

CITY OF SAN LUIS OBISPO



# Lead by Example

A Plan for Carbon  
Neutral City Operations

July 2021



# Acknowledgements

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## A Note from the City Manager

The City of San Luis Obispo is proud to present Lead by Example: A Plan for Carbon Neutral City Operations. The City as an organization has a long tradition of promoting sustainability across operations and leading by example to community partners. Building on the overwhelming community support for the Climate Action Plan for Community Recovery, *Lead by Example* sets the City on a trajectory to achieving the ambitious climate target of carbon neutral government operations by 2030.

As a trusted community leader, the City has a key role to play in implementing innovative climate actions that reduce greenhouse gas emissions across City operations, create a more resilient and equitable City organization, and are highly replicable. It is important that the City “walk the walk” throughout the transition to a carbon neutral San Luis Obispo, and through the sharing of resources and lessons learned, demonstrate to the community that the City is doing its part. Our actions and commitments demonstrate action, importance, and the need for City leadership in our own operations.

*Lead by Example* was developed with input from staff across City departments and nearly nine months of research and technical work. Now that the City is preparing to implement *Lead by Example*, we will need to carry on the tradition of sustainability throughout the organization, invest in meaningful climate action while exploring emerging opportunities, and continue to amplify this work throughout the community.

As an organization, we boldly embrace this challenge and look forward to making progress alongside the community. I look forward to seeing our team and community come together to fight the climate crisis and our leadership can and will make a difference.



Derek Johnson  
City Manager, City of San Luis Obispo

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# 1. INTRODUCTION

The City has a long history of supporting environmental stewardship through its operations, with actions ranging from solar panel installations to conserving open space; from cutting-edge energy and chemical management innovations at the Water Treatment Plant and Water Resource Recovery Facility to divesting from fossil fuel investments. A partial list of recent greenhouse gas (GHG) emissions reductions and sustainability actions include:

- Conserved over 3,000 acres of open space lands since 2005, and over 7,800 acres since the inception of the Greenbelt Protection Program
- Installed solar powered electric vehicle chargers at City Hall
- Purchased two electric buses
- Retrofitted streetlights with high-efficiency LED bulbs
- Retrofitted parking garage with high-efficiency LED bulbs
- Retrofitted the Water Resource Recovery Facility for energy efficiency and installing a digester gas cogeneration engine for energy capture
- Supported development of the regional anaerobic digester to generate clean power and compost from the City' green waste
- Established a Solid Waste and Recycling Section of the Utilities Department
- Established the Office of Sustainability in the Administration Department
- Purchased hybrid fleet vehicles, electric bicycles for fleet, and transitioning diesel fleet vehicles to renewable diesel
- Initiated energy efficiency and energy generation project at the Water Treatment Plant
- Identified Climate Action as a Major City Goal in each Financial Plan since 2017
- Contracted for new solar generating systems at three facilities

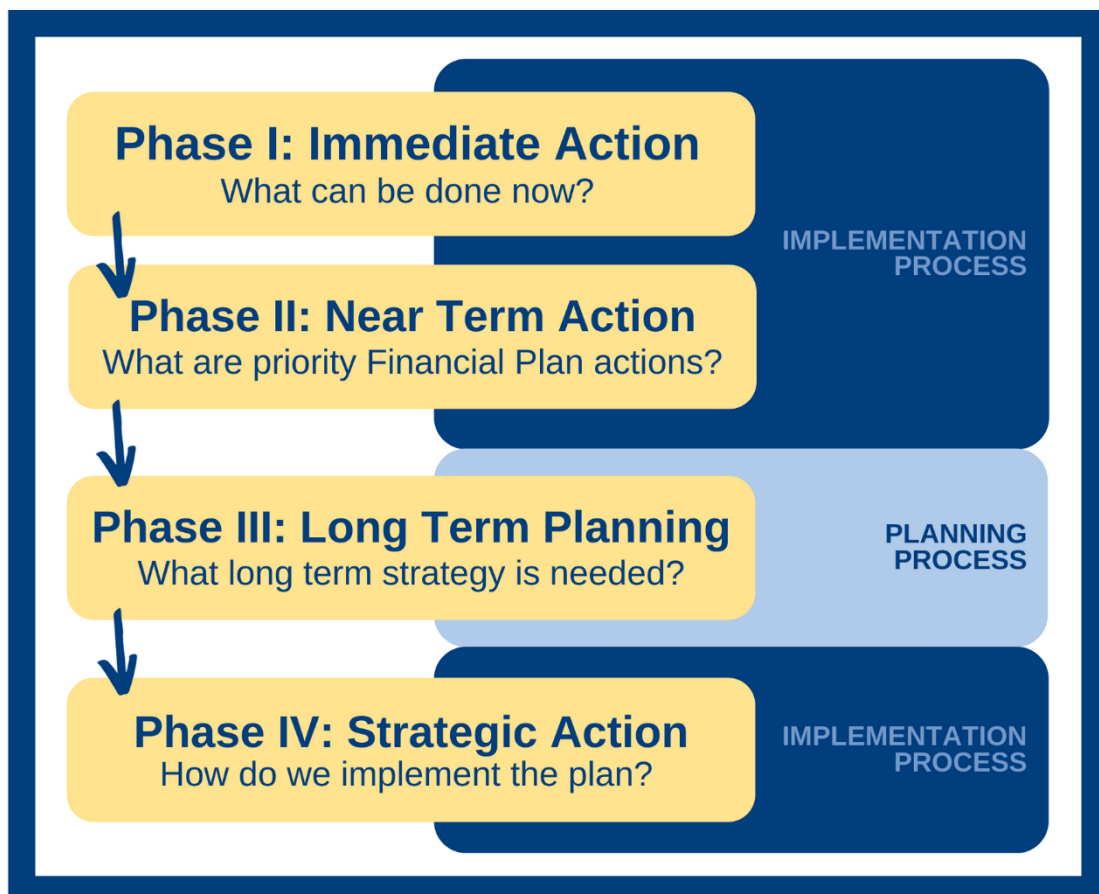
In August of 2020, the City of San Luis Obispo City Council adopted the Climate Action Plan for Community Recovery via Resolution [R-11159](#) (2020 Series). While the Climate Action Plan for Community Recovery is primarily focused on community emissions, it also highlights the role the City as an organization can play in “leading by example” and establishes a goal of carbon neutral municipal operations by 2030.

Lead by Example: A Plan for Carbon Neutral Municipal Operations (referred to in this document as “*Lead by Example*” or “Plan”) identifies an approach for achieving this goal. Carbon neutral municipal operations by 2030 is an achievable but ambitious goal that requires nearly all City policy and financial decisions to be aligned and oriented to a low carbon future. With this ambitious goal comes many challenges and opportunities. The City is excited to embrace these challenges and use this opportunity to reassess resource use, innovate to deliver core services that are low carbon, and integrate efforts with ongoing community climate and diversity, equity, and inclusion work, all while providing highly visible examples of this work to the community.

## Lead by Example Process

The planning and implementation of *Lead by Example* has occurred over three main phases outlined in Figure 1.1. *Lead by Example* includes the greenhouse gas emissions inventory (summarized in this chapter and provided in full as Appendix A), establishes 2030 greenhouse gas emissions targets per sector, explains how the targets are achievable (summarized in this chapter and provided in full as Appendix B), and includes an action plan with identified actions (Chapter 3). Implementation is the fourth phase following the adoption of this plan, as described in Chapter 4.

**Figure 1.1. Lead by Example Planning and Implementation Process.**



# Greenhouse Gas Emissions Inventory and Forecast

A greenhouse gas (GHG) inventory is an accounting of the GHG emissions that have occurred as the result of activity in a calendar year. For this plan, the GHG inventory measures emissions from activities that are directly related to City operations. The greenhouse gas emissions inventory and related emissions forecasts provide the foundational technical analysis for staff to understand baseline conditions and identify necessary actions to achieve Council's operational carbon neutrality goal. For *Lead by Example*, the City updated its 2005 municipal operations baseline inventory, completed a 2019 municipal operations inventory, and forecasted emissions for 2025 and 2030. Table 1. provides the emissions inventory and forecast years by emissions sector.

The municipal operations inventories and forecasts include emissions estimates for five sectors as outlined in Table 1.1 Each sector uses activity data from City operations to estimate or model GHG emissions:

- The Building & Facility Energy sector focuses on emissions from energy (electricity and natural gas) used to power buildings, facilities, and equipment owned and operated by the City.
- The Fleet sector focuses on emissions from fossil fuel use (gasoline and diesel) used in fleet vehicles owned and operated by the City, including maintenance vehicles, buses, fire trucks, and police vehicles.
- The Employee Commute sector estimates emissions from vehicle miles traveled (VMT) by employees traveling to and from work.
- The Solid Waste sector focuses on emissions from landfilled solid waste, including the paper and food products disposed in offices and landscape maintenance waste.
- The Wastewater sector focuses on direct emissions from wastewater treatment processes, specifically methane (CH<sub>4</sub>) from incomplete combustion of digester gas. Informational GHG emission estimates for Wastewater are included in Appendix A. but are not included in the total GHG emissions for the baseline, inventoried, or forecast year(s) due to data and method uncertainty. Energy use from wastewater treatment processes is included in the Building & Facility Energy sector.

**Table 1.1 Municipal Operations GHG Emissions Inventories and Business as Usual Forecast, 2005-2030 (MTCO<sub>2e</sub>).**

Sector	2005	2019	2025	2030	% change from baseline in 2030
Building & Facility Energy	3,550	2,130	2,110	2,290	-35.5%
Fleet	2,250	2,090	2,130	2,130	-5.3%
Employee Commute	810	730	710	610	-24.7%
Solid Waste	120	120	120	120	0.0%
<b>TOTAL</b>	<b>6,730</b>	<b>5,070</b>	<b>5,070</b>	<b>5,150</b>	<b>-23.5%</b>

## Carbon Neutral by 2030

The term “carbon neutrality” refers to a state where the total emissions of the inventoried sectors reported in Table 1.1, above, minus emissions captured through carbon sequestration efforts are, at most, zero. To achieve carbon neutral municipal operations, the City will need to pursue all feasible pathways to decarbonize assets, reduce the emissions intensity of daily business activities and workspaces, and empower each department with the tools to operate more efficiently and sustainably. Achieving carbon neutrality is a challenge that will require the City to implement priority near-term actions now and continue to assess the feasibility of new emission reduction measures as they emerge. Achieving municipal carbon neutrality will require support from City Council and staff from all departments.

### What are Municipal Operations?

While the Climate Action Plan for Community Recovery addresses greenhouse gas emissions from all actions that occur in the City limits, *Lead by Example* is focused on emissions caused by the day-to-day operations of the City of San Luis Obispo as an organization. In this context, the City organization can be thought of as a business that runs offices, employs staff, uses fleet vehicles, operates machinery, and maintains properties to carry out a variety of essential functions.

## Green Team

The Green Team is a cross-departmental collaborative body of staff convened to help guide the City’s approach to achieving carbon neutral City operations. The Green Team allows staff from each department to participate in the planning and implementation of emissions reduction measures to achieve a truly all-City approach to municipal carbon neutrality. For *Lead by Example*, the Green Team was divided into individual working groups based on each emissions sector. The stated and ongoing objectives of the Green Team are to:

- Cultivate an educated core group of staff that understand how their department’s operations contribute to the City’s overall GHG emissions and, in turn, recognize opportunities for emission reductions.
- Build capacity within the organization to Lead by Example by developing and implementing emissions reduction measures and supporting key technical tasks.
- Maximize opportunities for partnership between departments to share responsibilities and take action.
- Establish a foundation for ongoing employee education and outreach on municipal carbon neutrality.

*Lead by Example* has been co-created by the Green Team and reflects the hard work of staff members from throughout different City departments.

## Diversity, Equity, and Inclusion

Diversity, equity, and inclusion are core values for the City of San Luis Obispo. While *Lead by Example* focuses on GHG emissions and reduction actions related to emissions, opportunities exist to advance diversity, equity, and inclusion throughout the organization and the community. Staff have collaborated with the Green Team and the City’s internal Diversity, Equity, and



Inclusion (DEI) Committee to develop the following list of actions that staff are committed to throughout the implementation of Lead by Example and during future planning updates:

- Staff will develop an employee outreach and education program to share accessible information about Lead by Example and Council's operational carbon neutrality goal to staff outside of the Green Team.
- Staff will facilitate employee feedback sessions to continue exploring opportunities and challenges in integrating and addressing diversity, equity, and inclusion through the work.
- A DEI committee member will be invited to join Green Team meetings quarterly to facilitate collaboration around diversity, equity, and inclusion in Lead by Example implementation.
- Staff will integrate diversity, equity, and inclusion at the initial stages of the next Lead by Example update in 2023 and intend to collaborate with the DEI committee throughout the planning process.

Additional information about equity considerations for specific emissions sectors is included in Chapter 3: Carbon Neutral City Operations under "Emerging Issues and Opportunities".



# 2. THE PATH TO CARBON NEUTRALITY

## The City's Approach to Municipal Carbon Neutrality

The City's approach to municipal carbon neutrality is based on the guiding principles and greenhouse gas (GHG) emission inventories and forecasts and staff engagement as described in Chapter 1. The City's approach to municipal carbon neutrality is organized into a total of seven sectors, as shown in figure 2.1, each with a long-term goal and objectives, as well as foundational actions to be initiated or completed by 2023.

The Municipal Operations GHG Inventory includes five emissions sectors as mentioned in Chapter 1. Two additional sectors are included in *Lead by Example* that are not associated with direct GHG emissions for the purposes of the inventory and forecast but play a critical supportive role in the achievement of the City's carbon neutrality goal. The two additional sectors are:

- *Natural Solutions*. This sector captures the GHG emission sequestration activities occurring on City-owned property that could partially offset operational emissions.
- *Procurement, Budget, and Finance*. This sector focuses on aligning the financial processes that are the foundations of City operations with climate action and sustainability..

## Estimated Greenhouse Gas Emission Reductions

With the support of the Green Team, the City identified a pathway to achieve deep GHG reductions in municipal operations. The City conducted a robust work effort to model and estimate the emissions reductions occurring as the result of implementing *Lead by Example*. The resulting

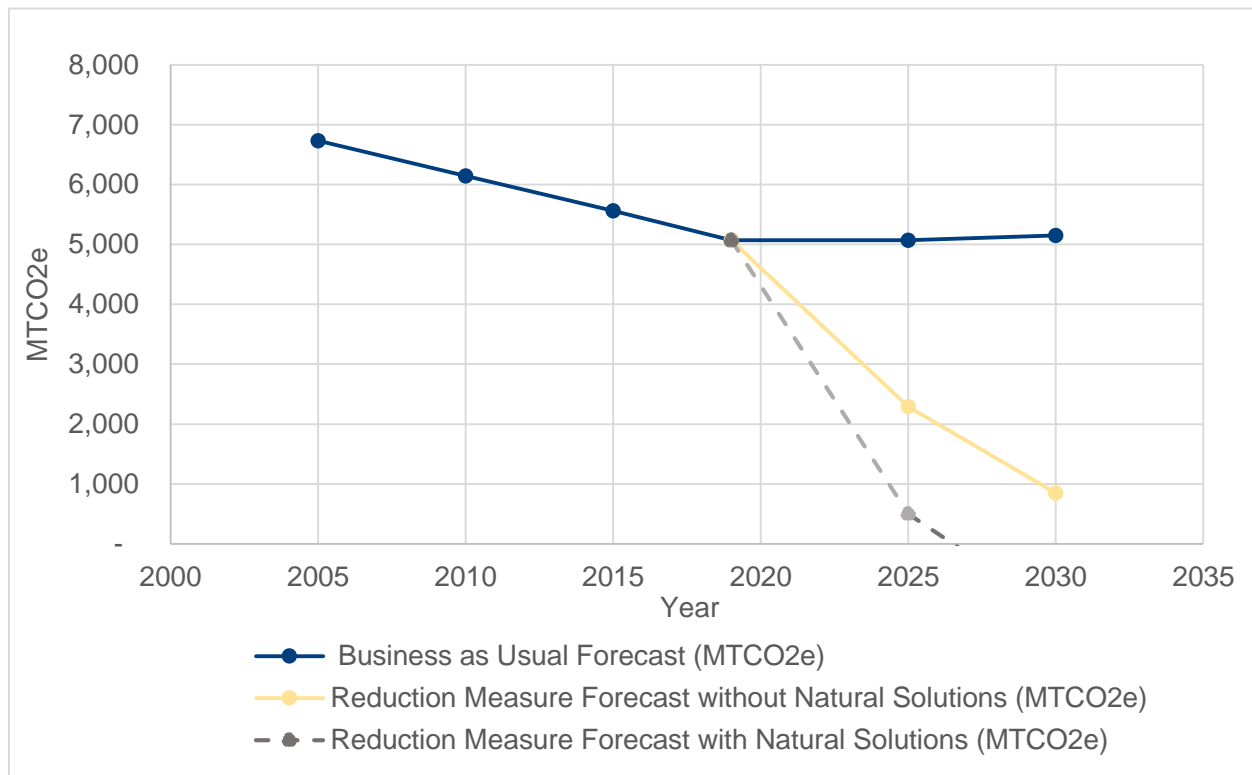
GHG reduction estimates and underlying calculations show that the City can make significant progress toward achieving its goal of carbon neutral municipal operations by 2030.

The combined reductions from the *Lead by Example* sectors and their objectives (not including sequestered emissions from the Natural Solutions sector) are expected to result in a total reduction of 2,780 MTCO<sub>2</sub>e in 2025, or 55 percent below the “business as usual” forecast and 4,300 MTCO<sub>2</sub>e in 2030, or 84 percent below the business as usual forecast, as shown in Figure 2.2 and Table 2.1. In 2030, not including offset emissions from the Natural Solutions sector, a remaining gap of 850 MTCO<sub>2</sub>e between forecast emissions and carbon neutrality is estimated. Considering offset emissions from the Natural Solutions sector, total emissions are estimated to reach net-zero in 2027 and surpass it thereafter.

**Figure 2.1. Emission Sectors and Goals.**



**Figure 2.2. Municipal Operations GHG Emissions Forecast, 2005-2030.**



**Table 2.1 GHG Emissions Reduction and Offset Estimates (MTCO2e, 2025 and 2030)**

Sector	2025	2030
<b>“Business as Usual” Emissions Forecast</b>	<b>5,070</b>	<b>5,150</b>
Building and Facility Energy	-1,560	-1,950
Fleet	-930	-1,890
Employee Commute	-240	-350
Solid Waste	-50	-110
<i>Natural Solutions (offset)</i>	<i>-1,790</i>	<i>-2,000</i>
<b>Total Emissions Reductions (without Natural Solutions)</b>	<b>-2,780</b>	<b>-4,300</b>
<b>Total Remaining Emissions (without Natural Solutions)</b>	<b>2,290</b>	<b>850</b>

## Getting to True Carbon Neutrality

*Lead by Example’s* approach to reducing greenhouse gas emissions (not including sequestered emissions from the Natural Solutions sector) leaves approximately 850 MTCO2e in annual emissions in 2030 to reduce or offset to achieve true carbon neutrality. Considering the offset emissions from the Natural Solutions sector, the City is expected to achieve net-zero greenhouse gas emissions in 2027, three years before the City’s goal year of 2030. While the estimated offsets

from the Natural Solutions sector technically allow the City to achieve its carbon neutrality goal ahead of schedule, it is necessary to emphasize the present uncertainty around the modeling methodology used to estimate Natural Solutions offsets and the importance of continued action to approach carbon neutrality without offsets.

To estimate emissions offsets associated with Natural Solutions, the City used commonly-accepted protocols and modeling equations to estimate offsets as a result of activities on City-owned properties. However, the City has not yet implemented pilot projects and do not yet have site-specific data.

The City is committed to fully implementing emissions reduction actions described in *Lead by Example* and pursuing opportunities for expansion and enhancement as supportive market conditions emerge to continue driving down operational emissions. Both in achieving Council's goal and leading in the community, it is important to continue making progress and engaging in emerging decarbonization activities. As emissions quantification protocols evolve over time and the City explores opportunities to further integrate Scope 3<sup>1</sup> indirect emissions into future inventories and operations plans, a continued commitment to scaling decarbonization programs and projects will be critical to achieve carbon neutral City operations.

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<sup>1</sup> The operational activities and sectors that are covered in *Lead by Example* fall under Scope 1 and 2 emissions, with the exception of Employee Commute, which is considered to be Scope 3. Scope 3 emissions includes all other indirect emissions not covered in Scope 2, such as emissions resulting from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the local government (i.e. Employee Commute), outsourced activities, waste disposal, and more. More information can be found at [https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf).

# 3. CARBON NEUTRAL CITY OPERATIONS

Each sector's actions present critical next steps in pursuing carbon neutral City operations by 2030. As described in previous chapters, the Green Team has worked closely with departmental staff throughout the City to develop and refine each of the following actions to ensure consistency with Council objectives, feasibility, and equity considerations.

This chapter provides an overview of each sector and its goal and objectives, a description of the overall approach to reducing emissions, emerging challenges and opportunities that will guide staff's approach, the actions that will enable the City to achieve the goal and objectives, and an emissions quantification summary.

Following best practices, the actions are organized by the Financial Plan period when they are expected to be initiated. *Lead by Example* includes specific actions to be initiated during the 2021-23, 2023-25, 2025-27, and 2027-29 Financial Plan periods. Actions are grouped by Financial Plan periods in order to closely align *Lead by Example* projects and programs with budgeted resources. All actions identified for 2021-23 are included in the 2021-23 Financial Plan adopted on June 1, 2021 or are included in staff work programs.

It is important to note that for actions expected to be implemented beyond the 2021-23 Financial Plan, the timelines presented are a best estimate and may change as lessons are learned through *Lead by Example* implementation. Staff are committed to performing an ongoing re-assessment of the actions necessary to achieve each sector goal and objectives and may recommend new or updated actions and/or changes to the implementation timeline based on feasibility and emerging best practices.

# Building & Facility Energy

## Strategy Overview

City-owned buildings and facility energy use was the largest contributor to annual municipal greenhouse gas emissions in 2019, accounting for 40 percent of inventoried emissions. The City has historically pursued long-term cost-saving retrofit opportunities on an ad-hoc basis when funding or outside resources allow (e.g., the 2016 replacement of streetlights with high-efficiency LED bulbs).

Lead by Example includes a strategic pathway to identify priority retrofit projects across buildings and facilities, align projects with new and existing funding mechanisms and budget cycles, and initiate retrofits. Due to recent advances in electric high-efficiency appliances and equipment, coupled with the City joining Central Coast Community Energy (3CE), there is an opportunity to transition away from fossil fuels and decarbonize the City's new and existing buildings and facilities. This can be achieved through a two-pronged approach: (1) committing to constructing all-electric new buildings and facilities, and (2) laying out a path for building decarbonization, efficiency, and energy resilience retrofits in existing buildings.

**GOAL:** The City eliminates fossil fuel use in buildings and facilities.

**OBJECTIVES:**

1. Construct only all-electric new buildings and facilities.
2. Eliminate fossil fuel use to the maximum extent possible in existing buildings and facilities.

## Emerging Challenges and Opportunities

With recent Public Safety Power Shut-offs (PSPS) experienced across California during the 2019 and 2020 wildfire seasons, it is critical that City buildings and facilities are able to operate in a rapidly changing climate. Additionally, as electric vehicles substantially increase load (and potentially provide mobile storage), electricity pricing shifts to time of use, and the City adds additional generation and storage assets, it will be increasingly complicated to manage onsite energy use for optimal operations, cost, and low emissions.

As rapidly decreasing costs in onsite renewable energy systems (like rooftop solar PV arrays) paired with battery storage, the City has an opportunity to gain greater energy independence and enhance the resilience of facilities. Staff commit to continue considering these emerging issues and integrating feasible solutions into this sector's long-term strategic approach.



## GHG Reduction Actions

Table 3.1 shows the reduction measure actions developed by the Green Team for the Building and Facility Energy sector. The table includes immediate actions that were completed during Phase I of the Lead by Example planning and implementation process as well as those near and long-term actions collaboratively developed with the Green Team. All actions within the 2021-23 Financial Plan period are currently budgeted or scheduled and do not represent additional work tasks. Chapter 4 provides additional implementation information, including responsible departments.

**Table 3.1. Building and Facility energy GHG reduction actions.**

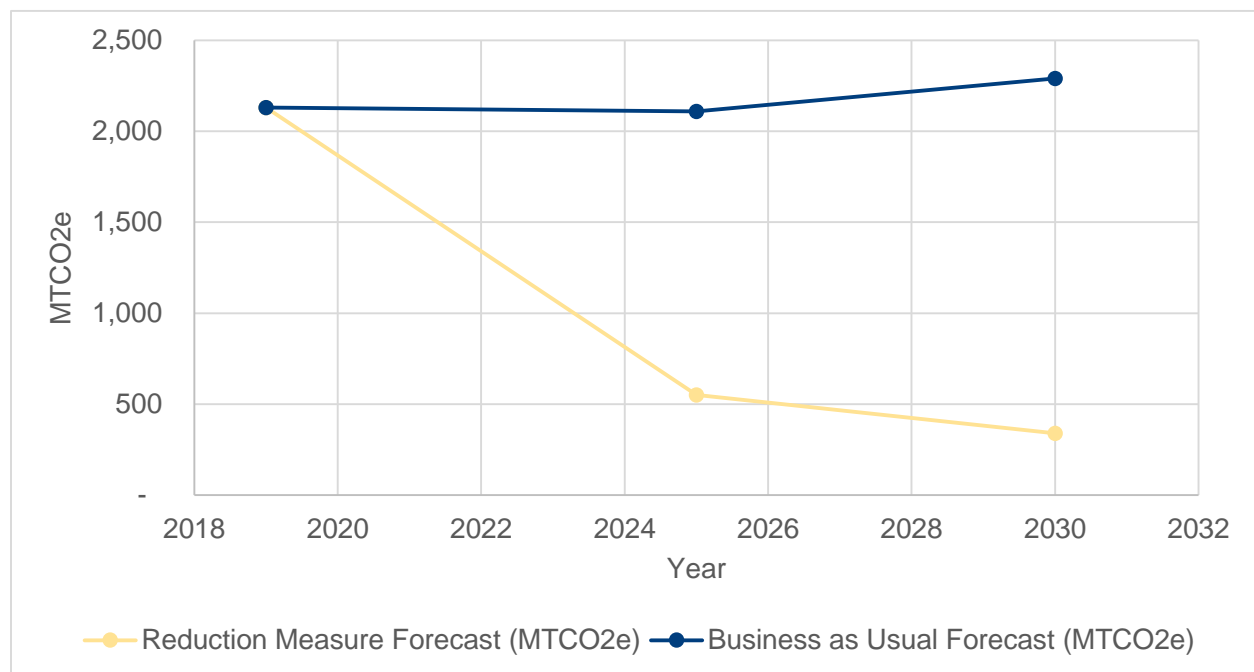
Status	GHG Reduction Action
Completed	<i>Energy Immediate Action 1</i> Initiate conversations with PG&E and The Energy Network to explore on-bill financing opportunities for City buildings and facilities.
	<i>Energy Immediate Action 2</i> Review and propose edits for lawn & garden Request for Proposals
2021-23 FP	Energy 1.1 Initiate and complete Energy Master Plan to develop the approach to decarbonization, comprehensive energy management, and efficiency across buildings and facilities.
	Energy 1.2 Complete On-Bill Financing Projects to retrofit buildings and facilities.
	Energy 1.3 Complete solar projects at SLO Swim Center, Transit Yard, and Fire Station 1 to offset energy use at key facilities.
	Energy 1.4 Complete battery storage project at the Water Treatment Plant to promote resilience against power failure.
	Energy 1.5 Continue ongoing and strategic efficiency improvements to advance the goal and objectives for the Energy sector.
	Energy 1.6 Develop and pilot an energy monitoring and management dashboard for Utilities Department to identify additional areas for efficiency improvements and quantify the impact of existing and future actions and consider scaling after pilot phase.
	Energy 1.7 Identify low or no cost energy efficiency improvements at the Wastewater Resource Recovery Facility (WRRF) through ongoing participation in energy efficiency studies with PG&E to reduce energy demand and emissions for one of the City's largest energy-consuming facilities.
2023-25 FP	Energy 2.1 Initiate implementation of Energy Master Plan, continue priority retrofits, and initiate hard-to-reach retrofits to advance decarbonization and energy management across buildings and facilities.
	Energy 2.2 Continue funding building retrofits and identifying and pursuing innovative funding and financing mechanisms such as on-bill financing.
	Energy 2.3 Procure and manage facility-wide energy management software and consider supportive staffing to target opportunities for retrofits and other energy efficiency measures.

Status	GHG Reduction Action
	Energy 2.4 "Opt-up" to Central Coast Community Energy (3CE) Prime to receive 100% renewable energy.
2025-27, 27-29 FP	Energy 3.1 Continue implementing Energy Master Plan and continue hard-to-reach retrofits to advance energy efficiency across buildings and facilities.
	Energy 3.2 Continue funding building retrofits and identifying and pursuing innovative funding and financing mechanisms such as on-bill financing.

## Sector Emissions

The Building & Facility Energy sector focuses on emissions from energy (electricity and natural gas) used in buildings and facilities owned and operated by the City. Figure 3.1 shows the business as usual scenario for municipal building and facility energy emissions compared to forecasted emissions as a result of implementing the sector’s emission reduction actions, described in the previous section. In 2025, Building and Facility Energy emissions are expected to decrease by 1,560 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 74 percent. In 2030, emissions are expected to decrease by 1,950 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 85 percent.

**Figure 3.1. Building and Facility Energy forecasted emissions.**



# Fleet

## Strategy Overview

Fleet is the second-largest contributor to annual municipal greenhouse gas emissions, creating approximately 39 percent of overall emissions. It is necessary for the City to pursue a phased transition to an electrified fleet (including transit) to achieve emissions reductions in this sector.

Lead by Example includes a strategic pathway to identify priority electrification opportunities across the City's fleet, align fleet replacement and purchase policies with the carbon neutrality goal, assess charging capacity and needs, and identify external funding opportunities to support the transition. By enhancing charging capacity across key City facilities via grants and partnerships, integrating EV-related objectives in procurement policies, accelerating and supporting the Transit Electrification Strategy, and exploring alternate modes for in-town travel, the City will be prepared to accommodate a growing EV fleet while driving down emissions across the sector.

**GOAL:** The City eliminates fossil fuel use in vehicle and equipment fleet.

**OBJECTIVES:**

1. Achieve 100% all-electric light duty vehicles, excluding long-range and certain public safety vehicles.
2. Achieve 50% zero emissions medium and heavy-duty vehicles.
3. Achieve 100% all-electric transit fleet.
4. Achieve 100% all-electric equipment, excluding certain heavy-duty equipment, pumps, and backup generators.

## Emerging Challenges and Opportunities

Reducing emissions in the Fleet sector is particularly challenging for medium and heavy-duty fleet vehicles, off-road equipment, and the increasing need for diesel-powered backup generators. This is especially true in divisions with medium and heavy-duty vehicles, including Public Works: Streets, Utilities, Parks and Recreation, Police, and Fire. While there are many price and performance-comparable options for light-duty vehicles, there is not currently a robust market for large trucks and maintenance equipment powered by electricity, hydrogen, or other alternative zero-emissions fuels. The inventoried Fleet sector also includes diesel used to power backup generation systems. Diesel used for backup power generation presents a particularly difficult fossil fuel source to decarbonize, as the need for reliable and accessible secondary power is essential to maintain critical services during times of crisis.

Staff have designed the Fleet emissions reduction strategy to reflect market uncertainty and integrated an action to lay the foundations for a hard-to-reach fleet vehicle transition once technology and cost-effectiveness allow.

## GHG Reduction Actions

Table 3.2 shows the reduction measure actions developed by staff for the Fleet sector. The table includes immediate actions that were completed during Phase I of the Lead by Example planning and implementation process as well as those near and long-term actions collaboratively developed with the Green Team. All actions within the 2021-23 Financial Plan period are currently budgeted or scheduled and do not represent additional work tasks. Chapter 4 provides additional implementation information, including responsible departments.

**Table 3.2. Fleet GHG reduction actions.**

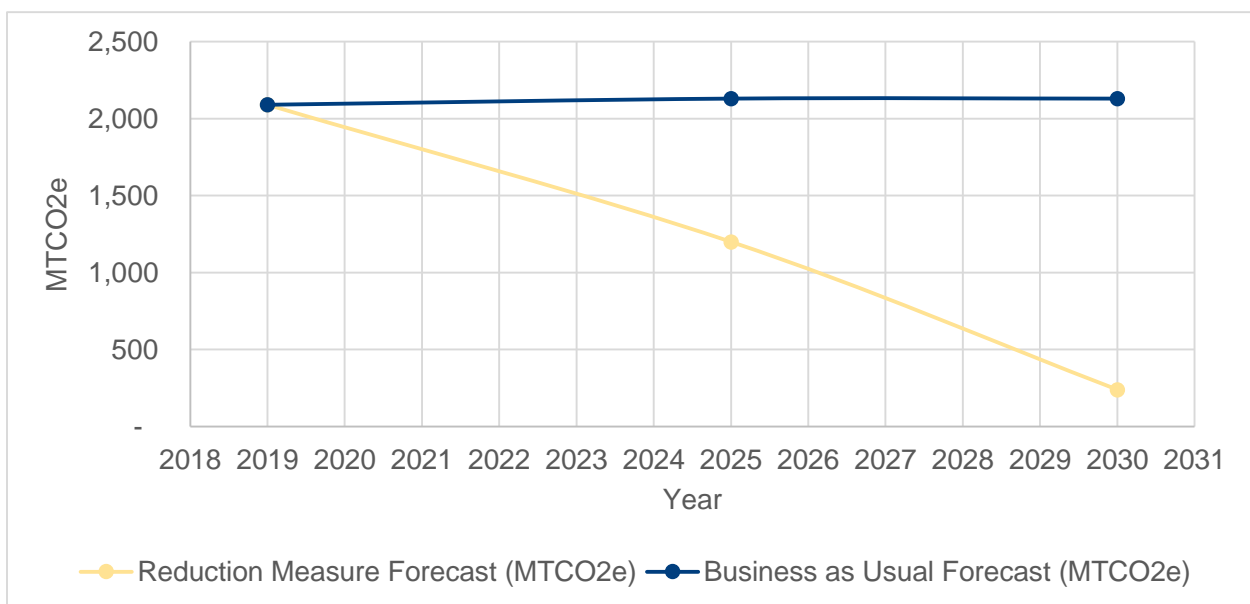
Status	GHG Reduction Action
Completed	<i>Fleet Immediate Action 1</i> Support Fleet Replacement Policy update to include requirements for all-electric light duty fleet vehicles on replacement.
	<i>Fleet Immediate Action 2</i> Research and assess green fleet procurement case studies
	<i>Fleet Immediate Action 3</i> Create GIS layer with locations of fleet parking and existing and planned EV chargers
2021-23 FP	Fleet 1.1 Expand EV charging infrastructure at strategic locations to accommodate a growing EV fleet.
	Fleet 1.2 Begin priority fleet electrification of light-duty vehicles to initiate the transition to a zero-emissions fleet.
	Fleet 1.3 Continue to research funding sources for charging infrastructure and monitor best practices for zero emissions medium and heavy-duty vehicles to build the foundation for a future "hard to reach" fleet transition.
	Fleet 1.4 Advocate to Central Coast Community Energy (3CE) to fund a fleet electrification plan to advance the goal and objectives of the Fleet sector.
2023-25 FP	Fleet 2.1 Develop and begin implementing landscape management and maintenance equipment transition plan to reduce fossil fuel use in maintenance equipment.
	Fleet 2.2 Launch landscape management pilot program to explore feasibility and effectiveness of electric landscaping equipment ahead of a broader transition.
	Fleet 2.3 Expand charging infrastructure for electric landscaping equipment and other electric/hybrid equipment to accommodate a growing electric equipment fleet.
	Fleet 2.4 Explore feasibility of backup power generation transition plan to reduce fossil fuel use in backup power generation.
	Fleet 2.5 Develop onsite solar offsets for charging needs to prevent increased energy demand and subsequent electricity purchases.
	Fleet 2.6 Develop plan for charging "hard to electrify" light duty vehicles (e.g., police cruisers), medium duty vehicles, and heavy-duty vehicles and install infrastructure as feasible.
2025-27, 27-30	Fleet 3.1 Implement landscape management and maintenance equipment transition plan to advance the goal and objectives of the Fleet sector.

Status	GHG Reduction Action
2025-27, 27-29 FP	Fleet 3.2 Initiate backup power generation transition plan to advance the goal and objectives of the Fleet sector.
	Fleet 3.3 Begin or continue transition to zero emissions medium and heavy-duty fleet vehicles to support the goal and objectives of the Fleet sector.
	Fleet 3.4 Procure vehicles for Police Department as identified in the FY 2025-26 Capital Improvement Project Budget to support the goal and objectives of the Fleet sector.

## Sector Emissions

The Fleet sector focuses on emissions from fossil fuel use (gasoline and diesel) used to power on-road vehicles and maintenance equipment owned and operated by the City. Figure 3.2 shows the business-as-usual scenario for municipal fleet emissions compared to forecasted emissions as a result of implementing the sector’s emission reduction actions, described in the previous section. Please note that the *Lead by Example* implementation forecast is based on the assumption that the City implements the Building & Facility Energy action 2.4, in which the City will opt-up to Central Coast Community Energy (3CE) Prime. In 2025, Fleet emissions are expected to decrease by 930 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 44 percent. In 2030, emissions are expected to decrease by 1,890 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 89 percent.

**Figure 3.2. Fleet forecasted emissions.**



# Employee Commute

## Strategy Overview

Single-occupancy transportation represents one of the largest community emissions sources in San Luis Obispo and the State of California. While employee commute for only represents approximately 13 percent of annual municipal operations emissions, the sector is highly visible and successful program implementation at the City could be transferable to businesses and other organizations in the community. For example, in 1998 the City initiated the Trip Reduction Incentive Program (TRIP) to help employees track their commute and receive incentives for taking less polluting commute options, which inspired other regional organizations to take similar actions..

*Lead by Example* includes a strategic pathway to identify opportunities to enhance and expand the TRIP program, leverage updated work-from-home policies to tailor new and existing commute reduction initiatives, and pursue partnerships to develop innovative mobility platforms. By building on evolving practices for employee tele-work and tailoring programs to encourage alternative transportation when commute is necessary, the City can achieve substantial reductions in commute vehicle miles traveled and related emissions.

**GOAL:** City employee commute is aligned with and substantially exceeds General Plan Mode Split Objectives by 2030.

**OBJECTIVES:**

1. Reduce single-occupancy commute miles 25% by 2025, 50% by 2030.
2. Of the remaining single-occupancy commute miles, achieve 25% via electric vehicle by 2025, 50% via electric vehicle by 2030.

## Emerging Challenges and Opportunities

The Employee Commute sector is a challenging, yet critical aspect of annual municipal GHG emissions. Staff that live within and outside of San Luis Obispo overwhelmingly rely on single-occupancy vehicle travel to report to work. This pattern can be attributed to the relatively far distance between home and work for many out-of-town employees due to higher housing costs in San Luis Obispo, the convenience of driving compared to other modes, perceived safety compared to other modes, and cultural norms. Meaningful changes to the vehicle miles travelled and commute mode chosen by employees will largely be based on behavioral change, over which the City is able to exercise limited policy and program influence. Additionally, while the COVID-19 pandemic has drastically reduced the number of employees physically reporting to work in 2020 and 2021, it is assumed that the transition back to in-person work could result in “business-as-usual” commute habits.

In the commute emissions reduction strategy, staff are committed to utilizing equity-focused incentives to encourage City employees to choose alternate modes and reduce overall vehicle miles traveled. Work with staff in the Human Resources department will inform the planning process to develop updated, long-term work-from-home policies that will allow flexibility for employees to work remotely.

## GHG Reduction Actions

Table 3.3 shows the reduction measure actions developed by staff for the Employee Commute sector. The table includes immediate actions that were completed during Phase I of the Lead by Example planning and implementation process as well as those near and long-term actions collaboratively developed by the Green Team. All actions within the 2021-23 Financial Plan period are currently budgeted or scheduled and do not represent additional work tasks. Chapter 4 provides additional implementation information, including responsible departments.

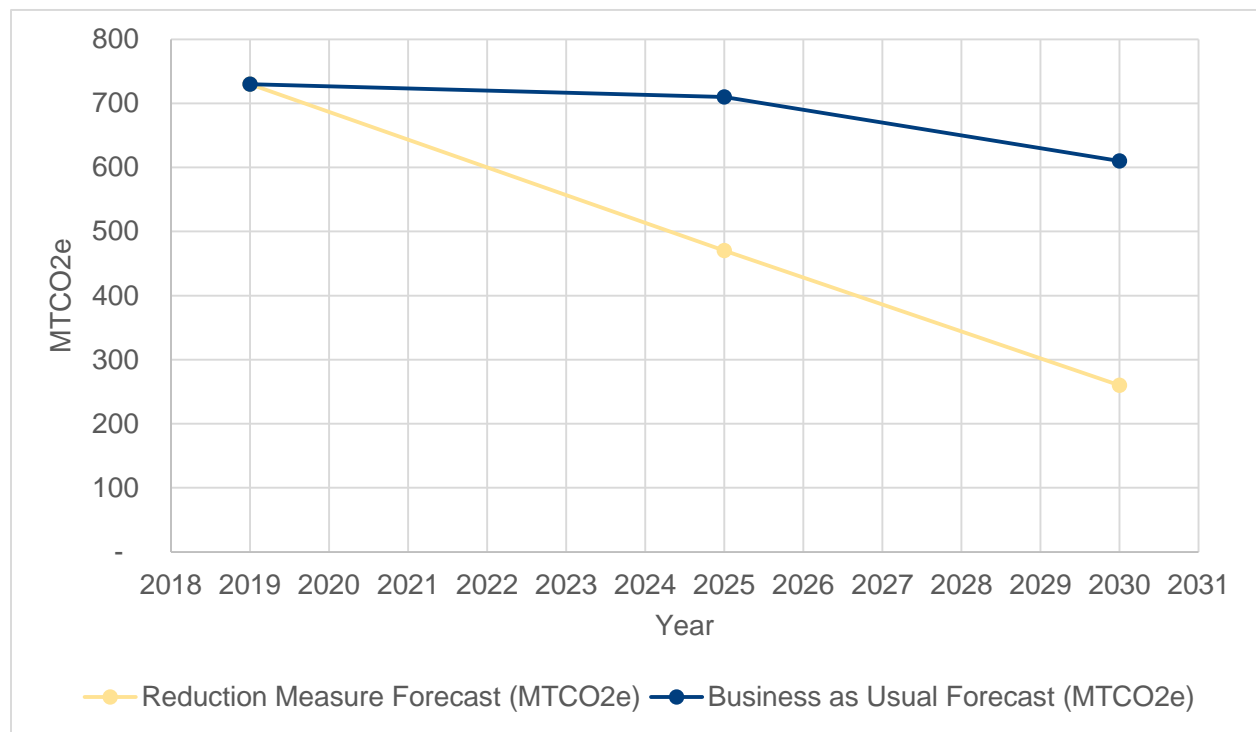
**Table 3.3. Employee Commute GHG reduction actions.**

Status	GHG Reduction Action
Completed	<i>Commute Immediate Action 1</i> Integrate “Lead by Example” into the Active Transportation Plan.
	<i>Commute Immediate Action 2</i> Facilitate an initial meeting with San Luis Obispo Council of Governments (SLOCOG) to expand iRideshare capabilities and leverage “mobility as a service” for employee commute objectives.
2021-23 FP	Commute 1.1 Leverage updated work from home policies to provide VMT and provide additional incentives for alternative transportation for field workers and shift workers.
	Commute 1.2 Update TRIP program to reflect current Council priorities and contemporary issues such as work from home, DEI, and electric vehicles.
	Commute 1.3 Develop trip reduction program to show that the City holds itself to the same standards as current development and to reduce vehicle miles travelled.
	Commute 1.4 Launch programs to increase employee access to bicycles (e.g., employee bike loan program).
	Commute 1.5 Enhance/expand bus pass access to encourage alternate, low-carbon transportation for commute purposes.
	Commute 1.6 Explore mobility-as-a-service to connect employees with alternate, low-carbon transportation for commute purposes.
	Commute 1.7 Establish electric vehicle charging policy for personal vehicles at City parking spaces to encourage use of EV’s for commute purposes.
2023-25 FP	Commute 2.1 Enhance access to trip reduction incentives for out-of-town employees to equitably advance the goal and objectives of the Employee Commute sector.
2025-27, 27-29 FP	Commute 2.2 Evaluate staff commute habits and reevaluate strategic approach to achieving sector objectives.

## Sector Emissions

The Employee Commute sector focuses on emissions from vehicle miles travelled (VMT) used by City employees to travel to and from work. Figure 3.3 shows the business as usual scenario for employee commute emissions compared to forecasted emissions as a result of implementing the sector’s emission reduction actions, described in the previous section. In 2025, Employee Commute emissions are expected to decrease by 240 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 34 percent. In 2030, emissions are expected to decrease by 350 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 57 percent.

**Figure 3.3. Employee Commute forecasted emissions.**





# Solid Waste

## Strategy Overview

City facilities and operations produce a considerable volume of annual solid waste, totaling about 280 tons in 2019. In terms of municipal operations GHG emissions, Solid Waste represents approximately two percent of total emissions. However, similar to Employee Commute, the Solid Waste sector presents an opportunity to develop and pilot waste reduction programs and capital projects that can be modeled by businesses and other organizations in the community. The City has historically implemented operations-based waste reduction policies consistent with state law and launched in-office programs that coincide with community programs, like the distribution of green waste bins across the organization.

**GOAL:** City buildings, facilities, and operations are zero waste as defined by the Zero Waste International Alliance (ZWIA).

**OBJECTIVES:**

1. Achieve 90% reduction in landscape waste.
2. Achieve 90% reduction in office-based operation waste.

The Utilities department is in a unique position to utilize its existing partnership with the Integrated Waste Management Authority (IWMA) to scale community-based waste reduction initiatives for municipal use. Lead by Example includes a strategic pathway to identify opportunities to enhance and expand current waste reduction programs and policies through a waste reduction plan. By implementing waste-reduction measures across City buildings and facilities and pursuing zero-waste operations, the City can save money, cut emissions, and Lead by Example.<sup>2</sup>

## Emerging Challenges and Opportunities

Pursuing zero-waste operations poses various challenges and uncertainties. Notably, reducing office-based waste is largely dependent on individual employee behavior. Even after the infrastructure and policies are in place, employees must dispose of waste in the correct bin, follow best practices, and develop new habits. This reality makes employee buy-in and education a critical component of achieving our waste objectives.

The pathway to reducing waste will largely depend on the findings and recommendations of the Municipal Waste Reduction Plan and Characterization Study (to be developed in FY 21-23). While any waste diverted from a landfill is a success, reducing consumption first is the best approach to minimize issues such as recycling contamination and green waste bin under-utilization.

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<sup>2</sup> The Zero Waste International Alliance (ZWIA) defines “zero waste” as “the conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health.” Lead by Example operationalizes this as a 90% reduction in landfilled waste.

## GHG Reduction Actions

Table 3.4 shows the reduction measure actions developed by staff for the Solid Waste sector. The table includes immediate actions that were completed during Phase I of the Lead by Example planning and implementation process as well as those near and long-term actions collaboratively developed with the Green Team. All actions within the 2021-23 Financial Plan period are currently budgeted or scheduled and do not represent additional work tasks. Chapter 4 provides additional implementation information, including responsible departments.

**Table 3.4. Solid Waste GHG reduction actions.**

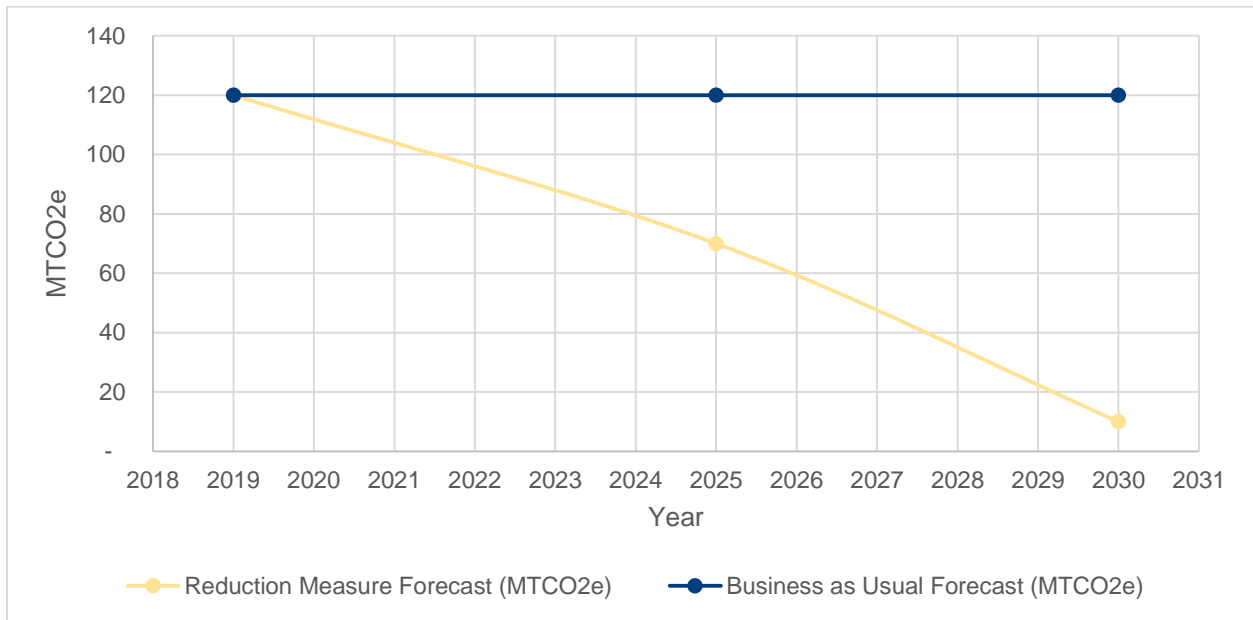
Status	GHG Reduction Action
Completed	<i>Waste Immediate Action 1</i> Research and assess solution case studies for recycling contamination in public spaces.
2021-23 FP	Waste 1.1 Hire a CivicSpark Fellow to support municipal zero waste goal.
	Waste 1.2 Develop a Municipal Waste Reduction Plan & conduct municipal waste characterization study to frame an approach to operations-wide solid waste reduction.
	Waste 1.3 Adopt waste reduction and diversion ordinances to ensure consistency with ordinance directives from the Integrated Waste Management Authority.
	Waste 1.4 Survey office space throughout the City and assess opportunities to optimize waste reduction through the TRUE certification program.
	Waste 1.5 Develop & implement paper-free workplace policy to reduce paper waste in office-based operations.
	Waste 1.6 Initiate project to right-size existing waste bins to encourage appropriate waste disposal across offices.
2023-25 FP	Waste 2.1 Implement Municipal Waste Reduction Plan to support the goal and objectives of the Solid Waste sector.
2025-27, 27-29 FP	Waste 3.1 Continue implementing Municipal Waste Reduction Plan to support the goal and objectives of the Solid Waste sector.

## Sector Emissions

The Solid Waste sector focuses on emissions from solid waste disposal as a result of City operations. Figure 3.4 shows the business as usual scenario for solid waste emissions compared to forecasted emissions as a result of implementing the sector’s emission reduction actions,

described in the previous section. In 2025, Solid Waste emissions are expected to decrease by 50 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 42 percent. In 2030, emissions are expected to decrease by 110 MTCO<sub>2</sub>e relative to “business as usual”, or approximately 92 percent.

**Figure 3.4. Solid Waste forecasted emissions.**



# Wastewater

## Strategy Overview

The City of San Luis Obispo owns and operates a major facility responsible for treating wastewater, the Water Resource Recovery Facility (WRRF). This facility and its processes use a significant amount of energy to power equipment. Additionally, the WRRF is a source of direct emissions in the form of biogas, which is a byproduct of the wastewater treatment process. Operations at the WRRF are highly regulated and opportunities to reduce emissions and enhance energy efficiency are constrained to allowable changes according to the regulatory agencies that oversee wastewater recovery in the State of California and the County of San Luis Obispo. The WRRF is currently undergoing an upgrade project that will replace the use of chemicals for disinfection with UV technology. This project will reduce the negative environmental and embodied GHG emission impacts of industrial chemicals and will result in greater onsite electricity use.

**GOAL:** The City minimizes direct emissions from the provision of wastewater to the maximum extent feasible.

Lead by Example includes a strategic pathway to identify opportunities for emissions reduction actions within the existing regulatory framework that the WRRF operates. By strategically pursuing onsite energy generation using digester biogas and exploring pathways to utilize biosolids for local use, the City can capitalize on critical infrastructure in a strict regulatory environment to reduce direct and indirect emissions.

## Emerging Challenges and Opportunities

Wastewater recovery is an essential function of the City. Critical services such as these operate under strict regulatory standards which limit opportunities to pursue energy efficiency and other climate actions. For example, new regulatory standards require the WRRF to phase-out its chemical disinfection processes and construct a more effective and less environmentally-impactful technology (UV disinfection) that requires greater onsite energy use. By exploring the feasibility of further enhancing onsite energy generation via the co-generation system paired with battery storage, the City can potentially offset these increased energy needs while creating a more resilient system overall. The WRRF is currently partnered with PG&E and the U.S. Department of Energy in exploring opportunities for additional efficiency measures, including the expansion of onsite energy production and optimization of existing and future facilities currently under construction. Staff are committed to considering feasible avenues for reducing emissions while maintaining high standards of operation.

## GHG Reduction Actions

Table 3.5 shows the reduction measure actions developed by staff for the Wastewater sector. The table includes immediate actions that were completed during Phase I of the Lead by Example

planning and implementation process as well as those near and long-term actions collaboratively developed with the Green Team. All actions within the 2021-23 Financial Plan period are currently budgeted or scheduled and do not represent additional work tasks. Chapter 4 provides additional implementation information, including responsible departments.

**Table 3.5. Wastewater GHG reduction actions.**

Status	GHG Reduction Action
Completed	<i>Wastewater Immediate Action 1</i> Develop community engagement materials and outreach program for sewer lateral replacement policy.
2021-23 FP	Wastewater 1.1 Optimize onsite energy generation to reduce external energy demand and subsequent electricity purchases.
	Wastewater 1.2 Continue to reduce inflow and infiltration into the wastewater collection system through capital replacement of gravity sewer mains and private sewer lateral programs, resulting in less wastewater to treat.
	Wastewater 1.3 Evaluate the potential for expanded onsite energy capture and production through an ongoing partnership with the U.S. Department of Energy.

## Sector Emissions

The Wastewater sector focuses on emissions from the wastewater treatment process. The energy used to power the WRRF is included under the Building and Facility Energy sector. GHG emissions estimates included in the 2019 Municipal GHG Inventory and Report are purely informational, as staff are not confident that the calculation methods used are defensible.

# Procurement, Budget, and Finance

## Strategy Overview

While activities related to Procurement, Purchasing, & Finance are not directly quantified in the Municipal Greenhouse Gas Inventory, this sector is of unique importance due to its nexus with the other sectors. The way the City spends money, by funding internal projects and programs, investing, and entering into vendor contracts has downstream impacts on greenhouse gas emissions. The City has historically integrated climate and sustainability considerations into financial policy on an ad hoc basis per Council direction, like the Municipal Code Environmentally Preferred Purchasing Policy adoption in 1990 (updated in 2015 and 2018).

Lead by Example includes a strategic pathway to identify opportunities to formally integrate climate considerations across procurement, budgeting, and finance activities and pilot purchasing programs. Integrating climate considerations and priorities into the City's financial operations serves as the foundation for the broader transition to carbon neutral City operations across all sectors.

**GOAL:** The City supports and accelerates achieving the carbon neutrality goal through procurement, budget, investment, and finance processes.

**OBJECTIVES:**

3. Establish sustainability criteria to guide vendor selection and other procurement activities.
4. Establish criteria to guide budget development and selection of CIPs.
5. Achieve 100% ESG investments across the City's portfolio.
6. Establish approach to enhancing circularity in City procurement and operations.

## Emerging Challenges and Opportunities

Currently, there are not strong case studies for how peer cities formally integrate quantitative climate and sustainability metrics into financial decision-making processes. This space is rapidly emerging as more municipalities aim to align financial policies and procedures with climate goals.

Staff have already begun integrating qualitative, high-level considerations and prompts into purchasing and budget approval processes to frame the Council-adopted climate goal in the context of financial activities. Staff are committed to considering opportunities to integrate climate metrics broadly across financial activities and continuing to explore peer city case studies as the emissions reduction strategy is implemented.

## GHG Reduction Actions

Table 3.8 shows the reduction measure actions developed by staff for the Procurement, Budget, and Finance sector. The table includes immediate actions that were completed during Phase I of the Lead by Example planning and implementation process as well as those near and long-term actions collaboratively developed with the Green Team. These actions are expected to result in indirect emissions reductions and are therefore not included in the GHG emissions forecast. All actions within the 2021-23 Financial Plan period are currently budgeted or scheduled and do not represent additional work tasks. Chapter 4 provides additional implementation information, including responsible departments.

**Table 3.8. Procurement, Budget, and Finance GHG reduction actions.**

Status	GHG Reduction Action
Completed	<i>Procurement Immediate Action 1</i> Research and assess case studies on green/sustainable budgeting at the municipal level.
	<i>Procurement Immediate Action 2</i> Collect case studies from Green Cities California (GCC) on draft purchase policy update.
	<i>Procurement Immediate Action 3</i> Adopt new policy focusing budget decisions on sustainability, resilience, and diversity, equity, and inclusion.
	<i>Procurement Immediate Action 4</i> Update capital improvement project (CIP) intake form to include carbon neutrality considerations.
2021-23 FP	Procurement 1.1 Develop and implement Capital Improvement Project (CIP) climate and resilience quantification tool for 2023-25 FP to promote consistency with Council-adopted climate goals for capital projects.
	Procurement 1.2 Update and advance climate and equity budget approach for 2023-25 FP to promote consistency with Council-adopted climate goals for budget processes.
	Procurement 1.3 Update Environmentally Preferred section of Procurement Policy and codify in the Municipal Code to reflect broader climate and sustainability considerations.
	Procurement 1.4 Conduct pilot program with IT and consider updating IT strategic plan regarding environmentally preferred equipment to identify/assess challenges and opportunities with sustainable purchasing that can be scaled to other operations and equipment.
2023-25 FP	Procurement 2.1 Develop and begin implementing Council-adopted sustainability criteria for procurement contracts.
2025-27, 27-29 FP	Procurement 3.1 Revisit janitorial contracts (amendment to request for proposal template & purchasing policy) to promote consistency with Council-adopted climate goals for janitorial products and services.

## Sector Emissions

The Procurement, Budget, and Finance sector is associated with indirect emissions not quantified in the 2019 Municipal GHG Inventory and Report. Any emission reductions that will occur as a result of implementation of emission reduction actions will also fall under indirect emissions and are not currently quantifiable according to the Local Government Operations Protocol. Therefore, staff did not estimate Procurement, Budget, and Finance sector emissions under a “business as usual” or emission reduction measure scenario. The City recognizes the importance of taking action within the sector despite not quantifying emissions, especially given the opportunity to “lead by example” and implement highly replicable and scalable measures.



# Natural Solutions

## Strategy Overview

The open space lands owned or managed by the City of San Luis Obispo present a significant opportunity to offset operational emissions via soil-based carbon sequestration. Investment in the Urban Forest and carbon farming in the City's Greenbelt can increase soil carbon storage while benefitting the community through the conservation of natural resources, maintenance of ecosystem services, access to passive recreation opportunities, and enhanced climate resilience.

Lead by Example includes a strategic pathway to build on Natural Solutions foundational actions detailed in the Climate Action Plan for Community Recovery to grow the City's Greenbelt through conservation easements and property acquisitions, implement targeted "carbon farming" pilot projects, and expand the City's Urban Forest system. The Natural Solutions sector allows the City to demonstrate leadership in this emerging field, support climate resilience, and enhance community well-being.

**GOAL:** The City optimizes carbon sequestration within the City's Greenbelt and Urban Forest system.

**OBJECTIVES:**

1. The City has a healthy multi-benefit Urban Forest system that increases local carbon sequestration.
2. The City open space and Greenbelt support regenerative agricultural practices and are managed to sequester carbon, where appropriate.
3. The City's landscape management practices are climate friendly and utilize compost from the regional anaerobic digester.

## Emerging Challenges and Opportunities

Actions within the Natural Solutions sector need to be responsive to a changing climate. With the frequency and intensity of extreme heat days and wildfire risk expected to increase over time, many areas of San Luis Obispo will be left vulnerable. Specifically, when considering the importance of tree cover to human health in cases of extreme heat, the co-benefits of a more robust urban forest are apparent. Additionally, nature-based approaches to carbon sequestration are a rapidly emerging field. Given uncertainty regarding methodology and the GHG sequestration potential of "carbon farming," the City should remain flexible in pilot project implementation.

As the region anticipates more frequent extreme heat days, tree planting will be coordinated to maximize cooling and energy efficiency benefits for the areas of San Luis Obispo with the least tree cover and greatest expected heat intensity. The Urban Forest system expansion strategy also includes considerations for tree species in order to ensure long-term tree success in a changing climate. Staff are committed to being responsive to changing conditions and will continuously seek opportunities to enhance climate adaptation and resilience co-benefits while pursuing carbon sequestration activities.

## GHG Reduction Actions

Table 3.6 shows the reduction measure actions developed by staff for the Natural Solutions sector. The table includes actions that were included in the Climate Action Plan for Community Recovery and those included in the 2021-23 Financial Plan. All actions within the 2021-23 Financial Plan period are currently budgeted or scheduled and do not represent additional work tasks. Chapter 4 provides additional implementation information, including responsible departments.

**Table 3.6. Natural Solutions GHG reduction actions.**

Status	GHG Reduction Action
2021-23 FP	Natural Solutions 1.1 Prepare the City’s first Urban Forest Master Plan, to be brought before City Council in 2022, including a comprehensive update of tree inventory, assessment of tree canopy coverage, and implementation of an ongoing tracking system.
	Natural Solutions 1.2 Partner with ECOSLO and others in the community to support the 10,000 Trees by 2035 goal through a tree planting and maintenance program.
	Natural Solutions 1.3 Convene an inter-departmental staff team to assess and provide recommendations for the Urban Forest Program's future role in advancing sustainability goals and objectives.
	Natural Solutions 1.4 Identify a strategy for a prioritized replacement schedule for downtown Ficus trees and begin implementation to ensure the long-term preservation of the Downtown street tree canopy.
	Natural Solutions 1.5 Develop a “Carbon Farm Plan” for the City’s Johnson Ranch Open Space and Calle Joaquin Agricultural Reserve (“City Farm”) in 2021 to strategically implement compost application.
	Natural Solutions 1.6 Begin pilot implementation of compost application and monitoring to implement the Carbon Farm Plans described in 1.5, above, beginning in 2022 to advance carbon sequestration efforts.
	Natural Solutions 1.7 Actively pursue opportunities to purchase open space lands and permanent land conservation agreements in furtherance of the City's Greenbelt Protection Program.
	Natural Solutions 1.8 Explore opportunities to utilize regional green waste digester compost for beneficial use across properties and operations.
2023-25 FP	Natural Solutions 2.1 Begin long-term implementation of “Carbon Farming” practices to advance carbon sequestration efforts.
	Natural Solutions 2.2 Continue planting trees on an annual basis towards the objective of 10,000 new trees by 2035 pending direction in the Urban Forest Master Plan.
	Natural Solutions 2.3 Launch pilot project to strategically phase-in regional green waste digester compost for landscape management operations to promote circularity and advance carbon sequestration efforts.

Status	GHG Reduction Action
2025-27 FP	Natural Solutions 3.1 Continue planting trees on an annual basis towards the objective of 10,000 new trees by 2035 pending direction in the Urban Forest Master Plan to advance carbon sequestration efforts.

## Sector Emissions

The Natural Solutions sector focuses on emissions reductions as a result of natural carbon sequestration on City-owned properties. Table 3.7 shows the forecasted emissions reductions as a result of implementing the sector’s actions, described in the previous section.

**Table 3.7. Natural Solutions forecasted emissions offsets.**

Sector	2025	2030
Forecasted Emissions Offsets (MTCO2e)	1,790	2,000



# 4. ACHIEVING OUR GOALS

## Administrative Actions

In addition to the sector specific actions in Chapter 3, the City commits to the following administrative actions to ensure active and effective implementation of Lead by Example.

- **Administrative Action 1: Lead by Example Update.** The City will update Lead by Example every four years (concurrent with every other Financial Plan). The City will synch the update with the Community Plan so that each plan is updated in an alternating fashion concurrent with every Financial Plan.
- **Administrative Action 2: Plan Monitoring and Reporting.** The City will monitor and report implementation to City Council on a regular basis.

## Action Implementation Matrix

The below table summarizes each action that the City is committed to pursuing as a part of Lead by Example, including the departments responsible for implementing the action and the planned initiation period. Under the Responsible Department(s) column, departments that are bolded are the primary lead for implementation and those that are not bolded have been identified as having a supportive role.

Action	Description	Responsible Department(s)	Planned Initiation (FP)
<i>Administrative Actions</i>			
<i>Administrative Action 1: Lead by Example Update</i>	The City will update Lead by Example every four years (concurrent with every other Financial Plan). The City will synch the update with the Community Plan so that each plan is updated in an alternating fashion concurrent with every Financial Plan.	<b>Office of Sustainability</b>	Ongoing
<i>Administrative Action 2: Plan Monitoring and Reporting</i>	The City will monitor and report implementation to City Council on a regular basis.	<b>Office of Sustainability</b>	Ongoing

Action	Description	Responsible Department(s)	Planned Initiation (FP)
<i>Energy</i>			
<i>Energy Immediate Action 1</i>	Initiate conversations with PG&E and The Energy Network to explore on-bill financing opportunities for City buildings and facilities.	<b>Office of Sustainability, Public Works</b>	Completed
<i>Energy Immediate Action 2</i>	Review and propose edits for lawn & garden Request for Proposal	<b>Office of Sustainability</b>	Completed
Energy 1.1	Initiate and complete Energy Master Plan to develop the approach to decarbonization, comprehensive energy management, and efficiency across buildings and facilities.	<b>Office of Sustainability, Public Works</b>	2021-23
Energy 1.2	Complete On-Bill Financing Projects to retrofit buildings and facilities.	<b>Public Works, Office of Sustainability</b>	2021-23
Energy 1.3	Complete solar projects at SLO Swim Center, Transit Yard, and Fire Station 1 to offset energy use at key facilities.	<b>Public Works</b>	2021-23
Energy 1.4	Complete battery storage project at the Water Treatment Plant to promote resilience against power failure.	<b>Utilities</b>	2021-23
Energy 1.5	Continue ongoing and strategic efficiency improvements to advance the goal and objectives for the Energy sector.	<b>Public Works, Utilities</b>	2021-23
Energy 1.6	Develop and pilot an energy monitoring and management dashboard for Utilities Department to identify additional areas for efficiency improvements and quantify the impact of existing and future actions and consider scaling after pilot phase.	<b>Utilities</b>	2021-23

Action	Description	Responsible Department(s)	Planned Initiation (FP)
Energy 1.7	Identify low or no cost energy efficiency improvements at the Wastewater Resource Recovery Facility (WRRF) through ongoing participation in energy efficiency studies with PG&E to reduce energy demand and emissions for one of the City’s largest energy-consuming facilities.	<b>Utilities</b>	2021-23
Energy 2.1	Initiate implementation of Energy Master Plan, continue priority retrofits, and initiate hard-to-reach retrofits to advance decarbonization and energy management across buildings and facilities.	<b>Public Works</b> , Office of Sustainability	2023-25
Energy 2.2	Continue funding building retrofits and identifying and pursuing innovative funding and financing mechanisms such as on-bill financing.	<b>Public Works</b>	2023-25
Energy 2.3	Procure and manage facility-wide energy management software and consider supportive staffing to target opportunities for retrofits and other energy efficiency measures.	<b>Office of Sustainability</b> , Public Works, Utilities	2023-25
Energy 2.4	"Opt-up" to Central Coast Community Energy (3CE) Prime to receive 100% renewable energy.	<b>Office of Sustainability</b> , Public Works, Utilities	2023-25
Energy 3.1	Continue implementing Energy Master Plan and continue hard-to-reach retrofits to advance energy efficiency across buildings and facilities.	<b>Public Works</b>	2027-29
Energy 3.2	Continue funding building retrofits and identifying and pursuing innovative funding and financing mechanisms such as on-bill financing.	<b>Public Works</b>	2027-29
<i>Fleet</i>			
<i>Fleet Immediate Action 1</i>	Support Fleet Replacement Policy update to include requirements for all-electric light duty fleet vehicles on replacement.	<b>Office of Sustainability</b>	Completed
<i>Fleet Immediate Action 2</i>	Research and assess green fleet procurement case studies	<b>Office of Sustainability</b>	Completed

Action	Description	Responsible Department(s)	Planned Initiation (FP)
<i>Fleet Immediate Action 3</i>	Create GIS layer with locations of fleet parking and existing and planned EV chargers	<b>Office of Sustainability</b>	Completed
Fleet 1.1	Expand EV charging infrastructure at strategic locations to accommodate a growing EV fleet.	<b>Public Works</b> , Office of Sustainability	2021-23
Fleet 1.2	Begin priority fleet electrification of light-duty vehicles to initiate the transition to a zero-emissions fleet.	<b>Public Works</b>	2021-23
Fleet 1.3	Continue to research funding sources for charging infrastructure and monitor best practices for zero emissions medium and heavy-duty vehicles to build the foundation for a future "hard to reach" fleet transition.	<b>Office of Sustainability</b> , Public Works	2021-23
Fleet 1.4	Advocate to Central Coast Community Energy (3CE) to fund a fleet electrification plan to advance the goal and objectives of the Fleet sector.	<b>Office of Sustainability</b>	2021-23
Fleet 2.1	Develop and begin implementing landscape management and maintenance equipment transition plan to reduce fossil fuel use in maintenance equipment.	<b>Public Works</b> , Office of Sustainability	2023-25
Fleet 2.2	Launch landscape management pilot program to explore feasibility and effectiveness of electric landscaping equipment ahead of a broader transition.	<b>Public Works</b> , Office of Sustainability	2023-25
Fleet 2.3	Expand charging infrastructure for electric landscaping equipment and other electric/hybrid equipment to accommodate a growing electric equipment fleet.	<b>Public Works</b>	2023-25
Fleet 2.4	Explore feasibility of backup power generation transition plan to reduce fossil fuel use in backup power generation.	<b>Office of Sustainability</b> , Public Works	2023-25



Action	Description	Responsible Department(s)	Planned Initiation (FP)
Fleet 2.5	Develop onsite solar offsets for charging needs to prevent increased energy demand and subsequent electricity purchases.	<b>Office of Sustainability, Public Works</b>	2023-25
Fleet 2.6	Develop plan for charging ‘hard to electrify’ light duty vehicles (e.g., police cruisers), medium duty vehicles, and heavy-duty vehicles and install infrastructure as feasible.	<b>Public Works, Office of Sustainability</b>	2023-25
Fleet 3.1	Implement landscape management and maintenance equipment transition plan to advance the goal and objectives of the Fleet sector.	<b>Public Works, Office of Sustainability</b>	2027-29
Fleet 3.2	Initiate backup power generation transition plan to advance the goal and objectives of the Fleet sector.	<b>Public Works</b>	2027-29
Fleet 3.3	Begin or continue transition to zero emissions medium and heavy-duty fleet vehicles to support the goal and objectives of the Fleet sector.	<b>Public Works</b>	2025-29
Fleet 3.4	Procure vehicles for Police Department as identified in the FY 2025-26 Capital Improvement Project Budget to support the goal and objectives of the Fleet sector.	<b>Public Works</b>	2025-29
<i>Commute</i>			
<i>Commute Immediate Action 1</i>	Integrate “Lead by Example” into the Active Transportation Plan.	<b>Office of Sustainability</b>	Completed
<i>Commute Immediate Action 2</i>	Facilitate initial meeting with San Luis Obispo Council of Governments (SLOCOG) to expand iRideshare capabilities and leverage “mobility as a service” for employee commute objectives.	<b>Office of Sustainability</b>	Completed

Action	Description	Responsible Department(s)	Planned Initiation (FP)
Commute 1.1	Leverage updated work from home policies to provide VMT and provide additional incentives for alternative transportation for field workers and shift workers.	<b>Human Resources</b> , Office of Sustainability	2021-23
Commute 1.2	Update TRIP program to reflect current Council priorities and contemporary issues such as work from home, DEI, and electric vehicles.	<b>Human Resources</b> , Office of Sustainability, Public Works	2021-23
Commute 1.3	Develop trip reduction program to show that the City holds itself to the same standards as current development and to reduce vehicle miles travelled.	<b>Public Works</b> , Office of Sustainability	2021-23
Commute 1.4	Launch programs to increase employee access to bicycles (e.g., employee bike loan program).	<b>Office of Sustainability</b> , Public Works, Finance	2021-23
Commute 1.5	Enhance/expand bus pass access to encourage alternate, low-carbon transportation for commute purposes.	<b>Public Works</b>	2021-23
Commute 1.6	Explore mobility-as-a-service to connect employees with alternate, low-carbon transportation for commute purposes.	<b>Office of Sustainability</b> , Public Works	2021-23
Commute 1.7	Establish electric vehicle charging policy for personal vehicles at City parking spaces to encourage use of EV's for commute purposes.	<b>Public Works</b> , Office of Sustainability, Finance	2021-23
Commute 2.1	Enhance access to trip reduction incentives for out-of-town employees to equitably advance the goal and objectives of the Employee Commute sector.	<b>Human Resources</b> , Office of Sustainability, Public Works	2023-25
Commute 2.2	Evaluate staff commute habits and reevaluate strategic approach to achieving sector objectives.	<b>Human Resources</b> , Office of Sustainability, Public Works	2023-25
<i>Solid Waste</i>			
<i>Waste Immediate Action 1</i>	Research and assess solution case studies for recycling contamination in public spaces.	<b>Office of Sustainability</b>	Completed
Waste 1.1	Hire a CivicSpark Fellow to support municipal zero waste goal.	<b>Utilities</b>	2021-23

Action	Description	Responsible Department(s)	Planned Initiation (FP)
Waste 1.2	Develop a Municipal Waste Reduction Plan & conduct municipal waste characterization study to frame an approach to operations-wide solid waste reduction.	Utilities	2021-23
Waste 1.3	Adopt waste reduction and diversion ordinances to ensure consistency with ordinance directives from the Integrated Waste Management Authority.	Utilities	2021-23
Waste 1.4	Survey office space throughout the City and assess opportunities to optimize waste reduction through the TRUE certification program.	Utilities	2021-23
Waste 1.5	Develop & implement paper-free workplace policy to reduce paper waste in office-based operations.	Utilities	2021-23
Waste 1.6	Initiate project to right-size existing waste bins to encourage appropriate waste disposal across offices.	Utilities	2021-23
Waste 2.1	Implement Municipal Waste Reduction Plan to support the goal and objectives of the Solid Waste sector.	Utilities	2023-25
Waste 3.1	Continue implementing Municipal Waste Reduction Plan to support the goal and objectives of the Solid Waste sector.	Utilities	2027-29
<i>Wastewater</i>			
<i>Wastewater Immediate Action 1</i>	Develop community engagement materials and outreach program for sewer lateral replacement policy.	Utilities, Office of Sustainability	Completed
Wastewater 1.1	Optimize onsite energy generation to reduce external energy demand and subsequent electricity purchases.	Utilities	2021-23

Action	Description	Responsible Department(s)	Planned Initiation (FP)
Wastewater 1.2	Continue to reduce inflow and infiltration into the wastewater collection system through capital replacement of gravity sewer mains and private sewer lateral programs, resulting in less wastewater to treat.	<b>Utilities</b>	2021-23
Wastewater 1.3	Evaluate the potential for expanded onsite energy capture and production through an ongoing partnership with the U.S. Department of Energy.	<b>Utilities</b>	2021-23
<i>Procurement</i>			
<i>Procurement Immediate Action 1</i>	Research and assess case studies on green/sustainable budgeting at municipal level.	<b>Office of Sustainability</b>	Completed
<i>Procurement Immediate Action 2</i>	Collect case studies from Green Cities California (GCC) on draft purchase policy update.	<b>Office of Sustainability</b>	Completed
<i>Procurement Immediate Action 3</i>	Adopt new policy focusing budget decisions on sustainability, resilience, and diversity, equity, and inclusion.	<b>Office of Sustainability</b>	Completed
<i>Procurement Immediate Action 4</i>	Update capital improvement project (CIP) intake form to include carbon neutrality considerations.	<b>Office of Sustainability</b>	Completed
Procurement 1.1	Develop and implement Capital Improvement Project (CIP) climate and resilience quantification tool for 2023-25 FP to promote consistency with Council-adopted climate goals for capital projects.	<b>Office of Sustainability, Finance, Public Works</b>	2021-23

Action	Description	Responsible Department(s)	Planned Initiation (FP)
Procurement 1.2	Update and advance climate and equity budget approach for 2023-25 FP to promote consistency with Council-adopted climate goals for budget processes.	<b>Office of Sustainability, Finance</b>	2021-23
Procurement 1.3	Update Environmentally Preferred section of Procurement Policy and codify in the Municipal Code to reflect broader climate and sustainability considerations.	<b>Finance, Office of Sustainability</b>	2021-23
Procurement 1.4	Conduct pilot program with IT and consider updating IT strategic plan regarding environmentally preferred equipment to identify/assess challenges and opportunities with sustainable purchasing that can be scaled to other operations and equipment.	<b>Finance, Information Technology, Office of Sustainability</b>	2021-23
Procurement 2.1	Develop and begin implementing Council-adopted sustainability criteria for procurement contracts.	<b>Finance</b>	2023-25
Procurement 3.1	Revisit janitorial contracts (amendment to request for proposal template & purchasing policy) to promote consistency with Council-adopted climate goals for janitorial products and services.	<b>Finance</b>	2025-27
<i>Natural Solutions</i>			
Natural Solutions 1.1	Prepare the City’s first Urban Forest Master Plan, to be brought before City Council in 2022, including a comprehensive update of tree inventory, assessment of tree canopy coverage, and implementation of an ongoing tracking system.	<b>Public Works and Office of Sustainability,</b>	2021-23
Natural Solutions 1.2	Partner with ECOSLO and others in the community to support the 10,000 Trees by 2035 goal through a tree planting and maintenance program.	<b>Office of Sustainability</b>	2021-23

Action	Description	Responsible Department(s)	Planned Initiation (FP)
Natural Solutions 1.3	Convene an interdepartmental staff team to assess and provide recommendations for the Urban Forest Program's future role in advancing sustainability goals and objectives.	<b>Public Works and Office of Sustainability</b>	2021-23
Natural Solutions 1.4	Identify a strategy for a prioritized replacement schedule for downtown Ficus trees and begin implementation to ensure the long-term preservation of the Downtown street tree canopy.	<b>Public Works</b> , Office of Sustainability	2021-23
Natural Solutions 1.5	Develop a “Carbon Farm Plan” for the City’s Johnson Ranch Open Space and Calle Joaquin Agricultural Reserve (“City Farm”) in 2021 to strategically implement compost application.	<b>Office of Sustainability</b>	2021-23
Natural Solutions 1.6	Begin pilot implementation of compost application and monitoring to implement the Carbon Farm Plans described in 1.5, above, beginning in 2022 to advance carbon sequestration efforts.	<b>Office of Sustainability</b> , Parks & Recreation	2021-23
Natural Solutions 1.7	Actively pursue opportunities to purchase open space lands and permanent land conservation agreements in furtherance of the City's Greenbelt Protection Program.	<b>Office of Sustainability</b>	2021-23
Natural Solutions 1.8	Explore opportunities to utilize regional green waste digester compost for beneficial use across properties and operations.	<b>Office of Sustainability</b> , Public Works, Parks & Recreation	2021-23
Natural Solutions 2.1	Begin long-term implementation of “Carbon Farming” practices to advance carbon sequestration efforts.	<b>Office of Sustainability</b>	2023-25
Natural Solutions 2.2	Continue planting trees on an annual basis towards the objective of 10,000 new trees by 2035 pending direction in the Urban Forest Master Plan to advance carbon sequestration efforts.	<b>Office of Sustainability</b>	2023-25

Action	Description	Responsible Department(s)	Planned Initiation (FP)
Natural Solutions 2.3	Launch pilot project to strategically phase-in regional green waste digester compost for landscape management operations to promote circularity and advance carbon sequestration efforts.	<b>Office of Sustainability,</b> Public Works, Parks & Recreation	2023-25
Natural Solutions 3.1	Continue planting trees on an annual basis towards the objective of 10,000 new trees by 2035 pending direction in the Urban Forest Master Plan to advance carbon sequestration efforts.	<b>Office of Sustainability</b>	2027-29