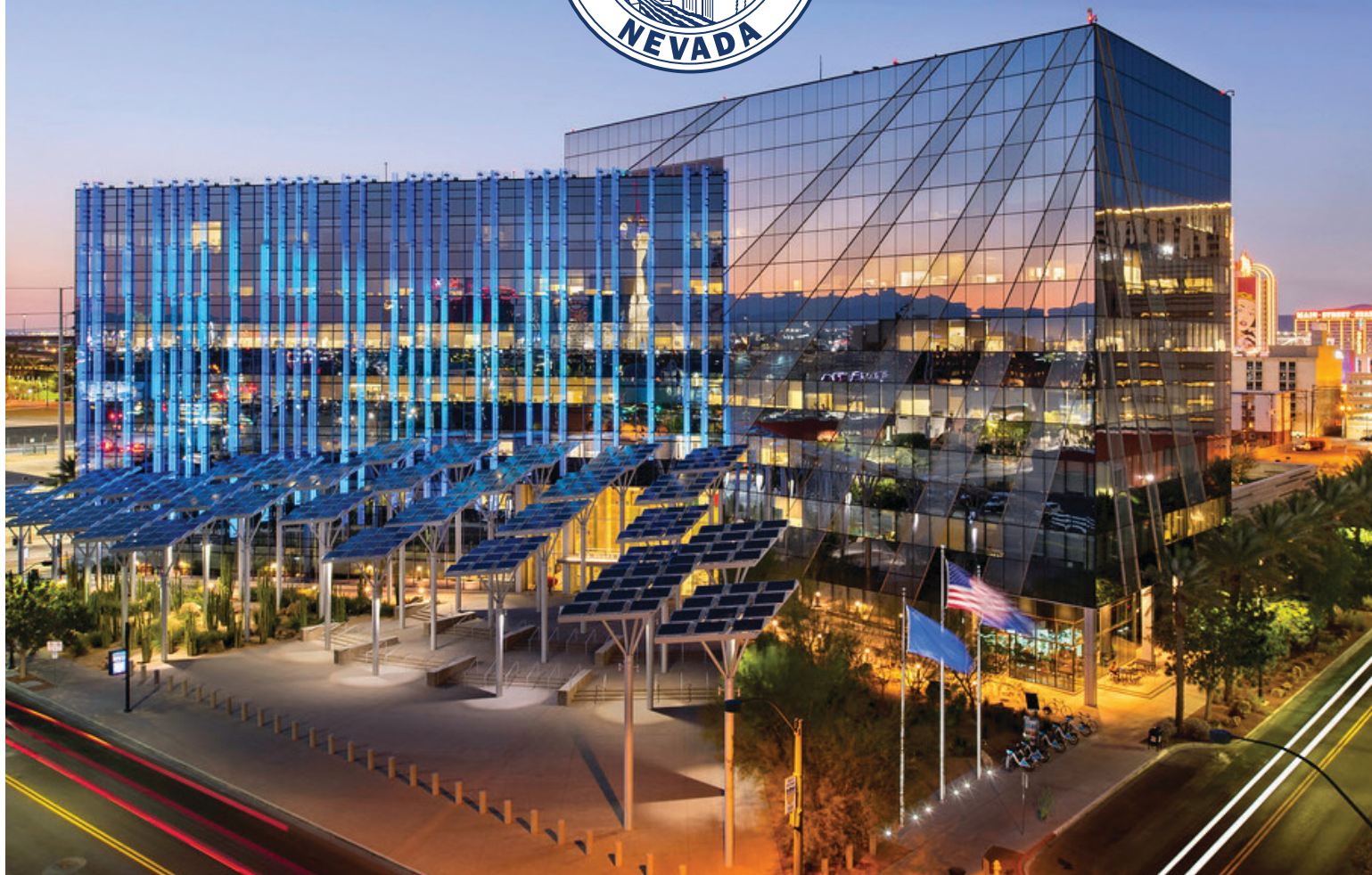


# SUSTAINING LAS VEGAS

## 2050 ACTION PLAN





# SUSTAINING LAS VEGAS: NOW AND INTO THE FUTURE



Recognized as a national leader in environmental sustainability, the city of Las Vegas has notable achievements in energy efficiency, water conservation, waste diversion, city planning and alternative transportation.

Beginning in 2005, Mayor Oscar B. Goodman was among the first mayors to sign on to the U.S. Conference of Mayors Climate Protection Agreement, effectively agreeing to reduce emissions to below 1990 levels in alignment with the Kyoto Protocol. This would be a launching point for the city to develop a sustainability initiative.

With guidance from city managers Doug Selby and Betsy Fretwell, the city tasked its first Chief Sustainability Officer, Tom Perrigo, with determining how to achieve those reductions for both its municipal operations and for the community at large. In the two decades that followed, visible signs of progress emerged. From constructing a

new LEED Gold certified City Hall to being the first municipality in Nevada to become the first large municipality in the country to achieve “net-zero” status for its retail electric load to developing innovative partnerships with other public sector entities and the gaming industry, the city has made its mark.

This action plan seeks to maintain and continue that momentum in alignment with the city’s 2050 Master Plan. In addition to the environmental, economic and social challenges impacting sustainability in communities, new ones continue to emerge for the city as well as others within Nevada, across the region and across the country. The goals, and the direction, however, continue to remain the same: the city of Las Vegas will be the leader in sustainability and use a triple bottom line approach that addresses new and existing challenges now and into the future.

# SUSTAINING LAS VEGAS: NOW AND INTO THE FUTURE



## FOUNDATIONAL POLICY

The city has adopted a wide range of policies in support of city and community sustainability. Each of the foundational policies and subsequent amendments to Las Vegas Municipal Code were designed to make city operations more efficient and our community more sustainable, including for major renewable energy and energy efficiency projects, tree planting guidelines, drought and water conservation standards, urban heat reduction, complete street projects and clean transportation strategies.

These policies include:

- 2005: U.S. Conference of Mayors Climate Protection Agreement
- 2006: Climate Protection Resolution (R-57-2006)
- 2006: Green Building Resolution (R-81-2006)
- 2008: Urban Forestry Resolution (R-26-2008)
- 2008: Sustainable Energy Strategy (R-50-2008)
- 2008-09: Sustainable Energy Strategy / (ARRA) Recovery Act

# SUSTAINING LAS VEGAS: NOW AND INTO THE FUTURE

By 2010, the city's Office of Sustainability was formally organized and coordinated with departments to leverage more than \$70 million in federal, state and local funding:

- 6.2 megawatts of solar at 40 facilities
- Turf conversions and xeriscaping at parks and public rights of way
- Replacement of 60,000 streetlights with LED technology
- Energy efficiency projects at large facilities, fire stations and community centers
- 12 LEED certified green buildings, including LEED Gold City Hall
- Urban forestry tree planting
- Transportation electrification at city facilities and garages
- Single stream recycling at all city facilities

The result of these efforts translated to national recognition, awards, and certifications from a broad cross section of groups, including the U.S. Conference of Mayors, the U.S. Chamber of Commerce, the American Institute of Architects, the American Planning Association, Carbon Disclosure Project and U.S. Department of Energy's SolSmart Program, among others.

## **NET-ZERO STRATEGY (R-32-2017)**

In the mid-2010's, the city set its sights on ways to distinguish itself as a "net-zero" city—using clean energy exclusively. The City Council would adopt the Strategy for Community Resilience, Net-Zero Energy and Sustainability which directed the city to receive renewable energy for its municipal retail load. It would do so through a multi-year renewable energy agreement with electric utility NV Energy, hydropower from Hoover Dam and generation from city solar facilities.



# SUSTAINING LAS VEGAS: NOW AND INTO THE FUTURE

## LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) FOR CITIES AND THE 2050 MASTER PLAN

Adoption of the Net-Zero Strategy contained other provisions and considerations for the future. Staff was directed to assess a wider range of sustainability metrics for the purposes of developing a new master plan. The city first utilized the Sustainability Tools for Assessing and Rating Communities (STAR) system, achieving a four-star rating. It would then go on to pursue the succeeding LEED for cities certification. The city closely assessed topics in a range of categories and was ultimately awarded “Gold” certification in August 2020 for implementing measurable strategies and solutions aimed at improving sustainability and the standard of living for residents.

Development of the city’s new “2050 Master Plan” occurred simultaneously with the LEED certification process. Both STAR and LEED offered useful tools to establish future outcomes, as well as determine appropriate implementation strategies to achieve them.


The 2050 Master Plan was adopted as a General Plan Amendment by the Planning Commission on April 12, 2021 and in full by the City Council on July 21st, 2021 (Ordinance 6788). The plan develops a comprehensive, clear vision and framework for the future of Las Vegas, as well as recommendations that are

implementation-focused. As required by NRS 278, the Master Plan addresses a comprehensive range of topics that included public involvement and were broadly-supported by community consensus. The plan was developed using guiding principles that measure success, weigh recommendations, foster community-driven implementation, and improve quality of life for all residents:

- Resilient: the city is prepared and adaptable to shocks and stresses.
- Healthy: residents can improve personal health outcomes.
- Livable: quality of life is distinct and uniquely “Vegas.”
- Innovative: the region educates and attracts the boldest and brightest.

Using these principles as a foundation for each of the plan’s goals, the 2050 Master Plan interweaves sustainability throughout its required elements, including:

- Land Use, Complete Streets and Transit
- Natural Features, Urban Forestry and the Mojave Desert environment
- Environmental Justice
- Water, Energy, Waste and Greenhouse Gas Emissions
- Hazards, including drought, extreme heat and flash flooding



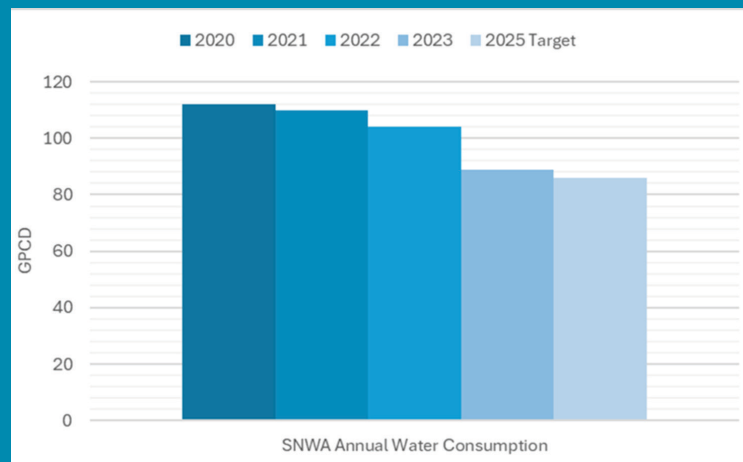
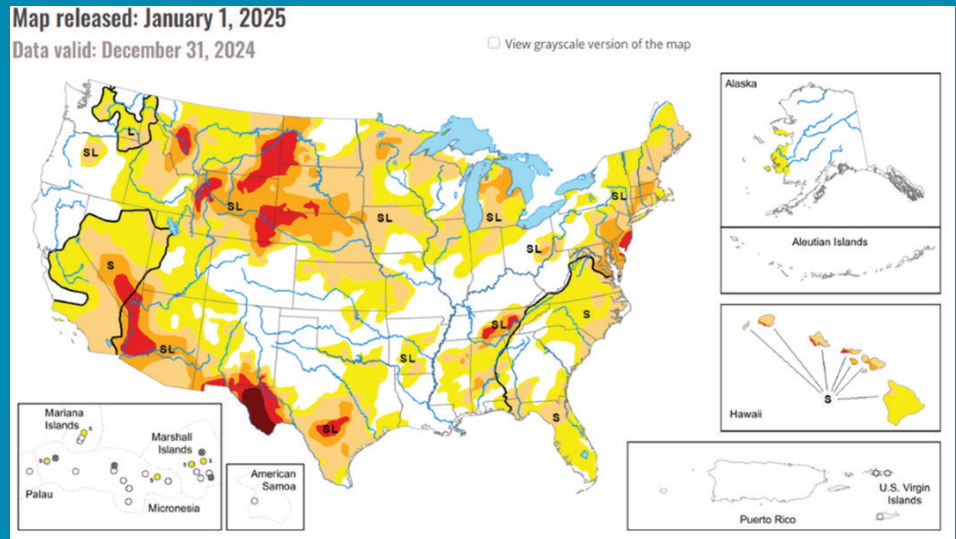
Category	Points Achieved/ Points Available
INTEGRATIVE PROCESS (IP)	3/5
NATURAL SYSTEMS AND ECOLOGY (NS)	8/9
TRANSPORTATION AND LAND USE (TR)	10/15
WATER EFFICIENCY (WE)	6/11
ENERGY AND GREENHOUSE GAS EMISSIONS (EN)	18/30
MATERIALS AND RESOURCES (MR)	5/10
QUALITY OF LIFE (QL)	9/20
INNOVATION (IN)	3/6
REGIONAL PRIORITY (RP)	4/4
<b>TOTAL POINTS ACHIEVED</b>	<b>66/110</b>



# WATER CONSERVATION

The primary source of water for the Las Vegas region is the Colorado River, accounting for 90% of the region's supply. Over the past two decades, Southern Nevada's per capita water consumption has decreased 34% despite an increase of 800,000 new residents. Currently, residents, businesses and visitors consume approximately 90 gallons per person, per day. However, 25 years of drought in the American West continues to take its toll on water supply, resulting in cuts to Nevada's Colorado River allocation of 300,000-acre-feet annually. Nevada, as well as other Colorado River Basin states, are working to negotiate new cuts and guidelines before their expiration at the end of 2026.

The city plays a crucial role in the conservation and management of the water supply for its residents and businesses by supporting regional management efforts by the Southern Nevada Water Authority (SNWA). Because water is critical to the city's ability to serve existing and future residents and for economic development, the 2050 Master Plan's water goal is to support efficient water management, reduce water consumption, and enact stronger water conservation strategies to minimize consumptive water use. Outcomes include the reduction of community water consumption to 86 gallons per capita per day (GPCD) by 2035, consistent with SNWA's Water Resource Plan, and to reduce the water consumption from municipal operations 2% annually,



covering the sectors of buildings and facilities, park and landscaping and wastewater treatment.

Two of the primary means of water conservation to reduce consumptive use that have been the most successful have been incentives through SNWA's Water Smart Landscapes Program and the Water Efficient Technologies Program. In 2024 alone, 15.3 million-square-feet of turf

converted to xeriscaping by residents and businesses saving 534 million gallons of water annually, bringing total program conversions to 239 million-square-feet. Although these successes have been effective, SNWA anticipates water demand may increase in coming years by 10 GPCD due to additional pressure on the Colorado River system and the age of SNWA's water infrastructure.

# WATER CONSERVATION

## MUNICIPAL OPERATIONS

For city operations, the city consumes approximately 1.2 billion gallons annually at an annual cost of \$7 million. Nearly 80% of its consumption is from irrigation at park facilities. To support SNWA and regional water goals, the city assessed conservation opportunities at 65 city parks and facilities and determined 4 million-square-feet of non-functional turf could potentially be removed resulting in an annual savings of up to \$1 million. In 2023, the city approved an interlocal agreement with SNWA to participate in the Water Smart Landscapes Program, to help finance a portion of the total cost of the projects. The city also participates in SNWA's Water Efficient Technologies (WET) program to replace evaporative cooling at city facilities.

## CODES AND POLICY

The city has adopted water conservation policies into Las Vegas Municipal Code (LVMC Titles 14, 16 and 19) in compliance with state laws AB 356 (2021) and AB 220 (2023), in support of SNWA's policies, and in alignment with LVVWD service rules, including:

- Prohibition of turf and non-functional and turf replacement by 2027
- Fountain and water feature limits
- Spray irrigation prohibitions
- Evaporative cooling moratorium
- Swimming pool size limits
- New golf course prohibition
- Septic restrictions

## RECOMMENDED CITY ACTIONS LEADING TO 2050 OUTCOMES

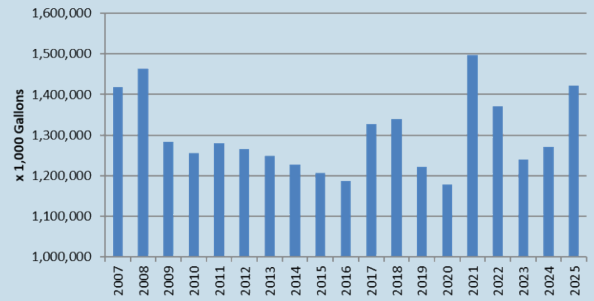
Complete Water Smart Landscaping and Water Efficient Technologies projects at:

- Heers, Cragin, Rainbow Family, Cameron, Essex, Lorenzi, Rafael Rivera, Firefighters Memorial, Bruce Trent, Heritage, Bettye Wilson Parks
- Various medians
- Pavilion Pool, Lieburn Senior Center, Mirabelli Community Center
- Additional water conservation code amendments, including:
- High use, industrial-commercial use, and other outdoor use restrictions
- Additional "Tier 2" drought restrictions

## WHAT YOU CAN DO

- Fix irrigation leaks
- Adjust watering schedules seasonally
- Replace non-functional turf with drought tolerant landscaping by 2027

Total Water Consumption



Total Cost - Water



# CLEAN ENERGY

Nevada has been at the forefront of clean energy. Since the adoption of the state's renewable portfolio standard (RPS) in 1997 and now enshrined in Nevada's Constitution, Southern Nevada receives nearly 34% from renewable sources each year. The RPS gradually increases until reaching 50% by 2030. The city has been, and will continue to be, a national leader in municipal clean energy development. The 2050 Master Plan's Energy goal is to prioritize the use of renewable energy sources and improve energy, with outcomes to reduce community energy use 80% by 2050, that 50% of both municipal and community energy supply is from renewable sources by 2030 consistent with the RPS, and to reduce total energy consumption from municipal operations 2% annually, covering the sectors of buildings and facilities, streetlighting and wastewater treatment.



# CLEAN ENERGY

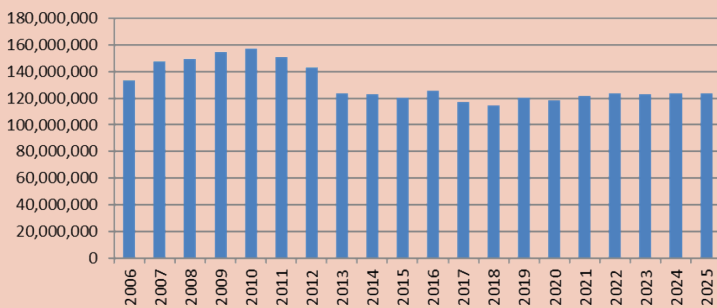
Actively participating in renewable energy provides opportunities for the city to reduce environmental impact and costs. As a member of SNWA, the city also supplies renewable energy toward the RPS. Through a 2016 Renewable Energy Agreement with the state's investor-owned utility NV Energy, the city of Las Vegas receives 100% of the energy it needs from renewable sources:

- Forty city buildings and facilities, parks, fire stations and community centers have approximately three megawatts of net-metered solar covered parking.
- Parker-Davis Dam allocation.
- Two megawatts of hydropower from Hoover Dam.
- Additional renewable power provided by NV Energy.

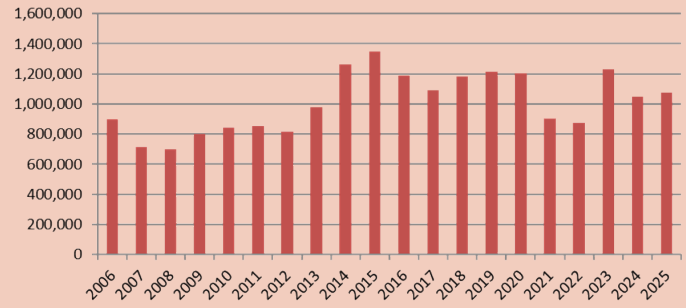
While RPS requirements will hold steady through 2030 and beyond, Nevada may take steps in the future to modify this requirement, further supporting the need for additional investment in renewables. Even without the requirement, the demand for clean energy will continue to rise. As such, the city must continue to lead both municipal and community clean energy opportunities beyond those required of the state's energy utilities and regulatory agencies:

- Additional municipal renewable energy projects, including biogas utilization, hydropower and battery-paired electricity generation.
- Establish a benchmarking program for both municipal and community energy use for energy consumption across facilities, identification of buildings with high usage, and prioritize opportunities for improvements to better assess performance for capital planning and retrofits.
- Deployment of city-led community education, community solar and efficiency programs.
- Expand energy efficiency efforts beyond lighting projects for deeper energy savings.
- Reinvest savings from high-return projects to more challenging projects.

### Total Electricity



### Total Therm



## MUNICIPAL OPERATIONS

The city's investment in renewable energy and energy efficiency has delivered notable benefits over the years. By reducing overall demand for electricity, the city's installed solar capacity has helped lower energy costs across municipal operations. For city operations, the city consumes an average of approximately 120 million-kilowatt-hours and 1 million therms annually at a cost of \$10 million. The city's six megawatts of solar, hydropower, and renewable power provided by NV Energy has helped the city meet clean energy targets. Since 2020, biogas use has displaced over 250,000 MMBtu of natural gas, avoiding over \$16,000 in annual fuel costs, but the remainder is flared. To reduce energy consumption, the city participates in NV Energy's PowerShift program for existing city facilities and new projects to reduce energy consumption from exterior lighting, streetlights and air conditioning. In 2024 alone, these savings accounted for roughly 7% of the city's total electricity costs.

# CLEAN ENERGY

As a LEED for cities certified organization, the city has been committed to green certified building stock. With more than a dozen LEED certified buildings in its portfolio, the city has seen considerable resource savings under the LEED rating system. With existing buildings in its portfolio, utility energy programs can be utilized to improve lighting, cooling and heating systems and weatherization. Similarly, the city has offered Commercial Property Assessed Clean Energy (C-PACE) as a strategy to help commercial, mixed-use and multi-family property owners finance energy efficiency and renewable energy improvements. Finally, as energy storage technology improves, new opportunities will develop to pair solar generation with energy demand management, allowing buildings to generate and store solar throughout the day and use stored energy during peak cooling periods and at night.



## CODES AND POLICY

The city has adopted updated versions of the International Energy Conservation Code. Since 2018, the city has offered a Commercial Property Assessed Clean Energy Program (C-PACE).

## RECOMMENDED CITY ACTIONS LEADING TO 2050 OUTCOMES

- Approve new Renewable Energy Agreement to maintain the city's 100% electric retail load commitment
- Complete Energy Efficiency projects at:
  - ◇ LED field lighting replacements at Ed Fountain Park, All-American Park, Freedom Park, Doc Romeo Park, Majestic Park, Mountain Ridge Park, Rainbow Family Park
  - ◇ LED Streetlights in Summerlin North and Summerlin West

- Complete Solar projects at fire stations 3 and 108 and at City Hall
- Complete community solar project at Lorenzi Park
- Host additional community solar projects at:
  - ◇ Kellogg Zaher Park
- Adopt solar access ordinance
- Construct biogas at the Water Pollution Control Facility

## WHAT YOU CAN DO

- Replace air filters, old appliances, electronics, and
- Weatherize, install energy efficient products and programmable thermostats
- Tune up air conditioning and heating units
- Install rooftop solar

# RECYCLING & WASTE

The city is committed to improving our environment by reducing, reusing and recycling. Community involvement is vital to the city's success in reaching its waste diversion goal to reduce waste consumption and target net-zero municipal solid waste produced in the community, with outcomes to reduce the region's waste disposal rate by 80%, a recycling rate of 40% and a reduction of waste from municipal operations 2% annually.

The city regulates the collection, transportation and transfer of waste and recycling, which is handled by Republic Services of Southern Nevada. Republic Services serves the city of Las Vegas (and much of the region as a whole) under a franchise granted by City Council to provide solid waste and recycling service to residents, businesses and for government operations.

Since 2020, Southern Nevadans (including city of Las Vegas residents) dispose of approximately 6-7 lbs of waste and recycle 1.5 lbs of waste for a total disposal rate of 7.5 lbs per person per day. On average, more than 3 million tons of waste are disposed of annually, while more than 1.7 million tons of waste and debris are recycled. Since deployment of single-stream recycling for single family residences, it is estimated

that the city's recycling rate of 24%, on par with the regional recycling rate of 23%.

Apex Regional Landfill, the largest landfill by volume in the United States, and the Southern Nevada Recycling Center and Polymer Center, the region's two largest materials recovery centers of their kind, process thousands of tons of waste and recyclables annually. However, many factors require additional work to improve waste diversion and recycling rates. Multi-family apartment and condominium complexes in Southern Nevada do not have recycling and those that do have low recycling rates; similarly, the provision of commercial recycling is available, but varies based on the types of businesses, tenants and operations.

From a global perspective, commodities markets have changed vastly. Proper disposal of special waste streams, such as electronic, medical and hazardous wastes, need improvement. Pacific Rim countries that have stopped accepting recyclables due to high rates of contamination impact the region's ability to divert waste streams properly. As such, it will be imperative to make structural changes with both demand and supply-side strategies, to ensure 2050 goals are met.



# RECYCLING & WASTE



## MUNICIPAL OPERATIONS

In 2013, the city introduced single stream recycling at all facilities, including parks, which have reduced the city's waste expenses by more than \$300,000 from \$821,000 annually. As a result, the city reduced the amount of waste sent to the landfill by 30,000 cubic yards (yd<sup>3</sup>) from 68,000 yd<sup>3</sup>, and increased its diversion rate to 55%. However, over time, the amount of waste and recycle capacity has increased and the savings eroded. Current waste costs have now increased to more than \$1 million annually.

## CODES AND POLICY

The city has adopted waste management, litter reduction into Las Vegas Municipal Code (LVMC Titles 14, 16 and 19).

## RECOMMENDED CITY ACTIONS LEADING TO 2050 OUTCOMES

- Conduct complete waste audit at largest city facilities to determine the rate and composition of waste and recyclables and recommend right-sized containers and pick up frequencies to reduce costs.

- Collect and divert special waste streams that arise from unique city operations, including general operations and maintenance, street sweeping, wastewater treatment, public safety and detention.
- Provide general information to all city departments and employees on proper waste and recycling disposal
- Provide recycling at all city facilities, parks and targeted public places for use by city employees and members of the general public.
- Provide recycling and waste education and composting training to the public.
- Amend franchise agreement to include other use types.

## WHAT YOU CAN DO

- Donate used goods and items to charitable organizations
- Dispose of medication and hazardous materials
- Take used electronics and appliances to authorized locations
- Reduce food waste

# CLEAN TRANSPORTATION



Transportation impacts the environment as a result of the direct burning of gasoline and other fuel sources. The resulting mobile emissions can lead to poor air quality. The city works closely with the Regional Transportation Commission of Southern Nevada (RTC) to plan, construct and maintain transportation networks in the region, including complete streets that allow for multiple modes of transportation. The 2050 Master Plan contains multiple transportation goals, including:

- To connect and enhance accessible bike and pedestrian facilities as part of a safe, efficient complete street and highway network that moves people and goods
- Make transit options more convenient and integrated with vibrant neighborhoods and employment centers, better connecting people to destinations

- Strengthen smart transportation systems and infrastructure to foster economic development efforts.

There are a number of long term transportation outcomes and actions spread between each goal, including improving drive alone versus transit, bike and walking trips; provision of access to transit service; increasing densities along high capacity transit routes; reducing the amount of fatalities on city roadways; and increasing the amount of publicly accessible EV charging stations by 2050. In addition to RTC Transit that provides bus service to more than 52 million passengers on 39 routes annually, the city has improved bicycle and pedestrian networks, including 500 miles of bike lanes and 100 miles of trails and paths. As a result of these efforts, the city has previously been recognized as a Bronze-rated Bicycle Friendly Community by the League of American Cyclists.

# CLEAN TRANSPORTATION

Land use and transportation directly influence each other. Vehicle miles travelled has continued to increase as the city's urban footprint continues to expand; transit usage has declined since the pandemic while telecommuting has increased; and while the drive-alone rate has fallen, overall vehicle miles travelled continues to increase. The city has a number of important actions and opportunities it must take to achieve long term outcomes:

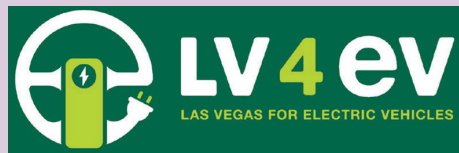
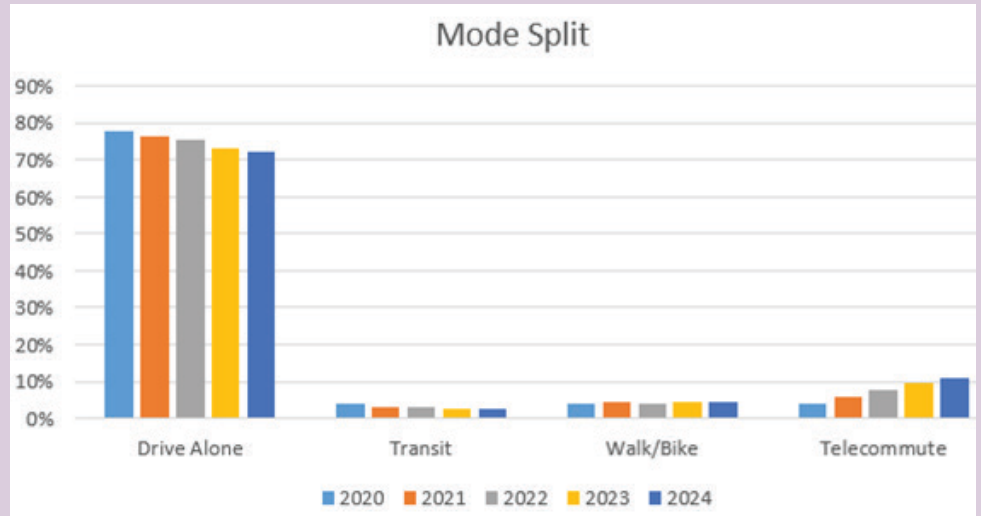
- Development of a new Mobility Master Plan in line with the city's 2050 Master Plan.
- Coordination of efforts of high capacity transit between the city and RTC
- Completion of complete streets, major trails, bike facilities and pedestrian infrastructure that enhance safety for all users
- Emphasis on transportation demand management
- Improve air quality through the efforts of the Southern Nevada Clean Cities Coalition

## MUNICIPAL OPERATIONS

The city was a previous leader of a Clean Cities Coalition and has again participated in the re-launch of the Southern Nevada Clean Cities Coalition to improve air quality from transportation sources. Through those previous efforts, nearly 100% of the city's vehicle fleet ran on alternative fuels. In addition to its hybrids, the city was Nevada's first public agency to purchase electric vehicles. The city also installed more than 80 electric vehicle charging stations at seven garages, community centers and facilities for general public use, including City Hall.

## CODES AND POLICY

The city has an adopted complete streets



policy as part of its Master Plan, codified in LVMC Title 19.04. Additional policies include a Vision Zero Action Plan.

## RECOMMENDED CITY ACTIONS LEADING TO 2050 OUTCOMES

- Adoption of new Mobility Master Plan as a supplement to the 2050 Master Plan
- Adoption of LV4EV charging plan and EV charging ordinance
- Adoption of transit orientated development (TOD) zoning overlay
- Participation in air quality improvement efforts, including transportation-based air quality efforts from the Southern Nevada Clean Cities Coalition
- Complete TOD Study for Charleston Boulevard
- Completion of bike-lane study
- Re-certify as a Bicycle Friendly Community with the League of American Bicyclists

- Complete EV charging projects as part of LV4EV at:
  - Arts District Garage
  - Doolittle and Mirabelli Community Centers
  - Upgrade and replace existing EV charging infrastructure
  - Further reduce vehicle miles traveled, congestion, wasted time, and emissions by working with regional partners to embrace transit, demand and system management, carpooling, ridesharing, and other transportation solutions.

## WHAT YOU CAN DO

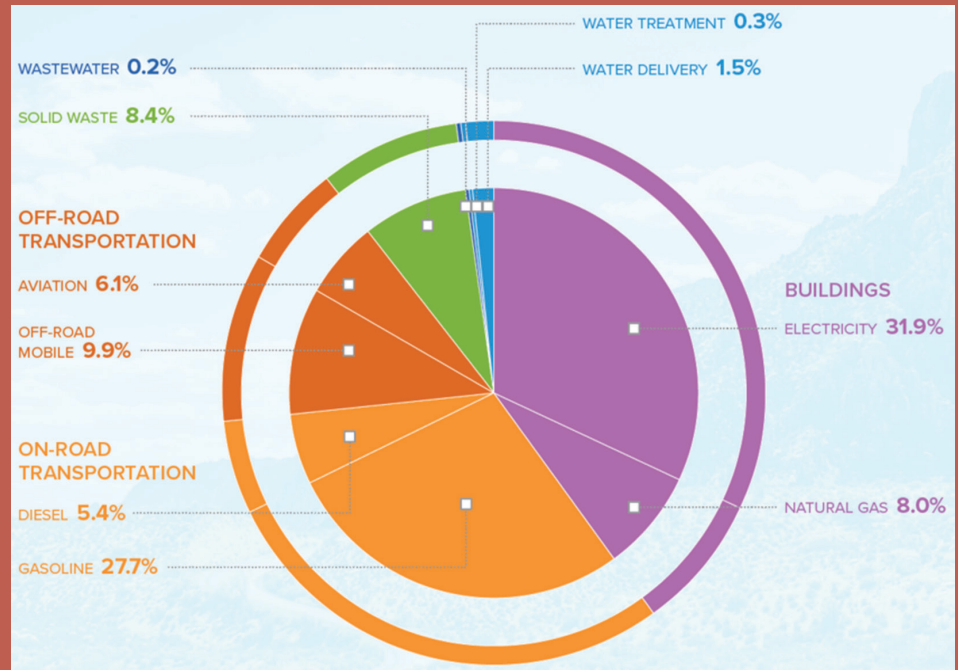
- Participate in RTC's Club Ride program if you bike, walk, carpool or take RTC Transit to work.
- Travel by other modes for shorter trips.
- If possible, purchase or utilize a newer, fuel-efficient or electric vehicle

# GHG EMISSIONS

The city has been a municipal leader in reducing its impact on the environment. The 2050 Master Plan's greenhouse gas emissions (GHG) goal is to mitigate and reduce municipal and community greenhouse gas emissions, with outcomes to achieve carbon neutrality for municipal operations by 2050, to reduce 28% of community emissions from all major sectors by 2025 and 80% by 2050.

A critical component of meeting this and associated energy and waste goals and outcomes of the 2050 Master Plan is understanding the source and change of emissions over time. Appended to this plan is the city of Las Vegas Municipal Inventory, which details results between 2020-2024 and highlighting the impact of the city's actions to enhance sustainability in its operations, saving resources and reducing energy expenditures in the process. In addition, the report summarizes results of the previous community-wide inventories developed in coordination with the Clark County All-In Regional Climate Collaborative.

The Community Greenhouse Gas Inventory, representing both stationary and mobile source emissions, results indicate total emissions of 5,037,707 MTCO<sub>2</sub>e. The largest source of emissions is the buildings sector, accounting for more than half of total community emissions, followed by on-road transportation at 44%. Other contributing sectors include solid waste (4%), water treatment and delivery (1%), and



wastewater treatment (less than 1%). These results highlight that the majority of community emissions stem from energy use in buildings and vehicle travel, indicating key areas for targeted emissions reduction strategies. Las Vegas's greenhouse gases make up 19% of the total regional emissions from Southern Nevada.

As a result of the Nevada Renewable Portfolio Standard, Southern Nevada's investments in solar generation has delivered environmental benefits and emissions reductions. The Portfolio Standard, set both in state statute and in the Nevada Constitution, requires a minimum percentage of electricity must come from renewable sources each year. The standard increases gradually over time, requiring 34% renewable energy through 2026,

42% from 2027 to 2029, and reaching 50% by 2030. By reducing overall demand for electricity, these systems have also helped lower energy costs across sectors.

## MUNICIPAL OPERATIONS

Since 2020, a 4% overall reduction in Municipal GHG emissions was found when using the location-based emission factors. The majority of reductions can be explained as a result of the regional electricity grid. Even though electricity use in buildings increased 3% between 2020 and 2024, the cleaner grid led to a 9% reduction in associated emissions. Similarly, the 2% reduction in electricity used for streetlights and traffic signals coupled with a cleaner grid led to a 14% reduction in associated emissions. Additionally, there was an additional 8%

# GHG EMISSIONS

decrease in natural gas use in buildings. Some sectors saw an increase in total emissions, including solid waste and the city's vehicle fleet. There was a 13% increase in solid waste landfilled and a 27% increase in gallons of gasoline used for the vehicle fleet. Despite these setbacks, overall emissions have seen a steady decline since 2021. To bring further benefit to the community, it is recommended that the city could pursue biogas and an additional hydropower allocation from the Parker-Davis Dam remarketing project.

## CODES AND POLICY

Outside of the stated goals of the 2050 Master Plan, the city has previously adopted resolutions in support of attaining net-zero energy (R-32-2017). This plan and associated resolution maintains the city's ongoing commitment to reducing municipal and community environmental impacts.

## RECOMMENDED CITY ACTIONS LEADING TO 2050 OUTCOMES

- Expand energy efficiency projects.
- Pursue Portfolio Energy Credits from additional hydropower allocations and biogas utilization from wastewater treatment operations.
- Development of additional renewable energy projects
- Establish formal benchmarking for municipal energy use
- Continue collaboration with regional partners
- Drive emission reduction efforts across the community.



# URBAN FORESTRY



As Las Vegas has been one of the fastest warming cities in the country, extreme heat is one of three current and long-term hazard vulnerabilities that must be mitigated. Among the top methods to reduce the urban heat island effect, mitigate extreme heat, and reduce overall temperatures is through the city's urban forest and other forms of green infrastructure. Trees provide shade, reduce direct sunlight, help lower the need to cool buildings, decrease the amount of heat absorbed by streets or parking lots and create a more comfortable environment for people to walk, bike or work outside.

The city directly oversees tree planting on public property and rights of way. It also establishes and regulates the type and minimum amounts of required landscaping on residential and commercial properties. Because water is also a complementary, yet critical factor for vegetative cover, the 2050 Master Plan's Urban Forestry goal is to prioritize increasing the tree canopy across all areas of the city for multiple public health and environmental benefits, with outcomes to plan 60,000 diverse, drought tolerant, water efficient, Mojave native and adaptive trees, increase tree canopy coverage to 25% by 2050, and to ensure 85% of the city's population is within a 1/3 of a mile from green infrastructure. Steps to mitigate the urban heat island effect through tree planting have already been well underway.

# URBAN FORESTRY

While planting thousands of water efficient trees adapted to Southern Nevada’s heat may be a challenge, preparation of an official inventory and urban forestry management plan can aid in strategically planting more in the future. Among the benefits of a robust urban forest that make Las Vegas a leading Tree City USA are:

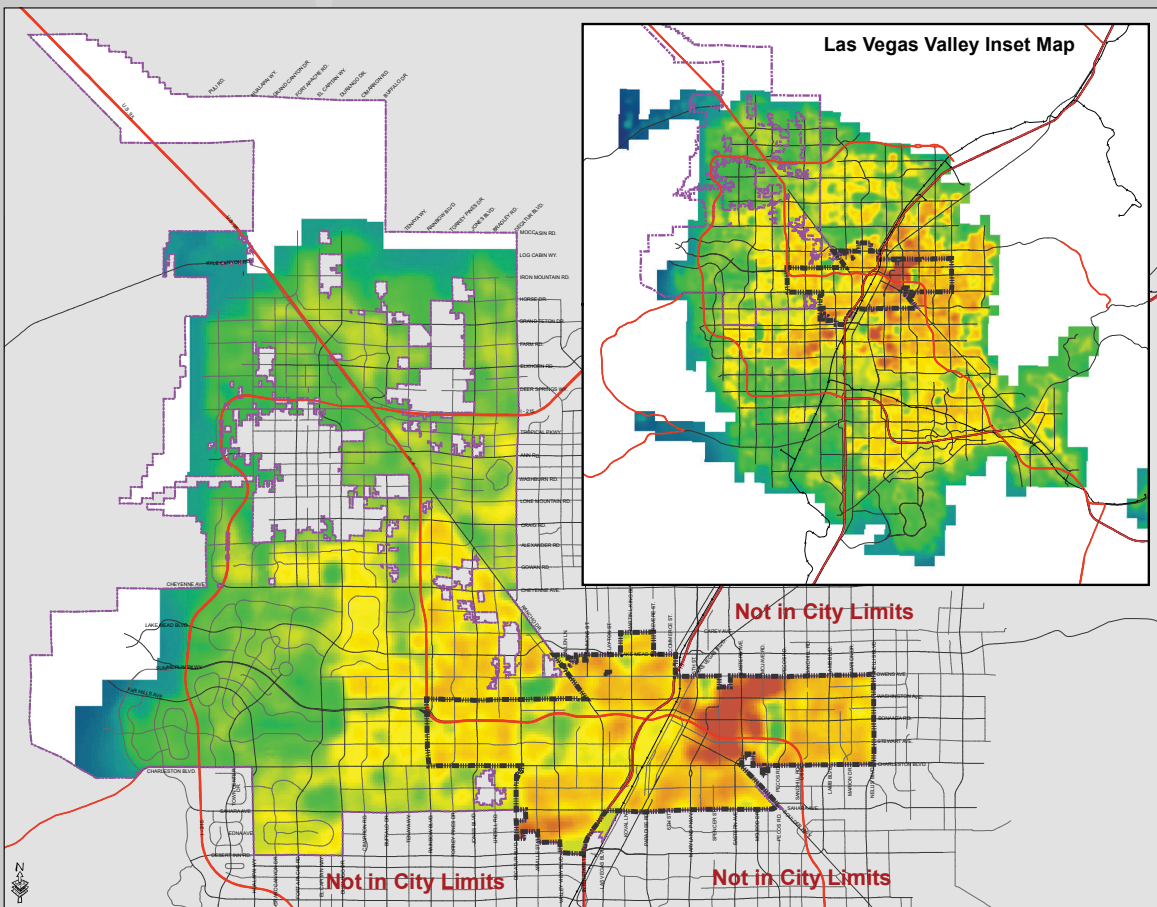
- Creating a shaded built environment that mitigates the urban heat island effect.
- Using water for trees efficiently, through the selection of drought adapted tree species that intercept rainfall and improve soil water retention.
- Improving air quality by filtering dust and absorbing harmful pollutants like ozone, nitrogen dioxide and sulfur dioxide.
- Sequestering carbon, helping to remove urban-based emissions that contribute to the global environment.
- Supporting biodiversity and the desert ecosystem.
- Improving community aesthetics and property values.

The city has also received \$5 million in Federal Community

Forestry funding to plant drought tolerant shade trees in affected urban heat island areas. Residents within city of Las Vegas neighborhoods, including those in downtown, East Las Vegas, Charleston and downtown south areas, may be eligible to receive a “Tree-bate.”

## MUNICIPAL OPERATIONS

Since 2021, the city has planted more than 3,000 new trees at parks, public facilities and along streets in addition to its existing inventory of more than 40,000, which has helped increase the city’s tree canopy coverage to 9.6%. On December 17, 2025, the city adopted an Urban Forestry Management Plan. This plan also includes an inventory of all publicly planted trees and their respective condition. The urban forestry program will maintain the city’s Tree City designation, establish public outreach and awareness efforts, develop an inventory of trees and establish a management plan.



## City of Las Vegas

Citywide Heat Effect map

### Legend

- City Limits
- Justice40 Census Tracts (City of Las Vegas zip codes: 89101, 89102, 89104, 89106, 89107, 89110)
- Higher heat value
- Lower heat value

\*note, Zip codes 89110, 89106, 89104, 89102 and 89101 extend beyond the City of Las Vegas city limits. These zip code areas have been modified to only reflect the portions within the City of Las Vegas city limits.

0 1 2 4 Miles



GIS maps are normally produced only to meet the needs of the City. Due to continuous development activity this map is for reference only. Geographic Information System Planning & Development Dept. 702.229.6301

Printed: Tuesday, May 30, 2023

# URBAN FORESTRY



## **CODES AND POLICY**

The city has previously adopted urban forestry and landscaping into Las Vegas Municipal Code Titles 13 and 19. City Council adopted an urban forestry program to assist with the city's 2050 Master Plan's Urban Forestry (R-43-2022). The city recognizes an amendment and update with specific measures on urban forestry will be required to help increase the amount of shade and vegetative surfaces.

## **RECOMMENDED CITY ACTIONS LEADING TO 2050 OUTCOMES**

- Adoption of Urban Forestry Management Plan and implement its best practices and recommendations
- Community Forestry Tree-Bate Program
- Adoption of urban forestry amendments to LVMC Titles 13 and 19
- Update other goals of 2050 Master Plan to specifically address heat, pursuant to AB 96 (2025)
- Annual tree planting, Arbor Day and Tree City USA events, planting approximately 2,000 trees per year

## **WHAT YOU CAN DO**

- Plant a new drought tolerant shade tree
- Tend or replace dying vegetation
- Prune and maintain existing trees
- Fix irrigation leaks

# REGIONAL COLLABORATION



Much of the success of the city's sustainability efforts has been ongoing collaborations, statewide partnerships and regional coordination. A wide range of agencies, utilities, non-profits and stakeholders have played a role in ensuring Las Vegas' leadership in sustainability.

- Founded in 2008, ImpactNV (then known as Green Chips) has served as an independent public-private nonprofit, including the city, Clark County, city of Henderson, city of Reno, MGM Resorts International, Caesars Entertainment, Dignity Health and Intermountain Healthcare, the Las Vegas Convention and Visitor's Authority, Republic Services and more. ImpactNV's goal is to make Nevada and its communities more environmentally, economically and socially resilient and sustainable, focusing its work in Southern Nevada and the Reno area.

- Beginning in 2021, Clark County launched the All-In Clark County initiative. Upon its formation, community leaders from other local, regional and state entities helped develop the All-In Community Plan, a regional sustainability framework. The plan advises on three foundational technical and planning efforts: the Regional Greenhouse Gas Inventory, the Climate Vulnerability Assessment and the Community Climate and Sustainability Action Plan.

## REGIONAL COLLABORATION MILESTONES

- Annual ConveneNV meetings
- ImpactNV 100,000 Tree goal and statewide tree planting efforts
- Buen Aire Para Todos air quality monitoring grant
- Regional Climate Collaborative Interlocal Agreement
- Fostering Convening and Capacity Building
- Sharing and Leveraging Resources
- Applied for \$500 million grant for a Building Improvement Hub
- Updates to the regional GHG inventory
- Developed metrics to track regional climate action progress
- Launched the All-In Community Education and Outreach Campaign

# NEXT STEPS

Since late 2024, the transition between federal administrations has resulted in a dramatic shift in funding opportunities from the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA). Federal efforts have also curtailed funding and grants for approved projects within both programs including the repeal of clean energy incentives and tax credits. City capital project funding has also been limited; in order to maintain momentum, modest funding requests, grant applications and partnerships may be made to ensure projects are completed.

## 2026-2027 CRITICAL PROJECTS

- Energy efficiency and renewable projects to reduce city operational costs
- Water conservation & turf reduction projects
- Community Forestry Tree-Bate Program
- First generation EV charging replacements
- Maintenance on existing solar PV systems
- Waste, recycling cost reduction analysis

## RECOMMENDED CITY ACTIONS LEADING TO 2050 OUTCOMES

- Implementation of the city actions in each section of this plan
- Prepare update on sustainability activities as part of the Annual Report of the Master Plan, pursuant to Ordinance 6788 / NRS 278.190
- Establish a nominal revenue mechanism for the outlined current and future sustainability projects.
- Establish a community education and outreach program to provide resources to businesses and residents.
- Adoption of amendments specific to sustainability into relevant titles of Las Vegas Municipal Code.

To maintain its leadership, it begins with city operations and staff. Actively implementing sustainability at the organizational level will inspire the community to adopt environmentally responsible practices in their daily lives. When sustainability is embedded, it sends a message to the community that the city is not only setting expectations, but living them and creating a ripple effect of positive environmental and social impact.

- Standardized Recycling Practices: Establish consistent recycling requirements across all custodial service vendors for city facilities.
- Solar Integration in New Construction: Require solar panel installations for all new city buildings.
- Developer Incentives: Offer incentives for private development projects that exceed minimum standards in.
- Innovative Thinking: Challenge the status quo. Just because something has always been done a certain way doesn't mean it should continue. As sustainability leaders, we must continuously seek innovative ways to reduce consumption and promote environmental and social equity.

## ONGOING KEY ACTIONS AND IMPLEMENTATION STRATEGIES

The 2050 Master Plan contains a wide range of additional actions and strategies within the goals for Land Use, the Environment, Transportation, Resource Conservation and Safety, some of which are summarized below:

- Community-wide energy efficiency and renewable energy programs for residential, commercial and industrial sectors
- Vehicle miles traveled (VMT) reduction and modal shifts, strategies, transit-oriented development (TOD), infill and redevelopment.
- Prepare additional extreme heat plan addressing other topics listed in AB 96 (2025).
- Institute resilient best management urban design practices to ensure high quality landscape architecture for public facilities and private development.
- Preserve and maintain open space as a balance to man-made development, including transfer of development rights and conservation easements.
- Continue to partner with agencies, organizations and businesses to enhance natural resource access and management.
- Educate the public on proper recycling, determine additional opportunities to increase waste diversion rates, and address special waste streams while ensuring waste costs are kept low.
- Require the provision of single-stream recycling service at multi-family and commercial properties
- Conduct neighborhood clean-ups, ensure public spaces and right-of-way are clean and graffiti free, and sensitive areas of the Mojave Desert are trash-free.



# **CITY COUNCIL**

Shelley Berkley, Mayor

Brian Knudsen, Mayor Pro-Tem - Ward 1

Shondra Summers-Armstrong Councilman, Ward 5

Olivia Diaz, Councilwoman, Ward 3

Nancy Brune, Councilwoman, Ward 6

Francis Allen-Palenske, Councilwoman, Ward 4

Kara Kelley, Interim Councilwoman, Ward 2

Mike Janssen, City Manager

Tim Hacker, Deputy City Manager

Rosa Cortez, Deputy City Manager

Sabra Newby, Deputy City Manager

Susan Heltsley, Chief Financial Officer

Seth T. Floyd, Executive Director, Community Development

## **COMPREHENSIVE PLANNING STAFF**

Marco N. Velotta, AICP, Chief Sustainability Officer

Rachel Lewison, Management Analyst II

