Environmental Sustainability Action Plan

DECEMBER 2023

City of VERNON CALIFORNIA

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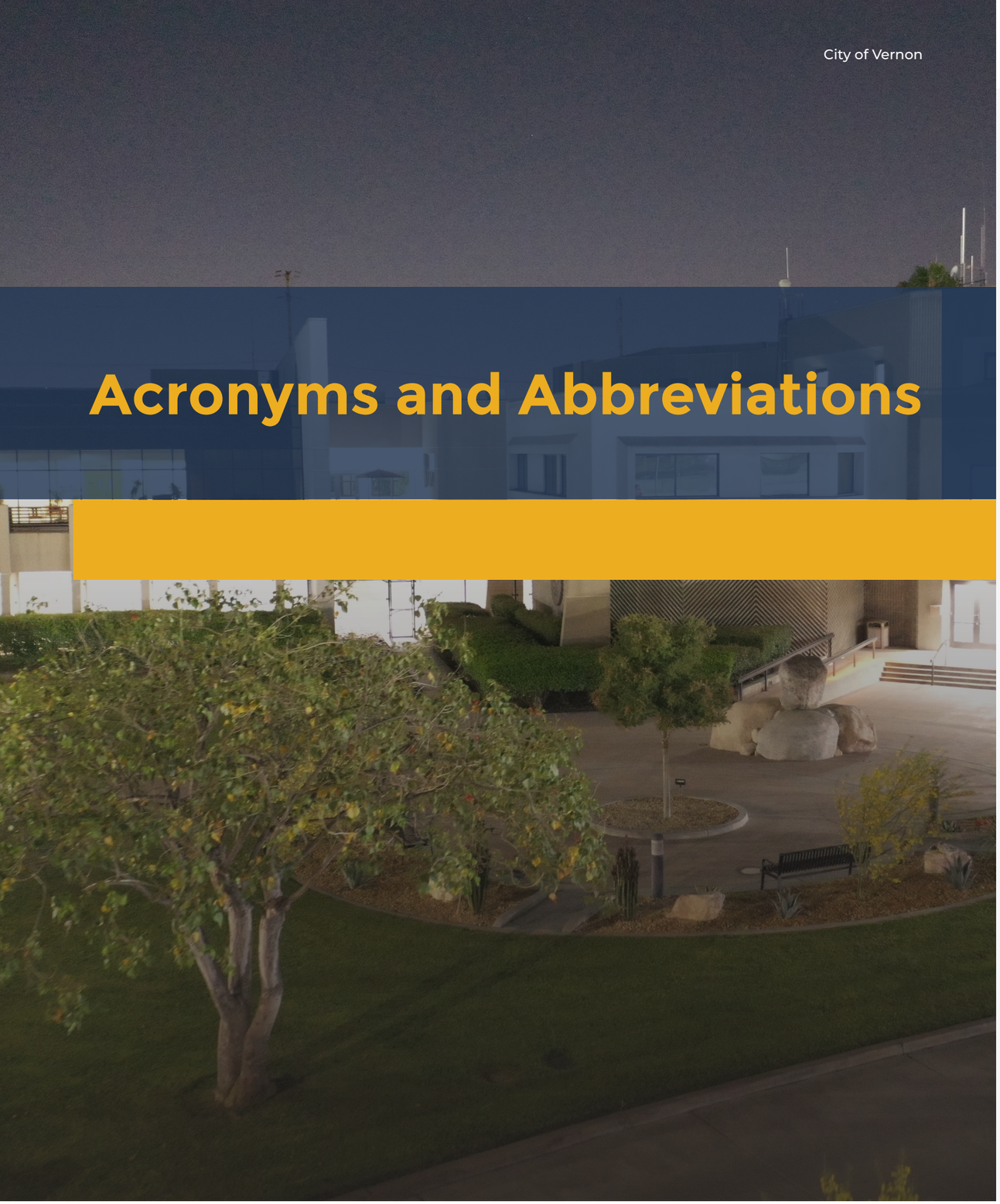
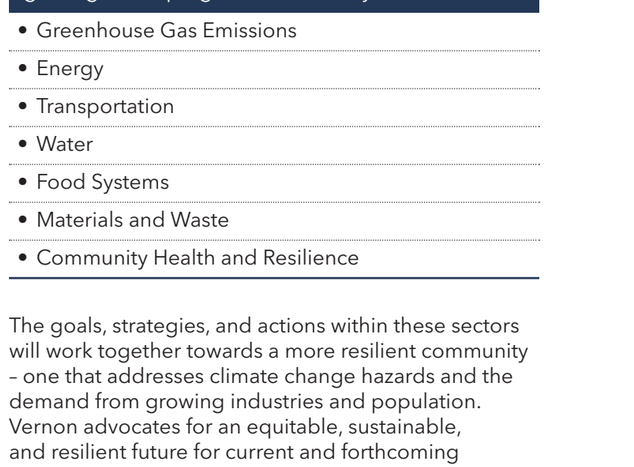


Acronyms and Abbreviations

AB 32	Assembly Bill 32 Global Warming Solutions Act of 2006
AB 341	Assembly Bill 341 Mandatory Commercial Recycling
AB 197	Assembly Bill 197 California Global Warming Solutions Act of 2006 – Direct Emissions
AB 802	Assembly Bill 802 Energy Efficiency Act of 2016
AB 1279	Assembly Bill 1279 Carbon Neutrality
AB 1668	Assembly Bill 1668 Water Management Planning Act of 2018
AB 1826	Mandatory Commercial Organics Recycling
AQMD	South Coast Air Quality Management District
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CBMWD	Central Basin Municipal Water District
ESA	Environmental Science Associates
ESAP or Plan	Environmental Sustainability Action Plan
EV	electric vehicle
Gateway Cities or GCCOG	Gateway Cities Council of Governments
GHG	Greenhouse gas
GVC	Green Vernon Commission
GPCD	Gallons per capita per day
GWFG	Golden West Food Groups
GWh	gigawatt-hour
IRP	Integrated Resource Plan
LA	Los Angeles
LAFPC	Los Angeles Food Policy Council
LHMP	Local Hazard Mitigation Plan
MGS	Malburg Generating Station
MWh	Megawatt-hour
MTCO2e	Metric tons of carbon dioxide equivalent
OEHHA	California Office of Environmental Health Hazard Assessment
PM	fine particulate matter
ROI	Return on Investment
SB 32	Senate Bill 32 California Global Warming Solutions Act of 2006 – 2030 Emissions Limit
SB 100	Senate Bill 100, 100% Clean Energy Act of 2018
SB 350	Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015
SB 379	Senate Bill 379 Land use: General plan: Safety element. 2015
SB 606	Senate Bill 606 Water Management Planning of 2018
SB X7-7	Senate Bill Water Conservation Act of 2009
SB 1020	Senate Bill 1020 Clean Energy, Jobs, and Affordability Act of 2022
SB 1383	Senate Bill 1383 California's Short-Lived Climate Pollutant Reduction Law of 2016
SCAG	Southern California Association of Governments
SMI	Strategic Materials Inc.
Solar PV Systems	Solar photovoltaic systems
SOV	single occupancy vehicle
UWMP	Urban Water Management Plan
VMT	Vehicle miles traveled
VPU	Vernon Public Utilities
WEA	Wellness Equity Alliance
ZEV	Zero-emission vehicles

Executive Summary



The City of Vernon's 2023 Environmental Sustainability Action Plan (ESAP) represents a renewed commitment to a greener, cleaner, and more sustainable community for the City's operations, as well as local businesses and residents. The Health and Environmental Control department is leading the effort to strengthen the City's sustainability policies, promote stronger collaborations across key sectors, and take action to reduce greenhouse gas emissions throughout the community.

This ESAP builds on the City's existing programs and practices while providing a framework for guiding future progress in seven key areas:

- Greenhouse Gas Emissions
- Energy
- Transportation
- Water
- Food Systems
- Materials and Waste
- Community Health and Resilience

The goals, strategies, and actions within these sectors will work together towards a more resilient community – one that addresses climate change hazards and the demand from growing industries and population. Vernon advocates for an equitable, sustainable, and resilient future for current and forthcoming generations, ensuring the City thrives amid the challenges of our changing world.

Acknowledgements

This Environmental Sustainability Action Plan is developed with the support and in collaboration with diverse groups within the City, including the project Steering Committee that is comprised of twelve representatives from seven City Departments, the Green Vernon Commission, and City staff from Health and Environmental Control, Public Utilities, and Public Works.

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CHAPTER 1

Introduction

This chapter outlines the purpose and scope of the Environmental Sustainability Action Plan, emphasizing the City's commitment to sustainability amid global climate change challenges. The chapter explores the significance of environmental stewardship, detailing the responsible management of natural resources and the pressing need for sustainable practices. It describes Vernon's history and commitment to sustainability, and highlights the critical role of businesses in the City's sustainable future through the concept of a circular economy. The chapter concludes by providing an overview of the strategies planned for implementation, outlining the major sectors, and emphasizing the importance of feasibility and community support in shaping these sustainability strategies.

CHAPTER 2

Sustainability Sectors, Goals, and Strategies

Chapter 2 dives into each sector of sustainability relevant to Vernon. These seven sectors include Energy, Greenhouse Gas Emissions, Energy, Transportation, Materials and Waste, Water, Food Systems, and Community Health and Resilience. Each sector includes these topics:

- **Existing Conditions:** Each sector begins with a summary of existing conditions and outlines specific challenges and opportunities unique to Vernon.
- **Goals, Metrics, Strategies, and Actions:** Goals outline the objectives the City wants to achieve; metrics offer measurable criteria for annual progress; strategies outline the general approaches, and; actions detail the specific steps needed to achieve the objectives.
- **Social, Economic, and Environmental Co-benefits:** This section highlights the strategy co-benefits, including improved public health, economic resilience, social equity, and environmental conservation.
- **Fiscal Considerations:** This section considers the financial and budgetary implications of implementing the strategies and actions outlined in the ESAP, including assessments regarding costs, funding requirements, and economic impacts. The ESAP advocates for strategic investments that generate long-term gains and enhance the City's financial and environmental resilience.
- **Vignettes:** This section showcases local initiatives, highlighting successful programs, partnerships, and community-driven efforts. It provides real-world examples of how sustainability practices are being effectively implemented across the City of Vernon, inspiring further community and business participation.

CHAPTER 3

Implementation

This chapter outlines recommended steps for implementing the sustainability strategies described in Chapter 2. It identifies potential funding sources and assigns implementation responsibility to specific City departments, presenting a high-level schedule for implementation.

CHAPTER 1

Introduction

What is Sustainability and Why Are We Doing This?

The City of Vernon (City) has reinforced its commitment to sustainability. Given increasing pressures on environmental resources and the growing risks that the City faces from climate change, the need has never been greater for sustainable solutions that increase community resilience and bring multi-benefits to local businesses, workers, and residents. While state and regional policies and programs are helping to increase sustainability more broadly, the City's efforts are critical to building a tailored response that addresses the environmental challenges most relevant to Vernon's unique community. This Environmental Sustainability Action Plan identifies sustainability goals and targets for Vernon to implement, through coordination with local businesses, stakeholders, and residents identified as significant partners to ensuring accountability, transparency, and long-term change.

Vernon's History of Environmental Stewardship

Environmental stewardship is crucial in addressing the challenges posed by a growing population, global climate change and limited natural resources. Environmental stewardship refers to the responsible management and care of the environment. It involves actively protecting natural resources, conserving biodiversity, and ensuring sustainable practices for current and future generations. Southern California faces significant risks from climate change, which is resulting in more extreme weather events, worsening air quality, and more threats to public health including new disease vectors. Through this ESAP, the City continues its commitment to sustainability and to aligning with the sustainability goals of the City of Vernon General Plan, a commitment that has the City's departments and commissions engaged at various levels in promoting sustainable practices. For example, the Department of Health and Environmental Control and the Green Vernon Commission (GVC) focus largely on food systems, materials and waste, greenhouse gas emissions, and community environmental health and safety; the Public Utilities Department of the City of Vernon focuses on energy use, renewable energy, and water use; and Public Works focuses on transportation.

The City of Vernon is enhancing its environmental stewardship efforts through updates to its essential plans, including the Local Hazard Mitigation Plan and General Plan Housing and Safety elements, all of which incorporate policies addressing climate change and sustainability. The City is also making zoning changes to diversify land uses, improve amenities,

attract skilled workers, and uphold its status as an industrial hub. Collaborating with organizations like the Gateway Cities Council of Governments (Gateway Cities or GCCOG), Loyola Marymount University Center for Urban Resilience, and TreePeople, the City recently conducted an urban Tree Canopy Prioritization assessment to assess its existing and potential urban greening opportunities. This initiative aims to create community-wide benefits, including greener spaces, improved aesthetics, shading, heat mitigation, enhanced air quality, and better pedestrian pathways through strategic tree plantings.

Vernon's robust foundation for addressing environmental challenges is built on past regional efforts and ongoing programs. Initiatives such as the regional Gateway Cities Climate Action Planning Framework, LA County's Our County Sustainability Plan, and Southern California Association of Governments' (SCAG) Regional Climate Adaptation Framework provide a strong foundation for the City's ESAP. The City's existing policies and programs, including comprehensive greenhouse gas inventories and mandatory emissions reporting, are integral to its sustainability approach. Likewise, the City's previous Sustainability Action Plan completed in 2011, which outlines targets and actions across multiple sectors, serves as a guiding framework for Vernon's continuous commitment to environmental stewardship and resilience.

Vernon's Business Community – The Key Player In Our Sustainable Future

Vernon's land area is mostly designated for industrial use. This distinctive status as an industrial city is reflected in the General Plan, which features a single land use category (Industrial) and seven Overlay Zones (Commercial-1, Commercial-2, Rendering, Slaughtering, Housing, Emergency Shelter, and Truck and Freight Terminal) as determined in the City's Comprehensive Zoning Ordinance, that cater to the community's specific needs and requirements. Consequentially, businesses represent most of the City's energy consumption and its contributions to greenhouse gas emissions.

Vernon's business community is at the forefront of the City's sustainable future and its vision for a circular economy. A circular economy eliminates waste, promotes material reuse and recycling, and repurposes resources. Unlike the traditional linear economy, where products are made, used, and then discarded as waste, the primary goal of a circular economy is to keep products, materials, and resources in use for as long as possible, thereby reducing the environmental impact of material production.

The City knows that for businesses to thrive, organizations must be prudent with their finances. In a competitive market, businesses must make decisions grounded in the return on investment (ROI). This balance between financial caution and environmental responsibility is where Vernon's businesses become key players. By integrating sustainable practices within their operations, many of the City's businesses are reducing their environmental footprint while contributing significantly to the City's circular economy. This ability to become both financially and environmentally sustainable is at the root of sustainable business practices and represents an essential component of Vernon's journey towards a greener, more sustainable future.

Community Input

The unique community characteristics of the City of Vernon are deeply rooted in its industrial legacy. Vernon serves as a robust economic powerhouse with over 1,800 businesses and an employment base of approximately 55,000 individuals. Since its establishment in 1905, Vernon has exemplified industrial progress, cultivating an environment where business thrives. The City takes pride in its business-friendly policies and the dedicated support provided by its municipal staff, emphasizing a personalized approach to every company. At the same time, the City is preparing for a growing population in the coming years through various mixed-use residential developments.

To understand the aspirations and concerns of its diverse community, development of this ESAP included extensive outreach to businesses and residents. Through virtual meetings and workshops with the Steering Committee, an online community survey, and personalized one-on-one engagements with key businesses and leaders, the project team obtained valuable insights. These interactions revealed the community's top priorities, concerns, and goals. The data collected during these outreach initiatives became the foundation upon which the ESAP was constructed, ensuring that it not only addresses the City's unique characteristics but also resonates with the aspirations of its people and businesses.

The outreach findings highlighted several key priorities and concerns within the community. The Steering Committee discussed and expanded outreach activities, including dissemination of a multilingual survey for businesses, employees, and residents. The survey results stressed the importance of public health, while the Steering Committee emphasized the importance of fiscal sustainability as a key concept. Climate change emerged as the central concern, transcending the sustainability concerns associated with transportation, fiscal responsibility, waste management, water usage, air quality, energy efficiency, and the environmental impacts associated with the food supply.

Strategies to Increase Sustainability

In developing this ESAP, the City of Vernon considered many potential strategies and actions to support sustainability goals. Best-suited measures were chosen primarily based on feasibility of implementation and the support received from businesses, residents, and City staff. The strategies and actions are organized into the major categories shown below and described in detail in Chapter 2: Sustainability Sectors, Goals, and Strategies.

Greenhouse Gas Emissions
The City will seek to reduce GHG emissions by improving the energy efficiency of existing buildings and implementing electrification strategies where applicable.

Energy
The City will take actions to procure zero-carbon electricity, increase distributed renewable energy resources, and develop energy storage/microgrids.

Transportation
The City will expand infrastructure to support zero emission vehicles (ZEV) and increase bicycle and pedestrian activity; transition the City fleet to greener alternatives; and expand car and bike sharing. The City will support transit-oriented and mixed-use development.

Materials and Waste
The City will divert solid waste and organics from landfills.

Water
The City will reduce community and municipal per capita water use through water conservation and reuse.

Food Systems
The City will decrease food waste, increase food accessibility and local circular economy of the food industry.

Community Health and Resilience
The City will increase resilience to climate hazards through adaptive measures that provide health benefits for people and the environment.

CHAPTER 2

Sustainability Sectors, Goals, and Strategies

GREENHOUSE GAS EMISSIONS CO_2

Increasing concentrations of greenhouse gas emissions in the atmosphere are a primary driver of global warming, which is causing significant and long-term changes in the earth's system, including changing weather patterns and the warming of oceans. Climate change is rapidly emerging as a major threat to global health and economic prosperity in the 21st century, as it will bring direct and indirect societal impacts that are far-reaching, with disproportionate impacts to vulnerable populations. The extent and severity of future climate change will largely depend on how effective the global community will be in reducing GHG emissions over the next several decades.

Existing Conditions

Community greenhouse gas (GHG) emission inventories for Vernon, which include all emissions-generating activity within the City, are available for calendar years 2010 and 2015 through regional planning efforts by the Gateway Cities Council of Governments and the Los Angeles County's Chief Sustainability Office. Municipal GHG inventories, which account for emissions from the City's buildings and operations, are available for the years 2010 through 2020 through Vernon Public Utilities. These efforts are summarized in Appendix B – Existing Conditions Summary.

The 2015 community GHG inventory shows a total of 939,293 metric tons of carbon dioxide equivalent (MTCO2e).[1] Energy consumption, which includes electricity and natural gas, accounted for 36% of the 2015 total, followed by stationary emissions from the Malburg Generating Station (a source regulated by the California Air Resources Board) at 34%, transportation (19%), solid waste (8%), off-road equipment (2%), short-lived climate pollutants (1%), and water and wastewater (<1%). From 2010 to 2015, total emissions decreased by approximately 15%, with the largest volume of reductions associated with the MGS and electricity use. The sector with the largest percent reduction was natural gas (27%).

1 Note that refinements were made to the 2015 and 2010 GHG inventories to allow comparisons across the two years, primarily related to revised transportation and socioeconomic data, updates to emission factors for vehicles and electricity, and updated methods for estimating emissions from wastewater and solid waste.

Sector	2010 GHG Emissions (MTCO2e)	2010 Percent of Total	2015 GHG Emissions (MTCO2e)	2015 Percent of Total
Malburg Generating Station	364,003	33%	317,815	34%
Electricity Use	334,316	30%	264,522	28%
Transportation	184,485	17%	179,052	19%
Natural Gas Use	100,404	9%	73,553	8%
Solid Waste	83,869	8%	71,632	8%
Off-Road Equipment	19,973	2%	19,973	2%
Short-Lived Climate Pollutants	12,734	1%	12,734	1%
Water & Wastewater	12	0%	13	0%
Total Emissions (MTCO2e)	1,099,795		939,293	

Vernon Public Utilities (VPU) leads collection, quantification, and reporting of the City's emissions from municipal operations, accounting for stationary and mobile sources, and purchased energy. These emissions represent a small subset of the community inventory (less than 3%) but come from sources over which the City has the most control. The City is committed to addressing GHG emissions through monitoring initiatives and infrastructure improvements; this includes regular updates of the VPU's GHG Inventory Management Plan and its mandatory reporting to California Air Resources Board and U.S. Environmental Protection Agency, along with implementation of the City's Five-Year Capital Improvement Plan, which aims to reduce VPU's carbon footprint by upgrading switches and circuit breakers that are insulated with sulfur hexafluoride gas and replacing them with vacuum insulated equipment.

Challenges

- Achieving local reductions in line with state targets and mandates will require a major shift to renewable energy, zero-carbon buildings, and zero-emission vehicles

Opportunities

- Expected growth in jobs and business opportunities in the CleanTech industry, due to growing need for low-carbon solutions
- Increasing availability of state and federal resources to support local climate action

Aligning with State Targets and Regulations

California is a global leader in addressing climate change through policies and programs that reduce GHG emissions throughout the economy. Many of these regulations apply at the state level, but some are state-imposed mandates with requirements for local jurisdictions like the City of Vernon.

Assembly Bill (AB) 32, known as the **Global Warming Solutions Act of 2006**, directed the state to reduce statewide GHG emissions to 1990 levels by 2020. **Senate Bill (SB) 32** signed by Governor Brown in 2016 deepened that commitment to 40% below 1990 levels by 2030, while **AB 1279** (2022) legally binds the state to achieving carbon neutrality by 2045, including a statewide reduction of at least 85% below 1990 levels within that timeframe. State agencies including the California Air Resources Board and the Office of Planning and Research recommend local jurisdictions develop community-wide targets and strategies to align with state goals.

Vernon is committed to doing its part to support the state's GHG emissions reductions goals. While the Environmental Sustainability Action Plan does not set a target for emissions reductions, it establishes a communitywide goal for reducing emissions aligned with science-based targets and in alignment with state regulations. The goals, strategies and actions outlined herein set the foundation for Vernon to prepare a local climate action plan that is focused on GHG emissions through strategies and actions that provide the greatest benefit to the community.

Goals (G)

Goal G1 Reduce community GHG emissions in alignment with state targets

Key Performance Metrics

- Annual GHG emissions inventory (community wide and municipal operations)
- Progress toward local emissions reduction targets (yet to be established)

Strategies and Actions

Note: Strategies and actions that reduce GHG emissions from the other sectors covered in this ESAP are noted as such by use of the CO_2 icon.

G1-a: Develop a detailed climate action plan for reducing emissions throughout the community and tracking progress towards targets that align with state mandates.

- Set a communitywide target for emissions reductions in alignment with the state's goals for 2030 (SB 32 and AB 1279).
- Develop an updated community GHG inventory to assess emissions trends since completion of the last inventory in 2015.
- Leverage existing partnerships, existing inventory data, and the Environmental Sustainability Action Plan to position the City to access funds for the development of a climate action plan.
- Develop a vulnerability assessment to address environmental justice and assess social and environmental vulnerability to climate change hazards, including impacts to people, places, and infrastructure.
- Identify needs for adaptation and resiliency measures to address the impacts of climate change hazards.

Sustainability Co-Benefits

SOCIAL. Promotes equity, environmental justice, and public health improvements.

ECONOMIC. Reduces costs relating to long-term adaptation and recovery from severe impacts.

ENVIRONMENTAL. Reduces severity from climate change impacts and air quality improvements.

Fiscal Considerations

Local governments must prioritize resources and available budget for day-to-day operations and maintenance. For many cities, this does not include long-term considerations for addressing climate change. Securing dedicated funding for climate action planning will be critical. As such, planning is needed to determine the cost-effectiveness of emissions reduction strategies, identifying benefits to the community and property owners, evaluating the costs of inaction, and determining the City's capacity for implementation.

Local Spotlight – Westside Specific Plan

The Westside Specific Plan in Vernon aims to revitalize the diverse Westside area near the Arts District in Los Angeles. It provides a good example of how the California Environmental Quality Act (CEQA) and the state's GHG reduction targets are affecting local land use planning. To minimize GHG emissions, the plan promotes adaptive reuse of existing development, changes in truck routes that redirect traffic to create pedestrian-friendly areas, and development of green corridors along railways and streets. The plan also envisions leveraging the City's central location – with proximity to downtown Los Angeles and connections to the ports and valley region – and reliable electric service to increase electric vehicle charging stations and support zero-emission vehicles on the road.

Creation of a communitywide climate action plan for Vernon would help guide future development to be designed and structured in ways that minimize GHG reductions and align with state climate goals.

ENERGY

Clean energy is energy derived from renewable sources like solar, wind, hydro, and geothermal, which have lower environmental impacts and produce minimal GHG emissions compared to fossil fuels. Renewable energy sources rely on natural processes and resources that are continuously replenished, rendering them more sustainable in the long run. By promoting clean energy, Vernon can transition toward a more sustainable future where energy production and consumption align with ecological and societal needs.

Existing Conditions

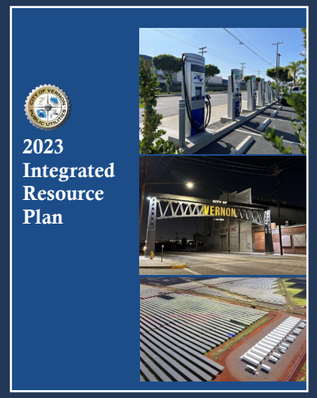
Vernon Public Utilities provides electricity to almost 2,000 customers, mostly commercial and industrial, through locally generated power and purchased power sourced from renewables, natural gas, market purchases, and nuclear resources. This includes the Malburg Generating Station (MGS), a city-owned combined-cycle natural gas-fired generating plant, which will supply 32% of the City's 2024 energy mix. The largest portion will be from renewable resources (43%), with remaining resources coming from market purchases (15%), nuclear resources (8%), and large hydro (1%).

Vernon aims to be a leader in eco-friendly energy practices, building on past efforts to increase energy efficiency and consumption of renewable energy. In 2008, Vernon purchased 30,000 acres in Kern County for wind and solar power to boost renewable energy service. In 2017, the City added supply from additional projects like Antelope DSR Solar, Astoria II Solar and Puente Hills Landfill Gas, and most recent in 2023 Daggett Solar. In 2026, the City will include Saphire Solar to meet California's renewable mandate. Five years ago, natural gas generation from MGS made up the majority of the City's energy mix (56%). In 2024 VPU will reduce natural gas generation to 32% and increase its renewable sources from 31% to 43%.

The City has set ambitious goals in its 2023 Integrated Resource Plan for sustainable energy management and enhancing the resilience of energy systems to ensure a reliable energy supply:

- Increase transition to clean, renewable energy sources, aiming for 60% renewable energy in its overall power mix by 2030, 90% zero-carbon by 2035, 95% zero-carbon by 2040, and 100% zero-carbon by 2045 (in alignment with state mandates SB 350, SB 100, and SB 1020).
- Promote the adoption of solar photovoltaic (PV) systems at public and private facilities in partnership with customers and property owners.
- Encourage the efficient use of energy through incentives and outreach, with an annual energy efficiency target of 2.6 giga watt-hour (GWh) through 2031.
- Replace and upgrade aging infrastructure to maintain system reliability.
- Evaluate utility-scale solar and solar plus storage power-purchase agreements for delivery by 2030.

Aligning with State Targets and Regulations



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Vernon is committed to doing its part to support the state's GHG emissions reductions goals. While the Environmental Sustainability Action Plan does not set a target for emissions reductions, it establishes a communitywide goal for reducing emissions aligned with science-based targets and in alignment with state regulations. The goals, strategies and actions outlined herein set the foundation for Vernon to prepare a local climate action plan that is focused on GHG emissions through strategies and actions that provide the greatest benefit to the community.

Challenges

- Increasing the energy mix with more renewable sources increases costs for customers
- Difficult to transition some industries to renewables (e.g., cement; heavy industry)
- Renewables are most abundant when the sun is shining, creating a need for more energy storage
- Need for workforce training to support the clean energy economy

Opportunities

- Price of renewables continues to trend lower
- Ample business and job opportunities in cleantech/climate tech, energy efficiency, building electrification, and renewable energy installations
- Reducing the use of fossil fuels results in cleaner air and better public health outcomes

Goals (E)

Goal E1 Transition to clean, renewable energy sources: 60% by 2030, 90% by 2035, 95% by 2040, and 100% by 2045

Goal E2 Improve energy efficiency of new and existing buildings throughout the community

Goal E3 Increase community energy resilience

Key Performance Metrics

- Percent of community electricity supply supplied by zero-carbon sources
- Annual energy efficiency savings (GWh or megawatt (MWh))

Strategies and Actions

E1-a: Procure and deliver more renewable electricity to the grid.

E1-b: Enable businesses and residents to adopt carbon free distributed energy resources.

- Develop programs and initiatives that promote customer adoption of carbon free distributed energy resources; supports procurement of local renewable energy.
- Streamline the permitting process for solar PV installations.
- Implement a transparent reporting system that tracks the number of installed solar PV systems, energy generation, and GHG emissions reductions.
- Provide resources that allow businesses and residents to assess the solar potential of their properties.

E2-a: Encourage building electrification and energy efficiency.

- Incentivize customers to exceed Title 24 standards for energy efficiency and promote electrification for new buildings and major retrofits on existing buildings.
- Promote community access to funding and technical assistance programs for energy efficiency and electrification improvements in existing buildings, including education on VPU's incentive programs.

E2-b: Develop community partnerships to evaluate deployment of new technologies and infrastructure to reduce energy-related emissions.

- Identify key community partners, local businesses, research institutions, and public agencies that can contribute to the reduction of energy-related emissions.

E3-a: Promote the adoption of microgrid technologies.

- Launch community workshops to educate residents, businesses, and local leaders about the benefits of microgrid technologies.
- Collaborate with relevant regulatory bodies to streamline permitting processes and overcome regulatory barriers that may hinder the deployment of microgrids.
- Establish incentive programs for businesses and homeowners to encourage the adoption of microgrid technologies that will enhance overall grid resilience.
- Develop a long-term maintenance and upgrade plan to ensure the continued effectiveness of utility-scale microgrid technologies. Organize collaborative workshops and forums where stakeholders share ideas and innovative solutions for emissions reduction.

Sustainability Co-Benefits

SOCIAL. Promotes new job opportunities in the clean energy sector.

ECONOMIC. Boosts energy independence, resiliency against fossil fuel price fluctuations, cost savings for the City and businesses and fosters new business opportunities.

ENVIRONMENTAL. Reduces GHG emissions and emissions of local criteria air pollutants, and contributes to global efforts to mitigate climate change.

Fiscal Considerations

Increasing the procurement of renewable energy typically requires a greater level of investment upfront, with higher costs to customers. Vernon continues to increase solar and wind energy purchases that meet state renewable targets and are cost-effective for customers, as well as energy storage solutions that increase reliability. A portfolio with geothermal or green hydrogen would result in a cleaner and more efficient supply, but represents a significant cost investment with a longer rate of return. VPU's 2023 Integrated Resource Plan evaluated different options for greening Vernon's renewable energy portfolio, and compared rates for customers based on portfolio options. Costs to customers for solar/wind/and energy storage were less than half the costs for green hydrogen. VPU will continue to assess its portfolio as future conditions change, and renewable procurement becomes more accessible and affordable.

Local Spotlight – Golden West Food Group

Golden West Food Group (GWFG) is a bulk supplier of raw, frozen, and prepared foods for retail, commercial and institutional use. Since 2012, GWFG has been reporting on its own sustainability performance, accounting for its use of materials and energy sources. GWFG has implemented several practices to keep its material recycling loop close to home. It sends its used fats and oils to a local renderer for processing into biodiesel, which it then purchases to fuel its own truck fleet. It also specifies the use of 50% minimum recycled content in its paperboard products, and sources these products from a local processor which uses GWFG's own recyclable paper and cardboard as feedstock.

GWFG also subscribes to a pallet-management system to minimize wasted shipping pallets. GWFG reduces its energy intake and emissions through upgraded equipment such as LED light bulbs, on-demand lighting, chillers for space cooling, and energy-efficient compressors. The company reduces its transportation carbon footprint by scheduling its work shifts to minimize commute time and by optimizing its boxes and pallet loads to utilize the maximum space on each truck.

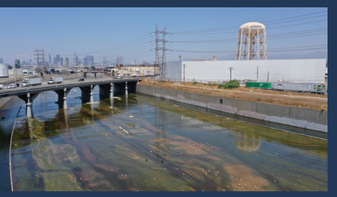
TRANSPORTATION

An efficient transportation system can provide diverse options for travel that help to reduce GHG emissions from decreased vehicle miles traveled (VMT), reduce fuel costs and improve traffic congestion and air quality. Sustainable transportation means connected and safe roadways for pedestrians, bicyclists, and motorists, and more efficient modes of transport that include electric vehicles, public transit, and active transportation.

Existing Conditions

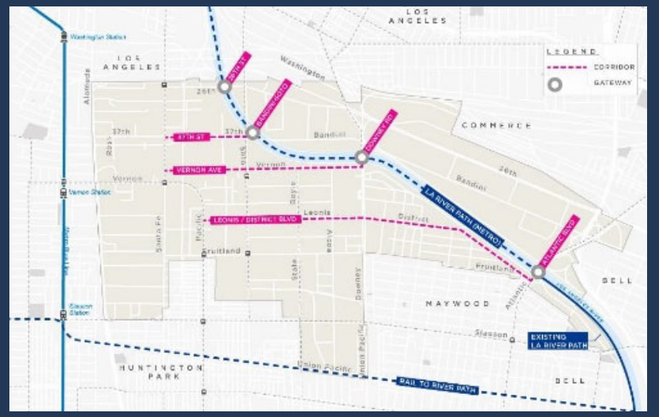
Vernon's transportation network is made up of 76-miles of local roadway and freeway, with key connections to industrial businesses and neighboring communities, where a majority of the City's workforce commutes from. Major roads like Alameda Street, Atlantic Boulevard, and Slauson Avenue facilitate access to downtown Los Angeles, local ports, and provide connections to I-710 to the east; I-5, I-10, and CA-60 to the north, and I-110 further west. The I-710 offers a direct link to the Port of Long Beach and to other highways that connect to the Port of Los Angeles, from one of the largest railyards in the country, Hobart Yard. Vernon also hosts the BNSF Railway and Union Pacific Rail yards, and Los Angeles Junction Railway switching services, which are critical to the region's goods movement and economy.

Sustainable Transportation Connections



Collaborations with regional agencies are leading to new and improved active transportation modes in Vernon, such as the LA River Path project developed in partnership with LA Metro. This project envisions a connected, shared-use bicycle and pedestrian path along the LA River, through Vernon and connecting the San Fernando Valley to the north, and Long Beach to the south. The LA River bicycle path is the only existing bikeway in Vernon. Addressing gaps in the bike trail will enhance connectivity to major employers in Vernon and provide another option for commuters driving to and from work and home. The river bikeway is anticipated to open in 2027.

Vernon's **LA River Active Transportation Access** study is building on the regional bikeway effort to assess potential corridors and gateways for critical first- and last-mile connections to transit, the LA River path, and key destinations and employers in Vernon. As Metro's LA River Path project comes to completion, Vernon will be well-positioned to pursue funding for designing three bikeway corridors along 37th Street, Vernon Avenue, and Leonis/ District Boulevard.



Public transportation service is provided by LA Metro, with the Vernon light rail station (Blue Line) located to the west on Vernon Avenue and Long Beach Avenue. Additionally, the Metro Bus Service operates over 10 routes in Vernon, serving local stops and connecting to neighboring cities.

Within the City's municipal fleet, the majority of vehicles are gasoline-fueled light-duty trucks. There are currently ten (10) electric- and one (1) gasoline/electric vehicle in the fleet. Vernon recently expanded its clean transportation infrastructure by installing its first public electric vehicle (EV) DC fast charging station, which features 18, Level 3 fast chargers available 24/7 for EV drivers, and a second public EV fast charging station in development.

Challenges

- Only one bikeway exists in Vernon, along the LA River trail to the east
- Zero or low-emission trucks and heavy-duty vehicles are expensive and in the early stages of technological development; these vehicles are not yet commercially available
- Reducing VMT requires safe walking and biking routes, convenient public transit, and changing the single occupancy vehicle (SOV) mindset

Opportunities

- The City's Bicycle Master Plan provides a framework for a citywide system that promotes bicycling and walking as a viable transportation mode and for recreation
- Vernon's major corridors are served by transit, and employment areas are proximate to regional rail commuter stations.
- The transition to EVs and other zero-emission vehicles (ZEVs) is accelerating due to state regulations, government funding, private sector investment and technological advancements
- Large amounts of funding for ZEVs and supporting infrastructure are becoming available from the state and federal governments
- Business opportunities are increasing for developing and supporting ZEV technologies, and infrastructure is expanding specifically for electric and hydrogen powered vehicles

Goals (T)

Goal T1 Reduce traffic congestion and vehicle emissions

Goal T2 Increase the use of ZEVs throughout the community

Goal T3 Create a safe, reliable, and efficient network for walking, biking, public transit, and new forms of mobility

Key Performance Metrics

- Number of publicly accessible EV charging stations
- Miles of dedicated bike lines and pedestrian routes

Strategies and Actions

T1-a: Reduce truck emissions of criteria air pollutants. CO_2

- Coordinate with Caltrans regarding the I-710 project and modifications to local freeway ramps that affect local roadways.
- Coordinate with local businesses to identify strategies that facilitate goods movement and minimize the potential negative impacts on people and infrastructure.

T1-b: Coordinate with local businesses and developers to reduce on-road VMT.

- Work with businesses and community leaders to identify VMT reduction strategies that are most aligned with local land use patterns and business needs, to help reduce vehicle trips and trip lengths in Vernon.
- Coordinate with Metro to complete the LA River gap closure.
- Encourage the Westside Specific Plan as a model for the development of future transportation infrastructure that coordinates with land use changes and provides multimodal infrastructure that can help reduce VMT for both residents and employees of the area.
- Conduct a detailed assessment of existing transportation infrastructure, identifying areas where the City can integrate the Westside Specific Plan principles.
- Promote car-sharing and carpooling for businesses and employers.

T2-a: Expand and maintain EV charging infrastructure.

- Identify locations for adding public EV chargers.
- Seek funding for expanding and maintaining public EV charging infrastructure.
- Raise awareness with local businesses of funding opportunities for on-site EV chargers.

T3-a: Promote active transportation and transit.

- Implement the Active Transportation Plan for dedicated cycling lanes, pedestrian walkways, and safe crossing points that encourage non-motorized transportation modes.
- Apply for funding to support active transportation trails.
- Work with businesses to enhance walking and cycling infrastructure around their premises, such as bike racks, pedestrian pathways, hydration stations, and secure storage for personal bicycles.
- Coordinate with Metro to complete the LA River gap closure.
- Identify key transit corridors in partnership with local transit agencies, to prioritize and enhance public transportation options in line with the Westside Specific Plan's multimodal focus.

Sustainability Co-Benefits

SOCIAL. Provides diverse travel options for people, increases physical activity, improves public health, and reduces risk of chronic diseases.

ECONOMIC. Reduces costs relating to active transportation modes and costs for fueling.

ENVIRONMENTAL. Reduces GHG emissions; provides greater connectivity.

Fiscal Considerations

The transportation sector often entails costly infrastructure improvements and development, in addition to ongoing maintenance to support daily industry and goods movements. Sustainable transportation can be lower cost, as it prioritizes cleaner vehicles, active modes of travel, and enhanced access to existing connections. This can mean reduced costs for fleets, vehicle owners, and fueling and maintenance. Vernon is uniquely positioned, geographically and as an employment hub, to strengthen connections between places of work, nearby residential communities, and other community destinations.

Local Spotlight – Crown Poly

Crown Poly, founded in Los Angeles in 1991, produces film plastic and plastic bags for home and commercial uses. Crown Poly's sustainability practices include using shrimp shells to make plastic adhesive, local sourcing of pallets, inks and corrugated cardboard, and sourcing recycled plastic feedstock, including recovered ocean plastics.

Their sustainability efforts are also reflected in their transportation-related initiatives. Crown Poly focuses on recruiting employees residing within a 30-mile radius of their Vernon plant, with production staff recruited within a 10-mile radius. This localized approach to hiring helps minimize commute distances and reduce transportation emissions. Crown Poly also sponsors employee carpooling and encourages the use of electric vehicles among its workforce by offering free workplace EV charging. In addition, the company optimizes its shipping processes by utilizing a direct rail spur, enhancing energy efficiency.

MATERIALS AND WASTE

Reusing and recycling materials rather than sending them to landfills or incineration facilities – the essence of a "circular economy" – is essential to protecting the environment and conserving resources for future generations. Embracing the circular economy promotes the highest and best use of materials and helps minimize the distance of materials traveled, reducing energy use and GHG emissions. This sustainable approach to managing waste and materials positively impacts public health by reducing pollution and exposure to harmful substances.

Existing Conditions

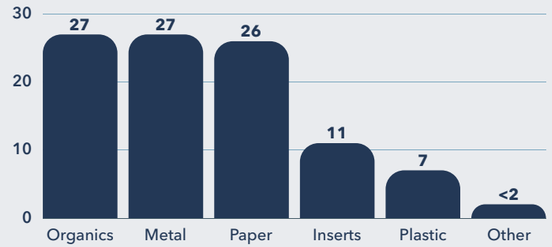
Vernon's industrial profile gives it a natural advantage as a circular economy leader. Its compact footprint contains companies that recycle diverse materials, such as glass, metal, and animal biproducts, as well as companies such as glassware manufacturers and biofuel producers that use those materials as feedstock for their products.

The City's 2021 tonnage report shows a total of 135,073 tons of solid waste sent to landfills, an 8% decrease from 2020. Detailed information is not available on the origins or composition of Vernon's discards, so the analysis below is based on statewide waste characterization averages, modified based on Vernon's employment numbers by industry, to yield an approximation of Vernon's waste characteristics. The Waste Sources figure shows waste generation by percentage, with the majority of solid waste attributed to food manufacturing (35%). By material categories, organics represent the largest estimated percentage of total waste generation at 27% as the Waste Material Categories figure demonstrates. The waste is primarily disposed of at Sunshine Canyon, located about 30 miles northwest of Vernon, with other landfills like El Sobrante and Olinda Alpha also being used.

The General Plan includes policies to enhance safety from hazardous material waste and disposal sites. The City annually reports solid waste tonnage by hauler and also hosts electronic waste recycling and disposal events for businesses and residents to encourage proper disposal practices.

WASTE MATERIAL CATEGORIES

Percentage of Vernon's Total Waste Generation

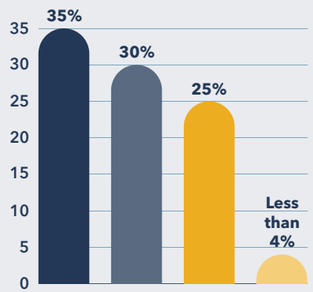


By material categories, organics represent the greatest estimated percentage of total waste generation (27%), followed by metal (27%), paper (26%, inerts and other (11%), and plastic (7%). Other categories generate less than 2%.

WASTE SOURCES

The majority of solid waste in Vernon is generated from manufacturing. Food manufacturing generates the highest amount of waste. The percentage of solid waste produced by manufacturing and other business groups are ranked in the following order:

- Food
- Wholesale & Trucking
- Other
- Other Business Groups



CalRecycle, 2022

Challenges

- Existing market forces often incentivize the wasting of materials
- Rendering animal biproducts into usable resources can pose air quality challenges
- Variability in recycling feedstock quality can increase disposal
- Diversion is not effectively measured and there is a lack of waste characterization data
- Conforming with Senate Bill 1383 (state-mandated organics recycling) requires engagement with multiple waste haulers

Opportunities

- The City has a high industrial density, with established patterns of business-to-business material cycling and a concentration of recycling businesses
- Vernon's well-developed rail network allows for materials to be moved in bulk, reducing the need for disposable transport packaging such as boxes and pallet wrap
- Reuse, rental, repair, and recycling all create jobs
- Recycled glass requires less energy than virgin glass production, which can reduce GHGs and other air pollutants.
- The City of Vernon 2023 Local Hazard Mitigation Plan (LHMP) suggests working with waste service contractors to promote safe disposal practices, mainly focusing on hazardous waste materials.

Aligning with State Targets and Key Regulations

California's **SB 1383** went into effect January 1, 2022, establishing targets to achieve a 50% reduction in organic waste disposal by 2020 and a 75% reduction by 2025, compared to 2014 levels. It expands the scope of existing mandatory organics and recycling laws, including **AB 1826** and **AB 341**, by requiring all residents and businesses to participate, and by mandating that every jurisdiction provide organic waste collection in addition to recycling and trash collection services to all residents and businesses. SB 1383 also requires large generators of surplus edible food to donate any excess food to food recovery organizations to assist people in need.

Goals (M)

Goal M1 Continue to Grow Vernon's Circular Economy

Goal M2 Maximize the effectiveness of waste management systems

Goal M3 Reduce 75% of organic waste disposed in landfills by 2025

Key Performance Metrics

- Tons of solid waste sent to landfill
- Tons of organics sent to landfill
- Number of businesses participating in materials exchange programs

Strategies and Actions

M1-a: Support waste prevention through product and packaging redesign.

- Connect businesses with educational resources, expert advice, and potential funding opportunities to help them reduce or eliminate non-reusable packaging and switch to reusable transport packaging.
- Support, publicize, and patronize (through City procurement) businesses that evaluate and redesign their products and packaging to prevent waste.

M1-b: Support local materials exchange.

- Identify resources for local materials exchange; identify and publicize the materials exchange resources available within Los Angeles County and beyond.
- Launch an awareness campaign to highlight local exchange activity and to inform businesses and residents in Vernon about the benefits of participating in local materials exchange.
- Offer workshops, webinars, and training sessions to guide participants on effectively utilizing materials exchange networks.
- Conduct an inventory of the City of Vernon's own surplus materials, waste, and potential recyclables and make this information publicly available.
- Implement a system to track resources exchanged and to consider greenhouse gas implications of these exchanges.

M1-c: Improve information and resources on City webpage.

- Facilitate the matchmaking of available resources in Vernon with the needs of other participants in the materials exchange network.
- Ensure a user-friendly interface and updates as new information becomes available.
- Regularly publish progress on performance metrics.

M1-d: Align the City's procurement processes with the requirements of SB 1383 to minimize toxics and waste, and incentivize local businesses to do the same.

- Update City purchasing preferences and contracts to incorporate sustainability criteria such as: Local sourcing, Use of recycled materials, Waste reduction, Toxic reduction, Materials reuse, and Minimal packaging.
- Promote the City's Green Purchasing Plan (which conforms with SB 1383) as an example to local businesses and encourage them to adopt similar plans.

M2-a: Maximize benefits of the waste diversion system.

- Work with haulers to increase transparency and accountability for high diversion goals.
- Ensure agreements incentivize diversion facilities to maintain high diversion efficiency.
- Partner with haulers to identify/develop incentives that reward businesses for consistently adhering to sorting guidelines.
- Gather feedback from employees, businesses, haulers, sorting and processing facilities, and local users of end products to refine the sorting process and maintain accuracy of guidelines.

M3-a: Increase Reuse & Recycling of materials and organics.

- Translate sorting guidelines and educational materials into multiple languages, to increase education and reach around reuse and recycling.
- Organize workshops or demonstrations at community events and schools to showcase how to prevent waste and sort materials.
- Incentivize equipment rental & repair businesses by publicizing them in City communications, convening workshops to raise awareness of rental and repair options, techniques, and the local businesses who provide them, and by including preference for repaired and shared resources in city procurement contracts.

- Gather local waste characterization data to understand what types of materials are going to the landfill. Improve data from haulers and obtain access to waste metrics of the business community.

Sustainability Co-Benefits

SOCIAL. Reduces pollution and exposure to harmful substances, improving air and water quality and community health.

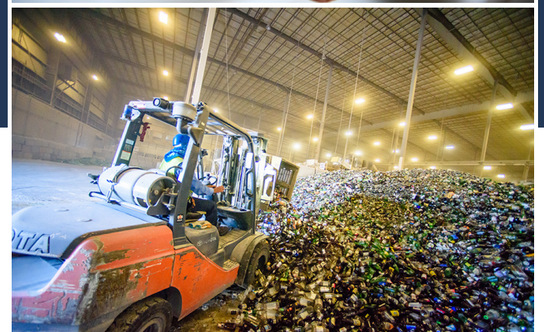
ECONOMIC. Promotes localized production and resource management, enhancing community resilience to economic shocks and shortages.

ENVIRONMENTAL. Reduces landfill use, pollution, and habitat destruction.

Fiscal Considerations

Adopting sustainable waste management practices involves infrastructure, technology, and community engagement costs. For example, infrastructure investments may be needed to establish or upgrade recycling facilities, upgrade waste treatment plants, or develop a materials exchange platform. While such investments may be costly, the long-term benefits include reduced landfill usage, lowered transportation costs, and potential revenue. In addition, transitioning to a circular economy model requires systemic production, consumption, and waste management changes. However, over time, a circular economy can reduce the demand for raw materials and lower production costs, contributing to fiscal sustainability. While a financial investment is involved in adopting sustainable waste management practices, the long-term benefits, cost savings, and revenue generation can significantly enhance Vernon's economy and environment.

Strategic Materials, Inc.



Local Spotlight – Strategic Materials Inc.

The Strategic Materials Inc. (SMI) facility in Vernon processes glass-rich materials from recycling programs and from industry into color-separated glass cullet for new glass products. Batteries recovered from the incoming feedstock are sent to local processors for further sorting and then extraction of valuable metals. The company also recycles pallets, cardboard, and ferrous metals. To save energy, the plant uses LED lighting.

The facility employs 30-35 staff, offering "second chance" employment for individuals who have been in the criminal justice system. SMI prioritizes bringing more women into its workforce, running a forum called "Breaking The Glass Ceiling" to highlight its female employee's achievements and to support women's career advancement. SMI provides employees with refillable water bottles and bottle-filling stations and runs a "Glass Warriors" initiative to promote employee environmental literacy and action, both professionally and personally.

WATER

Water conservation and sustainable water management are essential components of addressing and adapting to climate change in Vernon. Scientists observe that climate change is altering precipitation patterns in California, resulting in more intense and prolonged droughts punctuated by years of intense rainfall. While average annual precipitation may not change significantly in the next 50-75 years, it will likely come in more intense storms and a shorter wet season. Vernon's historical average maximum daily precipitation is approximately 2 inches, but some climate models indicate it could increase to 3 inches by the end of the century. Moreover, the length of dry spells could rise from an average of 159 days to 211 days due to climate change impacts, and higher temperatures will increase water demand due to higher evaporation rates. The Cal-Adapt platform shows the average yearly maximum temperature in Vernon is 76 °F, but under a high emissions scenario, it could reach 88 °F.

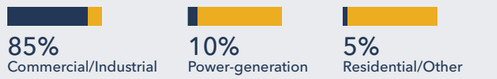
Existing Conditions

Most of Vernon's water use is supplied by the City through groundwater from the Central Groundwater Basin, followed by imported and recycled water purchased from the Central Basin Municipal Water District (CBMWD). The California Water Service Company and Maywood Mutual Water Company Number 3 are the suppliers for different parts of the city. The City has no surface water supply and does not divert stormwater for capture purposes.

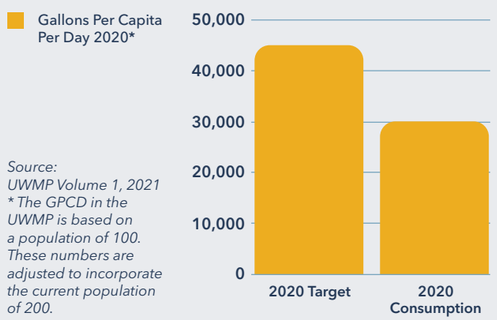
VERNON'S WATER USE

City's Water Usage

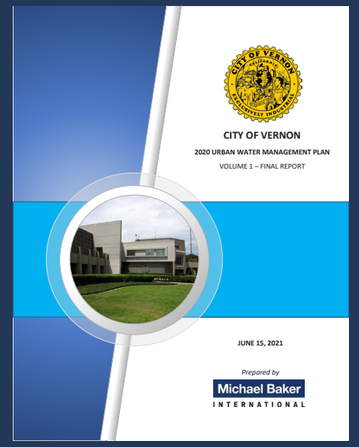
In the past decade, most of the water used in Vernon has been for commercial and industrial purposes, followed by power generation, and the rest for residential and other uses.



City's 2020 Consumption



Source: UWMP Volume 1, 2021
** The GPCD in the UWMP is based on a population of 100. These numbers are adjusted to incorporate the current population of 200.*



Aligning with State Targets and Key Regulations

Vernon has existing policies to manage its water resources, potential water shortages, and address drought. These policies are outlined in the **General Plan, Water Conservation Ordinance, and Urban Water Management Plan** (UWMP). They include measures such as specific watering days, limits on outdoor watering, and obligations for fixing leaks in a timely manner. The City already uses recycled water at the MGS, with potential opportunities for expanding the water recycling system in the future.

Legislation including **SB X7-7, AB 1668, and SB 606** form the basis of the City's UWMP. SB X7-7 was a major step forward in California's water conservation efforts by requiring a 20% reduction in urban per capita water use by 2020. It laid the foundation for AB 1668 and SB 606, enacted in 2018, further expanding and refining California's long-term water conservation framework. In 2020, the City's per-person daily water usage was 59,814 gallons, measured in gallons per capita per day (GPCD). This average usage is less than its targeted limit of 89,809 GPCD for that year. As a result, the City successfully met its 2020 water consumption goal and is in compliance with SB X7-7 regulations.

Challenges

- Input from community survey results indicate high value placed on importance of water quality, water supply, and reliability
- Water demand in Vernon is expected to increase due to growth of commercial/industrial activity
- The region's drought periods are expected to be longer, more intense, and occur with more regularity
- According to the Urban Water Management Plan, there is an oversupply of recycled water in the Central Groundwater Basin. However, Vernon currently does not have adequate distribution infrastructure in place to reach all potential recycled water customers
- Vernon has reduced its reliance on costly and limited imported water due to its dependence on groundwater sources. However, should there be severe climate changes this would impact the availability of both imported and the possibility of ground water

Opportunities

- City provides water service at some of the lowest rates in the region to attract and retain its commercial and industrial customers
- Vernon currently has an ample supply of groundwater and is not dependent on imported water as its water supply

Goals (W)

Goal W1 Achieve greater water conservation

Goal W2 Improve resilience to droughts

Goal W3 Improve stormwater management for flood control and groundwater recharge

Key Performance Metrics

- Gallons of water consumption per capita per day (GPCD)
- Number of water audits completed annually for industrial and commercial sites
- Number of tree wells and bioswales that have been successfully installed

Strategies and Actions

W1-a: Identify customer interest to expand use of recycled water.

- Support potential, future CBMWD projects for expanding the recycling water system and infrastructure in Vernon.
- Provide technical assistance and incentives, in collaboration with CBMWD, to support businesses and industries in retrofitting their systems to accommodate recycled water use.

W1-b: Collaborate with CBMWD to expand water conservation programs (water audits, water fixture upgrades, retrofits, and recycled water use).

- Identify and collaborate with CBMWD, non-profit organizations, and educational institutions involved in conservation efforts.
- Collaborate with CBMWD to facilitate water efficiency upgrades for industrial and commercial sites. Measure success by tracking the number of conducted water audits and completed upgrades.

W1-c: Share information on regional water conservation programs available for residents.

- Create a dedicated section on the City's website for all CBMWD water conservation programs and resources.
- Organize information into clear categories and multiple languages, making it easy for residents to navigate and access information.
- Collaborate with local newspapers, radio stations, and TV channels to feature stories, interviews, and segments about regional water conservation initiatives.

W2-a: Promote drought-tolerant landscaping for residential customers.

- Offer rebates or incentives for residents who replace traditional lawns with drought-tolerant landscapes.
- Transition to drought-tolerant and native landscaping for all City-owned public spaces.
- Create an online resource on the City website that features tools that help residents plan, design, and implement drought-tolerant landscapes.

W2-b: Continue to monitor water usage and assess water conservation pricing, especially during drought periods.

- Update Water Conservation Ordinance No. 1161 from 2009, which amended Article VI of Chapter 25 of its municipal code to enhance water conservation efforts, to align with new information and technologies.
- Support the implementation of the UWMP strategies for water conservation.

W3-a: Develop a comprehensive stormwater management plan that incorporates the Citywide Tree Wells Project.

- Offer incentives or rebates to property and business owners who install green infrastructure, including tree wells and bioswales, to manage stormwater and increase percolation into local groundwater.
- Establish clear maintenance standards for tree wells and other green infrastructure elements.
- Identify and secure funding sources for stormwater management projects, including grants, bonds, or public-private partnerships.

Sustainability Co-Benefits

SOCIAL. Secures water supply for present and future generations, enhancing community resilience during droughts.

ECONOMIC. Decreases demand for resources, reduces costs for water, avoids expensive infrastructure expansions, and minimizes economic risks during water scarcity.

ENVIRONMENTAL. Enhances water quality by reducing runoff and pollution, ensuring clean water sources for human consumption and wildlife ecosystems.

Fiscal Considerations

Communities in southern California must continue to plan for future drought conditions and build local resilience, through implementation of water conservation measures, improved stormwater management, improved water-saving technologies, and public awareness campaigns. Greater success of these actions is tied to widespread implementation and partnerships. Similarly, diversifying water sources, developing drought-resilient landscapes, and upgrading stormwater infrastructure requires cross collaboration and often means costlier investments. Vernon's ability to rely on local water supply helps to eliminate transportation costs and the issue of limited regional supplies. During periods of drought, potential for increased water costs is still of concern, which can incentivize reduced consumption, but may impact households and businesses financially. Implementation of water strategies increase sustainable, reliable, and long-term supply of water for all users, with benefits from more efficient technologies, reduced costs from reduced consumption, and enhanced community resilience during droughts.

Local Spotlight – Citywide Tree Wells

The **Citywide Tree Wells** project involves planting trees and managing stormwater by installing 115 new street tree wells. These tree wells are specifically designed to capture runoff from the gutter and process it through a combination of biofiltration, evapotranspiration, and infiltration, ultimately providing the necessary irrigation for the trees.

Tree wells helps mitigate stormwater-related issues like flooding and pollution, protecting local water bodies and enhancing water quality. This project also provides benefits for heat reduction, enhanced air quality, biodiversity support, carbon sequestration, and urban livability.

FOOD SYSTEMS

Food systems are inextricably linked to society and the environment. The production, processing, transportation, distribution, and preparation of food involves complex systems that can contribute to greenhouse gas emissions, deforestation, soil degradation, habitat destruction, and water pollution, as well as poor human health outcomes. When designed well, however, food systems can support resilient ecosystems, healthy people, and vibrant communities.

Existing Conditions

Vernon is home to numerous industrial food service facilities, including warehousing and refrigeration, processing, and commercial agriculture, with a concentration of meat/poultry processing facilities. The City has 22 cold storage facilities and 5 rendering facilities that repurpose animal by-products into feed, fertilizer, and biofuel. However, commercial food service is limited in the City, mainly catering to the daytime workforce. There are few markets or grocery stores, and no farmer's markets.

The City gathers data on various food service facilities, however, information is limited regarding food supply, production sources, and edible food recovery. For example, there is little information on the compliance status of state-mandated organics recycling (Senate Bill 1383). It is clear, however, that many companies operating in Vernon are willing to enhance recycling related to the food system.

Challenges

- The industrial context of the City makes local agriculture more challenging because of space and possible soil contamination
- The arid Southern California climate is not suitable for many food crops, leading to more imports.
- Lack of food disposal data from Vernon businesses makes it more difficult to identify opportunities for food rescue and upcycling
- Global and national economies and subsidies favor the production of foods that do not support human health

Aligning With State Targets

The **SB 1383 Local Assistance Grant Program**, established in 2016, aims to reduce methane emissions and combat climate change by cutting down on organic waste disposal in California. SB 1383 set targets to reduce organic waste disposal by 50% by 2020 and 75% by 2025 and rescue at least 20% of currently disposed surplus food for consumption by 2025. The Department of Resources Recycling and Recovery (CalRecycle) administers this non-competitive grant program, funding local jurisdictions to implement SB 1383 regulations, including collection, edible food recovery, and education and outreach. To meet SB 1383 goals, the City of Vernon plans to partner with Dyrt Labs, Inc. Dyrt offers a cost-neutral composting pilot initiative that includes customized tracking software and the use of Dyrt's proprietary composting equipment. This partnership aims to divert food waste from landfills and facilitate compliance with SB 1383 requirements. The proposed composting pilot project includes waste stream tracking software, a platform connecting businesses with service providers to manage various waste streams, residential food waste collection for 75 households, and the provision of Dyrt composters to private businesses at a discounted rate. This initiative helps businesses manage their waste effectively, contributes to the City's compliance with SB 1383 regulations, and promotes environmental sustainability.

Opportunities

- Many food businesses in proximity to other businesses, such as renderers and mushroom farmers, etc., could upcycle their byproducts into edible food
- The Helping Hands Society provides a local avenue to rescue surplus edible food and distribute it to those in need
- The Los Angeles Food Policy Council is a local resource for implementing sustainable and just food systems
- The City's health department ensures compliance with health codes and collaborates with the South Coast Air Quality Management District (AQMD) to stay informed about rendering operations' issues.

Goals (F)

Goal F1 Support a thriving regional food economy

Goal F2 Provide safe and convenient access to affordable, healthy, culturally relevant food

Key Performance Metrics

- Number of local businesses participating in surplus food upcycling
- Number of community gardens or farmer's markets operating within the City

Strategies and Actions

F1-a: Lead by example through City purchasing practices.

- Update the City's food purchasing policies to require all its departments to prioritize local production, environmental sustainability, valued workforce, animal welfare, and nutrition in their food purchases.
- Encourage Vernon's large businesses and institutions to adopt similar food purchasing policies by providing templates, support, and publicity.

F1-b: Incentivize, support, and publicize businesses that upcycle surplus food products.

- Offer businesses access to training, workshops, and technical assistance to help them integrate surplus food upcycling practices.
- Convene a food upcycling competition such as the "Reverse Pitch" in Austin, Texas, where businesses pitch their materials to local entrepreneurs that can use them as ingredients for upcycled food products.

F2-a: Promote community gardens and farmers markets.

- Promote community gardens, rooftop gardens, and urban farms to produce fresh produce locally and reduce the distance food travels from farm to table.
- Organize farmers' and mobile markets with direct access to fresh, locally grown produce in areas convenient to Vernon's workforce and accessible to its residents.

F2-b: Promote food rescue and distribution.

- Support and publicize Helping Hands Society to develop a broader donation network and greater transportation and storage capabilities.
- Launch targeted awareness campaigns highlighting the value of surplus food rescue for the local economy, environment, and community well-being.

Sustainability Co-Benefits

SOCIAL. Increases food access and security through diverse, local production, and prioritizes fair labor practices, supporting farmers and food workers with equitable wages and improved working conditions.

ECONOMIC. Stimulates local economies, generating jobs, and supporting small businesses through production and distribution support.

ENVIRONMENTAL. Decreases waste through composting, efficient resource use, and reduced energy consumption by emphasizing localized production and distribution.

Fiscal Considerations

Revising land use and zoning regulations to support sustainable, urban farming practices entail greater administrative costs and could have high revenue implications. However, investing in initiatives like supporting local farmers' markets, local food distribution networks and food education programs can significantly benefit the local economy at lower costs. To encourage adopting sustainable practices, the City could consider offering incentives or grants to local farmers and food producers, providing them with the necessary resources to transition towards more sustainable and environmentally friendly methods.

Local Spotlight – Smallhold

In 2022, Vernon welcomed Smallhold, LA County's first Certified Organic mushroom farm. Smallhold uses indoor agriculture technologies to grow various mushroom varieties, often at sites such as grocery stores and restaurants where the mushrooms will be purchased and/or consumed, thereby reducing food transportation emissions. Smallhold's operations prioritize water and energy efficiency and contribute to the circular materials economy by utilizing sawdust waste as a mushroom growth medium and by composting all spent substrates. Weekly, Smallhold receives 15,000-20,000 lbs. of sterilized and inoculated sawdust substrate blocks. Smallhold is exploring dehydration methods to reduce food waste and donates surplus mushrooms to the Helping Hands Society of Los Angeles for hunger relief. They collaborate with UC Riverside on soil remediation and green space creation, aiming to apply these studies in Vernon.

COMMUNITY HEALTH & RESILIENCE

Sustainability and community health are deeply interconnected and mutually dependent. Sustainable practices promote a healthier environment, resource conservation, climate resilience, and social equity, all of which contribute to improved community health and well-being.

Existing Conditions

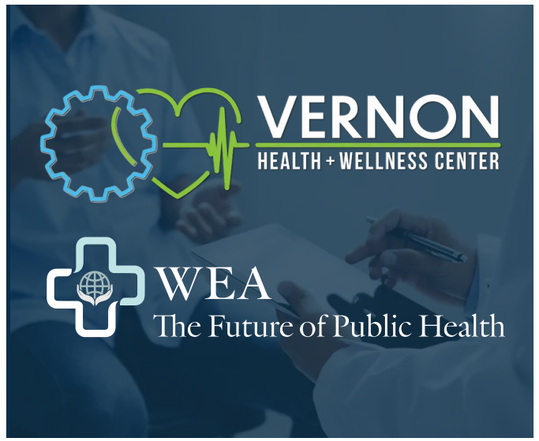
Climate change presents considerable risks to public health and safety in Vernon, including worsening air quality, intensified droughts, extreme weather events, heightened flood risks, and a potential increase in pandemics and vector-borne diseases. Vulnerable populations, including people of color, seniors, economically disadvantaged individuals, children, and those with disabilities or pre-existing health conditions, are more likely to be disproportionately affected by these impacts. These climate-related challenges compound the existing hardships faced by communities with constrained financial resources and inequitable access to stable employment, education, healthcare, and transportation options.

Air Quality:

- The pollution burden in Vernon is greater than almost all other communities in LA County (98th percentile in the County; 88th percentile in the state) due to higher potential for exposure to pollutants and adverse environmental conditions caused by pollution.
- Poor air quality is due to high levels of fine particulate matter (PM 2.5) and diesel particulate matter, which can affect the human respiratory and cardiovascular systems.

Extreme Heat:

- Excessive heat can lead to heat-related illnesses, exacerbate respiratory and cardiovascular problems, and contribute to an increased risk of hospitalizations and fatalities. Extreme Heat Days, defined as the number of days per year when daily maximum temperatures rise above 97.9 °F, are forecasted to surge from an average of 2 days up to 64 days per year by 2100.
- Higher temperatures associated with climate change are creating more suitable conditions that may foster the rise and spread of vector-borne diseases, such as Zika, dengue fever, yellow fever, West Nile Virus, and Lyme Disease.



Public Health Partnerships

Vernon's **Health + Wellness Center** is a pilot project presented in partnership with Wellness Equity Alliance (WEA), to promote health and wellness in Vernon's business community through quality and accessible health services.

The Health + Wellness Center provides primary health care, family planning, mental health, health promotion, patient education, and other health services. Mobile services are also available, providing onsite services for employees that support increased productivity for the workforce. The project also promotes equitable access to health care services, providing low- and no-cost options for patients and clinical and counseling services regardless of insurance or immigration status. The project expands opportunities for public health to Vernon's 50,000+ employees and business community.

Challenges

- Quantity and proximity of stationary and mobile sources of pollution
- Low urban tree canopy/forestry
- Low active transportation routes/opportunities for active commuting for employers

Opportunities

- Proximity to LA River and transit; opportunities for active transportation
- Vernon community identified public health improvements as a major element and co-benefit of sustainability
- 2023 Local Hazard Mitigation Plan evaluates the impacts of climate change on various hazards within the City, and includes a vulnerability assessment that identifies physical and social vulnerabilities associated with each hazard

Goals (C)

Goal C1 Increase resilience to climate change hazards

Goal C2 Reduce urban heat islands

Goal C3 Reduce air pollution

Key Performance Metrics

- Number of annual tree plantings
- Percent of tree canopy coverage

Strategies and Actions

C1-a: Develop a Community Climate Change Adaptation Plan.

- Conduct detailed climate change vulnerability assessment; identify key physical assets and populations at risk.
- Identify priority actions for increasing community resilience.

C1-b: Identify locations for community cooling centers/resilience hubs.

- Create detailed maps highlighting high-risk areas, considering demographics and accessibility.
- Evaluate public buildings, schools, community centers, and libraries to identify those that could serve as cooling or resilience hubs.
- Engage community members through surveys, meetings, and focus groups to gather insights on preferred locations and potential barriers to access.

C1-c: Improve early warning and communication systems for climate emergencies (extreme heat and precipitation events, wildfire smoke, etc.).

- Implement a multi-channel communication system that sends alerts via text messages, emails, mobile apps, social media, and sirens to reach a wide range of residents in real-time.
- Translate alert messages into multiple languages to ensure inclusivity and accessibility.

C1-d: Monitor vector-borne diseases through public health collaborations.

- Establish agreements with healthcare institutions to share relevant data for comprehensive disease monitoring.
- Launch educational campaigns to inform residents about vector-borne diseases, their prevention, symptoms, and available healthcare resources.

C2-a: Increase urban tree canopy.

- Update the Urban Tree Planting Assessment every 5 years.
- Focus on key transportation corridors that connect public transit to key employers and destinations within the City.
- Partner with local and regional organizations such as TreePeople to build local awareness for tree care and maintenance, for departmental staff, businesses, and homeowners who can help care for right-of-way plantings.

C2-b: Increase the use of cool roofs and pavements.

- Implement building codes or ordinances that mandate the installation of cool roofs for new constructions and major renovations.
- Offer financial incentives, tax breaks, or rebates to property owners who install cool roofs or pavements.
- Conduct awareness campaigns to educate homeowners, builders, and businesses about the benefits of cool roofs and pavements.

C3-a: Prioritize implementation of sector actions that result in GHG reductions (those with CO_2 icon).

Sustainability Co-Benefits

SOCIAL. Enables social well-being, provides cleaner environments, reduces respiratory diseases, and offers safe spaces for physical activity.

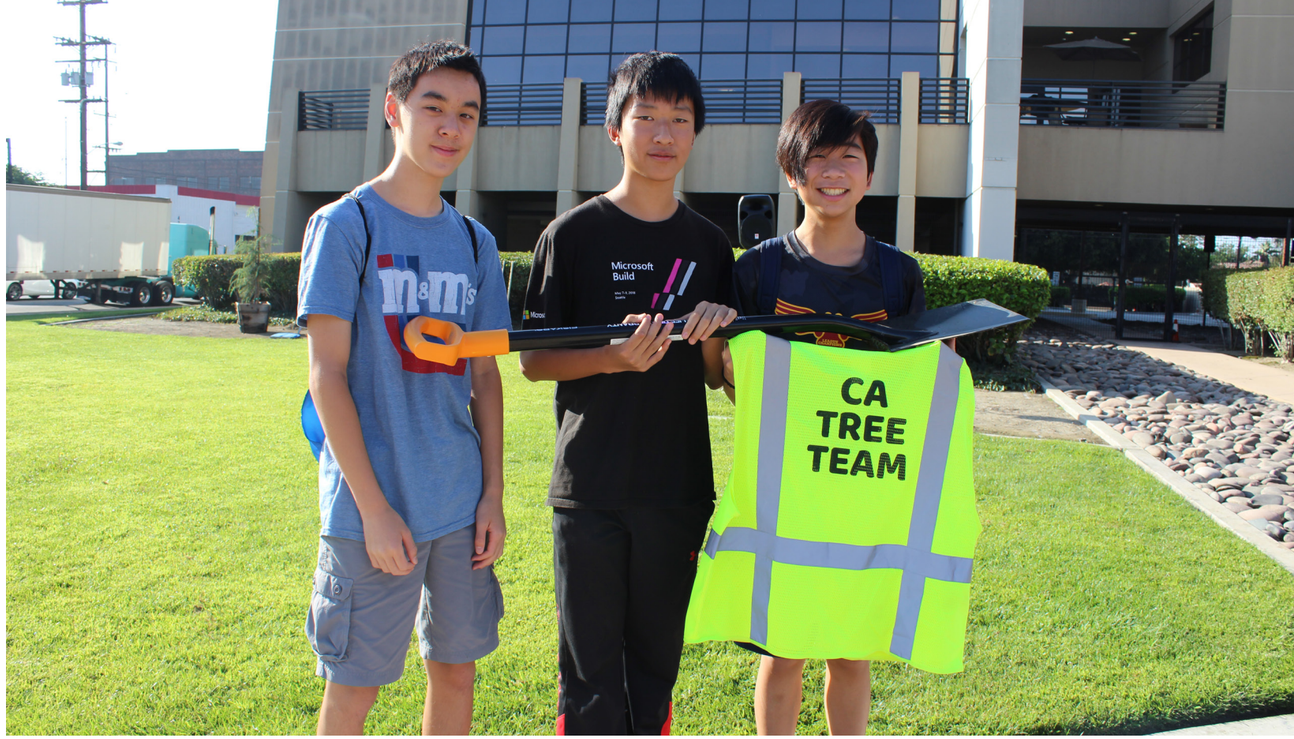
ECONOMIC. Improves preparedness and adaptability, reduces the impact of climate-related emergencies, protects lives, and decreases economic losses.

ENVIRONMENTAL. Captures pollutants, reduces heat island effects, and enhances air quality. Urban greening also boosts biodiversity, supporting urban ecosystems and habitats.

Fiscal Considerations

Development of strategies for climate change adaptation, cooling centers, early warning systems, and public health monitoring often require established partners and resources. Reducing urban heat islands and air pollution further requires multi-sector investments as these efforts involve tree canopy expansion, cool roofs, renewable energy use, transportation enhancements, waste reduction, and water conservation initiatives. Monitoring for vector-borne diseases in particular requires close collaboration with healthcare institutions, educational campaigns, and data-sharing agreements.

Implementation of Community Health and Resilience strategies should prioritize local engagement with business- and community leaders to ensure funding will benefit areas where it is needed the most. Through this process, Vernon can measure costs and savings for expected benefits, such as reductions in healthcare costs, missed or skipped work and school days, increased productivity, and prevented losses during emergencies or disasters.



Local Spotlight – Urban Tree Program

In Vernon, the City's only Census tract currently has the lowest tree canopy cover (2%) in all of Los Angeles County. Enhancing Vernon's tree canopy is a critical step toward mitigating the environmental challenges the City faces, which is why Loyola Marymount University, TreePeople, and the Gateway Cities Council of Governments partnered with the City of Vernon to prioritize community-based tree planting. This collaboration involved input from residents, businesses, and stakeholders to identify key tree benefits and create a priority map within Vernon.

Urban forestry is one strategy to increase a city's resilience. In addition to reducing the urban heat island effect, urban trees can help prevent flooding and runoff and remove pollutants before water enters rivers and oceans. Trees also filter air pollutants, improving air quality and producing public health benefits.

CHAPTER

3

Implementation

Management

The City's Health and Environmental Control Department will lead the implementation of the ESAP. However, specific strategies and actions may fall under the jurisdiction of other City departments, including Public Utilities and Public Works. Implementation progress will be guided by the Green Vernon Commission (GVC), an established committee with representation from the business, labor, and environmental communities to champion sustainability throughout the City, will provide ongoing guidance and support for the implementation of the ESAP, and identify new opportunities for sustainability.

Monitoring and Reporting

The City is committed to tracking the ESAP's implementation progress and reporting to the GVC. The ESAP includes actions that were identified to improve sustainability throughout Vernon. The GVC will be charged with evaluating and prioritizing the actions based on a set of evaluation criteria that will include, at minimum, the cost impacts, feasibility, and co-benefits.

This ESAP is a living document. It is expected that, over time, City, business, and community priorities may shift, new legislation will be introduced, and environmental conditions will change. Funding sources, regulations, and City staff and partnering organizations will also evolve. To ensure the ESAP stays relevant, progress will be monitored regularly, on an annual basis, to evaluate the effectiveness of sustainability goals and strategies, and to make course corrections where needed. The ESAP incorporates performance metrics that establish measurable criteria for its goals on an annual basis, unless otherwise specified.

Funding

With respect to funding, it is beyond the scope of this ESAP to develop a detailed cost-benefit analysis of every action. Actions using the City's general fund will go through the standard City Council approval process, including a financial impact analysis and inclusion in the City budget. As a part of its annual budget process, the City may appropriate funding from its general fund or make changes in its fee schedules, utility rates, and other sources as needed to support funding the implementation of the sustainability measures. With an adopted ESAP, the City's ability to seek federal and state grants will be enhanced.

Implementation Framework

The table below summarizes the goals and strategies from Chapter 2 – Sustainability Sectors, Goals, and Strategies. To facilitate successful implementation, each strategy as described in Chapter 2 includes one or more performance metrics to assist the City in tracking and monitoring progress on a periodic basis. Each sustainability strategy is accompanied by a suggested timeframe for implementation, a responsible lead City department, and targeted implementation partners, as described below. Chapter 2 also includes a list of recommended implementation actions under each strategy that will be tracked for completion by the Lead Department.

- **Timeframe:** Identifies the target timeframe for the strategy to be implemented. For the sustainability strategies, these are designated as Near Term (2024–2027), Mid Term (2027–2035), and Long Term (after 2035). Some strategies build on existing and continuous efforts, and are noted as Ongoing. Funding availability may dictate when strategies are actually completed.
- **Lead Department:** Identifies the City department(s) responsible for implementing the strategy. In some cases, there may be joint implementation responsibility across departments.
- **Potential Partners:** Identifies the City department(s) that could potentially work with the Lead Department to implement the strategies and actions.

Strategy	Timeframe	Lead Department	Potential Partners
Greenhouse Gas Emissions, Goal G1: Reduce community GHG emissions in alignment with state targets			
G1-a: Develop a detailed climate action plan for reducing emissions throughout the community and tracking progress towards targets that align with state mandates.	Mid term 2027-2035	Public Utilities	Public Works
Energy, Goal E1: Transition to clean, renewable energy sources: 60% by 2030, 90% by 2035, 95% by 2040, and 100% by 2045			
E1-a: Procure and deliver more renewable electricity to the grid.	Mid term 2027-2035	Public Utilities	
E1-b: Enable businesses and residents to adopt carbon free distributed energy resources.	Near term 2024-2027	Public Utilities	Public Works
Energy, Goal E2: Improve energy efficiency of new and existing buildings throughout the community			
E2-a: Encourage building electrification and energy efficiency.	Near term 2024-2027	Public Utilities	Public Works
E2-b: Develop community partnerships to evaluate deployment of new technologies and infrastructure to reduce energy-related emissions.	Near term 2024-2027	Public Utilities	Public Works
Energy, Goal E3: Increase community energy resilience			
E3-a: Promote the adoption of microgrid technologies.	Mid term 2027-2035	Public Utilities	Public Works
Transportation, Goal T1: Reduce traffic congestion and vehicle emissions			
T1-a: Reduce truck emissions of criteria air pollutants.	Near term 2024-2027	Public Works	Health and Environmental Control
T1-b: Coordinate with local businesses and developers to reduce on-road VMT.	Mid term 2027-2035	Public Works	Health and Environmental Control

Strategy	Timeframe	Lead Department	Potential Partners
Transportation, Goal T2: Increase the use of ZEVs throughout the community			
T2-a: Expand and maintain EV charging infrastructure.	Near term 2024-2027	Public Works	
Transportation, Goal T3: Create a safe, reliable, and efficient network for walking, biking, public transit, and new forms of mobility			
T3-a: Promote active transportation and transit.	Near term 2024-2027	Public Works	
Materials and Waste, Goal M1: Continue to Grow Vernon's Circular Economy			
M1-a: Support waste prevention through product and packaging redesign.	Near term 2024-2027	Health and Environmental Control	
M1-b: Support local materials exchange.	Near term 2024-2027	Health and Environmental Control	
M1-c: Improve information and resources on City webpage.	Near term 2024-2027	Health and Environmental Control	City Administration, City Clerk
M1-d: Align the City's procurement processes with the requirements of SB 1383 to minimize toxics and waste, and incentivize local businesses to do the same.	Near term 2024-2027	Health and Environmental Control	
Materials and Waste, Goal M2: Maximize the effectiveness of waste management systems			
M2-a: Maximize benefits of the waste diversion system.	Near term 2024-2027	Health and Environmental Control	
Materials and Waste, Goal M3: Reduce 75% of organic waste disposed in landfills by 2025			
M3-a: Increase Reuse and Recycling of materials and organics.	Near term 2024-2027	Health and Environmental Control	
Water, Goal W1: Achieve greater water conservation			
W1-a: Identify customer interest to expand use of recycled water.	Mid term 2027-2035	Public Utilities	Health and Environmental Control
W1-b: Collaborate with CBMWD to expand water conservation programs (water audits, water fixture upgrades, retrofits, and recycled water use).	Near term 2024-2027	Public Utilities	Public Works
W1-c: Share information on regional water conservation programs available for residents.	Near term 2024-2027	Public Utilities	Health and Environmental Control
Water, Goal W2: Improve resilience to droughts			
W2-a: Promote drought-tolerant landscaping for residential customers.	Near term 2024-2027	Public Works	Public Utilities
W2-b: Continue to monitor water usage and assess water conservation pricing, especially during drought periods.	Ongoing	Public Utilities	

Strategy	Timeframe	Lead Department	Potential Partners
Water, Goal W3: Improve stormwater management for flood control and groundwater recharge			
W3-a: Develop a comprehensive stormwater management plan that incorporates the Citywide Tree Wells Project.	Near term 2024-2027	Public Works	Health and Environmental Control
Food Systems, Goal F1: Support a thriving regional food economy			
F1-a: Lead by example through City purchasing practices.	Near term 2024-2027	Finance Department	All Departments
F1-b: Incentivize, support, and publicize businesses that upcycle surplus food products.	Near term 2024-2027	Health and Environmental Control	
Food Systems, Goal F2: Provide safe and convenient access to affordable, healthy, culturally relevant food			
F2-a: Promote community gardens and farmers markets.	Near term 2024-2027	Health and Environmental Control	
F2-b: Promote food rescue and distribution.	Near term 2024-2027	Health and Environmental Control	
Community Health & Resilience, Goal C1: Increase resilience to climate change hazards			
C1-a: Develop a Community Climate Change Adaptation Plan.	Mid-term 2024-2027	Public Works	Health and Environmental Control
C1-b: Identify locations for community cooling centers/resilience hubs.	Near term 2024-2027	Health and Environmental Control	Public Works
C1-c: Improve early warning and communication systems for climate emergencies (extreme heat and precipitation events, wildfire smoke, etc.).	Near term 2024-2027	Health and Environmental Control	Public Works, Police Department
C1-d: Monitor vector-borne diseases through public health collaborations.	Near term 2024-2027	Health and Environmental Control	Public Works
Community Health & Resilience, Goal C2: Reduce urban heat islands			
C2-a: Increase urban tree canopy.	Near term 2024-2027	Public Works	
C2-b: Increase the use of cool roofs and pavements.	Near term 2024-2027	Public Works	
Community Health & Resilience, Goal C3: Reduce air pollution			
C3-a: Prioritize implementation of sector actions that result in GHG reductions (those with icon).	Near term 2024-2027	Health and Environmental Control	Public Utilities, Public Works

Potential Funding Opportunities

For some strategies and actions, successful implementation will require outside funding sources in addition to a commitment of City resources. There are a variety of available and active funding sources that can support the implementation of sustainability strategies identified in this ESAP. The table below provides a list of known, potential funding sources and identifies the relevant sustainability sectors that could benefit. Programs and funding sources for increasing sustainability across sectors are developing rapidly and may change substantially from year to year. This includes but is not limited to federal sources, various grant programs that fall under the umbrella of California Climate Investments (funded from Cap-and-Trade revenues), and organizations like Southern California Regional Energy Network (SoCalREN) that provide financial assistance for energy efficiency improvements to residents, businesses, and public agencies.

Strategy	Timeframe	Lead Department
Caltrans Sustainability Planning Grant: Climate Adaptation Planning	Funds for identifying transportation-related climate vulnerabilities through climate action plans and other projects related to climate adaptation and transportation infrastructure.	Transportation, GHGs
OPR Adaptation Planning Grant Program	Funding made available to help fill local, regional, and tribal planning needs especially as they related to responding to climate impacts. Aims to assist communities in implementing plans that build resilience and reduce future risks.	Energy, Water, Community Health and Resilience
OPR Regional Resilience Planning and Implementation Grant Program	Support for regional projects and plans that improve regional climate resilience.	Community Health and Resilience
SGC Community Resilience Centers Grant Program	Funding for neighborhood-level resilience centers creating shelters and resources during climate emergencies and providing year-round community strengthening services.	Energy, Community Health and Resilience
OPR Community Resilience and Heat Grant Program	Program aims to expand projects that mitigate the impact of heat including heat action plans, shade structures, and cooling projects.	Community Health and Resilience
SoCalGas Climate Adaptation and Resiliency Grant	Assists local cities in becoming more resilient to climate hazards, improving climate adaptation, and mitigating the impacts of hazards.	Water, Community Health and Resilience
FEMA Building Resilient Infrastructure and Communities (BRIC) Grant	Provides annual grants for hazard mitigation planning and mitigation projects to build community capacity and capability.	Community Health and Resilience
EPA Climate Pollution Reduction Grant (CPRG)	Provides funding to develop and implement plans to reduce greenhouse gas and other emissions.	GHGs, Materials and Waste
SCAG Sustainable Communities Program	Technical assistance program to strengthen partnerships with local agencies to improve transportation and land use decisions	Transportation, GHGs

Strategy	Timeframe	Lead Department
Cal EPA Greenhouse Gas Reduction Fund	Provides private capital for clean energy and climate projects that reduce air pollution	GHGs, Energy
California Natural Resources Agency Urban Greening Grant Program	Funds projects that reduce GHG emissions by sequestering carbon, decreasing energy consumption, and reducing VMT.	Transportation, GHGs, Energy
California Natural Resources Agency Urban Green Infrastructure Program	Funding for multi-benefit green infrastructure investments in or benefiting disadvantaged communities.	GHG emissions, extreme heat
Federal Infrastructure Investment and Jobs Act	The Federal Infrastructure Investment and Jobs Act, passed in 2021, authorizes approximately $550 billion in new federal investment in America's transportation, communication, and water infrastructure, with much of the funding geared toward the clean energy transition and increasing resilience to climate change. The legislation includes the following: • $39 billion of new investment to modernize transit and improve accessibility for the elderly and people with disabilities. • $7.5 billion to build a national network of electric vehicle chargers. • $73 billion for power infrastructure and clean energy transmission. • $110 billion for roads, bridges, and other major projects. • $11 billion in transportation safety programs. • $39 billion in transit modernization and improved accessibility.	Transportation, Energy
Greenhouse Gas Reduction Fund	The Inflation Reduction Act amended the Clean Air Act to create a new program: the Greenhouse Gas Reduction Fund. This first-of-its-kind program will provide competitive grants to mobilize financing and leverage private capital for clean energy and climate projects that reduce GHG emissions—with an emphasis on projects that benefit low-income and disadvantaged communities—and further the Biden-Harris Administration's commitment to environmental justice. The Greenhouse Gas Reduction Fund provides $27 billion to U.S. EPA for expenditure until September 30, 2024. This includes: • $7 billion for competitive grants to enable low-income and disadvantaged communities to deploy or benefit from zero-emission technologies, including distributed technologies on residential rooftops; • Nearly $12 billion for competitive grants to eligible entities to provide financial and technical assistance to projects that reduce or avoid GHG emissions; and • $8 billion for competitive grants to eligible entities to provide financial and technical assistance to projects that reduce or avoid GHG emissions in low-income and disadvantaged communities.	GHG

Strategy	Timeframe	Lead Department
Resilient and Efficient Codes Implementation	$225 million for the Infrastructure Investment and Jobs Act to advance state and local jurisdiction efficiency and resilience of building energy codes, as well as provide long-term sustainability of measures and savings, and address equity, energy, environmental justice, and resilience priorities. Funding is appropriated for "eligible entities to enable sustained cost-effective implementation of updated building energy codes" through a competitive grant process over five years (Fiscal Years 2022 through 2026). Awardees eligible for this funding must include a relevant state agency, and priority will be given to teams that include strategic partnerships, such as a local building code agency, codes and standards developers, associations of builders and design and construction professionals, and many others. Projects must be tied to an updated building energy code, which includes any amendment or code update resulting in increased energy efficiency as compared to the previously adopted code.	Energy
Pollution Prevention (P2) Grant Program	P2 grants provide technical assistance to businesses to help them develop and adopt source reduction practices (also known as "pollution prevention" or "P2"). "P2" means reducing or eliminating pollutants from entering any waste stream or otherwise released into the environment prior to recycling, treatment, or disposal.	Waste and Materials
WaterSense	WaterSense is a voluntary partnership program sponsored by the U.S. EPA, and is both a label for water-efficient products and a resource for helping residents and businesses save water.	Water
Safe Routes to Schools	Safe Routes to Schools is an international movement focused on increasing the number of children who walk or bike to school by funding projects that remove barriers to doing so. These barriers include a lack of infrastructure and non-infrastructure projects, safety, and limited programs that promote walking and bicycling. In California, two separate Safe Routes to School programs are available at both the state and federal levels, and both programs fund qualifying infrastructure projects.	Transportation, Community Health and Resilience

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