

WATER USE AND CONSERVATION



The primary source of water for the Las Vegas region is the Colorado River at Lake Mead. The City of Las Vegas 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 \(SNWA\)](#), City policies and Drought Restrictions, and [development standards](#). Since 2008, the City has reduced its water consumption from 1.47 billion gallons to 1.18 billion gallons in 2016. These savings were achieved through the replacement of more than forty acres of grass with synthetic turf at City sports fields and parks. City landscaping and facility xeriscaping utilize drought tolerant plants and public art. Over 75 million gallons of water per day have been recycled at the city's wastewater treatment plants and used at golf courses around the valley or returned to Lake Mead.

In the community, water use has declined from approximately 350 gallons per person per day (GPCD) in 1990 to less than 220 GPCD today. Southern Nevada will soon surpass the region's 2035 goal to reduce consumption through conservation to 199 GPCD. Overall Colorado River water consumption has decreased 40 billion gallons despite an increase of 500,000 residents over the last decade.

USEFUL LINKS AND MORE INFORMATION

- Since 1991, [SNWA](#) has been responsible for developing and managing regional water resources, protecting Lake Mead's [water quality](#), regional water treatment, and infrastructure and conservation programs for Las Vegas residents and businesses. Learn more about the [region's water system](#) and its [history](#), and view the [Water Resource](#) and [Conservation Plan](#), the guiding document for the region's water use.
 - Participate in SNWA's [Incentive and Rebate](#) programs to save water
 - Know about [Watering restrictions](#) and [Find your Watering Group](#)
 - [Make Turf Conversions](#)
 - Participate in [residential](#) or [commercial](#) conservation programs
- The [Las Vegas Valley Water District \(LVVWD\)](#), a member agency of SNWA, is the primary water delivery agency for most City of Las Vegas and Clark County residents and businesses.
- [Las Vegas Springs Preserve](#) is a historic location that features demonstration gardens, sustainability, and water-efficient landscaping.
- The [Colorado River Commission](#) is the State of Nevada agency responsible for acquiring and managing Nevada's share of water resources from the Colorado River.
- The U.S. Bureau of Reclamation manages water resources and facilities in the Western United States, including [Lake Mead](#), [Hoover Dam](#), and [other reservoirs and infrastructure](#) on the Colorado River. The Reclamation website includes:
 - The [history](#) on Hoover Dam, as well as tour information
 - The [Colorado River Compact](#)
- Wastewater and stormwater leave the Las Vegas Valley through the Las Vegas Wash. Water that is consumed at homes and businesses reenter the City's sanitary sewer system, which gets treated at one of the City's [wastewater treatment plants](#). [Stormwater](#) and its [quality](#) the region's [storm drain system](#), is planned, funded, and managed by the [Clark County Regional Flood Control District](#).
- [Nevada Division of Water Resources](#) and the State Engineer help conserve, protect, and manage surface and groundwater resources, [water rights](#), and monitor well use.

RENEWABLE ENERGY AND ENERGY EFFICIENCY

Through a Renewable Energy Agreement with the state's investor-owned utility NV Energy, the City of Las Vegas receives **100 percent** of the energy it needs from renewable sources:

- Most of the energy for City use is produced at Boulder Solar, a solar facility near Boulder City, NV
- Forty City buildings and facilities, parks, fire stations, and community centers have approximately 3 megawatts of net-metered solar covered parking.
- A 3 megawatt solar plant at the City's Water Pollution Control Facility provides power for wastewater treatment
- Additional power that is provided by NV Energy already satisfies Nevada's renewable portfolio standard.
- Beginning in October 2017, the City will receive 2 megawatts of hydropower from Hoover Dam.

The Office of Sustainability carefully tracks the use of energy in its operations and has worked with other City departments to invest \$70 million in renewable energy and energy efficiency upgrades:

- In 2016, City of Las Vegas facilities used 125 million kilowatt-hours of electricity and 1.3 million therms of natural gas. These totals translate into approximately 641 thousand MMBTUs of energy, resulting in 82 thousand metric tons of CO₂e. Of the energy consumed, approximately 30 percent is from wastewater treatment operations, 40 percent from buildings and facilities, and 30 percent from streetlights. The resulting costs come to approximately \$10 million per year, a reduction of from \$15 million annually in 2008.
- Green buildings provide benefits through construction that is resource efficient and environmentally responsible. As a part of its Green Building Resolution in 2006, the City utilizes the [U.S. Green Building Council's](#) green building rating system, "[Leadership in Energy and Environmental Design \(LEED\)](#)", for newly constructed or renovated buildings to at least the LEED Silver Certification level. Since then, [City Hall](#), Westside School, Mob Museum and Fire Stations 106, 107, and 108 have been built or upgraded to LEED standards (all of them to LEED Gold with the exception of the Museum). The city has completed energy efficiency, lighting, window, HVAC, and other green improvements to its Development Services Center, Detention Center and 10 other buildings.
- In 2013, the City completed an upgrade of its streetlights to Light Emitting Diode (LED) fixtures. The first phase of streetlight upgrades replaced approximately 42,000 of the City's 52,000 existing streetlights that have a longer life span, less maintenance costs and lower energy consumption.
- The City also regulates all utilities and power production facilities, establishes standards, and charges fees, pursuant to [Las Vegas Municipal Code](#), to ensure safe and efficient distribution of gas and power to customers in buildings and through city right-of-way, and to ensure compatible and reasonable locations and standards for generating electricity. It also adopts regionally uniform construction codes, including the versions of the [International Energy Conservation Code](#).



USEFUL LINKS AND MORE INFORMATION

- [NV Energy](#), formerly known as Nevada Power, is a private, investor-owned company serving more than 90 percent of the state, including 2.5 million customers and 40 million tourists annually over a 45,000 square mile service territory. The company's southern service territory serves the Las Vegas Valley and the City of Las Vegas. Visit their site to find information about:
 - [Energy efficiency savings tips for homeowners and businesses](#), as well as [home](#) and [business incentives](#).
 - NV Energy's [RenewableGenerations](#) rebate programs, including [SolarGenerations](#), [WindGenerations](#), and [HydroGenerations](#).
 - Additional information about NV Energy's [environmental](#) and [renewable energy efforts](#), including a [map](#) of projects.
 - Information on [where your power comes from](#), NV Energy's projects and programs, and NV Energy's [Emissions Reduction and Capacity Replacement Plan](#).
- [Southwest Gas](#) is Southern Nevada's sole natural gas investor-owned utility for residential, commercial, and industrial customers. The company serves the Las Vegas Valley and the City of Las Vegas. Learn how natural gas [can save you money](#) for your [home](#) or [business](#), as well as find specific ideas and [rebates](#), including installing a [solar hot water system](#).
- The [Public Utilities Commission of the State of Nevada](#) (PUCN), is the state regulatory agency that supervises and regulates utility services within the State of Nevada for electric and natural gas providers to ensure compliance with state laws, analyses of utility rates, safety checks of utility operations, and resolution of consumer complaints.

- The State of Nevada established a [Renewable Portfolio Standard \(RPS\)](#) in 1997, which requires Nevada utilities to generate, acquire, or save 25% of retail sales by 2025 from renewable energy resources or energy efficiency measures. Other sources of renewable energy are derived through customer installed facilities from the public sector, private sector, and non-profits through the [Renewable Generations](#) program. As of [2016](#), over 19,000 solar, wind, and small hydro projects totaling more than 200 megawatts are installed at homes, businesses, public buildings and schools. NV Energy has awarded more than \$250 million in rebates through this program.
- The [Nevada Governor's Office of Energy](#), provides [Energy information](#) in Nevada and offers various Federal and State funded [Programs](#), including [Building Energy Code](#) implementation, [LEED green building tax abatements](#), the [New Energy Industry Task Force](#), [Renewable Energy Tax Abatements](#), and the [Revolving Loan Fund for Renewable Energy Efficiency and Conservation](#).
- Do you have high electric or natural gas bills? Does your home feel uncomfortable? [EnergyFit Nevada](#), Nevada's [Home Performance with ENERGY STAR](#) program, is a non-profit organization, funded in part by the City of Las Vegas, that provides homeowners trusted and certified contractors to perform work, including energy assessments, energy efficiency upgrades, and renewable energy.



WASTE AND RECYCLING

The City of Las Vegas is committed to improving our environment by reducing, reusing, and recycling. In conjunction with the City's efforts, community involvement is vital to the city's success in reaching our waste diversion goals. To protect public health, conserve natural resources and enhance the quality of the environment, the City of Las Vegas regulates the collection, transportation, and transfer of waste and recycling. The city recycles a variety of materials and utilizes repurposed products for numerous city projects and 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 (yd3) from 68,000 yd3, and increased its diversion rate to 55%.



USEFUL LINKS AND MORE INFORMATION

- [Republic Services of Southern Nevada](#) is franchised by the City to provide waste management services.
 - Services available for [residents](#) and [businesses](#).
 - [Residential recycling and bulk pick up schedules](#) and detailed information on how to separate materials appropriately for pick up.
 - Disposal of [household hazardous waste](#), bulk and electronic waste at a transfer station.
- **Single Stream Recycling:** Single-stream recycling makes recycling easy: simply throw all paper, plastics, containers, bottles and cardboard into the blue recycling containers, and throw all food waste and glass into trash bins or dumpsters. Many residents and business inquire about this program and when it will be arriving in their neighborhood. A single stream recycling program has been implemented in other Southern Nevada jurisdictions and will continue to be implemented throughout the county over the next five years.
- **What You Can Do With Special Types of Waste:** It can sometimes be difficult to know what to do with large, special, or unusual waste types. Here are some solutions for some common forms of special waste:
 - **Bulk waste and large items:** If you have large items, such as appliances, mattresses, home construction debris, landscaping/yard waste, or other household items that are too large to fit in your bins, **do not** dump them in the desert. [Contact](#) Republic Services for more details and information; large items can be taken to one of their transfer stations.
 - **Household Hazardous Waste:** Some household products can be hazardous and require special disposal. These items include, but are not limited to, cleaners, pesticides, fertilizer, paint, oil, batteries, pool chemicals, and aerosols. If you have these common items and need to dispose of them, **do not** dispose of them with regular trash; visit the Republic Services [Household Hazardous Waste page](#) for details on disposal instructions (you must be a Republic Services customer; a fee may apply for disposal). Other locations may also accept [household hazardous waste](#).
 - **Electronic Waste:** Electronics, such as TV's, computers, cell phones, or DVD players often contain toxic metals, such as mercury and lead, which can be extremely harmful to human health and the natural environment. Fortunately, most electronics can be safely broken down, repurposed and recycled for components. If you have broken or old electronic devices that are ready to be disposed, **do not** throw them away with regular trash; these can be disposed of with [Republic Services](#) or at other [electronic waste](#) locations.
 - **Fats, Oils, and Greases:** Some liquid based items can be harmful to the city's sewer system. Fats, oils, and grease should be disposed of in the regular trash; **do not** dispose of them in a sink or garbage disposal unit. For more information, please visit the [Pain in the Drain website](#) for more details.
 - **Medicine and Needles:** If you have old or expired medicine, **do not** dispose of it down a drain or in the trash – they can be harmful to the water supply and difficult for the city's wastewater treatment facilities to process; they can also be found, abused, and be dangerous for those they're not intended for. Local police departments have special bins and can accept old medicine, free of charge. Visit the [Pain in the Drain website](#) for more details and [locations](#). For other medical waste, including needles, syringes, and biohazardous material, please [contact](#) Republic Services.
- The [Southern Nevada Health District](#) is charged as the [Solid Waste Management Authority](#) in Clark County and is responsible for managing [Illegal dumping complaints](#) and permitted disposal facilities. You can also find an interactive map on the [Clark County Recycles](#) page that provides locations where different recyclable material can be accepted.
- The [Nevada Recycles](#) website contains additional [tips](#), what to do with [household hazardous waste](#), how to manage [electronic waste](#), and statewide [waste and recycling data](#).

LAND USE AND MOBILITY



The City of Las Vegas develops plans for alternative transportation as a part of its [Mobility Master Plan](#), includes [development standards](#) for streets, bike lanes, and paths, and adopts and enforces other plans, codes, and land use policies to help reduce sprawl, provide a diverse mix of land uses preserve open space, ensure good air quality, and create compact, walkable communities. Many of these plans, including the [Vision 2045 Downtown Las Vegas Master Plan](#), can be found on the [Planning and Zoning page's](#) section on [Master and Special Area Plans](#) and on the [City By Design](#) page. Providing residents and visitors to the city of Las Vegas with an abundance of choices for alternative modes of transportation has been a priority of the City. The [Planning Department](#) and [Public Works Department](#) work 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, including cars, bicycles, pedestrians, and transit. In addition to RTC Transit that provides bus service to more than 66 million passengers on 40 routes to all corners of the Las Vegas Valley each year, the City has worked with RTC to improve bicycle and pedestrian networks in the City, including 450 miles of bike lanes and 100 miles of trails and paths. As a result of these efforts, the City was recognized as a Bronze-rated [Bicycle Friendly Community](#) by the [League of American Cyclists](#).

Nearly 100 percent of the city's vehicle fleet runs on alternative fuels. In addition to its hybrid Toyota Priuses and Ford Escapes, the city was Nevada's first public agency to purchase electric vehicles - Chevy Volts, a Toyota Plug-in Prius, a Nissan Leaf and a Mitsubishi Mi-EV. The city also installed charging stations at seven garages, community centers, and facilities for general public use, including City Hall and the Development Services Center.

USEFUL LINKS AND MORE INFORMATION

- The [Regional Transportation Commission of Southern Nevada \(RTC\)](#) is the region's Metropolitan Planning Organization and is responsible for public transportation, traffic management, roadway design and construction funding, and transportation planning. Visit their site to find information about:
 - [RTC Transit](#), with links to maps, schedules, fares, and paratransit information.
 - [Club Ride](#), a free rewards program which allows people to find a carpool group and get discounts for reporting their commute by walking, biking, carpooling, or catching the bus.
 - [RTC Bike Share](#), a new program offering convenient biking options in Downtown Las Vegas.
 - [FAST](#), the region's traffic management center that provides updates on travel times, travel alerts, and traffic cameras.
 - RTC's [bicycle](#) programs, including route and trail maps and RTC's [Bike and Pedestrian Plan](#).
 - [Southern Nevada Strong](#) is a collaborative regional planning effort that produced a [Regional Plan](#) that envisions long-term economic growth and improved community livelihood by better integrating reliable transportation, housing, and job opportunities throughout Southern Nevada.
- The [Nevada Department of Transportation \(NDOT\)](#) coordinates transportation planning and improvements at a state level. The [Bicycle Nevada](#) page details bike laws, routes and road profiles along with other information helpful to bicyclists anywhere in the state. NDOT also supplies information on the [Safe Routes to School](#) program.
- The [Nevada Electric Vehicle Accelerator \(NEVA\)](#) provides a listing of all publicly accessible electric vehicle charging station locations in Nevada on their [locator map](#).
- The [Outside Las Vegas Foundation \(OLVF\)](#) works with the City to connect the community to Southern Nevada's incredible parks and recreational opportunities with trails and paths. The Southern Nevada Health District's [Get Healthy Clark County](#) site has a [Neon to Nature](#) interactive tool that provides maps and information on the more than 1,000 miles of trails in Southern Nevada.
- The City's [Redevelopment Agency](#) and [Department of Economic and Urban Development](#) provide incentives to encourage new business and residential infill development in the core of the City, especially in areas around Downtown Las Vegas.
- City of Las Vegas [Parking Services Division](#) offers an [Alternative Fueled Vehicle Parking Permit](#) for qualified vehicles that allow for free parking at all City lots and garages.
- Southern Nevada meets Federal Air Quality standards. [Clark County Department of Air Quality \(DAQ\)](#) is responsible for all air quality matters, including compliance, enforcement, and monitoring.

COMMUNITY SUSTAINABILITY & OTHER RESOURCES

Sustainability has many other environmental, economic, and social dimensions that the City works on in its operations or in the community. Throughout 2015, the City participated in the [Star Communities](#) program, which recognizes and certifies sustainable communities. The STAR Rating System serves as a roadmap to help evaluate, assess and improve community economic, environmental and social performance measures and become healthier and stronger. The City's [STAR Communities Report](#) and [STAR Indicators](#) detail how the city and community are sustainable in seven goal areas:

- Built Environment - A sustainable and livable city for residents and visitors with high quality of life for generations to come must have a built environment that considers ambient noise and light, water systems, compact and complete communities, housing affordability, infill and redevelopment, public space and transportation choices.
- Climate & Energy - An efficient community, even one faced with regionally shared resources, must increase its efficiency and efficacy in order to create a cleaner and resilient environment through adaptation, greenhouse gas mitigation, greening the energy supply, industrial sector resource efficiency, resource efficient buildings and public infrastructure and waste minimization.
- Economy & Jobs - A strong, diverse, and sustainable economy with equitably shared prosperity and access to quality jobs can be obtained through business retention and development, green market development, local economy, quality jobs and living wages, targeted industry development and workforce readiness
- Education, Arts, and Community - Sustainable communities embrace education, the arts, and diversity. The city will work with its community partners to promote an educated, cohesive, and socially connected community that emphasize arts and culture, community cohesion, educational opportunity and attainment, historic preservation, and social and cultural diversity.
- Equity & Empowerment - A healthy and sustainable community is equitable and inclusive, allowing access to opportunity for all residents. The City will work to ensure civic engagement, civil and human rights, environmental justice, equitable and accessible services, and that poverty is prevented and alleviated.
- Health & Safety - A healthy and safe community requires proactive measures to prevent disease and injury by reducing risks that determine safe and healthy outcomes through active living, high quality community health systems and emergency prevention and response, good access to food, high quality indoor air, and prevention from natural and human hazards.
- Natural Systems - A sustainable environment and community protects and restores the places that provide resources to support life. To achieve and support this goal area, objectives such as green infrastructure, invasive species, natural resource protection, outdoor air quality, water in the environment and working lands should be considered.

Below are additional resources and links to organizations that detail additional community sustainability metrics in each of the STAR goal areas:

- [City of Las Vegas Sustainability Policies and Codes](#)
- In collaboration with the City and students from the UNLV Downtown Design Studio and other regional stakeholders, the [Southern Nevada Sustainable Systems Inventory](#) documenting how the City is sustainable. Learn about the interactions between energy, transportation, water, food, waste, pollution, within the Mojave Desert ecosystem and how the region has become a national leader in sustainability.
- The [City of Las Vegas Interactive Map](#) shows locations of sustainability projects, including solar, community gardens, recycling locations, RTC bus routes, and electric vehicle charging station locations.
- The City provides annual disclosures of its municipal and community-wide energy consumption and emissions to the [Carbon Disclosure Project](#), a non-profit that runs a global disclosure system for investors, companies, cities, and states.
- In partnership with the [Southern Nevada Regional Planning Coalition](#) and the University of Nevada, Las Vegas, the City partners to conduct a Regional Greenhouse Gas Emissions to catalog and quantify sources of emissions in Southern Nevada.
- [Desert Research Institute](#) is an academic unit of the Nevada System of Higher Education dedicated to environmental research. Its [Green Box](#) and [EnergySmart Education](#) programs provides teaching kits to educators for school students.
- The [Conservation District of Southern Nevada](#) is a countywide conservation district charges with promoting resource conservation, preservation, and sustainability.
- The City of Las Vegas is a [Tree City USA](#) and celebrates Arbor Day annually. The Nevada Division of Forestry provides resources on [urban forestry](#) projects and best practices for tree planting, species selection, and care.
- [Green Chips](#) is a non-profit organization dedicated to community sustainability in Southern Nevada through collaborative public and private sector partnerships.

- The City works with other cities apart of the [Western Adaptation Alliance](#) on resilience and extreme event issues it faces, including drought, flash flooding, and extreme heat.
- The [University of Nevada Cooperative Extension](#) provides educational programs and outreach to the public including a Master Gardner program, agriculture, horticulture, community development, and 4-H Club.
- The [University of Nevada Business Environmental Program](#) provides free and confidential environmental assistance to businesses in Nevada. BEP specializes in cost effective strategies to reduce hazardous materials and waste generation, conserve water and energy, minimize air emissions, and maintain compliance with environmental requirements.
- Several Federal agencies have webpages that provide information, data, and resources on environmental and sustainability topics:
 - Both the [Department of Energy \(DOE\)](#) and [Environmental Protection Agency](#) provide information on energy use, air quality, climate change, greener living, land cleanup, waste, and water, including the [ENERGY STAR](#) Program
 - The [Bureau of Land Management's Southern Nevada District Office](#) page provides links to public lands and topics around Las Vegas, including the [Southern Nevada Public Land Management Act \(SNPLMA\)](#)
 - Several national parks, recreation areas, and wildlife refuges help preserve Southern Nevada's natural environment and cultural heritage:
 - [Red Rock Canyon National Conservation Area](#)
 - [Spring Mountains National Recreation Area \(Mount Charleston\)](#)
 - [Tule Springs Fossil Beds National Monument](#)
 - [Lake Mead National Recreation Area](#)
 - [Desert National Wildlife Refuge](#)

