



Building Community **Green** to  
Make Life Better

Annual Report ◊ July 2013



# INTRODUCTION

The City of Las Vegas' core purpose is to **Build Community to Make Life Better**. The efforts to build a **Sustainable community** has been no different; the comprehensive Sustainability Initiative's improvements that the City has taken, which have increased the City's efficiency and productivity, have made City and community quality of life better by reducing long-term costs and providing economic and environmental benefits. Built around four key focus areas (People, Power, Water, Waste), the City of Las Vegas has made improvements that reflect its core values of achievement, creativity, teamwork, integrity, and ownership that make it a recognized nationwide leader.

The Las Vegas City Council took **ownership** over sustainability by adopting policies, beginning with the 2006 U.S. Mayor's Climate Protection Resolution and culminating in the 2008 Sustainable Energy Strategy that set sustainability targets for City operations, City codes, and the community. Aided in part by leveraged investments from City funds and the American Recovery and Reinvestment Act, and requiring **teamwork** from the City Manager, the Office of Sustainability, multiple departments, contractors, consultants, and the community the City has **achieved** substantial cost savings and resource conservation:

- More than **5 megawatts** of renewable energy, including **creatively** designed solar covered parking structures at 30 City facilities,
- Energy improvements to more than **1 million ft<sup>2</sup> of green buildings**,
- Introduction of recycling at all parks and City facilities,
- Over **8 acres of water saving turf conversions**, and
- Construction of more than **225 miles of bike lanes**.

Built into the Strategy are metrics to evaluate progress over time and show accountability and **integrity**. As a part of the larger picture, as a result of these improvements, the City has reduced annual energy consumption by **15%**, saved **400 million gallons** of water since 2008, increased recycling rates to more than **50%**, and saved more than **\$9.6 million** in energy costs since 2010. The cost savings are being reinvested into additional energy, water, and recycling upgrades to City facilities on the horizon.

For the City, sustainability is a way to ensure that current and future generations will enjoy the quality of life we have all worked so hard to achieve. It includes every aspect of our lives and it takes the whole community to make it work. The City has made significant progress impacting energy, water, and resource infrastructure and will be diligently working with our community partners to affect changes that will help support the continued success of Las Vegas and make it America's first net zero city. This annual report details progress made towards achieving annual focus area targets outlined in the strategic business plan, and shows how this progress **Builds Community Green to Make Life Better**.



## PEOPLE – ENGAGEMENT

People are what make communities sustainable - community engagement fosters a sense of ownership and pride. Taking the time to cultivate authentic community engagement will deliver **"triple bottom line"** results: sustainability that can impact economic prosperity, environmental quality and social equity.

### Our Progress & ACTIONS

- The City of Las Vegas and Caesars Entertainment teamed up to offer **Sustainability Leadership Training** to provide staff with training on how to engage people and lead teams in the City's Sustainability initiative.
- The City is a partner with Green Chips, a local non-profit which holds "Convene for Green," an annual event held in March to engage, educate, and empower the community with a sustainability roadmap for Southern Nevada.
- Featured three **"One Great Idea"** segments at the City's annual Values Conference where City employees shared their story of a project or program related to sustainability, including stories about artificial turf, recycling, and LED lighting.
- The City of Las Vegas hosted 120 community engagement events throughout the year, drawing 65,000 people, including:
  - Earth Day,
  - Back to School events,
  - Hazardous waste disposal,
  - Paper shredding,
  - Blood drives,
  - Toys for Tots and other holiday events



### Building Community Green

- Developed community economic, environmental, and social goals, including increasing economic stability and diversity, conserving and protecting environmental resources, and engaging the community in education, sustainability issues and programs.



### On the Horizon

- Will feature additional "One Great Idea" segments.
- Develop a Sustainability Communication Plan.

# POWER – RENEWABLES AND CONSERVATION

The City of Las Vegas is a national leader in renewable energy, energy efficiency and conservation. More than 15% of the City’s energy consumption comes from City installed renewables and grid power at **30 City facilities**, parks, fire stations, community centers, and the wastewater treatment plant.

## Our Progress & ACTIONS

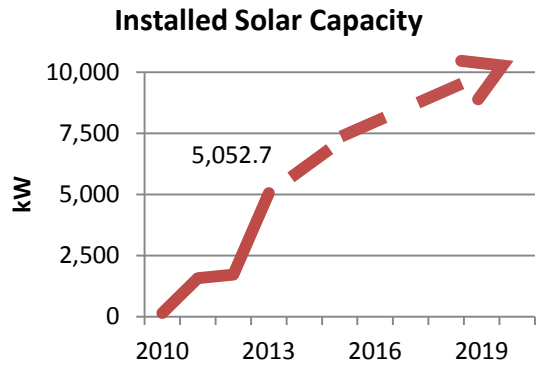
FY 13 City Goal – Reduce consumption 8% - a total of \$1 million / 45,000 MMBTU

- FY13: Reduced costs by **\$1.2 million** and energy **-8.4%**
- Upgraded **42,000** of the City’s 52,000 streetlights to LED’s, reducing consumption by **11.5 million kWh** and saving **\$695,000**.
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## Building Community Green

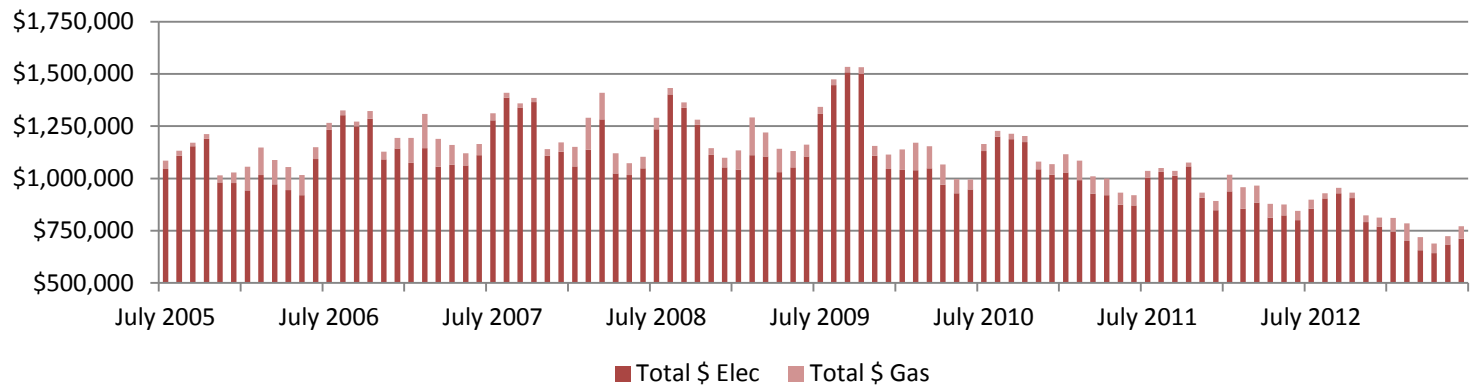
- Saved more than **\$9.6 million** in energy costs through renewable energy and conservation investments since FY10.
- Renewable Energy Production:
  - FY12: 2.3 million kWh
  - FY13: 4.7 million kWh
- City Electricity consumption
  - FY12: 142.0 million kWh
  - FY13: 123.3 million kWh



## On the Horizon

- Completion of 250 kW of solar at the City’s East Yard and West Yard, bringing total generation to more than 10 million kWh of power.

## Total Energy Costs - FY06-FY13





# POWER - GREEN BUILDING

Green buildings help improve the environment by efficiently using energy, water, and building materials, reduce waste and pollution, and improve employee health and productivity. The City of Las Vegas has **built or renovated 18 City facilities**, fire stations, and community centers to LEED, Green Globes, and other green standards.



## Our Progress & ACTIONS

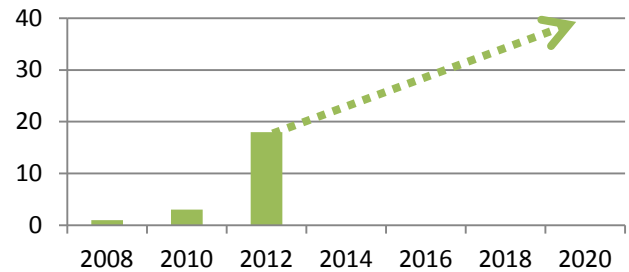
- **Completed 2 LEED facilities** in FY13: Fire Stations 106 and 107.
- Completed energy efficiency, lighting, window, HVAC, and other green improvements to the Development Services Center, Detention Center and **10 other buildings**.
- **153 homes** and **5 buildings** constructed in Green Building Program.



## Building Community Green

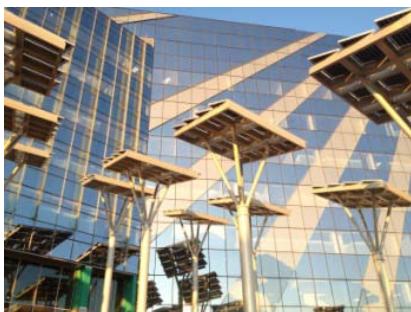
- **871,000 ft<sup>2</sup>** of City buildings have been built or upgraded to green standards, including City Hall, the Smith Center, and the National Museum of Organized Crime and Law Enforcement.
- *Community ACTIONS: Completion of **45 million ft<sup>2</sup>** of LEED certified buildings in Southern Nevada.*

City Buildings Built or Improved to Green Standards

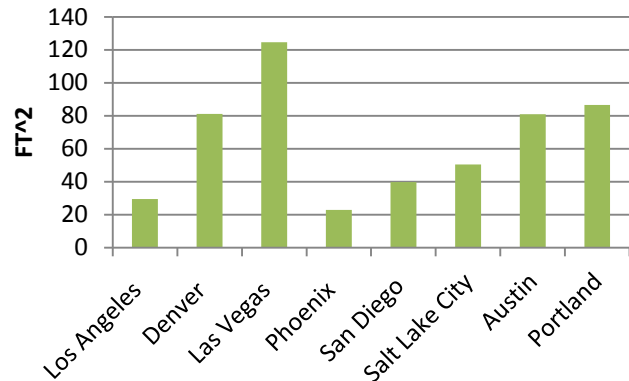


## On the Horizon

- LEED certification of Fire Station 108 and the historic Westside School.
- Completion of energy efficiency upgrades to more than **1 million ft<sup>2</sup>** of City facilities.
- Integration of intelligent building systems.



Square Feet of Green Buildings per capita



Conserving resources by reducing waste and recycling is the newest way the City is saving money. By the end of 2013, the City and its residents will be on track to **recycle half of all materials discarded** at City facilities.

## Our Progress & ACTIONS

City Goal – Reduce waste to landfill 10% - a total of 6,832 yd<sup>3</sup>.

- FY13: Improved recycling rate to 53%.
- Completed study to analyze the City's waste stream and costs.
- Worked with UNLV's Cannon Survey Center to determine resident's recycling preferences.



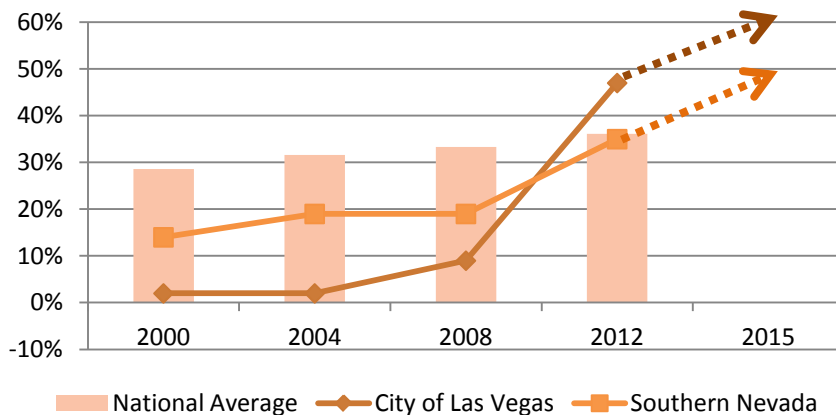
## Building Community Green

- Continued implementation of single stream recycling at City facilities and in the community while monitoring waste disposal rates and costs.
- Introduction of **recycling at all City of Las Vegas facilities**, the first municipality in the state to implement a widespread program.
- *Community ACTIONS: The countywide recycling rate has **doubled to more than 35%**, meeting the EPA's estimated national average.*

## On the Horizon

- To **reduce waste costs by 40%**, saving \$300,000 annually, the City will **reduce trash volume to 38,000 yd<sup>3</sup>** and **increase recycling to 34,000 yd<sup>3</sup>** annually.

### Recycling Rates



The conservation of our water resources in the desert southwest is necessary for our community to be sustainable. The City's water consumption has decreased 400 million gallons, equivalent to the water use of more than 1,200 households per year.

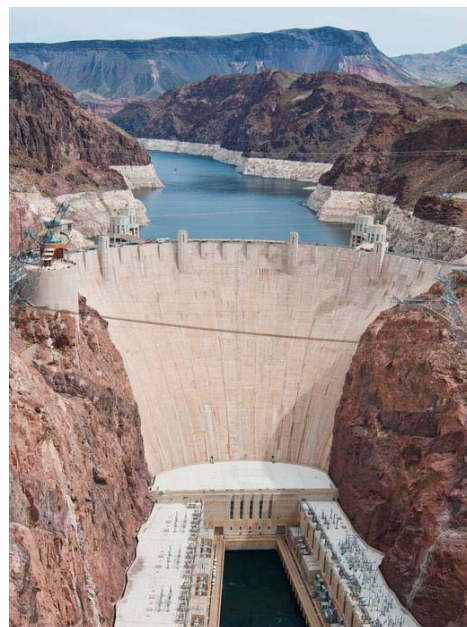
## Our Progress & ACTIONS

City Goal – Reduce consumption 3% - a total of 38 million gallons.

- Reduced water consumption **125 million gallons.**
  - FY12: 126.5 billion gallons
  - FY13: 114.1 billion gallons

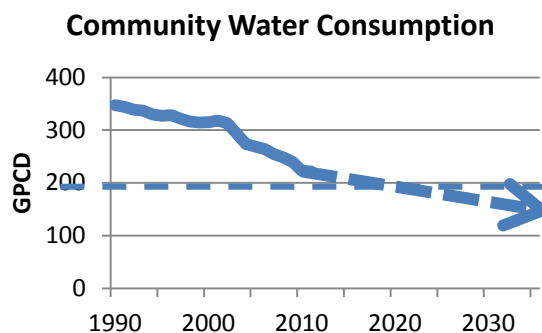
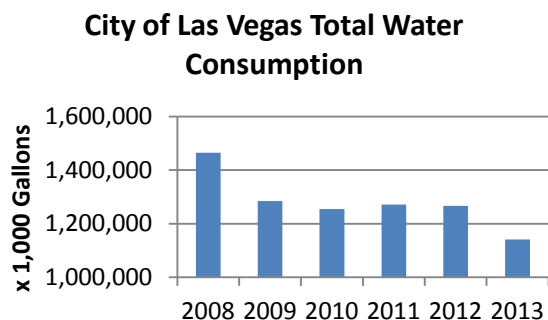
## Building Community Green

- The City has converted more than **8 acres** of grass to synthetic turf.
- Employed additional conservation efforts:
  - Recycle more than **75 million gallons** of water per day at its wastewater treatment plants, for use at golf courses or returned to Lake Mead.
  - Design landscapes using drought tolerant plants and public art.
- *Community ACTIONS: Water use has declined from approximately 350 gallons per capita per day (GPCD) in 1990 to **less than 225 GPCD today.***
- *Community ACTIONS: Colorado River water consumption **decreased 36 billion gallons** despite an increase of 400,000 residents from 2002-2011.*
- *Community ACTIONS: Southern Nevada will soon surpass the region's 2035 goal to reduce consumption through conservation to **199 GPCD.***



## On the Horizon

- Convert 3 – 5 additional sports fields to artificial turf.
- Complete a water optimization study of all water resources.
- Continue aggressive conservation practices.



## PEOPLE - MOBILITY

Alternative forms of transportation promote sustainability through improvements in air quality, enhanced mobility, and increased quality of life. The City of Las Vegas has added **226 miles of bike lanes** and **50 miles of trails** since 2006.

### Our Progress & ACTIONS

- The City participates in the Regional Transportation Commission of Southern Nevada's **Club Ride** transportation demand management program through bicycling, walking, taking public transit, or carpooling.
  - Reduced commuting trips by **125,800 miles**, saving commuters over **\$34,000** and reducing emissions by **49 tons**<sup>3</sup>.



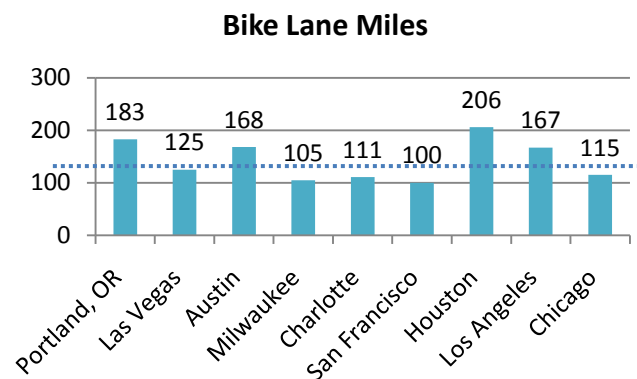
### Building Community Green

- The City has purchased **2 electric and 2 plug-in hybrid electric vehicles** and installed charging stations at 6 City facilities.
- The Planning Department has adopted **walkable community plans** in three neighborhoods to promote walking, bicycling, complete streets, and community connectivity.
- The City has installed bicycle racks at key locations around Downtown Las Vegas.
- Nearly **100%** of the City's vehicle fleet runs on alternative fuels, including G-Diesel, a cleaner burning fuel for City fire trucks.
- *Community ACTIONS: 6% of the Las Vegas Valley uses alternative modes of transportation to commute to work - higher than Phoenix, San Antonio, Dallas, and San Jose.*



### On the Horizon

- Add six miles of green bicycle lanes in Downtown Las Vegas.
- Purchase another plug-in hybrid electric vehicle.
- In 2013, the City will have a **bike share** program and is anticipated to be rated as a Bicycle Friendly Business.









### **Las Vegas City Council**

Carolyn G. Goodman, Mayor  
Stavros S. Anthony, Mayor Pro Tem – Ward 4  
Lois Tarkanian, Councilwoman – Ward 1  
Steven D. Ross, Councilman – Ward 6  
Ricki Y. Barlow, Councilman – Ward 5  
Bob Coffin, Councilman – Ward 3  
Bob Beers, Councilman – Ward 2

Elizabeth N. Fretwell – City Manager  
Orlando Sanchez – Deputy City Manager

Ted Olivas – Director, Department of Administrative Services  
Tom Perrigo – Chief Sustainability Officer

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For more information on other sustainability actions, please contact us or visit the City's Sustainability website:

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<http://www.lasvegasnevada.gov/sustaininglasvegas>