



City of Las Cruces[®]

PEOPLE HELPING PEOPLE

COUNCIL WORK SESSION SUMMARY ROUTING SLIP

Meeting Date June 13, 2016

TITLE: SUSTAINABILITY ACTION PLAN ANNUAL UPDATE.

- Are there attachments to the Council Work Session Summary? Yes No
- Will there be a Video Presentation for this item? Yes No
- Will there be a PowerPoint Presentation for this item? Yes No
- If "yes", will a copy of the PowerPoint Presentation be included on the Council Work Session Agenda? Yes No

DEPARTMENT / ORGANIZATION	SIGNATURE	PHONE NO.	DATE
Drafter/Staff Contact : Lisa LaRocque		x 2177	5-24-16
Department Director:		x 3136	5-25-16
Other:			
Assistant City Manager/CAO (if applicable)			5/25/16
Interim Assistant City Manager/COO			
City Manager			5/26/16



City of Las Cruces®

PEOPLE HELPING PEOPLE

Council Work Session Summary

Meeting Date: June 13, 2016

TITLE: SUSTAINABILITY ACTION PLAN ANNUAL UPDATE.

PURPOSE(S) OF DISCUSSION:

- Inform/Update
- Direction/Guidance
- Legislative Development/Policy

BACKGROUND / KEY ISSUES / CONTRIBUTING FACTORS:

On June 16, 2014, the City Council adopted the City of Las Cruces (City) second Sustainability Action Plan covering years 2014 to 2017. The Sustainability Office has compiled a report summarizing the City's progress related to the Sustainability Action Plan. To complement this report, the Sustainability Office has also prepared a presentation to highlight the City's accomplishments.

SUPPORT INFORMATION:

1. Attachment "A", Sustainability Action Plan 2014-2017.

(Continue on additional sheets as required)



City of Las Cruces Sustainability Action Plan 2014-2017

SUSTAINABILITY
*Nature based decisions that
inspire a vibrant economy
and community*
program
City of Las Cruces

City Council Adoption

June 16, 2014

Mayor

Ken Miyagishima

City Council

Miguel Silva, District 1

Greg Smith, District 2

Olga Pedroza, District 3

Nathan Small, District 4

Gill Sorg, District 5

Ceil Levatino, District 6

Staff Contributors

Administration

Snr. Management & Operations Analyst, Barbara DeLeon
Interim Economic Development Admin., Elizabeth Vega
Community Liaison, Jamey Rickman

Community and Cultural Services

Community and Cultural Services Director, David Dollahon
Acting Museum Systems Administrator, Rebecca Slaughter
Convention and Visitors Bureau Executive Director,
Philip J. San Filippo
Museum of Nature and Science Education Curator, Kimberly
Hanson
Seniors Program Volunteer Coordinator, Genevieve Kirk
Nutrition and Meal Svcs. Prog. Mgr., Roger Bishop

Community Development

Community Development Director, David Weir
Building & Development Svcs. Administrator, Robert Kyle
Community Development Dep. Director, Vincent Banegas
GIS Analyst, Timothy Pitts
MPO Officer, Tom Murphy
MPO Planner, Andrew Wray
Environmental Compliance Officer, Daniel Hermosillo
Downtown Senior Planner, Andy Hume
Family & Housing Svcs. Acting Senior Planner, Vera Zamora
Senior Planner, Katherine Harrison-Rogers
Senior Planner, Paul Michaud
Planner, Srijana Basnyat
Planner, Carol McCall

Financial Services

Department Director, Victoria Fredrick
Purchasing Manager, Karen Medina
Disbursements Manager, Anita Boss
Grants Manager, S. Nicole Williams

Fire Department

Fire Chief, Travis A. Brown

Information Technology (IT)

Information Technology Director, Scott Marr
Enterprise Services Manager, Johnna Macaw
Sr. Applications Analyst, Courtney Granite
IT Support Supervisor, Jeffery Manier

Parks and Recreation

Parks and Recreation Director, Mark Johnston
Horticulturist, Les Finley
Acting Parks Administrator, Rudy Trevino
Recreation Programs Manager, Phillip Catanach
Acting Parks District Manager, Valentin Franco
Management Operations Analyst, Joy Ann Lucero
Recreation Administrator, Sonya Delgado
GIS Technician, Elyn Clark

Police Department

Police Chief, Jaime Montoya
Interim Codes Enforcement Chief, James A Chavez

KLCB Coordinator, James Wood
KLCB Work-study, Myra Llerenas
KLCB Work-study, Carmen Castillo

Public Works

Public Works Director, Loretta M. Reyes
Contracts Administration Administrator, David Maestas
Project Development Administrator, Louis Grijalva
Facilities Management Administrator, D. Eric Martin
Management Analyst, Sally Bales
Assistant Operation Analyst, Gabriel Sapien
Design and Construction Services Manager, Soo Gyu Lee
Landscape Architect, Cathy Mathews
Architect, Tomas Mendez
Engineering Technician Drafter, David Viarreal
Building Systems & Maintenance Manager, Anthony Renio
Building Operations & Svcs. Supervisor, Richard Clark
Preventive Maintenance Coordinator, Darrin Podruchny
Sr. Engineering Technician, Peter Bennett
Civil Engineer Associate, Dorian Alcantar
Custodian, Vince Montez

Transportation

Transportation Director, Lisa L. Murphy
Airport Administrator and Acting Fleet Administrator,
Cheryl Rodriguez
Fleet Administrative Assistant, Virginia Barela
Fleet Warranty Clerk, James Hill
Transit Administrator, Mike Bartholomew
Transit Administrative Assistant, Margaret Hensley
Management Analyst, Mike Baker
Street and Traffic Operations Administrator, Willie Roman

Utilities

Utilities Director, Dr. Jorge Garcia
Interim Water & Wastewater Administrator,
Adrienne Widmer
Regulatory Environmental Services/ Technical Support
Interim Administrator, Carl Clark
Solid Waste Administrator, Klaus Kemmer
Water Conservation Coordinator, Leslie Kryder
Regulatory Environmental Analyst, Joshua Rosenblatt
Pollution Prevention Manager, Mark Rodriguez
JHWWTF Manager, Doug Paczynski
JHWWTF, Jose Hernandez
Meter Reading and Building Coordinator, Eric Lucero
Service Readers, Rudy Silva and Eli Duran

South Central Solid Waste Authority (SCSWA)

South Central Solid Waste Authority Director, Patrick Peck
South Central Solid Waste Authority Recycling Coordinator,
Tiffany Pegoda

RESOLUTION NO. 14-203

A RESOLUTION TO ADOPT A SUSTAINABILITY ACTION PLAN 2014 -2017.

The City Council is informed that:

WHEREAS, the City of Las Cruces embraces the principles of sustainability, including economic viability, environmental health, and social responsibility; and

WHEREAS, the City of Las Cruces 2014 Strategic Plan includes sustainability initiatives as one of its key priorities; and

WHEREAS, the Plan clearly provides a framework for staff to develop, implement and adapt actions over three years; and

WHEREAS, the progress toward the goals and objectives of the plan will be regularly evaluated.

NOW, THEREFORE, Be it resolved by the governing body of the City of Las Cruces:

(I)

THAT the City of Las Cruces adopts the Sustainability Action Plan 2014-2017, as shown in Exhibit "A" attached hereto and made a part of this Resolution.

(II)

THAT City staff is hereby authorized to do all deeds as necessary in the accomplishment of the herein above.

DONE AND APPROVED this 16th day of June, 2014.

APPROVED:



Mayor

ATTEST:

Office Memorandum - Carullo
City Clerk

(SEAL)

Moved by Sorg

Seconded by Small

APPROVED AS TO FORM:

 A. J. (Pat) Kennedy
City Attorney

VOTE:

Mayor Miyagishima:	<u> Aye </u>
Councillor Silva:	<u> Aye </u>
Councillor Smith:	<u> Aye </u>
Councillor Pedroza:	<u> Aye </u>
Councillor Small:	<u> Aye </u>
Councillor Sorg:	<u> Aye </u>
Councillor Levatino:	<u> Absent </u>

City of Las Cruces Sustainability Action Plan 2014-2017

We provide the responsible, proactive and innovative leadership necessary for the successful growth of our community, advancement of our economy, nurturing of our environment, and realization of Las Cruces' exciting future.

*Guiding Principle
City of Las Cruces Strategic Plan*

The City of Las Cruces' guiding principle captures the essential elements of a well-established sustainability framework, the **Triple Bottom Line (TBL)**. The TBL is designed to help organizations balance economic viability, environmental health, and social responsibility now and in the future. It is a departure from making decisions based solely on the financial bottom-line. It reflects a greater awareness of the impacts of our decisions on the environment, society and the economy - and how those impacts are related. The intersection of economic viability, environmental health, and social responsibility is where sustainability is achieved.

Economic viability

Investing in sustainability makes good business sense. Sustainable practices can save money over the long run, and give a boost to local economies as well. Below are national and local examples of these benefits:

- ⌘ Low-cost energy efficiency measures can reduce energy costs in the average office building by 10 to 30 percent. (U.S. Environmental Protection Agency, June 2010) We've seen that happen in Las Cruces, where the City's investment in energy retrofits for seven of its buildings has resulted in more than \$35,000 in annual energy savings, with an average savings of 10 to 40 percent per building.
- ⌘ Nationally, green buildings command a higher selling price¹ (Deloitte and Charles Lockwood, 2008) and have contributed to a burgeoning green market² despite the economic downturn. (Booz Allen Hamilton, 2008) Local businesses like Sunspot Solar Energy Systems, LLC demonstrate the viability of this new energy market. In the past four years, Sunspot has installed more than 700 photovoltaic systems, expanded its workforce from 4 to 21 employees, and contributed more than 10 percent of its profits annually to local non-profits.
- ⌘ From philanthropists to Federal agencies, everyone seems to understand the value of investing in sustainable ventures. CEO Richard Branson pledged \$3 billion from Virgin Transportation toward the development of renewable energy. Ted Turner has given more than \$1.5 billion to date to causes like water quality, sustainable energy, biodiversity, and wildlife protection.

¹ Green buildings command a higher selling price - \$61-171 more per square foot as compare with non-green certified buildings. (Deloitte and Charles Lockwood, 2008)

² The green construction market contributed \$554 billion to the GDP between 2009 and 2013. (Booz Allen Hamilton, 2008)

(Galloway, 2013) The HUD-DOT-EPA Partnership for Sustainable Communities continues to support cities that provide sound housing and transportation choices, attract economic opportunities, safeguard public health, and protect clean air and water. Dona Ana County and Las Cruces have benefitted from all these programs.

Environmental Health

Concern for the natural environment is at the core of sustainability. Healthy ecosystems provide many “services” for free that would be expensive for humans to duplicate, like providing flood control and producing clean air and water. Cities that follow a sustainable path strive to minimize harm to the environment while finding ways to take advantage of nature’s services. National and local examples illustrate the environmental benefits of sustainable practices:

- ∞ Since 2008, the U.S. has doubled electrical generation from wind, solar, and geothermal sources, eliminating greenhouse gas emissions with each renewable kilowatt produced. (US Department of Energy, January, 2013) With ample solar and wind resources, Las Cruces is well positioned to become a renewable energy exporter helping the whole region reduce its carbon footprint. (Mesilla Valley Economic Development Alliance, n.d.)
- ∞ The Southwest’s limited water resources have been taxed in recent years by drought. Climate change could reduce water supplies even more. Measures such as water reclamation, technical innovations, policy changes, and market-based solutions have the potential to make finite water supplies stretch further. (Turner, 2010) The Las Cruces Utilities has already tapped into water reclamation generating up to 600,000 gallons per day for landscape irrigation.
- ∞ Pollution prevention reduces waste created at the source. Besides reducing costs and lowering workplace exposure to hazardous materials, such practices can turn potential problems into assets. (US Environmental Protection Agency, 2013) For example, by engineering street medians with a depression or swale - as was done on Sonoma Ranch Boulevard – the City has been able to harvest storm water and use it to irrigate native landscape while minimizing potential problems related to flooding and nonpoint source pollution.

Social Responsibility

Sustainability is not just about saving money and protecting the environment. It’s also about improving the quality of life for everybody in a community. Enhancing natural and urban amenities is one approach. Another hallmark of sustainable communities is how local governments take a leadership role in promoting innovation and civic engagement. The national and local examples highlight the social benefits of sustainable practices:

- ∞ Natural spaces provide opportunities for healthy outdoor activities and contribute to social cohesion linked with reduced crime and increased public safety (Active Living Research, May, 2010) Las Cruces is blessed with an abundance of nearby public lands like the Organ Mountains

that are enjoyed by residents and visitors alike, and have the potential to contribute significantly to the local economy. (BBC Research and Consultion, 2013)

- ∞ Innovation goes hand in hand with sustainability, and can transform a community. The US Green Building Council (USGBC) raised the bar for sustainable design, construction, operation, and maintenance of green buildings with the development of the Leadership in Energy and Environmental Design (LEED) rating systems. As early as 2005, the City of Las Cruces leadership seized on this innovative model shepherding the construction of a LEED certified City Hall. With its completion in 2010, it was one of only seven LEED certified local government office buildings in the country.³

- ∞ Residents of cities with sustainable policies and programs in place are more engaged in civic life, with a greater tendency to belong to community groups, sign petitions, and participate in neighborhood associations. (Portney, 2010) The recent creation of the community liaison position is an example of an action taken by the City to encourage greater civic participation by its residents.

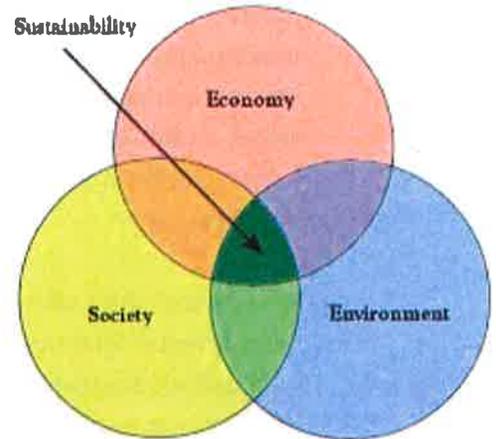
Economic viability, environmental health, and social responsibility all contribute to sustainability. The City's Sustainability Action Plan 2014-2017 captures these critical priorities in its overarching goals as presented in Table 1.

³ This figure was derived from a filtered search on the Green Building Certified Institute database.

Table 1:

Sustainability Action Plan Overarching Goals 2014-17

Economic viability



- ⌘ Ensure the City's sustainability investments yield a financial benefit.
- ⌘ Help create local markets for goods and services that promote sustainability.
- ⌘ Attract businesses and residents to Las Cruces because of its green practices.

Environmental health

- ⌘ Direct the City's' energy choices toward efficient and renewable practices reducing its carbon footprint.
- ⌘ Promote energy and water practices that anticipate and respond to long-term regional and global changes.
- ⌘ Minimize ecological impacts through City programs and policies.
 - Solid waste
 - Pollution prevention
 - Water conservation
 - Transportation options
 - Innovation, etc.

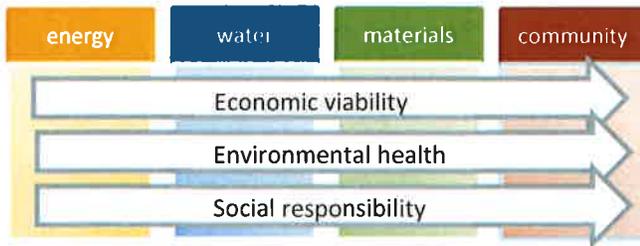
Social responsibility

- ⌘ Encourage problem solving and innovation within the City.

- ∞ Garner broad demographic representation in the City's public participation processes related to sustainability.
- ∞ Create an urban and natural environment that contributes to the residents' quality of life.

Plan Design and Implementation

Sustainability has been defined in many ways. The Triple Bottom Line describes the intersection of humans' economic, environmental, and social priorities. Other views of sustainability encourage the use of nature's efficient services. The Sustainability Office combines these views and asserts that by embracing nature's services the City will inspire a vibrant economy and community now and in the future.



The Triple Bottom Line serves as the overarching goals of this plan. The objectives of the plan are organized into four natural themes: Energy, Water, Materials and Community. Because of the interdependent nature of the TBL, the representative goals apply to all the objectives in the plan.

The City Council's adoption of the Sustainable Action Plan 2014-2017 confirms the City's directions in advancing sustainable principles and practices. It also provides the framework for staff actions in meeting the objectives and contributing to the goals described in this plan. The actions listed in this document provide examples of *possible* actions, but may not necessarily reflect the actions selected by the various departments. Staff has the flexibility to change or adapt actions to best meet the objectives. In all cases, staff will work in coordination with the Sustainability Office.

energy

BASELINE

E1: The City's estimated consumption of electricity in 2013 was 45 million kWh of electricity at a cost of \$4.7 million. In 2013, the City consumed 48,686 therms of gas at all City properties. Fleet consumed 288,931 gallons of unleaded gasoline, 357,515 gallons of diesel and 134,412 gallons of biodiesel in 2013.

E2: The 2013 GHG emissions in electricity is 31,331 tons of CO₂e. The 2013 baseline for natural gas is 168 tons CO₂e.

E3: The final report will compare baseline data with proposed alternative energy sources.

E1 three-year objective:

Monitor energy consumption in City facilities, fleet, and other operations to identify variances monthly for departmental review.

Examples of possible activities: Monthly reports; establish protocol for spikes and anomalies; institute preventive maintenance software for maintenance and fleet.

Collaborating Departments and JPA Entities: Information Technology, Parks and Recreation, Public Works, Transportation, South Central Solid Waste Authority (SCSWA).

E2 three-year objective:

Decrease energy consumption and greenhouse gas emissions in City buildings and streets by 7 percent of the end of year 2013 baseline rate.

Examples of possible activities: LEED construction; retrofitting; renewable energy, audits; policy for energy efficient purchasing and maintenance; monitor new technologies; policies for employee energy behavior; grants for renewable energy systems.

Collaborating Departments: Public Works, Transportation.

E3 three-year objective:

Review and prepare feasibility of alternate energy sources for utility facilities.

Examples of possible activities: Review the design of projects that include new pumps and motors and research feasibility to utilize other forms of energy such as solar and/or variable frequency pumps. Use a Preliminary Engineering Report for the utilization of alternate power source to supplement power for the East Mesa Water Reclamation Facility and request appropriate funding for project.

Collaborating Departments: Utilities.

BASELINE

E4: Currently 164,383.56 BTUs of bio-gas (methane) is burned off every year at JHWWTP instead of being utilized as a fuel source.

E5: The 2013 estimate baseline for fleet is 7,491 tons CO₂e.

E6: There were 759,643 fixed-route transit trips in 2013.

E7: There is no baseline for this objective. At present we are tracking growth.

E4 three-year objective:

Utilize utility waste streams to generate onsite energy.

Examples of possible activities: Utilize methane produced at Jacob Hands Wastewater Treatment Plant (JHWWTP).

Collaborating Departments: Utilities.

E5 three-year objective:

Reduce greenhouse gas emissions in city fleet to 5 percent below 2013 end of year baseline rate.

Examples of possible activities: Green fleet policy; upgrade software data monitoring; promotion of biodiesel; enforce anti-idling policy; hybrid and EVs; intelligent street light system.

Collaborating Departments and JPA Entities: Parks and Recreation, Public Works, Transportation, Utilities, SCSWA.

E6 three-year objective:

Increase use of alternative transportation options by 7 percent from end of the year 2013 baseline rates.

Examples of possible activities: Reevaluate routes; increase incentives for use; partner with businesses; bike share; ride share; park and ride; transit apps; marketing.

Collaborating Departments and JPA Entities: MPO, PIO, Transportation.

E7 three-year objective:

Promote alternative energy manufacturing and construction as a core business sector in the region.

Examples of possible activities: Provide dedicated reporting in business summary using the North American Industry Classification System (NAICS 237130) alternative energy code for the CLC Retail Marketplace profile; Economic Development website promotion; energy installations; solar gardens.

Collaborating Departments: Administration, Community Development.

BASELINE

E8: Baseline will be available at the end of 2014. Comparative analysis of energy bills for similar months before and after retrofit.

E8 three-year objective:

Enable participants in the HUD Home Rehabilitation Project to reduce per capita energy use by 10 percent of end of year 2014 baseline rate.

Examples of possible activities: Energy audits possibly with Weed and Seed program; Home Energy Rating Systems (HERS) energy efficiency scale; revolving loan fund.

Collaborating Departments: Community Development.

water

BASELINE

W1: The final baseline for each City property will be available March 2014. Planet Footprint, an environmental data service, will aggregate and organize utility water bills for analysis.

W2: The City used 48,686,000 gallons of water in 2013.

W3: The non-revenue water was 750.2 million gallons (2302.289 acre feet) which is 11.8% of the total water supplied. The non-revenue water per connection per day is 54.3 gallons.

W4: This baseline will be established in 2014. The City will create a baseline calculation via EPA Storm Water Calculator to determine the City's capacity to harvest rainwater.

W1 three-year objective:

Monitor water consumption in City facilities and other operations to identify variances monthly for departmental review.

Examples of possible activities: Monthly reports, establish protocol for spikes and anomalies.

Collaborating Departments: Information Technology, Parks and Recreation, Public Works.

W2 three-year objective:

Reduce water consumption in City buildings, parks, and operations by 3 percent of the end of 2013 baseline rate.

Examples of possible activities: Low-flow; xeriscaping; education; and audits.

Collaborating Departments: Parks and Recreation, Public Works, Utilities.

W3 three-year objective:

Continue reduction of non-revenue water from end of 2013 baseline level.

Examples of possible activities: Repairing leaks; hydrant flushing.

Collaborating Departments: Fire, Utilities.

W4 three-year objective:

Increase green infrastructure capabilities in four City-owned properties.

Examples of possible activities: Assessment of the City's capacity to harvest rainwater using green infrastructure techniques such as rooftop water harvesting, swales, or porous pavement.

Collaborating Departments: Parks and Recreation, Public Works.

BASELINE

W5: Requirements are delineated as part of the EPA National Pollutant Discharge Elimination System permit.

W5 three-year objective:

Put into place mechanisms to fulfill new National Pollutant Discharge Elimination System (NPDES) Permit requirements.

Examples of possible activities: Approved monitoring program, data management, map of stormwater infrastructure.

Collaborating Departments: Community Development, Police, Public Works, Utilities.

BASELINE

M1: Baseline will be available at the end of 2014.

Sustainability officer will work with Finance, administrative assistants and project managers to develop a consistent way of tracking purchases.

M2: The City used 722 cases or 18 tons of paper in 2013.

M3: City facilities recycled 72 tons of material in 2013. Commercial businesses recycled 2037 tons and delivered 1213 tons of yardwaste for composting. Residents recycled 5747 tons and delivered 1033 tons of yardwaste for composting. Combined these entities added 153,276 tons of municipal solid waste to the landfill.

materials

M1 three-year objective:

Increase the use of local and green products through City purchases and contracts by 10 percent from end of year 2014 baseline.

Examples of possible activities: develop a decision tool including guidelines and criteria for selecting green and nonhazardous products and incorporate these guidelines in the procurement code for general p card purchases, RFPs and contracts; create additional funding to support green purchases; highlight green construction materials.

Collaborating Departments: Administration, Financial Services, Public Works.

M2 three-year objective:

Reduce paper consumption by 20 percent by department from 2013 end of year baseline.

Examples of possible activities: Two-sided copies; e-bills; shared online documents for signature; SOP for scanning and saving document records.

Collaborating Departments: Financial Services, Information Technologies, Public Works.

M3 three-year objective:

Increase recycling by 10 percent in City, commercial and residential activities.

Examples of possible activities: Reduce solid waste; increase recycling waste; increase composting; increase reuse habits; and repurposing of glass and tire and other materials.

Collaborating Departments and JPA Entities: Administration, Public Works, Utilities, SCSWA.

BASELINE

M4: Water pollution baseline will be established in 2014. Public Works Project Development is required to collect information on the levels of the pollutants of concern as part of the EPA National Pollutant Discharge Elimination System.
Land pollution baseline: 24.9 tons of litter collected in 2013.
Air pollution baseline will be established in 2014.
Environmental Compliance Officer is developing a tool to determine the impact of published control efficiencies on disturbed acreage.

M4 three-year objective:

Minimize water, land and air pollution resulting from construction and maintenance in City, commercial, residential activities.

Examples of possible activities: Monitoring; wetlands; green infrastructure; education; litter cleanups, enforcement; violation reduction; policy changes; inspections; new technologies.

Collaborating Departments: Community Development, Police, Parks and Recreation, Public Works, Transportation.

BASELINE

C1: A baseline will be created one year from the establishment of a ranking system.

C2: A baseline will be created from a resident survey administered in 2014.

C3: A baseline will be created from a resident survey administered in 2014.

community

C1 three-year objective:

Collaborate with development community to promote best practices when implementing new design standards.

Examples of possible activities: Develop a ranking system the development communities' level of achievement in following the new design standards; acknowledging local best practices.

Collaborating Departments: Administration; Community Development; PIO; Police; Public Works.

C2 three-year objective:

Increase awareness of, and encourage resident participation in, city-wide sustainability programs and services.

Examples of possible activities: Provide and communicate information through appropriate means to include programs, workshops, special events, charrettes and other community engagement opportunities.

Collaborating Departments and JPA Entities: Community and Cultural Services, Community Development, Parks and Recreation, PIO, Utilities, SCSWA.

C3 three-year objective:

Provide amenities and activities to increase public perception of the downtown as focal point for community activity by 20 percent from an end of the year 2014 baseline.

Examples of possible activities: Complete two major public projects in the downtown area such as a plaza or collector pathways (callecitas) to Main Street; special downtown events.

Collaborating Departments: Community and Cultural Services, Community Development, Public Works.

BASELINE

C4: The multiuse loop is approximately 75 % complete. Less than 5 % of the incomplete area is within the City limits; the balance is within the Town of Mesilla.

C5: A baseline will be available in 2014. The entire City has 4.5% shade canopy.

C6: There is no baseline for this objective. This is a new effort based on the Las Cruces Arroyo Preservation Plan. No trails have been developed as of 2013.

C4 three-year objective:

Complete multiuse loop within City limits to provide continuity and safety for bicyclist and pedestrians.

Examples of possible activities: The bike/pedestrian loop has gaps between the outfall channel and La Llorona river trail, University and Triviz, sections of the Union pathway, and the Alameda Trail spur from Roadrunner to the Outfall Channel. There is potential to develop the irrigation laterals (Armijo and Las Cruces) phasing in signage, benches, and compacted crusher fines.

Collaborating Departments and JPA Entities: MPO, Public Works.

C5 three-year objective:

Establish an average of 10 percent shade canopy coverage and structures in City parks and walkable main streets.

Examples of possible activities: GIS mapping of existing canopy; evaluation of most viable shade trees; prioritize planting areas; explore structural shade options.

Collaborating Departments: Police, Parks and Recreation, Public Works.

C6 three-year objective:

Construct 3 primitive trail segments that additionally support wildlife habitat and serve as corridors (with necessary water, food, and shelters) on City property.

Examples of possible activities: WRDA Section 1135 Las Cruces Dam Environmental Restoration Plan suggested trails: 1) Lohman entrance to cottonwood grove; 2) cottonwood grove past burrowing owls area to wetland pond; 3) wetland pond and meadow to Sage Crest Park.

Collaborating Departments: Parks and Recreation, Public Works.

BASELINE

C7: There is no baseline for this objective.

C8: The City currently has 3 community gardens at Jardin de Mesquite, Munson Senior Center, and Gomez Community Center totaling 16,320 square feet.

C9: Baseline will be available at the end of 2014. This will be developed with the Community and Cultural Services staff.

C7 three-year objective:

Evaluate mechanisms to enhance ecological restoration projects.

Examples of possible activities: Voluntary contributions on water bills, long-term leasing of water rights, support of local nongovernmental organization and agencies.

Collaborating Departments: Community Development, Parks and Recreation, Utilities.

C8 three-year objective:

Double the City land used for local food production from end of year 2013 baseline.

Examples of possible activities: Create learning gardens; grow a row-food giving programs; new neighborhood or community center gardens within the City; promotion of urban farms; workshops.

Collaborating Departments: Community and Cultural Services, Parks and Recreation, Public Works, Utilities.

C9 three-year objective:

Increase the amount of local food purchased by the City by 5 percent from end of year 2014 baseline.

Examples of possible activities: Purchases for senior programs, Sage Café, Las Cruces Convention Center.

Collaborating Departments: Community and Cultural Services, Financial Services.

Works Cited

- Active Living Research. (May, 2010). *The Economic Benefits of Open Space, Recreation Facilities and Walkable Community*. San Diego State University.
- BBC Research and Consultion. (2013). Organ Mountain Desert Peaks National Monument Economic Study.
- Booz Allen Hamilton. (2008). *US Green Building Council Green Jobs Study*. US Green Building Council.
- Deloitte and Charles Lockwood. (2008). *The Dollars and Sense of Green Retrofits*.
- Galloway, R. (2013, 12 12). Building a Sustainable Legacy Through Green Philanthropy. *Forbes Brand Voice*. Retrieved from <http://www.forbes.com/sites/northwesternmutual/2013/12/12/building-a-sustainable-legacy-through-green-philanthropy/>
- Harnik, P. a. (2009). *Measuring the Economic Value of a City Park System*. The Trust for Public Land.
- Mesilla Valley Economic Development Alliance. (n.d.). Renewable Energy. Retrieved from <http://www.mveda.com/regional-advantages/target-industries/renewable-energy/>
- National Association of Realtors. (2011). *The 2011 Community Preference Survey*.
- Portney, K. E. (2010). Participation and the Pursuit of Sustainability in US Cities. *Urban Affairs Review*, 1-21. Retrieved from <http://ase.tufts.edu/polsci/faculty/portney/portneyBerry2010.pdf>
- Rlo Grande Consortium. (2013). *Dona Ana Snapshot Report*.
- Turner, G. M. (2010). Water, climate change, and sustainability in the southwest. *Proceedings of the National Academy of Sciences of the United States of America* , Vol. 107, No. 50, (pp. 21256-21262). National Academy of Sciences. Retrieved from <http://www.jstor.org/stable/25756871>
- U.S. Environmental Protection Agency. (June 2010). *Sustainable Design and Green Building Toolkit for*.
- US Department of Energy. (January, 2013). A Record Year for the American Wind Industry. <http://energy.gov>.
- US Environmental Protection Agency. (2013). Pollution Prevention and Toxics - Economic Analysis. Retrieved from <http://www.epa.gov/oppt/economics/>

Abbreviations

DOT – U.S. Department of Transportation

EPA – U.S. Environmental Protection Agency

GIS – Geographic Information Systems

HUD – U.S. Housing and Urban Development

IT - Information Technology

JHWWTF – Jacob Hands Wastewater Treatment Facility

JPA – Joint Power Agreement Entities, (.e.g., MPO, SCSWA)

KLCB – Keep Las Cruces Beautiful

LEED – Leadership in Energy and Environmental Design rating system

MPO – Metropolitan Planning Organization

NPDES – National Pollutant Discharge Elimination System

SCSWA – South Central Solid Waste Authority

TBL – Triple Bottom Line

WRDA – Water Resources Development Act

City Departments and JPA Entities Responsible for Sustainability Objectives		Sustainability Office	Administration	Community and Cultural Services	Community Development	Financial Services	Human Resources	IT	Legal	Police/Fire	PIO	Parks and Recreation	Public Works	Transportation	Utilities	JPA Entities	
																MPO	SCSWA
E1	Monitor energy consumption in City facilities, fleet, and other operations to identify variances monthly for departmental review.	○						●				●	●	●			●
E2	Decrease energy consumption and greenhouse gas emissions in City buildings and streets by seven percent of the end of year 2013 baseline rate.	○											●	●			
E3	Review and prepare feasibility of alternate energy sources for utility facilities.	○													●		
E4	Utilize utility waste streams to generate onsite energy.	○													●		
E5	Reduce greenhouse gas emissions in city fleet to 5 percent below 2013 end of year baseline rate.	○										●	●	●	●		●
E6	Increase use of alternative transportation options by 7percent from end of the year 2013 baseline rates.	○									●			●		●	
E7	Promote alternative energy manufacturing and construction as a core business sector in the region.	○	●		●												
E8	Enable participants in the HUD Home Rehabilitation Project to reduce per capita energy use by 10 percent of end of year 2014 baseline rate.	○			●												
W1	Monitor water consumption in City facilities and other operations to identify variances monthly for departmental review.	○						●				●	●				
W2	Reduce water consumption in City buildings, parks, and operations by three per cent of the end of 2013 baseline rate.	○										●	●		●		
W3	Continue reduction of non-revenue water from end of 2013 baseline level.	○								●					●		
W4	Increase green infrastructure capabilities in four City-owned properties.	○										●	●				
W5	Put into place mechanisms to fulfill new National Pollutant Discharge Elimination System (NPDES) Permit requirements.	○			●					●			●		●		

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																MPO	SCSWA
M1	Increase the use of local and green products through City purchases and contracts by ten per cent from end of year 2014 baseline.	○	●			●							●				
M2	Reduce paper consumption by 20 percent by department from 2013 end of year baseline.	○				●		●					●				
M3	Increase recycling by 10 percent in City, commercial and residential activities.	○	●										●		●		●
M4	Minimize the water, land and air pollution resulting from construction and maintenance in City, commercial, residential activities.	○			●					●		●	●	●			
C1	Collaborate with development community to promote best practices when implementing new design standards.	○	●		●					●	●		●				
C2	Increase awareness of, and encourage resident participation in, city-wide sustainability programs and services.	○		●	●						●	●			●		●
C3	Provide amenities and activities to increase public perception of the downtown as focal point for community activity by 20 percent from an end of the year 2014 baseline.	○		●	●								●				
C4	Complete multiuse loop within City limits to provide continuity and safety for bicyclist and pedestrians.	○											●			●	
C5	Establish an average of ten per cent shade canopy coverage and structures in City parks and walkable main streets.	○								●		●	●				
C6	Construct 3 primitive trail segments that additionally support wildlife habitat and serve as corridors (with necessary water, food, and shelters) on City property.	○										●	●				
C7	Evaluate mechanisms to enhance ecological restoration projects.	○			●							●			●		
C8	Double the City land used for local food production from end of year 2013 baseline.	○		●								●	●		●		
C9	Increase the amount of local food purchased by the City by 5 percent from end of year 2014 baseline.	○		●		●											