle use by requiring the construction of parking spaces, often at cost to a builder or developer. With this measure, local governments commit to eliminating minimum parking requirements for all new development, and instead establish parking maximums. These new parking maximums would be set below the standard level of parking provided for new development over the last several decades. In the coastal zone, this will need to be paired with additional provisions that ensure coastal public access parking is maintained and provided.

Implementation actions

Update zoning codes to eliminate minimum parking requirements and establish maximums.

Strategy 2.4: Increase use of Active Transportation

Active transportation—such as walking and biking—reduces GHG emissions by replacing vehicle trips. It has the co-benefit of also allowing people to build exercise into their daily routines.

According to HCAOG's 2018 Bike Plan, 1.7% of Humboldt County commutes are made on a bike. 2.3% and 6.2% of commuters travel by bike in the City of Eureka and City of Arcata, respectively. This is higher than the average for California (0.8%) or the country (0.4%). However, it is still much lower than other cities in California. By comparison, the City of Davis has a bike commute mode share of 15.5%, and the City of Santa Cruz's mode share is 13.2%.[16]

[16] League of American Bicyclists. 2017. Where we Ride: Report on the 2017 American Community Survey Data by the League of American Cyclists. https://bikeleague.org/sites/default/files/Where_We_Ride_2017_KM_0.pdf

Objective 2.4.1: Increase Adoption of Active Transport

Implementation Measure 2.4.1.1: Educate the Public About Active Transportation

Youth programs can educate students about the benefits of walking and bicycling and provide the skills how to do so safely.

Safe Routes to School is one such youth education initiative. Safe Routes to School programs teach students how to safely walk and bicycle with traffic and teach family and community members how to model these skills. A Countywide Safe Routes to Schools Task Force, with participation open to everyone, promotes active transportation education, emphasizing streets and sidewalks around school campuses.

Implementation actions

This measure could be implemented by working with representatives from local school districts to implement a bicycle and pedestrian safety program in local schools. Projects and programs could be coordinated through participating with the Countywide Safe Routes to School Task Force. (humboldtsaferoutes.org)

Implementation Measure 2.4.1.2: Expand Regional Trail and Bike Lane Network

2030 Target: 100 Miles of New Class I or II Bikeways

With this measure, jurisdictions commit to expanding the regional bicycling network by developing or expanding bike trails and lanes within their boundaries. This measure will be most effective if complete bike networks are rapidly created. Bike networks should also be connected to pedestrian and transit networks.

The measure calls for the creation of new miles of Class I, II, and IV bike lanes. Below is a summary of the different classes of bikeways (page 3-10 of the 2018 Humboldt Regional Bike Plan contains more detailed information):

- Class I: Bike Path (paved, shared-use between bicyclists and pedestrians).
- Class II: Bike Lane (demarcated area on a street or highway for one-way bicycle travel).
- Class III: Bike Route (roadway without demarcated bike lane that is signed to indicate that bicyclists share the road with motor vehicles).
- Class IV: Separated Bikeway (right-of-way designated exclusively for bicycle travel adjacent to a roadway and protected from vehicle traffic).
- Class III bikeways are not included as a metric for this measure because it is assumed that bike routes have far less potential to reduce VMT than other types of bikeways.

HCAOG's 2018 Bike Plan calls for adding or redesigning approximately 506 miles of bikeways over the next 20 years. Class I and II bikeways make up 94 miles, with the remaining future projects designated as Class III. For this measure, only Class I, II, and IV bikeway projects were considered.

Implementation actions

This measure could be supported by jurisdictions doing the following:

- Devoting staff time toward working with HCAOG to fund and implement the 2018 Bike Plan.
- Developing and implementing plans to re-allocate the existing right of way to form complete bicycle networks linked to transit and pedestrian networks.

Implementation Measure 2.4.1.3: Add Traffic Calming Measures to Roadways

2030 TARGET: AT LEAST 25% OF STREETS AND INTERSECTIONS HAVE IMPROVEMENTS

High vehicle speeds contribute to decreased road safety and increased GHG emissions. Local governments lower travel speeds using road design modifications to "calm" traffic. Traffic-calming measures include reducing the number of travel lanes, temporarily closing streets to vehicle use, and building "median islands" at often-used crosswalks.

Implementation actions

This target would be supported by the following actions:

- Identify key intersections and roadways that are candidates for traffic calming designs and pursue grant funding for traffic calming projects.
- Encourage events that temporarily dedicate streets to pedestrians.
- Explore opportunities for permanent pedestrian-only streets in downtown areas.

Implementation Measure 2.4.1.4: Pedestrian Streets

2030 TARGET: COMPLETE PEDESTRIAN NETWORKS EXIST FOR ALL DESTINATIONS IN URBAN AREAS.

Providing access to complete pedestrian networks encourages people to walk instead of drive. Pedestrian networks should include safe paths to all destinations, and barriers such as fences, walls, etc. should be eliminated.

Implementation actions

- Implement a comprehensive policy of improving pedestrian access in urban areas.

Implementation Measure 2.4.1.5: Implement Complete Streets Measures

"Complete Streets" enable a shift to healthier, more active modes of transit by providing safe and convenient access for bicyclists, pedestrians, and transit service. The Complete Streets Act of 2008 requires California cities and counties to adopt transportation plans that accommodate all users of roadways, including the elderly and disabled. Design features of Complete Streets include accessible sidewalks, crosswalks, bike lanes, and bike parking. Complete Streets design can bring economic benefits to local businesses and increase property values. Humboldt County Association of Governments (HCAOG) incorporates Complete Streets policies into their planning efforts—most recently in the Complete Streets

Element of the 2018 Regional Transportation Plan. With this measure, participating jurisdictions commit to working with HCAOG to implement their local complete streets policy priorities.

Implementation actions

- Devote staff time to working with HCAOG to pursue funding for infrastructure projects and planning for pedestrian, bicycle, and transit facility improvements.

Implementation Measure 2.4.1.6: Promote Purchasing of E-Bikes

2030 TARGET: 2,209 *E-Bikes Incentivized*

E-bikes can remove many barriers to bicycling, especially for those with physical limitations or longer commute trips. According to Project Drawdown, e-bikes are the "most environmentally sound means of motorized transportation in the world today."[17] A study in Portland found that just a 15% increase in e-bike mode share resulted in an 11% decrease in CO_2 emissions.[18] E-bikes currently make up 4-5% of total bike sales.

CARB has identified e-bikes as an important component in the shift to sustainable transportation. Through the Clean Cars 4 All program, California residents can scrap their older, high-polluting cars and receive rebates and vouchers for cleaner alternatives. This program includes e-bike vouchers.[19] The State of California is also issuing e-bike rebates through its Clean Vehicle Rebate Project (CVRP), administered by the Center for Sustainable Energy. And, locally, RCEA recently incentivized the purchase of new e-bikes and electric scooters (e-scooters) through a pilot program.

Jurisdictions can support these existing State and local efforts by assisting RCEA with e-bike incentives, holding safety workshops, and using their outreach channels to promote purchases.

Implementation Measure 2.4.1.7: Install Bike Parking Infrastructure at New and Existing Facilities

2030 TARGET: ALL CITIES AND THE COUNTY ADOPT ORDINANCES REQUIRING BIKE PARKING IN NEW DEVELOPMENT

Policy 1.4 in the Humboldt Regional Bike Plan briefly describes strategies for promoting bike parking in new development. In the text of the Policy, HCAOG pledges to "assist local jurisdictions in adopting an ordinance that requires bicycle facilities in new development and redevelopment."

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[17] Project Drawdown. https://drawdown.org/solutions/electric-bicycles Accessed 6-15-2019.

[18] Portland State University Transportation Research and Education Center. 2019. The E-Bike Potential: Addressing Our Climate Crisis by Incentivizing Active Transportation. https://trec.pdx.edu/news/e-bike-potential-addressing-our-climate-crisis-incentivizing-active-transportation

[19] Office of Senator Tom Umberg. 2019. E-bike vouchers bill signed by Governor Newsom. https://sd34.senate.ca.gov/news/992019-e-bike-vouchers-bill-signed-governor-newsom

Implementation actions

With this measure, participating jurisdictions commit to:

- Work with HCAOG to develop and adopt an ordinance requiring bicycle facilities in new public, multifamily residential, commercial, industrial and mixed-use development and redevelopment.
- Build bike parking at existing locations in the Bike Plan.

Implementation Measure 2.4.1.8: Use Traffic Signals to Encourage Active and Public Transit

Signalized intersections can be improved to prioritize pedestrians, bicyclists, and buses over private vehicles.

Implementation actions

The following actions would support this measure:

- In high-use areas, program signals for bicycle and pedestrian intervals, install bicycle and pedestrian priority signals, or all-way pedestrian "scrambles" (open areas which allow free movement of pedestrians at intersections).
- Program all pedestrian signals to provide sufficient time for all pedestrians, including pedestrians with disabilities, to cross the street safely.
- Replace pedestrian-activated signals in favor of automatic pedestrian signals.
- Install transit-priority signals along main bus routes.

STRATEGY 2.5: REDUCE SINGLE PERSON, PERSONAL VEHICLE COMMUTES

Humboldt County residents tend to travel to school or work in a personal vehicle. According to the *U.S. Census Bureau 2010-2014 American Community Survey 5-Year Estimates*, 73.5% of all employees within the County commute by car alone. There are 18,170 K-12 students in Humboldt County[20]; according to HCAOG's Safe Routes to School prioritization tool, [21]59% of those students are driven to school in private vehicles.

Ridesharing reduces VMT, resulting GHG emissions and driving costs. As of 2020, Cal Poly Humboldt offers a ridesharing program, Zimride, to students. Zimride allows students to track their commute patterns and

[20] Education Data Partnership. 2020. County Summary: Humboldt. https://www.ed-data.org/county/Humboldt

[21] HCAOG, 2012. Safe Routes to School Prioritization Tool. http://hcaog.net/sites/default/files/hcaog_sr2s_prioritzn_tool_report_final_draft_0.pdf

network with others who might want to share a ride. This program or others like it may be applied to establishments outside of the Cal Poly Humboldt setting.

Telework reduces commute trips and can reduce VMT and associated GHG emissions. During the COVID-19 pandemic, telework has allowed many Humboldt County residents to work safely from home. As the pandemic subsides, many cities and counties throughout the State are developing telework policies that allow for employees to work from home under certain conditions. This paradigm shift presents an opportunity for Humboldt County local governments to greatly reduce emissions from employee commutes.

Objective 2.5.1: Implement a Commute Trip Reduction Ordinance for Workplaces

This objective calls for the implementation of a mandatory commute trip reduction program applying to employers that employ over 25 people. The intent of this program is to reduce single-occupancy vehicle trips by encouraging employees of large employers to use an alternate form of transportation—such as public transit, active transportation, carpooling, or telecommuting—at least once a week. Implementation of a trip reduction program ordinance includes the development of performance standards, mandatory implementation, monitoring, and reporting.

The following sub-measures are designed to be components of the trip reduction program. They apply only to establishments that employ over 25 people.

Implementation Measure 2.5.1.1: Carpooling—workplace

2030 TARGET: 35% OF EMPLOYEES ELIGIBLE FOR ESTABLISHMENTS EMPLOYING OVER 25 PERSONS

Implementation Measure 2.5.1.2: Telecommuting--Workplace

2030 TARGET: 14% OF EMPLOYEES TELECOMMUTE 1.5 DAYS PER WEEK ON AVERAGE

Implementation actions

- Jurisdictions adopt a trip-reduction ordinance that requires employers with over 25 employees to develop and implement a commute trip reduction program.
  - The ride-sharing measure will include a ride-sharing program and membership within a transportation management association. The ride-sharing program will consist of:
    - Designated parking spaces for ridesharing vehicles,
    - Passenger loading, unloading, and waiting zones; and
    - A website, message board, or app for coordinating ride-sharing.
  - The measure will include a provision to allow employees to work remotely 1.5 days per week when feasible.
- Jurisdictions develop telecommute policy for municipal employees that eliminates commuting for most employees at least once a week.

Implementation Measure 2.5.1.3: Subsidize Transit Passes—Employer Program

2030 Target: 4,170 free transit passes provided

Transit authorities across the country—from Washington D.C. to Portland, Oregon—partner with major employers to subsidize employee commutes, with employers using tax breaks to fund some or all transit subsidy costs.

An excellent local model for this type of program is HTA and Cal Poly Humboldt's Jack Pass offering. Through Jack Pass, Cal Poly Humboldt students ride Redwood Transit System (RTS) free (the program is funded through college tuition fees). Jack Pass users make up about 1/3 of total ridership on RTS and 61% of the Arcata Mad River Transit System (AMRTS).

Implementation actions

With this measure, jurisdictions commit to incentivizing or requiring large employers to provide free transit passes to employees. This type of program could be required via ordinance or implemented as a voluntary program with incentives for businesses to provide passes.

Objective 2.5.2: Commute Trip Reduction (School)

Carpooling reduces VMT, thus reducing GHG emissions. The intent of this program is to reduce VMT for schools by encouraging families to carpool when transporting students.

BOLDT Rides for Resilience is a local initiative to connect students with rides to after school activities using two apps: GoKid and GoKid Connect. The apps can be used by families, guardians, administrators, educators, counselors, and school staff.

Implementation Measure 2.5.2.1: Promote Carpooling to School

2030 TARGET: 16-35% PARTICIPATION RATE AMONG FAMILIES IN JURISDICTION

Implementation actions

- Coordinate with BOLDT program leaders to implement the BOLDT Rides for Resilience program, including the following near-term actions:
    - Create a workable timeline,
    - Conduct outreach,
    - Pilot the GoKid apps,
    - Create informational packets and distribute via mail and email, and
    - Create licensed schoolwide databases within the first year.

Objective 2.5.3: CalPoly Humboldt Commute Reduction

Cal Poly Humboldt (located within the city limits of Arcata) adopted a Climate Action Plan on December 12, 2016, that sets goals to reduce GHG emissions to 1990 levels by 2020, to 80% below 1990 levels by 2040, and to become carbon neutral by 2050. While the City of Arcata does not have any direct authority over the university's actions to achieve its climate goals, all the local jurisdictions in the County commit to supporting Cal Poly's goals to reduce its GHG emissions from commuter trips to and from the university.

Implementation Measure 2.5.3.1: Support CalPoly Humboldt Climate Action Plan

2030 TARGET: 3,584 MT CO2E REDUCTION in GHG EMISSIONS FROM COMMUTE TRIPS AS DESCRIBED IN THE CAL POLY HUMBOLDT 2016 CAP.

STRATEGY 2.6: REDUCE RURAL VEHICLE TRIPS

Over half of the land in the County's unincorporated areas is designated for low density, homestead-style development which explains why the VMT per person is higher in the unincorporated County than in any other jurisdiction which all have higher densities. Due to limited transit accessibility and active transportation infrastructure, personal vehicles are often the only viable transportation option for people living within these rural areas. Thus, ridesharing and e-bikes may be an effective way to reduce overall driving in low-density areas of the county.

Implementation actions

- Support the development of vanpool programs for workers regularly commuting to urban centers.
- Support the development of an online network allowing community members to consolidate shopping and other household trips.
- Promote e-bike incentives in rural areas.

STRATEGY 2.7 EXPAND CARSHARE

Objective 2.7.1: Attract Carshare Services

Car-sharing allows people to rent cars on a short-term basis as needed. Carshare is generally much cheaper than owning a car, and people who participate in a carsharing subscription service tend to drive less, relying on active transportation and/or transit for short trips.

Major car-sharing companies have not yet established significant operations in Humboldt County. With this measure, jurisdictions commit to working with HCAOG, local businesses, and entrepreneurs to increase the supply and demand for car-sharing and potentially facilitate the development of a "home-grown" car-sharing service.

Implementation Measure 2.7.1.1: Implement a Carshare Program

2030 TARGET: CAR SHARE PROGRAM(S) WITH 10,525 PARTICIPANTS

Implementation Measure 2.7.1.2: Require Car Share Parking in New Development

2030 TARGET: RECOMMEND FOR ALL NEW DEVELOPMENT

Implementation actions

- Explore cost-sharing strategies and incentives for local businesses and major developments to include car-sharing spaces
- Adopt an ordinance to require carshare parking in new large multifamily and commercial development
- Facilitate the development of local car-share services by coordinating with providers and pursuing grant funding.

STRATEGY 2.8: BIKESHARE

Objective 2.8.1: Implement A Bike/Scooter-sharing Program

2030 TARGET: BIKE/SCOOTER-SHARING AVAILABLE IN EACH CITY AND THE COUNTY

Bike share and scooter share programs allow people to use bicycles on a short-term basis. Bikes and scooters can be rented or provided for free. The City of Arcata has an active bike-share program and the City of Eureka is looking at initiating a scooter share program in the near future. Roughly 25% of all trips in the County are one mile or less in length which is an appropriate distance for scooters.

Implementation Measure 2.8.1.1: Implement a Bike/Scooter Share Program

2030 TARGET: BIKE/SCOOTER SHARE PROGRAM IMPLEMENTED

Implementation actions

This measure would be supported by jurisdictions doing all the following:

- Work with RCEA and HCAOG to identify ideal locations for new bike/scooter share facilities, including kiosks at entrances to town and local businesses.
- Explore cost-sharing strategies and incentives for local businesses and major developments.
- Based on the above, expand local bike/scooter-share services.

STRATEGY 2.9: TRANSIT RIDERSHIP

VMT and related transportation emissions can be reduced by increasing transit ridership. The measures in this section are meant to make public transit more convenient and less costly, thus encouraging car commuters to take the bus more often.

Objective 2.9.1: Increase Transit Ridership by Improving Service and Reducing Cost

Implementation Measure 2.9.1.1: Active Transportation and Transit Education

2030 TARGET: ONE PROMOTION EVENT ANNUALLY. DISSEMINATION OF INFORMATION

Outreach and community education can increase ridership.

Implementation actions

- Develop outreach campaigns and educational materials in coordination with HTA and local transit agencies.

Implementation Measure 2.9.1.2: Increase Transit Frequency/Speed

2030 TARGET: 15% REDUCTION IN HEADWAY IN 50% OF TRANSIT ROUTES

To reduce headway (wait time between buses), transit managers have two options. They can either increase the number of buses running at a given time or streamline service by moving buses to priority routes. This measure will involve streamlining existing transit routes to focus on more densely populated areas and utilizing park-and-ride infrastructure to bring transit riders from low-density areas to stops along streamlined routes. Where it is appropriate, jurisdictions will allocate transit-only lanes from the existing right-of-way.

The target for this measure is to reduce headway by 15% in many Humboldt Transit Authority/Arcata Mad River Transit Service (HTA/AMRTS) routes. This is a regional measure that requires coordination between HTA and member jurisdictions to streamline transit throughout the County. Some jurisdictions, such as Blue Lake and Ferndale, will not be able to utilize this measure because they are not served by HTA/AMRTS routes.

Implementation actions

Support HTA/AMRTS in their efforts by dedicating staff time to pursue funding for:

- a High-Frequency Shuttle between Cal Poly Humboldt and Downtown Arcata in Peak Periods , and
- a Mainline Eureka–Arcata Express Service (RTS).

Implementation Measure 2.9.1.3: Subsidize Transit Passes—Community Program

2030 TARGET: 8,905 TRANSIT PASSES FULLY SUBSIDIZED (15% OF JURISDICTION RESIDENTS)

Providing free transit routes should encourage ridership by reducing travel costs. Furthermore, eliminating fares can reduce the time it takes for passengers to board, increasing overall bus speed and decreasing wait times for passengers.

Several US communities have offered free fare, including Olympia, Washington, Denver Colorado, and Austin, Texas. Within California, transit systems must maintain a certain level of ridership to be eligible for Transit Development Fund (TDA) funding. To implement this measure, jurisdictions and transit authorities will need to find funding to match what would be collected at the farebox.

Jurisdictions can also create a culture of public transportation ridership by offering free transit passes to their employees, a measure that HTA and member jurisdictions have previously considered. The City of Arcata, College of the Redwoods and Cal Poly Humboldt already offer free or subsidized passes. In Del Norte County, Redwood Coast Transit Authority allows all middle school, high school, and college students to ride for free. Humboldt County recently initiated a pilot program offering 10 free bus passes for 100 employees on a first-come-first-served basis that was so quickly oversubscribed they offered a second round for another 50 employees that also went quickly.

Implementation actions

- Coordinate with HTA to determine the monetary commitment required from each jurisdiction to match revenue from bus fares.
- Secure funding to subsidize passes and educate the public about fare-free transit.

Implementation Measure 2.9.1.4: Subsidize Transit Passes—Housing Developer Program

2030 TARGET: 500 SUBSIDIZED TRANSIT PASSES DISTRIBUTED

Transit passes can be subsidized by developers of new, multifamily, transit-oriented dwellings or by owners of existing rentals. One example of a residential transit pass program is Alameda-Contra Costa (AC) Transit's EasyPass, which offers passes for residents of complexes with over 100 units. The cost of passes may be covered by allowing developers to offer passes in lieu of dedicating land to parking spaces.

Implementation actions

- Form working group of staff from HTA, cities, and the County to coordinate rollout of and funding for subsidized transit passes for municipal employees.
- Include this measure as part of the CAP Compliance Checklist for new development. See Appendix F.

Implementation Measure 2.9.1.5: Increase Number of Transit Stops

2030 TARGET: 45 NEW TRANSIT STOPS

Increasing the availability of bus stops will make taking the bus an option for more people. An additional bus stop in Blue Lake was recommended in the 2017 Transit Development Plan , and subsequently added by incorporating into Willow Creek Transit's Saturday service. Other bus stops would be added in future updates to that Plan.[22]

Implementation actions

- Coordinate with HTA to determine additional bus stop locations.
- Coordinate with HTA to secure funding for additional bus stops.

Implementation Measure 2.9.1.6: Improve Transit Stops

Transit accessibility can be improved by installing sheltered stops, bike racks, bike lockers, and ADA facilities, and ADA compliant sidewalks. As identified by HCAOG in their Transit Development Plan, priority should be given to the installation of an ADA pad and ADA compliant sidewalks at bus stops.

Implementation actions

- Add bus top improvements in coordination with HTA.

Implementation Measure 2.9.1.7: Expand Park-and-Ride Facilities

Park-and-ride lots allow commuters to park their car at a transit stop and take the bus for the remainder of their journey. There is currently a park-and-ride lot in Trinidad and another in Fortuna. With this measure, jurisdictions will work with HTA to explore potential locations for additional park and ride lots and, if necessary, amend zoning regulations to facilitate their development.

Implementation actions

- Coordinate with HTA to expand park-and-ride infrastructure.

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[22] HCAOG, 2017. Transit Development Plan. http://hcaog.net/sites/default/files/humboldt_tdp_2017_plan_final_nov_2017.pdf

Implementation Measure 2.9.1.9: Increase Microtransit Services

2030 TARGET: 26 MICRO-TRANSIT VEHICLES SERVING JURISDICTIONS

Demand response (or micro) transit allows users to access transit within a defined service area and service timeframe, grouping rides whenever possible. Users can access transit through an app, website, or phone call. In 2021, a team of researchers with Montana State University analyzed transit feasibility for McKinleyville and recommended the development of demand response transit system using an app or website.[23]

Implementation actions

- Work with local transit providers to develop microtransit options.

Implementation Measure 2.9.1.10: Increase the Number of Transit Hubs

Transit hubs can allow for convenient access to walking and biking networks, shared micro-mobility services such as bike share services, and other current and future forms of mobility-on-demand, such as Uber and Lyft services. Infrastructure that provides convenience, comfort, and reliability of transit service can encourage a mode shift to public transit.

Implementation actions

- Coordinate with HTA and local transit agencies to fund and create additional transit hubs.

STRATEGY 2.10: PEDESTRIAN-FRIENDLY DOWNTOWN AREAS

Downtown areas tend to be the economic and social centers of a city. Due to the variety of land uses and the population and job density, these areas can be excellent for walking, biking, and riding public transit.

Objective 2.10.1: Reduce Vehicle Traffic in Downtown Areas

Implementation Measure 2.10.1.1: Initiate Parking Fees and Time Limits

2030 TARGET: ALL JURISDICTIONS IMPLEMENT PARKING POLICY WITH A 25% OR GREATER INCREASE IN PARKING PRICE

Implementing parking fees may help encourage a mode shift from single passenger driving to biking, walking, or public transit.

[23] Hamre, Kack, Fisher. 2021. McKinleyville Transit Study Interim Report. https://www.mckinleyvilletransitstudy.com/uploads/1/3/3/7/133791725/20210526_mckinleyville_interim_report.pdf

Implementation actions

- Create parking fees and/or metered parking in downtown areas with revenue potentially supporting pedestrianization.

Implementation Measure 2.10.1.2: Provide Premium Spaces for Carpool and Vans

Providing spaces for carpool and van pools and/or reducing parking prices or fees for carpools and vanpools can incentivize shared trips. Dedicated spaces could be offered at a reduced price or free, and they can be located close to key destinations.

Implementation actions

- Dedicate premium spaces for carpools and/or vanpools at municipal buildings with more than 25 employees.
- Provide parking at no cost or a reduced cost for carpools and vanpools.

Implementation Measure 2.10.1.3: Replace On-street Parking with Non-Vehicle Uses in Dense Downtown Areas

Curb management programs should be implemented in dense downtown areas. On-street parking can be transformed into parklets, bike corrals, expanded bus stops and loading/unloading zones for passengers and transit.

Implementation actions

- Develop and implement plans to shift some downtown curb space from vehicle parking to non-vehicle uses including parklets, bike corrals, expanded bus stops, and loading/unloading zones.
- Work with HCAOG to secure funding for curb management improvements.

ACTIVE AND SUSTAINABLE MASS TRANSIT - COMMUNITY CO-BENEFIT OUTCOMES:

The following paragraphs describe other benefits of the implementation measures for this goal which are outside the focus of the CAP, but noteworthy for other reasons.

A shift away from single-occupancy vehicles towards active transportation and sustainable mass transit will have meaningful impacts on the overall health and safety of the community. The Bureau of Transportation Statistics data indicates that as VMT per capita decreases, so too do fatalities from motor vehicle accidents[24]. People who use transit are more likely to be physically active during their daily commutes,

[24] United States Bureau of Transportation Statistics. (n.d.). State Transportation Statistics 2015. Retrieved from

which can improve their individual health[25]. Increasing the use of transit and active transportation has also shown to be correlated with community-wide improvements in mental and physical health[26].

Supporting sustainable mass transit and active transportation can also expand options for non-driving community members (or community members who don't drive), allowing increased access and variety across their lives--from healthier groceries to wider employment opportunities. It can also improve social equity by reducing expenses related to transportation (which can be substantial for lower income households), allowing income to be allocated to other necessities and helping to reduce poverty-related stress[27].

The direct, avoided cost resulting from CAP measures to reduce VMT amounts to $57 million in maintenance and gas costs for passenger vehicles alone. The average person spends over $9,000/year on a petroleum-fueled passenger vehicle.[28] If these measures provided an opportunity for even a small number of people to live without cars, the savings would be substantial.

GOAL 3: TRANSITION FROM FOSSIL FUELS IN RESIDENTIAL AND COMMERCIAL BUILDINGS AND INDUSTRIAL PROCESSES

All appliances that currently run on gas or propane fuel can be substituted with appliances that run on electricity, allowing for deep cuts in emissions.[29]

Integrating energy-efficient equipment into energy generation and storage can have major implications on the larger energy grid when it comes to mitigating power outages. Optimizing electricity management to allow for increased energy storage and control of when electricity is being used will provide relief to the grid when constrained, and reduce reliance on natural gas in these scenarios.

Appliances that run on electricity need to largely replace their fossil fuel-powered counterparts over the next few decades if we are to meet GHG reduction goals. Stationary combustion fuels include natural gas, propane and wood. Together, these sources comprise approximately 13% of overall Humboldt County GHG emissions, with roughly two thirds of these emissions coming from residential buildings and one third from

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http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/state_transportation_statistics/state_transportation_statistics_2015/index.html

[25] Besser, L., & Dannenberg, A. (2005). Walking to Public Transit: Steps to Help Meet Physical Activity Recommendations. American Journal of Preventive Medicine, 29 (4), 273-280.

[26] Ding, D., Gebel, K., Phongsavan, P., Bauman, A., & Merom, D. (2014). Driving: A Road to Unhealthy Lifestyles and Poor Health Outcomes. PLoSONE, 9

[27] Litman, T. (2011). "Evaluating Non-Motorized Transportation Benefits and Costs." Victoria Transport Policy Institute.

[28] Bureau of Transportation Statistics. 2019. https://www.bts.gov/content/average-cost-owning-and-operating-automobilea-assuming-15000-vehicle-miles-year

[29] Lynch, Tyler Wells. 2019. If Induction Cooktops are so Great, Why Does Hardly Anyone Use Them? New York Times. https://www.nytimes.com/wirecutter/blog/why-dont-people-use-induction-cooktops/

commercial buildings). In the Legislative-Adjusted Forecast scenario, that share is projected to rise to 16% by 2030, while emissions from electricity use decline.

As the electrical grid is decarbonized, switching from stationary combustion to electricity becomes an increasingly effective way to curb the release of GHGs. Once the local Community Choice Energy program reaches 100% zero-carbon in 2025, emissions from electrical appliances can effectively equal zero. The efficiency of natural gas and propane appliances can also be improved to reduce carbon pollution.

State policy has focused on planning for building decarbonization and incentivizing these efforts. SB 32 directs the California Energy Commission to assess options to reduce emissions from buildings by 40% from 1990 levels by 2030. SB 1477 requires the California Public Utilities Commission to develop and supervise the administration of a statewide initiative requiring gas corporations to improve the State's market for low-emission space and water heating equipment for new and existing residential buildings. SB 1477 also requires the California Public Utilities Commission to develop and supervise the administration of a program to require gas companies to provide incentives for the deployment of near-zero-building emission technologies and directs the Commission to allocate funds for these programs.

STRATEGY 3.1: OUTREACH AND EDUCATION

This strategy involves developing and disseminating educational materials describing the costs and benefits of transitioning from fossil fuels in buildings and commercial and industrial processes. The two Implementation Measures below would be developed similar to the educational programs for zero emission vehicles described earlier in this chapter.

Implementation Measure 3.1.1: Educate Stakeholders on Green Building Practices

Implementation Measure 3.1.2: Energy Efficiency Education Campaign

STRATEGY 3.2: FOCUS ON FUEL SWITCHING IN EXISTING INFRASTRUCTURE

According to the County's General Plan, Humboldt can expect only modest population growth over the planning period of this CAP. Thus, measures directed at new infrastructure will have a limited effect on overall emissions. According to countywide estimates prepared for this CAP, there are currently around 34,000 homes utilizing natural gas appliances and just over 5,000 powered by propane. If the region is going to achieve carbon neutrality by 2045, these homes will need to decarbonize.

Objective 3.2.1: Electrify Existing Homes

2030 TARGET: 26% OF EXISTING HOMES (14,293 HOMES) TRANSITION TO ELECTRIC

Under this objective, jurisdictions commit to transitioning existing homes powered by natural gas and propane to all-electric. It involves the replacement of a central or wall heating system, one dryer, one water heater and one cookstove, or other measures to achieve an equivalent reduction in gas use. Cities and the County can incentivize a transition in the existing building stock by providing financing

opportunities for the replacement of appliances. There may also be opportunities to require electrification in certain cases through building code requirements and regulations on the sale of propane and gas appliances.

Implementation Measure 3.2.1.1: Existing Natural Gas Home Transitions to All-Electric

2030 TARGET: 10,739 EXISTING HOMES THAT USE NATURAL GAS ARE CONVERTED TO ELECTRIC OR OTHER MEASURES THAT ACHIEVE AN EQUIVALENT REDUCTION IN GAS USE

Implementation Measure 3.2.1.2: Existing Propane Home Transitions to All-Electric

2030 TARGET: 3,152 EXISTING HOMES THAT USE PROPANE ARE CONVERTED TO ELECTRIC OR OTHER MEASURES THAT ACHIEVE AN EQUIVALENT REDUCTION IN GAS USE

Implementation actions

This measure would be supported by all the following:

- Adopt building codes to require new buildings to be "electrification ready" (e.g. minimum 200 amp service, and running conduit for electric appliances to water heater and stove locations).
- Consult the North Coast Unified Air Quality Management Board to determine if the agency would be willing and able to limit the sale of gas or propane appliances in areas served by public utilities.
- Work with RCEA to provide financing programs for all-electric appliances, panel upgrades, and wiring upgrades.
- Work with RCEA to provide incentives and rebates for the cost of appliances, panel upgrades and wiring upgrades.
- Consult with HWMA about offering appliance fee waivers for disposal of non-electric appliances.
- Work with PG&E to acquire funding for a program to provide customers with new appliance purchases, panel upgrades, etc. instead of investing in repairs or upgrades to old gas infrastructure.

Objective 3.2.2: Electrify Residential Space Heating

Together, residential space heating and water heating comprise the majority of building emissions. In this CAP, residential space heating has been accounted for separately from water heating to allow for programs that specifically target electrification of residential space heaters.

Implementation Measure 3.2.2.1: Replace Natural Gas Space Heating

2030 TARGET: 200 NATURAL GAS UNITS CONVERTED TO A HEAT PUMP SYSTEM (ASSUMES 50%/50% CENTRAL AND WALL UNITS REPLACED)

Implementation Measure 3.2.1.2: Existing Propane Space Heating

2030 TARGET: 20 PROPANE UNITS CONVERTED TO A HEAT PUMP SYSTEM (ASSUMES 50%/50% CENTRAL AND WALL UNITS REPLACED)

Objective 3.2.3 Electrify Residential Water Heating

Implementation Measure 3.2.3.1: Replace Natural Gas Water Heating

2030 TARGET: 200 NATURAL GAS WATER HEATERS CONVERTED TO HEAT PUMP WATER HEATERS

Implementation Measure 3.2.3.2: Replace Propane Water Heating

2030 TARGET: 20 PROPANE WATER HEATERS CONVERTED TO A HEAT PUMP WATER HEATERS

Objective 3.2.4 Electrify Residential Dryers

Implementation Measure 3.2.4.1: Replace Natural Gas Dryers

2030 TARGET: 200 NATURAL GAS DRYERS CONVERTED TO ELECTRIC HEAT PUMP

Implementation Measure 3.2.4.2: Replace Propane Dryers

2030 TARGET: 20 PROPANE DRYERS CONVERTED TO ELECTRIC HEAT PUMP

Objective 3.2.5 Electrify Residential Cookstoves

Implementation Measure 3.2.5.1: Replace Natural Gas Cookstoves

2030 TARGET: 200 NATURAL GAS COOKSTOVES CONVERTED TO ELECTRIC (RESISTANCE OR INDUCTIVE) COOKSTOVES

Implementation Measure 3.2.5.2: Replace Propane Cookstoves

2030 TARGET: 20 PROPANE COOKSTOVES CONVERTED TO ELECTRIC (RESISTANCE OR INDUCTIVE) COOKSTOVES

Objective 3.2.6 Electrify Commercial Buildings

Implementation Measure 3.2.6.1: Transition Small Commercial Natural Gas Appliances to Electric

2030 TARGET: 9,055,522 TOTAL CUMULATIVE SQUARE FEET ALL ELECTRIC SMALL COMMERCIAL UNITS IN AREAS SERVED BY NATURAL GAS OR OTHER MEASURES THAT ACHIEVE AN EQUIVALENT REDUCTION IN GAS USE

Implementation Measure 3.2.6.2: Transition Small Commercial Propane Appliances to Electric

2030 TARGET: 21,057 TOTAL CUMULATIVE SQUARE FEET ALL ELECTRIC SMALL COMMERCIAL IN AREAS SERVED BY PROPANE OR OTHER MEASURES THAT ACHIEVE AN EQUIVALENT REDUCTION IN GAS USE

Objective 3.2.7: Electrify Commercial Space Heating

Implementation Measure 3.2.7.1: Small Commercial, Natural Gas

2030 TARGET: SEE IMPLEMENTATION MEASURE 3.2.6.1

Implementation Measure 3.2.7.2: Small Commercial, Propane

2030 TARGET: 1,000 TOTAL CUMULATIVE SQUARE FEET ALL ELECTRIC IN AREAS SERVED BY PROPANE

Objective 3.2.8: Electrify Commercial Water Heating

Implementation Measure 3.2.8.1: Small Commercial, Natural Gas

2030 TARGET: SEE IMPLEMENTATION MEASURE 3.2.6.1

Implementation Measure 3.2.8.2: Small Commercial, Propane

2030 TARGET: 1,000 TOTAL CUMULATIVE SQUARE FEET ALL ELECTRIC IN AREAS SERVED BY PROPANE

Implementation actions

The implementation actions supporting Implementation Measures 3.2.6.1 and 3.2.6.2 also support all the other Implementation Measures in Strategy 3.2 described above.

Objective 3.2.9: Energy Assessments and Efficiency Upgrade Programs

Objective 3.2.10. Energy Efficiency Fair

Implementation actions

Jurisdictions can assist Redwood Coast Energy Authority in providing no cost energy assessments to eligible local businesses and information on available rebates and financing options for energy efficiency retrofits. Jurisdictions can also assist Redwood Community Action Agency (continue and expand their programs helping low to moderate income households reduce their energy burden through energy efficiency retrofits.

STRATEGY 3.3: PROMOTE ALL-ELECTRIC BUILDING DESIGN FOR NEW CONSTRUCTION (BY 2030, 100% OF NEW CONSTRUCTION IS ALL-ELECTRIC)

Transitioning away from natural gas and propane in new construction is critical to meeting emissions targets, as it prevents "locking in" significant future emissions. Although California's 2019 update to the Title 24 Building Energy Efficiency Standards allow natural gas and propane hookups, the new codes make it easier for builders to meet energy efficiency standards through all-electric design. Because jurisdictions can regulate buildings via building codes, they are well-positioned to make deep cuts in building emissions while helping the community avoid investing in natural gas infrastructure that may soon need to be abandoned.

Objective 3.3.1: Electrify Space and Water Heating, Dryer, and Cookstoves in New Residential Construction

For new single or multi-family homes, all-electric construction provides substantial capital savings, partly due to the lack of a need to pipe for gas.[30] Annual energy costs tend to be lower for new all-electric residences, although this depends on the electricity rate design, climate zone, load management for the water heater and the amount of solar PV installed on the home (California's 2019 building codes require PV solar to be installed on most new residential construction). With this measure, the County and cities commit to promoting all-electric building design. Jurisdictions have the option of adopting a reach code ordinance requiring electrification.

Implementation Measure 3.3.1.1: Require Electric Appliances in New Homes (Single and Multi-family) in Areas Served by Natural Gas

2030 TARGET: 3,196 NEW HOMES ARE ALL-ELECTRIC

Implementation Measure 3.3.1.2: Require Electric Appliances in New Homes (Single and Multi-family) in Areas Served by Propane

2030 TARGET: 143 NEW HOMES THAT WOULD BE BUILT ALL-ELECTRIC

Implementation actions

- Adopt a reach code ordinance or natural gas moratorium for new residential construction that requires all-electric design.
- Build capacity among developers and building inspectors to implement Title 24 electric-ready construction recommendations through workshops, outreach materials.
- Work with RCEA to explore funding for local incentive programs.

Objective 3.3.2: Electrify Space and Water Heating in New Small Commercial Construction

With this measure, cities and the County commit to promoting all-electric design in commercial buildings. Jurisdictions have the option of adopting a reach code ordinance requiring electrification.

[30] Synapse Energy Solutions, Inc. 2018. Decarbonization of Heating Energy Use in California Buildings. https://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf

Implementation Measure 3.3.2.1: Require Electric Appliances in New Small Commercial Buildings in Areas Served by Natural Gas

2030 TARGET: 1,132,846 TOTAL CUMULATIVE SQUARE FEET NEW NATURAL GAS SMALL COMMERCIAL UNITS (ONLY COUNTS SPACE AND WATER HEATING)

Implementation Measure 3.3.2.2: Require Electric Appliances in New Small Commercial Buildings in Areas Served by Propane

2030 TARGET: 15,077 TOTAL CUMULATIVE SQUARE FEET NEW PROPANE SMALL COMMERCIAL UNITS (ONLY COUNTS SPACE AND WATER HEATING)

Implementation actions

The implementation actions for these Implementation Measures for small commercial buildings are the same as those described above in Objective 3.3.1 for new residences:

- Build capacity of developers and building inspectors to implement Title 24 electric-ready construction recommendations through workshops, outreach materials.
- Work with RCEA to explore funding for local incentive programs.

BUILDING ELECTRIFICATION – COMMUNITY CO-BENEFIT OUTCOMES:

Building electrification has a wide range of potential co-benefits. Transitioning to all-electric appliances can improve indoor air quality, avoiding carbon monoxide and nitrogen dioxide pollution resulting from the use of gas and propane stoves and heaters. Carbon monoxide pollution can cause death, headache, fatigue, queasiness, poor vision and concentration, and heart pains; nitrogen dioxide pollution can cause lung damage, lung disease, and respiratory infections. [61,31]

Electric heat pumps, which move rather than generate heat, can provide equivalent space conditioning at as little as one quarter of the cost of operating conventional heating or cooling appliances. High efficiency induction cooktops can boil water in nearly half the time of a gas or conventional-electric burner. Induction ranges are also safer than other types of cooktops, with no open flame and little residual heat after they have been turned off[60].

[31] California Air Resources Board. 2020. Combustion Pollutants and Indoor Air Quality. https://ww2.arb.ca.gov/resources/documents/combustion-pollutants-indoor-air-quality

STRATEGY 3.4: ENCOURAGE EFFICIENCY IN NEW AND EXISTING BUILDINGS

Eliminating the fossil fuel emissions associated with a building's energy use relies on three components: a clean supply of energy, high levels of energy efficiency, and demand flexibility (shifting electricity use to coincide with times when electricity is "cleanest"). Of those three, energy efficiency—finding ways to use less energy to perform the same task—is often the first area of focus when decarbonizing a building.

California has long been a leader in efforts to improve building energy efficiency. State law mandates a doubling of energy savings in natural gas and electricity end-uses statewide by 2030. California's Title 24 Building Energy Efficiency Standards include requirements for new construction to improve energy efficiency. Requirements vary depending on the type of construction (i.e., residential vs. commercial) and include standards related to lighting, insulation, and solar readiness.

Many cities and counties throughout the State have encouraged developers to go above and beyond State building energy efficiency requirements. To date, eighteen cities and counties (including the City of Arcata) have adopted local "reach codes" that set ambitious energy standards for new construction. Some of these codes expired with the last building code cycle. Arcata's residential reach codes which now no longer apply established requirements that improve energy efficiency in new single-family homes 30% beyond the State's 2016 Title 24 standards.

Objective 3.4.1: Encourage Weatherization in Low Income Housing

Objective 3.4.2: Improve Energy Efficiency in Existing Buildings

Energy efficiency in existing homes can be promoted through incentives and education. RCEA currently offers free energy efficiency kits and a free energy advisor consultation to homeowners. RCAA provides weatherization services to income-eligible renters and homeowners; examples of services include lighting retrofits, replacement of energy-inefficient refrigerators, installation of programmable thermostats, duct repair and replacement, installation of insulation, heater and water repairs/replacements, and microwave replacements. Community outreach and education will be crucial to facilitating the changes to buildings that will occur over the next few decades. Collaboration between jurisdictions, RCEA, RCAA, and other organizations working in this field is key to conveying the importance of energy efficiency and building decarbonization.

One component of this outreach could be a sustainable energy fair in partnership with community organizations. The fair could include:

- Testimonies from local homeowners, landlords, and renters who have cut their energy use
- Hands-on education from RCEA, RCAA, municipal staff, and other community organizations
- Promotion of available programs and incentives
- Awards for homeowners who cut their energy use

With the below measures, participating jurisdictions commit to promoting energy efficiency services and increasing participation within their jurisdiction.

Implementation Measure 3.4.2.1. Existing Residential, Natural Gas

2030 TARGET: SUPPORT RCEAS ONGOING ENERGY EFFICIENCY WORK

Implementation Measure 3.4.2.2: Existing Residential, Propane

2030 TARGET: SUPPORT RCEAS ONGOING ENERGY EFFICIENCY WORK

Implementation actions

- Work with RCEA to explore funding for local incentive programs.
- Work with RCAA to promote the weatherization program.
- Work with RCEA to promote and expand their energy efficiency residential programs.
- Develop reach codes for existing homes.
- Conduct energy assessments within each jurisdiction.
- Host an energy fair.

Objective 3.4.2: Upgrade Electric Appliances in Existing Businesses

2030 TARGET: SUPPORT RCEA EXISTING EFFORTS

As of the writing of this Plan, RCEA provides a no-cost, no-obligation assessment of lighting, refrigeration and other systems to all Humboldt County businesses and organizations regardless of whether they lease or own their building. Assessment program participants receive a report with specific product recommendations, a financial summary of potential projects, and available incentive estimates. These incentives can be paid directly to the contractor, reducing upfront costs. RCEA can refer customers with qualifying projects to financing opportunities such as zero percent interest financing.

Implementation Measure 3.4.2.1. Existing Residential, Natural Gas

2030 TARGET: SUPPORT RCEAS ONGOING ENERGY EFFICIENCY WORK

Implementation Measure 3.4.2.2: Existing Residential, Propane

2030 TARGET: SUPPORT RCEAS ONGOING ENERGY EFFICIENCY WORK

Implementation Measure 3.4.2.3. Existing Commercial, Natural Gas

2030 TARGET: SUPPORT RCEAS ONGOING ENERGY EFFICIENCY WORK

Implementation Measure 3.4.2.4: Existing Commercial, Propane

2030 TARGET: SUPPORT RCEAS ONGOING ENERGY EFFICIENCY WORK

Implementation actions

- Encourage or require new commercial establishments to apply for the energy assessment program through issuance of business licenses.
- Coordinate with RCEA on outreach to eligible business owners.

Objective 3.4.3: Improve Energy Efficiency in New Buildings

With this objective, cities and the County set a goal for reducing electricity consumption in new residential and commercial construction that goes beyond the requirements of the 2019 Title 24 Building Energy Efficiency Standards. This goal can be accomplished via mandatory building codes, voluntary incentives, and outreach to developers and permit applicants. A reach code ordinance would incorporate Title 24 "tier 1" voluntary energy efficiency measures into local code, increasing building energy efficiency by 15%.

According to this CAP's estimates of emissions, this measure will not result in any emissions reductions past 2025. It is targeting reductions in electricity consumption, and this CAP assumes that Humboldt County's supply of electricity will be 100% clean renewable by 2025 due to RCEA's efforts. Reducing electricity consumption will have benefits, but it will not substantially reduce GHG emissions.

Implementation Measure 3.4.3.1: Residential, Natural Gas

2030 TARGET: SEE IMPLEMENTATION MEASURE 3.2.1.1

Implementation Measure 3.4.3.2: Residential, Propane

2030 TARGET: SEE IMPLEMENTATION MEASURE 3.2.1.2

Implementation Measure 3.4.3.3: Small Commercial, Natural Gas

2030 TARGET: 1,323,552 TOTAL CUMULATIVE SQUARE FEET NEW NATURAL GAS SMALL COMMERCIAL UNITS

Implementation Measure 3.4.3.4: Small Commercial, Propane

2030 TARGET: 15,077 TOTAL CUMULATIVE SQUARE FEET NEW PROPANE SMALL COMMERCIAL UNITS

Implementation actions

- Adopt a reach code requiring new construction that goes beyond current Title 24 standards.
- Develop a reach code alternative in coordination with stakeholders and community partners.
- Adopt a target percentage of new buildings, on a per-area basis, that will be built to CALGreen Tier 1 voluntary standards (between 10% and 50%).
- Identify CALGreen voluntary standards as preferred mitigations for environmental impacts of new nonresidential projects.
- Educate builders through CALGreen workshops.
- Promote green building practices through outreach and education.
- Update checklists and provide information and guidance to permit applicants.

STRATEGY 3.5: JURISDICTIONS LEAD BY EXAMPLE

Objective 3.5.1: Jurisdictions Decarbonize Existing Municipal Buildings

Cities and the County have direct control over the energy use in their buildings and facilities. Improving energy efficiency in municipal buildings allows cities and the County to act as ambassadors for building decarbonization.

Implementation Measure 3.5.1.1: Decarbonize Buildings Using Natural Gas

Implementation Measure 5.5.1.2: Decarbonize Buildings Using Propane

Implementation actions

- Implement a facility energy efficiency program including energy audits for all municipal facilities, and retrofits where feasible.
- Require that newly constructed, purchased, or leased municipal space meet Leadership in Energy and Environmental Design (LEED) criteria.
- Switch facilities to all-electric.

STRATEGY 3.6: ENCOURAGE EFFICIENCY IN LARGE COMMERCIAL AND INDUSTRIAL MANUFACTURING PROCESSES

Objective 3.6.1: Energy Efficiency in Large Commercial and Industrial Manufacturing Processes

Efficiency measures can be encouraged through incentives and technical assistance.

Implementation Measure 3.6.1.1: Reduce Electricity Consumption by 5%

2030 TARGET: 428,800 TOTAL CUMULATIVE SQUARE FEET MANUFACTURING AND PROCESSING SPACE

Implementation Measure 3.6.1.2 Reduce Natural Gas Consumption by 5%

2030 TARGET: 458,800 TOTAL CUMULATIVE SQUARE FEET MANUFACTURING AND PROCESSING SPACE

Implementation actions

- Work with large industrial and commercial building operators to determine ways to reduce energy use.

Objective 3.7.1: Cal Poly Humboldt Climate Action Plan

As identified above in Objective 2.5.3, Cal Poly Humboldt within the city limits of Arcata has a Climate Action Plan to reduce GHG emissions to 80% below 1990 levels by 2040, and to become carbon neutral by 2050. While the none of the cities nor the County have any direct authority over the University's actions to achieve its climate goals, all jurisdictions in the County commit to supporting Cal Poly's goals to reduce its GHG emissions from fossil fuel energy use in buildings.

Implementation Measure 2.5.3.1: Support CalPoly Humboldt Climate Action Plan

2030 TARGET: 2,994 MT CO2E REDUCTION in GHG EMISSIONS FROM BUILDINGS AS DESCRIBED IN THE CAL POLY HUMBOLDT 2016 CAP.

ENERGY EFFICIENCY – COMMUNITY CO-BENEFIT OUTCOMES:

The following paragraphs describe other benefits of the implementation measures for this goal which are outside the focus of the CAP, but noteworthy for other reasons.

Indoor environments are where people spend most of their time, and the conditions of these spaces can have lasting impacts on both physical and mental health. Energy efficiency measures in homes and workplaces can improve ventilation reducing the concentrations of things like mold, allergens, particulates, and chemical contaminants. Proper ventilation reduces risks of respiratory illnesses and of impaired cognitive development, particularly among children. Energy efficiency measures that address temperature control and humidity can also reduce risks of these symptoms in occupants of homes and workplaces.[32]There are also general benefits of comfort to having efficient and well-designed temperature control. In Humboldt County homes, this means spare rooms in houses are not cold in the middle of the day and homes are not too hot at night.

Efficient and intentional lighting has co-benefits as well. The source, intensity, and location of lighting in homes and workplaces can affect strain on eyesight and mental stress. Occurrences of seasonal affective disorder can be reduced, and workplace productivity can be increased with appropriate and efficient lighting design.[33]

Low-income households tend to live in homes that are older and less efficient, resulting in poorer people paying disproportionately more in electricity bills and compounding the health risks mentioned above. Energy efficiency measures will reach populations who need the most support to the greatest effect.[34]

GOAL 4: DECARBONIZE ELECTRICITY SOURCES

RCEA's *RePower Humboldt Plan* documents the community's vision for the future of energy: by 2030, the County will be a net exporter of renewable energy and a "thriving research and development center and incubator for energy technology and related manufacturing." The renewable energy sector will be a "stable source of local jobs," keeping money spent on energy in the county while increasing the community's adaptability to any major external changes in energy supply or technology. Humboldt is well-positioned to achieve this vision due to the County's abundant natural resources and the ambitious renewable energy development goals of its Community Choice Energy (CCE) provider.

RePower identifies the following interim goals for energy generation and utility services in Humboldt County:

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[32] Younger, M., H. Morrow-Almeida, S. Vindigni, A. Dannenberg (2008). "The Built Environment, Climate Change, and Health: Opportunities for Co-Benefits." American Journal of Preventive Medicine 35(5): 517-526

[33] Edwards, L., P. Torcelli (2002). "A Literature Review of the Effects of Natural Light on Building Occupants." National Renewable Energy Laboratory

[34] CEC (2004). "California Statewide Residential Appliance Saturation Study." California Energy Commission.

"By 2025, 100% of RCEA's power mix will be from a combination of State-designated renewable energy sources (solar, wind, biomass,[35] small-hydroelectric, zero-emission large hydro-electric facilities and geothermal). By 2030, Humboldt County will be "a net exporter of renewable electricity and RCEA's power mix will consist of 100% local, net-zero-carbon-emission renewable sources."

RCEA will achieve the 2025 and 2030 goals through securing energy purchase contracts from renewable energy providers. Collaboration with cities and the County on achieving their CAP commitments will support these goals. RCEA plans to help "build the clean energy sector into a cornerstone of the local economy through a breadth of strategies that include innovation, research and development, local energy-related business development, and establishing Humboldt Bay as the primary west coast hub for the offshore wind energy industry."

RePower Humboldt identifies several potential sources of local renewable energy, including both utility-scale and rooftop solar, offshore and onshore wind, small hydropower, biomass, and biogas. Table 3 below identifies several potential sources of renewable energy in the area. RCEA seeks to ensure a diversity of renewable power sources, recognizing that a variety of sources will have roles to play in Humboldt's renewable energy future

[35] Section 398.4 of the Public Utilities Code considers biomass to be a renewable energy resource under the California Renewables Portfolio Standard Program. Furthermore, the Energy Commission does not consider emissions from combustion of biomass (Public Utilities Code Section 1393): "The Energy Commission shall not attribute carbon dioxide emissions associated with electricity production from biogenic fuels to retail suppliers for GHG emissions intensity calculations." "Biogenic fuels" means biomass, biowaste, or biomethane from an eligible renewable generator. Biomass plants do typically produce some non-biogenic emissions from use of other fuels, which are treated separately in emissions accounting.

Generator Name	Resource	Location	Operational Capacity (MW)	Potential Capacity (MW)
DG Fairhaven Power	biomass	Humboldt	0	15
Humboldt Sawmill Cogeneration	biomass	Humboldt	25	25
Baker Station Hydro Plant	hydro	Humboldt	1.5	1.5
Big Creek Water Works	hydro	Trinity	5	5
Gosselin Hydroelectric Plant	hydro	Trinity	2	2
Kekawaka Hydro Plant	hydro	Trinity	5	5
Three Forks Waterpower Project	hydro	Trinity	1	1
Additional local small hydropower	hydro	Humboldt	not built, unplanned	8
Redwood Coast Airport Solar Microgrid	solar	Humboldt	2.2	2.2
RCEA Feed-In Tariff Projects	various	Humboldt	not built, planned	12
Humboldt onshore wind	wind	Humboldt	not built, unplanned	125
Redwood Coast Offshore Wind	wind	Offshore	not built, planned	120[36]
Total			54.5	323

Table 3. Maximum rated output of electric power production by potential renewable energy generators in the area.

Even in an unlikely hypothetical scenario where solar is installed on every roof in Humboldt County, rooftop solar could provide less than a third of Humboldt's electricity needs.[37] However, distributed generation across the grid is a key aspect of energy resilience. RCEA also plans to develop a network of community microgrids and renewable energy back-up power systems to be installed at all critical facilities across the county by 2030. These distributed energy systems will help reduce GHG emissions, provide energy resiliency, and emergency energy supply.

Public Safety Power Shutoffs (PSPS) affected communities throughout California since 2019, and the risk of PSPS events in future years remains high. Small-scale, localized energy generation through solar, paired with energy storage technology, can greatly increase community resilience during power shutoffs. Residences will be able to keep their food fresh for longer, and vulnerable populations who rely on power

[36] 2019 EDP Renewables analysis of average generation data.

[37] Lehman, Peter. Quoted in a 2019, Times-Standard Article. Solar can't power all of Humboldt County, HSU researchers say. https://www.times-standard.com/2020/01/11/solar-cant-power-all-of-humboldt-county-hsu-researchers-say/

to keep medications cold or medical assistance devices powered will be more equipped to sustain grid outages. Businesses will be more able to save perishable products, and vital community gathering places can keep the lights on for community members during emergencies.

Strategy 4.1: Renewable Energy Workforce Development

Any efforts to reduce local GHG emissions or adapt to a changing climate rely on skilled workers. To meet our climate goals, we will need electricians who can retrofit buildings and install EV charging stations, scientists who can restore streams and wildlands and engineers upgrade our streets to make them safe for bicyclists and pedestrians.

Future development in Humboldt County may increase the need for workers in the clean energy sector beyond the current local supply. The offshore wind industry alone could create more than 17,500 jobs in California by 2045,[38] requiring a highly skilled and trained workforce in planning, building, construction, maritime trades and more.

Local governments, non-profits and educational institutions all have a role to play in expanding the green workforce in Humboldt County. Existing local programs, such as Cal Poly Humboldt's Environmental Resources Engineering program and College of the Redwoods' Solar Photovoltaic Technician Program, already contribute to training candidates for green jobs. With this CAP objective, Humboldt County's local governments commit to working with stakeholders to support the expansion of these programs and the development of similar programs. To ensure living wages and job security for this growing workforce, the County will work with labor unions and other stakeholders to establish the practice of developing Community Benefits Agreements for renewable energy projects.

Implementation Actions

- Collaborate with stakeholders, including tribes, labor unions, workforce development boards, State agencies, colleges, universities, industry and community organizations to increase local workforce development and explore certification pathways for trades
- Work with stakeholder groups to identify workforce gaps along project timelines and finance, design and develop training programs.
- Work with unions to develop apprenticeship programs and community benefits /project labor agreements.

Strategy 4.2: Incorporate Vehicle to Grid Services in the Energy Grid

Vehicle to grid services enable energy to be pushed back to the power grid from the battery of an electric car. With electric vehicle-to-grid technology—also known as car-to-grid—a car battery can be charged and discharged based on different signals to balance variations in energy production and consumption.

[38] American Jobs Project. 2019. The California Offshore Wind Project: A Vision for Industry Growth. http://americanjobsproject.us/wp/wp-content/uploads/2019/02/The-California-Offshore-Wind-Project.pdf

Increased renewable energy use inevitably makes our energy system more volatile, requiring new ways to balance and store energy to be used, and vehicle to grid services may be a part of the solution.

Jurisdictions can support RCEA's efforts to incorporate vehicle to grid services into the local energy grid to implement this strategy.

STRATEGY 4.3: DEVELOP UTILITY-SCALE RENEWABLE ELECTRICITY GENERATION

The most promising local utility-scale generation resources are offshore wind, solar, biomass, and small run-of-the-river hydroelectric. Offshore wind is of special interest as wind speeds off the North Coast are among the highest in the nation. Humboldt Bay is also the only deep-water port in California north of San Francisco Bay and has substantial, underutilized port facilities and infrastructure which could support offshore wind energy development, possibly allowing Humboldt to serve as a hub for a broader west coast offshore wind industry.

Objective 4.3.1: Amend Zoning Regulations to Facilitate Renewable Energy Development

Amendments to local zoning codes can help facilitate renewable energy development. Identification and pre-zoning of promising locations for utility-scale solar, hydropower and wind projects will further help encourage the development of renewable energy infrastructure.

Implementation Measure 4.3.1.1: Support Countywide Development of Solar and Wind Overlay Zones

2030 TARGET: COMPLETION OF OVERLAY ZONES

Implementation Actions

- Work with RCEA and the Schatz Energy Research Center to identify locations throughout the county that are suitable for utility-scale solar, hydropower and wind energy.
- Adopt zoning code amendments to principally permit wind and solar projects in certain areas under certain conditions.
- Develop a wind energy overlay zone or other appropriate ordinances.

Objective 4.3.2: Support Offshore Wind Development

RCEA and Schatz Energy Research Center (SERC) are leading the extensive planning and research process required for what could be California's first floating offshore wind project. Project goals include increasing local economic opportunity, providing competitively priced renewable energy to electricity ratepayers, prioritizing stakeholder engagement, pursuing environmentally-sound development and maximizing investment in local infrastructure to develop Humboldt Bay into an industry hub. As of summer 2021, RCEA is conducting conversations with stakeholders—including local fishermen, tribes, environmentalists, labor unions and government partners—about the project.

The Redwood Coast Offshore Wind Project, if awarded a lease by the Bureau of Ocean Energy Management, would generate 100-150 megawatts (MW) of energy. RCEA plans to procure 40 MW of that power, with the remaining power sold to buyers outside of Humboldt. Five to fifteen turbines would be located approximately 25 miles west of Eureka, anchored 600-1000 meters deep. Cables would connect the turbines, and an export cable would extend to the shore with an connection proposed at the Humboldt Bay Generating Station[39].

Implementation Measure 4.3.2.1: Promote the Development of Offshore Wind

2030 TARGET: >120 MW OF OFFSHORE WIND CAPACITY DEVELOPED BY 2030

Implementation Actions

- Work with RCEA, the Harbor District and permitting agencies to help develop the Redwood Coast Offshore Wind Project.

Objective 4.3.3: Support Renewable Energy Workforce Development

Implementation Measure 4.3.3.1: Promote Local Renewable Energy Workforce Development Programs

2030 TARGET: EXISTENCE OF RENEWABLE ENERGY WORKFORCE DEVELOPMENT PROGRAMS

STRATEGY 4.4: DISTRIBUTED RENEWABLE ELECTRICITY GENERATION

RCEA's RePower Humboldt Plan defines strategies to support the development of behind-the-meter, grid-connected renewable energy and storage systems in customers' homes and businesses.

Objective 4.4.1: Promote Distributed Energy Systems Development

The California Public Utilities Commission Self-Generation Incentive Program (SGIP) provides incentives to support existing, new, and emerging distributed energy resources. SGIP provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter. Funding for the SGIP is limited, necessitating local commitment to sustaining the build-out of distributed energy generation.

Implementation Actions

- Streamline permitting of small-scale wind, waste-to-heat power and biogas systems, as appropriate.

[39] RCEA. 2020. Offshore Wind Energy. https://redwoodenergy.org/community-choice-energy/about-community-choice/power-sources/offshore-wind-energy/

- Assist RCEA with outreach to qualifying customers.

Implementation Measure 4.4.1.1: Support RCEA's Feed-In Tariff (FIT) Program

2030 TARGET: SUPPORT THE EXISTING FEED-IN TARIFF PROGRAM MANAGED BY RCEA

The purpose of the FIT program is to incentivize the installation of local small-scale distributed renewable generation resources. Eligible technologies include biomass, biodiesel, fuel cells using renewable fuels, digester gas, landfill gas, municipal solid waste, ocean wave, ocean thermal, tidal current, solar photovoltaic, small hydroelectric, solar thermal, wind and geothermal.

Implementation Actions

- Meet with RCEA and developers to specify parameters for successful projects
- Participate in efforts, as needed, to increase feeder capacity
- Screen potential small run-of-the-river hydroelectric projects for power potential and environmental context to inform potential developers of the potential power generation, financial expectations, and risks.
- Share data with RCEA and developers to expedite infrastructure planning

Implementation Measure 4.4.1.2: Community Scale Renewable Energy Promotion

2030 TARGET: REGULARLY PROMOTE THE BENEFITS OF RENEWABLE ENERGY GENERATION. CONTINUE CURRENT INCENTIVE PROGRAMS

Implementation Measure 4.4.1.3: Streamline Solar Permitting

Implementation Measure 4.4.1.4: Support RePower Residential Solar Installation Goals

2030 TARGET: SUPPORT REPOWER RESIDENTIAL SOLAR INSTALLATION GOALS

RCEA intends to facilitate the installation of one solar electric system each day within the county between 2020 and 2030. RCEA assumes 90% of solar arrays will be installed on residences and 10% on commercial buildings. This results in an average annual target of 328 residential solar installations and 37 commercial installations over the next decade.

Currently, an average of 222 solar electric arrays are installed per year in the County.[40] This number is trending upward, assuming historic installation rates continue. There are State targets for rooftop solar as well: beginning in 2020, the State Building Energy Efficiency Standards required all new homes to install solar panels, and future building codes will likely extend this requirement to nonresidential construction. However, due in part to Humboldt County's limited projected population growth and old building stock

[40] California Distributed Generation Statistics. https://www.californiadgstats.ca.gov/charts/

relative to the rest of California, new construction will make up only a small fraction of countywide GHG emissions from building energy consumption over the next decade.

In addition to supporting RCEA, local governments can act to help reach solar installation goals by complying with State law[41] and removing local regulatory burdens to rooftop solar installation.

For the years 2020-2026, the solar goals set by RCEA for behind-the-meter, customer-sited solar will be met via Title 24 requirements for new residential buildings and retrofits and projected upward installation trends.

Implementation Actions:

- Meet with RCEA and developers to specify parameters for successful projects.
- Participate in efforts, as needed, to increase feeder capacity.
- Share information with RCEA and developers to expedite infrastructure planning.
- Support community solar (a joint investment in solar in which participants either own or lease a part of a front-of-the-meter solar system or purchase renewable energy from it).
- Support solar installation on residential and commercial buildings.
- Regularly promote the benefits of renewable generation, current and future incentive programs[42] [43] including RCEA's Net Energy Metering program, the federal Investment Tax Credit, the California Solar Initiative's Single-Family Affordable Solar Homes (SASH) and Multifamily Affordable Solar Housing (MASH) Programs.
- Work with jurisdictions and contractors to standardize and streamline permitting processes across the county.
- Conduct a comprehensive review of local solar permitting process based on the Governor's Office of Planning and Research's Solar Permitting Guidebook, identifying any existing barriers to solar installation.
- Collaborate with other jurisdictions and RCEA to develop common promotional materials.
- Develop an online solar permitting process.
- Explore renewable energy permit fee waiver.

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[41] Muratsuchi, 2014. AB 2188. Solar Energy: Permits. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB2188[42] RCEA's Net Energy Metering (NEM) and Feed-In Tariff programs are the primary incentives available as of the writing of this report; some sources deduce that NEM provides a greater incentive than the Federal ITC.

[42] RCEA's Net Energy Metering (NEM) and Feed-In Tariff programs are the primary incentives available as of the writing of this report; some sources deduce that NEM provides a greater incentive than the Federal ITC.

[43] California Distributed Generation Statistics. https://www.californiadgstats.ca.gov/charts/

- Adopt goal that supports RCEA initiative to facilitate the installation of one solar electric system each day within the county between 2020 and 2030.
- Adopt a reach code ordinance with requirements for solar installation that go beyond 2019 State requirements. This ordinance would apply to:
    - Homes that undergo major additions/alterations (project value is > 50% of the value of existing improvements)
    - New commercial construction
- Adopt an ordinance requiring new commercial developments to either have solar or be solar-ready.

Implementation Measure 4.4.1.5: Support RCEA's Commercial Solar Installation Goals

2030 TARGET: SUPPORT RCEA'S COMMERCIAL SOLAR INSTALLATION GOALS

RCEA intends to facilitate the installation of one solar electric system each day within the county between 2020 and 2030. RCEA assumes 90% of solar arrays will be installed on residences and 10% on commercial buildings. This results in an average annual target of 328 residential solar installations and 37 commercial installations over the next decade.

Currently, an average of 222 solar electric arrays are installed per year in the County.[43] This number is trending upward, assuming historic installation rates continue. There are State targets for rooftop solar as well: beginning in 2020, the State Building Energy Efficiency Standards will require all new homes to install solar panels, and future building codes will likely extend this requirement to nonresidential construction. However, due in part to Humboldt County's limited projected population growth and old building stock relative to the rest of California, new construction will make up only a small fraction of countywide GHG emissions from building energy consumption over the next decade.

In addition to supporting RCEA, local governments can act to help reach solar installation goals by complying with State law[44] and removing local regulatory burdens to rooftop solar installation.

For the years 2020-2026, the solar goals set by RCEA for behind-the-meter, customer-sited solar will be met via Title 24 requirements for new residential buildings and retrofits and projected upward installation trends.

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[43] California Distributed Generation Statistics. https://www.californiadgstats.ca.gov/charts/

[44] Muratsuchi, 2014. AB 2188. Solar Energy: Permits. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB2188[45] RCEA's Net Energy Metering (NEM) and Feed-In Tariff programs are the primary incentives available as of the writing of this report; some sources deduce that NEM provides a greater incentive than the Federal ITC.

Implementation Actions:

- Meet with RCEA and developers to specify parameters for successful projects.
- Participate in efforts, as needed, to increase feeder capacity.
- Share information with RCEA and developers to expedite infrastructure planning.
- Support community solar (a joint investment in solar in which participants either own or lease a part of a front-of-the-meter solar system or purchase renewable energy from it).
- Support solar installation on residential and commercial buildings.
- Regularly promote the benefits of renewable generation, current and future incentive programs[45] including RCEA's Net Energy Metering program, the federal Investment Tax Credit, the California Solar Initiative's Single-Family Affordable Solar Homes (SASH) and Multifamily Affordable Solar Housing (MASH) Programs.
- Work with jurisdictions and contractors to standardize and streamline permitting processes across the county.
- Conduct a comprehensive review of local solar permitting process based on the Governor's Office of Planning and Research's Solar Permitting Guidebook, identifying any existing barriers to solar installation.
- Collaborate with other jurisdictions and RCEA to develop common promotional materials.
- Develop an online solar permitting process.
- Explore renewable energy permit fee waiver.
- Adopt goal that supports RCEA initiative to facilitate the installation of one solar electric system each day within the county between 2020 and 2030.
- Adopt a reach code ordinance with requirements for solar installation that go beyond 2019 State requirements. This ordinance would apply to:
    - Homes that undergo major additions/alterations (project value is > 50% of the value of existing improvements)
    - New commercial construction
    - Adopt an ordinance requiring new commercial developments to either have solar or be solar-ready.

[45] RCEA's Net Energy Metering (NEM) and Feed-In Tariff programs are the primary incentives available as of the writing of this report; some sources deduce that NEM provides a greater incentive than the Federal ITC.

[46] https://redwoodenergy.org/integrated-resource-plan/

Strategy 4.5 Electricity Storage

Objective 4.5.1: Support RCEA in Reaching Energy Storage Targets

RCEA has set targets for behind the meter solar, battery storage, long-duration storage technologies, and demand response programs. With this objective, cities and the County commit to supporting RCEA's goals and activities related to energy storage.

Implementation Measure 4.5.1.1 Support Battery Storage Targets

Implementation actions:

- Coordinate with RCEA to support RePower Humboldt goals and activities.
- Expedite and streamline permitting for energy storage facilities.
- Support RCEA efforts to integrate automated demand response technology.
- Participate in RCEA demand response programs.

Implementation Measure 4.5.1.2: Replace Diesel Generators

2030 Target: 10,600 Gallons of diesel offset by storage in 2030

Municipal facilities often have backup generators powered by diesel. Rooftop solar paired with battery storage can fulfill these key facilities' need for backup generation The City of Rio Dell has used battery systems paired with solar to replace diesel generators at key facilities.

Implementation actions:

- Replace diesel generators with solar paired with behind-the-meter storage in key municipal facilities.

Strategy 4.6: Pursue a time-coincident clean procurement strategy (a.k.a. "24/7 Clean and renewable portfolio")

As mentioned previously throughout the document, RCEA has set goals for 100% clean and renewable energy procurement by 2025, and 100% renewable and local energy procurement by 2030. Currently, common practice among utilities to achieve the State's Renewables Portfolio Standard is to purchase sufficient renewable energy to meet the targeted portion of their customers' electricity consumption on an annual basis, not an hourly basis. However, *when* that electricity is generated is important to decarbonizing the grid.

The carbon intensity of any utility's electricity mix varies by the hour. The grid typically experiences peak demand during the hours of 4-9pm. Solar, wind, and other renewables that are not paired with storage in the utility's portfolio often don't produce sufficient energy to match its customer demand during these

peak hours. For this reason, utilities often rely on unspecified system power to fill in the gaps when demand is at its peak. Unspecified system power cannot be traced to any one source. It has a higher carbon intensity because it is fed by the larger power grid which uses non-renewable energy sources. More specifically, unspecified system power procured through the California Independent System Operator can be assumed to consist largely of natural gas and large hydro generation.

For this reason, even though RCEA's power purchases will amount to 100% clean and renewable in 2025, the lack of a time-coincident procurement strategy will require unspecified system power to supplement specified generation during certain hours of each day, resulting in carbon emissions. To approximate the emissions of its forecasted portfolio inclusive of system power reliance and other system-level impacts, RCEA used the CPUC's 2020 Integrated Resource Planning Clean System Power Calculator[46]. The following table shows the resultant annual average GHG emission factors per unit energy delivered through 2030.

Year	lbs CO_2/MWh
2020	315
2021	406
2022	230
2023	179
2024	225
2025	225
2026	199
2027	199
2028	199
2029	199
2030	242

As with other clean energy goals, a time-coincident clean portfolio can be pursued through both supply-side strategies such as contracting for utility-scale energy storage, and demand-side strategies including aggregated demand response and distributed energy resources.

A 24/7 clean and renewable portfolio will require substantial planning, analysis and investment to achieve. At least one other California Community Choice Aggregation (CCA), Peninsula Clean Energy, has formally adopted a goal of a time-coincident clean portfolio. Financial analysis by RCEA staff and consultants would help the RCEA Board of Directors make an informed choice on whether to pursue such a strategy. In any case, it is possible that State-level regulatory changes in the coming years will compel RCEA and other load-serving entities to pursue 24/7 clean and renewable power procurement, to maintain grid reliability while still meeting the State's grid decarbonization goals.

Implementation Actions

[46] https://redwoodenergy.org/integrated-resource-plan/

- Cities and the County, via their RCEA Board representative, encourage RCEA to pursue a time-coincident procurement strategy through a Board resolution.
- Cities and the County adopt demand-side strategies such as energy efficiency, automated demand response and distributed energy storage that are deployed to better match load with supply hour by hour and reduce demand during peak periods.

Objective 4.6.1: Support a Time-Coincident Procurement Policy with Demand-side Strategies

Implementation Measure 4.6.1.1: Jurisdictions, Via Their RCEA Board Representative, Encourage RCEA to Pursue a Time-Coincident Procurement Strategy

2030 TARGET: JURISDICTIONS, VIA THEIR RCEA BOARD REPRESENTATIVE, ENCOURAGE RCEA TO PURSUE A TIME-COINCIDENT PROCUREMENT STRATEGY THROUGH A BOARD RESOLUTION.

Implementation Measure 4.6.1.2: Jurisdictions Adopt Demand-side Strategies for the Community such as Energy Efficiency, Automated Demand-side Management, etc.

STRATEGY 4.7: JURISDICTIONS LEAD BY EXAMPLE AND SWITCH TO CLEAN ENERGY

Objective 4.7.1: Implement Energy Efficiency, Fuel Switching, and Clean Energy Initiatives in Municipal Facilities.

Cities and the County can have a direct impact on emissions by reducing building energy emissions in their own facilities.

One implementation action presented here is for cities and the County to "opt up" to RCEA's Repower+ service. For customers who opt up, RCEA procures 100% renewable energy to meet their electricity demand. Choosing Repower+ for some or all of their facilities allows jurisdictions to directly cut their emissions and lead by example. Furthermore, it helps jurisdictions to educate the public about the RePower+ program.

Implementation Measure 4.7.1.1: Cities and the County "Opt Up" to RePower+

2030 TARGET: CITIES AND THE COUNTY OPT-UP TO REPOWER+

Implementation Actions

- Convert propane and natural gas appliances in facilities to electric.
- Develop an allowance program for special-purpose appliances for which an electric replacement is not available.

- Conduct efficiency upgrades on all buildings.
- Opt up some or all municipal facilities to RePower+.

GOAL 5: MINIMIZE WASTE

Waste reduction can help us conserve valuable materials. The City of Arcata's website has this language about its zero-waste program: "The goal is to ensure that nothing is sent to a landfill or incinerator by ensuring that resources we take from the earth continue to be used efficiently without waste and excess burden on the environment."

Many Humboldt County residents take pride in using materials efficiently. The county is home to Zero Waste Humboldt, an organization specializing in waste reduction solutions. Cal Poly Humboldt's Waste Reduction Resource Awareness Program hosts an annual zero-waste conference. Neighboring Del Norte County is one of California's many Zero Waste Communities

Solid waste accounts for 4% of total countywide emissions. The solid waste portion of the inventory accounts for GHGs from decomposition. Emissions associated with the transport of waste are embedded in the transportation sector of the Humboldt County GHG Inventory. Emissions from decomposition of solid waste can be minimized— practices like material reuse, recycling and composting can divert waste from landfills and subsequently reduce emissions.

Even though waste materials still decompose and release gases when composted, composting can result in less GHG emissions compared to landfilling. This is because composted organics, which tend to decompose aerobically, produce less methane than landfilled organics, which tend to decompose anaerobically. Furthermore, compost used to amend soil can offset GHG emissions associated with chemical fertilizers.

STRATEGY 5.1: ORGANIC WASTE

Organic waste accounts for more than a third of the material in California's waste stream.[47] Organic wastes can be made into useable products such as compost, fertilizer, or biofuel. SB 1383 Short-Lived Climate Pollutants, adopted in 2016 by the State Legislature, establishes a target to divert 75 percent more waste from landfills by 2025.

Humboldt is currently lacking in facilities to accept diverted organics. There are currently no facilities for composting food waste, and green waste is currently accepted only by the Mad River Compost Facility in Arcata.

Green waste includes yard trimmings, grass clippings, pallets and unpainted or untreated wood. In 2016, between self-haul and curbside programs, 4,000 tons of green waste was received at the Hawthorne Street Transfer Station in Eureka.[48] Most of this material was composted at Mad River Compost Facility in Arcata. Up until recently, some material in Humboldt County was burned at the Scotia biomass power plant.

[47] CalRecycle. 2020. Organic Materials Management. https://www.calrecycle.ca.gov/organics

[48] HWMA. Greenwaste. http://www.hwma.net/disposal-services/greenwaste

Curbside green waste pickup is currently only available in Rio Dell, Ferndale, Fortuna, Arcata, Unincorporated areas of the Eel River Valley and Eureka.[49]. As noted above, currently only the Northcoast Co-op in Arcata accepts food waste drop-off for composting. Backyard composting is encouraged by the Cities of Arcata and Eureka

Construction and demolition activities generate approximately 28% of total solid waste in California. Wood waste makes up the majority of the C&D waste stream.[50] Other waste byproducts from C&D activities are lumber, drywall, metals, masonry (brick, concrete, etc.) and carpet. Metals are the most recycled material on this list, while lumber is most often landfilled.[51]

Many jurisdictions have adopted C&D diversion ordinances, and CalRecycle provides a model C&D diversion ordinance on its website.

Objective 5.1.1: Establish Diversion and Compost Programs

Implementation Measure 5.1.1.1 Adopt Ordinance Requiring 75% Lumber Waste Diversion to Green Waste Facilities

2030 TARGET: 8,269 ANNUAL TONS LUMBER WASTE DIVERTED

Implementation Measure 5.1.1.2: Coordinate with HWMA to Expand Yard Waste Service and Explore Residential Composting

2030 TARGET: 75% OF ORGANIC WASTE (14,848 ANNUAL METRIC TONS) COMPOSTED

Implementation Actions

- Develop an ordinance requiring that 75% of lumber waste from new construction and renovation is diverted to green waste.
- Require new residential and commercial projects to submit a waste management plan to divert, recycle or salvage at least 50% of non-hazardous construction materials.
- Coordinate with HWMA to expand yard waste service and explore residential compost pickup.

[49] Recology. https://www.recology.com/recology-humboldt-county/

[50] Calrecycle. 2020. Urban Wood Waste. https://www.calrecycle.ca.gov/condemo/wood

[51] CalRecycle. 2020. Construction and Demolition Debris Recycling. https://www.calrecycle.ca.gov/ConDemo/

- Coordinate with HWMA to expand composting facilities and explore the development of infrastructure to compost/digest food waste.

STRATEGY 5.2: RECYCLING AND RE-USE

Local governments can reduce waste by requiring reuse and recycling via permits and ordinances. Ideally, these local policies can target the waste streams that contribute the most to landfills overall. Large events such as concerts and festivals create waste and often require local permits. Waste from events can include food, packaging, utensils, beverage containers, and other items, much of which can be reduced, reused, recycled or composted.

Objective 5.2.1 Expand Recycling and Reuse Programs

Implementation Measure 5.2.1.1: Require New Residential and Commercial Projects to Submit a Waste Management Plan for New Construction or Major Retrofits

2030 TARGET: 17,051 ANNUAL METRIC TONS CONSTRUCTION WASTE DIVERTED

Implementation Measure 5.2.1.2: Major Event Recycling and Waste Diversion Plan

2030 TARGET: DIVERT 70 ANNUAL METRIC TONS SOLID WASTE FROM EVENTS. 50% OF RECYCLABLES ARE RECYCLED AND 75% OF ORGANICS ARE COMPOSTED

This measure is modeled after Arcata's Major Event Recycling and Waste Diversion Plan. The Plan includes the following measures and requirements:

- Request vendors look at packing and serving materials to reduce waste.
- Encourage vendors to purchase compostable, reusable, recycled content and easy-to-recycle products whenever possible.
- Use City provided containers for public recycling of glass, plastic & aluminum bottles and cans.
- Utilize recycling services provided by the Arcata Garbage Co. or Arcata Resource Recovery Center to recycle glass, plastic, aluminum, cardboard, chipboard, tin cans and paper.
- Provide periodic service to vendor booths to pick up cardboard, plastic, chipboard, tin cans, paper and recyclable beverage containers.
- Require booth staff to bring cardboard, plastic, chipboard, tin cans, paper and recyclable beverage containers to designated recycling collection areas.
- Divert other materials.

Implementation actions

- Direct staff to develop a waste management permit form for event managers. Require event managers to submit a waste management permit prior to events.
- Monitor events for compliance.

Implementation Measure 5.2.1.3: Enhance Regional Coordination on Waste Mitigation

This measure requires that jurisdictions coordinate with HWMA, waste haulers, Zero Waste Humboldt and other municipalities to promote and disseminate information on waste reduction and diversion. This is an unquantified supporting measure.

Implementation actions

- Jurisdictions direct staff to devote hours to coordinate with HWMA.

MINIMIZING WASTE – COMMUNITY CO-BENEFIT OUTCOMES

Implementing measures that address solid waste has other benefits which are outside the focus of the CAP. Limiting emission of hydrogen sulfide, methane, dust, odor, and other pollutants improves air quality. Limiting the contact of harmful waste with our bodies of water and soil can allow for more stable pH and fewer contacts with potentially harmful toxins, increasing quality of life for plants and wildlife[52].

GOAL 6 REDUCE EMISSIONS FROM CONSTRUCTION

The emissions reductions in Goal 9 are meant to help support a project-level GHG emissions analysis. There are no 2030 targets for these measures.

STRATEGY 6.1: PROJECT-LEVEL CONSTRUCTION EMISSIONS

Objective 6.1.1: Reduce Diesel Consumption

Implementation Measure 6.1.1.1 Use Renewable Diesel in Construction Equipment

2030 TARGET: 5,000 GALLONS OF RENEWABLE DIESEL USED IN CONSTRUCTION EQUIPMENT

Implementation Measure 6.1.1.2 Use Electric and Hybrid Construction Equipment

[52] Waste Management through Composting: Challenges and Potentials Modupe Stella Ayilara 1, Oluwaseyi Samuel Olanrewaju 1, Olubukola Oluranti Babalola 1, * and Olu Odeyemi

[70] Pratt, Greg. Personal Communication with Colin Fiske

[72] Pratt, Greg. Personal Communication with Connor McGuigan

5 Carbon Sequestration in Forests, Agricultural Lands, and Wetlands

Biological carbon sequestration is the process of removing carbon dioxide from the atmosphere and storing it as carbon in vegetation and soil, thereby reducing atmospheric carbon. This terrestrial, or biological, sequestration occurs on agricultural lands (including cropland and grazing land); in forests and wetlands, and other non-agricultural rural lands; and in urban forests.

Forests, grasslands, shrublands, and wetlands can store large amounts of carbon for decades. When disturbed through human activities or natural disturbances, stored carbon can be released to the atmosphere. Conversely, natural and working lands can be protected and managed in ways that actually increase carbon sequestration. Carbon storage is complex and subject to many influences. Some changes to carbon storage and flux can be quantified, such as changes resulting from timber harvest, but unless a rigorous life cycle analysis is done, the effects on climate are indeterminate. Also, many influences cannot be reliably predicted. For example, future wildfire locations, timing, and severity are all unpredictable influences.

The measures in this Chapter call on the CAP's implementing entities to continue to take steps to identify how human activities impact biological carbon emissions, and support land management and conservation practices that reduce emissions and increase biological carbon sequestration. Many of these measures are focused on contributing to forest, farm, and watershed health and resilience to climate change, as health and resilience are necessary for continued and increased carbon storage. The measures are grouped by land type: forests, urban lands, agricultural lands, and wetlands. Various measures in each of these four sections also apply to other land types (e.g., grasslands and shrublands). A list of probable lead entities for each measure is included in Appendix E.

Measures to Increase Carbon Sequestration are Advisory and Not Quantified

Quantifying the contributions of carbon sequestration measures is beyond the scope of this CAP, so GHG emissions reductions from actions in this section of the CAP are not used to achieve overall GHG emission reduction goals at this time. In future updates to the CAP, carbon sequestration as part of a GHG reduction strategy may be used if measures or actions increase the amount of carbon stocks relative to a dynamic baseline, defined at "Business as Usual", which is what would occur without the measure. More discussion of this topic is in Appendix C.

The current degree of practice of the following measures is not known or broadly monitored across the many land ownerships in the County. Baseline carbon sequestration data for Humboldt's natural and working lands has not been collected for this CAP, although available estimates of standing carbon storage by land type and forest carbon in offset reserves are given in Appendix C, indicating that land use contributions are large and significant, even if the incremental effects of the following carbon sequestration measures are not presently quantifiable.

Preparing a sequestration inventory is included as an implementation goal of this CAP, with the hope that future updates can include an analysis and tracking of carbon sequestration effects of future land use and land management changes over time.

Biological carbon sequestration is the process of removing carbon dioxide from the atmosphere and storing it as carbon in vegetation and soil, thereby reducing atmospheric carbon. This terrestrial, or biological, sequestration occurs on agricultural lands (including cropland and grazing land); in forests and wetlands, and other non-agricultural rural lands; and in urban forests.

Forests, grasslands, shrublands, and wetlands can store large amounts of carbon for decades. When disturbed through human activities or natural disturbances, stored carbon can be released to the atmosphere. Conversely, natural and working lands can be protected and managed in ways that actually increase carbon sequestration. Carbon storage is complex and subject to many influences. Some changes to carbon storage and flux can be quantified, such as changes resulting from timber harvest, but unless a rigorous life cycle analysis is done, the effects on climate are indeterminate. Also, many influences cannot be reliably predicted. For example, future wildfire locations, timing, and severity are all unpredictable influences.

The measures in this Chapter call on the CAP's implementing entities to continue to take steps to identify how human activities impact biological carbon emissions, and support land management and conservation practices that reduce emissions and increase biological carbon sequestration. Many of these measures are focused on contributing to forest, farm, and watershed health and resilience to climate change, as health and resilience are necessary for continued and increased carbon storage. The measures are grouped by land type: forests, urban lands, agricultural lands, and wetlands. Various measures in each of these four sections also apply to other land types (e.g., grasslands and shrublands). A list of probable lead entities for each measure is included in Appendix E.

MEASURES TO INCREASE CARBON SEQUESTRATION ARE ADVISORY AND NOT QUANTIFIED

Quantifying the contributions of carbon sequestration measures is beyond the scope of this CAP, so GHG emissions reductions from actions in this section of the CAP are not used to achieve overall GHG emission reduction goals at this time. In future updates to the CAP, carbon sequestration as part of a GHG reduction strategy may be used if measures or actions increase the amount of carbon stocks relative to a dynamic baseline, defined at "Business as Usual", which is what would occur without the measure. More discussion of this topic is in Appendix C.

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Preparing a sequestration inventory is included as an implementation goal of this CAP, with the hope that future updates can include an analysis and tracking of carbon sequestration effects of future land use and land management changes over time.

5.1 Forest Lands

Goal7: Manage resilient, biodiverse forests that effectively sequester carbon

Humboldt County forests store large and significant amounts of carbon, the most of any county in California. Forests sequester carbon through photosynthesis and growth. Forests can be managed to contribute to carbon gain, or can cause carbon emissions. Forests lose carbon when they are converted to other purposes such as agriculture and urban development, when they burn, are impacted by pests and disease, or harvested unsustainably. The following measures are high level actions to increase forest carbon sequestration and resilience.

Forested Areas Conservation and Growth

Conserved forests can sequester large amounts of carbon long-term, as well as benefit the environment as species refugia for adaptation, anchoring the persistence and recovery of key populations of animals and plants. Conserved forests also provide myriad other ecosystem services.

Maintain forests as forests to the greatest extent possible

Forests are among the most significant and effective methods of storing carbon in the long term, and are a major source of carbon storage in Humboldt County, with an estimated 3.8 billion tons of CO_2e stored long-term. The largest potential loss of this important ecosystem service is the conversion of forests to agricultural use (which sequesters far less carbon) or urban/suburban development (which sequesters little to no carbon). Measures that incentivize keeping forests as forests can be the most effective measure to maintain and increase carbon storage in Humboldt County forests. Restoring oak woodland and prairie communities from conifer encroachment may lead to a decrease in carbon sequestration; however, this restoration is important for other reasons including climate resilience. [53]

Reduce landscape fragmentation

Fragmented habitats are a primary cause of biodiversity loss and reduced productivity through exposure to disturbances, obstruction of potential migration pathways, and overall lowered resistance and resilience. Avoiding and reducing fragmentation requires an intentional effort that benefits from partnerships, agreements, and other mechanisms for land protection and management across ownership boundaries. Strategic acquisitions of high-priority conservation areas with fee acquisitions, conservation easements, and other efforts to increase the size and connectivity of forest ecosystems will foster a landscape-scale response to resist the effects of climate change.

[53] Tim Bailey, personal communication. 7-30-21

EXPAND COMMUNITY FORESTS NEAR TOWNS

Community forests that are managed for multiple ecosystem services, such as forest health, recreation, timber harvest, and wildlife have been established in Arcata and the Eureka area and have been initiated for McKinleyville. Community forests provide multiple benefits to municipalities and communities including species refugia, recreation opportunities, and demonstration of low impact forestry and working landscapes.

FOREST MANAGEMENT

Good forest management is good forest carbon management. Healthy, productive forests are ideal for accruing and storing carbon and thereby reducing GHGs in the atmosphere. Keeping forests healthy by protecting soils and soil productivity, tending stands where feasible for productivity and wildfire resilience, practicing sound silviculture according to clear objectives, and ensuring healthy levels of forest stocking can secure the large and important sequestration capacity and storage of the County's forested lands. The following are forest management measures that can maintain and increase carbon stocks and sequestration capacity and improve forest resilience to climate change.

RETAIN AND REGENERATE OLDER TREES TO INCREASE FOREST RESISTANCE TO LOSS OF CARBON STOCKS

Old trees with large boles and abundant heartwood are ideal for long-term carbon sequestration. Landowners can retain older trees to ensure genetic continuity and resist fire. Thinning older forests to reduce fire vulnerability, protecting and supporting regeneration, and enhancing the cultivation and persistence of large, old, and primary trees are all actions that benefit carbon storage of forests.

REDUCE ADVERSE EFFECTS TO LONG-TERM SOIL PRODUCTIVITY AND NUTRIENT CYCLING

Modifying forest operations and using suitable equipment that can minimize soil compaction, rutting, or other impacts are measures that protect long-term forest productivity. Retaining woody debris to maintain moisture, soil quality, and nutrient cycling are also important for forest health. Restricting recreational access in areas that show signs of excessive impacts to allow for revegetation and soil stabilization may be a useful tool in some areas as well.

RETAIN BIOLOGICAL LEGACIES ACROSS THE LANDSCAPE

Maintaining biological diversity at the population and species level can help enhance forest resilience. During forest management activities, measures could include retaining the oldest and largest trees with good vigor, and retaining survivors of pest or disease outbreaks, droughts, windthrow events, or other disturbances during salvage or sanitation operations. Retaining individual trees of a variety of uncommon species to maintain their presence on the landscape can also help enhance forest resilience.

RESTORE AND FAVOR NATIVE TREE SPECIES THAT ARE ANTICIPATED TO BE ADAPTED TO FUTURE CONDITIONS

Species composition in most forest ecosystems is expected to change as species adapt to new climatic conditions. Maintaining overall ecosystem function and health by assisting adaptive transitions of species

and communities to appropriate habitats is one way forest management can play a role. This can result in different species assemblages than those present in the current community, or an altogether different community in future decades as climate warming proceeds.

MAINTAIN AND ENHANCE DIVERSE FOREST STRUCTURE AND COMPOSITION

Maintaining and improving species, age-class and structural diversity in forests can improve forest health and resilience. Vegetation and associated habitat diversity supports more diverse wildlife and help all species to persist as the climate changes, allowing systems to more quickly adjust and respond to new conditions.

INCREASE RESISTANCE AND RESILIENCE OF FOREST TREES TO INVASIVE INSECTS

Development and implementation of integrated pest management strategies can prevent and reduce the negative impacts of invasive insects on the productivity of the region's forests and grasslands and their ability to sequester carbon in the future with warming temperatures. Effectively addressing invasive insects in the long term includes identifying and monitoring invasive insects that are not currently present in the region but may appear in the future under warmer conditions. This measure can be implemented in part through support of existing efforts by County agricultural programs[54], the Humboldt UC Cooperative Extension[55], and the CAL-IPC Weed Management Area[56].

PRACTICE ECOSYSTEM-BASED MANAGEMENT

Ecosystem management is a concept of wildland management that was defined for national forest lands in the 1980s and 90s (Franklin et al. 2018[57]). Sound ecosystem-based management maintains high stocks of carbon in forests. Important principles of ecosystem management include, but are not limited to:

1. Avoiding irreversible effects.
2. Applying treatments at relevant ecological timescales.
3. Managing for structural heterogeneity across landscapes.
4. Understanding historic disturbance processes.
5. Maintaining ecological processes and functions.
6. Recognizing and protecting unique ecological and cultural values and services.
7. Managing for long-term benefits at large scales.

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[54] "The Agricultural Commissioner is charged with the responsibility of managing nuisance pests of agriculture and human health. Many of these pests are recently introduced species that have become established despite the best efforts of the commissioners to keep them out." County of Humboldt. https://humboldtgov.org/2302/Agricultural-Program-Information

[55] UC Cooperative Extension. https://humboldtgov.org/614/UC-Cooperative-Extension

[56] CAL-IPC. 2021. "What We Do." https://www.cal-ipc.org/about/mission/

[57] Franklin, Jerry F., K. Norman Johnson, and Debora L. Johnson. *Ecological forest management*. Waveland Press, 2018

8. Embracing biological complexity.
9. Designing with nature.

WORK ACROSS OWNERSHIPS AND JURISDICTIONS AT LARGER SCALES

At large-scales, carbon sequestration can be best achieved if actions and planning are coordinated across ownerships and jurisdictions where possible. Specific planning actions include:

1. Aligning priorities for programs of work with neighboring lands.
2. Communicating about projects adjacent to other lands, and coordinating on-the-ground
3. Working across boundaries to preserve roads, trails, and access.
4. Granting rights-of-way to adjacent owners where this can preclude the need for new roads.

Fuels Management Fires can be intense in densified forest stands where fire has previously been suppressed. Severe fires can burn organic material that would otherwise decompose and release carbon into the soil. Such fires can also destabilize soils, break off carbon-based organic matter from minerals, and kill bacteria and fungi. As a result, fuel management actions that reduce the risk of severe fires can have a positive impact on long-term carbon sequestration.

DECREASE TREE DENSITY IN DENSIFIED FOREST STANDS

Strategic thinning of densely grown forests can reduce the risk of severe fires and the consumption of forest carbon. It can also promote forest age-class and structural diversity.

ENCOURAGE WILDFIRE TO PLAY A NATURAL AND BENEFICIAL ROLE

Healthy forests in Humboldt County benefit from periodic wildfire. Ideally, such fires are more frequent and lower-intensity to clear understory and ladder fuels, rather than infrequent and high-intensity in densified forest stands. Using “let burn” (Fire Use) authorities in suitable situations, allowing wildfires to burn under conditions where they will be of low-to-moderate severity, can accomplish large areas of fuel treatment during wildfire incidents.

ENCOURAGE PRESCRIBED BURNING

The spread and severity of wildfires can be mitigated and risks reduced by reducing fuel loading. Clearing of fuels can be achieved through prescribed burning, mechanical and hand thinning, prescribed herbivory, mastication, etc. Prescribed burning is often a good solution, since it restores a more frequent and natural regime of small fires, helping to prevent the build-up of fuels; other forms of fuels treatments might be helpful to prepare an area in advance of a prescribed burn. Prescribed or “controlled” burning is inexpensive, poses some small but consequential risks of fire escape, adds air pollution as smoke, and often requires open road systems for crew and emergency access. Strongly encouraging prescribed burning by collaboratives and multiple stakeholders can help to overcome barriers and mitigate risks to decisionmakers. Frequent, low-intensity prescribed burns result in significantly less long-term emissions from wildfire, as fire behavior, fire suppression, and burn severity are moderated by the reduction in fuels.

Reduce and manage fuels in the WUI (Wildland Urban Interface) and other strategic locations to reduce wildfire spread and severity

The WUI is the highest priority for fuel management work because of the values at stake and the priority of fire suppression resources devoted to structures during wildfire.

Several groups and programs exist in Humboldt County to help reduce fuel loading in the WUI and more broadly. A few of these include:

1. The Fire-adapted Landscapes & Safe Homes Program, or "FLASH", is designed to assist property owners with reducing their risk to wildfire by thinning flammable vegetation around their homes and along key access routes.[58]
2. The Humboldt Resource Conservation District's forest health/fire resilience programs also have fuels reduction components.[59]
3. 3. Among other things, the Humboldt County Fire Safe Council supports beneficial fire such as prescribed and cultural burning60.

Research

Support and conduct "Life Cycle Analyses" to understand actual effects of Forest Management on climate

To quantify carbon sequestration in a way that can be useful to counter GHG emissions, it is crucial to conduct life cycle analyses (LCA) to assess and quantify how various measures affect actual GHG emissions when all carbon fates and pathways are included. In our complex systems, most actions are interrelated, and measures usually have multiple effects.

Practice adaptive management on public forests to learn how to Improve Carbon Sequestration and promote resilience

Public forests and experimental research sites can make valuable contributions to understanding carbon sequestration dynamics, climate change impacts, and ways to adapt to rapidly changing climates and maintain forest and watershed resilience. National forests encompass large, relatively undisturbed areas, and often comprise headwater areas where water supplies and aquatic ecosystems are intact and function as refugia. These areas provide a favorable environment for assessing the ecological effects of climate change. On public lands, scientists and managers can work together to gain better understanding of carbon sequestration, ecosystems and climate processes, evaluate management options, test solutions, and transfer knowledge to stakeholders.

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[58] County of Humboldt. "FLASH."https://humboldtgov.org/690/Fire-Adapted-Landscapes-Safe-Homes

[59] Humboldt Resource Conservation District. Forest Health/Fire Resiliency. http://humboldtrcd.org/projects/forest_healthfire_resiliency

[60] County of Humboldt. Fire Safe Council. https://humboldtgov.org/FireSafeCouncil

CONTINUE RESEARCH ON ALTERNATIVES TO BIOMASS BURNING TO SEQUESTER THE CARBON IN LUMBERMILL RESIDUES AND IN-FOREST THINNING RESIDUES. CONDUCT LIFE CYCLE ANALYSES TO UNDERSTAND THE BENEFITS OF BIOMASS POWER GENERATION AND ALTERNATIVE USES.

The Humboldt County timber industry generates a large amount of forest residuals (material that is generally left in the forest or pile-burned) and mill waste as trees are manufactured into lumber for market. Approximately 400,000 tons of forest residuals are generated per year.[61] Recent research at the Schatz Energy Research Center characterizes GHG emissions from forest residuals used to generate electricity across the State.[62]

Much of the material used in existing Humboldt County biomass plants is a byproduct of milling. Sawmill waste consists of sawdust, cutoffs, and miscellaneous small pieces that result from milling. This waste has insufficient quality for current product manufacture. Much of this material is burned in biomass electricity generating plants, locally and in the upper Sacramento Valley. Biomass power is expensive, but can be continuously generated if sufficient feed material is available, and the carbon is non-fossil, within the Earth's carbon cycle. Biomass burning, in any form, generates both air pollution and GHG emissions. RCEA and others are currently planning to conduct a comprehensive analysis of the value of biomass electricity generation compared with other fates and uses, such as biochar, compost, and nanocellulose that could sequester this carbon.

MARKET OPTIONS

CONTINUE TO INCREASE FORESTS USED AS CARBON RESERVES IN THE CALIFORNIA CAP-AND-TRADE AND VOLUNTARY CARBON OFFSET MARKETS

California's Cap-and-Trade system and voluntary carbon offset markets allow the purchase of carbon offsets to compensate for GHG emissions. This gives monetary value (carbon offset credit) to carbon storage and emissions avoidance measures, providing a means of generating revenue from efforts to increase forest carbon sequestration. In California, a protocol has been established to quantify, verify, and certify forest offset credits for sale in the Cap-and-Trade system, and also in the voluntary, non-compliance market.[63]. Humboldt County has 12 conserved "carbon forests" in the State Cap-and-Trade compliance system; a summary of these carbon reserve projects is given in Appendix D. The amount of Humboldt County forestland used for forest offset credits is small relative to the potential amount.

[61] Furniss, Michael J. 2019. Biomass Power in Humboldt County. https://redwoodenergy.org/wp-content/uploads/2019/11/Biomass-Humboldt-Board-Final-MJF.pdf

[62] Carman, Fingerman et al. 2021. Minimizing Emissions from Forest Residues. https://schatzcenter.org/cbrec/

[63] California Air Resources Board, 2020

5.2 URBAN LANDS

GOAL 8: PROTECT AND ENHANCE URBAN FORESTS AND GREENWAYS

Urban forests are the trees, plants, and associated ecosystems anywhere where people are – for instance, along streets and roads, and in yards and parks. Urban greenways are the vegetated open space corridors that run through urban areas, often including wetlands, watercourses, and riparian habitat. While the overall contributions of the urban areas of the County to biological carbon sequestration may be relatively minor compared to the County's rural lands, the social, environmental, and economic co-benefits of protecting and enhancing urban forests, greenways, and natural areas are significant. The following measures are high-level actions to increase carbon sequestration and resilience in urban areas.

INCREASE URBAN TREE PLANTING AND URBAN FORESTS TO INCREASE CARBON SEQUESTRATION OTHER ECOSYSTEM SERVICES

Urban forests and other "trees outside of forests" contribute to carbon sequestration and myriad ecosystem services that help adapt to warming conditions, reducing the urban heat-island effect, enhancing water quality, increasing biodiversity, and promoting human health.

MAINTAIN OR RESTORE RIPARIAN AREAS IN URBAN AREAS

Much of the forest cover in urban areas are in riparian areas. Forests within riparian areas serve important functions, such as decreasing soil erosion, filtering runoff, storing and recycling organic matter and nutrients, providing shade to moderate stream temperatures, and storing carbon in wood. Forested riparian areas also often serve as corridors for wildlife and plant species migrating across fragmented landscapes. The use of guidelines, such as best management practices and riparian management zones, can help to secure the long-term benefits of urban forests in riparian areas.

5.3 AGRICULTURAL LANDS

GOAL9: DEVELOP AGRICULTURAL SYSTEMS THAT MORE EFFECTIVELY SEQUESTER CARBON

The following measures are high level actions to increase carbon sequestration and resilience on agricultural lands and rangelands, where most carbon is stored in the soil.

SOIL MANAGEMENT

REDUCE SOIL EROSION AND SEDIMENT EXPORT FROM FARMS

Erosion is expected to increase as climate change alters soil moisture regimes and runoff. Increasing frequency and severity of drought will increase the susceptibility of soil to wind and water erosion, while increased heavy rain frequency and durations will drive erosion processes. Sites currently prone to erosion

will have increased risks of sediment losses in a changing climate, especially sites with sparse cover, steeper slopes, and impervious surfaces. Excessive sedimentation and deposition of fine materials can degrade watershed hydrology and flow paths, water quality, and the potential survival and regeneration of plants, aquatic, and terrestrial wildlife. Soil erosion seriously degrades the ability of soils to store carbon, decreasing their long-term sequestration capacity. The use and monitoring of best management practices is key to reducing soil erosion and protecting sites from the challenges presented by increased extreme events, seasonal fluctuations in soil moisture, and increased frequency of overland flow.

INCREASE LONG-TERM SOIL CARBON STORAGE USING REGENERATIVE AGRICULTURE PRACTICES

Soils can hold large amounts of carbon as humus, roots, litter, and other organic matter. A significant proportion of humus is long-lived and can persist in soil for decades. Regenerative agricultural practices focus on increasing and maintaining organic matter in soils to maintain soil fertility, drought tolerance, and increase the stocks of sequestered carbon. Such practices include; no-till or reduced-till cultivation, use of cover crops to promote soil organic matter and soil health, and reduction or elimination of the burning of crop residues.

USE THE MINIMUM NITROGEN FERTILIZER AND FERTILIZER THAT IS SLOW-RELEASE

Nitrogen fertilizer in inorganic forms often results in significant release of NO_x to the atmosphere, which is a highly potent and long-lived GHG and a serious air pollutant. Excess amounts of nitrogen fertilizer can also pollute surface and ground waters. Minimizing nitrogen fertilizer, using slow-release organic forms of nitrogen fertilizer and maintaining abundant soil organic matter can limit these emissions and discharges.

PEST MANAGEMENT

INCREASE THE RESISTANCE AND RESILIENCE OF FARMS AND CROPS TO INVASIVE INSECTS AND PATHOGENS

Weeds, pests, and pathogens may become more prevalent and harder to control in a warmer world. Supporting and coordinating existing efforts to develop climate-resilient integrated pest management and existing County agricultural programs will increase the resistance and resilience of farms and crops to invasive insects and pathogens.[64]

PREVENT THE INTRODUCTION AND ESTABLISHMENT OF INVASIVE PLANTS AND REMOVE EXISTING INVASIVE PLANT SPECIES

[64] "The Agricultural Commissioner is charged with the responsibility of managing nuisance pests of agriculture and human health. Many of these pests are recently introduced species that have become established despite the best efforts of the commissioners to keep them out." County of Humboldt. https://humboldtgov.org/2302/Agricultural-Program-Information

Climate change may increase the rate of spread of invasive plant species. Early detection and rapid response will be crucial as the risks of new invaders increase. Urban areas are especially susceptible to the introduction and spread of invasive plants because of use of ornamental species in landscaping, nutrient loading, high levels of disturbance, and moderated microclimates.

BIODIVERSITY

ESTABLISH AND MAINTAIN TREES AND SHRUBS ON FARMS.

Adding crop or non-crop trees to agricultural fields, known as agro-forestry or permaculture, can add biodiversity, act as natural pest control and can increase soil carbon storage. Leaving portions of farms as natural ecosystems to enhance biodiversity and resistance to insects can increase overall farm resilience to climate change.

LIVESTOCK

REDUCE ENTERIC FERMENTATION AND IMPROVE MANURE MANAGEMENT

Enteric fermentation takes place in the digestive systems of animals, particularly ruminant animals such as cattle. Methane, a potent GHG, is produced in the rumen by bacteria as a by-product of the fermentation process. This methane is exhaled or belched by the animal and accounts for most emissions from ruminants.

Enteric methane emissions can be substantially reduced by adding a small amount of certain types of seaweed to cattle feed.[65] Researchers are investigating ways to deliver seaweed additives to pastured animals,[66] and commercialization will likely be possible by 2025 or earlier.[67]

[65] **Red seaweed *(Asparagopsis taxiformis)* supplementation reduces enteric methane by over 80 percent in beef steers** Roque BM, Venegas M, Kinley RD, de Nys R, Duarte TL, et al. (2021) Red seaweed *(Asparagopsis taxiformis)* supplementation reduces enteric methane by over 80 percent in beef steers. PLOS ONE 16(3): e0247820. https://doi.org/10.1371/journal.pone.0247820

[66] Kebreab, Ermias. 2021. Personal communication. May 6, 2021.

[67] Ermias Kebreab and Breanna Roque. 2021. EcoWatch. https://www.ecowatch.com/cow seaweed-methane-2651130438.html

Incentives & Support

Support Local agriculture to reduce transportation emissions

Local governments can support local agriculture and enhanced processing facilities for local agricultural products, particularly when this results in a significant savings in transportation costs and emissions.

Encourage innovation to increase soil carbon storage on farms and adaptive responses to climate changes.

Farmers usually know best how to increase soil carbon, overall farm productivity, and the best ways to adapt to changing climates. Programs and incentives that encourage, reward, and communicate innovations should be implemented. Carbon offset credits for soil carbon increases on farms are under consideration by the California Climate Action Reserve.

5.4 Wetlands

Goal 10: Enhance and Restore Wetlands

Wetlands fix large amounts of carbon, as organic matter accrues faster than the slow oxidation occurring in saturated low-oxygen environments. Only wetlands store more carbon per acre than forests in Humboldt County. Carbon sequestration in coastal wetlands, such as those adjacent to Humboldt Bay, have large and ongoing carbon storage.[68] Over time, the buildup of peat materials can be very large and comprises important long-term carbon storage. Restoration of drained tidal wetlands to reestablish mudflats and salt marshes can increase carbon storage, while conversion of wetlands to other uses reduces carbon storage potential. The following measures are high level actions to increase wetland carbon sequestration and resilience.

Restoration

Increase wetland carbon sequestration through restoration of tidal marshes

Wetland restoration and enhancement projects such as those in the sloughs around Humboldt Bay[69] are highly effective in sequestering additional carbon over time and holding it out of the atmosphere for long

[68] Owers, Christopher J., Kerrylee Rogers, Debashish Mazumder, and Colin D. Woodroffe. "Temperate coastal wetland near-surface carbon storage: Spatial patterns and variability." *Estuarine, Coastal and Shelf Science* 235 (2020): 106584.

[69] Montanio, Patricia A. "Targeted supplemental environmental assessment for the City of Arcata McDaniel Slough Expansion Project." (2010).

periods. These measures also achieve large improvements in aquatic diversity and ecosystem health and productivity and increase the resilience of these biologically rich systems to climate warming and sea level rise.

ADAPTATION

AS SEA LEVELS RISE, ALLOW FORMER WETLAND AREAS TO RE-ESTABLISH

Rising sea levels in Humboldt Bay will cause dikes to fail and flood areas of the Bay that were formerly tidal wetlands. Adding or enlarging dikes to temporarily block flooding is a common "solution" but only perpetuates the losses and risks and is expensive and temporary. A better solution in many places may be to allow some areas to flood and become tidal wetlands again, increasing carbon storage, and adding diverse and highly productive habitats, rich biodiversity, and overall system resilience. Compensation for landowners in the form of conservation easements or fee acquisitions could help incentivize this outcome; rather than adding or expanding expensive dikes that will become inadequate as seas continue to rise and as coastal groundwater and soils salinize and become unsuitable for agriculture.

6 IMPLEMENTATION, MONITORING, AND EVALUATION

Implementation of the CAP will require coordinated action between local jurisdictions, agencies, businesses, and the public in the coming years. To ensure accountability, progress must be regularly measured and reported. To work together effectively, everyone must have clear roles. Many CAP programs call for widespread public participation recognizing their overall success depends on the public being engaged and supporting these efforts by providing education and resources.

This section presents a high-level overview of the following:

1. Administration and staffing
2. Community outreach and engagement
3. Financing and budgeting
4. Timelines for measure implementation
5. Monitoring, reporting, and adaptive management
6. Next steps

6.1 ADMINISTRATION AND STAFFING

Local government staff and a dedicated CAP coordinator will work with stakeholders to implement CAP measures. City and County staff will support the CAP as they approve projects, develop ordinances and policies, and enforce codes. Other climate actions related to the CAP will be administered by the federal government, the State, and other local agencies. For instance, the RCEA may use the State CALeVIP program to expand local electric vehicle charging infrastructure; the role of local governments in this case would be to provide permits and any other documentation necessary for new chargers. Responsible entities and key partners are listed in Appendix E: Implementation and Monitoring Table.

Cities and the County will also need to commit staff hours and other resources toward implementation, outreach, securing outside funding, monitoring, reporting, adaptive management, and CAP updates. Estimated staff level of effort (high, medium, low; Table 5) can be found in the Implementation and Monitoring Table for each measure. Estimates include work performed by the aforementioned regional CAP coordinator.

Level of effort	Staff Hours	Funding	Coordination and outreach	Existing Policies vs. New Policies and Programs
Low	Negligible additional full time equivalent (FTE) staff hours (less than 40).	No cost or funding needs negligible.	Only minor coordination with the public or stakeholder groups.	Can be performed with existing programs or using minor modifications to existing programs
Medium	Requires more than 40 FTE hours, but less than 160.	Funding or financing can be re-allocated from existing sources or programs.	Engagement with stakeholders, other organizations, and the public is necessary.	New programs or policies must be developed, but they are limited in scope and can lean heavily on existing planning.
High	Requires FTE staff hours greater than 160.	Will require jurisdictions and agencies to work together to secure external funding or financing.	Implementation requires widespread public buy-in. Outreach and education needs are extensive.	Completely new policies or programs must be developed; these have a broad scope. Little existing planning in place.

Table 5. Staff level of effort was estimated for each measure.

A regional CAP coordinator position will be created to support local government staff and facilitate CAP implementation. A list of possible duties for the CAP coordinator are given in the following sections.

Implementation of CAP Policies

1. Coordinate the implementation of the Climate Action Plan. Work with staff from multiple jurisdictions and agencies to implement GHG emissions reduction projects.
2. Implement discrete projects in support of the Climate Action Plan. "Implementation" includes convening working groups, creating programs, managing projects, etc.
3. Assist City and County departments, residents, and local businesses in implementing climate programs and practices to achieve CAP goals.

Funding and Budgeting

Implement funding strategy. Analyze emerging or additional funding sources; identify and seek grants, financing programs, public/private partnerships, and other funding sources. Track, facilitate and administer funds as needed and in coordination with jurisdictions and agencies.

Support jurisdiction and agency funding efforts.

Participate in the preparation and administration of budgets as needed, including estimating funding requirements and future expenditures.

Reporting

Develop implementation status reports and presentations for the Board of Supervisors, City Councils, and others.

Prepare a GHG emissions inventory on a regular basis in coordination with local government and agency staff and their consultants. Ensure that the report is disseminated to relevant decision-makers and the public.

Prepare a sequestration inventory in coordination with local government staff and their consultants.

Evaluate CAP progress.

Adaptive Management

Research new models and strategies and develop new tools and reports as needed.

Attend classes, workshops, and committee meetings regularly to stay abreast of changing legislation and requirements. Prepare CAP updates in accordance with CARB guidance on meeting the State's 2045 carbon neutrality target.

Coordinate adaptive management activities in response to GHG emissions inventories and implementation reporting. If targets are not being met, recommend, develop, and implement new strategies to achieve target GHG reductions and other CAP goals. Develop these new policies and procedures in compliance with federal, State, and local requirements for the CAP.

Outreach

Share lessons learned and best practices with others, including Humboldt County jurisdictions and agencies.

Conduct primary and secondary research and compile best practices on GHG reduction and climate change resilience practices.

Develop, implement, and coordinate public education for climate-oriented programs and projects, including messaging and materials such as press releases, website content, flyers, public meetings, and other forms of communication.

Organize and participate in multi-stakeholder events and working groups.

Conduct outreach activities to support CAP policies.

Communicate project success through website updates, reports and presentations to city councils, the Board of Supervisors, County staff, and members of the public. Publicize CAP and related projects.

Serve as climate action plan liaison to the public, City and County departments, regional organizations, civic groups, other government agencies, and business organizations.

Assist with coordination and collaboration across climate mitigation and climate adaptation efforts.

6.2 COMMUNITY OUTREACH

Programs in this CAP and subsequent updates will impact nearly every individual, household, workplace, and business in the County. Thus, community engagement is crucial to the success of the CAP.

Educational programs will be created to inform the public about rebates, incentives, and other advantages of participating in CAP programs. The CAP coordinator and staff will also need to keep the community informed about the benefits of overall CAP goals and policies to gain buy-in for local measures. For instance, educational programs should highlight the importance of climate action and the public health benefits of eliminating fossil fuel use. Educational programs can be conducted via in person meetings, a public website, interviews, newspaper articles, tabling at events, and other methods.

As implementation progresses, focused meetings with stakeholders or the public may be necessary in addition to more generalized community education. Stakeholder engagement will also be necessary as implementation actions are refined and/or if adaptive management becomes necessary.

This CAP was developed with substantial input from the community. However, the COVID-19 pandemic inadvertently caused delays in outreach work. Prior to the next update of the CAP, an equity working group will be formed from representatives of community organizations representing Humboldt County low-income communities and communities of color. Funding will be provided to compensate representatives of these groups for their time. Recommendations from the Equity Working Group will be incorporated into the CAP update's vision, equity commitments, actions, equity objectives, equity implementation guide, and climate equity metrics.

At regular intervals, reports will be given by the CAP coordinator or city/county staff at city council meetings, Board of Supervisors' meetings, and other public forums. These reports will present status inventory results and updates on plan implementation.

6.3 FUNDING AND BUDGETING

Action to reduce climate pollution will not only benefit the global climate in the long-term, but will result in immediate local benefits including public health benefits adding up to an overwhelming savings to local communities.

Although not quantified in this plan, direct cost savings will result from some CAP measures. For instance, all-electric new buildings are expected to have lower construction costs, and increases in active transit will likely reduce the costs associated with car ownership. Other measures will require a substantial capital investment, and some will add additional operation and maintenance costs. The equitable distribution of cost and savings should be considered and every possible effort must be made to minimize or eliminate costs to the public, particularly low- or middle-income residents. Financing strategies such as grant programs have been identified to offset these costs; many of these programs can bring money into the community from State and federal sources (see Appendix E, CAP Funding Matrix). The Regional CAP Coordinator and local government staff will build upon this draft funding matrix as they implement CAP policies and advocate for the community.

The regional nature of the CAP should allow local governments and agencies to more effectively pursue and secure funding. Local governments may need to refine cost estimates for projects and integrate CAP measures into their budgets and capital improvement programs. In addition to pursuing outside funding, local governments can allocate existing funding to the CAP or make changes to fees to raise funds.

6.4 TIMELINE

An implementation timeline was developed according to the following principles:

- Rapidly enact ordinances and codes to target new development in the near term.
- Create educational programs, community engagement programs, working groups, committees, and other organizations in the near term to support public participation in future CAP actions and direct mid- and long-term actions.
- Focus actions in the near and midterms on deploying technologies that are currently feasible to implement at scale.

Preventing or discouraging investment in fossil fuel infrastructure is one of the most cost-effective ways to reduce GHG emissions; thus, it makes financial sense to rapidly enact ordinances and codes to decarbonize buildings and reduce vehicle emissions. Other near-term actions can utilize existing planning and research, such as studies conducted by the RCEA to guide electric vehicle deployment, or they can involve the continuation of previous and current programs, such as the RCEA's e-bike incentive. Programs that will involve substantial public engagement, such as the electrification of existing homes, will be drafted in the near term along with associated educational and promotional materials. Near-term actions will also be prioritized based on cost-effectiveness and ease of implementation. Some of these more cost-effective measures include rapidly creating bike and pedestrian networks and providing transit at no cost. Near term actions will occur in the first three years after CAP adoption.

Mid-term actions will focus on the deployment of technologies that are currently feasible to implement at scale but require more investment and planning than near term actions. These include expansion of charging station networks, continued decarbonization of existing homes and businesses, and creation of solid waste infrastructure, such as a composting facility, to handle expanded organic waste collection. Decarbonization of local electricity, facilitated by the RCEA, is necessary to ensure the success of building and transportation electrification efforts. Midterm actions will occur in the first six years after CAP adoption.

Long-term actions are those that require additional technological developments or inputs from near and midterm actions. These include strategies and programs developed or refined in working groups; electrification of the heavy-duty and off-road mobile combustion sectors; and possibly decommissioning of some natural gas infrastructure in coordination with utilities. These long-term actions, which occur before 2030, set the stage for the next phase of efforts to reach carbon neutrality by 2045.

The implementation timeline is provided in an implementation and monitoring table (Appendix E).

6.5 MONITORING AND REPORTING

A monitoring and reporting program will create accountability, inform adaptive management efforts, and demonstrate compliance with CEQA. Implementation reports will show progress on each measure-- for instance, the number of e-bike incentives given to community members-- while an emissions inventory will track the effectiveness of these programs at reducing emissions.

Implementation Monitoring and Reporting

Monitoring of implementation progress will occur continuously; reporting on implementation and CAP measure completion will occur at least annually. An annual, written implementation report will be prepared by the CAP coordinator and jurisdiction staff. Implementation progress will also be promoted in local print and digital media. Ideally, reports will be accessible through the County and RCEA's websites.

Local climate programs will also need to be responsive to changes occurring at state and federal levels, including new laws, plans, and funding sources. The CAP coordinator will work with local government and agency staff to monitor the status of state and federal programs and adapt accordingly.

Inventory

A comprehensive GHG inventory will be completed at least every 5 years, with more frequent interim inventory updates for the most carbon-intensive sectors (i.e., mobile combustion, electricity consumption, and stationary).

Inventory updates will be completed by the CAP coordinator, in collaboration with jurisdiction staff or their consultants. Future inventories will include quantification of carbon sequestration for natural and working lands. This will allow future CAP updates to include quantified GHG reduction measures in these sectors.

6.6 Adaptive Management

Adaptive management will occur if 1) implementation falls short of targets or 2) inventories do not show required progress toward GHG reduction goals, or 3) specific studies find that the effectiveness of measures can be improved by modifying them, substituting others, or dropping them.

6.7 Updates

A CAP update may be triggered if GHG inventories are not demonstrating expected progress toward jurisdiction reduction targets. "Expected progress" is defined as GHG levels showing a linear decrease from the baseline year to the 2030 target, as shown by the GHG emissions inventory. The CAP update will occur after 8 years have passed if expected progress is being made.

6.8 CAP Consistency Checklist for New Development

The CAP Consistency Checklist in Appendix F will be used to guide new development. The checklist is part of the CAP implementation and monitoring plan, and progress reported therein will be tracked as part of overall CAP progress. If a project design is consistent with all required elements of the checklist, the project can show that it is consistent with the climate action plan and thus the emissions it generates are not cumulatively considerable. The checklist can be found in Appendix F: CAP Consistency Checklist.

6.9 Next Steps

To reach the State's 2045 carbon neutrality target, Humboldt County will need to accelerate climate action from 2030 to 2045. That means making deep cuts in emissions from buildings, transportation, and waste while also developing strategies to reduce emissions from agriculture, refrigerants, and other sectors not addressed in this CAP. After an inventory has been completed in the natural and working lands sector, the measures that are currently unquantified can be adapted into quantified measures that count toward

jurisdiction reduction targets. Local governments could also work with the local air board to develop measures pertaining to point sources not regulated by CARB under the CAP-and-Trade program. Local government staff and the CAP coordinator will monitor State planning for updates, particularly CARB rulemaking regarding the State's 2045 GHG carbon neutrality target.

Staff and the CAP coordinator will also look for opportunities to exceed emissions reductions targets whenever possible. For instance, agencies and local governments should strive to reduce countywide VMT by 25% by 2030 in accordance with RCEA planning even though the modeling associated with the Climate Action Plan shows a lower VMT reduction as a result of implementation of CAP measures.

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APPENDICES

Appendix A: Calculation of GHG Emission Reductions of Measures in the Climate Action Plan

Appendix B. GHG Reduction Measures Spreadsheet

Appendix C: Forest Carbon Storage in Humboldt County

Appendix D: Forest Carbon Reserves under California Cap-and-Trade program

Appendix E: Implementation and Monitoring Table & Funding Matrix

Appendix F: CAP Consistency Checklist

Appendix G: County-Wide 2015 GHG Emissions Inventory Report

APPENDIX A CALCULATION OF GHG EMISSION REDUCTIONS OF MEASURES IN THE CLIMATE ACTION PLAN

GHG emission reduction impacts of CAP measures were calculated by EIAS, local consultants with expertise in climate action planning. Calculation methodologies are captured in a spreadsheet that is incorporated into this Climate Action Plan by reference. The majority of calculation methods are derived from guidance by the California Air Pollution Control Officers Association in their document, "Quantifying Greenhouse Gas Mitigation Measures". Impacts take into account State and local emissions reduction legislation.

The list of measures was developed through a review of common measures in other climate action plans, then augmented with measures specific to Humboldt County along with jurisdiction, public and stakeholder suggestions. The recommended set of measures and commitment targets were designed to enable jurisdictions to defensibly achieve compliance with SB32 GHG reduction targets.

Jurisdictions interacted with the "Measure Targets" tab of the spreadsheet shown below to identify realistic goals for each area that would be evaluated in the environmental document for the CAP. The GHG reduction of each commitment is reflected in the "Impact Summary" and "Pie Chart" tabs of the spreadsheet. The orange-colored tabs show how the calculations are performed, and the green "Resources" tab shows the referenced data.

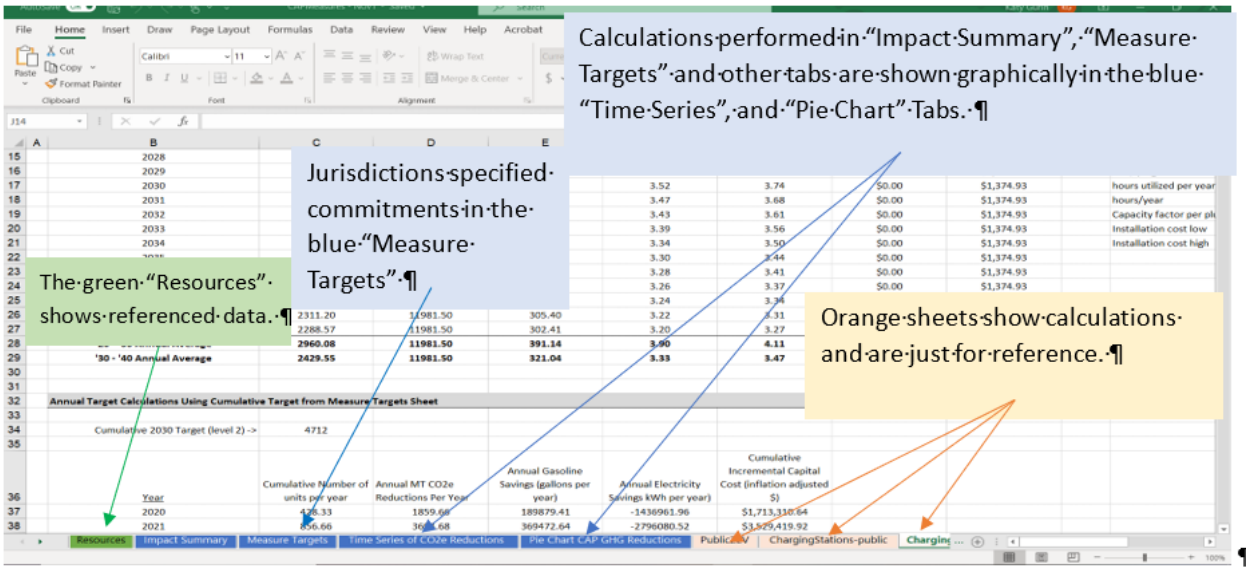

Figure 25. GHG emission reductions spreadsheet

A slide deck explaining the spreadsheet in additional detail may be found here: https://drive.google.com/file/d/1ODRyebyR9LcLg_TWHg-w0K2tpch8WEep/view?usp=sharing

APPENDIX B. GHG REDUCTION MEASURES SPREADSHEET

This spreadsheet is included as a separate file.

APPENDIX C: FOREST CARBON STORAGE IN HUMBOLDT COUNTY

C.1 OVERVIEW OF CARBON CYCLES

As with most systems, a forest has a stock or pool of carbon and fluxes: carbon that comes and goes from storage. Forest carbon can be likened to a bathtub: The bathtub can contain water (the stock), has a faucet (input) and a drain (output). The tap and the drain are in continuous action -- the faucet is always on, and the drain is leaky -- and so a forest gains and loses carbon continuously.

CARBON POOLS

Forest carbon is stored in five pools within and around vegetation

1. **Above-ground biomass**:
   Stems, bark, leaves, needles, etc.
2. **Below-ground biomass**:
   Roots of all sizes
3. **Dead wood** or dead
   organic matter in dead wood
4. **Litter** or dead organic matter in
   litter
5. **Soil organic carbon** (SOC) consisting of humus, microbial biomass, and other organic materials

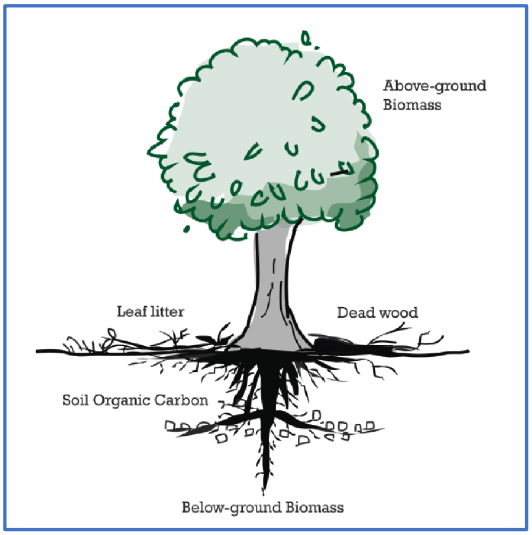

Figure 17. Pools of forest carbon storage. Image source: Vickers, B. et al. 2012. Community guidelines for accessing forestry voluntary carbon markets Chapter 1 Forests and Climate Change FAO Regional Office for Asia and the Pacific. http://www.fao.org/docrep/016/i3033e/i3033e01.pdf

Total carbon storage is greatest in forests, grasslands, and shrublands[124]. Humboldt County forests store large and significant amounts of carbon, the most of any county in California, and has the highest above-ground forest carbon densities in the world[124] (Van Pelt, pers comm.). An excellent recent analysis of

carbon stocks in a 10-county area for northwest California is available that has sound and credible estimates of carbon storage (expressed as CO2 equivalents)[70].

This analysis indicates that stocks in Humboldt County, in metric tons of CO_2 (MT) equivalent are: 3,828,968,564 MT in forests, 183,901,833 MT in grasslands, 193,066,775 MT shrublands, and 7,410 MT in wetlands. Wetlands and forests store the most carbon per acre (see Appendix C for details).

At large scales, such as at the scale of forestland in Humboldt County and larger scales, changes in the carbon pool from wildfires, timber harvest, pathogens and so on are well distributed in time and space. They tend to even out and approach the land-climate system's inherent capacity to fix (sequester) carbon in biogenic materials (see Figure 18).

CARBON FLUX IN WILDLANDS

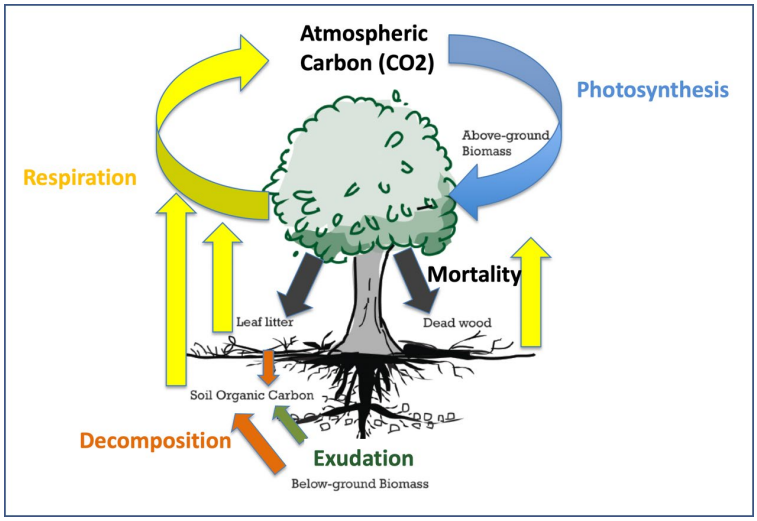

Figure 18. Forest carbon flux (quantitative movement from one form to another) Image modified from: Vickers, B. et al. 2012. Community guidelines for accessing forestry voluntary carbon markets Chapter 1 Forests and Climate Change FAO Regional Office for Asia and the Pacific. http://www.fao.org/docrep/016/i3033e/i3033e01.pdf

HUMBOLDT COUNTY FORESTS ARE BOTH A CARBON SINK AND EMISSION SOURCE.

Forests sequester carbon through photosynthesis and growth. Forests lose carbon when they are converted to other purposes such as agriculture and urban development, when they burn, are impacted by pests and disease, or harvested unsustainably.

[70] Nickerson 2017, Carbon Inventory Estimates for the North Coast Resource Partnership)

FORESTS ARE DIVERSE AND DYNAMIC

Forest carbon storage differs from ecosystem to ecosystem as a function of species, local climate, soil fertility, age, tree density, tree condition, competition, and historic and current management.

There are three general climate strategies for forests:

Keep what you have. "*Keep forests as forests*". Avoid conversion to non-forest uses; avoid deforestation and forest fragmentation.

Improve carbon stocking within existing stands. Many stands are degraded; they are below natural carrying capacity. Improve productivity: Restore more natural tree densities and spacing; number of stems/acres. Put growth on fewer, larger trees; allow longer rotations between timber harvests.

Reforestation: Restock originally-forested stands, such as abandoned cannabis grows with appropriate species mix.

Concluding High-Level Actions Measures to increase carbon storage and to adapt to changing climates in forests and agricultural lands are often the same or similar. That is, measures that increase carbon storage usually contribute to forest, farm, and watershed health and resilience to climate change, enabling forested lands to contribute to both climate mitigation and adaptation. The measures given here are thus not separated by mitigation and adaptation, as most contribute to both needs.

C.2 FORESTS

Gains of carbon in forests occur when growth rates exceed respiration, decay, harvest, and other losses. Growth is usually greatest at well-stocked but not overly stocked stands, as overstocking can cause stress. Many factors affect growth, including climate-- particularly climate variability and climate change, soil quality, slope aspect, and disturbances such as drought, flooding, windstorms, and insect infestation.

FACTORS AFFECTING CARBON STORAGE

GROWTH IS INCREASED BY AIR POLLUTION

CO_2 fertilization from anthropogenic emissions increases plant growth and plant water-use efficiency. However, moisture and nutrients usually quickly become limiting, and increased growth ceases. Nitrogen, in moderated amounts, is necessary for healthy plant growth. Nitrogen in air pollution results in a fertilizing effect in some forests, which may be harmful or beneficial depending on the ecology and physiology of the trees. There are two primary sources of excess nitrogen in Humboldt County: over-application of nitrogen fertilizer in agricultural applications and nitrogen oxide generated from internal combustion engine emissions.

GROWTH CAN BE INCREASED AND MAINTAINED BY ACTIVE FOREST MANAGEMENT

Actively managing forests for optimal stocking via thinning (both commercial and non-commercial) and prescribed burning where possible increases overall forest growth rates over time and can accelerate forests in reaching their full potential for carbon sequestration. Other silvicultural methods that promote healthy and climate-resilient forests, include management of species composition, age-class distribution, and shade, implementation of best management practices to protect soils, insects, pathogens, and invasive

plants. These measures can increase forest growth and ensure that sites meet their potential to sequester carbon.

LAND USE

Large areas of forest are converted and lost to other uses each year in California. This is not as big a factor in Humboldt County where the expansion of agriculture and residential development into forest areas has been relatively minor. In fact, most jurisdictions intend to further mitigate the potential sprawl of residential development into forested areas through integrating infill and dense housing developments as part of their individual CAPs. Conversion of forests into cannabis farms has been an issue in Humboldt County, but wildland cannabis farming appears to be declining with previously converted lands reforesting either via planting or natural regeneration. This is largely a result of County cannabis policy, which prohibits conversion from timberland, incentivizes removal of cultivation from marginal wildlands to less problematic areas, and limits permitting for existing cultivation sites located in forestlands to applicants who applied prior to a 2016 deadline.[71]

WILDFIRE

Wildfire is emerging as the biggest threat to California's forests and the North Coast is not immune to this disturbance agent. After a 100+ years of fire suppression, the natural consumption of competing vegetation has been eliminated and stands have densified and carry high-fuel loads. This leads to the increased likelihood of higher severity fire conditions and large-scale impacts The black carbon emissions from wildfire are extremely bad for human health and the extent of high-severity wildfires over the last decade have reversed much of California's emission goals. Wildfire generally kills trees but does not consume them. Wildfire severity is nearly always a matrix of low, moderate, and high severity. For most burned areas, more than half the initial forest carbon remains after wildfires, however, the killed trees can decompose quickly. GHG emissions from wildfire can be very large. The California Climate Action Reserve recently calculated wildfire emissions in California, and the summary results are shown in Figure 19. While significant, these wildfire emissions are relatively small compared to total GHG emissions in California.

[71] Lazar, Steven. 2020. Personal Communication.

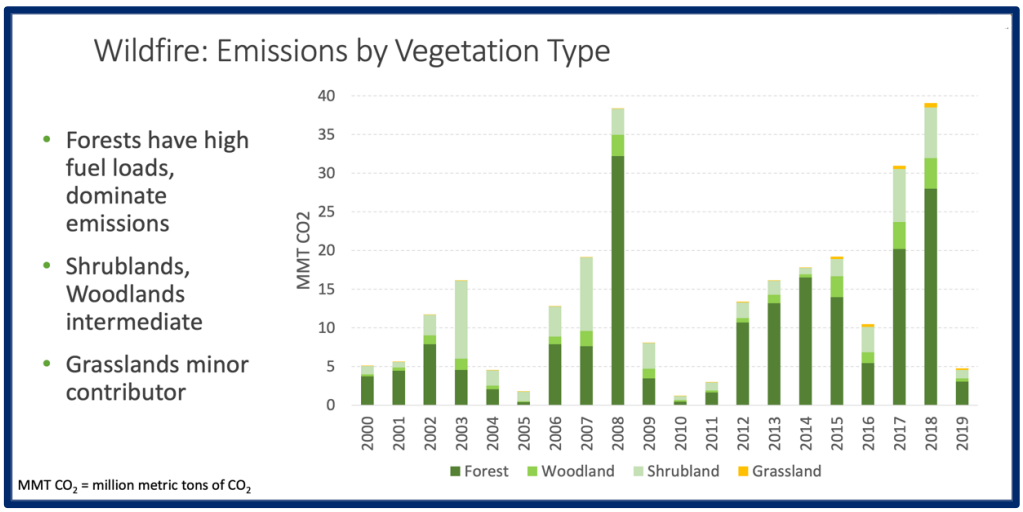

Figure 19. CO2 emissions from wildfire in California. Source: California Air Resources Board. Online presentation. December 2020

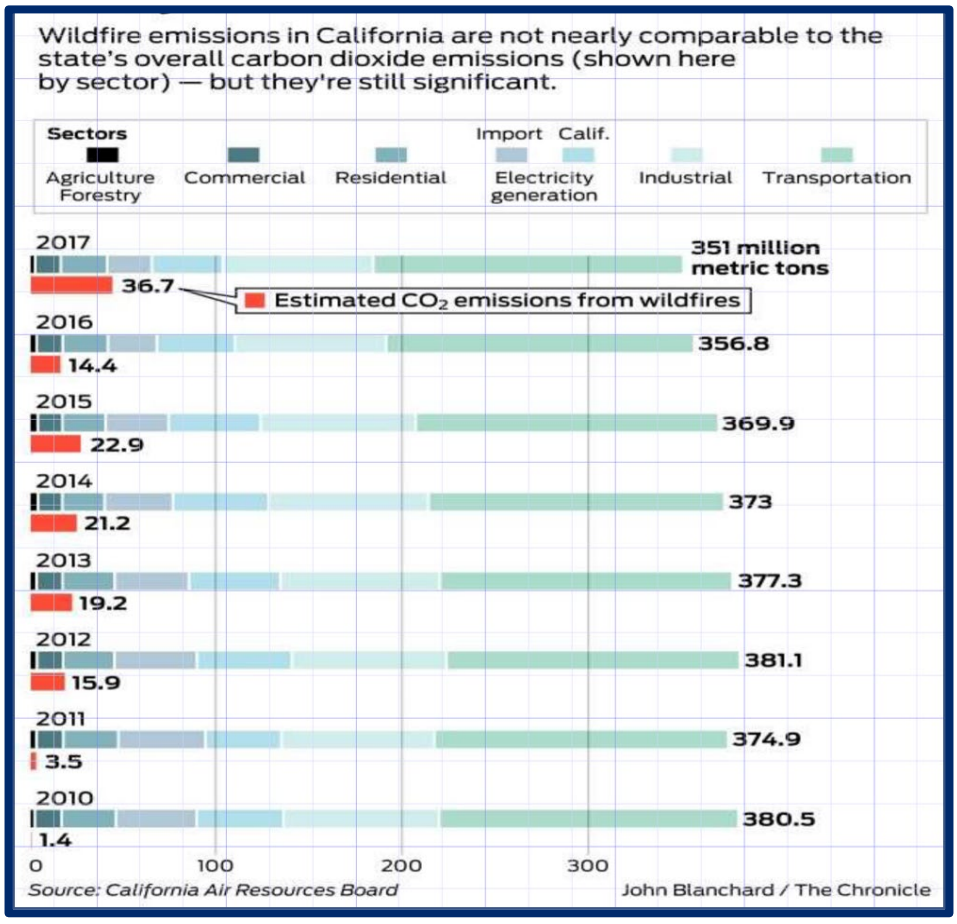

Figure 20. Wildfire co2 emissions appear to be high but are relatively small compared to other sources of emissions in California. Note: wildfire co2 emissions were higher in 2018-2020, but the general relation still holds.

DROUGHT AND INSECT INFESTATION

During a drought, trees compete for water and nutrients. Weakened trees have less resource to ward off beetle attacks and other pathogens. Climate change results in more frequent and more severe droughts, which reduces the growth of forests. The intensity and frequency of droughts are expected to increase as average temperatures rise, but the degree of this increase is uncertain.

Some forest types are better adapted to prolonged droughts such as deep-rooted oak trees. Other tree species are more vulnerable. Forest management can help ameliorate some of this competition for resources and help increase stand resilience to drought or other disturbances.

TIMBER HARVESTING

Timber harvest temporally reduces carbon stocks in proportion to the amount of tree removal. Roughly half of the harvested tree carbon is lost to the atmosphere in harvests via manufacturing and slash disposal, and about half is conserved in forest products [72].

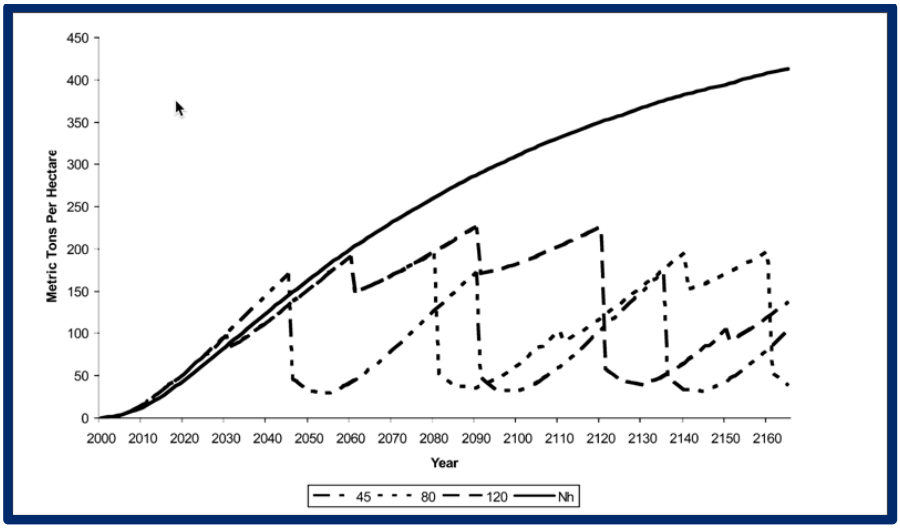

Figure 21. Forest carbon pools differ depending on rotation length. After harvest, forest stands fix carbon and recover their carbon-sequestration according to their inherent capacity and the time between harvests. "Rotation" means the growth period between forest harvests.[73]

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[72] Davis, Sarah C., et al. "Forest carbon sequestration changes in response to timber harvest." *Forest Ecology and Management* 258.9 (2009): 2101-2109.

Perez-Garcia, John, et al. "An assessment of carbon pools, storage, and wood products market substitution using life-cycle analysis results." Wood and Fiber Science 37 (2007): 140-148.

[73]

Some forest products, such as tissue paper, are ephemeral, but most harvested timber is used for lumber, which typically has a long life and stores carbon for decades to more than a century.

THE VALUE OF WOOD-BASED CONSTRUCTION

Building with wood requires significantly less energy and embodied GHG emissions than building with concrete and steel. Substituting wood for concrete and steel results in significant reductions in emissions. New "mass timber" materials such as cross-laminated timber are capable of replacing steel and concrete in many applications, even in high-rise buildings.

FOREST OFFSET CREDITS

A reduction in emissions through carbon offsets compensates for the emissions made by other sources. Carbon offsets are considered a "bridging" strategy until GHG emissions reduction technologies and a low-carbon economy are in place.

California has established a "Cap and Trade" system for pricing carbon emissions and providing financial incentives to reduce emissions and sequester carbon. The goal is to steadily reduce GHG emissions statewide in a cost-effective, market-based system.

The Cap

Each large-scale emitter (greater than 1 ton per year) is subject to a regulatory limit on the amount of GHG that it may emit. The emitter must have an "emissions permit" for every ton of carbon dioxide it releases to the atmosphere. These permits set an enforceable limit, or cap, on the amount of GHGs that the entity may emit. Over time, the limits become stricter -- the cap is reduced -- allowing less and less pollution, until the final reduction goal is met. This system is similar to the cap-and-trade system enacted by the Clean Air Act of 1990, which capped the sulfur emissions that cause acid rain. This previous cap-and-trade system met its goals at a much lower cost than industry or government expected.

The Trade

It will be less expensive or easier for some companies to reduce their emissions below their cap than others. The more efficient companies who emit less than their allowance can sell their extra permits to emitters that are not able to make reductions as easily. This creates a system that ensures a set level of overall reductions, while rewarding the most efficient companies and ensuring that the cap can be met at the lowest cost to the economy.

California auctions the emissions permits to the companies that are required to reduce their emissions, creating a large revenue stream. These financial resources are used to achieve critical objectives for climate change mitigation and economic development.

Offsets

Emitting entities (those emitting 25,000 metric tons of CO2e or more per year) may compensate for up to 8% of excess emissions by purchasing offset credits, which are carbon storage or emissions avoidance measures. The number of allowable offsets changes in accordance with the law. One of the available offset credit categories in California is forest offset credits.

A protocol has been established to quantify, verify, and certify forest credits for sale in the Cap-and-Trade system, and also in the voluntary, non-compliance market[74].

This cap-and-trade system provides a means of generating revenue from forests by leaving them standing, and puts a price on carbon emissions, which is widely advocated as essential to climate mitigation.

Humboldt County has 12 "carbon reserves" projects where a baseline of forest carbon storage is promised for 100 years. The total carbon currently verified in these reserves is 7,439,123 metric tons. This is a relatively small amount relative to the potential in Humboldt County but additional reserves are in progress and more are expected to be established. Market prices and conditions are trending upward.

[74] California Air Resources Board, 2020

A Valid Offset Requires Establishing Six Parameters

Baseline: What the atmosphere sees now under Business-as-Usual activity, without the measure.

Additionality: Most registries or markets for carbon offset credits including California's cap-and-trade system require demonstration of "additionality". A measure or action has additionality if it increases the amount of carbon stocks relative to a dynamic baseline, defined at "Business as Usual", which is what would occur without the measure. For example, conversion of a fully stocked forest to an intensively managed forest is almost inevitably going to reduce the amount of carbon stocks for a significant period of time. Converting an intensively managed system to a low-intensity management scheme would result in increased carbon stocks and be "additional". Additionality must be above regulatory requirements.

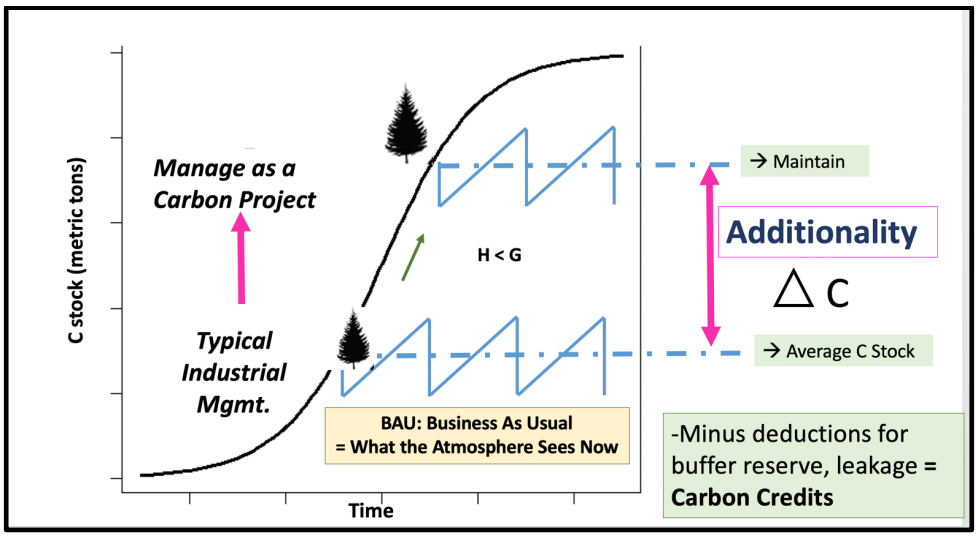


Figure 22. An illustration of additionality in forest management, necessary for valid carbon offset credits. Illustration from Andrea Tuttle. H="harvest" and G="Growth"

Leakage: The gains of a measure are not lost elsewhere through leakage. Leakage refers to the activity moving elsewhere as a result of implementing an emissions reduction measure.

Permanence: Ensure net CO_2 remains stored over time. The offset must be permanent. For forest carbon offsets in California, "permanent" is defined as 100-years or more.

Verification: Third party, independent verification of data and procedures is required.

Monitoring and Enforcement: A monitoring and enforcement process must be included as well with sanctions for not meeting offset commitments.

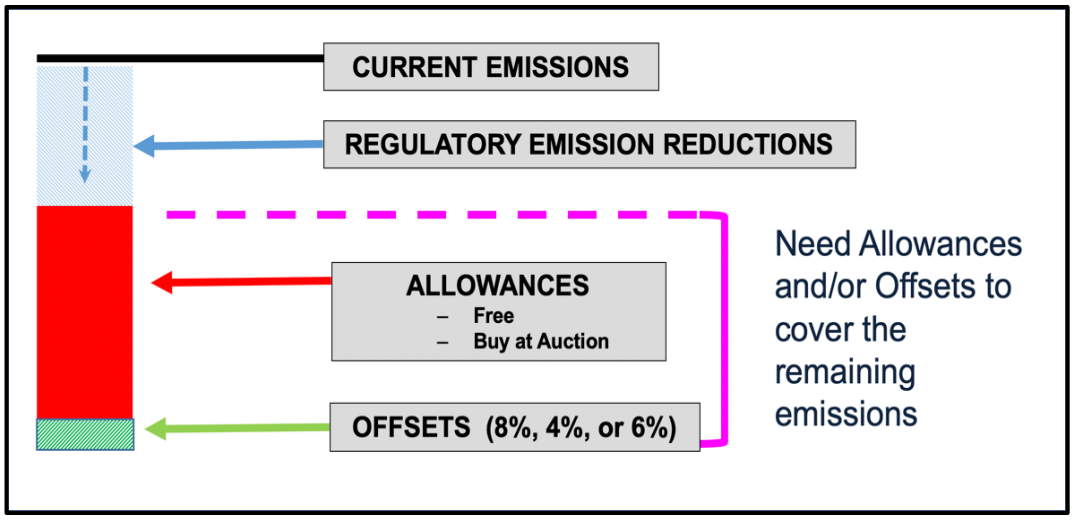


Figure 23. An illustration of how an emitting entity can comply with the California regulations.

The effect of scale on carbon accounting

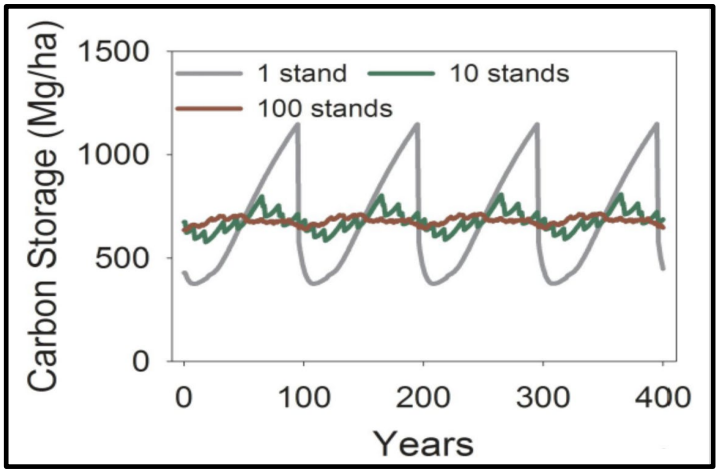


Figure 24. Carbon storage tends to average out over a landscape as forest harvest, wildfire, and other disturbances are distributed in time and space. If disturbance frequency is decreased, the average carbon stock goes up. If disturbance frequency is increased, the average carbon stock goes down.

HOW MUCH CARBON IS SEQUESTERED ON HUMBOLDT COUNTY LANDS?

There are nine distinct landcover classes identified in the Dogwood Springs Forestry report. As shown below, the vast majority of sequestration value in our region is contained in the "forest" landcover class.

Values given are CO2-equivalent.

Stocks of carbon in Humboldt Region by landcover type

Landcover Class	Total Acres	Total CO2	CO2 per acre
Barren	441,668	15,116,227	209
Forest	8,655,696	3,828,968,564	2701
Grassland	1,418,495	183,901,833	792
Orchard	88	11,013	766
Row Crop	199,765	12,264,442	375
Shrubland	1,433,943	193,066,775	822
Urban	204,787	25,122,384	749
Vineyard	65,849	4,257,492	395
Wetland	12	7,410	3913

Table 6. Carbon Inventory Estimates for the North Coast Resource Partnership Derived from: Nickerson 2017. Dogwood Springs Forestry[75]

Landcover Class	Landcover Subclass	Landcover Type	Abovegro und CO2e	Soil CO2e	Area (acres)
Barren	Barren	Barren	37,768	620,035	1,988.7
Barren	Barren	Mediterranean California Sparsely Vegetated Systems	23,048	334,107	687.2
Barren	Barren	North Pacific Sparsely Vegetated Systems	369	5,204	11.0
Barren	Barren	Quarries-Strip Mines-Gravel Pits	0	2,342	3.9
Barren	Roads	Developed-Roads	0	1,821,272	3,718.5
Barren	Water	Open Water	0	0	3,611.9
Forest	Coniferous Forest	California Coastal Redwood Forest	174,031,671	96,609,794	67,942.2
Forest	Coniferous Forest	California Lower Montane Foothill Pine Woodland and Savanna	185,847	162,588	139.0
Forest	Coniferous Forest	California Montane Jeffrey Pine (-Ponderosa Pine) Woodland	1,307,907	851,790	851.5
Forest	Coniferous Forest	Klamath-Siskiyou Lower Montane Serpentine Mixed Conifer Woodland	1,606,571	394,007	664.6
Forest	Coniferous Forest	Klamath-Siskiyou Upper Montane Serpentine Mixed Conifer Woodland	2,388,289	632,339	1,157.0
Forest	Coniferous Forest	Mediterranean California Dry-Mesic Mixed Conifer Forest and Woodland	34,651,271	10,474,050	15,335.8

[75] Nickerson 2017. ***Carbon Inventory Estimates for the North Coast Resource Partnership.*** Dogwood Springs Forestry

Landcover Class	Landcover Subclass	Landcover Type	Abovegro und CO2e	Soil CO2e	Area (acres)
Forest	Coniferou s Forest	Mediterranean California Lower Montane Conifer Forest and Woodland	3,187,006	1,272,88 6	1,504.6
Forest	Coniferou s Forest	Mediterranean California Mesic Mixed Conifer Forest and Woodland	52,051,68 4	13,267,8 15	21,139.5
Forest	Coniferou s Forest	Mediterranean California Mixed Evergreen Forest	428,059,0 46	199,852, 821	171,548.6
Forest	Coniferou s Forest	Mediterranean California Red Fir Forest	4,783,124	756,832	2,141.2
Forest	Coniferou s Forest	Mediterranean California Subalpine Woodland	6,865	1,955	5.9
Forest	Coniferou s Forest	North Pacific Maritime Mesic-Wet Douglas-fir-Western Hemlock Forest	4,115,447	2,335,72 0	1,877.7
Forest	Coniferou s Forest	Northern California Mesic Subalpine Woodland	116,585	17,136	60.8
Forest	Coniferou s Forest	Pinus sabiniana Woodland Alliance	1,089,727	765,288	632.1
Forest	Woodland s	California Coastal Closed-Cone Conifer Forest and Woodland	210,382	24,549	123.0
Forest	Woodland s	California Lower Montane Blue Oak Forest and Woodland	11,270	11,781	9.2
Forest	Woodland s	California Lower Montane Blue Oak-Foothill Pine Forest and Woodland	13,642	17,388	10.7
Forest	Woodland s	California Montane Riparian Systems	11,299,72 2	5,580,59 1	5,416.9
Forest	Woodland s	California Montane Woodland and Chaparral	7,517,457	10,240,2 76	8,871.3
Forest	Woodland s	Mediterranean California Lower Montane Black Oak - Conifer Forest and Woodland	189,528	103,321	109.6
Forest	Woodland s	Mediterranean California Lower Montane Black Oak Forest and Woodland	124,384	69,270	78.7
Forest	Woodland s	Mediterranean California Mixed Oak Woodland	2,770,865	1,928,92 8	1,854.5
Forest	Woodland s	North Pacific Oak Woodland	4,139,947	5,002,34 7	3,735.1
Forest	Woodland s	Quercus garryana Woodland Alliance	2,722	2,103	2.0
Grassland	Grassland	California Annual Grassland	1,166,192	27,679,2 15	18,742.6
Grassland	Grassland	California Mesic Serpentine Grassland	13,199	200,881	211.9
Grassland	Grassland	California Northern Coastal Grassland	5,888	97,602	89.9
Grassland	Grassland	Introduced Upland Vegetation-Perennial Grassland and Forbland	232,096	5,378,22 5	3,575.1
Grassland	Grassland	North Pacific Montane Grassland	716,286	13,573,6 17	12,437.2
Grassland	Grassland	Pacific Coastal Marsh Systems	38,319	778,537	654.9
Grassland	Grassland	Western Cool Temperate Pasture and Hay land	6,210	4,166,37 0	2,740.2

Landcover Class	Landcover Subclass	Landcover Type	Aboveground CO2e	Soil CO2e	Area (acres)
Grassland	Grassland	Western Cool Temperate Wheat	1	411	0.3
Grassland	Grassland	Western Warm Temperate Pasture and Hayland	107	70,374	47.3
Grassland	Grassland	Western Warm Temperate Wheat	10	4,722	4.6
Grassland	Ruderal Grassland	Western Cool Temperate Developed Ruderal Grassland	8,069	5,880,190	3,560.7
Grassland	Ruderal Grassland	Western Cool Temperate Undeveloped Ruderal Grassland	51	2,754	22.3
Grassland	Ruderal Grassland	Western Warm Temperate Developed Ruderal Grassland	356	129,654	157.3
Orchard	Orchard	Western Cool Temperate Orchard	195	133	0.5
Orchard	Orchard	Western Warm Temperate Orchard	133	178	0.5
Row Crop	Agroforestry	Western Cool Temperate Undeveloped Ruderal Deciduous Forest	0	0	0.0
Row Crop	Agroforestry	Western Cool Temperate Undeveloped Ruderal Evergreen Forest	0	35	0.1
Row Crop	Agroforestry	Western Cool Temperate Undeveloped Ruderal Mixed Forest	0	26	0.1
Row Crop	Agroforestry	Western Warm Temperate Developed Ruderal Deciduous Forest	0	491	0.9
Row Crop	Agroforestry	Western Warm Temperate Developed Ruderal Evergreen Forest	0	1,288	2.4
Row Crop	Agroforestry	Western Warm Temperate Developed Ruderal Mixed Forest	0	1,343	2.4
Row Crop	Row Crop	Western Cool Temperate Close Grown Crop	0	2,538	6.2
Row Crop	Row Crop	Western Cool Temperate Fallow/Idle Cropland	0	232	1.2
Row Crop	Row Crop	Western Cool Temperate Row Crop	0	208	0.4
Row Crop	Row Crop	Western Warm Temperate Close Grown Crop	0	13,917	32.1
Row Crop	Row Crop	Western Warm Temperate Fallow/Idle Cropland	0	1,514	3.6
Row Crop	Row Crop	Western Warm Temperate Row Crop	0	28	0.1
Shrubland	Shrubland	California Mesic Chaparral	6,287,714	13,331,447	9,096.2
Shrubland	Shrubland	California Xeric Serpentine Chaparral	6	210	0.1
Shrubland	Shrubland	Klamath-Siskiyou Xeromorphic Serpentine Savanna and Chaparral	405,760	665,916	388.3
Shrubland	Shrubland	Northern and Central California Dry-Mesic Chaparral	30,532	75,136	51.2
Shrubland	Shrubland	Northern California Coastal Scrub	38,039	3,274,985	2,003.1
Shrubland	Shrubland	Western Cool Temperate Undeveloped Ruderal Shrubland	258	2,937	3.5
Shrubland	Shrubland	Western Warm Temperate Developed Ruderal Shrubland	1,448	14,441	17.4

Landcover Class	Landcover Subclass	Landcover Type	Abovegro und CO2e	Soil CO2e	Area (acres)
Urban	Barren	Urban_Barren	116	0	0.7
Urban	Barren	Urban_Mediterranean California Sparsely Vegetated Systems	372	1,149	2.2
Urban	Barren	Urban_Quarries-Strip Mines-Gravel Pits	6	0	0.0
Urban	Coniferou s Forest	Urban_California Coastal Redwood Forest	1,575	24,217	9.4
Urban	Coniferou s Forest	Urban_Mediterranean California Mixed Evergreen Forest	781	11,842	4.7
Urban	Grassland	Urban_California Annual Grassland	2,356	10,172	14.1
Urban	Grassland	Urban_North Pacific Montane Grassland	1,740	7,838	10.4
Urban	Grassland	Urban_Pacific Coastal Marsh Systems	2,063	11,687	12.3
Urban	Grassland	Urban_Western Cool Temperate Pasture and Hayland	79	0	0.5
Urban	Low Intensity	Developed-Low Intensity	0	176,299	350.0
Urban	Low Intensity	Urban_Developed-Low Intensity	81,012	200,544	483.6
Urban	Other Urban	Developed-High Intensity	0	7,184	13.2
Urban	Other Urban	Developed-Medium Intensity	0	58,622	103.4
Urban	Other Urban	Urban_Developed-High Intensity	8,893	23,683	53.1
Urban	Other Urban	Urban_Developed-Medium Intensity	82,434	214,437	492.1
Urban	Other Urban Forest	Urban_Western Cool Temperate Developed Ruderal Deciduous Forest	6	0	0.0
Urban	Other Urban Forest	Urban_Western Cool Temperate Developed Ruderal Evergreen Forest	6	0	0.0
Urban	Other Urban Forest	Urban_Western Cool Temperate Developed Ruderal Mixed Forest	6	0	0.0
Urban	Other Urban Forest	Urban_Western Cool Temperate Urban Deciduous Forest	8,826	41,421	52.7
Urban	Other Urban Forest	Urban_Western Cool Temperate Urban Evergreen Forest	5,994	24,374	35.8
Urban	Other Urban Forest	Urban_Western Cool Temperate Urban Mixed Forest	11,378	42,531	67.9
Urban	Other Urban Forest	Urban_Western Warm Temperate Urban Deciduous Forest	1,453	6,554	8.7

Landcover Class	Landcover Subclass	Landcover Type	Abovegro und CO2e	Soil CO2e	Area (acres)
Urban	Other Urban Forest	Urban_Western Warm Temperate Urban Evergreen Forest	586	1,778	3.5
Urban	Other Urban Forest	Urban_Western Warm Temperate Urban Mixed Forest	903	3,247	5.4
Urban	Other Urban Forest	Western Cool Temperate Developed Ruderal Deciduous Forest	2,200	14,493	8.8
Urban	Other Urban Forest	Western Cool Temperate Developed Ruderal Evergreen Forest	6,083	38,971	22.9
Urban	Other Urban Forest	Western Cool Temperate Developed Ruderal Mixed Forest	6,659	29,651	21.5
Urban	Other Urban Forest	Western Cool Temperate Urban Deciduous Forest	55,114	350,353	281.5
Urban	Other Urban Forest	Western Cool Temperate Urban Evergreen Forest	105,198	559,527	537.3
Urban	Other Urban Forest	Western Cool Temperate Urban Mixed Forest	43,634	228,168	222.9
Urban	Other Urban Forest	Western Warm Temperate Urban Deciduous Forest	39,033	210,981	199.3
Urban	Other Urban Forest	Western Warm Temperate Urban Evergreen Forest	52,595	266,734	268.6
Urban	Other Urban Forest	Western Warm Temperate Urban Mixed Forest	21,817	103,590	111.4
Urban	Other Urban Grassland	Urban_Western Cool Temperate Urban Herbaceous	60,368	665,736	360.4
Urban	Other Urban Grassland	Urban_Western Warm Temperate Urban Herbaceous	6,165	29,826	36.8
Urban	Other Urban Grassland	Western Cool Temperate Urban Herbaceous	2,259	831,780	498.4
Urban	Other Urban Grassland	Western Warm Temperate Urban Herbaceous	780	205,292	172.2
Urban	Other Urban Shrubland	Urban_Western Cool Temperate Developed Ruderal Shrubland	98	237	0.6

Landcover Class	Landcover Subclass	Landcover Type	Abovegro und CO2e	Soil CO2e	Area (acres)
Urban	Other Urban Shrubland	Urban_Western Cool Temperate Urban Shrubland	40,121	186,833	239.5
Urban	Other Urban Shrubland	Urban_Western Warm Temperate Urban Shrubland	1,697	6,853	10.1
Urban	Other Urban Shrubland	Western Cool Temperate Developed Ruderal Shrubland	8,679	115,981	104.7
Urban	Other Urban Shrubland	Western Cool Temperate Urban Shrubland	21,244	354,938	325.5
Urban	Other Urban Shrubland	Western Warm Temperate Urban Shrubland	11,075	164,299	169.7
Urban	Roads	Urban_Developed-Roads	172,088	40,528	1,027.3
Urban	Ruderal Grassland	Urban_Western Cool Temperate Developed Ruderal Grassland	3,278	7,902	19.6
Urban	Ruderal Grassland	Urban_Western Warm Temperate Developed Ruderal Grassland	201	0	1.2
Urban	Shrubland	Urban_California Mesic Chaparral	79	322	0.5
Urban	Shrubland	Urban_California Montane Woodland and Chaparral	2,564	14,539	15.3
Urban	Shrubland	Urban_Klamath-Siskiyou Xeromorphic Serpentine Savanna and Chaparral	4,895	52,394	29.2
Urban	Shrubland	Urban_Northern California Coastal Scrub	2,460	34,885	14.7
Urban	Vineyard	Urban_Cropscape Vineyards 2012	12	25	0.1
Urban	Water	Urban_Open Water	4,181	0	25.0
Urban	Woodland s	Urban_California Montane Riparian Systems	439	5,856	2.6
Urban	Woodland s	Urban_North Pacific Oak Woodland	208	1,172	1.2
Vineyard	Vineyard	Cropscape Vineyards 2012	3,266	31,167	75.1
Vineyard	Vineyard	Western Cool Temperate Vineyard	98	1,509	2.3
Vineyard	Vineyard	Western Warm Temperate Vineyard	114	1,357	2.6

Table 7. Detail of carbon stocks in Humboldt County by landcover subclass

APPENDIX D: FOREST CARBON RESERVES UNDER CALIFORNIA'S CAP-AND-TRADE PROGRAM

From: (from Climate Action Reserve) Accessed November 24, 2020

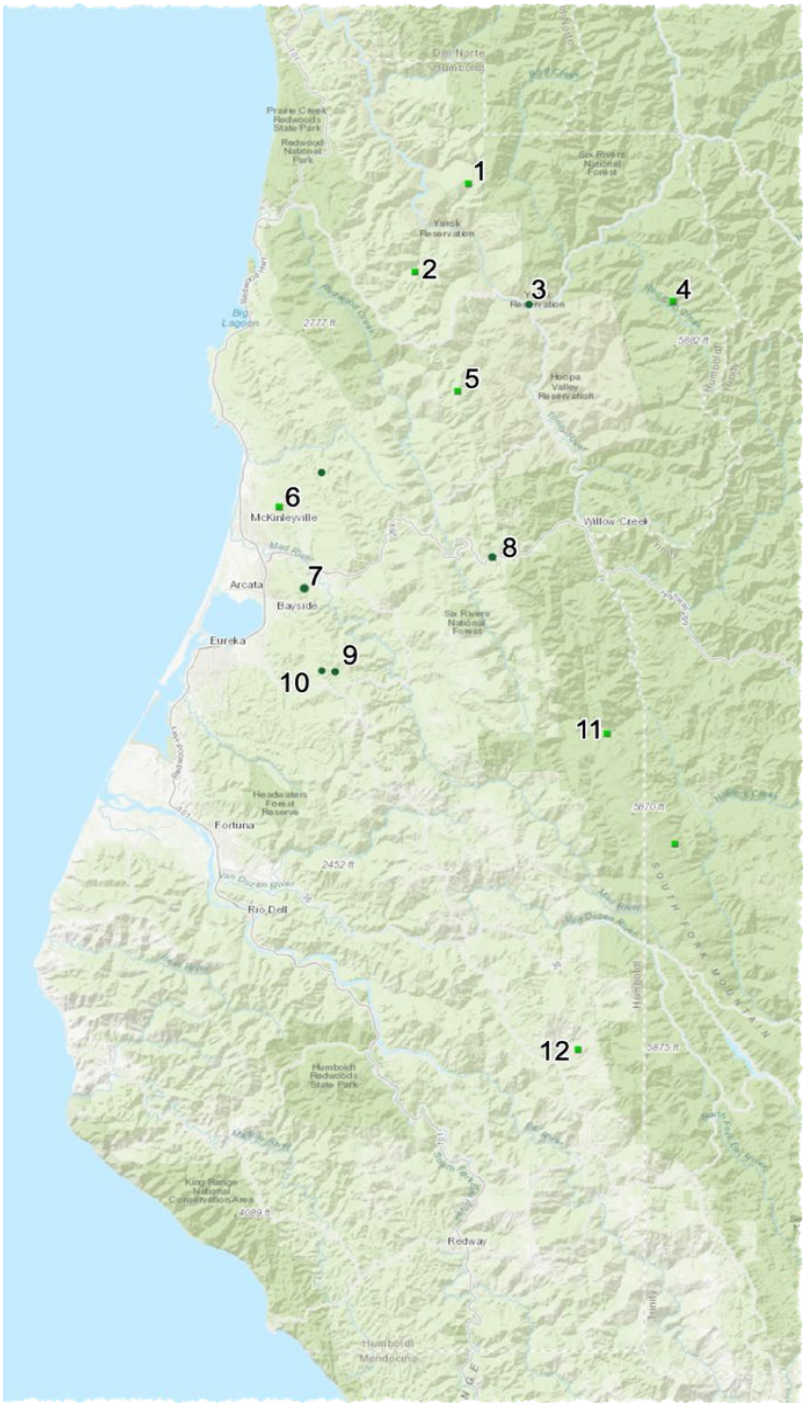


Figure 26. Approximate locations of forest carbon reserves in Humboldt County. See table below for attributes. Credit numbers may not be totally accurate or up to date

Map	Project Name	Project Developer	Project Owner	Credits Issued (MT)	Credits retired (used) or cancelled (MT)
1	Phase 1 Sustainable Forest Project	Yurok Tribe	Yurok Tribe	81,6381	710,434
2	Humboldt Mixed Forest Improvement Project	Peak Carbon LLC	Peak Carbon LLC	2,895,502	0
3	Yurok Tribe Sustainable Forest Project	Yurok Tribe	Yurok Tribe	1,336,270	0
4	Yurok Tribe/Forest Carbon Partners	Yurok Tribe	Yurok Tribe	983,755	983,755
5	Pine Creek Improved Forest Management Project	California Timberlands 2 LLC	California Timberlands 2 LLC	494,904	0
6	Van Eck Forest	Fred M Van Eck Forest Foundation for Purdue University	Fred M Van Eck Forest Foundation for Purdue University	10,433	10,433
7	Arcata Sunnybrae Tract	City of Arcata	City of Arcata	42,716	27,256
8	Finite Carbon - Berry Summit	Berry Summit, LLC	Berry Summit, LLC	239,205	239,205
9	Arcata City Forest Lucchesi Tract	City of Arcata	City of Arcata	19,053	16,878
10	Arcata City Forest Barnum Tract	City of Arcata	City of Arcata	39,748	32,483
11	Forest Carbon Partners - Gabrych Ranch	Forest Carbon Partners, L.P.	Forest Carbon Partners, L.P.	287,077	287,077
12	Forest Carbon Partners -- Glass Ranch	Forest Carbon Partners, L.P.	Forest Carbon Partners, L.P.	274,079	274,079

Table 8. Forest carbon reserves under California cap-and-trade program. From: (from Climate Action Reserve) Accessed November 24, 2020

APPENDIX E: IMPLEMENTATION AND MONITORING TABLE & FUNDING MATRIX

The Implementation and Monitoring Table and Funding Matrix are included as separate files.

APPENDIX F: CAP CONSISTENCY CHECKLIST

Senate Bill 97, which was passed in 2007, required the analysis of GHG emissions as a part of the CEQA process. In response to SB 97, the Governor's Office of Planning and Research developed, and the California Natural Resources Agency adopted, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those amendments became effective on March 18, 2010. Amendments were finalized in 2018.[76]

Lead agencies may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, a long-range development plan, or a separate plan to reduce GHG emissions, such as a Climate Action Plan. Project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review, provided that the plan fulfills the requirements established in Section 15183.5.[77]

Because this CAP was developed in accordance with the requirements in Section 15183.5, project consistency with the CAP is adequate to demonstrate that GHG emissions at the project level are not cumulatively significant under CEQA. The CAP consistency checklist is a tool for developers to show that projects are consistent with the Climate Action Plan. This checklist is part of the CAP implementation and monitoring plan, and progress reported herein will be tracked as part of overall CAP progress. If a project design is consistent with all required elements of the checklist, the project can show that it is consistent with the climate action plan and thus the emissions it generates are not cumulatively considerable. If the project design does not include all required elements of the checklist, the project is not consistent with the climate action plan and thus the emissions it generates are cumulatively considerable. This checklist is part of the CAP implementation and monitoring plan and progress reported will be tracked as part of overall CAP progress.

The CAP consistency checklist will require updating as new CAP goals, strategies, objectives, and implementation actions are adopted. The Checklist may also need updating as other local, state, and federal policies take effect.

This checklist is included as a separate file. [CAP Consistency Checklist.xlsx]

[76] Governor's Office of Planning and Research. 2021. "CEQA and Climate Change." https://opr.ca.gov/ceqa/climate-change.html Accessed 3-8-21.

[77] California Code of Regulations. 2010. § 15183.5. Tiering and Streamlining the Analysis of Greenhouse Gas Emissions.

APPENDIX G: COUNTY-WIDE 2015 EMISSIONS INVENTORY REPORT

INTRODUCTION

GHG emissions inventories are vital to any climate action plan for two key reasons: State law and regulations require climate action plans to select GHG emissions targets that are a set reduction against a given inventory baseline and identifying the sources of emissions is integral to effectively selecting the most effective suite of GHG emissions reductions measures.

The State has established its own GHG reduction goals: 20% below 1990 levels by 2020, 40% below 1990 levels by 2030, and net-zero emissions by 2045. Local governments who develop climate action plans are not required to choose a 1990 baseline; in fact, professional guidance discourages the use of 1990 baselines due to the limited availability of data and the questionable integrity of 1990 data that does exist (ICLEI, personal communication).

Humboldt County has established a goal of reducing GHG emissions by 40% from 2015 by 2030. This target is recommended to keep pace with guidance from the International Panel on Climate Change and the State of California's aggressive carbon neutrality goals. Additionally, this target is non-inclusive of industrial point sources. In other words, the 1990 and 2015 inventories used for target-setting include all County-Wide emissions besides those coming from industrial point sources. Humboldt County jurisdictions do not have the authority or ability to control industrial point sources; instead, permitting and regulating industrial point source emissions is within the State and Air Quality Management Districts' purview. The Climate Action Plan only represents actions that can be adopted, implemented, and therefore controlled by Humboldt County local governments.

HUMBOLDT COUNTY 2015 GHG INVENTORY METHODOLOGY

As mentioned previously, the first step toward achieving tangible GHG emissions reductions requires identifying baseline emissions levels, sources, and activities generating emissions in the community. The Humboldt County 2015 inventory, also referred to as the "County-wide inventory" represents the sum of inventoried emissions from each Humboldt County jurisdiction: City of Arcata, the City of Blue Lake, City of Eureka, City of Ferndale, City of Fortuna, City of Rio Dell, City of Trinidad, and the County of Humboldt (a.k.a. unincorporated Humboldt County). A full inventory was completed for each jurisdiction and is available online. A separate government operations inventory was not completed for each of the jurisdictions; however, government operations emissions are a subset of the comprehensive community inventoried emissions.

As local governments have continued to join the climate action movement, the need for a standardized approach to quantify GHG emissions has proven essential. This inventory uses the approach and methods provided by the Community GHG Emissions Protocol ("Community Protocol").

COMMUNITY EMISSIONS PROTOCOL

Version 1.0 of the Community Protocol was released by ICLEI in October 2012 and represented a national standard in guidance to help U.S. local governments develop effective community GHG emissions inventories. Version 1.1 was released in 2013, and Version 1.2--the most recent version-- was released in

2019. This protocol establishes 1) reporting requirements for all community GHG emissions inventories; 2) provides detailed accounting guidance for quantifying GHG emissions associated with a range of emission sources and community activities; 3) provides a number of optional reporting frameworks to help local governments customize their community GHG emissions inventory reports based on their local goals and capacities. The State of California Governor's Office of Planning and Research recommends that California local governments follow the Community Protocol when undertaking their GHG emissions inventories. The 2015 inventories were calculated using Version 1.2 of the Community Protocol.

Overview of Emissions Sources and Activities

Communities contribute to GHG emissions in many ways. Two categorizations of emissions are used in the community inventory:

1) GHG emissions that are produced by "sources" located within the community boundary, and

2) GHG emissions produced as a consequence of community "activities".

Emissions sources and activities are color-coded as shown in the following table.

Source	Activity
Any physical process inside the jurisdictional boundary that releases GHG emissions into the atmosphere	The use of energy, materials, and/or services by members of the community that result in the creation of GHG emissions.

By reporting on both GHG emissions "sources" and "activities", local governments can develop and promote a deeper understanding of GHG emissions associated with their communities. A purely source-based emissions inventory could be summed to estimate total emissions released within the community's jurisdictional boundary.

In contrast, a purely activity-based emissions inventory could provide perspective on the efficiency of the community, even when the associated emissions occur outside the jurisdictional boundary. The division of emissions into sources and activities replaces the "scopes framework" used in government operations inventories, which does not have a clear definition for application to community inventories.

Community Emissions Inventory Results

Emissions from Sources and Activities Under Significant Local Government Influence

This framework emphasizes policy relevance, highlighting a set of emission sources and activities that Humboldt County has the greatest opportunity to address. This includes the five Basic Emissions Generating Activities required by the Community Protocol, plus additional sources and activities:

- Electricity Consumption
- Stationary Combustion
- Mobile Combustion
- Solid Waste Generation
- Wastewater Treatment
- Potable Water Consumption
- Refrigerant Leakage

- Industrial Point Sources

The total 2015 emissions from all these sectors are estimated at 1,524,254 metric tons of CO_2e and are summarized in Figure 27. Details regarding each sector are provided in the following sections.

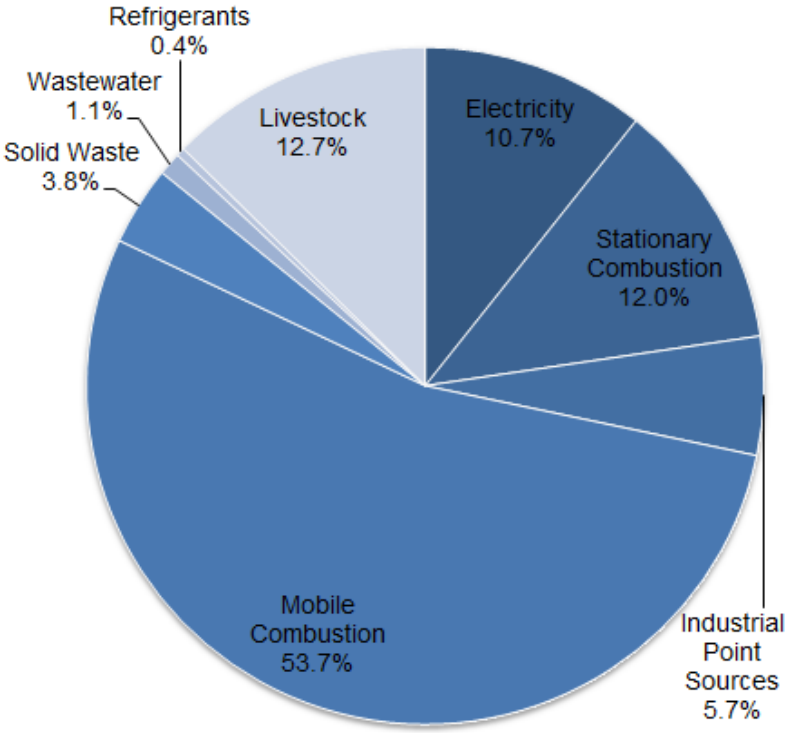


Figure 27. County-Wide 2015 emissions breakdown by various sectors (Source: RCEA 2015 Humboldt County GHG Emissions Inventory)

ACTIVITY: ELECTRICITY CONSUMPTION

Electricity consumption contributes to GHG emissions indirectly, although it is considered within significant local government influence. Emissions are generated at generation plants, usually through the combustion of fuels which generate heat that is then used to drive steam engines. Alternative generation sources, such as hydropower and wind, are also used and are considered to be free of emissions. Emissions factors for the 2015 inventory were sourced from Pacific Gas & Electric (PG&E) and reflect the average mix of electricity generation procured for the inventory year. The results are shown in Table 9. Future GHG inventories will use emissions factors provided by our County's CCE program.

Electricity Consumption				
Activity: Electricity Consumption	Annual Quantity of Electricity (kWh)		Emissions Factor (annual metric tons CO2e / kWh)	Annual Emissions (metric tons CO2e)
Residential	Consumption:	391,314,645	0.0001844	72,152
	T&D Losses:	18,743,971	0.0002588	4,851
	Total:	**410,058,616**	**0.0001878**	**77,003**
Commercial	Consumption:	371,732,425	0.0001844	68,542
	DA:	47,180,798	0.0002588	12,211
	T&D Losses:	20,065,943	0.0002588	5,194
	Total:	**438,979,166**	**0.0001958**	**85,947**
All Sectors	Consumption:	763,047,070	0.0001844	140,694
	DA:	47,180,798	0.0002588	12,211
	T&D Losses:	20,065,943	0.0005006	10,045
	Total:	**830293811.4**	**0.0001963**	**162,950**

Table 9. Annual emissions associated with electricity consumption within Humboldt County.

SOURCE: STATIONARY COMBUSTION

Stationary combustion is associated with the combustion of fuels at a specific location. This includes the combustion of natural gas, propane, firewood, etc. The vast majority of these fuels are combusted for cooking and space heating. Emissions associated with the combustion of these fuels can be considered either a source or an activity since the activity usually occurs at the point of combustion. This inventory considers this sector an emissions source. Table 5 shows the results.

Stationary Combustion - Natural Gas Aligns with CEC Energy Almanac				
Source: Stationary Combustion	Annual Quantity of Fuel Consumed		Emissions Factor (annual metric tons CO2e / unit)	Annual Emissions (metric tons CO2e)
Residential	Natural Gas (therm)	17,460,271	0.0053070	92,662
	Propane (gal.)	4,211,147	0.0056855	23,942
	Fuel Wood (MMBTU)	475,956	0.0099610	4,741
	Total	---	---	**121,346**
Commercial	Natural Gas (therm)	11,473,400	0.0053070	60,890
	Propane (gal.)	0	---	0
	Fuel Wood (MMBTU)	0	---	0
	Total	---	---	**60,890**
All Sectors	Natural Gas (therm)	28,933,671	0.0053070	153,552
	Propane (gal.)	4,211,147	0.0056855	23,942
	Fuel Wood (MMBTU)	475,956	0.0099610	4,741
	Total	---	---	**182,236**

Table 10. Annual stationary combustion-related emissions within Humboldt County

SOURCE: MOBILE COMBUSTION

Mobile emissions are associated with mobile vehicles and equipment. This includes passenger vehicles, freight and service trucks, off-road vehicles, and construction equipment, to name a few. Emissions results are shown in Table 11.

These emissions are considered a source due to the inventory methodology used. Each jurisdiction is assigned mobile emissions based on whether the emissions occur within their respective jurisdictional boundaries. For example, under this method, a resident of Arcata that commutes between Arcata and Fortuna only contributes emissions to the City for the miles traveled within the jurisdictional boundaries. For the County-Wide inventory, each jurisdictions' total emissions were summed.

The emissions factors used are those associated with two computer models created by the California Air Resources Board (CARB): EMFAC2014 and OFFROAD2007. These models use a wide range of emissions that depend on numerous factors such as vehicle age and type, fuel type, temperature, and humidity.

Mobile Combustion				
Source: Mobile Combustion	Annual Quantity of Fuel Consumed (gallons)		Emissions Factor	Annual Emissions (metric tons CO2e)
On-Road Passenger Vehicles	Gasoline	45,752,556	0.00848425	388,176
	Diesel	608,186	0.010170464	6,186
	LPG / CNG	Not Modeled	---	---
	Total	---	---	**394,362**
Retail and Commercial Trucks	Gasoline	3,849,767	0.008498958	32,719
	Diesel	24,825,230	0.010171916	252,520
	LPG / CNG	Not Modeled	---	---
	Total	---	---	**285,239**
Off-Road Vehicles and Equipment (excluding marine and air travel)	Gasoline	1,581,672	0.006209207	9,821
	Diesel	11,516,922	0.009984192	114,987
	LPG / CNG	399,683	0.006131472	2,451
	Total	**13,498,277**	---	**127,259**
Airport Ground Support Equipment	Gasoline	6,788	0.026068921	177
	Diesel	7,444	0.025538198	190
	LPG / CNG	939	0.016481395	15
	Total	**15,171**	---	**383**
All Sectors	Gasoline	51,190,783	Combined	430,893
	Diesel	36,957,782	Combined	373,883
	LPG / CNG	400,622	Combined	2,466
	Total	---	---	**807,242**

Table 11. Annual mobile combustion emissions in Humboldt County.

Additional details regarding the primary contributors to on-road vehicle emissions are shown in Figure 28. Results are disaggregated by vehicle type and fuel. This demonstrates that gasoline-fueled passenger vehicles and light-duty trucks are the primary contributors to emissions in this sector. Note, however, that this is not the case for the off-road vehicle sector where diesel is the dominant fuel.

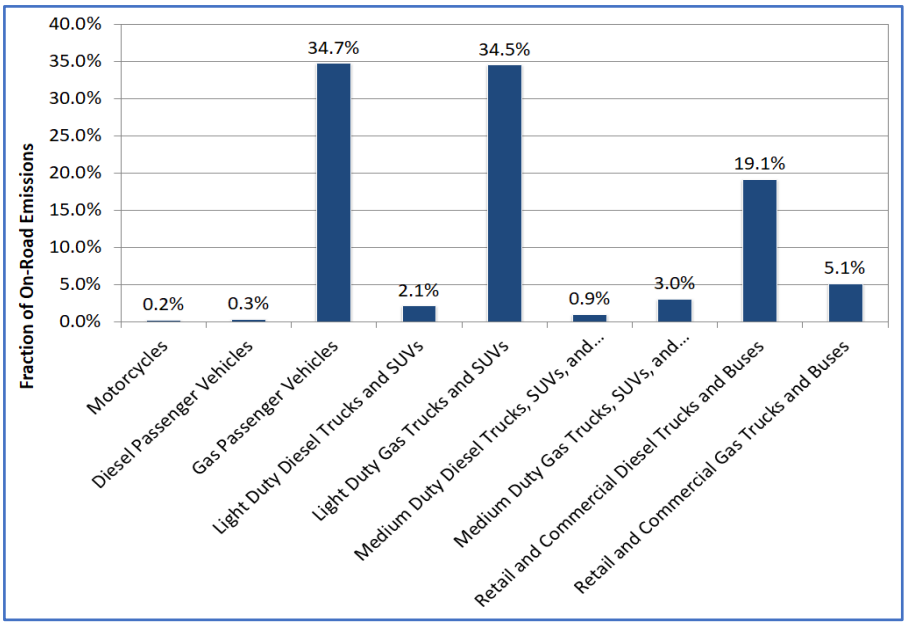


Figure 28. Total metric tons Of CO_2e by vehicle lass and fuel type

Activity: Solid Waste Generation

Emissions are generated by the transportation, processing, and decomposition of solid waste. This inventory estimates the emissions associated with all three.

Emissions from the transportation of waste out of the County from the Humboldt Waste Management Authority (HWMA) distribution center are included as an information item as they should be reasonably modeled within the Mobile Combustion sector (see Section 3.2.3). Note that emissions from self-hauling and from trash trucks are also assumed to be reasonably modeled within the Mobile Combustion sector but are not estimated separately due to lack of information.

Waste processing emissions associated with onsite landfill operations are also included as an information item. Different emissions factors are used based on whether the onsite equipment is fueled by either diesel or compressed natural gas (CNG). All landfills that are used by HWMA utilize diesel equipment with the exception of the Altamont Landfill in Livermore, CA. Only a small fraction of waste is trucked to this site and therefore the large majority of process emissions are associated with diesel equipment.

Emissions from the decomposition of waste are associated with paper, food, plant, animal, wood, and textile wastes. Appropriate emissions factors are used for each type of waste. Results of all emissions are shown in Table 12.

Solid Waste Generation

	Activity: Solid Waste Generation	Quantity of Waste Generated (wet short ton)		Emissions Factor (metric tons CO2e / short ton)	Emissions (metric tons CO2e)
	Paper Waste	Waste Decomposition	19,395	Numerous. Refer to Methodology Report.	13,284
	Food Waste		20,965		10,302
	Plant Waste		13,115		3,624
	Wood / Textile Waste		8,774		3,376
	Other Waste		30,108		0
	All Sectors	Waste Decomposition	92,356	Numerous. Refer to Methodology Report.	30,586
Info Item	Additional Emissions Sources	Landfill Process Equipment	92,356	Numerous. Refer to Methodology Report.	1,514
		On-Road Transportation of Waste	92,356		5,914

Table12. Annual emissions associated with the transportation, processing, and decomposition of solid waste.

SOURCE AND ACTIVITY: WASTEWATER TREATMENT

GHGs are emitted from processing as well as the energy consumed for processing. Both the central treatment plant and septic systems are considered. Process emissions are considered an emissions source from the central plant.

Central treatment plant process emissions are associated with methane release from anaerobic activity and the creation of nitrous oxide during the conversion of ammonia. Septic system process emissions are associated with methane release from anaerobic conditions. Central treatment plant energy consumption Emissions results are shown in Table 13.

Wastewater Treatment

Source: Wastewater Treatment	Indicators		Emissions Factor (metric tons CO2e / unit)	Emissions (metric tons CO2e)
Central Treatment Process Emissions	Average influent BOD5 (kg / day)	#VALUE!	Numerous. Refer to Methodology Report.	12,385
	Average daily volume of wastewater (gallons)	18,690,116		
	Population served	92,717		
Fugitive Emissions From Septic	Estimated population served	36,031	0.108 metric tons CO2e per person per year	4,378
	Estimated number of permitted septic systems	16,500		
All Sectors	---	---	---	16,762

Table 13. Annual emissions associated with the processing of wastewater from both the central treatment plant and septic systems within the County.

Source and Activity: Wastewater Treatment

The Community Protocol requires reporting of emissions associated with potable water consumption. This sector is highlighted to emphasize the impact that water saving measures can have on reducing a community's emissions. Results of the estimated emissions associated with pumping and treatment of potable water are shown in Table 14.

This emissions source is already accounted for in the Electricity Consumption and Stationary Combustion sectors, so should not be added to these sectors. Instead, this emissions activity should be considered as an information item to guide policy decisions.

Potable Water

Activity: Potable Water Consumption		Indicators		Emissions Factor (metric tons CO2e / million gallons)	Emissions (metric tons CO2e)
Info Item	Pumping and Treatment Energy Consumption	Population served	131,557	0.1710	641
		Gallons of water consumed (MG)	3,752		
		Energy Intensity (MWh/MG)	0.8486		

Table 14. Annual emissions associated with pumping and treatment of potable water served to the City of Arcata.

Source: Fugitive Leakage of Refrigerants

Leaked refrigerants can be a significant source of GHGs as many refrigerants have extremely large global warming potential factors. Even though the quantity of leaked refrigerants is generally small, their large global warming potential makes their relative impact significant. This inventory estimates the emissions associated with stationary and mobile refrigeration equipment operated within industrial and commercial sectors. Vehicle air conditioning units are not tracked given the difficulty of the task and the lack of local government influence over the emissions source. The estimated emissions associated with leaked refrigerants are shown in Table 15.

Refrigerant Emissions

Source: Fugitive Refrigerant Emissions	Number of Refrigeration Units		Emissions Factor (metric tons CO2e / refrigeration unit)	Emissions (metric tons CO2e)
Stationary Refrigeration Equipment	Size 50 - 200 lbs	137	13.97	1,914
	Size 200 - 2000 lbs	59	55.88	3,297
	Size >2000 lbs	0	---	0
	Total	**196**	**---**	**5,211**
Transport Refrigeration Units	3 lbs	650	1.511	982
Mobile A/C Units	Not Estimated	---	---	Not Estimated
All Sectors	**All Sizes**	**846**	**Various**	**6,193**

Table 15. Estimated annual emissions associated with the leakage of refrigerants from commercial and industrial stationary and mobile equipment.

Data on stationary refrigeration units are obtained from the North Coast Unified Air Quality Management District (NCUAQMD). The size and leakage rate of these units is roughly approximated.

Transportation units refer to mobile refrigeration units such as those carried by food delivery trucks. This emissions sector is a rough estimate modeled by the OFFROAD2007 emissions model created by the California Air Resources Board (CARB).

Source: Industrial Point Sources

As required by the State, industrial point sources are tracked by the NCUAQMD given their large contribution to overall emissions. Estimated emissions from all industrial sources within the County are included. In addition, criteria pollutants associated with environmental and health concerns are also included for information purposes. The results are shown in Table 16.

Industrial Point Sources

Source: Industrial Point Sources	Quantity of GHGs and Other Criteria Pollutants (metric tons)		Emissions Factor (metric tons CO2e / unit)	Emissions (metric tons CO2e)
Sources Tracked by the NCUAQMD	CO2	81,930	1	81,930
	CH4	14	28	405
	N2O	2	265	473
	CO	0	---	---
	NOx	0	---	---
	SOx	0	---	---
	PM	0	---	---
	TOG	0	---	---
	Total CO2 + CH4 + N2O	**---**	**---**	**82,808**

Table 16. GHG and criteria pollutant emissions estimates from industrial point sources.

Activity: Air Travel

Emissions associated with commercial and private airplane flights are estimated using total fuel sales data obtained from the County Public Works Department of Aviation/Airports. This department tracks all fuels sales for all airports within the County. There was no ridership data at the time the 2015 inventory was calculated.

Table 17: Estimated emissions from fuel purchased for air travel in Humboldt County.

Air Travel

Activity: Air Travel Emissions	Quantity of Fuel Consumed Countywide (gallons)		Emissions Factor (metric tons CO2e / gallon)	Fraction Allocated To Jurisdiction	Emissions (metric tons CO2e)
Commercial and Private Jets	Jet Fuel	309,326	0.0096370	100.00%	2,981
Other Private Small Airplanes	AVGAS (100LL)	154,813	0.0083682	100.00%	1,296

Source: Marine Vessels

This source includes emissions associated with marine freight and passenger vessels. Freight carrying vessels may include ships, barges, tugboats, towboats, fishing vessels, patrol boats, and industrial boats (such as drilling boats and dredges). Passenger carrying vessels, in Humboldt County's case, consist of recreational boats. This source is only likely to be significant if an operating port exists within the community (ICLEI Community Protocol)

Marine vessel activity is largely beyond the direct control of a community, especially international cargo, which is part of a long-distance supply chain driven by national and international economic activity. A community may, however, be able to influence marine vessel emissions by working with the port to

implement strategies such as ship hoteling (providing electric power while in port so that the ship's engines do not need to run) or implementing reduced-speed zones in waters adjacent to the community. These types of strategies are typically implemented to reduce air pollution, but they can have GHG benefits as well. Some marine vessels may be owned or regulated by a local agency and improvements such as purchase of newer, cleaner vessels may be implemented directly (ICLEI Community Protocol).

Table 18: Estimated emissions from marine vessel Countywide fuel consumption.

Marine Vessels

Source: Marine Vessel Emissions	Quantity of Fuel Consumed Countywide (gallons)		Emissions Factor (metric tons CO2e / gallon)	Emissions (metric tons CO2e)
Pleasure Craft	Gasoline	308,662	0.0077557	2,394
	Diesel	11	0.0098595	0.11
	Total	**308,673**		**2,394**
Commercial and Harbor Vessels	Diesel	Unknown	OFFROAD2007	2,727
Barges and Dredges	Diesel	Unknown	OFFROAD2007	2,572
All Sectors	**Gasoline and Diesel**	**Unknown**	---	**7,694**

Upstream: Marine Vessel Emissions	Quantity of Fuel Consumed (gallons)		Emissions Factor (metric tons CO2e / gallon)	Emissions (metric tons CO2e)
All Vessels	Gasoline	277,796	0.0020870	580
	Ethanol	30,866	0.0058550	181
	Diesel	Unknown	---	Unknown

SOURCE: LIVESTOCK

An estimate of emissions from livestock was made by considering both emissions of methane and nitrous oxide from live animals and from the decomposition of manure.

Table 19. Estimated emissions from livestock and manure within the County.

Livestock

Source: Livestock	Number of Animals and Amount of Manure		Emissions Factor (metric tons CO2e / unit)	Emissions (metric tons CO2e)
Methane and Nitrous Oxide Emissions From Animals	Number of Beef Cattle + Calves	54,000	2.4259473	131,001
	Number of Dairy Cows + Calves	14,248	3.2386893	46,145
	Number of Sheep + Lamb	3,000	0.3160891	948
	Total	**71,248**	**2.4996388**	**178,094**
Methane and Nitrous Oxide Emissions From Manure	Metric Tons of Manure from Beef Cattle + Calves	68,968	0.1513300	14,825
	Metric Tons of Manure from Dairy Cows + Calves	28,960		
	Metric Tons of Manure from Sheep + Lamb	39		
All Sectors	**Beef Cattle, Dairy Cows, Calves, Sheep, Lamb**	**---**	**---**	**192,920**

SOURCE: LANDFILLS

GHG emissions are associated with the decomposition of solid waste under anaerobic conditions, releasing methane gas into the atmosphere. The Cummins Road Landfill was slated for closure in 2000 and has received any solid waste since 2005. A proposal for post-closure processes (including capping) was approved in 2012. Although no longer active, the waste in this landfill is still decomposing and releasing methane.

Landfills

Source: Landfills	Quantity of Landfill Gas Produced		Emissions Factor (metric tons CO2e / unit)	Emissions (metric tons CO2e)
Cummins Road Landfill	Metric Tons of Methane Produced	967.1071429	CO2e value from ghgdata.epa.gov	27,079

Table 20. Emissions from decomposition of Cummins Road Landfill

DRAFT SPECIAL MEETING MINUTES
Fortuna City Council
Monday, May 2, 2022 at 4:30 P.M.
621 11th Street, Fortuna

I. CALL TO ORDER / FLAG SALUTE / ROLL CALL

Mayor Long called the meeting to order at 4:30 p.m., and led the flag salute.

Council	**Staff**
Council Member Mike Johnson	City Manager Merritt Perry
Council Member Mike Losey	Deputy City Clerk, Buffy Gray
Council Member Jeremy Stanfield	
Mayor Pro Tem Tami Trent	
Mayor Sue Long	

II. ORAL COMMENTS FROM THE PUBLIC

There being no public comments, Mayor Long closed the public comment section.

III. DISCUSSION ITEMS

A. Mandatory Organic Waste Disposal Ordinance Review

City Manager Merritt Perry provided a staff report and presentation on a draft ordinance that would establish mandatory organic waste disposal reduction.

City Attorney Gary Bell was present via Zoom; he spoke on the draft ordinance and answered questions from Council and the public.

Recology representative Linda Wise was present to answer questions from the Council and the public in regards to Recology's part in the organic waste disposal reduction.

PUBLIC COMMENT:

Neil Palmer, resident of Fortuna spoke about being a self-hauler and asked if there would be an exemption for self-haulers. He explained he currently does not pay for trash service. He also asked about garden compost bins.

Francis Rizza, resident of Fortuna asked how the City would enforce the requirements on self-haulers.

Jim Rizza, resident of Fortuna asked if multiple people could share one bin and mentioned sharing a bin may be good for the elderly community.

There being no additional public comments, Mayor Long closed this public comment section.

Council directed staff to finalize the draft ordinance and schedule the first reading for May 16, 2022.

VI. ADJOURN

Mayor Pro Tem Trent moved, seconded by Council Member Johnson to adjourn the meeting at 5:47 p.m. Motion carried 5/0.

Submitted by,
Buffy Gray, Deputy City Clerk

Regular Meeting Agenda

Minutes

Monday, May 2, 2022 at 6:00 pm

621 11th Street, Fortuna CA

- We May Disagree, But We Will Be Respectful of One Another
- All Comments Will Be Directed to the Issue at Hand, and Addressed to the City Council
- Personal Attacks are Unacceptable
- The City Council May Take Action on any Item on this Agenda.

1. **CALL TO ORDER / FLAG SALUTE / ROLL CALL**

Minutes:
Mayor Long called the meeting to order at 6:00 pm and led the flag

2. **PRESENTATIONS / PROCLAMATIONS/NEW EMPLOYEE INTRODUCTIONS**
   a. **Recognition of Driver of the Year 2022 Ricardo Arrendondo of Recology**

Minutes:
Mayor Long presented the Driver of the Year 2022 Recognition Certificate to Ricardo Arrendondo of Recology.

   b. **National Police Week Proclamation**

Minutes:
Council Member Losey presented the National Police Week Proclamation to Lieutenant Matt Eberhardt.

   c. **53rd Annual Municipal Clerks Week Proclamation**

Minutes:
Mayor Long presented the Municipal Clerks Proclamation to Fortuna' s Deputy City Clerk Buffy Gray. Mayor Long also read an acceptance and appreciation letter from City Clerk Siana Emmons.

   d. **National Bike Month Proclamation**

Minutes:
Council Member Stanfield presented the National Bike Month Proclamation to Fortuna Middle School students, Grace Olson, mason Cahill, and Chloe Doener.

Director of Parks & Recreation Cameron Mull spoke on the upcoming Bike Rodeo event that will be held on Saturday, May 14, 2022 at Newburg Park.

e. **"Go Slow Watch the Road" Proclamation**

Minutes:
Mayor Long presented the Go Slow Watch the Road Proclamation to City Engineer Brendan Byrd on behalf of the Humboldt County Traffic Safety Task Force.

f. **Kiwanis 80th Anniversary Proclamation**

Minutes:
Council Member Johnson presented the Kiwanis Proclamation to the president of the Fortuna Kiwanis Club Ray Lovell.

3. **ORAL COMMENTS FROM THE PUBLIC**

Minutes:
There being no comments, Mayor Long closed the oral comment section.

4. **CONSENT CALENDAR**

Minutes:
PUBLIC COMMENTS: There being no public comments, Mayor Long closed the public comment section. CITY COUNCIL ACTION: Mayor Pro Tem Trent pulled items c and e. Item c, she asked if the field could be used if the girls fastpitch team wasn't using it? Director of Parks & Recreation Cameron Mull explained that when the field was not in use by the girls fastpitch team anyone else could use the field. Council Member Losey pointed out a typo in the MOU to be corrected. Mayor Long commented on the section in the MOU regarding food. Director of Parks & Recreation Cameron Mull explained they would like to see healthy alternatives. Item e, Mayor Pro Tem Trent explained that the Board of Supervisors approved the allocation of funds for the Drug Task Force Officer. Council Member Losey moved, Seconded by Council Member Johnson to approve Consent Calendar items a-e. Voice vote. AYES: Council Member Johnson, Losey, Stanfield, Mayor Pro Tem Trent, Mayor Long NOES: None ABSTAIN: None ABSENT: None MOTION CARRIED: 5/0

a. **City Council Minutes – April 18 , 2021 (Regular Meeting)**
b. **Report of Disbursements**
c. **Approve Memorandum of Understanding between City of Fortuna and Mad River Girls Fastpitch Softball Association for Park Facility Use**
d. **Award Professional Service Contract to GHD for the 12th Street Storm Water Enhancement Project**
e. **Approve the Updated Humboldt County Drug Task Force Memorandum of Understanding Between Participating Agencies**

5. **CITY COUNCIL BUSINESS**

a. **Second Reading: Use of Military Weapons Policy**

Minutes:

STAFF REPORT: City Attorney Ryan Plotz provided a staff report on approving an ordinance to add a military equipment use policy. PUBLIC COMMENTS: There being no public comments, Mayor Long closed the public comment section. CITY COUNCIL ACTION: Council Member Johnson moved, seconded by Council Member Losey to conduct the second reading and adopt Ordinance 2022-753, by title only. Ordinance 2022-753, An Ordinance of the City Council of the City of Fortuna, California Amending Title 2 – Administration And Personnel Of The Fortuna Municipal Code By Adding Section 2.10.150 – Military Equipment, Approving A Military Use Policy, and Determining The Ordinance To Be Exempt From CEQA. AYES: Council Members Johnson, Losey, Stanfield, Mayor Pro Tem Trent, Mayor Long NOES: None ABSTAIN: None ABSENT: None MOTION CARRIED 5/0

b. First Reading: Zoning Map Amendment

Minutes:
STAFF REPORT: Deputy Director of Community Development Liz Shorey provided a staff report on amendments to the General Plan Land Use Map. PUBLIC COMMENTS: Walt Wilson, resident of Fortuna asked if it was originally a care home and if the zoning has changed. There being no additional public comments, Mayor Long closed the public comment section. CITY COUNCIL ACTION: Council Member Losey moved, seconded by Council Member Stanfield to amend the General Plan Land Use Map from Residential Low (RL) to Residential Medium (RM) by adopting Resolution 2022-13, A Resolution of the City Council of the City of Fortuna Amending the General Plan Land Use Map from Residential Low (RL) to Residential Medium (R-M). AYES: Council Members Johnson, Losey, Stanfield, Mayor Pro Tem Trent, Mayor Long NOES: None ABSTAIN: None ABSENT: None MOTION CARRIED 5/0
CITY COUNCIL ACTION: Council Member Stanfield moved, seconded by Council Member Losey to introduce and conduct first reading, by title only, of Ordinance No. 2022-754 and continue the public hearing to May 16, 2022. Ordinance 2022-754, An Ordinance of the City Council of the City of Fortuna Amending the Fortuna Zoning Map from Residential Single Family (R-1-6) to Residential Multifamily (R-M). AYES: Council Members Johnson, Losey, Stanfield, Mayor Pro Tem Trent, Mayor Long NOES: None ABSTAIN: None ABSENT: None MOTION CARRIED 5/0

6. CITY MANAGER’S REPORT

Minutes:
City Manager Merritt Perry provided a verbal report.

7. FUTURE AGENDA ITEMS

Minutes:
None at this time.

8. **CITY COUNCIL REPORTS AND COMMENTS**
    a. **Council Member Mike Johnson**
    b. **Council Member Mike Losey**
    c. **Council Member Jeremy Stanfield**
    d. **Mayor Pro Tem Tami Trent**
    e. **Mayor Sue Long**
9. **ADJOURN TO CLOSED SESSION**

Minutes:
PUBLIC COMMENTS: There being no public comments, Mayor Long closed the public comment section. CITY COUNCIL ACTION: Mayor Pro Tem Trent moved, seconded by Council Member Johnson to adjourn to closed session at 6:57 p.m. MOTION CARRIED 5/0

    a. **CONFERENCE WITH LEGAL COUNSEL--ANTICIPATED LITIGATION Initiation of litigation pursuant to paragraph (4) of subdivision (d) of Section 54956.9: One case**
    b. **CONFERENCE WITH REAL PROPERTY NEGOTIATOR pursuant to Section 54956.8 of the Government Code; Vacant Land along Eel River and 1320 Riverwalk Drive; Negotiating Parties: City Manager Merritt Perry for the City of Fortuna and Land/Emke as Negotiating Parties; Under Negotiation: Price and Terms of payment.**

10. **REPORT OUT AND ADJOURN**

Minutes:
REPORT OUT: Direction to staff for items a & b. CITY COUNCIL ACTION: Mayor Pro Tem Trent moved, seconded by Council Member Johnson to adjourn at 8:00 p.m. MOTION CARRIED 5/0

Contact: Siana L. Emmons, City Clerk (semmons@ci.fortuna.ca.us 707-725-1409)

STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Siana L. Emmons, City Clerk

THROUGH: Merritt Perry, City Manager

SUBJECT: **Administrative Department Monthly Report**

STAFF RECOMMENDATION:

Receive report as an informational item.

EXECUTIVE SUMMARY:

The Administration Department monthly report encompasses the following divisions:

CITY ATTORNEY

The City Attorney billing was 12.8 hours for the month of April 2022 for the Mitchell Law Firm, LLC. Project support for this month included agenda and staff report review, contract review, and various email and telephone calls.

CITY CLERK DIVISION

For the month of April, the Clerk's Office prepared and published two agendas for Regular City Council meetings. The Clerk's Office also posted agenda's for the Rohner Community Recreation Parks District Board and the Parks & Recreation Commission.

City Council Meetings

Council Meeting Date	**Agenda Items**
April 4, 2022 Regular Meeting	11
April 18, 2022 Regular Meeting	14
Totals	**25**

City Clerk's Office Key Duties	**April**
Public Records Act Requests	4
General Information Requests	25 – 30 per day, average
Ordinances	0
Resolutions	3
Minutes Prepared	3
Notary Services Provided	1
Claims for Damages Filed	1

FPPC Filings:	0
Legal Publications	0
Notices Posted (Public Hearing, Agenda, Ordinance, etc.)	1

Clerk staff is participating in the City Clerk Association of California's (CCAC's) Educational Committee to aid in restructuring the CCAC's educational offerings. The Committee is working in an advisory capacity to the CCAC Board with the goal of circulating a Request for Proposal's to California Universities that may be interested in collaborating with CCAC to develop a new institute for Clerks working to achieve Certified Municipal Clerk (CMC) and Master Municipal Clerk (MMC) designations.

The City Clerk's office has been working on updating election information on the City's website as well as providing information for potential candidates. The nomination period for those interested in running for a City Council seat will be open from July 18, 2022 at 8:00 a.m. through August 12, 2022 at 5:00 p.m. There will be three Council seats open for election in November. Any members of the public who are interested in running for Council can obtain basic information on the City's website or contact the Clerk's Office directly at 707-725-7600 or email the City Clerk at semmons@ci.fortuna.ca.us.

TecHome Innovations and Burgess Electric began Council Chamber upgrades on May 6th. Once the upgrades are complete, the Chambers will have the technical ability to host fully interactive hybrid meetings, which will allow greater access to public meetings as well as improved monitors, displays and presentations for Council, public and staff.

RISK MANAGEMENT / HUMAN RESOURCES DIVISION

Risk Management

There were two new Worker's Compensation claims and no new liability/tort claims filed as of April 1, 2022. Risk staff worked diligently with George Hills and our risk pool to effectively close two claims over the last month and currently the City has one open tort claim that is progress.

Date of Claim	Type of Claim	Status
03/03/2021	Civil Claim	CLOSED
05/20/2021	Civil Claim	CLOSED
03/10/2022	Civil Claim	In progress

Human Resources

Human Resources Staff attended a training on April 28, 2022 hosted by Frasco, the company that provides the city's pre-employment background checks. The training was "Turn the Great Resignation into the Great Retention" and focused on how to leverage human resources data and information to attract and retain employees.

Staff continues to post timely and accurate recruitments, has been successful in attracting qualified candidates and has filled many of the previous vacancies. For more information about employment with the City of Fortuna, visit the City's website www.friendlyfortuna.com, send e-mail to the Deputy City Clerk at bgray@ci.fortuna.ca.us, or call 707-725-7600.

Current Recruitments:

Parks & Recreation Department:

Park Maintenance Worker I Part-time: Scott Rexford started Monday, May 2, 2022.

Conference Center Worker Part-time: Nicole Kent started May 4, 2022.

Bus Driver I Part-time: Candidate is currently in background.

Recreation Leader Part-time: Continuous recruitment

Police Department:

Police Dispatcher Full-time: Open until filled.

Police Officer Full-time: Open until filled.

Community Services Officer – Field CSO Part-time: Candidate currently in background.

Police Officer Trainee Full-time: Bryce Sancho started on April 28, 2022. One candidate is currently in background.

Public Works:

Utility Worker II/III Full-time: Closes May 6, 2022.

City Engineer Full-time: Closes May 6, 2022

Treatment Plant Operator OIT/I & II Full-time: Matthew Engleman started April 25, 2022.

INFORMATION TECHNOLOGY DIVISION

City Website Statistics (www.friendlyfortuna.com)

We encourage all citizens who are interested in receiving updates from the City to go on to the Fortuna's website and sign up for e-notifications! 2022 Election information will be coming to the City's website soon!

Anyone who would like to receive public notices from Public Works, Community Development/Planning, the Police Department or Citywide Press Releases, please visit the website at https://www.friendlyfortuna.com/enotify/index.php and sign up for e-notifications.

Computer/Network

IT staff worked in collaboration with Nylex to identify and dispose of a number or obsolete or damaged hardware to create more space and organization in the main City server room. Our department would like to give a big thanks to Rick Kern, Brett Wheeler and Tim Munsell, of the General Services Department for assisting with the disposal of all the e-waste, which can be time consuming and cumbersome.

Computer/Network

Nylex spent a total of 40.5 hours for the month of March working on various issues throughout the City network. April's hours will be on the June staff report. Nylex continues to maintain City networks, servers, hardware and software. The average time Nylex spends working for the City of Fortuna is 30 to 40 hours a month.

RECOMMENDED COUNCIL ACTION:

Receive Administration Division Monthly Report. Consent Agenda vote.

STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Liz Shorey, Deputy Director of Community Development

THROUGH: Merritt Perry, City Manager

SUBJECT: **Community Development Department Monthly Report for April 2022**

STAFF RECOMMENDATION:

Receive report as an informational item.

SIGNIFICANT ACTIVITIES:

- The Building Department's permit summary for April 2022 is attached.
- Planning Commission activity in April includes:
  - On 4/12/2022, approved a recommendation to the city council to amend the Fortuna Zoning Map from Residential Single Family (R-1-6) to Residential Multifamily (R-M), and the General Plan Land Use Map from Residential Low (RL) to Residential Medium (R-M)
  - Review of the 2021 Housing Element Annual Progress Report
- In-process long-range planning activities for Community Development include:
  - SB2 Planning Grant to implement housing element programs, including ADU, multifamily, design review standards, GIS mapping, improvement standards, and infrastructure. ADU standards were adopted by the City Council on November 1, 2021.
  - Mill District Specific Plan for infrastructure, design standards, and land use planning is underway, funded by HCD's LEAP grant and Headwaters grant.
  - Climate Action Plan--coordinating with other Humboldt County jurisdictions to create a plan that identifies baseline and reduction policies to reduce greenhouse gas emissions, and to streamline CEQA review of development review by tiering off the plan.
- Planning Permits Under Review:
  - Package Distribution Facility Conditional Use Permit; Location: 1470 Newburg Road; Applicant: 42 Eureka LP; Property Owner: Town of Scotia, LLC
  - Eel River Brewery Expansion Conditional Use Permit and Lot Line Adjustment; Location: 1777 Alamar Way; Applicant/Owner: Ted Vivatson
  - Gulliksen Drive Lot Line Adjustment; Location: 202 Gulliksen Drive; Applicant/Owner: Lee and Joan Woodcock
  - Ross Hill Road Merger; Location:1274 Ross Hill road; Applicant: LeRoy and Wanda Hoffman

- Power Tap Hydrogen Station Design Review; Location: 1791 Riverwalk Drive; Applicant: Power Tap; Owner: Humboldt Petroleum

- Subdivision Activity:
  - Adams Major Subdivision (6 multifamily lots/buildings; 36 units): Final map is under City review. Staff is working with applicant to complete steps to record the map (agreements, Council approval, fees, etc.).
  - Twin Creeks Planned Unit Development (59 Lots/Units): Phase 1 Final Map has been recorded.
  - Fitze Minor Subdivision 12th Street: Approved by Planning Commission; Applicant preparing parcel map for recordation.
  - Campbell Minor Subdivision (4 lots and a remainder; Berry Creek and Second Ave): Improvement plans approved.
  - Mildbrandt Minor Subdivision (2 Lots) Mylar ready for signatures, City working with applicant on requirements for recording.

CITY OF FORTUNA

BUILDING PERMIT SUMMARY

APRIL 2022

TYPE OF PERMIT ISSUED

RESIDENTIAL	NUMBER OF PERMITS	LIVING UNITS	VALUE / COST OF CONSTRUCTION	BUILDING PERMIT FEES	PUBLIC WORKS - SEWER & WATER FEES
SINGLE FAMILY RESIDENCES	4	5	$1,324,982.00	$23,480.05	$35,703.78
DUPLEX FAMILY RESIDENCES					
MULTI-FAMILY RESIDENCES					
MANUFACTURED RESIDENCES					
SECOND DWELLING UNIT (ATTACHED)					
SECOND DWELLING UNIT (DETACHED)					
ADDITIONS	2		$53,000.00	$741.73	$0.00
REMODELS	3		$39,500.00	$811.85	$0.00
GARAGES/CARPORTS					
ACCESSORY STRUCTURES	1		$500.00	$296.62	$0.00
COMMERCIAL					
NEW STRUCTURES					
ON-SITE IMPROVEMENTS/GRADING					
ADDITIONS					
TENANT IMPROVEMENT / REMODEL					
REPAIRS	1		$18,000.00	$301.16	$0.00
SIGNS					
OTHER PERMITS					
ELECTRICAL	6		$91,217.00	$1,911.44	$0.00
PLUMBING	2		$8,600.00	$256.12	$0.00
MECHANICAL	7		$68,880.00	$1,197.33	$0.00
ROOFING	2		$37,400.00	$341.93	$0.00
GRADING - *RESIDENTIAL*					
SIDING / WINDOWS					
DECK					
SOLAR PHOTO-VOLTAIC SYSTEM	9		$265,531.00	$7,423.51	$0.00
MISCELLANEOUS					
TOTAL THIS MONTH:	**37**	**5**	**$1,907,610.00**	**$36,761.74**	**$35,703.78**
	NUMBER OF PERMITS	LIVING UNITS	VALUE / COST OF CONSTRUCTION	BUILDING PERMIT FEES	PUBLIC WORKS - SEWER & WATER FEES
				Building Permit Fees. *CA State Seismic Fee* *CA State Housing Dev. Fee*	*Water Connection Fee* *Water Capitol Conn Fee* *Sewer Capitol Conn Fee* *Storm Drainage Fee,* *Traffic Impact Fee*
2022 - TOTAL YEAR TO DATE:	**117**	**9**	**$5,947,516.16**	**$91,433.53**	**$123,623.76**
	# OF PERMITS	LIVING UNITS	VALUE/COST OF CONST	BUILDING PERMIT FEES	PW - SEWER & WATER FEE

STAFF REPORT
City Council Consent Agenda Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Aaron Felmlee, Finance Director

THROUGH: Merritt Perry, City Manager

SUBJECT: Finance Department Monthly Report

STAFF RECOMMENDATION:

Receive report as an informational item.

EXECUTIVE SUMMARY:

Utility Billing – Past Due Collections:
Due to the Pandemic, the Finance Department had the difficult task of navigating a State issued moratorium placed on water utility providers that prevented service interruptions for delinquent customers. The moratorium lasted from October 2020 through January 2022 and made it virtually impossible for municipalities, such as the City of Fortuna, to have leverage collecting past due water and sewer payments from our customers.

In an effort to collect on past due payments I would like to acknowledge, Danielle, our Account Clerk III, who worked diligently each month to proactively make hundreds of calls, send countless emails, letters, and door hangers to customers in an ongoing effort to collect as much past due monies as possible. Our accounts receivable aging balances did increase during the moratorium as one would expect, however, while other cities in our county wrote off large unpaid balances, the City of Fortuna did not. As we continue to move towards normalcy, the Finance Department would like to share some important numbers as a representation of the hard work and dedication demonstrated by Finance staff over the past 18 months.

From January 2021 through April 2022, the City of Fortuna wrote off and sent to collections, a total of $15,046.68 which is an average of $940.42 per month or 0.17% of our average monthly total receivables. In addition, the aged receivables for accounts 60 days or more past due averaged $23,429.63 per month or 4.23% of the total aged receivables. The moratorium has expired and we reinstated service interruptions for non-paying customers. In March we had to suspend service for 39 customers or 0.85% of the total customers; all but one of these have had their service reinstated. In April we only had to suspend service for 17 customers or 0.37% of the total customers; all but one of these services have been reinstated.

It is not lost on our team that so many of our citizens have had to overcome hurdles during the pandemic, we have had to work hard to balance compassion and empathy for customers with financial insecurities and the best interests of our citizen base as a whole. It is important to

acknowledge that the monthly customer contact is beneficial to our customers as well. When payments are not made regularly, this may cause high and unmanageable balances for customers; although not required it is our goal to give everyone a call or an email as a friendly reminder if they are in danger of service interruption. For the most part, we have been able to work with our customers to meet their needs as well as those of the city. I am confident that Danielle will continue to keep our numbers low and manageable moving forward, her extra efforts have made a huge difference.

American Rescue Plan Act (ARPA) Reporting:

As has previously been presented to the City Council, the Coronavirus State and Local Fiscal Recovery Funds (SLFRF) program, a part of the American Rescue Plan, provided the City with $2,932,614 to be used on specified COVID-19 related expenses. As part of the City's eligibility to receive these funds the City is required to report project and expenditure reports to the Department of Treasury on an annual basis until funds have been expended.

The Department of Treasury released the project and expenditure report and associated reporting requirements on Friday, April 1. The requirement items include projects, obligations and expenditure data, and sub-award data, as well as certain required programmatic data. The City had until April 30 to complete and submit the report to the Department of the Treasure. Finance staff completed the submission of the report on April 22.

Measure E Update:

The Measure E committee met on April 20, 2022 at 5:30 pm. The primary purpose of this meeting was for the committee to approve a list of recommended projects to be funded by Measure E. The finalized list will be presented to the City Council at a special budget workshop on May 16 by the Measure E committee chair.

List of Measure E items funded this month:

- (2) Police Detective Positions
- Community Services Officer Position
- Parks and Recreation Director Position
- Recreation Program Supervisor Position
- Transit Trips to Eureka for Seniors
- PT Code Compliance Officer Position
- Illegal Camp Coordination and Assistance
- K-9 Program

An activity log displaying important Finance data is attached for informational purposes.

RECOMMENDED COUNCIL ACTION:

Receive Finance Department Monthly Report. Consent Agenda vote.

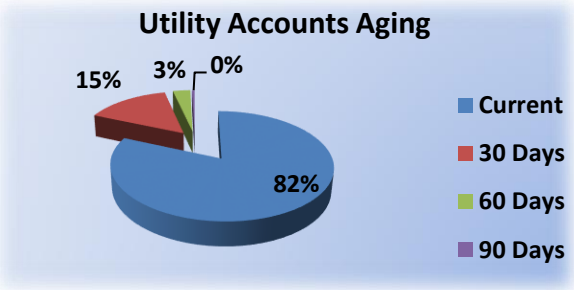
ATTACHMENTS:

- Finance Staff Activity Log for April 2022

City of Fortuna
Finance Department
Fiscal Year 2021/22

Finance Department Activity Log	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022
Payroll Checks Issued:	190	264	204	189	187	319
Accounts Payable Checks Issued:	225	248	199	211	264	243
Number of Invoices Processed:	425	501	384	423	541	447
CDBG Loan Payments/Payoff	0	0	0	0	0	0
# Telephone Calls	1943	1574	1696	2167	2159	1593
Avg Daily	***97***	***75***	***100***	***114***	***94***	***76***
Daily Walk-in Customers						
Utility	820	518	580	628	719	574
Bldg	58	38	46	84	53	60
Plan	32	19	29	42	33	30
Other	36	23	28	24	0	53
Total:	**946**	**598**	**683**	**778**	**805**	**717**
Average Daily Walk-in Customers	***47***	***28***	***40***	***41***	***35***	***34***
Monthly Bills	4577	4579	4583	4578	4569	4584
Reminder Notices	417	503	552	495	391	429
Shut Off Notices Mailed	249	309	331	253	245	251
Shut Offs	0	0	0	0	39	17
Ebills - Bills sent via email	359	361	385	391	374	380
Utility Bills paid online	1065	1101	1117	1088	1163	1131
% of Utility bills paid in person	18%	11%	13%	14%	16%	13%
Public Works Calls Dispatched:	101	93	84	81	88	82
					Avg Service Calls	*88.2*

Utility Billing Aging Report	Total Bal	Current	30 Days	60 Days	90 Days
	$ 553,961	**$ 451,776**	**$ 82,591**	**$ 17,079**	**$ 2,516**
		81.6%	14.9%	3.1%	0.5%



STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Cameron Mull, Director of Parks & Recreation

THROUGH: Merritt Perry, City Manager

SUBJECT: Parks & Recreation Monthly Report for April 2022

STAFF RECOMMENDATION:

Receive report as an informational item.

EXECUTIVE SUMMARY:

Director's Report

- The City is working with local engineers and landscape architects for the planning & development of the new Rohner Park basketball courts (funded by Measure E) as well as the Newburg Park expansion of the newly acquired 8.4 acre parcel. The basketball courts project will include a fenced, 2-court area with brand new surfacing, striping, and backboard systems, with surrounding amenities. Plans for the Newburg Park expansion will include grading, drainage, sports field development, and other recreational amenities as funding becomes available.
- The regularly scheduled Rohner Community Recreation and Park District (RCRPD) monthly meeting was held on 4/6, which included further discussion of the Benefit Assessment process with a presentation by contracted consultants LACO & Associates, in which the mailed ballots may go to the parcel owners within the RCRPD boundary in 2022. The RCRPD Board also approved an additional services contract with Counsilman-Hunsaker, who performed a feasibility study for RCRPD in 2019, and will be providing further services to identifying reductions in construction and operation & maintenance costs of the future aquatic facility, in order to still provide a benefit to the public while requesting a lower annual tax, if passed.
- Planning is still underway for the first Kids Bike Rodeo on Saturday, May 14th at Newburg Park from 10am-1pm. Parks & Recreation will be partnering with multiple organizations to make the event a success. Additionally, the 2nd Annual Pastels in the Park event will be held on Saturday, June 11th from 10am-12pm. The event will again be sponsored by First 5 Humboldt with a donation of $1,000 to purchase 50 pastel kits and prize baskets for the most artistic plots. The 2022 plan is to increase participation (from 24 in 2021) and also potentially add live music, a kids art & play zone, and other mediums of art (i.e. plein air art).

Parks & Facility Maintenance

- Toilet repairs were completed at the Monday Club with new gasket & flanges after leaking
- The City Hall Conference Room received a floor stripping, cleaning, 2 coats of sealant, 5 coats of wax, and buffed to shine
- Extensive weed-pulling was completed at the River Lodge landscaped areas and parking lot
- New casters were installed on the piano at the River Lodge
- The drinking fountain near the women's bathroom at the River Lodge received repairs after being inoperable
- The Rodeo Grounds cook shack stove was cleaned and re-oiled
- A water valve was replaced at the Newburg park restroom
- The roller skates in the Fireman's Pavilion received wheel cleanings
- Multiple picnic tables in the Rohner Park picnic area received repairs (new lumber and paint) due to rot and damaged sections
- After the Depot Museum received 26 new/ replacement windows due to an earthquake, 3M tint film was installed to eliminate UV rays that could damage museum artifacts
- All windows at the Depot Museum were cleaned on the interior and exterior
- A dead tree was removed at the Rohner Park forest trail main entry
- Graffiti removal was performed at the fish-viewing gazebo area
- The Bike Park at Newburg Park received cold-patch/ pavement repairs to in areas of need, and weeding was performed in areas where plants were pushing up through the pavement
- The drinking fountain at Newburg Park's Hardball #1 field received repairs

Depot Museum

No report is included for this month, but both April and May's Depot Museum statistics will be included in the June 20th City Council meeting monthly report.

Fortuna Transit

Passengers on the Fortuna Transit Bus totaled 590 trips during the month of April 2022. The lift was used for non-wheelchair riders 86 times and 64 times for wheelchair trips. The Fortuna Transit had 8 new riders during the month of April. The Eureka medical trips on Tuesdays have been going well averaging around 3-5 riders.

	April 2021	April 2022	YTD ~ July 2020 – June 2021	YTD ~ July 2021 – June 2022
# of passengers	755	590	7444	6545
Total Miles	2275	1779	22481	21100
Service Miles	2104	1611	20834	19199
Hours Worked	296.75	235	2608.75	2680.00
Service Hours Worked	252.75	202.75	2220.25	2255.25

Sports, Classes and Facility Rentals

Results Fit Camp continues holding classes in the Pavilion, the Rohner Rec Hall was used 12 times and the Rohner Park picnic area 3 times during the month of April. Adult recreation basketball league continued playing at Fortuna High School in both gyms Monday through Thursday evenings, with 18 total teams participating, and women ending on 4/4 and men ending on 4/19.

Skating Rink

The Fortuna Skating Rink operated Public Skate Friday & Saturday nights and most Sunday afternoons in April. The rink was closed Sunday April 17th to observe the Easter holiday and Sunday April 24th for a staff appreciation event. Friday April 15th the rink hosted an Easter Weekend Discount Skate Night that had a record 156 people in attendance. The second Adult Night also took place Saturday April 30th, and will continue as an ongoing event the last Saturday of every month. Over the course of the month, the skating rink hosted 21 private parties with 580 attendees, and in addition to the 1,095 skaters that attended public skate, hosted an overall total of 1,675 skaters in the month of April.

Recreation Programs

Drop-in volleyball on Sunday evenings continued throughout April. Attendance ranged from 12 to 15 players per night. Our drop-in basketball program restarted Thursday April 28th with 4 players after being on hold for the duration of our adult league, with numbers anticipated to rebound quickly to previous attendance levels.

The Recreation Department also spent April planning and implementing our Spring Break Camp that took place April 11th – 15th, for youth ages 5-12. We had 34 children registered, and we were able to host a visitor from the Fortuna Library for Story Time as well as a visitor from Zero Waste Humboldt who worked with campers on nature art and re-growing food scraps. We also logged 27.5 volunteer hours with an L.I.T. (Leader in Training) youth volunteer who assisted with camp activities.

Coordination and planning continued with First 5 Humboldt on a new playgroup for kids ages 0-5 and their caregivers. Planning and development of the program has progressed well and supplies have all arrived. The goal is to open in the next month, staffing dependent.

Planning and development on a Paint & Sip event for May 12th continued through April, with all 30 available spots being filled within 4 business days of opening registration. Planning and development also continued on a new Bike Rodeo event that will take place on May 14th. Geared toward youth ages 5-12, the event will bring together community groups and cycling advocates for a youth & family focused event designed to teach fundamental bicycle safety & skills. Work also began in April on developing a parks-centered scavenger-hunt activity for local youth in celebration of the 12th annual National Kids to Parks Day.

Community Service

The Parks & Recreation Department had 5 people signed up to perform Community Service, and workers completed 66.25 hours in the month of April. The Community Service Work Program is a big part of the parks' success. The workers help with trash pickup and various basic maintenance

projects in Rohner and Newburg Parks, the River Lodge, and other Parks-maintained spaces throughout the City. Since the program started in 1997, there have been 52,696.25 service hours completed throughout the City of Fortuna.

RECOMMENDED COUNCIL ACTION:

Receive Parks & Recreation Department Monthly Report. Consent Agenda vote.

STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Casey J. Day, Chief of Police

THROUGH: Merritt Perry, City Manager

SUBJECT: Police Department Monthly Report for April 2022

STAFF RECOMMENDATION:

Receive report as an informational item.

Patrol Statistics:
During the month of April 2022, the Fortuna Police handled 1,407 calls for service. 42 arrests were made during the month of April, including 14 felony arrests and 28 misdemeanor arrests. 42 citations were issued for traffic offenses or other miscellaneous violations. Crime statistics and information on calls for service are available at **forpd.crimegraphics.com.**

Staffing:
Staffing levels were impacted during the month of April. The Police Department is working to replace existing vacancies, which include:

- Two sworn police officer positions, and
- One part time Community Service Officer, and
- One Public Safety Dispatcher

Two entry-level Police Officer candidates have received conditional letters of employment. One candidate completed the background investigation and will graduate from the Police Academy in June 2022. The other candidate is currently finishing the background investigation process. One part-time CSO candidate is currently nearing the end of the background phase of hiring. The recruitment for Public Safety Dispatcher is currently open.

Covid-19:
N/A – No exposures or illnesses.

Employee of the Month:
During the month of April, Public Safety Dispatcher Jade Campbell received the department's "Employee of the Month" award for her adaptability, hard work, and commitment to the department and community.

RECOMMENDED COUNCIL ACTION:
Receive Police Department Monthly Report. Consent Agenda vote.

STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Brendan Byrd, Public Works Director/City Engineer

THROUGH: Merritt Perry, City Manager

SUBJECT: **Public Works/Engineering Department Monthly Report**

STAFF RECOMMENDATION:

Receive report as an informational item.

EXECUTIVE SUMMARY:

Public Works Director/City Engineer

Public works staff have been engaged in a number of ongoing projects, see the summary below:

12th Street Interchange Modernization Project

In March, staff developed and posted a Request for Proposals to complete the project, and proposals were received on April 13th. The City received a single proposal, from GHD, similar to the Kenmar Interchange Improvement Project. Since the proposal due date, staff have been working with Caltrans to initiate the cooperative project phase, and to identify the necessary steps that need to be completed prior to city staff taking a project award recommendation to Council.. Staff hope to bring the project award recommendation to the Council in June.

12th Street Prop 1 Integrated Stormwater Enhancement Project

Staff received the final executed grant agreement in April. Following the final agreement, staff have been working to contract for the design phase of work with our engineering consultant, and have been engaged with Fortuna Union High School staff to finalize the Maintenance Agreement Memorandum of Understanding for the future bioretention facility.

Campton and Hillside Water Tank Coating Project

As noted below in the Chief Plant Operators report, staff is having a water tank inspection performed on the City's two steel tanks in order to identify any required interior maintenance as part of the tank coating project. Once the inspection is performed, staff and our engineering consultants will have a better idea of the total scope of the project and can develop and advertise the final bid package.

Stormdrain Infrastructure Hazard Identification Project

Staff received final authorization from the California Office of Emergency Services (Cal OES) to award the contract and commence work. A project kickoff meeting was held in late April, and over the next several months staff from the General Services and Engineering Divisions will be working to assist our consultant in preliminary data collection for the stormdrain system.

Newburg Park Expansion and Rohner Park Basketball Court Improvement Projects

Public works and engineering staff have been supporting the Parks department in the project planning and development phase of these two projects. Staff have been assisting our consulting City Surveyor with performing field data collection that will be used for future design. Additionally, staff are working with our engineering consultants to develop a scope of work for the Newburg Park expansion project.

Kenmar and Drake Hill Water Pump Station Emergency Stationary Generators

The project was put out to bid in April, and the bid opening date is May 19th. After the bid opening, staff anticipate bringing the contract to the Council for an Award recommendation at the June 6th meeting.

CDBG ADA Barrier Removal Project

In April, staff received comments back from Housing and Community Development (HCD) on the City's application for ADA improvements, including locations along N Street, at Newburg Park, and the Rodeo Grounds. Over the next several weeks staff will be working to address comments and resubmit the updated application. Depending on the review timeline for the second submittal, this project may or may not be able to be constructed this season.

Annual Microslurry Project

In April, public works staff coordinated with the City of Arcata (this year's administering agency) to develop a multi-agency bid package for the 2022 Accelerated Cure Slurry (Micro Slurry) Project. This is a biennial project, which was last administered by Fortuna. For this year's project, staff are proposing to slurry various roads in the greater Kenwood neighborhood. Additionally, staff have been coordinating with the Fortuna Volunteer Fire Department to include their parking lot at the main fire station in the project. Based on a preliminary procurement schedule received from Arcata, the project will bid in May, and construction is anticipated to take place in July/August.

Utilities Division- Utility Lead

Service Call Summary

- In April, the Utilities Division completed 81 service calls by operators. Figure 1 below shows the distribution of service calls by type.

- The division completed 35 Underground Service Alert (USA) mark and locates with no miss-marks, resulting in zero broken utilities.

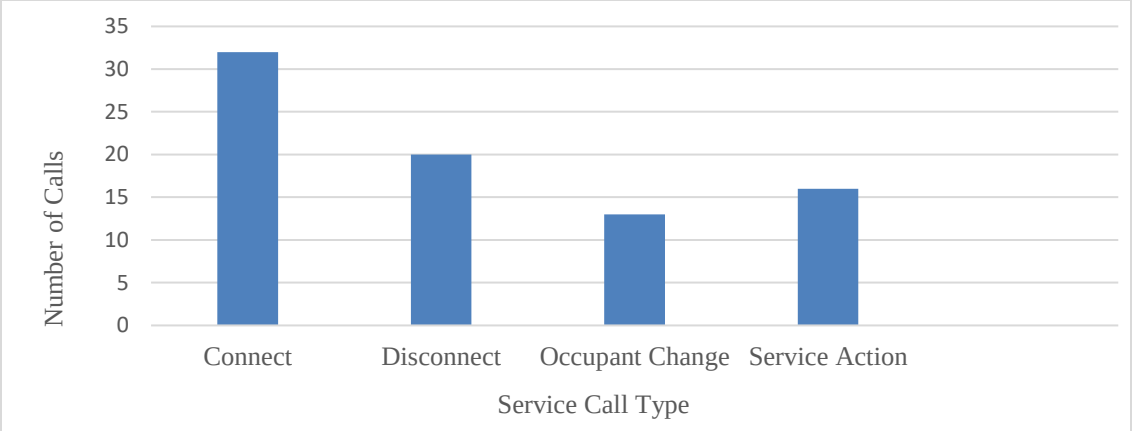


Figure 1. Utility division service calls by type in April.

Water Distribution System

- The utilities division installed one new service to the system in April.
- In April there was one water leak, with an estimated 7,200 gallons of water lost. Table 1 below shows a summary of annual lost water for 2022.
- In the month of April the utilities team changed out 14 dead water meters, and replaced one service line on 14th street.
- Two broken angle valves were replaced with new ones, both for houses on the shut off list.

Table 1. Water leak rate and water loss estimates for 2022.

Date	Location	Pipe Information	Estimated Leak Rate (Gallons per Minute)	Leak Duration	Total Estimate Leak Volume (Gallons)
1/20/2022	Newell Drive	2" Cast Iron	2	5 days	28,800
2/8/2022	Hillside Drive	6" Cement	5	5 days	36,000
2/17/2022	Sunny Heights Drive	¾" Plastic	10	3 days	43,200
2/23/2022	Orchard Lane	6" Cement	900	1 hour	54,000
3/14/2022	Riverwalk Drive	6" Hydrant	1000	0.75 hour	39,000
3/30/2022	West End Place	¾" Blue Plastic	40	1 hour	2,400
4/6/2022	**524 14th Street**	**¾'' Blue Plastic**	**1**	**5 days**	**7,200**

Wastewater Collections System

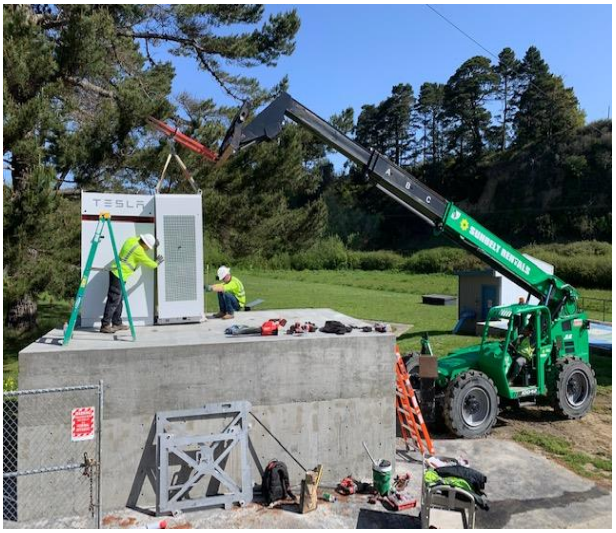
- The Utilities Division focused a significant amount of time in April performing camera inspections of the City sewer system. In April, staff cleaned and inspected 5,077 feet of sewer mains. While performing camera inspections staff found a sewer line on P Street that is in poor shape. It is encumbered with roots at most joints and has many cracks in the pipe walls (see photo inset right). This section of sewer line was subsequently added to the upcoming 2022-23 Capital Improvement Program, and staff will look to initiate a project at this location as soon as possible.

Miscellaneous Tasks

- The Utilities Division performed monthly maintenance on the division's heavy equipment, including greasing and checking all fluids.

- Jason Johnson traveled to Santa Rosa to take his Distribution 3 Test and passed! Jason becomes one of only four City staff with this certification.

Water Treatment/Wastewater Division- Chief Plant Operator



Tesla Corrosion Control Facility Battery Project: Tesla contractors installed the battery units at the City's water wells site this month (see picture inset left). Contractors also completed the wiring connection with the PG&E grid. Tesla has planned further construction in May with the installation of stairs and railing to the elevated pad. City staff will then work with Tesla on commissioning the units before PG&E can give them permission to operate.

Plant Staffing: New Operator-in-Training Matthew Engleman started working for the City this month. This fills a vital, vacant operator position in the WWTP Division.

WWTP Tour: Plant staff conducted a tour of the WWTP to fellow operators from McKinleyville Community Services District and the City of Eureka. This important networking event will spur the spread of local knowledge, which can make it possible for multi-system improvement.

Loleta Community Services District (CSD) Assistance: Staff finalized an agreement to assist Loleta CSD with their water treatment facility operations. City of Fortuna staff will provide operations for two days per week, for a maximum of two hours per day. This arrangement will last

for three months until Loleta CSD can hire a Certified Operator. Staff began working there this month.

California Drought: Staff attended a webinar from the State Water Boards on draft drought regulation, which could go into effect in June. Due to the driest January-March in CA history and recent lack of normal rainfall, the State will soon impose restrictions on water use. The State will require the City to go to Stage 2 of the Water Shortage Contingency Plan, which will require extra reporting, public notification and some water use curtailment, including watering days. Once regulations become finalized, staff will bring this as an informational item to the Council in June. Additionally, during the summer months staff will include a graph on the City's groundwater table in this report, comparing this year with previous years.

Wastewater Treatment

April wastewater plant effluent flows for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Table 2. April wastewater plant effluent flows for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Year	2018	2019	2020	2021	2022
Total Monthly Flow, MG	44.973	40.369	35.424	33.670	38.220
Maximum Daily Flow, MGD	2.704	2.021	2.466	1.380	1.880
Average Monthly Flow, MGD	1.499	1.346	1.181	1.122	1.274

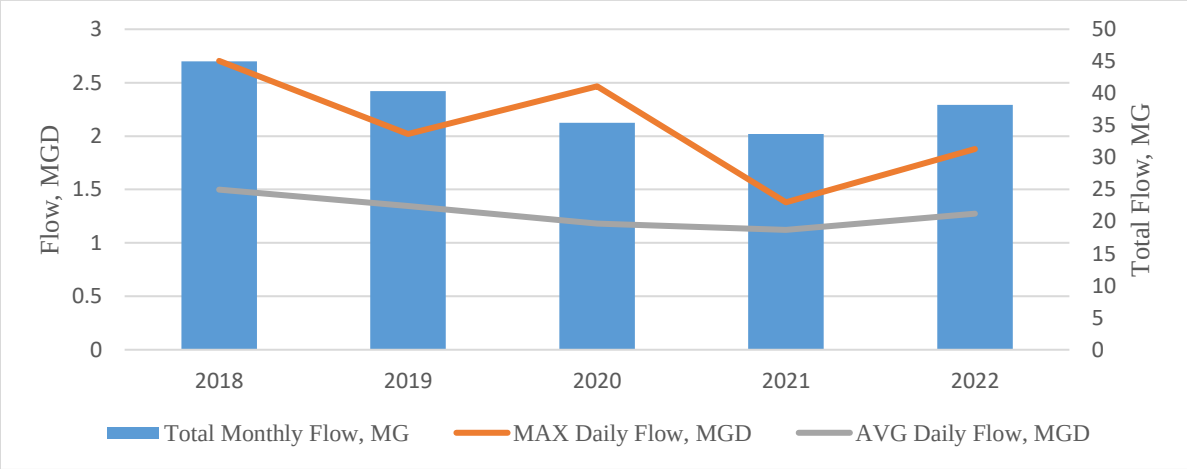


Figure 2. April wastewater plant effluent flows for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Wastewater Events & Maintenance Tasks Completed:

- Staff replaced an aged and damaged access door to a garage/ shop building at the WWTP.

- Staff conducted quarterly acute toxicity testing of the effluent. This is a bioassay test which ensures that the effluent can sustain aquatic life in the receiving water. All tested parameters passed standards.

- A contractor assisted staff in replacing badly corroded iron piping to the digester gas flare. The contractor fabricated new, stainless steel piping, which will last far longer than the original infrastructure.

- Staff discovered a problem with one of the grit channel rails at the WWTP. The rail is bent slightly up, causing the rakes that ride on it to separate at an end sprocket before dropping back down. Staff made some progress repairing it, but an ultimate repair will require further time and equipment in the near future.

- The contractor arrived in the end of April to begin work on the percolation ponds rehabilitation project (see picture inset right). This annual task supports the summertime effluent discharge requirement, where the City cannot discharge directly to surface water.

- The City recently received test results for our Class A compost, and staff are planning to have a second compost giveaway the week of May 23rd. Staff are working to inform the public through press- and social media releases.

Water Treatment

The following table and chart show the potable water production data in April for the past five years.

Table 3. April potable water production for the past five years in Million Gallons (MG).

Year	2018	2019	2020	2021	2022
Total Production, MG	**27.693**	**28.875**	**34.4**	**31.892**	**26.589**
Maximum Daily, MG	**1.257**	**1.127**	**1.46**	**1.424**	**1.445**
Average Daily, MG	**0.923**	**0.963**	**1.147**	**1.063**	**0.886**

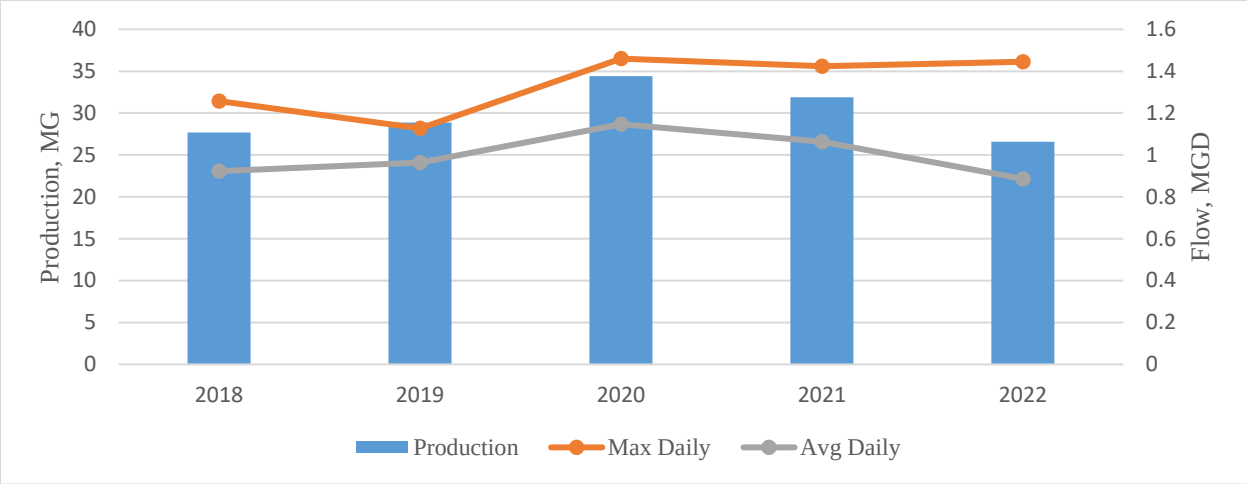


Figure 3. April potable water production for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Water Events & Maintenance Tasks Completed:

- The General Services Division assisted staff at the Vancil pump station, pouring and shaping a new concrete pad for one of the three pumps. Staff also replaced the wiring for this pump.

- Staff spent time on seasonal mowing at City facilities. Late rains will require staff to work on this task into May.

- Staff gathered quotes for cleaning and inspecting the City's two potable, steel water tanks: Hillside and Campton Heights. Contractors last performed this task in 2018. Cleaning and inspecting these tanks will assist staff in determining the need for to perform interior tank rehabilitation as part of the Campton and Hillside tank exterior coating project.

General Services and Streets - General Services Superintendent

The following is a list of scheduled assignments completed by the General Services staff in April:

- During inclement weather in mid-April, a small slide developed on Hillside Drive. Staff placed temporary traffic control signs and measures near and around the slip out for the night. Staff removed the debris the next day (see photo inset right).

- Staff continues to mow and weed eat along City's right of ways, easements, and City property.

- Staff replaced lights in the Council Chambers.

- Staff replaced a pump motor pedestal for Vancil Reservoir. The previous pedestal was found to be broken when the pump motor was removed.

- Staff continues to remove and replace decking and seatbacks at the rodeo grandstands.

- Staff removed low hanging limbs, or limbs that impaired sight distance in the City right of ways.

- Staff fulfilled a request to check on the status of a small air conditioning unit in the City Hall server room. Staff cleaned and serviced the filtration system. The task will be included in quarterly maintenance schedule.

- Staff relocated stored material for the percolation pond rehabilitation project.

- River Life Foundation removed and hauled 1,680 pounds of miscellaneous debris from transient's camps that are on or near creeks and streams.

- Staff participated in coordination calls with Caltrans to discuss various opportunities to take advantage of Clean California Grant funds, including for trash pickup and mattress dump-day in June.

- Staff have been working with our on-call concrete contractor to replace various driveway aprons throughout the downtown area.

In addition to the special tasks noted above, staff also engaged in the following regular routine maintenance activities including USA's, street sweeping, recycling and trash management, road maintenance, vegetation management, and safety training and inspections. Staff is available for questions, requests, and emergency responses to the community.

RECOMMENDED COUNCIL ACTION:

Receive Public Works Department Monthly Report. Consent Agenda vote.

STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Jennifer Lourenzo, Conference Center Manager

THROUGH: Merritt Perry, City Manager

SUBJECT: **River Lodge Conference Center and Fortuna Monday Club Monthly Report for April 2022**

STAFF RECOMMENDATION:

Receive report as an informational item.

EXECUTIVE SUMMARY:

The River Lodge and Monday Club held a total of 23 events in the month of April. Events included 3 monthly meetings, 3 baby showers, 2 weddings, a memorial and a Celebration of Life. There were 7 churches that congregated together for a Good Friday Service at River Lodge and Soroptimist International of the Eel River Valley held their Annual Awards Program. The State of the City Breakfast, hosted by Fortuna Chamber, took place and was very well attended. Fortuna Union High School held an *Interview Day* for students participating in the *Bridging Connections* Program. The River Lodge catered 4 Rotary luncheon meetings. COVID testing through the Department of Health & Human Services took place on 4 days and The Fortuna Concert Series played at the Monday Club.

There has been an increase in bookings at both River Lodge and Monday Club. The wedding season is upon us, and the events that have been on hold for 2 years are finally happening.

RECOMMENDED COUNCIL ACTION:

Receive River Lodge & Monday Club Monthly Report. Consent Agenda vote.

April 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
						Baby Shower
3	4	5	6	7	8	9
Baby Shower	ERV/ Baby Shower		Covid Testing	Mtg 2-3/ Mtg 4-6 Rotary		Wedding Concert Series
10	11	12	13	14	15	16
		Civics Mtg	Covid Test/Vaccinations Garden Club	Rotary	Church Service	
17	18	19	20	21	22	23
	ERV Parent Mtg		Covid Testing	Rotary	SIERV Awards Wedding	Memorial
24	25	26	27	28	29	30
			Covid Testing	Rotary State of the City		Celebration of Life Birthday Party

STAFF REPORT
City Council Consent Calendar Agenda Item

DATE: May 16, 2022

TO: Honorable Mayor and City Council Members

FROM: Merritt Perry, City Manager

SUBJECT: **Report of Disbursements for May 4, 2022**

STAFF RECOMMENDATION:

Receive staff report of disbursements that were processed for the City of Fortuna and the Successor Agency (Fortuna Redevelopment Agency) if applicable, as an informational item only.

REPORT OF DISBURSEMENTS:

Disbursement was processed as follows:

- May 4, 2022 $ 83,043.84

RECOMMENDED COUNCIL ACTION:

Informational Item. Receive report by Consent Agenda vote.

ATTACHMENTS:

- Disbursements Detail Report for May 4, 2022

OF FORTUNA

Expense Approval Report

By (None)

Payment Dates 5/2/2022 - 5/4/2022

Payment Numl	Payment Date	Vendor Name	Payable Number	Description (Item)	Amount
73474	05/02/2022	POSTMASTER	050222	Utility Billing Postage 4.30.22	943.9
73474	05/02/2022	POSTMASTER	050222	Utility Billing Postage 4.30.22	943.9
73475	05/04/2022	ADVANCED SECURITY SYSTEM	599381	Alarm Service Call - Lab	70.53
73476	05/04/2022	ASAP LOCK & KEY	21783	Padlocks - General Services	91.07
73477	05/04/2022	BALDWIN, JEFFREY	041322	Per Diem/Mileage 5.8 - 5.13 (Bldg Code Tr	619.11
73478	05/04/2022	BODYWORKS	050122	May Gym Memberships	20
73478	05/04/2022	BODYWORKS	050122	May Gym Memberships	140
73478	05/04/2022	BODYWORKS	050122	May Gym Memberships	60
73478	05/04/2022	BODYWORKS	050122	May Gym Memberships	40
73479	05/04/2022	CALLAWAY, DAMYAN	042722	Adult Bball Forfeit Deposit Refund	150
73480	05/04/2022	CHARLTON, GABE	041622	Per Diem 5.11 - 5.13 (De-escalation/Tactic	187
73481	05/04/2022	CONWAY-O'NEILL, PACKY	042722	Adult Bball Forfeit Deposit Refund	200
73482	05/04/2022	COUNTY OF HUMBOLDT	043022	April Parking Fees	10
73482	05/04/2022	COUNTY OF HUMBOLDT	043022	April Parking Fees	15
73483	05/04/2022	CRYSTAL SPRINGS BOTTLED W	37150	Water Delivery - Public Works	18
73483	05/04/2022	CRYSTAL SPRINGS BOTTLED W	37228	Water Delivery - Parks	36
73484	05/04/2022	ECOLAB	6268895253	Dishmachine Rental - River Lodge FY 21/2	117.45
73485	05/04/2022	ENGINEERED FIRE SYSTEMS, INC	18511	Fire Plan Review	1125
73486	05/04/2022	FEDEX	7-733-24696	Delivery Services - Lab	175.2
73487	05/04/2022	FORBUSCO LUMBER	182083	Supplies - Streets	36.96
73487	05/04/2022	FORBUSCO LUMBER	182083	Supplies - Streets	-2.6
73487	05/04/2022	FORBUSCO LUMBER	182586	Supplies - Parks	5.64
73487	05/04/2022	FORBUSCO LUMBER	182586	Supplies - Parks	-0.39
73487	05/04/2022	FORBUSCO LUMBER	182731	Building Maintenance - River Lodge	-2.67
73487	05/04/2022	FORBUSCO LUMBER	182731	Building Maintenance - River Lodge	38.2
73487	05/04/2022	FORBUSCO LUMBER	183269	Supplies - Vancil Pump	-1.13
73487	05/04/2022	FORBUSCO LUMBER	183269	Supplies - Vancil Pump	16.12
73487	05/04/2022	FORBUSCO LUMBER	183453	Supplies - Parks	22.81
73487	05/04/2022	FORBUSCO LUMBER	183453	Supplies - Parks	-1.58
73488	05/04/2022	FORTUNA ACE HARDWARE	3425846	Supplies - Parks	17.34
73488	05/04/2022	FORTUNA ACE HARDWARE	342700	Building Maintenance - PD	8.67
73488	05/04/2022	FORTUNA ACE HARDWARE	342732	Tools - Utilities	271.24
73488	05/04/2022	FORTUNA ACE HARDWARE	342749	Supplies - Parks	318.14
73488	05/04/2022	FORTUNA ACE HARDWARE	342762	Supplies - Utilities	41.21
73488	05/04/2022	FORTUNA ACE HARDWARE	342786	Supplies - Parks	21.27
73488	05/04/2022	FORTUNA ACE HARDWARE	342860	Supplies - WWTP	15.37
73488	05/04/2022	FORTUNA ACE HARDWARE	342864	Vehicle Repair - WWTP	21.68
73488	05/04/2022	FORTUNA ACE HARDWARE	342866	Supplies - PD	60.71
73488	05/04/2022	FORTUNA ACE HARDWARE	342936	Supplies - WWTP	7.36
73488	05/04/2022	FORTUNA ACE HARDWARE	342945	Supplies - WWTP	45.95
73488	05/04/2022	FORTUNA ACE HARDWARE	342972	Tools - Utilities	105.19
73488	05/04/2022	FORTUNA ACE HARDWARE	343012	Janitorial Supplies - River Lodge	16.47
73489	05/04/2022	GRAINGER	9293724424	Lab Supplies	34.73
73489	05/04/2022	GRAINGER	9294220026	Lab Supplies	41.38
73490	05/04/2022	GROCERY OUTLET	40733922542232	Catering Supplies - River Lodge	46.37
73491	05/04/2022	HORIZON BUSINESS PRODUCTS	248625	Supplies - River Lodge	82.42
73492	05/04/2022	HUMBOLDT BAY COFFEE CO	41928	Coffee - River Lodge	137.25
73493	05/04/2022	HUMBOLDT VETERINARY MEDICAL (	385550	Vet Services - K9 Blitz	225.77
73494	05/04/2022	HUMMEL TIRE & WHEEL	262895	Tire Sensor - General Services	95.43
73494	05/04/2022	HUMMEL TIRE & WHEEL	262919	Flat Repair Service Call - Utilities	233.87
73494	05/04/2022	HUMMEL TIRE & WHEEL	262954	Tires - PD	710.9
73495	05/04/2022	IAPE	M22-C682579	Membership Dues - CSO	65
73496	05/04/2022	INTERNAT'L INSTITUTE OF MUNCIPA	042722	Membership Dues - S. Emmons	175
73497	05/04/2022	JAQUETTE, JASON & STEPHANIE RC	042522	Monday Club Deposit/Insurance Refund	185

Payment Numl	Payment Date	Vendor Name	Payable Number	Description (Item)	Amount
73498	05/04/2022	JOE'S AUTO GLASS	53456	Vehicle Repair - PD	990.76
73499	05/04/2022	KEISNER, DELMER	042722	Adult Bball Forfeit Deposit Refund	200
73500	05/04/2022	MAD RIVER COMMUNITY HOSPITAL	10551541	Sancho Pre-employment Physical	1208.07
73501	05/04/2022	MANDON, BRADEN	042722	Adult Bball Forfeit Deposit Refund	200
73502	05/04/2022	MCGINNIS, DAKOTA	042722	Adult Bball Forfeit Deposit Refund	150
73503	05/04/2022	MCGINNIS, JOHN	042722	Adult Bball Forfeit Deposit Refund	150
73504	05/04/2022	MENDES SUPPLY INC	M227235	Janitorial Supplies - Parks/CH/Library	16.99
73504	05/04/2022	MENDES SUPPLY INC	M227235	Janitorial Supplies - Parks/CH/Library	16.99
73504	05/04/2022	MENDES SUPPLY INC	M227235	Janitorial Supplies - Parks/CH/Library	33.99
73504	05/04/2022	MENDES SUPPLY INC	M228246	Janitorial Supplies - Parks	487.83
73504	05/04/2022	MENDES SUPPLY INC	m228247	Janitorial Supplies - Rec Program/Pavilion	33.38
73504	05/04/2022	MENDES SUPPLY INC	m228247	Janitorial Supplies - Rec Program/Pavilion	135.85
73505	05/04/2022	MISSION LINEN INDUS SERV	516878294	Parks/Rink Linen Service	68.51
73505	05/04/2022	MISSION LINEN INDUS SERV	516920705	Corp Yard Linen Service	67.54
73505	05/04/2022	MISSION LINEN INDUS SERV	516920705	Corp Yard Linen Service	48.98
73505	05/04/2022	MISSION LINEN INDUS SERV	516920706	Wastewater Linen Service	71.76
73505	05/04/2022	MISSION LINEN INDUS SERV	516920715	Parks/Rink Linen Service	72.31
73505	05/04/2022	MISSION LINEN INDUS SERV	516948389	Janitorial Supplies - Parks	460.47
73506	05/04/2022	MITCHELL 1	IB27531796	Software Subscription - Shop FY 21/22	64.53
73506	05/04/2022	MITCHELL 1	IB27531796	Software Subscription - Shop FY 21/22	64.53
73506	05/04/2022	MITCHELL 1	IB27531796	Software Subscription - Shop FY 21/22	64.53
73506	05/04/2022	MITCHELL 1	IB27531796	Software Subscription - Shop FY 21/22	64.53
73507	05/04/2022	NAPA AUTO PARTS FORTUNA	14186	Equipment Maintenance - General Service	10.18
73508	05/04/2022	NCL OF WISCONSIN INC	469563	Lab Supplies	-28.33
73508	05/04/2022	NCL OF WISCONSIN INC	469563	Lab Supplies	501.21
73509	05/04/2022	NOEL, KEVIN	042722	Adult Bball Forfeit Deposit Refund	100
73510	05/04/2022	NORMAN'S DRY CLEANERS	70720	River Lodge Linen Service	16.98
73510	05/04/2022	NORMAN'S DRY CLEANERS	70788	River Lodge Linen Service	51.32
73511	05/04/2022	NORTH COAST EVENTS & RENT	1782	Linens - River Lodge	146.88
73512	05/04/2022	NORTH COAST JOURNAL	202294821	Dispatcher Recruitment Advertising	122
73512	05/04/2022	NORTH COAST JOURNAL	202294824	Dispatcher Recruitment Advertising	50
73512	05/04/2022	NORTH COAST JOURNAL	202294827	Utility Worker II/III Recruitment Advertising	61
73512	05/04/2022	NORTH COAST JOURNAL	202294827	Utility Worker II/III Recruitment Advertising	61
73512	05/04/2022	NORTH COAST JOURNAL	202294830	Utility Worker II/III Recruitment Advertising	25
73512	05/04/2022	NORTH COAST JOURNAL	202294830	Utility Worker II/III Recruitment Advertising	25
73512	05/04/2022	NORTH COAST JOURNAL	202294862	Engineer Recruitment Advertising	50
73512	05/04/2022	NORTH COAST JOURNAL	202294865	Engineer Recrutiment Advertising	154
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	996.59
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	1629.89
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	346.64
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	346.64
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	43.33
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	303.31
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	303.31
73513	05/04/2022	NYLEX.NET	11927	Network Supporty FY 21/22	563.29
73513	05/04/2022	NYLEX.NET	11994	Domain Renewal - 2 Years	85.99
73514	05/04/2022	O'REILLY AUTOMOTIVE STORE	107819	Vehicle Repair - PD	21.73
73515	05/04/2022	O'SHAUGHNESSY, BLAINE	042522	Park Deposit Refund	250
73516	05/04/2022	OWEN EQUIPMENT SALES	56091	Equipment Maintenance - Streets	186.09
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	2440.5
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	224.81
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	1682.12
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	270.02
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	129.95
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	2790.49
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	1351.57
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	12968.98
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	1141.44
73517	05/04/2022	PACIFIC GAS & ELECTRIC CO	04220845	46580260845	216.07
73518	05/04/2022	PALMER, DALTON	041622	Per Diem 5.11 - 5.13 (De-escalation/Tactic	187

Payment Numl	Payment Date	Vendor Name	Payable Number	Description (Item)	Amount
73519	05/04/2022	PLATT ELECTRIC SUPPLY	2R69312	Building Maintenance - City Hall	15.69
73520	05/04/2022	R.J. RICCIARDI, INC CPAs	13047	Auditor Fees FY 21/22	493.5
73520	05/04/2022	R.J. RICCIARDI, INC CPAs	13047	Auditor Fees FY 21/22	164.5
73520	05/04/2022	R.J. RICCIARDI, INC CPAs	13047	Auditor Fees FY 21/22	164.5
73521	05/04/2022	REDWOOD GLASS & WINDOWS	RW10240	Window Repair - Museum	2975
73522	05/04/2022	REMOTE SATELLITE SYSTEMS	117387	Satellite Phone Service - PD FY 21/22	54
73523	05/04/2022	RESTIF CLEANING SERVICE	120480	Carpet Cleaning - River Lodge	1065.03
73524	05/04/2022	RIOS, RUBEN	042722	Adult Bball Forfeit Deposit Refund	150
73525	05/04/2022	SARVINSKI, SILAS	042722	Adult Bball Forfeit Deposit Refund	150
73526	05/04/2022	SCOTTY'S CUTTERS EDGE	144395	Equipment Maintenance - Utilities	65.84
73527	05/04/2022	SEQUOIA GAS STATION	176908	Equipment Fuel	20.71
73527	05/04/2022	SEQUOIA GAS STATION	176909	Equipment Fuel	25.92
73527	05/04/2022	SEQUOIA GAS STATION	176911	Equipment Fuel	44.31
73527	05/04/2022	SEQUOIA GAS STATION	376928	Propane - General Services	33.07
73527	05/04/2022	SEQUOIA GAS STATION	376933	Equipment Fuel	40.69
73527	05/04/2022	SEQUOIA GAS STATION	376949	Equipment Fuel	81.38
73528	05/04/2022	SHERLOCK RECORDS MANAGEMEN	3552	Finance Record Storage FY 21/22	50
73529	05/04/2022	STAPLES BUSINESS CREDIT	7353348284	Supplies - Skating	16.81
73529	05/04/2022	STAPLES BUSINESS CREDIT	7353348284-1-1	Supplies - Skating (Credit Original Order)	-16.81
73529	05/04/2022	STAPLES BUSINESS CREDIT	7353348284-2	Supplies - Skating (Replacement Order)	16.81
73529	05/04/2022	STAPLES BUSINESS CREDIT	7354743089-1-1	Credit Price Adjustment	-19.86
73529	05/04/2022	STAPLES BUSINESS CREDIT	7355253893	Supplies - PD	49.88
73529	05/04/2022	STAPLES BUSINESS CREDIT	7355282035	Supplies - Parks	106.13
73530	05/04/2022	THATCHER COMPANY INC	2022400104241	Chemicals	7050
73530	05/04/2022	THATCHER COMPANY INC	2022400104241	Chemicals	13677.2
73530	05/04/2022	THATCHER COMPANY INC	2022400900975	Chemical Deposit Refund	-7050
73530	05/04/2022	THATCHER COMPANY INC	2022400900975	Chemical Deposit Refund	-599.26
73531	05/04/2022	TROTTER, JACOB	042722	Adult Bball Forfeit Deposit Refund	200
73532	05/04/2022	US BANK EQUIPMENT FINANCE	470936568	Copier Lease FY 21/22	342.85
73532	05/04/2022	US BANK EQUIPMENT FINANCE	470936568	Copier Lease FY 21/22	133.65
73532	05/04/2022	US BANK EQUIPMENT FINANCE	470936568	Copier Lease FY 21/22	104.6
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	71.45
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	6871.42
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	81.34
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	63.87
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	3051.18
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	934.88
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	166.68
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	177.57
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	348.56
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	355.62
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	2969.5
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	1174.68
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	CL 22-492073	Fuel	1210.71
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	INV 22-539435	Bulk Oil	154.08
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	INV 22-539435	Bulk Oil	154.08
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	INV 22-539435	Bulk Oil	154.08
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	INV 22-539435	Bulk Oil	154.08
73533	05/04/2022	VALLEY PACIFIC PETROLEUM SERV	INV 22-539435	Bulk Oil	154.09
73534	05/04/2022	VAN DYKE, KYLE	042722	Adult Bball Forfeit Deposit Refund	150
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	33.7
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	107.04
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	626.34
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	39.32
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	40.6
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	113.61
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	152.23
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	570.15
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	31.66
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	54.08

Payment Numl	Payment Date	Vendor Name	Payable Number	Description (Item)	Amount
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	2.11
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	156.58
73535	05/04/2022	VERIZON WIRELESS	9904731041	April Cellular Service	222.87
73536	05/04/2022	WHITCHURCH ENGINEERING	042722	Adult Bball Forfeit Deposit Refund	150
73537	05/04/2022	WYCKOFF'S	30708	Building Maintenance - Monday Club	29.34
73537	05/04/2022	WYCKOFF'S	30962	Streetlight Maintenance	9.96
73537	05/04/2022	WYCKOFF'S	31308	Building Maintenance - City Hall	11
73537	05/04/2022	WYCKOFF'S	31403	Equipment Maintenance - River Lodge	31.56
73537	05/04/2022	WYCKOFF'S	31557	Newburg Maintenance	26.2
73537	05/04/2022	WYCKOFF'S	31848	Supplies - Parks	5.84
73537	05/04/2022	WYCKOFF'S	32727	Supplies - Vancil Pump	19.51
73537	05/04/2022	WYCKOFF'S	33567	Newburg Maintenance	27.49
73537	05/04/2022	WYCKOFF'S	33676	Supplies - Utilities	23.85
				Grand Total:	**83043.84**

Report Summary

Fund Summary

Fund	ent Amount
100 - General Fund	34601.1
101 - Transaction and Use Tax Fund	198.34
105 - Donations Fund	225.77
120 - Development & Building Fund	1975.76
160 - Riverlodge Fund	2267.02
189 - Measure Z Fund	348.56
280 - Gas Tax Fund	4728.09
500 - Water Fund	18676.1
550 - Wastewater Fund	18596.4
590 - TDA Transit Fund	1210.71
672 - Forest Hill Water Booster Fund	216.07
Grand Total:	**83043.8**

Account Summary

Account Nu	Account Name	ent Amount
100-1680	Distributed Office Supplies	-19.86
100-1683	Distributed Utilities	2440.5
100-2220	Refundable Park Deposits	250
100-2405	Parking Fund-County	10
100-2410	Parking Fund-State	15
100-2460	Sales Tax Payable	-28.33
100-4310	Recreation Program Fees	1950
100-5265-1200	Miscellaneous Benefits	20
100-5265-2000	Miscellaneous Benefits	140
100-5265-5400	Miscellaneous Benefits	60
100-5500-1500	Department Supplies	16.99
100-5500-2000	Department Supplies	110.59
100-5500-4100	Department Supplies	158.61
100-5500-5450	Department Supplies	595.24
100-5500-5500	Department Supplies	16.99
100-5505-1500	Vehicle Fuel & Oil	71.45
100-5505-2000	Vehicle Fuel & Oil	6871.42
100-5505-2800	Vehicle Fuel & Oil	81.34
100-5505-4000	Vehicle Fuel & Oil	63.87
100-5505-4100	Vehicle Fuel & Oil	3091.87
100-5505-5450	Vehicle Fuel & Oil	1025.82
100-5565-5450	Janitorial Supplies	1123.11
100-5705-1500	Equipment Maintenance	342.85
100-5705-2000	Equipment Maintenance	133.65
100-5705-5450	Equipment Maintenance	104.6
100-5715-2000	Vehicle Repairs	1877.47
100-5715-4100	Vehicle Repairs	95.43
100-5715-5450	Vehicle Repairs	154.08
100-5720-4100	Equipment Repair	197.33
100-5740-1500	Building Repair and Maintenance	26.69
100-5740-2000	Building Repair and Maintenance	8.67
100-5740-5600	Building Repair and Maintenance	2975
100-5741-5450	Newburg Park Maintenance	53.69
100-5775-1500	Network Support	1082.58
100-5775-2000	Network Support	1629.89
100-5775-4000	Network Support	346.64
100-5775-5400	Network Support	346.64
100-5775-5600	Network Support	43.33
100-6000-1400	Audit Fees	493.5
100-6025-1200	Professional Services	50
100-6025-2000	Professional Services	54
100-6035-2000	Personnel Services	1380.07

Account Summary

Account Nu	Account Name	ıntAmount
100-6035-4000	Personnel Services	204
100-6205-1100	Cell Phones	33.7
100-6205-1500	Cell Phones	107.04
100-6205-2000	Cell Phones	626.34
100-6205-3200	Cell Phones	39.32
100-6205-4000	Cell Phones	40.6
100-6205-4100	Cell Phones	113.61
100-6205-5450	Cell Phones	152.23
100-6210-2000	Internet Service	570.15
100-6505-5400	Utility - General & Electric	224.81
100-6505-5450	Utility - General & Electric	1682.12
100-6505-5500	Utility - General & Electric	270.02
100-6505-5600	Utility - General & Electric	129.95
100-7000-2000	Travel, Conferences & Training	374
100-7015-1150	Dues & Subscriptions	175
100-7015-2000	Dues & Subscriptions	129.53
100-7015-4100	Dues & Subscriptions	64.53
100-7222-5400	Kiddie Kamp Program	33.38
100-7230-5400	Skating/Pavilion	170
101-5505-2000	Vehicle Fuel & Oil	166.68
101-6205-2000	Cell Phones	31.66
105-5500-2850	Department Supplies	225.77
120-5505-3000	Vehicle Fuel & Oil	177.57
120-6005-3000	Engineering Services	1125
120-6205-3000	Cell Phones	54.08
120-7000-3000	Travel, Conferences & Training	619.11
160-2221	Monday Club Deposits	185
160-5500-5800	Department Supplies	82.42
160-5540-5800	Catering - Food	183.62
160-5547-5800	User Group Linen	146.88
160-5565-5800	Janitorial Supplies	84.77
160-5706-5800	Equipment Lease	117.45
160-5720-5800	Equipment Repair	31.56
160-5740-5700	Building Repair and Maintenance	29.34
160-5740-5800	Building Repair and Maintenance	1100.56
160-5775-5800	Network Support	303.31
160-6205-5800	Cell Phones	2.11
189-5505-2000	Vehicle Fuel & Oil	348.56
280-5505-4200	Vehicle Fuel & Oil	355.62
280-5720-4200	Equipment Repair	186.09
280-5726-4200	Street Light Maintenance	44.32
280-6505-4200	Utility - General & Electric	2790.49
280-8500-8000	Principle -Debt	1351.57
500-5265-6100	Miscellaneous Benefits	40
500-5500-6000	Department Supplies	34.5
500-5500-6100	Department Supplies	114.04
500-5500-6200	Department Supplies	943.9
500-5505-6100	Vehicle Fuel & Oil	2969.5
500-5715-6100	Vehicle Repairs	154.08
500-5720-6100	Equipment Repair	299.71
500-5775-6300	Network Support	303.31
500-5900-6100	Tools & Small Equipment	376.43
500-6000-6300	Audit Fees	164.5
500-6035-6100	Personnel Services	86
500-6205-6300	Cell Phones	156.58
500-6505-6000	Utility - General & Electric	12969
500-7015-6000	Dues & Subscriptions	64.53
550-1310	Chemical Tank Deposits	0

Account Summary

Account Nu	Account Name	ent Amount
550-5500-6600	Department Supplies	158.44
550-5500-6700	Department Supplies	943.9
550-5505-6600	Vehicle Fuel & Oil	1174.68
550-5555-6600	Plant Chemicals	13077.9
550-5557-6600	Lab Supplies	577.32
550-5715-6600	Vehicle Repairs	21.68
550-5720-6500	Equipment Repair	154.09
550-5730-6600	Alarm System Maintenance	70.53
550-5775-6700	Network Support	563.29
550-6000-6700	Audit Fees	164.5
550-6035-6500	Personnel Services	86
550-6045-6600	Laboratory Services	175.2
550-6205-6700	Cell Phones	222.87
550-6505-6600	Utility - General & Electric	1141.44
550-7015-6600	Dues & Subscriptions	64.53
590-5505-5000	Vehicle Fuel & Oil	1210.71
672-6505-6515	Utility - General & Electric	216.07
	Grand Total:	**83043.8**

Project Account Summary

Project Account Ke	ent Amount
None	82818.1
Exp DONATION-K9	225.77
Grand Total:	**83043.8**

STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Christopher Christianson, Chief Treatment Plant Operator

THROUGH: Merritt Perry, City Manager

SUBJECT: **Declaration of Surplus Property and Authorization to Dispose of Surplus Property; *Resolution 2022-14***

STAFF RECOMMENDATION:

Consider declaring property surplus and authorize to dispose by adopting *Resolution 2022-14.*

EXECUTIVE SUMMARY:

The City owns a 16' aluminum boat with a 25 HP motor. Wastewater treatment plant staff used this boat prior to treatment plant upgrades of the 1970s when the plant was still a pond system - the boat was used to remove excess pond vegetation and to deploy a detention time curtain. The plant no longer uses these ponds for treatment purposes, and thus no longer needs the boat. The boat sat unused at the plant for decades, taking up valuable space, falling into disrepair, and eventually the motor ceased functioning.

In 2019, the boat was leant to Scotia CSD. They repaired both the boat and the motor and use it to this day in their wastewater treatment ponds, just as Fortuna did decades ago. Given that the boat no longer provides use to the City, and that Scotia CSD spent time and resources improving it and make use of it, it is requested that the Council declare the boat property surplus and officially sell it to Scotia CSD.

The California Constitution and Government Code 37350, 37351 provide for a city to dispose of property in any way it chooses if the disposition is for the common benefit. The proposed disposition method is presented in the table below.

Table 1. Surplus Property Information

Item	Approx. Value	Condition	Disposition Method
16' Boat with 25 HP Motor	$375	Adequate	Sell to Scotia CSD

Staff proposes that the City sell the boat to Scotia CSD for $375, plus back registration fees in the amount of $56 for a total of $431. City staff researched prices in the local area for comparable boats, and found them to range between $250 and $500. $375 lands right in the middle of this range and staff feel that this is a fair sales price for proper compensation. The boat currently serves no function or utility to the City, and otherwise simply takes up space. Also, it costs the City

approximately $20 in annual registration fees. Selling the boat would overall save the City money and provide common benefit to a smaller, local, and severely disadvantaged community in need.

RECOMMENDED COUNCIL ACTION:

Adopt *Resolution 2022-14.* Consent Agenda vote.

ATTACHMENTS:

- *Resolution 2022-14*; *A Resolution Of The City Council Of The City Of Fortuna Declaring Property Surplus And Authorizing The Disposal Of Surplus Property*

RESOLUTION 2022-14

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FORTUNA DECLARING PROPERTY SURPLUS AND AUTHORIZING THE DISPOSAL OF SURPLUS PROPERTY

WHEREAS, the City of Fortuna has determined that the following item will no longer be used by the City:

Item	Approx. Value	Condition	Disposition Method
16' Boat with 25 HP Motor	$375	Adequate	Sell to Scotia CSD

WHEREAS, the California Constitution and Government Code Section 37350, 37351 allows for the disposal of surplus property by a city in any way it chooses if the disposal is for the common benefit.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Fortuna hereby declares that the listed property is surplus and may be disposed of in the proposed manner, which is for the common benefit.

PASSED AND ADOPTED on this 16th day of May 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Sue Long, Mayor

ATTEST:

_____
Siana Emmons, City Clerk

STAFF REPORT
City Council Consent Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Liz Shorey, Deputy Director of Community Development

THROUGH: Merritt Perry, City Manager

SUBJECT: **Authorization to File the Final Subdivision Map for the Smith Lane Subdivision, and Accept the Dedications and Public Improvements; *Resolution 2022-15***

Applicant: Will Adams
APNs: 200-451-018
Project Site: Southeast Side of Smith Lane Between Fortuna Blvd. and Rohnerville Road.

STAFF RECOMMENDATION:

Approve the final map, accept the dedications and public improvements, and authorize City staff to record the map by adopting *Resolution 2022-15*.

BACKGROUND:

The City Council approved the Smith Lane Subdivision on December 16, 2019 by Resolution 2019-38, allowing subdivision of a 1.57-acre lot into six multifamily lots ranging in size from 10,000 square feet to 13,197 square feet, located on the southeast side of Smith Lane between Fortuna Boulevard and Rohnerville Road. A conditional use permit was approved by the Planning Commission (Resolution P-2019-3027), approving a 6-unit multifamily building on each lot, for an overall development of 36 living units. Project development includes on-site parking, a shared common private driveway, private interior sidewalks, and common open space. Ongoing maintenance of the shared driveway, open space, and storm drainage features within the development will be established by creation of CC&Rs and a homeowner's association.

Public infrastructure consists of on-site utilities to serve each of the six lots, new public sidewalk along Smith Lane, and a new streetlight at Smith Lane. Public easements will be dedicated within the site for utility maintenance and emergency response access. All of the improvements have been installed with the exception of the streetlight, which will be secured with a construction bond prior to the map being recorded.

FINAL MAP AUHTORIZATION

Authorization to file the map and accept the dedications and improvements must come from the City's legislative body, in accordance with Subdivision Map Act Section 66458.

The final map has been submitted for recordation, reviewed and signed by the City surveyor and the Public Works Director/City Engineer, and is ready to be signed by the Deputy Community Development Director and the City Clerk. All of the completed public and private improvements and underground utilities for the project have been inspected by the City Engineer for conformance with City standards, record drawings have been signed and submitted by the developer's engineer, and approved by the city engineer. The street light has been secured with a construction agreement and a cashier's check has been posted at 150% of its time and materials cost. Following the Council's acceptance of the improvements, the City Engineer and City Clerk will sign the certificate of acceptance, and the city manager will sign a one-year maintenance agreement.

FISCAL IMPACT

There is minimal fiscal impact to the City general fund as a result of the approval of the final map and acceptance of improvements and easements. The City will be responsible for maintenance of the new on-site public utilities (water and sewer) after release of the one-year warranty bond. The on-site public utilities are relatively short, and maintenance cost will be covered by the water and sewer rates collected for each of the properties.

RECOMMENDED COUNCIL ACTION:

Authorize the City Clerk to file the final map for the Smith Lane Subdivision, and accept the dedications and improvements. Consent Agenda vote.

ATTACHMENTS:

1. *Resolution 2022-15 A Resolution of the City Council of the City of Fortuna Authorizing Recordation of the Final Map for the Smith Lane Subdivision, and Accepting the Dedications and Improvements*
2. Final Map
3. Council Resolution 2019-38
4. Tentative Map

RESOLUTION NO. 2022-15

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FORTUNA AUTHORIZING RECORDATION OF THE FINAL MAP FOR THE SMITH LANE SUBDIVSION, AND ACCEPTING THE DEDICATIONS AND IMPROVEMENTS

WHEREAS, on December 16, 2019, the Fortuna City Council adopted Resolution 2019-38 approving a 6-lot multifamily tentative map for Will Adams; and

WHEREAS, the Final Map for the Smith Lane Subdivision has been submitted to the City for approval; and

WHEREAS, the City Engineer, City Planner, and City Surveyor have reviewed the Smith Lane Final Map for its conformity with the tentative map and the conditions of approval and have determined that the final map substantially conforms with all requirements of the tentative map and the California Subdivision Map Act; and

WHEREAS, the City Engineer has approved the Improvement Plans, inspected construction, received and approved record drawings, and found them to be in conformance with the conditions of approval and the City's Improvement Standards and Specifications, and recommends issuance of a certificate of compliance for the required public improvements and is ready to have the City Clerk sign the Certificate of Compliance and the City Manager to enter into a one-year Maintenance Agreement; and

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

1. Accepts the public dedications on the Final Map and authorizes the City Clerk to sign and record the map on behalf of the City Council;
2. Accepts the public improvements for the subdivision, and authorizes the City Clerk to sign the Certificate of Acceptance and the City Manager to enter into a one-year Maintenance Agreement with the developer;

PASSED AND ADOPTED on this 16th day of May 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Sue Long, Mayor
City of Fortuna

ATTEST:

_____
Siana L. Emmons, City Clerk
City of Fortuna

OWNERS' STATEMENT

That the undersigned, being the parties having a record title interest in the real property being subdivided by this map, do hereby consent to the preparation and recordation of this map and to the dedication of the easements for the purposes shown hereon.

OWNERS:

HUMBOLDT DEVELOPMENT COMPANY, LLC, a California Limited Liability Company

By _____ Dated 3/7/22
Will Adams

By _____ Dated 3/8/2022
Humboldt Land Title
A Division of Fidelity National Title, Trustee under a Deed of Trust recorded on January 23, 2019 as Instrument Number 2019-1261 of Official Records

Andie Ullsmith, AVP Branch Manager
Printed Name and Title

NOTARY ACKNOWLEDGMENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT

State of California
County of Humboldt

On March 7, 2022, before me, Suzanne Smith,

Notary Public, personally appeared Will Adams,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature _____

Printed Name Suzanne Smith

My principal place of business is in Humboldt County

My Commission Expires Oct. 7, 2025

Official Seal not required #2374515

TAX COLLECTOR'S CERTIFICATE

I, John Bartholomew, Tax Collector of Humboldt County, California, hereby certify that, according to the records in this Office, as of this date, that there are no tax liens currently due against the land within this subdivision or parcel description described as Assessor's Parcel No. 200-461-018 for any unpaid County taxes or Special Assessments.

I further certify that taxes or assessments which will become a lien on the property, but which are not currently due, are estimated at $_____ and that a bond in this amount has been collected and deposited with this office on behalf of the Board of Supervisors.

John Bartholomew
Humboldt County Tax Collector

By _____ Deputy Date: _____

_____
Print Name

NOTARY ACKNOWLEDGMENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT

State of California
County of Humboldt

On 03/08/2022, before me, R. Christiansen,

Notary Public, personally appeared Andie Ullsmith,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature RChristiansen

Printed Name R. Christiansen

My principal place of business is in Humboldt County

My Commission Expires May 14, 2023
#2286981

Official Seal not required

PLANNING DIRECTOR'S STATEMENT

I, Liz Shorey, City Planner for the City of Fortuna, County of Humboldt, State of California, hereby state that the Tentative Map for this Subdivision was approved by the City of Fortuna by Resolution 2019-38 and this Map is substantially the same as the approved Tentative Map.

Signed: Liz Shorey Date: 3-24-2022
Liz Shorey, City Planner

CITY CLERK'S STATEMENT

I, Siana Emmons, City Clerk and ex-officio Clerk of the City Council, City of Fortuna, County of Humboldt, State of California, hereby certify that the City Council at a meeting held on _____, 20____, at which a quorum was present, approved the subdivision map and accepted on behalf of the public the parcels of land and easements offered for dedication for the uses set forth on the subdivision map in conformity with the terms of the dedications.

Signed: _____ Date: _____
Siana Emmons, City Clerk

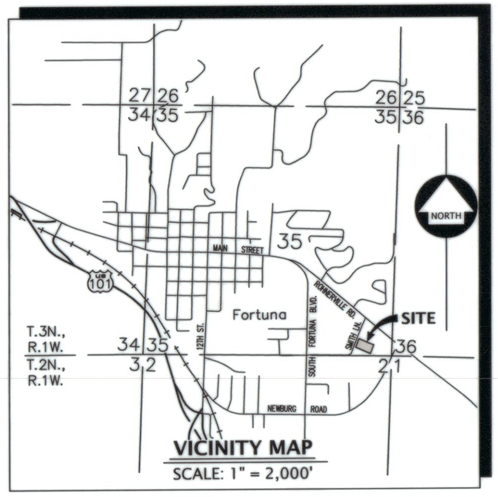
CITY ENGINEER'S STATEMENT

I hereby state that I have examined this map, except those requirements examined by the City Surveyor. The subdivision as shown is substantially the same as the approved tentative map and any approved alterations thereof. All provisions of the Subdivision Map Act and of any local subdivision ordinances applicable at the time of approval of the Tentative Map have been complied with.

Signed: _____
Brendan E. Byrd, RCE 91293
City Engineer, City of Fortuna

Date: 3/24/22

REGISTERED PROFESSIONAL ENGINEER
BRENDAN E. BYRD
No. C 91293
CIVIL
STATE OF CALIFORNIA



VICINITY MAP
SCALE: 1" = 2,000'

CITY DEDICATIONS

PARCEL A, as shown hereon over Lots 1, 2, 3, 4, 5 & 6, is a 77 foot wide easement for public utility purposes and emergency vehicle access hereby offered for dedication to the City of Fortuna for public use.

PARCEL B, as shown hereon over Lots 3 & 4, is a 23 foot wide easement for public utility purposes hereby offered for dedication to the City of Fortuna for public use.

PARCEL D, as shown hereon over Lots 4, 5 & 6, is a 15 foot wide easement for public utility purposes previously conveyed to private parties are noted hereon hereby offered for dedication to the City of Fortuna for public use.

PARCELS M & N as shown hereon, are easements for public utility purposes hereby offered for dedication to the City of Fortuna for public use.

PARCELS P & Q, as shown hereon over Lots 1 & 6, are 1 foot wide non-vehicular access easements hereby offered for dedication to the City of Fortuna.

EASEMENTS CREATED BY THIS MAP

PARCEL C, as shown hereon over Lots 1, 2, 3, 4, 5 & 6, is a 77 foot wide easement for ingress, egress, parking and public utility purposes for the benefit of all Lots in this subdivision.

PARCELS E, F, G, H, J, K, & L, as shown hereon, are easements for drainage, public utilities and open space purposes for the benefit of all Lots in this subdivision.

SURVEYOR'S STATEMENT

This map was prepared by me or under my direction and is based upon a field survey in conformance with the requirements of the Subdivision Map Act and local ordinance, at the request of ***Will Adams*** in ***March 2022***. I hereby state that all the monuments are of the character, and occupy the positions indicated, and that the monuments are sufficient to enable the survey to be retraced, and that this Final Map substantially conforms to the conditionally approved Tentative Map. I hereby state that said survey is true and complete as shown.

_____
Michael D. Pulley
P.L.S. 7793

3/4/2022
Date

LICENSED LAND SURVEYOR
MICHAEL D. PULLEY
L.S. 7793
STATE OF CALIFORNIA

CITY SURVEYOR'S STATEMENT

Pursuant to Section 66442 of the Government Code, this map has been examined this 24 day of March, 2022 and I am satisfied the map is technically correct.

Signed: _____ Date 3/24/2022
Kenneth Johnston, P.L.S. 9194
City Surveyor, City of Fortuna

PROFESSIONAL LAND SURVEYOR
KENNETH R. JOHNSTON
No. 9194
STATE OF CALIFORNIA

COUNTY RECORDER'S STATEMENT

Filed this _____ day of _____, 2022 at _____ m. in Book _____ of Maps, at Pages _____, Humboldt County Records, at the request of Points West Surveying.

Kelly E. Sanders
Humboldt County Recorder

By _____ Deputy

_____
Print Name

FEE $ _____

Instrument No._____

TRACT No. _____

SMITH LANE SUBDIVISION
for
Humboldt Development Company, LLC

BEING A SUBDIVISION OF 2019-1260
SECTION 35 T3N R1W
HUMBOLDT MERIDIAN
IN THE CITY OF FORTUNA
HUMBOLDT COUNTY, STATE OF CALIFORNIA
MARCH 2022
PWS Jn 1286-20

SCALE: AS NOTED SHEET 1 OF 4

POINTS WEST SURVEYING CO.
5201 Carlson Park Dr., Suite 3 - Arcata, CA 95521
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CITY MONUMENT NUMBERS SHOWN HEREON ARE TAKEN FROM BOOK 50 OF SURVEYS, PAGES 133-135

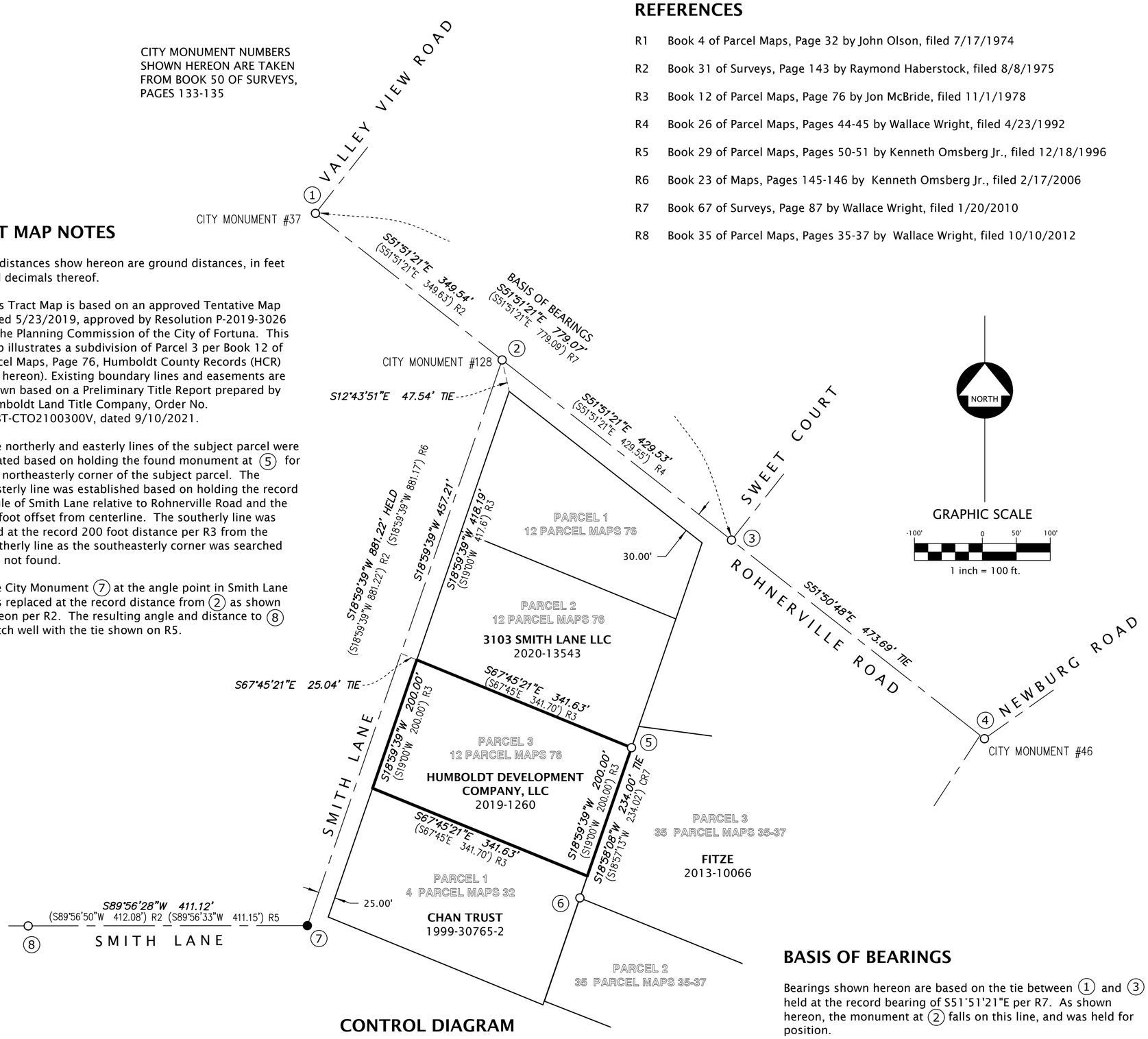
TRACT MAP NOTES

1) All distances show hereon are ground distances, in feet and decimals thereof.

2) This Tract Map is based on an approved Tentative Map dated 5/23/2019, approved by Resolution P-2019-3026 of the Planning Commission of the City of Fortuna. This map illustrates a subdivision of Parcel 3 per Book 12 of Parcel Maps, Page 76, Humboldt County Records (HCR) (R2 hereon). Existing boundary lines and easements are shown based on a Preliminary Title Report prepared by Humboldt Land Title Company, Order No. FHBT-CTO2100300V, dated 9/10/2021.

3) The northerly and easterly lines of the subject parcel were located based on holding the found monument at (5) for the northeasterly corner of the subject parcel. The westerly line was established based on holding the record angle of Smith Lane relative to Rohnerville Road and the 25 foot offset from centerline. The southerly line was held at the record 200 foot distance per R3 from the northerly line as the southeasterly corner was searched for, not found.

4) The City Monument (7) at the angle point in Smith Lane was replaced at the record distance from (2) as shown hereon per R2. The resulting angle and distance to (8) match well with the tie shown on R5.



CONTROL DIAGRAM

REFERENCES

R1 Book 4 of Parcel Maps, Page 32 by John Olson, filed 7/17/1974

R2 Book 31 of Surveys, Page 143 by Raymond Haberstock, filed 8/8/1975

R3 Book 12 of Parcel Maps, Page 76 by Jon McBride, filed 11/1/1978

R4 Book 26 of Parcel Maps, Pages 44-45 by Wallace Wright, filed 4/23/1992

R5 Book 29 of Parcel Maps, Pages 50-51 by Kenneth Omsberg Jr., filed 12/18/1996

R6 Book 23 of Maps, Pages 145-146 by Kenneth Omsberg Jr., filed 2/17/2006

R7 Book 67 of Surveys, Page 87 by Wallace Wright, filed 1/20/2010

R8 Book 35 of Parcel Maps, Pages 35-37 by Wallace Wright, filed 10/10/2012

BASIS OF BEARINGS

Bearings shown hereon are based on the tie between (1) and (3) held at the record bearing of S51°51'21"E per R7. As shown hereon, the monument at (2) falls on this line, and was held for position.

CORNER NOTES

(1) City Monument #37 - Found 2 1/2" dia. brass disc with small "+", no other markings, in concrete in standard monument well at the intersection of David Way, Valley View Road, and Rohnerville Road per R2. Held for Basis of Bearings.

(2) City Monument #128 - Found 2 1/2" dia. brass disc stamped "LS 3431 1979" with center "+" in concrete in standard monument well at the intersection of Smith Lane and Rohnerville Road per R2. Held for position.

(3) Found 2" dia. brass disc stamped "LS 4851 FORTUNA" with punchmark in concrete in standard monument well at the intersection of Sweet Court and Rohnerville Road per R4, held for Basis of Bearings.

(4) City Monument #46 - Found 1" dia. brass disc with punchmark, no other markings, in small monument well with no cover at the intersection of Newburg Road and Rohnerville Road as shown on Book 68 of Surveys, Pages 136-145, Corner Note 20 thereon. Asphalt patch to west of this position in area of City Monument #45 which appears to have been destroyed by utility construction. Not used by this survey.

(5) Found 1" dia. iron pipe with plastic plug stamped "LS 3115", plug driven down into pipe, at southwesterly side of fence intersection per R1. Held to establish north line of subject parcel.

(6) Found 1/2" dia. iron pipe with plastic plug stamped "LS 4851 WRIGHT" at fence intersection per R8, monument is 0.11' easterly (measured perpendicular) to extension of east line of subject parcel.

(7) Monument shown on R2, described as 1 1/4" dia. copperweld flush with pavement on R6, searched for, not found, likely destroyed by sewer manhole rehabilitation. Reset 2" dia. brass disc monument at surface in concrete collar of manhole stamped "PULLEY LS 7793 SMITH LANE RESET 2021" at record distance and bearing from (2) per R2.

(8) Found brass pin in concrete in standard monument well in centerline on Smith Lane, shown on R2 and R5.

(9) Set 3 1/4" dia. brass disc stamped "PULLEY LS 7793 2021 SMITH LANE SUBDIVISION LOT 2 LOT 3 LOT 4 LOT 5" in standard monument well at lot line intersection in parking lot. Punch mark falls in "N" of "SMITH LANE" near edge of disk.

TRACT No. _____

SMITH LANE SUBDIVISION

for

Humboldt Development Company, LLC

BEING A SUBDIVISION OF 2019-1260
SECTION 35 T3N R1W
HUMBOLDT MERIDIAN
IN THE CITY OF FORTUNA
HUMBOLDT COUNTY, STATE OF CALIFORNIA
MARCH 2022

SCALE: 1" = 100' SHEET 2 OF 4

POINTS WEST SURVEYING CO.
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BOOK ___ OF MAPS, PAGE ____

S67°45'21"E 25.04' TIE

S67°45'21"E 341.63'
(S67°45'E 341.70') R3

S67°45'21"E 117.52'

5.00'

S67°45'21"E 125.50'

8.50'

S67°45'21"E 98.61'

5

SMITH LANE

S18°59'39"W 99.02'

60.46'

LOT 1
11340 sq. ft. (Gross)

60.86'

98.86'

S22°14'39"W

LOT 2
12407 sq. ft. (Gross)

98.86'

S22°14'39"W

LOT 3
10027 sq. ft. (Gross)

S18°59'39"W 99.02'

S18°59'39"W 200.00'
(S19°00'W 200.00') R3

20' WIDE PUBLIC UTILITIES
EASEMENT PER 2012-25190

15' WIDE PUBLIC UTILITIES
EASEMENT PER 2009-20348-3

38.56'

33.00'

N67°45'21"W 111.90'

S67°45'21"E 125.50'

9

S67°45'21"E 104.23'

S18°59'39"W 200.00'
(S19°00'W 200.00') R3

38.56'

33.00'

S18°59'39"W 100.98'

62.42'

100.82'

S22°14'39"W

LOT 6
10993 sq. ft. (Gross)

67.82'

LOT 5
12652 sq. ft. (Gross)

100.82'

S22°14'39"W

LOT 4
10796 sq. ft. (Gross)

S18°59'39"W 100.98'

15' WIDE SEWER EASEMENT
PER 1989-5158
& 1989-6650

S67°45'21"E 106.18'

S67°45'21"E 125.50'

S67°45'21"E 109.95'

S67°45'21"E 341.63'
(S67°45'E 341.70') R3

NORTH

GRAPHIC SCALE

-20' 0 10' 20'

1 inch = 20 ft.

LEGEND

(N74°15'19"W 98.70') R1	RECORD BEARING AND DISTANCE PER REFERENCE 1
N74°15'19"W 98.70'	MEASURED BEARING AND DISTANCE
CR1	CALCULATED FROM NOTED REFERENCE
(1)	SEE CORNER NOTE 1 ON SHEET 2
○	FOUND RECORD MONUMENTS AS NOTED. SEE CORNER NOTES
●	SET 1" DIA. IRON PIPE WITH PLASTIC PLUG STAMPED "PULLEY LS 7793" UNLESS OTHERWISE NOTED
◕	SET 3/4" DIA. BRASS TAG STAMPED "PULLEY LS7793" WITH RIVET IN CONCRETE
———	EXTERIOR BOUNDARY LINES
———	NEW LOT LINES CREATED BY THIS MAP
———	ADJACENT BOUNDARY LINES
—— – ——	CENTERLINE OF RIGHT OF WAY
– – – – –	EXISTING EASEMENT LINES
— — — —	PROPOSED EASEMENT LINES

EASEMENTS OF RECORD

DOCUMENT 1989-5158 - 15 foot wide easement for sanitary sewer purposes and appurtenances thereto granted to C. Anthony & Irma Jean Fleschner -SHOWN HEREON

DOCUMENT 1989-6650 - 15 foot wide easement for sanitary sewer purposes and appurtenances thereto granted to C. Anthony & Irma Jean Fleschner -SHOWN HEREON

DOCUMENT 2009-20348-3 - 15 foot wide easement for public utility purposes granted to Egan, Kable, Wooden, Ventura & Simpson - SHOWN HEREON

DOCUMENT 2012-25190-3 - 20 foot wide easement for public utility purposes granted to City of Fortuna - SHOWN HEREON

EXISTING EASEMENTS
TRACT No. _____
SMITH LANE SUBDIVISION
for
Humboldt Development Company, LLC

BEING A SUBDIVISION OF 2019-1260
SECTION 35 T3N R1W
HUMBOLDT MERIDIAN
IN THE CITY OF FORTUNA
HUMBOLDT COUNTY, STATE OF CALIFORNIA
MARCH 2022

SCALE: 1" = 20' SHEET 3 OF 4

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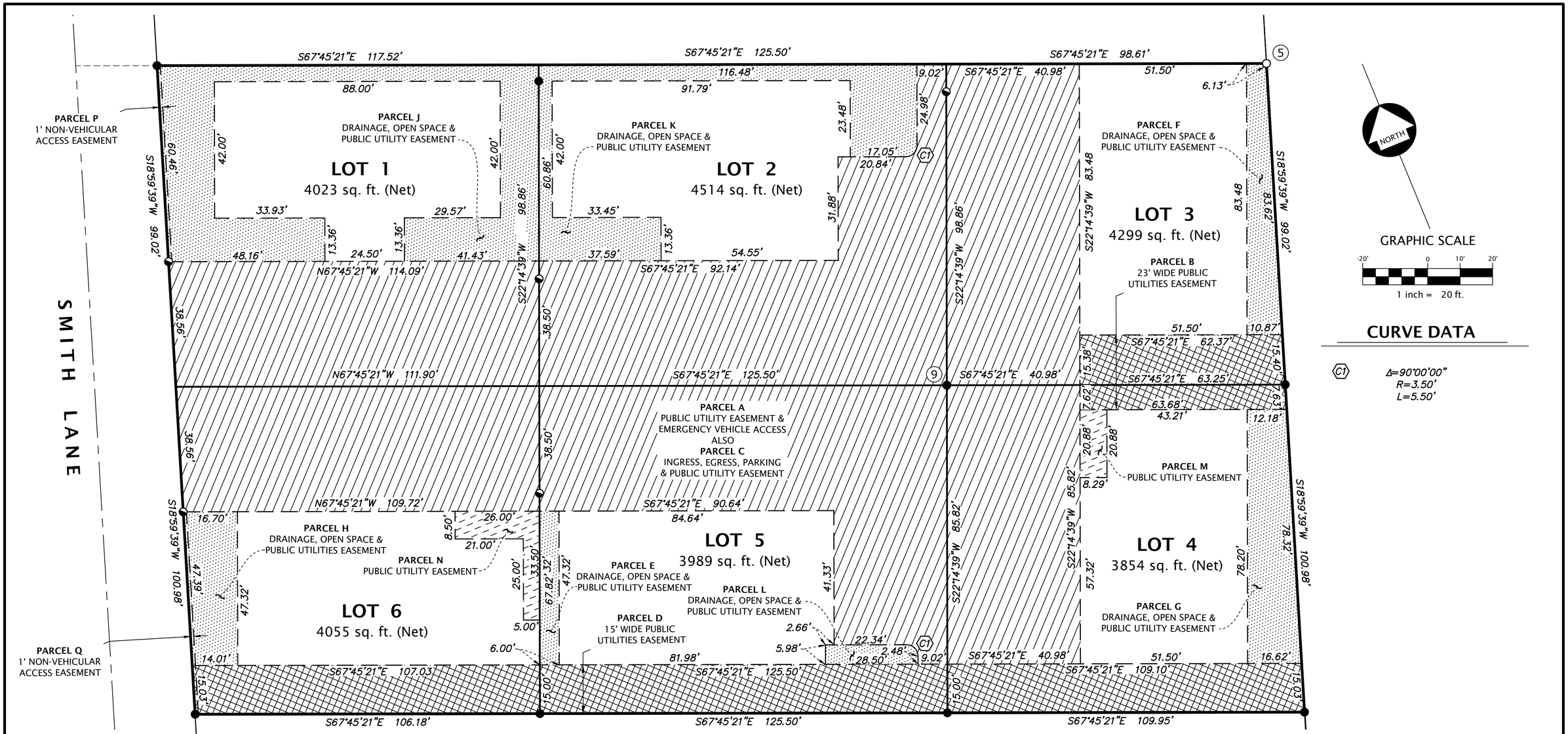
BOOK ___ OF MAPS, PAGE ____



CURVE DATA

C1 Δ=90°00'00" R=3.50' L=5.50'

LEGEND

(N74°15'19"W 98.70') R1	RECORD BEARING AND DISTANCE PER REFERENCE 1
N74°15'19"W 98.70'	MEASURED BEARING AND DISTANCE
CR1	CALCULATED FROM NOTED REFERENCE
(1)	SEE CORNER NOTE 1 ON SHEET 2
○	FOUND RECORD MONUMENTS AS NOTED. SEE CORNER NOTES
●	SET 1" DIA. IRON PIPE WITH PLASTIC PLUG STAMPED "PULLEY LS 7793" UNLESS OTHERWISE NOTED
◕	SET 3/4" DIA. BRASS TAG STAMPED "PULLEY LS7793" WITH RIVET IN CONCRETE
———	EXTERIOR BOUNDARY LINES
———	NEW LOT LINES CREATED BY THIS MAP
———	ADJACENT BOUNDARY LINES
—— – ——	CENTERLINE OF RIGHT OF WAY
– – – – –	EXISTING EASEMENT LINES
— — — —	PROPOSED EASEMENT LINES

PARCEL A - PUBLIC UTILITY & EMERGENCY VEHICLE ACCESS EASEMENT TO BE DEDICATED TO THE CITY OF FORTUNA
PARCEL C - INGRESS, EGRESS, PARKING & PUBLIC UTILITY EASEMENT FOR BENEFIT OF ALL LOTS

PARCELS B & D - PUBLIC UTILITY EASEMENT TO BE DEDICATED TO THE CITY OF FORTUNA

PARCELS E, F, G, H, J, K, & L - DRAINAGE, PUBLIC UTILITIES & OPEN SPACE EASEMENT FOR THE BENEFIT OF ALL LOTS

PARCELS M & N - PUBLIC UTILITY EASEMENTS TO BE DEDICATED TO THE CITY OF FORTUNA

EASEMENT NOTES

All easement lines for easements created hereon are perpendicular to or parallel with the centerline of the access road shown hereon which bears N67°45'21"W.

Dimensions of Parcels D, H, and J extend to Smith Lane right of way, not 1 foot non-access easement.

See Sheet 1 for specific language on easement dedications.

Dimensions shown hereon to lot lines and easements, not set property corners; see Sheet 3 for property corner locations/dimensions.

DEDICATIONS & EASEMENTS

TRACT No. _____

SMITH LANE SUBDIVISION

for

Humboldt Development Company, LLC

BEING A SUBDIVISION OF 2019-1260
SECTION 35 T3N R1W
HUMBOLDT MERIDIAN
IN THE CITY OF FORTUNA
HUMBOLDT COUNTY, STATE OF CALIFORNIA
MARCH 2022

SCALE: 1" = 20' SHEET 4 OF 4

POINTS WEST SURVEYING CO.
5201 Carlson Park Dr., Suite 3 - Arcata, CA 95521
707·840·9510 · Phone 707·840·9542 · Fax

BOOK ___ OF MAPS, PAGE ____

RESOLUTION 2019-38
A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FORTUNA APPROVING A TENTATIVE MAP TO SUBDIVIDE A 1.57-ACRE LOT INTO SIX MULTIFAMILY LOTS RANGING IN SIZE FROM 10,000 SQUARE FEET TO 13,197 SQUARE FEET

WHEREAS, Will Adams has applied for approval of a tentative map to subdivide a parcel of land into a six multifamily parcels; and

WHEREAS, the proposed project, and its design and improvements, conform to the applicable local policies, ordinances and the Fortuna General Plan, as discussed in the staff report and the "Findings for the Adams Subdivision" (Attachment A); and

WHEREAS, an Initial Study and Mitigated Negative Declaration (ISMND) were circulated and adopted by the Planning Commission on November 14, 2006, and mitigation measures were adopted for a multifamily development on the site that is substantially similar to the proposed development, and the proposed project fits within the project analyzed by the 2006 ISMND as allowed by the California Environmental Quality Act (CEQA), and therefore the proposed project may rely on the existing ISMND; and

WHEREAS, the Planning Commission considered this project at a duly noticed public hearing that was held on December 10, 2019 and voted to recommend that the Council approve the proposed subdivision with the attached conditions;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Fortuna that the subdivision shown on the tentative map dated October 17, 2019, is hereby approved, subject to the following conditions being satisfied and improvements being installed or secured in accordance with the Fortuna General Plan, Fortuna Municipal Code, Fortuna Improvement Standards and Specifications, and other applicable regulations, prior to recordation of the subdivision map:

I. PLANNING DIVISION:

1. All taxes to which the property is subject must be paid in full if payable, or secured if not yet payable, to the satisfaction of the County Tax Collector's Office. Approximately two weeks prior to submitting the subdivision map to the City for recordation, the Tax Collector's Office must be contacted. A receipt and "subdivision bond" from the Tax Collector's Office must be submitted with the subdivision map.

2. City fees shall be paid prior to map recordation. The fees shall be calculated and provided to the applicant following submittal of the parcel map mylars for City signatures, and prior to map recordation. The City shall calculate the fees based on the City fee ordinance and policies in effect at the time.

3. The final subdivision map shall conform to the standards of the Fortuna Municipal Code when it is filed with the Humboldt County Recorder's office.

4. The applicant shall submit Conditions, Covenants, and Restrictions (CC&Rs) to the City for review and approval, to be recorded with the subdivision first phase map, and which shall address at a minimum, homeowners association roles and responsibilities, maintenance and use of any common areas, design review approval for each building or a pre-approved set of building plans for multiple buildings, property maintenance, maintenance assessment, parking enforcement, and other issues relating to compliance with the City's project approval, and to ensure no other conflicts with the Fortuna Zoning Code as approved.

5. All building and construction activities shall comply with the Mitigation Measures adopted by Fortuna Planning Commission Resolution No. P-2004-41.

II. ENGINEERING DIVISION:

Final Map/Dedications:

1. The applicant shall submit to the City Engineer a final map prepared by a Land Surveyor or Civil Engineer, licensed in the State of California to practice Land Surveying, that is substantially the same as the approved Tentative Map dated May 23, 2019, for review, approval, and recordation with the County Recorder, within two years of the approval date of the Tentative Map. All existing easements and interests shall be shown and/or noted on the final map. Upon city approval and prior to recordation, an Autodesk compatible electronic file of the final map shall be delivered to the City Engineer.

2. The applicant shall dedicate upon the final map, the following easements to the City of Fortuna:

    a. A City utility easement within the entire width and length of the new access road extending to the back of the proposed sidewalk.

    b. A 20-foot drainage easement from the east (APN# 200-461-008) between Lots 3 and 4, increasing to the full width of the private access road for its entire length extending to Smith Lane.

    c. An area shall be set aside, and easements dedicated, if necessary, for Cluster Box Unit (CBU). Such area shall be approved by the Postmaster or the Postmaster's representative of the City of Fortuna, and written verification shall be provided. Rural boxes are acceptable if approved by the Postmaster.

    d. Additional drainage easements, as required for drainage improvements outside of the street right-of-way, as noted in the Storm Drainage and Improvement Plan sections below.

    e. A 15-foot City utility easement along the back of lots 4,5, and 6 for the existing sanitary sewer main.

f. A one foot non-vehicular access strip shall be dedicated to the City along the frontage of Smith Lane extending from the edges of the proposed access road to the next adjacent parcels.

g. Any other easements not anticipated at this time, as may be required to facilitate the construction of improvements shown on the final improvement plans, as approved for construction by the City Engineer.

3. City Council authorization to accept the required dedications and improvements and to record the final map, shall be required prior to submittal of the final map to the County Recorder for recordation.

Roads and Streets:

4. The following improvements shall be constructed or secured in accordance with the City of Fortuna's Standard Improvement Specifications and Subdivision Ordinance prior to recordation of the parcel map or final map:

    a. Road structural sections for the internal access road will be based upon R-value tests of the subgrade soils, utilizing Traffic Index values determined by the City Engineer. Typical sections shall be shown on improvement plans for all street improvements. Sidewalks, driveways, and handicapped ramps shall be constructed as a contiguous pour with curb and gutter, at the time of roadway construction.

5. Prior to recording of any parcel map, final map, or issuance of any building permit, the applicant shall pay Traffic Impact or Road Extensions and Expansions fees noted below, in accordance with City of Fortuna Resolution No. 2007-12:

    a. Prior to filing of any parcel map or final map, the applicant shall pay a fee for Arterial and Collector Road Extensions and Expansions in the amount of $305 for each new undeveloped parcel. Such fee shall be placed in the "Collector and Arterial Street Improvement Fund."

    b. Prior to the issuance of any building permit, the applicant shall pay a fee for Arterial and Collector Road Extensions and Expansions in the amount of $610.00 for each new dwelling. A credit will be given for any fees paid under section a) directly above (per Resolution 2007-12, section 7.b).

6. Street name signs shall be installed at the intersections of Smith Lane, and stop signs and stop bars shall be installed, where applicable. New street names shall be submitted and approved prior to submittal of improvement plans or final map, in accordance with the Planning Department requirements.

7. Street lights shall be installed at the intersection of the proposed access road and Smith Lane, in accordance with City Standard Details, page R-111, and dedicated to the City.

8. "No parking" signs shall be installed on both sides of the new access road, and/or the curbs shall be painted red, to be determined by the City Engineer or Director of Public Works.

Special Reports (Soils, Drainage, Geology, Traffic):

9. The applicant and all construction shall comply with all recommendations contained in the report titled "Soils Investigation for Proposed Multi-Family Residential Development" prepared by Whitchurch Engineering dated June 28, 2019 and referenced in the letter from Whitchurch Engineering dated April 18, 2019, and any subsequent updates, revisions, or additions. The measures recommended in this report(s) shall be incorporated into any and all improvement plans, site development plans, or building permits (if applicable) on the property, unless a more detailed report has been prepared for a specific site. A note to this effect shall be placed on the improvement plan drawings.

10. Provisions of the Drainage and Soils Report(s) must be complied with during construction of any improvements in order to ensure site stability and that drainage issues are addressed. In order to ensure compliance with the findings of the geologic/soils and drainage report(s) during building permit stage, a copy any report(s) shall be placed on file with the Fortuna Building Department. Site specific soils/slope stability and drainage issues noted by the city inspector, at the time of construction, shall be mitigated prior to acceptance of the construction improvements.

Water System:

11. Show how proposed units connect into City water system. Each proposed parcel may only have one metered connection.

12. Water mains, as sized by the developer's engineer, and approved by the City Engineer, shall be extended within the project in accordance with the City of Fortuna Improvement Standards, Section V-3, page 15.

13. Fire hydrants shall be installed every 500 feet within residential areas, and 300 feet within commercial areas, at locations approved by the Fortuna Volunteer Fire District and City of Fortuna Improvement Standards, Section V-3, page 15. A letter of approval from the fire department, including a schematic diagram of approved fire hydrant and building fire department connection (FDC) locations, shall be provided prior to approval of the improvement plans.

14. Water valves shall be installed in accordance with City of Fortuna Improvement Standards, Article V – Water Systems.

15. All dead end mains shall be provided with a standard blow off or other acceptable means of flushing in accordance with the City of Fortuna Improvement Standards, Article V – Water Systems.

16. Backflow prevention shall be provided at all landscape irrigation and fire service connections.

17. Provide easements to any on-site fire hydrant required by FVFD.

Sewer System:

18. Each individual parcel shall connect to the City sewer system through a single connection. All sewer laterals shall have a cleanout located in a public utility easement or public right of way and all laterals shall be directed towards the new sewer line located in the central access road.

19. A hydraulic analysis to determine the ability of the city's existing sewer facilities to serve the project may be required, at the discretion of the City Engineer. The analysis shall determine whether adequate capacity is present within the existing city facilities. If the analysis determines that adequate service cannot be provided by the city's existing sewer facilities, the applicant shall upsize the existing collection, pumping and/or treatment facilities serving the project, as needed, so that adequate sewer service can be provided; or provide other means, acceptable to the City Engineer, to supply adequate sewer service to the project. If the applicant is required to oversize, improve, or extend the city's existing sewer facilities, a rebate agreement may be considered in accordance with Fortuna City Council Policy "Rebate Agreements for Water and Sewer Extensions and/or Facilities" dated June, 2004.

20. Sewer mains, as sized by the developer's engineer, and approved by the City Engineer, shall be extended within the project in accordance with the City of Fortuna Improvement Standards, Article VI – Sanitary Sewers.

21. Minimum size of sewer mains shall be 8", except for final runs within cul-de-sacs, or other area where there is no possibility of future extension of the sewer main. Sewer manholes shall be installed at a maximum spacing of 300 feet. Sewer cleanouts to grade may be installed at the end of final runs within cul-de-sacs, other areas where there is no possibility of future extension of the sewer main, or at the end of a sewer main that will likely be extended in the future. Sewer cleanouts to grade can be installed no further than 150 feet from a manhole.

Storm Drainage:

22. A site map shall be prepared for the Stormwater Control Plan that shows more detail in the connections between the infiltration trenches and the self-retaining areas.

23. Calculation of runoff reduction credits shall ensure that any porous pavement installed over the top of an infiltration trench will not receive credit, as credit is already being taken for the infiltration trench.

24. All development shall comply, to the extent reasonably possible, with the recommendations of the 2005 Storm Drain Master Plan prepared by Winzler and Kelly, a copy of which is available for purchase at City Hall. Drainage Reports and/or calculations shall specifically include consideration of the recommendations within this report. If

recommendations per the Master Plan are not included within the proposed development design, the Drainage Report and/or calculations must address specific justification for omission thereof. Specific provisions that should be incorporated into any development design, and/or addressed within the project Drainage Report include, but are not necessarily limited to:

a. Incorporate onsite and regional storm drainage detention.

b. New development shall not increase the estimated existing peak runoff rate from the site due to the 25-year 24-hour storm. Any increase beyond the 25-year event peak resulting from new development shall be retained or detained at the expense of the developer/owner.

25. Design of all Storm Drainage Facilities shall incorporate Low Impact Development (LID) practices, and a Stormwater Control Plan shall be prepared in accordance with the requirements outlined in the Humboldt County Low Impact Development Manual (V2.0).

26. A Drainage Report shall be prepared for the project by a properly licensed professional. All of the measures recommended in these reports shall be incorporated into any and all improvement plans, site development plans, or building permits (if applicable). Improvement plans shall include a signature block for consultant(s) that have prepared the drainage report(s) for the project, stating the appropriate plans have accurately reflected the recommendations contained therein. In the event that the Drainage Report is prepared by the same engineer or firm that prepares the Improvement Plans, a separate signature block acknowledging the Drainage Report shall not be required. In this case, a general note shall be included on the title sheet of the plans, acknowledging the Drainage Report by title and date, and confirming that the plans have accurately reflected the recommendations contained therein.

27. Prior to recording of any parcel map, final map, or issuance of any building permit, the applicant shall pay Storm Drainage fees noted below in accordance with City of Fortuna Resolution No. 2007-12:

a. Prior to filing any parcel map or final map, the applicant shall pay a drainage assessment fee of $600/vacant parcel.

b. Parcels developed prior to 1985 shall pay a drainage fee of $0.32/square foot for all existing impervious surface coverage on the parcel.

c. Prior to issuance of any building permit, the applicant shall pay a drainage fee of $0.32/square foot of impervious surface coverage created.

d. A drainage fee calculated upon the issuance of a building permit shall be reduced by the amount of the drainage fee paid prior to the filing of a parcel or final map, per section a) above (per Resolution 2007-12, section 4.a.ii).

28. Storm Drainage Improvements, as determined necessary by the Drainage Report, and as shown on the Improvement Plans, shall be extended within the project in accordance with the City of Fortuna Improvement Standards, Article IV – Drainage Improvements. Appropriate easements to accommodate maintenance and repair of the improvements shall be provided on the final map. Specific storm drainage improvements required include, but may not be limited to the following:

    a. Storm drain pipes and structures to deliver project storm water runoff to the nearest existing City-owned facility.

    b. Lot grading (as shown on the Improvement Plans) to ensure post-project runoff does not flow to adjacent lots of the project.

    c. Lot grading (as shown on the Improvement Plans) to ensure off-site flows not routed through the project's storm drainage system do not change in character, location, or volume.

    d. Mitigation of storm water runoff flows as noted above to prevent post-development flows from exceeding pre-development flows.

29. All public storm drain inlets are to be marked with "No Dumping—Drains to River" using brass markers purchased from the City of Fortuna Public Works Division, or other supplier approved by the Public Works Division.

30. As well as being shown on the final map, a "Notice of Special Development Conditions" shall be recorded noting the need for any private storm drainage easements to be created on any of the lots of this development, as determined by the approved final grading and drainage plan. The Notice shall state that no structures, uses, or modification of ground elevations shall be allowed that obstruct storm water runoff within the drainage easement(s), and shall include language requiring maintenance of any LID facilities by the property owner.

Improvement Plans:

31. Prior to performing any work on the improvements, an Improvement Plan shall be submitted to the City Engineer, and approved and signed by the City Engineer, Director of Public Works, City Planner, City Compliance Coordinator, Pacific Gas and Electric, AT&T, SuddenLink, U.S. Postal Service, the Fortuna Building Official, and the Fortuna Fire District Chief. Once approved, an Autodesk compatible electronic file shall be delivered to the city. After completing the work, a complete set of "Record Drawings" including reproducible improvement plan drawings shall be filed with the City documenting all as-built improvements. It shall be the responsibility of the Design Engineer who prepares the Improvement Plans to certify the Record Drawings as being accurate and complete.

32. Improvement Plans shall include full design data for all improvements proposed to be constructed in conjunction with the development, including any required off-site improvements. Improvement plan drawings shall be reasonably organized and presented with a title sheet showing a location map, general notes, and sheet index. Plan sheets shall include match lines and references to adjacent sheets. If off-site improvements are required as a part of the development, the location and sheet number for these improvements shall be clearly shown and identified on the title sheet. Improvement plans for required off-site improvements shall be an integral part of the improvement plans prepared for the development, unless specifically approved otherwise by the City Engineer.

33. A Construction Cost Estimate, prepared by a Registered Civil Engineer, showing estimated quantities and unit prices based upon prevailing wage labor rates, shall be provided for all work included on the final approved Improvement Plans.

34. Improvement Plans shall include a grading plan clearly showing existing contours and finish grade elevations, including all cut and fill slopes, and cut and fill daylight lines. The general location of finished building pads and finish pad elevations shall be shown for each parcel. Detailed location, finished grade elevations, and grading shall be provided for all flag lots to be created (if applicable). Maximum driveways slope shall be 15% . All of the improvements required by the Conditions of Approval, and shown on the grading plan shall be installed prior to the filing of the final map, unless appropriate agreements and bonding have been executed. All lots shall be graded so that the surface water runoff shall drain to the street or other drainage facility approved by the City Engineer adjacent to the parcel. Surface water runoff shall be directed to the street whenever possible. Designation of rear lot drainage on an approved Tentative Map shall not be interpreted as a tacit approval to provide rear lot drainage in conjunction with the final grading plan. Extraordinary, extenuating, and compelling conditions must exist before rear lot drainage will be allowed. All drainage facilities outside the street right-of-way shall be installed in pipe. Drainage outfalls may require Best Management Practices to reduce storm water contamination, as determined by the Public Works Director, City Engineer, and/or jurisdictional regulatory agencies. All grading plans shall consider the surface flow of waters in the event that proposed storm drainage facilities fail for any reason, minimizing the potential for flooding of buildings or other damage.

35. When building plans for Lots 1-6 are submitted, an individual grading, drainage, and foundation plan signed by a Licensed Engineer or Certified Engineering Geologist shall be submitted for each lot, and shall be subject to approval by the City Engineer. A "Notice of Special Development Conditions" shall be recorded to notify future property owners of this requirement.

36. All improvement plans shall be prepared using the NAVD88 vertical datum. The improvement plans shall include a note acknowledging how the datum was established on the project site (which benchmarks were used to establish the elevation datum). A temporary benchmark shall be provided for the city inspector's and contractors' use within 100' of the limits of the development. The location, description, and elevation of the TBM shall be clearly shown on the improvement plans.

37. Prior to any grading on the site, Improvement Plans shall be prepared for the project, reviewed, and approved by the City Engineer. Improvement plans shall include an erosion control plan identifying construction site BMP's. The erosion control plan must be approved prior to issuance of any grading permit (including rough grading), or prior to signing the Improvement Plans, and ongoing inspections will be conducted by the City Engineer or appointed designee. If grading is started on the project prior to approval of improvement plans or issuance of a grading permit, or receipt of a Waste Discharge Identification Number (WDID) from the Regional Water Quality Control Board (if required), the City will immediately issue a Stop Work Notice, the contractor shall be subject to fines and penalties as specified in Municipal Code, and the City Manager may elect to request the City Council or Planning Commission to consider rescinding approval of the development.

38. Projects that involve grading or disturbance of soil shall comply with the requirements of the State of California State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CA S000002 (General Order). This General Order became effective on July 1, 2010. If proposed construction activity will disturb less than one (1) acre of land, BMP's shall be implemented to eliminate, minimize and/or treat stormwater discharges from the site. These BMP's shall be monitored for effectiveness throughout construction activities. If proposed construction activity will disturb one (1) acre of land or more, the General Order requires that the Legally Responsible Person (LRP) (usually the property owner or leasehold interest) is required to obtain permit coverage under the General Permit through the submittal of Permit Registration Documents (PRD's) ***prior to the commencement of construction activities***. Permit Registration Documents include, but are not limited to, a Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer (QSD), certified by the State Water Resources Control Board (the Board). The General Order requires all PRD's to be electronically submitted and the appropriate fee paid to the Board prior to the Board issuing a Waste Discharge Identification Number (WDID). The WDID shall be provided to the City Engineer in conjunction with improvement plan review and checking, and must be confirmed by the City Engineer prior to the approval of the improvement plans.

39. A note shall be added to the Improvement Plans, stating "This project is required to meet all requirements of the State of California State Water Resources Control Board National Pollutant Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CA S000002 (General Order) regarding storm water erosion control. All mass grading shall be completed between May 1st and October 15th unless otherwise specifically approved by the City Engineer. If project construction activity is anticipated to extend beyond October 15th, the developer and/or contractor shall submit written notice to the City Engineer by September 15th of each year, requesting approval of wet weather construction activities. Wet weather construction activities may not be approved for sensitive sites. The project site shall be adequately winterized, and all Best Management

Practices (BMP's) shall be in place, and all disturbed areas adequately stabilized, before the onset of seasonal rains which may produce runoff or erosion, or no later than October 15th of each year, whichever occurs first. The City may issue Stop Work Notice and/or notify the Board of any violations of these provisions."

If construction activity is proposed on the site during wet weather periods, the written notice required directly above shall request a meeting with City staff prior to October 1st to review anticipated construction activities during wet weather periods. The site's SWPPP, and the project site's calculated risk level, as determined in the PRD's, will be evaluated to determine whether construction activity during wet weather periods will be permitted. In the event that construction activities within wet weather periods are allowed, an additional general note shall to be included on the improvement plans, as follows:

a. All site inspections (including pre- and post-storm inspections) required by the General Order shall be faithfully performed and properly documented. In the event any erosion control provision fails to perform adequately, or as intended; or there is any observed erosion on, or sediment transport from, the project site, all construction activities shall immediately cease on the project, and notice provided to the Legally Responsible Person, the designated Qualified SWPPP Developer or Practitioner (QSD/QSP as designated in the project's PRD's), and the City Engineer. The QSD/QSP shall provide direction for the repair of any failed erosion control BMP measure(s), and/or additional erosion/sediment control BMP's recommended to prevent further erosion or sediment transport. No additional new work shall be completed on the project until the failed erosion control BMP measures have been repaired to the satisfaction of the QSD/QSP and the City of Fortuna, and/or additional recommended erosion/sediment control BMP's have been properly installed. The QSD/QSP shall prepare a letter or memo to the City, acknowledging that repairs and/or additional BMP's have been completed to the QSD/QSP's satisfaction, prior to work resuming on the project.

Miscellaneous Requirements:

40. A cement pad for a Cluster Box Unit (CBU) shall be poured, location to be approved in writing by the Post Office. The CBU shall be installed, or receipt showing payment of it shall be provided. If necessary, additional easements for the placement of the CBU shall be shown and dedicated on the final map.

41. Public utilities, including sewer, water, electricity, cable TV, gas, and telephone, shall be installed within the right-of-way within the subdivision and laterals shall be installed to each parcel, when necessary, in accordance with each utility's rules and regulations. Utility poles and/or street lights shall be placed within the 10-foot wide utility easement. If necessary, any existing utility poles shall be relocated. The installation of public utilities shall be coordinated with and approved by the applicable utility. All laterals shall be marked for easy identification. Prior to the filing of the final map, the developer shall provide proof that financial arrangements have been made for installation of all public utilities to each lot of the subdivision.

PASSED AND ADOPTED by the City Council of the City of Fortuna on this 16 day of December 2019 by the following vote:

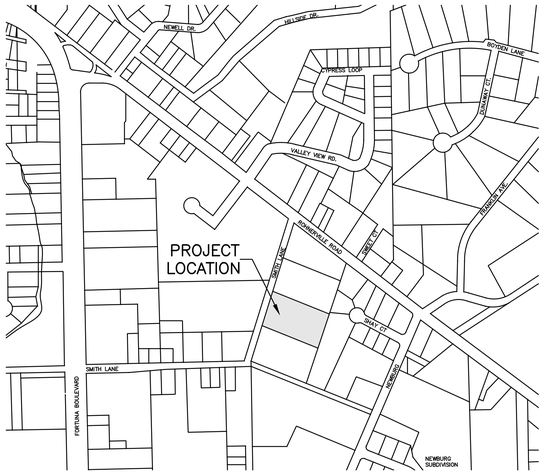
AYES: Council Member Glaser, Johnson, Stanfield, Mayor Pro Tem Trent, Mayor Long
NOES: None
ABSTAIN: None
ABSENT: None

Sue Long, Mayor

ATTEST:

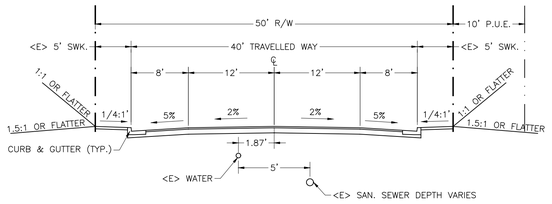
Siana L. Emmons, City Clerk

TENTATIVE MAP



LOCATION MAP

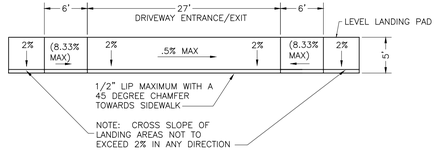
SCALE: 1"=400'



A

EXISTING ROAD SECTION FOR SMITH LANE

SCALE: 1"=10'



TYPICAL DRIVEWAY DETAIL

SCALE: 1"=10'

APPLICANT: WILL ADAMS – ACGC INC.
217 E STREET
EUREKA, CA. 95501
(707) 443–6000

AGENT: WHITCHURCH ENGINEERING
JEFFREY LAIKAM, P.E.
610 NINTH STREET
FORTUNA, CA. 95540
(707) 725–6926

PROJECT LOCATION: SMITH LANE
FORTUNA, CA. 95540
APN: 200–461–018
ZONE: RESIDENTIAL MULTIFAMILY

PROJECT DESCRIPTION:
THE PURPOSE OF THIS TENTATIVE MAP IS TO CREATE A 6 LOT SUBDIVISION WITH 6 APARTMENT BUILDINGS, EACH CONTAINING 6 INDIVIDUAL APARTMENT UNITS. THE SUBDIVISION OF THIS PARCEL (200–461–018, ZONED RM) WILL CREATE 6 LOTS. ALL NECESSARY EASEMENTS WILL BE GRANTED TO THE CITY OF FORTUNA FOR WATER & SEWER.

NOTE: ALL EASEMENTS OF RECORD ARE SHOWN ON THE TENTATIVE MAP AND WILL APPEAR ON THE FINAL, RECORDED MAP.

TENTATIVE MAP NOTES:

- FURTHEST DISTANCE TO A FIRE HYDRANT – 350'
- ALL BUILDINGS WILL BE 24' & 8" AT THE PEAK OF THE ROOF
- BUILDINGS WILL BE CONSTRUCTED IN THE FOLLOWING PHASES.

CONSTRUCTION PHASES
1. LOT 1 & LOT 2
2. LOT 3 & LOT 4
3. LOT 5 & LOT 6

6 LOT SUBDIVISION
APN 200–461–018

(18) ONE–BEDROOM APARTMENT UNITS
(18) TWO–BEDROOM APARTMENT UNITS

(36) UNITS TOTAL

GROSS PARCEL SIZE = 68,230 S.F.

BUILDING AREAS	= 13,484	41,911
PARKING & DRIVEWAY AREAS	= 21,358	
SIDEWALK AREAS	= 6,637	
TRASH & RECYCLE AREAS	= 432	
GROUND LEVEL OPEN SPACE	= 26,319	
2ND FL. OPEN SPACE (DECKS)	= 1,206	
TOTAL OPEN SPACE	= 27,525 (40.3%)	

SETBACK REQUIREMENTS

ZONING: RM

FRONT: 20'
SIDE: 5'
REAR: 10'
PUBLIC STREET: 10'

PARKING REQUIREMENTS

ZONING: RM
USES: LESS THAN 8 UNITS PER PARCEL (17.05.140 FMC)

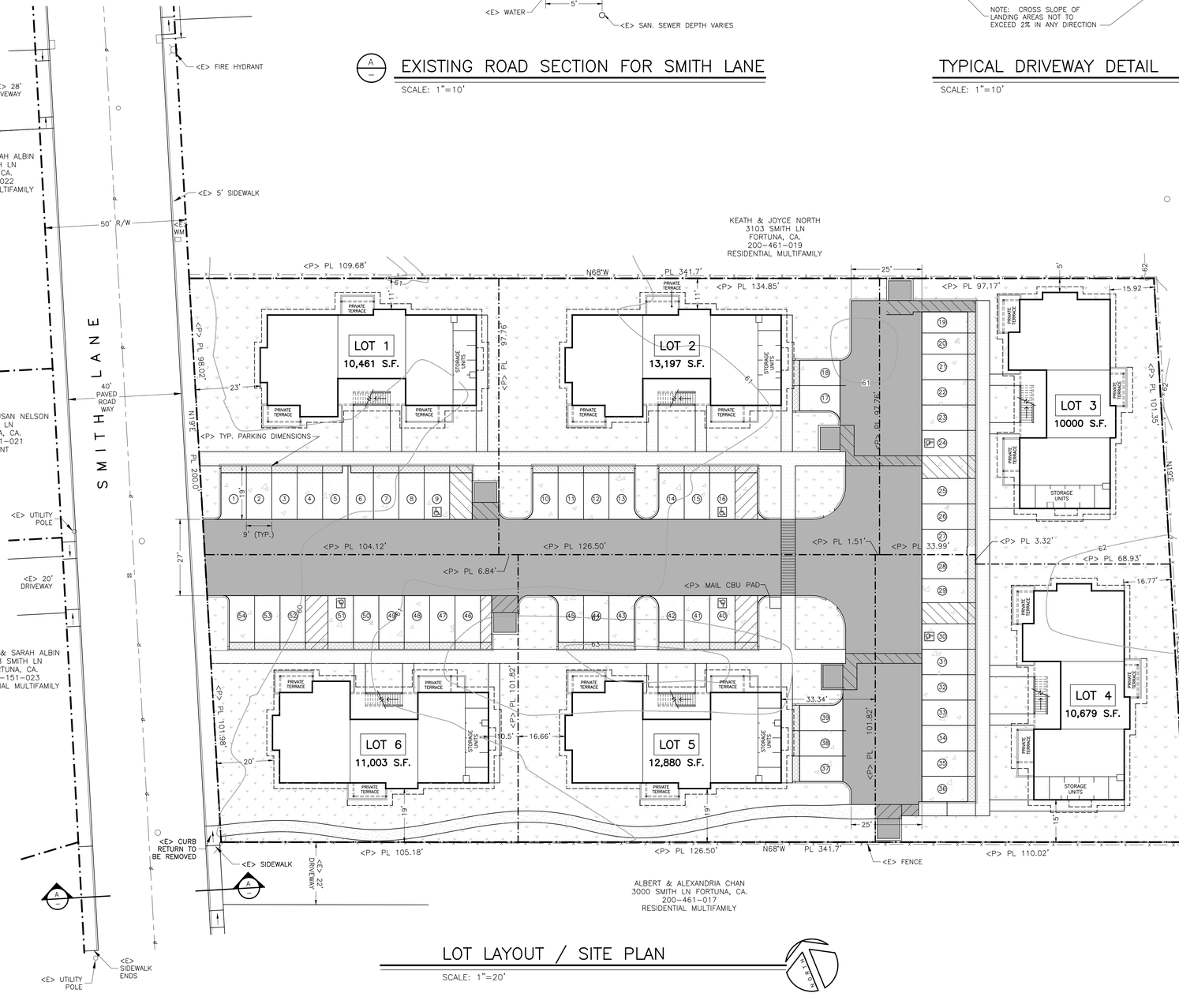
(18) ONE–BEDROOM APARTMENT UNITS
(18) TWO–BEDROOM APARTMENT UNITS

– 1 SPACE PER 1 BEDROOM UNIT
– 2 SPACES PER 2 BEDROOM UNIT

= 18 x 1 + 18 x 2 = 54 PARKING SPACES

LEGEND

- AC – ASPHALTIC CONCRETE
- <E> – EXISTING
- F.F. – FINISHED FLOOR
- CL – CENTERLINE
- FL – FLOW LINE
- GD – GROUND
- M.H. – MANHOLE
- <P> – PROPOSED
- PL – PROPERTY LINE
- SD – STORMDRAIN
- TC – TOP OF CURB
- JB – JUNCTION BOX
- – PROPOSED POROUS PAVEMENT COVERED INFILTRATION TRENCH
- – PROPOSED ASPHALTIC CONCRETE PAVING
- – PROPOSED CONCRETE WALKWAYS
- – PROPOSED LANDSCAPE AREAS
- – PROPOSED GRASS COVERAGE AREAS
- – PROPOSED POROUS PAVEMENT AREAS
- – PROPOSED 4' WIDE GRAVEL WALKING PATH
- – PROPOSED PROPERTY LINE
- – EXISTING PROPERTY LINE
- x — x — EXISTING FENCING
- x — x — PROPOSED FENCING
- W — W — EXISTING WATER MAIN
- SS — SS — EXISTING SEWER MAIN
- SD — SD — EXISTING STORMDRAIN
- GAS — GAS — EXISTING GAS LINE
- OH — OH — EXISTING OVERHEAD POWERLINE
- SD — SD — PROPOSED STORMDRAIN
- W — W — PROPOSED WATER MAIN
- SS — SS — PROPOSED SEWER MAIN
- GAS — GAS — PROPOSED GAS LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- SETBACK LINE
- CENTER LINE
- 00.00 – NEW FINISHED GRADE
- 00.00 – EXISTING GRADE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM SEWER DRAIN
- EXIST STORM SEWER DROP BOX
- PROPOSED STORM SEWER DROP BOX
- P – PG&E PEDESTAL
- EXISTING WATER VALVE
- PROPOSED WATER SERVICE METER
- PROPOSED SEWER LATERAL w/CLEANOUT
- SURFACE FLOWLINE



LOT LAYOUT / SITE PLAN

SCALE: 1"=20'

PRELIMINARY

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

REVISIONS	BY

REGISTERED PROFESSIONAL ENGINEER * JEFFREY T. LAIKAM * NO. 66586 * STATE OF CALIFORNIA

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725–6926

ACGC SMITH LANE SUBDIVISION & DEVELOPMENT
APN 200–461–018
3097 SMITH LANE, FORTUNA, CA. 95540

LOT LAYOUT / SITE PLAN

FOR: WILL ADAMS, ACGC INC, 217 E STREET, EUREKA, CA. 95501 (707) 443–6000

Date	MAY 23 '19
Scale	AS NOTED
Design	JTL
Drawn	LWC
Job	ACG–1901
Sheet	1
OF	3

STAFF REPORT
City Council Business Agenda Item

DATE: May 16, 2022

TO: Honorable Mayor and Councilmembers

FROM: Liz Shorey, Deputy Director of Community Development

THROUGH: Merritt Perry, City Manager

SUBJECT: **Public Hearing to Hold the Second Reading Amending the Fortuna Zoning Map from Residential Single Family (R-1-6) to Residential Multifamily (R-M); Location: 809 12th Street and 806 13th Street; APNs: 040-043-021 and 040-043-016; Applicant: Tyler Franklin; *Ordinance 2022-754***

STAFF RECOMMENDATION:

Staff recommends that the City Council amend the Fortuna Zoning Map from Residential Single Family (R-1-6) to Residential Multifamily (R-M) by holding the second reading of *Ordinance-2022-754*.

This is a second reading for the above-described Zoning Map amendments. The General Plan land use map was modified from Residential Low (RL) to Residential Medium (RM) by Council adoption of Resolution 2022-13. The Zoning Map amendments require a second reading of Ordinance 2022-754. There have been no changes since the first reading was held on May 2, 2022, and staff has not received any public comments or any new information. The following is information presented to the Council in the May 2nd staff report.

EXECUTIVE SUMMARY:

The applicant has submitted a request to rezone 806 13th Street from Residential Single Family (R-1-6) to Residential Multifamily (R-M) in order to convert the existing residence to a 4-plex. City staff recommends also including in the rezone the neighboring parcel to the west (809 12th Street), as it is an existing non-conforming 4-plex. Both parcels are located on the north side of N Street (between 12th and 13th streets), adjoining the City's Downtown district. Approval of a rezone would also require a General Plan map amendment from Residential Low (RL) to Residential Medium (RM) in order to maintain general plan consistency.

The area under consideration consists of two parcels, summarized as follows:

Assessor Parcel No.:	**040-043-021**	**040-043-016**
Address:	809 12th Street	806 13th Street
Parcel Size:	6,600 square feet	6,600 square feet
Existing General Plan:	Residential Low (RL)	Residential Low (RL)

Proposed General Plan:	Residential Multifamily (R-M)	Residential Multifamily (R-M)
Existing Zoning:	Residential Single Family (R-1-6)	Residential Single Family (R-1-6)
Proposed Zoning:	Residential Medium (R-M)	Residential Medium (R-M)
Existing Land Use:	Four units	One unit
Proposed Land Use:	No change	Four units

Proposed Project

The proposed map amendments would change the principal land use activity from single-family residential to multifamily. The residence at 809 12th Street contains four living units, which are allowed as a legal nonconforming use (FMC 17.06.130). The residence at 806 13th Street has operated as a group care home in the past, and has most recently been used as a single-family residence, a principally permitted activity. The applicant/property owner is requesting a rezone to allow the two-story building at 806 13th Street to be remodeled to allow four living units, including two 2-bedroom units and two 3-bedroom units (see attached floor plans). After the rezone, the multifamily units would be a principally permitted activity, with no special permit required except for design review approval for any proposed exterior changes.

Location

Zoning to the north is Residential Single Family (R-1-6) and Retail Commercial (R-C) to the south. Surrounding activities consist of residential single-family activities to the north of N Street, single family to the east, commercial/office to the west, and mixed use commercial and residential activities to the south in the Downtown Retail Commercial (R-C) zone.

Neighborhood Compatibility

Each parcel is developed with a two-story Craftsman-style structure that complements the period architecture of the Downtown area (see attached street view images). This housing style has the appearance of a medium-sized single-unit house, and is compatible in scale with the single-family zone to the north, creating a seamless transition between the Downtown commercial activities and the single-family neighborhood. These are ideal for conversion to four-plexes as proposed, with simple conversion to two units on the ground floor and two above, with shared or individual entries from the street. They also fill the demand for affordable housing in walkable neighborhoods with dining and shopping amenities, as well as other commercial services and transit options, are responsive to changing demographics, and offer affordable housing too low to moderate-income individuals and small families.

Because these lots were built in the early 20th century pre-automobile style, there is reduced opportunities for on-site provision of parking. At this location, there is the ample street frontage along three streets (N, 12th and 13th streets). These 4-plexes would typically not have more than a total of eight cars (two per unit). Each site would have three to four on-site parking spaces accessed by the alley, and street parking will provide up to seven spaces for each building, for a total of 11 spaces per 4-plex building. In addition, households with fewer cars (such as single or retired renters and those with smaller households) are typically attracted to this type of walkable housing style adjacent to the Downtown area where they can enjoy the nearby urban amenities.

PLANNING COMMISSION RECOMMENDATION

On April 12, 2022, the Planning Commission considered the proposed General Plan and Zoning Map amendments, and voted (4-1) to recommend that the Council adopt the amendments, with Commissioner Mobley dissenting due to parking concerns. There were no members of the public in attendance at the hearing, and no public comments were submitted.

ENVIRONMENTAL:

The project is exempt from the provisions of the California Environmental Quality Act under a Class 32 exemption (CEQA Sec. 15332) for In-Fill development projects, and a Common Sense Exemption pursuant to 15061(b)(3) which applies to projects where it can be seen with certainty that there is no chance of a significant environmental impact.

FISCAL IMPACT:

The General Plan and zoning amendments will not result in any cost to the City.

RECOMMENDED COUNCIL ACTION:

1. Receive staff presentation and review questions with staff.
2. Open public comment.
3. Close public comment.
4. Motion to hold the second reading and adopt *Ordinance 2022-754*, read by title only. Roll call vote.

ATTACHMENTS:

- *Ordinance 2022-754, An Ordinance of the City Council of the City of Fortuna Amending the Fortuna Zoning Map from Residential Single Family (R-1-6) to Residential Multifamily (R-M)*
    - Exhibit 1—Zoning Map Amendments
- Assessor Parcel Map
- Project Location Map
- Zoning & General Plan Map Amendments Map
- 806 13th Street First Floor Plan
- 806 13th Street Second Floor Plan
- Street View

ORDINANCE 2022-754

AN ORDINANCE OF THE FORTUNA CITY COUNCIL AMENDING THE FORTUNA ZONING MAP FROM RESIDENTIAL SINGLE FAMILY (R-1-6) TO RESIDENTIAL MULTIFAMILY (R-M)

WHEREAS, the City Council of the City of Fortuna has the authority to approve and amend the land use designations of parcels from one zoning designation to another in order to address unforeseen circumstances and changing priorities; and

WHEREAS, the proposed rezone will amend the parcels shown on Exhibit 1 from Residential Single Family (R-1-6) to Residential Multifamily (R-M); and

WHEREAS, the Zoning Map amendments are consistent with the Fortuna General Plan, pursuant to FMC 17.07.1, including the following General Plan policies:

> LU-4.3 Multi-Family Housing. The City shall encourage multi-family housing to be located throughout the community, but especially within or near major transportation corridors, Downtown, major commercial areas, neighborhood commercial centers, and employment centers.
>
> LU-11.5 Housing. The City shall actively pursue the creation of significant new housing opportunities within and immediately adjacent to Downtown.
>
> LU-11.4 Nighttime Activities. The City shall strive to create more nighttime pedestrian activity in Downtown.
>
> LU-11.7 Pedestrian Environment. The City shall create a distinctive and active pedestrian environment that supports Downtown as a unique destination.
>
> LU-1.6 Infill Development. The City shall encourage infill development on vacant sites and reuse of underutilized parcels to minimize outward growth and reduce the cost of providing public services and facilities, and

WHEREAS, the City finds that the amendment supports the public health, safety, and general welfare pursuant to FMC 17.07.H.2, in that it results in affordable housing in an appropriate location adjacent to the Downtown Retail Commercial area to the south and a residential single family neighborhood to the north, and that fills the demand for affordable housing in walkable neighborhoods with dining and shopping amenities, and other commercial services and transit options, and is responsive to changing demographics; and

WHEREAS, the Planning Commission has considered the Zoning Map amendments at a duly noticed public hearing on April 12, 2022, and after considering the staff report, discussion, and public comment, and voted (4-1) to recommend that the City Council amend the Zoning Map;

NOW, THEREFORE, The City Council of the City of Fortuna, State of California, does ordain as follows:

SECTION 1. Pursuant to Fortuna Municipal Code Section 17.07.200 Zoning Amendments, the City Council does hereby amend the Fortuna Zoning Map from Residential Single Family (R-1-6) to Residential Multifamily (R-M) as set forth is Exhibit 1.

SECTION 2. Severability. If any subsection, sentence, clause or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have adopted this ordinance, and each and every subsection, sentence, clause and phrase thereof not declared invalid or unconstitutional, without regard to whether any portion of the ordinance would be subsequently declared invalid or unconstitutional.

SECTION 3. Conflicts. All ordinances and parts of ordinances or resolutions, in conflict herewith, are hereby repealed to the extent of such conflicts and no further.

SECTION 4. Effective Date. The effective date of this ordinance is thirty (30) days after its adoption by the City Council.

INTRODUCED AND FIRST READING PERFORMED on this 2nd day of May 2022 by the following vote:

AYES:
NAYS:
ABSENT:
ABSTAIN:

_____
Sue Long, Mayor

ATTEST:

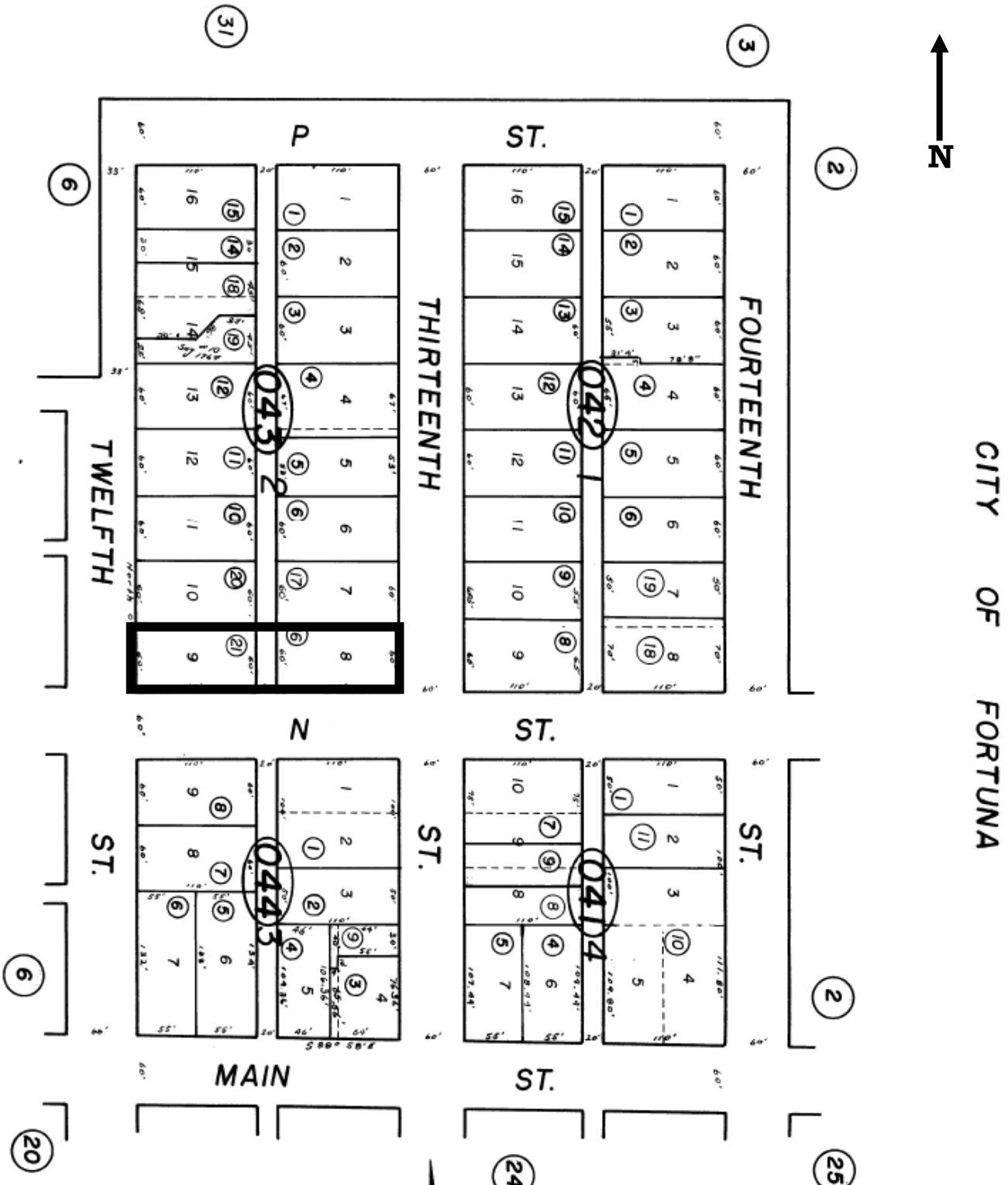
_____
Siana L. Emmons, City Clerk

SECOND READING PERFORMED AND ADOPTED on the 16th day of May 2022 by the following vote:

AYES:
NAYS:
ABSENT:
ABSTAIN:
ATTEST:

_____
Sue Long, Mayor

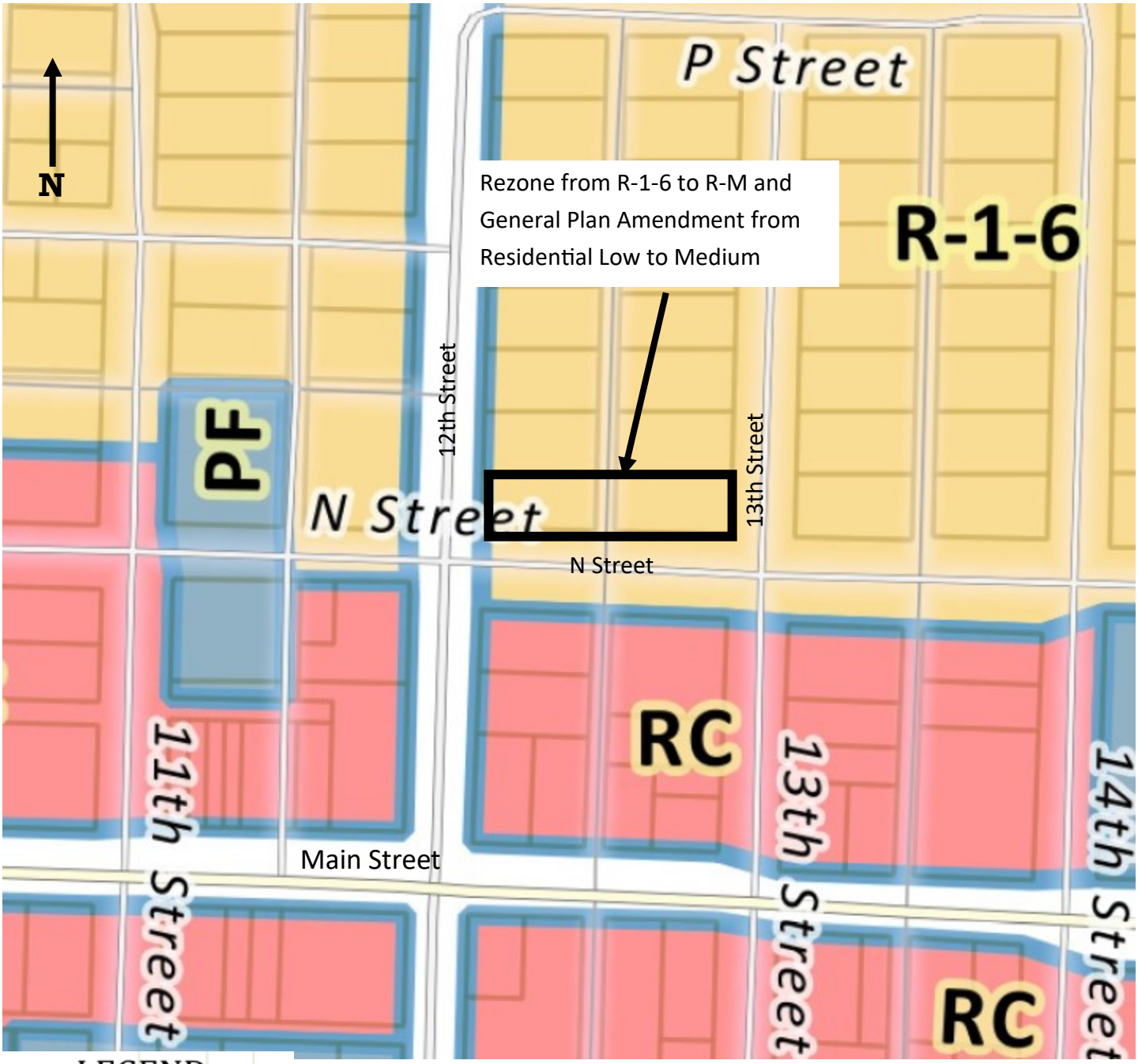
_____
Siana L. Emmons, City Clerk



City of Fortuna
Proposed Zoning and General Plan Map Amendments
Assessor Parcel Map

City of Fortuna
Proposed Zoning and General Plan Map Amendments
Project Location Map

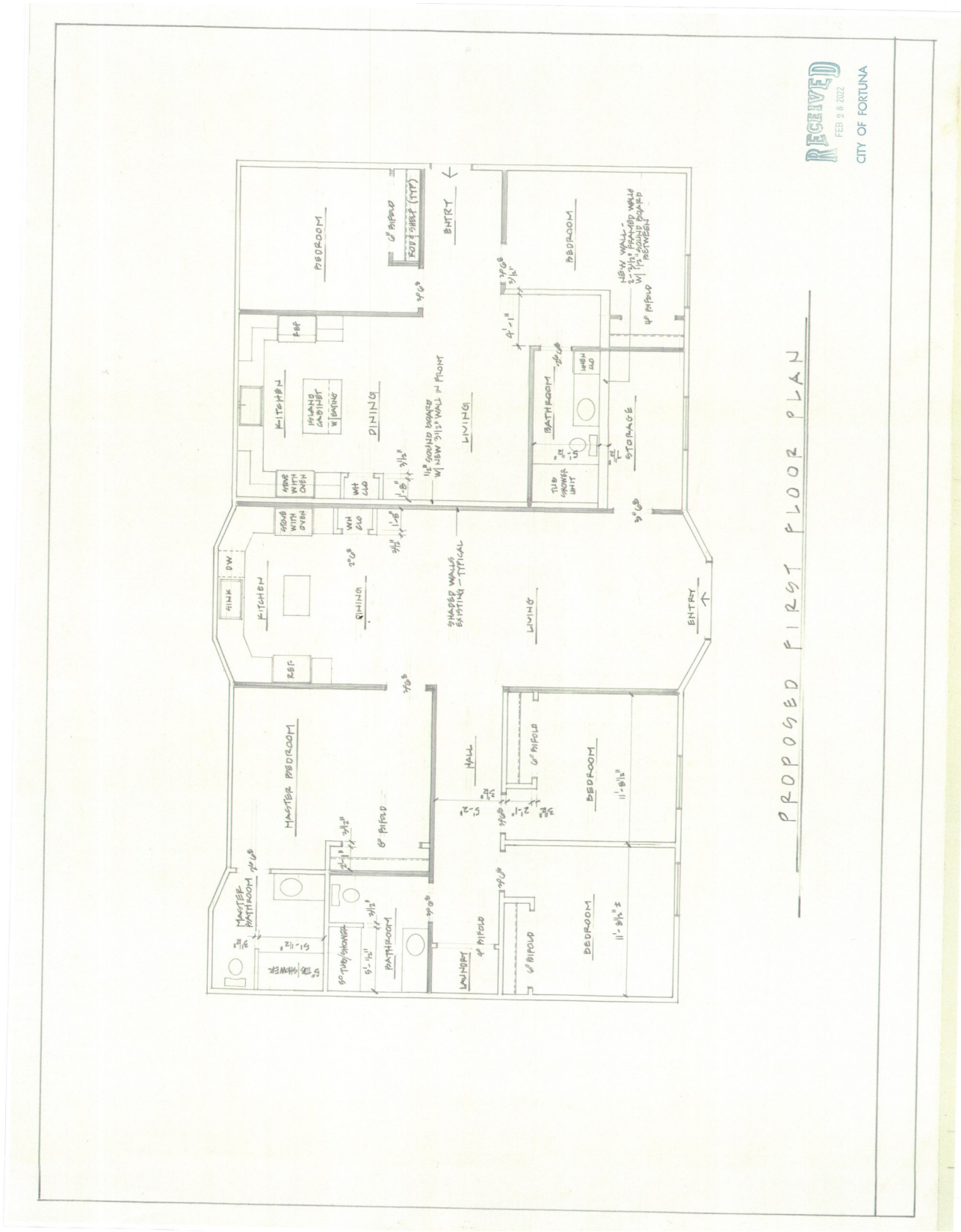
N



LEGEND

- FC • Freeway Commercial
- RC • Retail Commercial
- CT • Commercial Thoroughfare
- NC • Neighborhood Commercial
- RM • Residential Multifamily
- R-1-6 • Residential Single Family (Min. 6,000 SF Lots)
- R-1-10 • Residential Single Family (Min. 10,000 SF Lots)
- RE 20 • Residential Estates (Min. 20,000 SF Lots)
- RE 43 • Residential Estates (Min. 43,560 SF Lots)
- PF • Public Facility

City of Fortuna
Proposed Zoning & General Plan Map Amendments

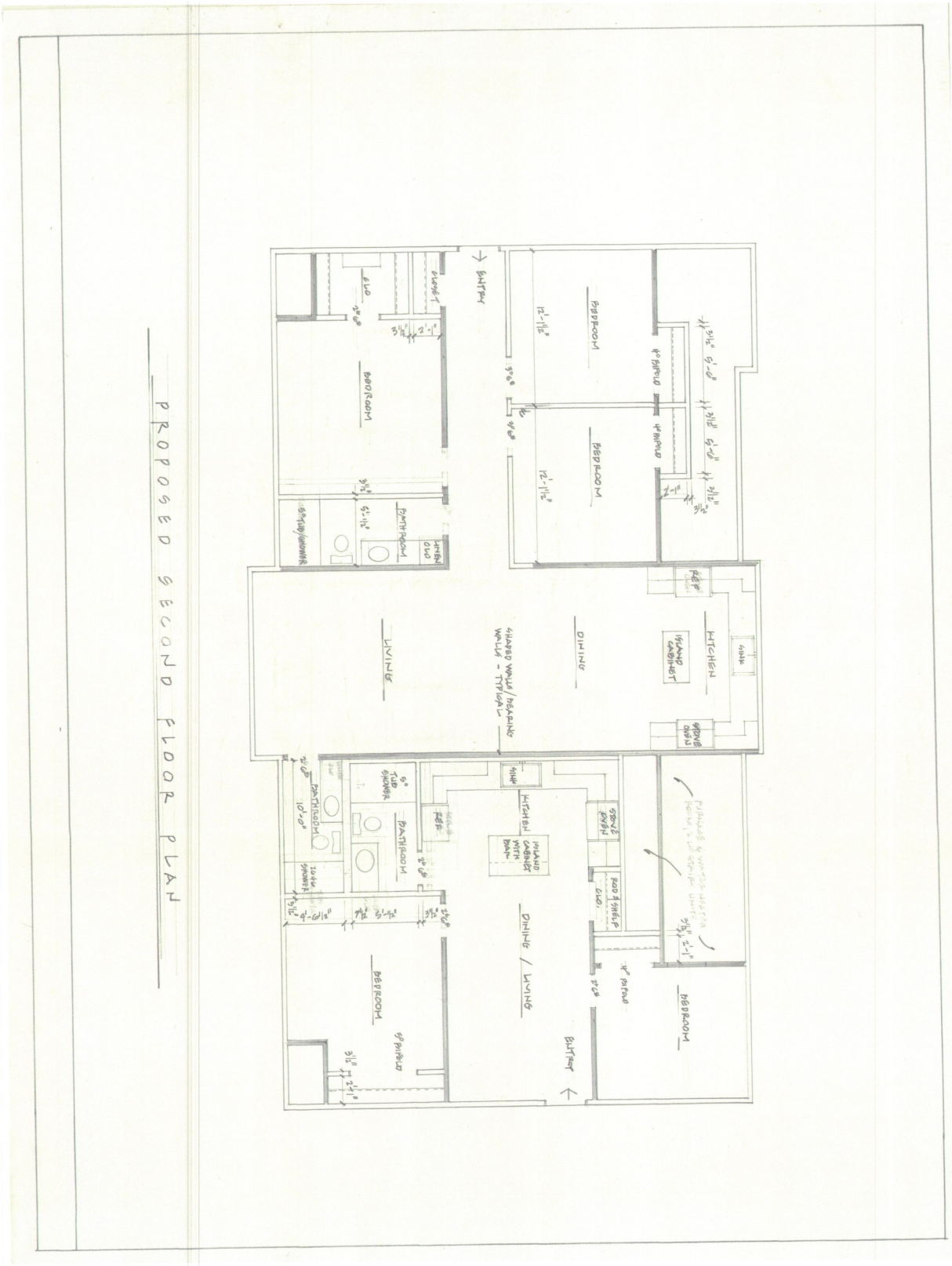


City of Fortuna

Proposed Zoning and General Plan Map Amendments

806 13th Street First Floor Plan

N



City of Fortuna

Proposed Zoning and General Plan Map Amendments

Assessor Parcel Map

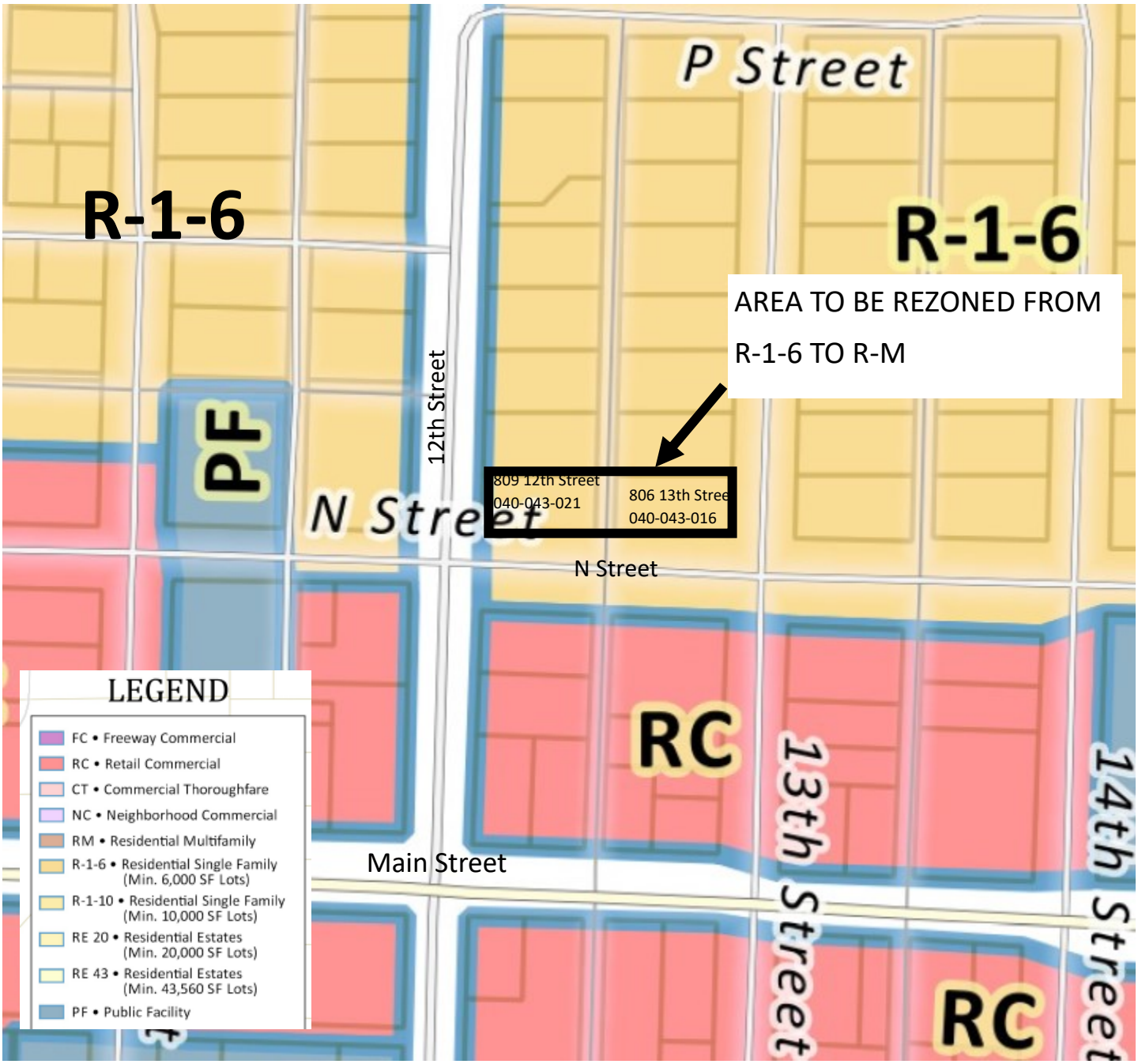
N

809 12th Street

806 13th Street

City of Fortuna
Proposed Zoning and General Plan Map Amendments
Street View

Exhibit 1 to Zoning Amendment Ordinance



City of Fortuna
Proposed Zoning Map Amendment
Residential Single Family (R-1-6) to Residential Multifamily (R-M)

STAFF REPORT
City Council Business Agenda Item

DATE: May 16, 2022

TO: Honorable Mayor and Council Members

FROM: Merritt Perry, City Manager

SUBJECT: **Mandatory Organic Waste Disposal Ordinance Review**

STAFF RECOMMENDATION:

Introduce and conduct first reading of Ordinance 2022-755 adding Chapter 8.14 to the Fortuna Municipal Code establishing mandatory organic waste disposal reduction regulations to implement and enforce CalRecycle organics regulations and SB 1383.

EXECUTIVE SUMMARY:

In September 2016, Governor Brown signed into law SB 1383 (Lara, Chapter 395, Statutes of 2016), establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. The new law codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605 (Lara, Chapter 523, Statutes of 2014), to achieve reductions in the statewide emissions of short-lived climate pollutants. Actions to reduce short-lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California's most at-risk communities, and on the environment.

From 2016-2020, the California Department of Resources, Recycling and Recovery (CalRecycle) worked to develop regulations to achieve the goals of SB 1383. These new regulations were finalized by CalRecycle in November 2020. The regulations went into effect January 1, 2022 and every city and county in California is required to have an enforceable SB 1383 Ordinance in place by this date. The law establishes statewide targets to reduce the amount of organic waste disposed of in landfills (50% reduction by 2020 and 75% by 2025). It also sets a goal to rescue at least 20% of currently disposed edible food by 2025 and redirect that food to people in need.

The state defines "Organic waste" as food, landscape and pruning trimmings, lumber, wood, manure, cardboard, paper products, printing and writing paper, and other plant and animal- based products. The SB 1383 regulations require that jurisdictions conduct education and outreach on organics recycling to all residents, businesses (including those that generate edible food that can be donated), haulers, solid waste facilities, and local food banks and other food recovery organizations.

With the delays in finalizing the SB 1383 regulations, CalRecycle has prioritized three components of the regulations to be in place prior to January 2022: an enforceable ordinance, an edible food recovery program, and mandatory organics collection. As a response to the challenges created by the COVID-19 pandemic and the associated delays in rulemaking for SB 1383, Governor Newsom signed Senate Bill 619, which allows agencies to request that CalRecycle waive fines for non-compliance by January 1, 2022. The fines would only be waived for agencies that have a "Notice of Intent to Comply" (NOIC) on file with CalRecycle by March 2022. The City Council authorized the City Manager to submit the Notice of Intent to comply on February 22, 2022, which was submitted by the City Manager on February 24, 2022.

There are many parts of SB 1383 that will take time and effort to develop and implement. The City is working on an Implementation Plan in collaboration with the HWMA and other jursidictions in Humboldt County. A part of that effort was the development of a roadmap of options for how we might look to identify the requirements of the various portions of the new regulations. The City will have to make changes to the City's waste collection, recycling, and organics programs in the next few years to satisfy the requirements of SB 1383.

Ordinance 2022-755 will satisfy the City's requirement to adopt an enforceable ordinance, but delay implementation of the requirements until January 1, 2023. If changes need to be made before the effective date, or the effective date is changed, that will remain an option for the City.

It is important for the City to adopt this ordinance now so that the City can qualify for the local assistance grant that it applied for to fund some of the planning work required to comply with SB 1383. The City will receive a minimum of $20,000 that will fund staff and consultant efforts currently underway, provided that an ordinance is adopted prior to June 14, 2023.

A workshop was held on May 2, 2022, at which the council reviewed the draft ordinance and received input from the public. Linda Wise with Recology was also present, and answred questions regarding the draft ordinance and how the ordinance would impact collection programs within the City.

Gary Bell of the Colantuono, Highsmith, & Whatley Law firm that has been assisting the City with the development of the draft ordinance and negotiating the franchise agreement will be on hand to answer questions regarding the draft ordinance.

The next step after adopting the ordinance will be for the City to update the solid waste franchise agreement with Recology to reflect SB 1383 requirements that the City will be requesting they complete as a part of their contract with the City. As a part of that process, it will be necessary to review potential rate changes to support the new organic collection and recycling requirements. Additionally, staff is considering adding a staff position to the city organizational chart to be responsible for activities necessary for compliance with SB 1383.

Some of the key components of the legislation related to the ordinance are described in more detail below.

SUMMARY OF KEY COMPONENTS OF SB 1383

Organics and Recycling Collection

Jurisdictions are required to provide organic waste collection to all residents and businesses, which means providing service automatically and not relying on the generator to subscribe.

SB 1383 requires specific colors for waste collection containers: trash containers must be grey or black, organics containers must be green, and recycling containers must be blue. All new containers must be clearly labeled with what does and does not go into them.

- Beginning in 2022, SB 1383 requires every jurisdiction to provide organic waste collection services to all residents and businesses. This is what we refer to as automatically providing service, mandatory service, or universal service, in which the resident or business is automatically provided the service. The City has identified January 1, 2023 as the intended date to comply with this requirement in the NOIC, as equipment is not available to be able to collect this waste until then, and there is currently no place to take organic waste to for recycling.

- The regulations require contamination monitoring in curbside collection containers. This will be delegated to the City's waste hauler in an update of the Franchise agreement.

Edible Food Recovery

The City must identify the edible food recovery generators that are required to implement edible food recovery programs, connect them with local food recovery organizations, provide annual outreach to the edible food generators about their requirements under SB 1383, and perform annual inspections to ensure they have contracts in place with edible food recovery organizations, and are keeping records of all recovered edible food

Education and Outreach

The law will require the City to conduct specific outreach to residents, schools, businesses, edible food generators, on an annual basis. The outreach must be translated into multiple languages, based on the most recent census results.

Procurement Requirement

Beginning January 1, 2022, the City must annually procure a certain quantity of recovered organic waste products. Jurisdictions can fulfill their target by procuring recycled organic waste products like compost, mulch, renewable natural gas (RNG), electricity, and recycled-content paper and paper products. This requirement has also been delayed and documented in the NOIC submitted by the City and will be implemented at a future date.

- *Organic Waste Product Requirements*
  Each jurisdiction will have a minimum procurement target for recycled organic waste products that is calculated based on its population. CalRecycle will provide a calculator for a jurisdiction to use to calculate progress towards meeting their target. CalRecycle will notify jurisdictions of their target prior to January 1, 2022. This component of the regulation is subject to significant future regional discussion and coordination as most

jurisdictions are unclear as to the mechanisms and operational capacity to procure, use, and place large quantities of compost or mulch.

- *Recycled-Content Paper and Paper Product Requirements*
  All City departments that make paper purchases will be required to purchase and keep purchase records for paper products that contain postconsumer recycled content and are recyclable.

Capacity Planning

The City must collaborate with the County and the other jurisdictions located within the county to determine the necessary organic waste recycling and edible food recovery capacity needed to divert organic waste and edible food from the landfill as required under the regulations.

Jurisdictions must do an annual compliance review of commercial businesses to ensure they are subscribed to collection service. This requirement was previously established by California's Mandatory Commercial Organics Recycling law (AB 1826, Chesbro, Chapter 727, Statutes of 2014).

Contamination Monitoring

The regulations require waste audits to be conducted on each trash, recycling, and organics route regularly, to check bins for contamination (recycling and organics not being sorted correctly). Specific recording, reporting and follow-up is required for any contamination that is found. This will likely be included in an updated franchise agreement with Recology.

In addition to the main six elements outlined above the City is required to implement enforcement mechanism and provide annual reports to CalRecycle regarding our compliance.

RECOMMENDED COUNCIL ACTION:

1. Open the Public Hearing
2. Receive staff presentation and review Council questions with staff
3. Open Public Comment
4. Close Public Comment
5. Motion to conduct first reading and adopt Ordinance 2022-755, by title only. Roll Call vote.

ATTACHMENTS:

- *Ordinance No. 2022-755, An Ordinance Of The City Council Of The City Of Fortuna, California Amending Title 8 – Health and Safety Of The Fortuna Municipal Code By Adding Chapter 8.14– Organic Reduction and Recycling Ordinance*

ORDINANCE 2022-755

ORGANICS REDUCTION AND RECYCLING ORDINANCE

TABLE OF CONTENTS

ORDINANCE 2022-755

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FORTUNA, ORGANICS REDUCTION AND RECYCLING

The City Council of the City of Fortuna hereby ordains as follows:

SECTION 1. CODE AMENDMENT. ORGANICS REDUCTION AND RECYCLING ORDINANCE

Chapter 8.14 of the Fortuna Municipal Code is hereby added to read as follows.

8.14.010. PURPOSE AND FINDINGS

(a) The purpose of this chapter is to reduce the amount of organic and recyclable materials deposited in landfills from commercial and residential generators. This Ordinance seeks to provide a single comprehensive framework to achieve its purposes and comply with various state laws as set forth below.

(b) The CITY has the power to enact this Ordinance pursuant to its police powers.

(c) State recycling law, Assembly Bill 939 of 1989, the California Integrated Waste Management Act of 1989 (approved by the Governor of the State of California on September 29, 1989, which among other things, added Division 30 (Section 40000, et seq.) to the Public Resources Code, as amended, supplemented, superseded, and replaced from time to time), requires cities and counties to reduce, reuse, and recycle (including composting) Solid Waste generated in their jurisdictions to the maximum extent feasible before any incineration or landfill disposal of waste, to conserve water, energy, and other natural resources, and to protect the environment.

(d) State recycling law, Assembly Bill 341 of 2011 (approved by the Governor of the State of California on October 5, 2011, which amended Sections 41730, 41731, 41734, 41735, 41736, 41800, 42926, 44004, and 50001 of, and added Sections 40004, 41734.5, and 41780.01 and Chapter 12.8 (commencing with Section 42649) to Part 3 of Division 30 of, and added and repealed Section 41780.02 of, the Public Resources Code, as amended, supplemented, superseded and replaced from time to time), places requirements on businesses and multi-family property owners that generate a specified threshold amount of Solid Waste to arrange for recycling service and requires jurisdictions to implement a Mandatory Commercial Recycling program.

(e) State organics recycling law, Assembly Bill 1826 of 2014 (approved by the Governor of the State of California on September 28, 2014, which added Chapter 12.9 (commencing with Section 42649.8) to Part 3 of Division 30 of the Public Resources Code, relating to Solid Waste, as amended, supplemented, superseded, and replaced from time to time), requires businesses and multi-family property owners that generate a specified threshold amount of Solid Waste, recycling, and Organic Waste per week to arrange for recycling service for those materials, requires counties and cities to implement a recycling program to divert Organic Waste from businesses subject to the law, and to implement a Mandatory

Commercial Organics Recycling program.

(f) State organics recycling law, Senate Bill 1383 of 2016, the Short-lived Climate Pollutant Reduction Act of 2016 (approved by the Governor of the State of California on September 19, 2016, which added Sections 39730.5, 39730.6, and 39730.8 to the Health and Safety Code, and added Chapter 13.1 (commencing with Section 42652) to Part 3 of Division 30 of the Public Resources Code, as amended, supplemented, superseded, and replaced from time to time), took effect on January 1, 2017 and sets Statewide Organic Waste disposal reduction targets of 50 percent by 2020 and 75 percent by 2025, based on the 2014 organics waste disposal baseline, set forth in Section 39730.6 of the Health and Safety Code, and requires CalRecycle to develop regulations to reduce organics in landfills as a source of methane. The SB 1383 Regulations place requirements on multiple entities, including counties, cities, residential households, Commercial Businesses (including Multi-Family Residential Dwellings), Commercial Edible Food Generators, haulers, Self-Haulers, Food Recovery Organizations, and Food Recovery Services to support achievement of statewide Organic Waste disposal reduction targets with compliance required beginning January 1, 2022.

(g) In furtherance of the food recovery objectives of the laws noted above and to reduce legal risks associated with food recovery, the State food donation law, Assembly Bill 1219 of 2017, the California Good Samaritan Food Donation Act of 2017 (approved by the Governor of the State of California on October 9, 2017, which amended Section 1714.25 of the Civil Code, amended Section 58502 of, and repealed Section 58506 of, the Food and Agricultural Code, and amended Sections 114432, 114433, and 114434 of, and added Section 114435 to, the Health and Safety Code, as amended, supplemented, superseded and replaced from time to time), provides additional protections for entities that donate and distribute food for human consumption.

(h) By January 1, 2022, the SB 1383 Regulations require jurisdictions to adopt and enforce an ordinance or other enforceable mechanism to implement relevant provisions of the SB 1383 Regulations concerning regulation of organic waste collection services, generators of organic waste, waste haulers, and generators and processors of edible food, together with enforcement mechanisms and administrative civil penalties for violations of local regulations.

8.14.020. TITLE OF ORDINANCE

This Ordinance is titled “Organics Reduction and Recycling Ordinance”.

8.14.030. DEFINITIONS

The following definitions govern the use of terms in this Ordinance:

(a) “Humboldt County” means all of the geographical areas located within the unincorporated areas of Humboldt County, as well as those incorporated areas of Humboldt County that have opted-in to this ordinance.

(b) “Back-Haul” means generating and transporting Organic Waste to a destination owned and

operated by a generator using the generator's own employees and equipment, or as otherwise defined in 14 CCR Section 18982(a)(66)(A).

(c) "C&D" means construction and demolition debris.

(d) "CalRecycle" means California's Department of Resources Recycling and Recovery, which is the state agency designated with responsibility for developing, implementing, and enforcing the SB 1383 Regulations.

(e) "California Code of Regulations" or "CCR" means the State of California Code of Regulations. CCR references in this Ordinance are preceded with a number that refers to the relevant Title of the CCR (e.g., "14 CCR" refers to Title 14 of CCR).

(f) "Certification of Recycling Service Form" means documentation certifying that a Commercial Business does not subscribe to collection services for Compost Containers and/or Recycling Containers because the Commercial Business has arranged for collection of its Source Separated Compost Container Organic Waste and/or Source Separated Recyclable Materials by self-hauling, Back-Haul, contracting with a third party hauler (provided that such contract does not violate any exclusive rights granted to any Regulated Hauler by the City), or shares service with another Commercial Business.

(g) "CITY" means the City of Fortuna.

(h) "Commercial Business" or "Commercial" means a firm, partnership, proprietorship, joint-stock company, corporation, institution or association (whether incorporated or unincorporated or for-profit or nonprofit), strip mall, industrial facility, or a Multi- Family Residential Dwelling, or as otherwise defined in 14 CCR Section 18982(a)(6).

(i) "Commercial Edible Food Generator" includes a Tier One or a Tier Two Commercial Edible Food Generator as defined herein or as otherwise defined in 14 CCR Section 18982(a)(73) and (a)(74). For the purposes of this definition, Food Recovery Organizations and Food Recovery Services are not Commercial Edible Food Generators pursuant to 14 CCR Section 18982(a)(7).

(j) "Community Composting" means any activity that composts green material, agricultural material, food material, and vegetative food material, alone or in combination, and the total amount of feedstock and Compost on-site at any one time does not exceed 100 cubic yards and 750 square feet, as specified in 14 CCR Section 17855(a)(4); or, as otherwise defined by 14 CCR Section 18982(a)(8).

(k) "Compliance Review" means a review of records by the Enforcement Agency to evaluate compliance with this Ordinance.

(l) "Compost" has the same meaning as in 14 CCR Section 17896.2(a)(4), which stated, as of the effective date of this chapter, that "Compost" means the product resulting from the controlled biological decomposition of organic Solid Waste that is Source Separated from the municipal Solid Waste stream, or which is separated at a centralized facility.

(m) "Compost Container" has the same meaning as "Green Container" in 14 CCR Section 18982(a)(29) and shall be used for the purpose of storage and collection of Source Separated Compost Container Organic Waste.

(n) "Compostable Plastics" or "Compostable Plastic" means plastic materials that meet the ASTM D6400 and D6868 standards for compostability and are certified by the Biodegradable Products Institute (BPI) or similar third-party approved by the CITY, and are approved by the CITY for placement in the Compost Container.

(o) "Container Contamination" or "Contaminated Container" means a container, regardless of type, that contains Prohibited Container Contaminants, or as otherwise defined in 14 CCR Section 18982(a)(55).

(p) "Designee" means an entity that the CITY contracts with or otherwise arranges to carry out or assist with any of CITY's responsibilities for compliance with the SB 1383 Regulations or administration or enforcement of this chapter. A Designee may be a government entity, a private entity, or a combination of those entities.

(q) "Edible Food" means food intended for human consumption, or as otherwise defined in 14 CCR Section 18982(a)(18). For the purposes of this chapter or as otherwise defined in 14 CCR Section 18982(a)(18), "Edible Food" is not Solid Waste if it is recovered and not discarded. Nothing in this Ordinance or in 14 CCR, Division 7, Chapter 12 requires or authorizes the Recovery of Edible Food that does not meet the food safety requirements of the California Retail Food Code, as codified in the Health and Safety Code Section 113700, et seq.

(r) "Enforcement Action" means an action of the City to address non-compliance with this Ordinance including, but not limited to, issuing administrative citations, fines, penalties, or using other remedies.

(s) "Enforcement Agency" means an entity with the authority to enforce part or all of this chapter as specified herein. Employees and agents of an Enforcement Agency may carry out inspections and enforcement activities pursuant to this Ordinance. Nothing in this Ordinance authorizing an entity to enforce its terms shall require that entity to undertake such enforcement except as agreed to by that entity.

(t) "Excluded Waste" means hazardous substances, hazardous waste, infectious waste, designated waste, volatile, corrosive, medical waste, infectious, regulated radioactive waste, and toxic substances or material that facility operator(s), which receive materials from the CITY and its generators, reasonably believe(s) would, as a result of or upon acceptance, transfer, processing, or disposal, be a violation of local, State, or Federal law, regulation, or ordinance, including: land use restrictions or conditions, waste that cannot be disposed of in Class III landfills or accepted at the facility by permit conditions, waste that in the reasonable opinion of the CITY or a Regulated Hauler operating in that CITY's jurisdiction would present a significant risk to human health or the environment, cause a nuisance or otherwise create or expose the CITY or a Regulated Hauler to potential liability; but not including de minimis volumes or concentrations of waste of a type and

amount normally found in Single-Family or Multi-Family Solid Waste after implementation of programs for the safe collection, processing, recycling, treatment, and disposal of batteries and paint in compliance with Sections 41500 and 41802 of the Public Resources Code. Excluded Waste does not include used motor oil and filters, household batteries, universal wastes, and/or latex paint when such materials are defined as allowable materials for collection through the CITY's collection programs and the generator or customer has properly placed the materials for collection pursuant to instructions provided by the CITY or the Regulated Hauler providing service to the generator.

(u) "Food Distributor" means a company that distributes food to entities including, but not limited to, Supermarkets and Grocery Stores, or as otherwise defined in 14 CCR Section 18982(a)(22).

(v) "Food Facility" has the same meaning as in Section 113789 of the Health and Safety Code.

(w) "Food Recovery" means actions to collect and distribute food for human consumption that otherwise would be disposed, or as otherwise defined in 14 CCR Section 18982(a)(24).

(x) "Food Recovery Organization" means an entity that engages in the collection or receipt of Edible Food from Commercial Edible Food Generators and distributes that Edible Food to the public for Food Recovery either directly or through other entities or as otherwise defined in 14 CCR Section 18982(a)(25), including, but not limited to:

(1) A food bank as defined in Section 113783 of the Health and Safety Code;

(2) A nonprofit charitable organization as defined in Section 113841 of the Health and Safety code; and,

(3) A nonprofit charitable temporary food facility as defined in Section 113842 of the Health and Safety Code.

A Food Recovery Organization is not a Commercial Edible Food Generator for the purposes of this chapter and implementation of 14 CCR, Division 7, Chapter 12 pursuant to 14 CCR Section 18982(a)(7). If the definition in 14 CCR Section 18982(a)(25) for Food Recovery Organization differs from this definition, the definition in 14 CCR Section 18982(a)(25) shall apply to this Ordinance.

(y) "Food Recovery Service" means a person or entity that collects and transports Edible Food from a Commercial Edible Food Generator to a Food Recovery Organization or other entities for Food Recovery, or as otherwise defined in 14 CCR Section 18982(a)(26). A Food Recovery Service is not a Commercial Edible Food Generator for the purposes of this chapter and implementation of 14 CCR, Division 7, Chapter 12 pursuant to 14 CCR Section 18982(a)(7).

(z) "Food Scraps" means all edible or inedible food such as, but not limited to, fruits, vegetables, meat, poultry, seafood, shellfish, bones, rice, beans, pasta, bread, cheese, coffee grounds, and eggshells. Food Scraps excludes fats, oils, and grease when such materials are Source Separated from other Food Scraps.

(aa) "Food Service Provider" means an entity primarily engaged in providing food services to institutional, governmental, Commercial, or industrial locations of others based on contractual arrangements with these types of organizations, or as otherwise defined in 14 CCR Section 18982(a)(27).

(bb) "Food-Soiled Paper" is compostable paper material that has come in contact with food or liquid, such as, but not limited to, compostable paper plates, napkins, and pizza boxes, and is approved by the CITY for placement in the Compost Container.

(cc) "Food Waste" means Food Scraps, Food-Soiled Paper, and Compostable Plastics in combination or separately.

(dd) "Grocery Store" means a store primarily engaged in the retail sale of canned food; dry goods; fresh fruits and vegetables; fresh meats, fish, and poultry; and any area that is not separately owned within the store where the food is prepared and served, including a bakery, deli, and meat and seafood departments, or as otherwise defined in 14 CCR Section 18982(a)(30).

(ee) "Hauler Route" means the designated itinerary or sequence of stops for each segment of the CITY's collection service area, or as otherwise defined in 14 CCR Section 18982(a)(31.5).

(ff) "Health Facility" has the same meaning as in Section 1250 of the Health and Safety Code.

(gg) "High Diversion Organic Waste Processing Facility" means a facility that is in compliance with the reporting requirements of 14 CCR Section 18815.5(d) and meets or exceeds an annual average mixed waste organic content Recovery rate of 50 percent between January 1, 2022 and December 31, 2024, and 75 percent after January 1, 2025, as calculated pursuant to 14 CCR Section 18815.5(e) for Organic Waste received from the "Mixed waste organic collection stream" as defined in 14 CCR Section 17402(a)(11.5); or, as otherwise defined in 14 CCR Section 18982(a)(33).

(hh) "Hotel" has the same meaning as in Section 17210 of the Business and Professions Code.

(ii) "Inspection" means an Enforcement Agency's electronic or on-site review of records, containers, and an entity's collection, handling, recycling, or landfill disposal of Organic Waste or Edible Food handling to determine if the entity is complying with requirements set forth in this Ordinance, or as otherwise defined in 14 CCR Section 18982(a)(35).

(jj) "Landfill Container" has the same meaning as "Gray Container" in 14 CCR Section 18982(a)(28) and shall be used for the purpose of storage and collection of Landfill Container Waste.

(kk) "Landfill Container Waste" means Solid Waste that is collected in a Landfill Container that is part of a three-container or three-plus container collection service that prohibits the placement of Organic Waste in the Landfill Container as specified in 14 CCR Sections 18984.1(a) and (b), or as otherwise defined in 14 CCR Section 17402(a)(6.5). (Three container collection service refers to service collecting materials in Landfill Containers, Organics Containers, and Recycling Containers.)

(ll) "Large Event" means an event, including, but not limited to, a sporting event or a flea market, that charges an admission price, or is operated by a local agency, and serves an average of more than 2,000 individuals per day of operation of the event, at a location that includes, but is not limited to, a public, nonprofit, or privately owned park, parking lot, golf course, street system, or other open space when being used for an event. If the definition in 14 CCR Section 18982(a)(38) differs from this definition, the definition in 14 CCR Section 18982(a)(38) shall apply to this Ordinance. For the purposes of this definition of Large Event, "local agency" means all public agencies except those that are not subject to the regulatory authority of the CITY.

(mm) "Large Venue" means a permanent venue facility that annually seats or serves an average of more than 2,000 individuals within the grounds of the facility per day of operation. For purposes of this chapter and implementation of 14 CCR, Division 7, Chapter 12, a venue facility includes, but is not limited to, a public, nonprofit, or privately owned or operated stadium, amphitheater, arena, hall, amusement park, conference or civic center, zoo, aquarium, airport, racetrack, horse track, performing arts center, fairground, museum, theater, or other public attraction facility. For purposes of this chapter and implementation of 14 CCR, Division 7, Chapter 12, a site under common ownership or control that includes more than one Large Venue that is contiguous with other Large Venues in the site, is a single Large Venue. If the definition in 14 CCR Section 18982(a)(39) differs from this definition, the definition in 14 CCR Section 18982(a)(39) shall apply to this Ordinance.

(nn) "Mixed Waste Organic Collection Stream" or "Mixed Waste" means Organic Waste collected in a container that is required by 14 CCR Sections 18984.1, 18984.2 or 18984.3 to be taken to a High Diversion Organic Waste Processing Facility or as otherwise defined in 14 CCR Section 17402(a)(11.5).

(oo) "Multi-Family Residential Dwelling" or "Multi-Family" means of, from, or pertaining to residential premises with five or more dwelling units. Multi-Family premises are considered a distinct type of Commercial Business for the purposes of implementing this Ordinance. Consistent with the SB 1383 Regulations, residential premises that consist of fewer than five units are not "Multi-Family" and instead are "Single-Family" for the purposes of implementing this Ordinance. Multi-Family premises do not include hotels, motels, or other transient occupancy facilities, which are considered other types of Commercial Businesses.

(pp) "Non-Compostable Paper" includes, but is not limited to, paper that is coated, lined or treated with a non-compostable material, or otherwise unacceptable to the compostable materials handling facility processing the material.

(qq) "Non-Organic Recyclables" means non-putrescible and non-hazardous recyclable materials including but not limited to recyclable food and beverage glass containers, metal (aluminum and steel) food and beverage cans, HDPE (high density polyethylene) bottles and PET (polyethylene terephthalate) bottles, and other materials specified in 14 CCR Section 18982(a)(43).

(rr) "Notice of Violation" means a notice that a violation has occurred that includes a compliance date to avoid an action to seek penalties, or as otherwise defined in 14 CCR

Section 18982(a)(45) or further explained in 14 CCR Section 18995.4.

(ss) "Organic Waste" means Solid Waste containing material originated from living organisms and their metabolic waste products, including but not limited to food, green material, landscape and pruning waste, organic textiles and carpets, lumber, wood, Paper Products, Printing and Writing Paper, manure, biosolids, digestate, and sludges or as otherwise defined in 14 CCR Section 18982(a)(46). Biosolids and digestate are as defined by 14 CCR Section 18982(a).

(tt) "Organic Waste Generator" means a Person or entity that is responsible for the initial creation of Organic Waste, or as otherwise defined in 14 CCR Section 18982(a)(48).

(uu) "Paper Products" include, but are not limited to, paper janitorial supplies, cartons, wrapping, packaging, file folders, hanging files, corrugated boxes, tissue, and toweling, or as otherwise defined in 14 CCR Section 18982(a)(51).

(vv) "Person" includes an individual, firm, limited liability company, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever, or as otherwise defined in Public Resources Code Section 40170.

(ww) "Printing and Writing Paper" include, but are not limited to, copy, xerographic, watermark, cotton fiber, offset, forms, computer printout paper, white wove envelopes, manila envelopes, book paper, note pads, writing tablets, newsprint, and other writing papers, posters, index cards, calendars, brochures, reports, magazines, and publications, or as otherwise defined in 14 CCR Section 18982(a)(54).

(xx) "Prohibited Container Contaminants" includes all of the following: (i) materials placed in the Recycling Container that are not identified as acceptable Source Separated Recyclable Materials for the CITY's Recycling Container; (ii) materials placed in the Compost Container that are not identified as acceptable Source Separated Compost Container Organic Waste for the CITY's Compost Container; (iii) materials placed in the Landfill Container that are acceptable Source Separated Recyclable Materials and/or acceptable Source Separated Compost Container Organic Waste that can be placed in the CITY's Compost Container and/or Recycling Container; and, (iv) Excluded Waste placed in any container.

(yy) "Recovery" means any activity or process described in 14 CCR Section 18983.1(b), or as otherwise defined in 14 CCR Section 18982(a)(49).

(zz) "Recycling Container" has the same meaning as "Blue Container" in 14 CCR Section 18982(a)(5) and shall be used for the purpose of storage and collection of Source Separated Recyclable Materials and Source Separated Recycling Container Organic Waste.

(aaa) "Regulated Hauler" means a Person that collects Solid Waste (other than Solid Waste generated by a permitted building project) originating in the CITY from Compost Containers, Recycling Containers, and/or Landfill Containers, and does so under a contract, franchise agreement, or permit with the CITY..

(bbb) "Remote Monitoring" means the use of mechanical or electronic devices to identify the types of materials in Recycling Containers, Compost Containers, and/or Landfill Containers for purposes of identifying the quantity of materials in containers (level of fill) and/or presence of Prohibited Container Contaminants.

(ccc) "Restaurant" means an establishment primarily engaged in the retail sale of food and drinks for on-premises or immediate consumption, or as otherwise defined in 14 CCR Section 18982(a)(64).

(ddd) "Route Review" means a visual Inspection of containers along a Hauler Route for the purpose of determining Container Contamination, and may include mechanical or electronic Inspection methods such as the use of cameras, or as otherwise defined in 14 CCR Section 18982(a)(65).

(eee) "SB 1383" means Senate Bill 1383 of 2016, the Short-lived Climate Pollutant Reduction Act of 2016.

(fff) "SB 1383 Regulations" means or refers to, for the purposes of this chapter, the Short-Lived Climate Pollutants: Organic Waste Reduction regulations developed by CalRecycle and adopted in 2020 that created 14 CCR, Division 7, Chapter 12 and amended portions of regulations of 14 CCR and 27 CCR.

(ggg) "Self-Hauler" means a Person, who hauls Solid Waste, Organic Waste or recyclable material they have generated to another Person for disposition as allowed by the CITY and otherwise in accordance with all applicable laws. Self-Hauler also includes a Person who Back-Hauls such materials, and as otherwise defined in 14 CCR Section 18982(a)(66).

(hhh) "Single-Family" means, for purposes of this chapter, of, from, or pertaining to any residential premises with fewer than five units.

(iii) "Solid Waste" has the same meaning as defined in Public Resources Code Section 40191, which defines Solid Waste as all putrescible and non-putrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, dewatered, treated, or chemically fixed sewage sludge which is not hazardous waste, manure, vegetable or animal solid and semi-solid wastes, and other discarded solid and semisolid wastes, with the exception that Solid Waste does not include any of the following wastes:

(1) Hazardous waste, as defined in the Public Resources Code Section 40141.

(2) Radioactive waste regulated pursuant to the State Radiation Control Law (Chapter 8 (commencing with Section 114960) of Part 9 of Division 104 of the Health and Safety Code).

(3) Medical waste regulated pursuant to the State Medical Waste Management Act (Part 14 (commencing with Section 117600) of Division 104 of the Health and Safety Code). Untreated medical waste shall not be disposed of in a Solid Waste landfill, as defined in Public Resources Code Section 40195.1. Medical waste that

has been treated and deemed to be Solid Waste shall be regulated pursuant to Division 30 of the Public Resources Code.

(jjj) "Source Separated" means materials, including commingled recyclable materials, that have been separated or kept separate from the Solid Waste stream, at the point of generation, for the purpose of additional sorting or processing those materials for recycling or reuse in order to return them to the economic mainstream in the form of raw material for new, reused, or reconstituted products, which meet the quality standards necessary to be used in the marketplace, or as otherwise defined in 14 CCR Section 17402.5(b)(4). For the purposes of this chapter, Source Separated shall include separation of materials by the generator, property owner, property owner's employee, property manager, or property manager's employee into different containers for the purpose of collection such that Source Separated materials are separated from Landfill Container Waste or other Solid Waste for the purposes of collection and processing.

(kkk) "Source Separated Compost Container Organic Waste" means Source Separated Organic Waste that can be placed in a Compost Container that is specifically intended for the separate collection of Organic Waste by the generator, excluding Source Separated Recycling Container Organic Waste, carpets, Non- Compostable Paper, and textiles.

(lll) "Source Separated Recyclable Materials" means Source Separated Non-Organic Recyclables and Source Separated Recycling Container Organic Waste.

(mmm) "Source Separated Recycling Container Organic Waste" means Source Separated Organic Wastes that can be placed in a Recycling Container that is limited to the collection of those Organic Wastes and Non-Organic Recyclables, as defined herein or as otherwise defined in Sections 18982(a)(43) and 18982(a)(46). Source Separated Recycling Container Organic Waste shall include materials as determined by the CITY and includes unsoiled Paper Products and Printing and Writing Paper.

(nnn) "Supermarket" means a full-line, self-service retail store with gross annual sales of two million dollars ($2,000,000), or more, and which sells a line of dry grocery, canned goods, or nonfood items and some perishable items, or as otherwise defined in 14 CCR Section 18982(a)(71).

(ooo) "Tier One Commercial Edible Food Generator" means a Commercial Edible Food Generator that is one of the following:

(1) Supermarket.

(2) Grocery Store with a total facility size equal to or greater than 10,000 square feet.

(3) Food Service Provider.

(4) Food Distributor.

(5) Wholesale Food Vendor.

If the definition in 14 CCR Section 18982(a)(73) of Tier One Commercial Edible Food Generator differs from this definition, the definition in 14 CCR Section 18982(a)(73) shall apply to this Ordinance.

(ppp) "Tier Two Commercial Edible Food Generator" means a Commercial Edible Food Generator that is one of the following:

(1) Restaurant with 250 or more seats, or a total facility size equal to or greater than 5,000 square feet.

(2) Hotel with an on-site Food Facility and 200 or more rooms.

(3) Health facility with an on-site Food Facility and 100 or more beds.

(4) Large Venue.

(5) Large Event.

If the definition in 14 CCR Section 18982(a)(74) of Tier Two Commercial Edible Food Generator differs from this definition as to entities subject to the regulatory authority of the CITY, the definition in 14 CCR Section 18982(a)(74) shall apply to this Ordinance.

(qqq) "Wholesale Food Vendor" means a business or establishment engaged in the merchant wholesale distribution of food, where food (including fruits and vegetables) is received, shipped, stored, prepared for distribution to a retailer, warehouse, distributor, or other destination, or as otherwise defined in 14 CCR Section 189852(a)(76).

8.14.040. REQUIREMENTS FOR SINGLE-FAMILY GENERATORS

Except Single-Family Organic Waste Generators that meet the Self-Hauler requirements in Section 8.14.100 and/or that are located in a census tract for which CalRecycle has issued a low population waiver (as described in 14 CCR Section 18984.12), Single-Family generators shall:

(a) Be subscribed to the collection service(s) approved by the CITY for Compost Containers, Recycling Containers, and Landfill Containers. The CITY shall have the right to review the number and size of a generator's containers to evaluate the adequacy of capacity provided for each type of collection service and to review the separation of materials and containment of materials. A Single-Family generator shall adjust its service level for its collection services as requested by the CITY in order to meet the standards set forth in this Ordinance. Generators may manage their Organic Waste by preventing or reducing their Organic Waste, managing Organic Waste on site, and/or using a Community Composting site pursuant to 14 CCR Section 18984.9(c) to the extent permitted by other applicable laws.

(b) Participate in the Organic Waste collection service(s) approved by the CITY by placing designated materials in designated containers as described below, and not placing Prohibited Container Contaminants in collection containers. Generator shall place Source Separated Compost Container Organic Waste, including Food Waste, in the Compost Container; Source Separated Recyclable Materials in the Recycling Container; and Landfill

Container Waste in the Landfill Container; in each case, solely to the extent such materials are acceptable materials in the applicable container under the franchise agreement between the CITY and a Regulated Hauler. Generators shall not place materials designated for the Landfill Container into the Compost Container or the Recycling Container.

(c) The Enforcement Agency for the provisions of this section is the CITY and any other Designee of the CITY.

8.14.050. REQUIREMENTS FOR COMMERCIAL BUSINESS GENERATORS INCLUDING MULTI-FAMILY RESIDENTIAL DWELLINGS

Commercial Business Organic Waste Generators, including Multi-Family Residential Dwellings, shall:

(a) Except Commercial Businesses that meet the Self-Hauler requirements in Section 8.14.100 and/or that are located in a census tract for which CalRecycle has issued a low population waiver (as described in 14 CCR Section 18984.12):

(1) Be subscribed to collection service(s) approved by the CITY for Compost Containers, Recycling Containers, and Landfill Containers and comply with requirements of those services as described below. The CITY shall have the right to review the number and size of a generator's containers and frequency of collection to evaluate adequacy of capacity provided for each type of collection service for proper separation of materials and containment of materials; and, Commercial Businesses shall adjust their service level for their collection services as requested by the CITY.

(2) Participate in collection services approved by the CITY for Organic Waste collection service(s) by placing designated materials in designated containers as described below. Generator shall place Source Separated Compost Container Organic Waste, including Food Waste, in the Compost Container; Source Separated Recyclable Materials in the Recycling Container; and Landfill Container Waste in the Landfill Container; in each case, solely to the extent such materials are acceptable materials in the applicable container under the franchise agreement between the CITY and a Regulated Hauler. Generator shall not place materials designated for the Landfill Container into the Compost Container or Recycling Container.

(b) Supply and allow access to adequate number, size and location of collection containers with sufficient labels or colors (conforming with subsections (c)(1), (c)(2), and (d) below) for employees, contractors, tenants, and customers, consistent with the Recycling Container, Compost Container, and Landfill Container collection service or, if self-hauling, per the Commercial Businesses' instructions to support its compliance with its self-haul program, in accordance with Section 8.14.100.

(c) Excluding Multi-Family Residential Dwellings, provide containers for the collection of Source Separated Compost Container Organic Waste and Source Separated Recyclable Materials generated by that business in all areas where the Commercial Business provides disposal containers for employees, contractors, tenants, customers and other users of the

premises ("User Disposal Containers"). Such User Disposal Containers do not need to be provided in restrooms. If a Commercial Business does not generate, or has a waiver pertaining to, any of the materials that would be collected in one type of User Disposal Container, then the business does not have to provide that particular type of container in all areas where User Disposal Containers are provided. Pursuant to 14 CCR Section 18984.9(b), the User Disposal Containers provided by the business shall have either:

(1) A body or lid that conforms with the following container colors, with either lids conforming to these color requirements or bodies conforming to these color requirements, or both lids and bodies conforming to these color requirements: gray or black containers for Landfill Container Waste, blue containers for Source Separated Recyclable Materials, and green containers for Source Separated Compost Container Organic Waste. Notwithstanding the foregoing, a Commercial Business is not required to replace functional containers, including containers purchased prior to January 1, 2023, that do not comply with the color requirements of this subsection prior to the end of the useful life of those containers, or prior to January 1, 2036, whichever comes first.

(2) Container labels that include language or graphic images, or both, indicating the primary materials accepted and the primary materials prohibited in that container, or containers with imprinted text or graphic images that indicate the primary materials accepted and primary materials prohibited in the container. Pursuant 14 CCR Section 18984.8, the container labeling requirements are required on new containers commencing January 1, 2023.

(d) For Multi-Family Residential Dwellings, provide containers for the collection of Source Separated Compost Container Organic Waste and Source Separated Recyclable Materials in all common areas where those materials are being generated and disposal containers are provided for tenants, and in areas for internal consolidation of materials that are later deposited in Organics Containers, Recycling Containers, and Landfill Containers for collection by Regulated Haulers. Such containers do not need to be provided in restrooms accessible from common areas of the Multi-Family Dwelling. Such containers shall comply with the color and labeling requirements specified in subsections (c)(1) and (c)(2) above.

(e) To the extent practical through education, training, inspection, and/or other measures, prohibit employees from placing materials in a container not designated for those materials per the Recycling Container, Compost Container, and Landfill Container collection service or, if self-hauling, per the Commercial Businesses' instructions to support its compliance with its self-haul program, in accordance with Section 8.14.100.

(f) Periodically inspect Recycling Containers, Compost Containers, and Landfill Containers for contamination and inform employees if containers are contaminated and of the requirements to keep contaminants out of those containers pursuant to 14 CCR Section 18984.9(b)(3).

(g) Annually provide information to employees, contractors, tenants, building residents, and customers about Organic Waste Recovery requirements and about proper sorting of Source

Separated Compost Container Organic Waste and Source Separated Recyclable Materials.

(h) Provide information before or within fourteen days of new occupation of the premises to new tenants and no less than fourteen days before tenants move out of the premises, unless a tenant does not provide fourteen or more days' notice to before moving out, that describes requirements to keep Source Separated Compost Container Organic Waste and Source Separated Recyclable Materials separate from each other and from Landfill Container Waste and the location of containers and the rules governing their use at the property.

(i) Provide or arrange access for the Enforcement Agency to their properties during all Inspections conducted in connection with this Ordinance and timely provide documents requested by the Enforcement Agency to confirm compliance with the requirements of this chapter.

(j) Accommodate and cooperate with any Remote Monitoring program established by a Regulated Hauler or the CITY for Inspection of the types of materials placed in containers for Prohibited Container Contaminants to evaluate generator's compliance with subsection (a)(1) above. Notwithstanding any other provision of this chapter, Remote Monitoring equipment may not be installed on or in any containers or other property owned by a Regulated Hauler without the CITY providing at least 30-days' written notice thereof to the Regulated Hauler and such Regulated Hauler shall be entitled to reimbursement from CITY for any costs or expenses incurred as a result of any damage to the Regulated Hauler's equipment as a result of the installation by CITY or its contractors of any Remote Monitoring equipment.

(k) At Commercial Business' option and subject to approval by the Enforcement Agency, implement its own Remote Monitoring program for self-inspection of the types of materials placed in Recycling Containers, Compost Containers, and Landfill Containers for the purpose of monitoring the contents of containers to determine appropriate levels of service and to identify Prohibited Container Contaminants. Purchase and maintenance of the Remote Monitoring program shall be the responsibility of the Commercial Business.

(l) Nothing in this section prohibits a generator from preventing or reducing waste generation, managing Organic Waste on site, or using a Community Composting site pursuant to 14 CCR Section 18984.9(c) to the extent permitted by other applicable laws.

(m) The Enforcement Agency for the provisions of this section is the CITY, and any other Designee of the CITY.

8.14.060. WAIVERS FOR GENERATORS

(a) De Minimis Waivers. Except for Multi-Family Residential Dwellings, the Enforcement Agency may waive a Commercial Business' obligation to comply with some or all of the Organic Waste collection service requirements of this chapter if the Commercial Business provides documentation demonstrating that the business generates below a certain amount of Organic Waste material, as described in subsection (a)(2) below. A Commercial Business requesting a de minimis waiver shall:

(1) Submit an application to the Enforcement Agency specifying the service or requirements for which it is requesting a waiver.

(2) Provide documentation with the application that either:

(A) The Commercial Business' total Solid Waste collection service is two cubic yards or more per week and Organic Waste subject to collection in a Recycling Container or Compost Container comprises less than 20 gallons per week per applicable container of the business' total waste; or,

(B) The Commercial Business' total Solid Waste collection service is less than two cubic yards per week and Organic Waste subject to collection in a Recycling Container or Compost Container comprises less than 10 gallons per week per applicable container of the business' total waste.

(C) For the purposes of subsections (a)(2)(A) and (a)(2)(B) above, total Solid Waste shall be the sum of weekly Landfill Container Waste, Source Separated Recyclable Materials, and Source Separated Compost Container Organic Waste measured in cubic yards.

(3) If the waiver is granted, notify the Enforcement Agency granting the waiver if circumstances change such that Commercial Business's Organic Waste exceeds threshold required for waiver, in which case the waiver will be rescinded.

(4) If the waiver is granted, provide written verification of continued eligibility for de minimis waiver to the Enforcement Agency every 5 years.

(b) Physical Space Waivers. The Enforcement Agency may waive a Commercial Business' or property owner's (including a Multi-Family Residential Dwelling's) obligation to comply with some or all of the recyclable materials and/or Organic Waste collection service requirements of this chapter if the Enforcement Agency has evidence from a Regulated Hauler, licensed architect, licensed engineer, or other Person authorized by the Enforcement Agency demonstrating that the premises lacks adequate space for the collection containers required for compliance with the Organic Waste collection requirements of Section 8.14.050.

A Commercial Business requesting a physical space waiver shall:

(1) Submit an application to the Enforcement Agency specifying the service or

requirements for which it is requesting a waiver.

(2) Provide documentation with the application that the premises lacks adequate space for Recycling Containers and/or Compost Containers, which shall include documentation from its Regulated Hauler, licensed architect, licensed engineer, or other Person authorized by the Enforcement Agency.

(3) If the waiver is granted, notify the Enforcement Agency granting the waiver if the Commercial Business' physical space configurations or amounts of Solid Waste generation change, in which case the waiver may be rescinded.

(4) If the waiver is granted, provide written verification to the Enforcement Agency of continued eligibility for a physical space waiver every five years.

(c) Collection Frequency Waiver. The Enforcement Agency, at its discretion and in accordance with 14 CCR Section 18984.11(a)(3), may allow the owner or tenant of any residence, premises, business establishment or industry that subscribes to the CITY's three- or, if relevant, three-plus container Organic Waste collection service to arrange for the collection of their Recycling Container, Landfill Container, or both once every fourteen days, rather than once per week.

(d) The Enforcement Agency for the provisions of this section is the CITY and any other Designee of the CITY.

8.14.070. REQUIREMENTS FOR COMMERCIAL EDIBLE FOOD GENERATORS

(a) Tier One Commercial Edible Food Generators must comply with the requirements of this section commencing January 1, 2023, and Tier Two Commercial Edible Food Generators must comply commencing January 1, 2024, pursuant to 14 CCR Section 18991.3 or such later deadline established by State law or regulations.

(b) Large Venue or Large Event operators not providing food services, but allowing for food to be provided by others, shall require Food Facilities operating at the Large Venue or Large Event to comply with the requirements of this section, commencing January 1, 2024 or such later deadline established by State law or regulations.

(c) Commercial Edible Food Generators shall comply with the following requirements:

(1) Arrange to safely recover for human consumption the maximum amount of Edible Food that would otherwise be disposed.

(2) Enter into a contract or other written agreement with Food Recovery Organizations Food Recovery Services for: (i) the collection for Food Recovery of Edible Food that would otherwise be disposed; or, (ii) acceptance of Edible Food that would otherwise be disposed that the Commercial Edible Food Generator self-hauls to the Food Recovery Organization for Food Recovery.

(3) Use best efforts to abide by all contractual or written agreement requirements specified by the Food Recovery Organization or Food Recovery Service on how Edible Food should be prepared, packaged, labeled, handled, stored, distributed or transported to the Food Recovery Organization or Service.

(4) Not intentionally donate food that has not been prepared, packaged, handled, stored and/or transported in accordance with the safety requirements of the California Retail Food Code.

(5) Not intentionally spoil Edible Food that is capable of being recovered by a Food Recovery Organization or a Food Recovery Service.

(6) Allow the Enforcement Agency to review records upon request, including by providing electronic copies or allowing access to the premises, pursuant to 14 CCR Section 18991.4.

(7) Keep records that include the following information, or as otherwise specified in 14 CCR Section 18991.4:

(A) A list of each Food Recovery Service or Food Recovery Organization that collects or receives its Edible Food pursuant to a contract or written agreement established under 14 CCR Section 18991.3(b).

(B) A copy of all contracts and written agreements established under 14 CCR Section 18991.3(b) and/or this chapter.

(C) A record of the following information for each of those Food Recovery Services or Food Recovery Organizations:

(i) The name, address and contact information of the Food Recovery Service or Food Recovery Organization.

(ii) The types of food that will be collected by or self-hauled to the Food Recovery Service or Food Recovery Organization.

(iii) The established frequency that food will be collected or self- hauled.

(iv) The quantity of food, measured in pounds recovered per month, collected or self-hauled to a Food Recovery Service or Food Recovery Organization for Food Recovery.

(D) If it has not entered into a contract or written agreement with Food Recovery Organizations or Food Recovery Services pursuant to subsection (c)(2) above, a record that describes (i) its direct donation of Edible Food to end recipients (including employees) and/or (ii) its food waste prevention practices that result in it generating no surplus Edible Food that it can donate.

(8) Tier One Commercial Edible Food Generators and Tier Two Commercial Edible Food Generators shall provide, upon request, a Food Recovery report to the Enforcement Agency that includes the information in Section 8.14.070(c)(7). Entities shall provide the requested information within 60 days of the request.

(d) Nothing in this Ordinance shall be construed to limit or conflict with (1) the protections provided by the California Good Samaritan Food Donation Act of 2017, the Federal Good Samaritan Act, or share table and school food donation guidance pursuant to Senate Bill 557 of 2017 (approved by the Governor of the State of California on September 25, 2017, which added Article 13 commencing with Section 49580 to Chapter 9 of Part 27 of Division 4 of Title 2 of the Education Code, and to amend Section 114079 of the Health and Safety Code, relating to food safety, as amended, supplemented, superseded and replaced from time to time); or (2) otherwise applicable food safety and handling laws and regulations.

(e) Nothing in this Ordinance prohibits a Commercial Edible Food Generator from donating Edible Food directly to end recipients for consumption, pursuant to Health and Safety Code Section 114432(a).

(f) The Enforcement Agency for the provisions of this section is the CITY and any other Designee of the CITY.

8.14.080. REQUIREMENTS FOR FOOD RECOVERY ORGANIZATIONS AND SERVICES

(a) Nothing in this Ordinance prohibits a Food Recovery Service or Food Recovery Organization from refusing to accept edible food from a Commercial Edible Food Generator, in accordance with 14 CCR Section 18990.2(d).

(b) Food Recovery Services collecting or receiving Edible Food directly from Commercial Edible Food Generators, via a contract or written agreement established under 14 CCR Section 18991.3(b), shall maintain the following records, or as otherwise specified by 14 CCR Section 18991.5(a)(1):

(1) The name, address, and contact information for each Commercial Edible Food Generator from which the service collects Edible Food.

(2) The quantity in pounds of Edible Food collected from each Commercial Edible Food Generator per month. This may also include the total quantity in pounds of food collected that was spoiled when received from a Commercial Edible Food Generator or otherwise not able to be used to feed people.

(3) The quantity in pounds of Edible Food transported to each Food Recovery Organization per month.

(4) The name, address, and contact information for each Food Recovery Organization that the Food Recovery Service transports Edible Food to for Food Recovery.

(c) Food Recovery Organizations collecting or receiving Edible Food directly from Commercial Edible Food Generators, via a contract or written agreement established under 14 CCR Section 18991.3(b), shall maintain the following records, or as otherwise specified by 14 CCR Section 18991.5(a)(2):

(1) The name, address, and contact information for each Commercial Edible Food Generator from which the organization receives Edible Food.

(2) The quantity in pounds of Edible Food received from each Commercial Edible Food Generator per month. This may also include the total quantity in pounds of food collected that was spoiled when received from a Commercial Edible Food Generator or otherwise not able to be used to feed people.

(3) The name, address, and contact information for each Food Recovery Service that the organization receives Edible Food from for Food Recovery.

(d) Food Recovery Organizations and Food Recovery Services that have their primary address physically located in the City and contract with or have written agreements with one or more Commercial Edible Food Generators pursuant to 14 CCR Section 18991.3(b) shall report to the CITY the total pounds of Edible Food recovered from the Tier One and Tier Two Commercial Edible Food Generators they have established a contract or written agreement with pursuant to 14 CCR Section 18991.3(b) according to the following schedule: (i) no later than August 15, 2023, submit an initial report covering the period of January 1, 2023 to June 30, 2023; and (ii) no later than March 31, 2024, and no later than every March 31 thereafter, submit a report covering the period of January 1 to December 31 of the previous calendar year.

(e) In order to support Edible Food Recovery capacity planning assessments and similar studies, Food Recovery Services and Food Recovery Organizations operating in the City shall provide, upon request, information and consultation to the Enforcement Agency regarding existing, or proposed new or expanded, Food Recovery capacity in a form that can be provided to or that can be accessed by the CITY and Commercial Edible Food Generators in the City A Food Recovery Service or Food Recovery Organization contacted by the Enforcement Agency shall respond to such request for information within 60 days,

unless a shorter timeframe is otherwise specified by the Enforcement Agency.

(f) The Enforcement Agency for the provisions of this section is the CITY and any other Designee of the CITY.

8.14.090. REQUIREMENTS FOR REGULATED HAULERS AND FACILITY OPERATORS

(a) Requirements for Regulated Haulers.

(1) A Regulated Hauler providing Single-Family, Commercial, or industrial Organic Waste collection service to generators within the City shall meet the following requirements and standards in connection with collection of Organic Waste:

(A) Through written notice to the CITY annually on or before March 31, identify the facilities to which they will transport Organic Waste including facilities for Source Separated Recyclable Materials and Source Separated Compost Container Organic Waste.

(B) Transport Source Separated Recyclable Materials to a facility that recycles those materials and transport Source Separated Compost Container Organic Waste to a facility, operation, activity, or property that recovers Organic Waste as defined in 14 CCR, Division 7, Chapter 12, Article 2.

(C) Obtain approval from the CITY to haul Organic Waste, unless it is transporting Source Separated Organic Waste to a Community Composting site or lawfully transporting C&D in a manner that complies with 14 CCR Section 18989.1, Section 8.14.130, and any CITY rules.

(2) The Enforcement Agency for the provisions of this subsection (a) is the CITY and any other Designee of the CITY.

(b) Requirements for Facility Operators and Community Composting Operations

(1) Owners of facilities, operations, and activities that recover Organic Waste, including, but not limited to, compost facilities, in-vessel digestion facilities, and publicly-owned treatment works shall, upon request from the CITY, provide within 60 days information regarding available and potential new or expanded capacity at their facilities, operations, and activities, including information about through put and permitted capacity necessary for planning purposes.

(2) Community Composting operators shall, upon request from the CITY, provide within 60 days information to support Organic Waste capacity planning, including, but not limited to, an estimate of the amount of Organic Waste anticipated to be handled at the Community Composting operation.

(3) The Enforcement Agency for the provisions of this subsection (b) is the CITY and any Designee of the CITY.

8.14.100. REQUIREMENTS FOR SELF-HAULERS

(a) Self-Haulers shall source separate all recyclable materials and Organic Waste (materials that the CITY otherwise requires generators to separate for Collection in the CITY's organics and recycling collection program) generated or handled on-site from Solid Waste in a manner consistent with 14 CCR Sections 18984.1 and 18984.2, or shall haul Organic Waste to a High Diversion Organic Waste Processing Facility as specified in 14 CCR Section 18984.3.

(b) Self-Haulers shall haul their Source Separated Recyclable Materials to a facility that recovers those materials; and haul their Source Separated Compost Container Organic Waste to a Solid Waste facility, operation, activity, or property that processes or recovers Source Separated Organic Waste. Alternatively, Self- Haulers may haul Organic Waste to a High Diversion Organic Waste Processing Facility. Self-Haulers may Back-haul to a destination owned and operated by the generator using the generator's own employees and equipment and then haul those consolidated materials to facilities meeting the requirements of this subsection (b) or otherwise dispose of the waste, recyclables, and organic waste in a manner consistent with this Ordinance.

(c) Self-Haulers shall certify at least once every five (5) years to compliance with this section, on a form provided by the City, as a precondition to self-hauling, and upon every change of address.

(d) Self-Haulers that are Commercial Businesses (including Multi-Family Residential Dwellings) shall keep a record of the amount of Organic Waste delivered to each Solid Waste facility, operation, activity, or property that processes or recovers Organic Waste; this record shall be subject to Inspection by the Enforcement Agency. The records shall include the following information:

(1) Delivery receipts and weight tickets from the entity accepting the material.

(2) The amount of material in cubic yards or tons transported by the generator to each entity.

(3) If the material is transported to an entity that does not have scales on-site, or employs scales incapable of weighing the Self-Hauler's vehicle in a manner that allows it to determine the weight of materials received, the Self- Hauler is not required to record the weight of material but shall keep a record of the entities that received the Organic Waste.

(e) Self-Haulers that are Commercial Businesses (including Multi-Family Residential Dwellings) shall submit a Certification of Recycling Service Form to the Enforcement Agency for review for compliance if they do not also subscribe to separate collection service for Compost Containers and/or Recycling Containers by a Regulated Hauler. Applications will be considered for approval to the extent permitted by other applicable laws.

(f) Self-Haulers that are Commercial Businesses (including Multi-Family Residential Dwellings) shall submit a new Certification of Recycling Service Form to the Enforcement Agency for compliance review every five years, if they do not also subscribe to separate collection service for Compost Containers and/or Recycling Containers by a Regulated Hauler.

(g) Self-Haulers shall notify the Enforcement Agency if they subscribe to separate collection service for Compost Containers and/or Recycling Containers by a Regulated Hauler, such that they are no longer Self-Haulers.

(h) Self-Haulers that are Commercial Businesses (including Multi-Family Residential Dwellings) shall provide information, upon request, collected in subsection (c) above to the Enforcement Agency. Entities shall provide the requested information within 60 days.

(i) A Single-Family Organic Waste Generator that self-hauls Organic Waste is not required to record or report information in subsections (d) through (g) above.

(j) The Enforcement Agency for the provisions of this section is the CITY and any other Designee of the CITY.

8.14.110. COMPLIANCE WITH CALGREEN RECYCLING REQUIREMENTS

(a) Persons applying for a permit from the Jurisdiction for new construction and building additions and alternations shall comply with the requirements of this section and all required components of the California Green Building Standards Code, 24 CCR, Part 11, known as CALGreen, as amended, if its project is covered by the scope of CALGreen. If the requirements of CALGreen are more stringent then the requirements of this section, the CALGreen requirements shall apply.

Project applicants shall refer to Jurisdiction's building and/or planning code for complete CALGreen requirements.

(b) For projects covered by CALGreen, the applicants must, as a condition of the Jurisdiction's permit approval, comply with the following:

(1) Where five (5) or more Multi-Family dwelling units are constructed on a building site, provide readily accessible areas that serve occupants of all buildings on the site and are identified for the storage and collection of Blue Container and Green Container materials, consistent with the three container collection program offered by the Jurisdiction, or comply with provision of adequate space for recycling for Multi-Family and Commercial premises pursuant to Sections 4.408.1, 4.410.2, 5.408.1, and 5.410.1 of the California Green Building Standards Code, 24 CCR, Part 11 as amended provided amended requirements are more stringent than the CALGreen requirements for adequate recycling space effective January 1, 2020.

(2) New Commercial construction or additions resulting in more than 30% of the floor area shall provide readily accessible areas identified for the storage and collection of Blue Container and Green Container materials, consistent with the three container program offered by the Jurisdiction, or shall comply with provision of adequate space

for recycling for Multi-Family and Commercial premises pursuant to Sections 4.408.1, 4.410.2, 5.408.1, and 5.410.1 of the California Green Building Standards Code, 24 CCR, Part 11 as amended provided amended requirements are more stringent than the CALGreen requirements for adequate recycling space effective January 1, 2020.

(3) Comply with CALGreen requirements and applicable law related to management of C&D, including diversion of Organic Waste in C&D from disposal. Comply with Jurisdiction's C&D ordinance, and all written and published Jurisdiction policies and/or administrative guidelines regarding the collection, recycling, diversion, tracking, and/or reporting of C&D.

8.14.120. MODEL WATER EFFICIENT LANDSCAPING ORDINANCE REQUIREMENTS

(a) Property owners or their building or landscape designers, including anyone requiring a building or planning permit, plan check, or landscape design review from the Jurisdiction, who are constructing a new (Single-Family, Multi-Family, public, institutional, or Commercial) project with a landscape area greater than 500 square feet, or rehabilitating an existing landscape with a total landscape area greater than 2,500 square feet, shall comply with Sections 492.6(a)(3)(B) (C), (D), and (G) of the MWELO, including sections related to use of Compost and mulch as delineated in this section.

(b) The following Compost and mulch use requirements that are part of the MWELO are now also included as requirements of this chapter. Other requirements of the MWELO are in effect and can be found in 23 CCR, Division 2, Chapter 2.7.

(c) Property owners or their building or landscape designers that meet the threshold for MWELO compliance outlined in subsection (a) above shall:

(1) Comply with Sections 492.6 (a)(3)(B)(C),(D) and (G) of the MWELO, which requires the submittal of a landscape design plan with a soil preparation, mulch, and amendments section to include the following:

(A) For landscape installations, Compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six (6) inches into the soil. Soils with greater than six percent (6%) organic matter in the top six (6) inches of soil are exempt from adding Compost and tilling.

(B) For landscape installations, a minimum three- (3-) inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife up to five percent (5%) of the landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such.

(C) Organic mulch materials made from recycled or post-consumer materials shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local fuel modification plan guidelines or other applicable local ordinances.

(2) The MWELO compliance items listed in this section are not an inclusive list of MWELO requirements; therefore, property owners or their building or landscape designers that meet the threshold for MWELO compliance outlined in subsection (a) above shall consult the full MWELO for all requirements.

(d) If, after the adoption of this chapter, the California Department of Water Resources, or its successor agency, amends 23 CCR, Division 2, Chapter 2.7, Sections 492.6(a)(3)(B) (C), (D), and (G) of the MWWELO September 15, 2015 requirements in a manner that requires Jurisdictions to incorporate the requirements of an updated MWELO in a local ordinance, and the amended requirements include provisions more stringent than those required in this section, the revised requirements of 23 CCR, Division 2, Chapter 2.7 shall be enforced.

8.14.130. DELEGATION OF AUTHORITY

(a) The City Council may delegate all CITY responsibilities and authority under this Ordinance, SB 1383, and SB 1383 Regulations including, but not limited to, those related to Organic Waste collection services, education, inspections and investigations, and Edible Food recovery services, to its Designee by:

(1) Contracts with haulers or other private entities; or

(2) Agreements such as memorandums of understandings with other jurisdictions, entities, regional agencies as defined in Public Resources Code Section 40181, or other government entities, including environmental health departments.

(b) The City Council may not delegate authority to impose civil penalties, or to maintain an action to impose civil penalties, to a private party.

(c) The City Manager shall have the authority to enter into agreements and contracts in furtherance of this chapter.

8.14.140. INSPECTIONS AND INVESTIGATIONS

The Enforcement Agency is authorized to conduct Inspections and investigations, at random or otherwise, of any collection container, collection vehicle loads, or transfer, processing, or disposal facility for materials collected from generators, or Source Separated materials to confirm compliance with the provisions of this chapter for which it has enforcement authority by Organic Waste Generators, Commercial Businesses (including Multi-Family Residential Dwellings), Commercial Edible Food Generators, Regulated Haulers, Self-Haulers, Food Recovery Services, and Food Recovery Organizations, subject to applicable laws. This section does not allow entry in a private residential dwelling unit for Inspection. For the purposes of inspecting Commercial Business containers for compliance with Section 8.14.050(b), the Enforcement Agency may conduct container

Inspections for Prohibited Container Contaminants using Remote Monitoring, and Commercial Businesses shall accommodate and cooperate with the Remote Monitoring pursuant to Section 8.14.050(j).

(a) A Person subject to the requirements of this chapter shall provide or arrange for access during all Inspections (with the exception of a private residential dwelling unit) and shall cooperate with the Enforcement Agency during such Inspections and investigations. Such Inspections and investigations may include confirmation of proper placement of materials in containers, inspection of Edible Food Recovery activities, review of required records, or other verification or Inspection to confirm compliance with any other requirement of this chapter. Failure to provide or arrange for: (i) access to the premises; (ii) installation and operation of Remote Monitoring equipment, if a Remote Monitoring program is adopted and installation of such equipment is authorized pursuant to the terms of this chapter; or (iii) access to records for any Inspection or investigation is a violation of this chapter and may result in penalties described in Section 8.14.150.

(b) Any records obtained by the Enforcement Agency during Inspections, Remote Monitoring, and other reviews shall be subject to the requirements and applicable disclosure exemptions of the California Public Records Act as set forth in Government Code Section 6250 et seq.

(c) The Enforcement Agency is authorized to conduct any Inspections, Remote Monitoring, or other investigations as reasonably necessary to further the goals of this chapter, subject to applicable laws.

(d) The Enforcement Agency shall accept written complaints from persons regarding an entity that may be potentially non-compliant with this Ordinance.

(e) The Enforcement Agency is the CITY and any Designee authorized by the CITY to enforce one or more sections of this chapter.

8.14.150. ENFORCEMENT

(a) Violation of any provision of this Chapter shall constitute grounds for issuance of an administrative citation and assessment of a fine by the Enforcement Agency. Enforcement Actions under this Chapter are issuance of an administrative citation with a fine. The CITY's procedures on imposition of administrative fines in Chapter 1.09 are hereby incorporated in their entirety, as modified from time to time, and shall govern the imposition, enforcement, collection, and review of administrative citations issued to enforce this Chapter and any rule or regulation adopted pursuant to this Chapter.

(b) Other remedies allowed by law may be used, including, but not limited to, civil action or prosecution as a misdemeanor or an infraction. The CITY may pursue civil actions in the California courts to seek recovery of unpaid administrative citations. The CITY may choose to delay court action until such time as a sufficiently large number of violations, or cumulative size of violations exist such that court action is a reasonable use of CITY staff and resources.

(c) Enforcement pursuant to this Chapter may be undertaken by the Enforcement Agency.

(d) Appeals Process. Persons subject to administrative enforcement of this Chapter may request an administrative hearing pursuant to Section 1.09.060.

(e) Education Period for Non-Compliance Beginning January 1, 2023, and through December 31, 2024. The CITY will conduct Inspections, Remote Monitoring, Route Reviews or waste evaluations, and Compliance Reviews, depending upon the type of regulated entity, to determine compliance, and if the CITY determines that Organic Waste Generator, Self-Hauler, Commercial Edible Food Generator, Food Recovery Organization, Food Recovery Service, or other entity is not in compliance, the CITY shall provide educational materials to the entity describing its obligations under this Chapter and a notice that compliance is required by January 1, 2023, and that violations may be subject to administrative civil penalties from the CITY starting on January 1, 2024.

(f) Civil Penalties for Non-Compliance. Beginning January 1, 2023, if the CITY determines that an Organic Waste Generator, Self-Hauler, Commercial Edible Food Generator, Food Recovery Organization, Food Recovery Service, or other entity is not in compliance with this Chapter, it shall document the noncompliance or violation, issue an administrative citation and take Enforcement Action, as needed.

8.14.160. LOCAL REGULATION AND OPT-IN PROVISIONS

(a) Nothing in this Ordinance shall be construed to prohibit the CITY from enacting and enforcing ordinances and regulations regarding the collection, transport, storage, processing, and deposit in landfill(s) of Solid Waste within its jurisdiction, including more stringent requirements than those in this Ordinance.

SECTION 2. CODE AMENDMENT. Section 8.12.030 of Chapter 8.12 of Title 8 of the Fortuna Municipal Code is hereby repealed.

SECTION 3. SEVERABILITY. If any provision of this Ordinance or the application thereof is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such invalidity shall not affect the remaining provisions or application of the remaining provisions of this Ordinance, which can be given effect without the invalid provisions or application.

SECTION 4. EFFECTIVE DATE.

a) This Ordinance shall be posted at City Hall after its adoption and shall take effect commencing on January 1, 2023.

INTRODUCED AND FIRST READING PERFORMED on this 16th day of May 2022 by the following vote:

AYES:
NAYS:
ABSENT:
ABSTAIN:

_____
Sue Long, Mayor

ATTEST:

_____
Siana L. Emmons, City Clerk

SECOND READING PERFORMED AND ADOPTED on the _____ day of _____, 2022 by the following vote:

AYES:
NAYS:
ABSENT:
ABSTAIN:
ATTEST:

_____
Sue Long, Mayor

_____
Siana L. Emmons, City Clerk

STAFF REPORT
City Manager's Report

DATE: May 16, 2022

TO: Honorable Mayor and City Councilmembers

FROM: Merritt Perry, City Manager

1. Upcoming Council Meeting Dates

*Special Meeting/Workshop

*Monday, May 23, 2022 9:00 a.m.	**Special City Council Meeting** Council Chambers at City Hall
Monday, June 6, 2022 6:00 p.m.	**Regular City Council Meeting** Council Chambers at City Hall

2. Upcoming Planning Commission Meeting Dates

Tuesday, May 24, 2022 6:00 p.m.	**Regular Planning Commission Meeting** Council Chambers at City Hall

3. Upcoming Measure E Meeting Dates

Tuesday, September 20, 2022 5:30 p.m.	**Regular Measure E Meeting** Council Chambers at City Hall

4. Upcoming Rohner Community Recreation and Park District (RCRPD) Meeting Dates

Wednesday, June 6, 2022 2:30 p.m.	**Regular RCRPD Meeting** Council Chambers at City Hall

5. Verbal Report