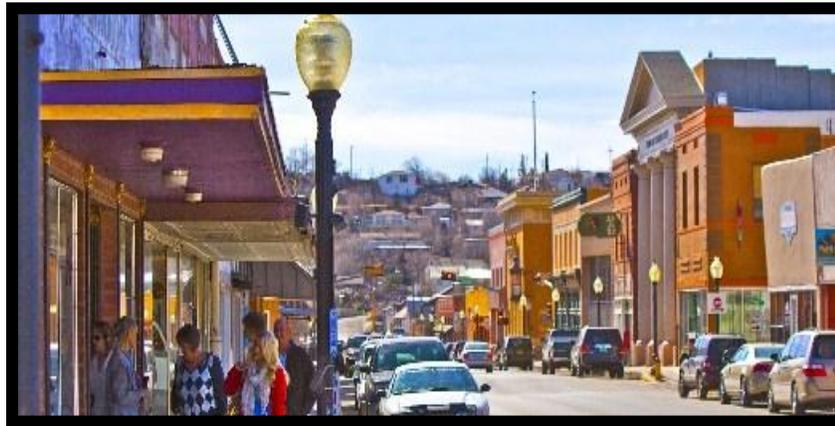


October, 2013



# Town of Silver City



# Sustainability Plan 2030

**- Protect, Conserve, Prepare -**  
*An approach to community resiliency*



## Public-Private Partnerships

The Town of Silver City, Grant County, SW Council of Governments, WNMU, business community, non-profits, community organizations and residents



Office of Sustainability

# Silver City Sustainability Task Force

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# Acknowledgements

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**Linda Thompson**

Hidalgo Medical System, Silver City  
Former Co-Chair, Sustainability TF  
Former Facilitator, Mayor's Climate  
Committee

-for her dedication and commitment  
to the greater Silver City area

**Mayor's Climate Committee**

-who made all things possible

**Peter Russell**

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**Aric Ray**

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**Gary Benavidez**

Former Fire Management Officer,  
Grant County (GC)  
-for his long service to Grant County,  
before and after the 2011 Quail Ridge  
Fire; and for the 2009 GC Community  
Wildfire Protection Plan

**Debaura James, Kurt Albershardt, Jim Kerstetter**  
SC Sustainability Task Force Volunteers

**Ed Reynolds**

Chief, Silver City Police Dept.

**Dan Ferguson**

Director, CLIMAS Program  
Institute of the Environment  
University of Arizona, Tucson  
-for his referral to Stephanie Smith and Dave DuBois

**Stephanie Smith**

Special Assistant to the Town Manager;  
and Former Sustainability Specialist  
City of Flagstaff  
-for sharing her time, sustainability plans and  
encouragement

**Leslie Ethen**

Director, Office of Conservation  
and Sustainable Development  
Tucson, Arizona  
-for inviting Silver City's Office of Sustainability to  
the *Power to Prepare Tucson Summit*

**Gregg Garfin, PhD**

University of Arizona  
-for good advice

**David DuBois, PhD**

NM State Climatologist  
Director, Climate Center, NMSU  
-for two great community presentations on  
climate and air quality

**Tom Swetnam, PhD**

Director, Tree Ring Research Laboratory  
University of Arizona, Tucson  
-for his presentation at the Sep2013 Gila River  
Festival and for insight into the future of the Gila  
National Forest

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*Someday, our children, and our children’s children, will look at us in the eye and they’ll ask us, did we do all that we could when we had the chance to deal with this problem and leave them a cleaner, safer, more stable world?* (President Barack Obama, June 25, 2013)

## A. Executive Summary

This *Sustainability Plan 2030*, the result of a 7-month effort by a Task Force organized by the Office of Sustainability (OS), sets forth recommendations for policy and priority actions to reduce the Town’s vulnerability to impacts from increasing heat, drought and other climate variability, such as larger and more intense wildfires and increased stress on Emergency Services personnel and equipment.

This Plan is both a municipal and a community plan. Recommendations include actions for the municipality and others that require public/private partnerships to implement.

The Task Force first identified planning areas and functions of the Town’s municipal operations and of the community that could be impacted by changes in climate, grouped the elements into categories, systems and key planning areas (Table 1), and performed Vulnerability and Risk assessments on each area.

**Table 1 : Categories, Systems and Key Planning Areas**

Category	System	Key Planning Area
COMMUNITY	Emergency Services	Police and Fire Services, Disaster Response, Emergency Medical Services
	Food	Local Agriculture, Food Delivery/Distribution, People
	Public Health	Public Health Personnel and Support People and Public Services
	Transportation	Transportation Infrastructure, Petroleum Costs, Public Transit, Alternative Modes of Transportation
	Waste	Solid Waste, Waste Water
ENVIRONMENT	Energy	Energy Assurance and Delivery, Energy Demand and Cost
	Land and Urban Forest Health	Land Management, Urban Forest Management, Wildlife and Vegetation
	Stormwater	Stormwater Infrastructure, Floodplain Management
	Water	Water Quantity, Water Quality, Water Delivery Infrastructure

Ultimately, this led to proposing action recommendations for the following:

1. Community Outreach, Education and Support;
2. Systems and Planning Areas;
3. Climate/Severe Weather; and
4. Conservation of Resources

Scope. Although the Plan does not directly address housing or the local economy, both are important components of Town Resiliency<sup>1</sup>.

**VULNERABILITY AND RISK ASSESSMENT.** Table 2 shows those planning areas deemed most at Risk, providing a platform for priority actions. See Section D for how the assessment was performed and the complete ranking matrix.

Table 2. Combined Vulnerability and Risk Assessment -Planning Areas for Action Priority (Highlighted in Yellow)-			
VULNER- ABILITY (Sensitivity & adaptive capacity)	RISK (Likelihood of occurrence by 2030)		
	HIGH	MEDIUM-HIGH	MEDIUM
HIGH	Emergency Services: -Police & Fire -Disaster Response		Emergency Services: EMS
MEDIUM-HIGH		Public Health: People and Public Services	Stormwater: Infrastructure
MEDIUM		Public Health: Personnel and Support	Stormwater: Floodplain management Land/Urban Forest Health: -Land management -Urban forest management Transportation: Infrastructure

Recommendations resulting from the assessments are divided into two groups – policy recommendations and action recommendations, which are summarized here. See Section F for more details.

<sup>1</sup> Housing may need to be more durable, and more energy and water efficient, given the projected future changes. The priority should be on retrofitting the existing housing stock, as no significant increase in new housing production is projected in the near future. Greater support for a more self-reliant local economy (buying and investing locally to keep money in the community) would also seem to be a step in the right direction.

**KEY POLICY RECOMMENDATIONS:** The following policy recommendations are based on the Task Force consensus that successful preparation for the coming changes is dependent on a well-informed and motivated public.

1. Provide outreach, education and support, for the municipality and the community on a unified (public/private) and ongoing basis.
2. Build, sustain and leverage local and regional partnerships.
3. Identify vulnerable populations.
4. Incorporate flexibility of design into infrastructure development.
5. Allocate municipal resources necessary to adapt the municipality's physical design and operations, and to participate at varying levels in all the public/private partnerships. Fiscal resources saved through conservation could be redirected toward these efforts.

**PRIORITY ACTION RECOMMENDATIONS:**

**Community Outreach, Education and Support**

1. Develop a well-informed community to assist it in becoming more comfortable with the Adapted Lifestyle needed to sustain our community.

**Systems and Planning Areas (listed in order of ranking)**

Community

2. Emergency Services - Police and Fire: Save lives through enhanced capacity of the Town's firefighting and police forces and infrastructure to accomplish their mission in severe weather with quick response and sufficient resources.
3. Emergency Services - Disasters (Response): Implement and provide resources for all emergency services goals stated in the Emergency Response Strategy of the Town's Emergency Operations Plan and build in capacity to address increased wildfire, dust storms, and heat by insuring personnel (Town and community volunteers), equipment and communications systems are sufficient to achieve minimal loss of life and property.
4. Public Health - People and Public Services: Strengthen public/private partnerships to mitigate poor wellness and health status outcomes due to changing weather and growing income disparities in the Town/Grant County.
5. Public Health Personnel and Support: Strengthen the Grant County public health infrastructure to address increased health and wellness Vulnerabilities due to changing weather and to maintain a healthy and safe population.
6. Emergency Services - EMS: Increase reliability of EMS ambulances.

7. Transportation - Infrastructure: Maintain and improve the transportation infrastructure in Silver City to improve public safety.

#### Environment

8. Stormwater - Infrastructure: Manage stormwater by maintaining, repairing and upgrading infrastructure to meet a variety of objectives - to mitigate soil erosion, downstream flooding, stream bank and channel erosion, water quality degradation and infrastructure damage, and to provide landscape irrigation and improved soil moisture.
9. Stormwater - Floodplain Management: Preserve and manage the natural and beneficial function of the floodplain, where possible, to reduce the threat to health and safety caused by flooding, decrease channel erosion and prevent damage to infrastructure and properties from flooding during large storm events, and to infiltrate small events into the soil.
10. Land and Urban Forest Health - Land Management: Protect and Conserve land and soil resources to decrease wildfire events, reduce soil erosion, and increase soil moisture.
11. Land and Urban Forest Health - Urban Forest Management: Conserve and Protect urban forest resources, including trees on public and private lands, to maximize the multi-value benefits, and to decrease threat of catastrophic wildfire.

#### **Climate/Severe Weather**

12. Drought (Fire, Wind and Dust): Prepare for an extended, hot drought.
13. Disasters (Mitigation): Update the Town-adopted Grant County Local Hazard Mitigation Plan, apply for funding, and implement approved projects.

#### **Conservation of Resources**

14. Fiscal: Reduce demand for resources and services.
15. Water (Quantity, Quality and Delivery Infrastructure): Protect, manage and Conserve water resources to ensure the long-term future supply and delivery.
16. Energy: Increase Energy Security for critical Town functions, and reduce the Town's demand and cost for energy.
17. Waste: Reduce waste by increased recycling and composting to assist Silver City to become more Resilient and avoid future costs associated with waste disposal.

## B. Introduction

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Acting on the initiatives put forth by local citizens and Mayor James Marshall, the Town Council of Silver City passed Resolution 2007-31 on September 25, 2007 creating the Mayor's Climate Protection Agreement Citizen's Advisory Committee (Climate Committee). In January of 2009, the Mayor's Climate Committee presented the Climate Action Plan to the Town Council, which provided recommendations on ways to reduce or Mitigate greenhouse gas emissions. As recommendations were being implemented, the Climate Committee realized that although mitigation is appropriate, it would also be prudent to plan ways to Adapt to changes already occurring in climate variability.

On March 29, 2012, the Climate Committee presented an addendum to the Climate Action Plan to the Town Council concerning Adaptation (Appendix 1). It's recommendation:

“Enhance the Town's Resilience to the effects of a hotter and drier climate through **sustained community education**, project implementation as may be approved, and other actions focused on government operations, residences, businesses and the area's ecosystem.” (bold is original)

The Adaptation Addendum called for the development of a Vulnerability and Risk Assessment and a Climate Change Adaptation Plan (renamed here as the *Silver City Sustainability Plan 2030*). The Second International Conference on Climate Change, held at the University of Arizona in May 2012, provided a timely and accessible educational opportunity on the subject. Nineteen community members attended the conference, including the Mayor, many members of the Climate Committee, and staff of the Office of Sustainability, which provided the energy and momentum to begin a year-long effort to prepare for and develop this Plan.

In the fall of 2012, a public/private task force was formed, including key municipal departments, leaders from nonprofit organizations, local citizens with expertise on issues of concern and a representative from Western New Mexico University. The Task Force brainstormed on how the impacts of local severe weather and Climate Variability may directly affect not only Town municipal operations, but the broader community. Recent weather-related events in the area informed the process. In the past several years, the Town area has experienced a minus 9°F cold snap, heat waves, extreme-to-exceptional drought, and catastrophic wildfires (the Quail Ridge fire and fires in the Gila National Forest). As climate and related severe weather conditions change, so will the demand for Town services.

The Task Force performed analyses and assessments on aspects of the Town that were deemed Vulnerable and at Risk to changing weather and climate variability.

This *Sustainability Plan 2030* sets forth recommendations for policy and priority actions to reduce the Town's Vulnerability to impacts from increasing heat, drought and other Climate Variability, such as larger and more intense wildfires and increased stress on Emergency Services personnel and equipment.

This Plan is both a municipal and a community plan. The recommendations include actions for the municipality and others that require public/private partnerships to implement.

Like many towns, Silver City's public and private sector partners are developing policies, programs and projects that will affect the Town in the long-term. A commitment to climate Adaptation and Resiliency will assist the response by the Town's municipal staff, the community and County partners to service delivery challenges with Preparedness and prevention measures that complement the response and relief efforts.

By building Resiliency within Town operations, Silver City can be a place where:

- Robust public health and emergency management infrastructure, social networks and other social systems enable the region to minimize the health impacts of Climate Change.
- People, homes and infrastructure are prepared for severe weather events and related flooding, wildfires, and other Hazards.
- Municipal operations incorporate Resiliency and Adaptability into existing and future plans, policies and procedures.

## **PROCESS AND METHODOLOGY**

The Task Force met five times between October 2012 and April 2013. Two community meetings were facilitated in February and March 2013. In the first meeting, the State Climatologist of New Mexico, David DuBois, NMSU discussed Climate Change history and projections. The second meeting addressed climate change impacts on public health.

The first part of the Plan process was devoted to a Vulnerability and Risk assessment of the Town to climate change impacts. The results of that assessment are presented in Section D. Part of the assessment dealt with identifying what capabilities the Town currently has that help it Adapt, and what new capabilities it will need to adapt to climate impacts in the future. These future needs were translated into a set of recommendations (Section F) and priority actions (Sections G).

## **WEATHER AND CLIMATE SUMMARY – SILVER CITY, NM**

Data from the National Oceanic and Atmospheric Administration, National Climate Data Center (NCDC) specific to Climate Division 4 (CD 4), the New Mexico Southwestern Mountains provides the best predictions about future climate patterns for our local area. According to NCDC:

- The mean annual temperature for CD 4 from 1895-2012 has trended up +1.0 degree F. 2012 was the hottest year on record for CD 4.
- The mean annual precipitation for CD 4 from 1895-2012 has trended up +1.4 inches. 2012 was the second driest year on record (1956 was the driest).
- 2011 and 2012 were both the driest & warmest consecutive 2 year period on record for New Mexico.

***Projected Temperature:*** Temperatures are projected to rise approximately 2°F (geographic average) between 2013 and 2050 (DuBois 2013).

***Projected Precipitation:*** Overall precipitation is not likely to change, but there is likely to be a trend toward less frequent, but heavier precipitation events. Effects on monsoon rains are not clear, but a delay in the monsoon season may be possible. Snowpack in the mountains may decrease, and runoff may occur earlier (DuBois 2013).

### **Anticipated Impacts by 2050**

- Stronger storms: erosion and damage to structures
- Reduced winter precipitation, snowpack, earlier snowmelt
- Reduction in late spring and summer runoff resulting in reduced stream flow
- Drought to be more frequent (increasing heat and aridity) resulting in increases in evaporation and reduction in soil moisture
- Pests – bark beetle infestations during drought leading to tree die-off
- Larger wildfires and resulting land cover and ecological change
  - Dramatic change of the Gila National Forest by 2035 (Swetnam 2013)
  - Significant erosion from post-wildfire precipitation
- Frost free season increases between 17 and 24 days over 2041-2070 resulting in a longer growing season
- Cold snaps still present resulting in frozen water pipes and water damage.
- Effects on monsoon are not clear, but possible delay of monsoon season but overall precipitation amount unchanged or slightly decreasing.
- Increased energy demand for water and air conditioning; potential blackouts (DuBois 2013, except as noted)

**Definitions.** Definitions for most Capitalized Terms are included in **Appendix 2.**

## C. The Rationale for Resiliency

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“The curious thing about adapting to climate change in the North American Southwest (and indeed in most places), is that **the adaptations commanding highest priority** are tasks that have needed doing for a long time, irrespective of climate. They are the difficult, postponed chores that never went away. None should come as a surprise; **all involve the pursuit of Resilience.**” (deBuys, 2011) (author’s bold)

Resilience is the ability of a community to absorb a disturbance while retaining its essential functions. (Longstaff, Patricia H., et. al., 2010). As increasing “disturbances” are expected as a result of Climate Change and Variability, building resiliency effectively becomes preparation for the future.

Silver City and other local governments are on the front lines of managing the impacts associated with climate variability, ranging from increased drought (fire, dust) to more heat and severe weather events (putting lives and property at risk).

There are several reasons why Resiliency is a practical, strategic option for Silver City:

1. ***The climate has already changed and future changes are highly likely.*** In the Silver City area, annual average temperature has increased and projections indicate a rise in the rate of warming (DuBois 2013).
2. ***Climate Variability poses a threat to existing community priorities and affects a local government’s ability to deliver on its existing commitments.*** Existing priorities and commitments may shift as projected impacts (power outages, fire) increase over time. How the Town views quality of life may ultimately change: “Think of emergency preparedness as a “quality of life” issue.”<sup>2</sup>
3. ***Local officials are making decisions today that will have long legacies; therefore, today’s choices will shape tomorrow’s Vulnerabilities.*** It is important to build the capacity to adapt to unforeseen circumstances by increasing diversity, redundancy and network overlaps within municipal operations, as well as commercial, retail and residential. Infrastructure designed and built today could last anywhere between 30 and 100 years depending on durability of materials.
4. ***Planning now can save money, while inaction will lead to higher costs in the future.*** Paying for prevention up front can avoid more significant costs in the future. On average, a dollar spent by FEMA on Hazard Mitigation (actions to reduce disaster losses) provides the nation about \$4 in future benefits<sup>3</sup>. Indeed, the goal of the 2012

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<sup>2</sup> (NM Dept. of Homeland Security and Emergency Management;  
<https://www.preparingnewmexico.org/Preparedness.aspx>)

<sup>3</sup> *Natural Hazard Mitigation Saves*, National Institute of Building Science Multihazard Mitigation Council

*NM Energy Assurance Plan*<sup>4</sup> is to "...transition from response and recovery [reaction] to energy assurance [prevention and preparation] planning. This will take a significant change in local government thinking." (author's brackets)

5. ***Planning for uncertainty and future variability is not a new process, and can be integrated into current planning frameworks.*** Key elements of the approved *Sustainability Plan 2030* may be incorporated into the new *Comprehensive Plan 2030*.

"It took just six months for 2011 to become the costliest year on record for natural disasters, a fact that insurance companies tie unambiguously to climate change. Volatility of all sorts has become the new normal, and it's here to stay... We can design – and redesign – organizations, institutions, and systems to better absorb disruption, operate under a wider variety of conditions, and shift more fluidly from one circumstance to the next. **To do that, we need to understand the emerging field of Resilience.**" (Zolli, 2012) Note: author's bold.

## **The Resilient Communities Campaign**

A number of Federal agencies have been working to assist communities in Adapting to the challenges ahead - from the Dept. of Health and Human Services, Assistant Secretary for Preparedness and Response<sup>5</sup>, to Homeland Security's Community Resilience Task Force<sup>6</sup>.

Enter now the Resilient Communities for America (RC4A) Agreement (**Appendix 3**), a complement to the U.S. Mayors Climate Protection Agreement (CPA) which the Town Council endorsed in 2007. In a similar way, the RC4A Agreement is a sign-on letter for mayors and county leaders who pledge to create more Resilient cities, towns, and counties – and share their challenges and successes to help other local governments.

## **"Protect, Conserve, Prepare"**

There are many interrelated terms used in the emerging field of Resilience, some of which include: Adaptation, robustness, flexibility, risk reduction, Hazard Mitigation, Protection, Conservation, Preparedness, enhanced community self-reliance, and Sustainable development. They attempt to convey the ability to minimize damage to critical functions (e.g., Emergency Services) from anticipated significant change. *Plan 2030* focuses on the theme of "Protect, Conserve, Prepare" as best expressing the goal of increasing the Resilience of the Town.

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<sup>4</sup><http://www.emnrd.state.nm.us/ECMD/Multimedia/documents/NMENERGYASSURANCEPLANREPO RTDECEMBER2012.pdf>

<sup>5</sup> <http://www.phe.gov/Preparedness/planning/abc/Documents/community-resilience.pdf>.

<sup>6</sup> <http://www.dhs.gov/xlibrary/assets/hsac-community-resilience-task-force-recommendations-072011.pdf>

Adaptation. The Climate Action Plan of 2009 focused on Mitigating effects of Climate Change by reducing greenhouses gas emissions. Community Resilience is locally focused on Adapting to the projected local future. It does not directly address climate mitigation, namely measures intended to reduce greenhouse gases, e.g., carbon dioxide. However, many measures that contribute to building resiliency also contribute to reducing greenhouse gases. The term “mitigation” is also used when addressing hazards, measures intended to eliminate or reduce the effects of future disasters. Hazard mitigation is very much a part of building community Resilience.

Maintaining Resilience. A commitment to Resilience means a continual process of monitoring, re-evaluation and update.

### COMMUNITY OUTREACH, EDUCATION AND SUPPORT

One of the biggest challenges in building Resiliency is that segments within the Silver City area face varying risks given the differences in the degree to which they may be affected and their ability to cope with climate extremes. These varying risks are related to many factors including awareness, household income, support system, durability of housing, location, etc. Climate related extreme events around the world have shown that when local governments and communities are prepared (i.e. residents are educated and aware, informed, prepared, have access to appropriate resources), then the impacts of adverse effects of extreme climate events can be less severe (City of Flagstaff Resiliency and Preparedness Study, 2012).

**Community Participation – the increased need.** One of the most important aspects of Resiliency, especially for small towns, is the body of informed, diverse and involved community residents. Resource limitations and government-only efforts will likely be insufficient to meet the challenges ahead. Working together, increasingly in public/private partnerships, can provide additional capacity to Adapt. In his book *Resilience* (2012), Andrew Zolli describes what his team finds when they observe social Resilience:

“...we rarely find just big, formal institutions at work. Instead, we often find a rich stew made up of bits and pieces of public and private organizations, informal social networks, government agencies, individuals, social innovators, and technology platforms, all working together in highly provisional, spontaneous, and self-organized ways...this mode of organization is characterized by informal team roles, limited focus on standard operating procedures, deep improvisation, rapid cycles, selective decentralization, the empowerment of specialist teams, and a general intolerance of bureaucracy.”

## D. Vulnerability and Risk Assessment

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The first step toward reducing Silver City's Vulnerability to the changing climate was to identify how vulnerable the Town's operations, infrastructure and public health are to Climate Variability. Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes<sup>7</sup>. The diversity and expertise of the Task Force guided the complex assessment and helped identify the potential widespread impacts across the Town. The Task Force also reviewed a) the Grant County Local Hazard Mitigation Plan with County emergency management staff, and b) data provided by the NM State Climatologist.

The assessment identified non-climate factors such as population, public safety, and the local economy. It considered the following:

- The Sensitivity of the Town to climate variability and estimated the degree of impacts. Sensitivity is the extent to which a system or its components is likely to experience harm, and the magnitude of that harm, due to Exposure to perturbations or stresses. [Kasperson, et al. (2002)]
- The resources currently in place for the Town to adapt and respond. The assessment identified where the Town lacks sufficient adaptive capacity to respond to the associated impacts. The Adaptive Capacity is the capacity to accommodate change with minimal disruption or additional cost.
- What the Risks are if no action is taken. (Risk is the likelihood of occurrence by 2030 when referring to a risk assessment in this Plan)

From this assessment, a five-tiered vulnerability ranking from low to high was assigned. As in other fields that require risk management, the process of priority setting for proposed climate Adaptation actions is based on estimation of risk to systems (e.g., Emergency Services) and key planning areas (e.g., Police and Fire). The Task Force used the information collected during the Vulnerability assessment to estimate the consequence, probability and resulting risk of associated impacts of Climate Change. Thus Risk was a qualitative assessment that included important non-quantifiable information. This determination of risk was also ranked using a five-tiered ranking from low to high.

Table 3, the Combined Assessment Matrix, summarizes Vulnerability and Risk rankings of all 25 planning areas assessed. Those 11 areas that ranked between medium and high for both vulnerability and risk, were identified as priorities for action (area in yellow).

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<sup>7</sup> <http://weadapt.org/knowledge-base/vulnerability/vulnerability-definitions>.

October, 2013

**Table 3. Combined Vulnerability and Risk Assessment for Action Priority (Highlighted in Yellow)**

VULNERABILITY (Sensitivity & adaptive capacity)	RISK (Likelihood of occurrence by 2030)				
	HIGH	MEDIUM-HIGH	MEDIUM	MEDIUM-LOW	LOW
HIGH	Emergency Services: -Police & Fire -Disaster Response		Emergency Services: EMS		
MEDIUM-HIGH		Public Health: People and Public Services	Stormwater: Infrastructure		
MEDIUM		Public Health: Personnel and Support	Stormwater: Flood plain management Land/Urban Forest: -Land management -Urban forest management Transportation: Infrastructure	Food: Local Agriculture	
MEDIUM-LOW			Waste: Wastewater Energy: Demand & Cost	Water: Delivery Infrastructure Water: Quantity Waste: Solid waste Transportation: Public transit	Land/Urban Forest: Wildlife & Vegetation
LOW		Food: Delivery/ Distribution	Food: People	Energy: Assurance & Delivery	Water: Quality Transportation: -Alternative Modes -Petroleum costs

## October, 2013

The rationale for placement of each of the planning areas in the Medium through High vulnerability and risk ranking is summarized below.

**Emergency Services - Police and Fire.** Increased heat, extended drought and stronger storms are likely to put police and fire personnel at *high risk* as first responders during severe weather events. Police and Fire services are *highly vulnerable* because they are already stressed from a lack of a sufficient number of trained personnel and have minimal ability to adapt to climate change without significant additional resources.

**Emergency Services - Disaster Response.** Disaster responses were rated as *high risk* as fires and other natural disasters will be more likely with climate changes, and there has been little progress made on implementing the Town-adopted Grant County Local Hazard Mitigation Plan. A ranking of *high vulnerability* was based on the assessment that the system is largely sensitive and has a low ability to Adapt to Climate Change without significant additional resources.

**Emergency Services - EMS.** The likelihood of climate change impact on Emergency Medical Services, independent of disaster response, is considered a *medium risk*. EMS is largely sensitive because it is already stressed with increasing demands and aging equipment, and has a minimal ability to adapt without significant resources; thus it has been assessed at *high vulnerability*.

**Public Health - People and Public Services.** It is considered likely that climate change will lead to a *medium-high risk* for impacts on public health. Increased air quality related health impacts (asthma and respiratory illness triggers) to vulnerable populations will be exacerbated by income disparity in the community. A *medium-high vulnerability* is the result of the great sensitivity to the effects of climate change, especially among the lowest income groups, and only a moderate ability to adapt without significant additional resources.

**Public Health – Personnel and Support.** The likelihood of climate change affecting personnel and funding sources for the Public Health infrastructure puts them at *medium-high risk*. A ranking of *medium vulnerability* was assigned because personnel are largely sensitive to increased Exposure to pathogens and increased demand for services, and ability to adapt was assessed as minimal due to other priorities at the state level.

**Stormwater - Infrastructure.** There is a *medium risk* from climate change related increased flooding affecting the stormwater infrastructure. A *medium-high vulnerability* ranking was derived from the largely sensitive nature of the aging infrastructure to extreme rain events, and a likely increase in the occurrence of flooding of streets and property in some areas where culvert size is currently inadequate and is subject to

clogging with debris. The system is minimally adaptable without significant resources to increase existing capacity and stormwater harvesting on private and public lands.

**Stormwater: Flood Plain Management.** The flood plains are at *medium risk* from increased severe storm flooding related to climate change. A *Medium vulnerability* ranking was assigned as there is a lack of naturally functioning flood plains through Town since the waterways are mostly incised channels. There is only a moderate ability to adapt the management of the flood plains because most are on private land and are already developed with residential and/or commercial structures.

**Land/Urban Forest: Land Management.** The likelihood of erosion of exposed soils from fire, extreme rain events, and desiccation from drought with projected changes in the climate place land management at *medium risk*. The system is moderately sensitive because of existing soil erosion and soil moisture deficits. This combined with a minimal ability to adapt without increasing the vegetation or other cover on exposed soil leads to a ranking of *medium vulnerability*.

**Land/Urban Forest; Urban Forest Management.** The urban forest is at medium risk to climate variability as it is dependent on regular rainfall to stay healthy. The system is moderately sensitive because it is already stressed from drought, pests, disease and invasive species. This combined with a minimal ability to adapt without significant resources leads to a ranking of medium vulnerability.

**Transportation: Infrastructure.** It is considered likely that climate change impacts will put the major arterial roads in Silver City at *medium risk* for flooding. *Medium vulnerability* is based on the moderate sensitivity to flooding and the need for significant resources to adapt.

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## E. Early Successes

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As a local government critically concerned with drought, Climate Variability, and the larger issues of sustainability, completing the Plan 2030 is both timely and critically important. Silver City has a long history of weathering adversity and emerging as a stronger, more cohesive community. As climate and related severe weather conditions change, the Town has begun to innovate in creative ways to Prepare, as evidenced by the list of important accomplishments below. Many of these early efforts contribute significantly to conservation of resources, including fiscal resources. The listed accomplishments by multiple organizations are representative, and not meant to be all inclusive.

### **Emergency Services:**

- Two new police officers authorized by the Town Council in August 2013.
- A Community Wildfire Protection Plan for the Town and the Extraterritorial Jurisdiction (ETJ) was begun in August 2013.
- The purchase of one new ambulance for the SCFD EMS team has been advanced to number 2 priority in the 2013 Infrastructure Capital Improvement Program (ICIP).

### **Energy:**

- WWTP PV Array, one megawatt, June 24, 2013; over 20 yrs, saves municipality \$4,000,000 (est.) and 29,000 tons CO<sub>2</sub>; positions Town for energy future.
- The completion of the Regional Strategic Plan for Energy Efficiency and Renewable Energy and Associated Job Creation, developed by the SWNM Energy and Green Jobs Task Force; and its in-progress adoption by counties and municipalities.
- Solar Covered Parking Structure, Visitors Center, Summer 2011
  - ✓ Generate 100% of the electricity for the Visitor Center and \$235 in average monthly savings to TOSC during calendar year 2012.
  - ✓ Provide shaded parking at the Visitor Center parking lot.
- Formation and ongoing efforts of the SWNM Solar Energy Association
- Custom Steelworks: USDA REAP grant to add a solar photovoltaic system

### **Floodplain and Urban Forest Management:**

- Continued acquisitions along San Vicente Creek by Town Council action.
- San Vicente Floodplain Restoration Project by NMED.

### **Food:** (vulnerable populations: food security and public health)

- Formation and on-going efforts of the Grant County Food Council

- The Commons Center for Food Security and Sustainability

**High Performance Buildings:** (energy efficiency/conservation; saves money)

- Murray Hotel 2012
  - ✓ Rehabilitated 70+ year old hotel with high performance features including hydronic heating with high efficiency natural gas boilers.
- New WNMU LEED Silver Residences (under construction 2013)
- New HMS Medical Center

**Land and Forest Management:** the acquisition of Boston Hill through citizen advocacy and Town Council action

**Lighting:** (energy efficiency/conservation; saves money)

- Retrofitted the four highest energy use municipal buildings

**Stormwater infrastructure:** numerous street improvements by Public Works that include stormwater infrastructure components.

**Urban Forest Health:** Adaptation

- State Forestry grant for community forest audit and demonstration project

**Waste:** (Conservation; saves money; extends landfill life)

- 22% recycling rate, up from 7%
- New compactor/bailer at landfill saves \$36,000/yr. in reduced transportation costs from the landfill to the recycling center in Tucson.
- New recycling partnership with WNMU to begin July 2013

**Water:** (Conservation; saves money; sets stage for conservation in other areas as needed)

- Development of a regional water plan by Grant County Water Commission
- Annual Gila River Festival, including Children’s Water Festival by the Gila Conservation Education Center (GCEC)
- Draft Water Conservation Plan posted for public comment
- Discussion to begin in June 2013 on partnership between Town and WNMU
- Interstate Stream Commission (ISC) grant for a substantial water conservation demonstration project at the Ben Altamirano Ballfield.

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## F. Recommendations

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This section identifies the policy and action recommendations that are a result of this year-long planning and analysis effort. The Task Force recommends an incremental and integrated approach in order to leverage existing operational efforts, master planning processes and strong partnerships. An integrated approach will foster Resilience into existing efforts, creating a more meaningful realization of near and long term benefits of climate Adaptation.

Recommendations are divided into two groups – policy recommendations and action recommendations.

### KEY POLICY RECOMMENDATIONS

**1. Provide outreach, education and support, for the municipality and the community on a unified (public/private) and ongoing basis.**

It is recommended that the Town establish Community Outreach, Education and Support as the #1 priority for action. Most outreach efforts are focused on near term events – what is needed is on-going relationship building over years: the real work of community building. Education and awareness can be integrated into existing efforts such as community support meetings, emergency planning, etc. identifying partnership opportunities to reach students and the community on the importance of being prepared, and coordinating with the Fire Department to support cross training for Town employees.

**2. Build, sustain and leverage local and regional partnerships.**

The Town’s most vulnerable operations are directly impacted by climate and often characterized as large-scale problems that must be addressed at the community and regional level. Therefore, the Task Force recommends that the Town continue to build, sustain and leverage partnerships with local and regional stakeholders to ensure collective investment, efficient action and shared responsibility in the building of local resiliency.

**3. Identify vulnerable populations.**

The Task Force recommends that Town services consider the exacerbation of impacts when changing climate is combined with the circumstances of an aging population as well as differential exposures to pollution, poverty and access to scarce resources.

#### **4. Incorporate flexibility of design into infrastructure development.**

Planning for new development and supporting existing development needs to take into account design, economic, environment and climate elements in such developments. The Task Force recommends the incorporation of resiliency into the design of future infrastructure projects.

#### **5. Allocate municipal resources necessary to adapt the municipality's physical design and operations.**

The Task Force recommends that the municipality support evidence-based, ongoing assessment of the organization's vulnerability and risk to changes in regional climate. Triggers can be developed to support incremental action that is based on identified and projected risk to the municipality's critical functions.

### **PRIORITY ACTION RECOMMENDATIONS**

#### **Community Outreach, Education and Support**

1. Develop a well-informed community to assist it in becoming more comfortable with the adapted lifestyle needed to sustain our community.

#### **Systems and Planning Areas (listed in order of ranking)**

##### Community

2. Emergency Services - Police and Fire: Save lives through enhanced capacity of the Town's firefighting and police forces and infrastructure to accomplish their mission in severe weather with quick response and sufficient resources.
3. Emergency Services - Disasters (Response): Implement and provide resources for all emergency services goals stated in the Emergency Response Strategy of the Town's Hazard Emergency Operations Plan and build in capacity to address increased wildfire, dust storms, and heat by insuring personnel (Town and community volunteers), equipment and communications systems are sufficient to achieve minimal loss of life and property.
4. Public Health - People and Public Services: Strengthen public/private partnerships to mitigate poor wellness and health outcomes due to changing weather and growing income disparities<sup>8</sup> within the Town/Grant County.

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<sup>8</sup> US Census shows the poverty rate increasing from 17.7% in 2007 to 20.6% in 2011 in Grant County. Robert Wood Johnson County Health Rankings shows children living in poverty has been rising since 2006 from 24.4 % to now 33% of Grant County children living in poverty in 2011 that's above the 29% state average.

5. Public Health Personnel and Support: Strengthen the Grant County public health infrastructure to address increased health and wellness vulnerabilities due to changing weather and to maintain a healthy and safe population.
6. Emergency Services - EMS: Increase reliability of EMS ambulances.
7. Transportation: Infrastructure: Maintain and improve the transportation infrastructure in Silver City to improve public safety.

#### Environment

8. Stormwater - Infrastructure: Manage stormwater by maintaining, repairing and upgrading infrastructure to meet a variety of objectives - to mitigate soil erosion, downstream flooding, stream bank and channel erosion, water quality degradation and infrastructure damage, and to provide landscape irrigation and improved soil moisture.
9. Stormwater - Floodplain Management: Preserve and manage the natural and beneficial function of the floodplain, where possible, to reduce the threat to health and safety caused by flooding, decrease channel erosion and prevent damage to infrastructure and properties from flooding during large storm events, and to infiltrate small events into the soil.
10. Land and Urban Forest Health - Land Management: Protect and conserve land and soil resources to decrease wildfire events, reduce soil erosion, and increase soil moisture.
11. Land and Urban Forest Health - Urban Forest Management: Conserve and protect urban forest resources, including trees on public and private lands, to maximize the multi-value benefits, and to decrease threat of catastrophic wildfire.

#### **Climate/Severe Weather**

12. Drought (Fire, Wind and Dust): Prepare for an extended, hot drought.
13. Disasters (Mitigation): Update the Town-adopted Grant County Local Hazard Mitigation Plan, apply for funding, and implement approved projects.

#### **Conservation of Resources**

14. Fiscal: Reduce demand for resources and services.
15. Water (Quantity, Quality and Delivery Infrastructure): Protect, manage and conserve water resources to ensure the long-term future supply and delivery.
16. Energy: Increase Energy Security for critical Town functions, and reduce the Town's demand and cost for energy.

17. Waste: Reduce waste by increased recycling and composting to assist Silver City to become more resilient and avoid future costs associated with waste disposal.

## **G. Action Plan**

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This section identifies efforts needed to implement the priority recommendations between Plan approval and 2030 with a series of goals, objectives and actions to be performed through public-private partnerships. Plan review and progress documentation will take place annually, as well a report to the Town Council, allowing flexibility should there need to be adjustments to the plan.

Support to implement is anticipated to be provided through the activities of non-profits, municipal staff, County and regional partners, volunteers, and the effectiveness of working collaboratively rather than separately. "Responsible Partners" identified in sections G1 - G17 are those most likely to be involved in the implementation. Additional resources may include multiple-source funding from grants, loans, bonds and the general fund.

### **G1. Community Outreach, Education and Support**

**Recommendation Statement:** Through established programs and the employment of new methods, develop and maintain a well-informed community that is comfortable with the adapted lifestyle needed to sustain our community.

**Responsible Partners:** Office of Sustainability (Lead) and other Town departments, Debraura James (former Aldo Leopold teacher), Sustainability Task Force, Public Health/People and Public Services Team, The Volunteer Center, Neighborhood Alliance(s), the Gila Resources Information Project, the SW Chapter of the NM Solar Energy Association, the Green Chamber of Commerce, the Health Council, WNMU, Natural Resources Conservation Services, and the Grant County Soil and Water District NMSU Climate Center.

**Rationale:** Population segments within the Silver City area face varying risks given the differences in the degree to which they can be affected and their ability to cope with climate extremes. When local governments and communities are prepared (i.e., residents are educated and aware, informed, and have access to appropriate resources), then the impacts of adverse effects of extreme climate events can be less severe.

**Goal #1: Raise awareness of climate issues, projections for regional changes, and approaches to conservation, protection and preparedness for projected changes amongst students to provide a more seamless transition to the climate future.**

Objective 1: Advocate for sustainability education (e.g., climate issues, projections for regional changes, and approaches to adaptation and mitigation, etc.) to become part of required K-12 public school curricula in science, social studies, language arts, and career readiness.

Action 1: Provide input and encouragement to the New Mexico Public Education Department to include sustainability education across the curriculum in the Common Cores State Standards, which are currently being written.

Action 2: Concurrently, continue training in the local schools through established means, such as the SunChaser Program, the Introduction to Green Jobs curriculum, and collaborative arrangements with school administrators and staff.

**Goal #2: Develop an informed public that is aware of resources available and capable of accessing the skill sets necessary to help citizens accommodate and adapt to a changing climate.**

Objective 1: Within Town neighborhoods, establish and maintain councils that can provide information about climate change, connect needs with solutions, and oversee neighborhood vulnerabilities. Coordinate with the Neighborhood Alliance and the Food Council to implement.

Action 1: Train a minimum of two neighborhood volunteers in climate issues, projections for regional changes; approaches to conservation, protection, adaptations, and preparedness. Begin establishing simple neighborhood hubs for dissemination of information, skill-training, neighborhood resources, and opportunities for mutual assistance. Encourage the volunteers to be interconnected with one another for the purpose of city-wide continuity and communication.

Objective 2: Through the responsible partners above, host and facilitate an Annual Preparedness Forum of training and discussion on topics of protection, conservation and preparedness (including conservation, emergency services, public health, drought, severe weather and disaster preparedness, including wildfire prevention, planning and evacuation).

Action 1: Collaborate with other teams, such as those working on public health and other related issues.

Action 2: Design and evolve theme, program, speakers and marketing campaign on an on-going basis.

**Benefits:** An informed public is the first step to preparedness.

## **G2. Emergency Services: Police and Fire**

**Recommendation Statement:** Save lives and sustain the Town’s future through enhanced capacity of the Town’s firefighting, police forces and infrastructure to accomplish their mission in severe weather with quick response and sufficient resources to:

- a. Fight drought-caused wildfires in higher winds, heat, and extended fire season;
- b. Protect first responders and the public during severe weather events;
- c. Control crime during concurrent demand for services, e.g., wildfire/burglary, power outage/burglary/public welfare calls, and disasters.

**Responsible Partners:** SC Police Dept. (Lead)/Emergency Management , SC Fire Dept. (Co-Lead), GC Emergency Management, GC Fire Management Officer, Pinos Altos VFD, Whiskey Creek VFD, Tyrone VFD, Neighborhood Alliance, Silver Public School System, the Gila Regional Medical Center, Red Cross, State Police, Search and Rescue, FEMA, NM Dept. of Homeland Security and Emergency Management, and the Sustainability Task Force.

### **Rationale:**

- Larger and more frequent wildfires with extended fire season, continued variable winds, increased dry woody fuels, and number of homes built near wildlands.<sup>9</sup>
- Drought to be more frequent (increasing heat and aridity).
- Severe storm events such as down bursts, dust storms, and flashfloods may result in property damage and loss of life; and increased stress on infrastructure, resulting in rolling power outages.<sup>10</sup>
- Increasing heat may result in an increase in aggressive behavior<sup>11</sup>.

**Goal 1: Support the update to the August 16, 2011 Silver City *Emergency Operations Plan* (EOP), including revisions to address wildfire in high wind, drought, heat (and heat-related aggressive behavior) and rolling black-outs.**

Objective 1: Revise, provide resources for, and implement the Silver City EOP.

Action 1: Revise EOP

- a. Identify “large fire” (EOP pg. 21) as Silver City’s Number One Threat.
- b. Increase wildfire exercise testing from every four years to the following: table top exercise annually, and a live exercise every two years.

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<sup>9</sup> [http://headwaterseconomics.org/pubs/wildfire/cost\\_of\\_fire.pdf](http://headwaterseconomics.org/pubs/wildfire/cost_of_fire.pdf)

<sup>10</sup> [http://www.epa.gov/heatisld/about/pdf/EHEguide\\_final.pdf](http://www.epa.gov/heatisld/about/pdf/EHEguide_final.pdf),  
<http://www.epa.gov/climatechange/impacts-adaptation/energy.html>

<sup>11</sup> <http://www.psychology.iastate.edu/faculty/caa/abstracts/2010-2014/12A2.pdf>

- c. Revise “Overall Plan Priorities” (Concept of Operations) to insure the Town’s viability through community communication in addition to infrastructure restoration. Improve team communications through the shared use of the portable RIOS interoperable communications system to supplement central dispatch in an overload situation.
- d. Address the increased risk to police as well as fire personnel caused by wildfire, heat, rolling black-outs and increased crime.

Action 2: Build capacity in police and fire installations and equipment

- a. Operationalize the gas pumps at City Annex 2 with generator backup to serve public vehicles (municipal, County, GRMC and Silver School) as needed.
- b. Install generator systems for critical functions in case of power failure. Evaluate the benefits of a towable, self-propelled PV system to completely power an incident operation.
- c. Build and equip a satellite fire station in Town based on available data and requirements.
- d. Consider additional 4-wheel drive police vehicles for use in wildfires and evacuations with the assumption that sheriffs will continue to provide support with their 4-wheel vehicles; and 1-2 ATVs for more rural areas.
- e. Equip the EOC as noted in the EOP’s “Responsibilities-Plan Development and Maintenance”, pg. 41, i.e., Computer-aided Management of EO (CAMEO) and mapping system (MARPLOT).

Action 3: Build capacity in personnel to fight more frequent and larger fires, and those involving both structures and wildlands, to lower the risk to firefighter and police safety, health and welfare; to reduce response times; and to reduce the risk to loss of life or property.

**Goal 2: Strengthen public safety personnel resources.**

Objective 1 - Fire: Attract and add both new and seasoned staff to balance staff needs with the increasing fire threat (see Rationale above) and expanded service area by 2018. Train for both structural and wild land fire-fighting to lower risk to firefighter safety, reduce response times, and control risk to life and property.

Action 1: Increase efforts to attract local high school and college students, design creative and attractive hiring packages for seasoned staff, coordinate with WNMU to recruit candidates and work with community groups to recruit citizen auxiliary assistance. Continue to partner with WNMU to get EMT courses taught in the Nursing School.

Action 2: Work with community groups to formalize the existing Citizen Auxiliary, including creating a list of auxiliary members, contact information and phone tree. (The existing auxiliary provides non-firefighting support (e.g., food during an extended incident) to the Department so that fire fighters do not have to be concerned directly with those functions after response to an incident). Identify members who may be willing to provide housing for potential evacuees.

Action 3: Institutionalize enhanced local training programs and develop Memoranda of Understanding with volunteer fire department members to increase structural and wild land fire suppression training.

Objective 2 - Police: Build capacity in emergency and disaster staff response, as well as patrol, through enhanced recruitment, retention and training programs for new positions to adequately meet the service area population needs by 2018.

Action 1: Design and implement enhanced employee attraction and retention programs including incentives, personal equipment, and training benefits for high school seniors and college students, and seasoned staff.

Action 2: Attract, retain, and train qualified para-professionals for duties in disaster preparedness, community relations, evacuations, investigations, and coordination of services for persons made homeless due to disaster.

**Goal 3:** Design, fund, implement (and enforce where appropriate) community involvement and education to increase fire prevention/preparedness.

Objective: Increase physical protection for the community.

Action 1: Evaluate the potential benefits/challenges of providing support to code enforcement personnel so that they have the means to effectively enforce code related to life safety, such as the existing ordinance to ensure debris, dead plant material, and hazardous waste do not accumulate on private property in a way that threatens neighboring life/property. Review what other towns are doing.

Action 2: Identify, map, evaluate and negotiate emergency road ingress/egress easements where needed.

Action 3: Partner with community organizations to provide the public with instruction by trained individuals on removal of debris, dead plant material, dangerous waste, and evacuation procedures. Assist the elderly and disabled with services to remove these materials, and provide coordination services to those left homeless by fire.

**Benefits:** The readiness of the Fire Department affects the ISO (Insurance Services Office, Inc.) rate for the Town for property/casualty risk. Benefit for additional police officers on downtown streets may be measured in burglary rates, perception of the safety of businesses in the downtown area, and sense of security for visiting tourists.

### **G3. Emergency Services: Disasters (Response)**

**Recommendation Statement:** Implement and provide resources for all emergency services goals stated in the Emergency Response Strategy of the Town’s Hazard Emergency Operations Plan and build in capacity to address increased wildfire, dust storms, and heat by insuring personnel (Town and community volunteers), equipment and communications systems are sufficient to achieve minimal loss of life and property.

**Responsible Partners:** SC Police Dept./Emergency Management (Lead), GC Emergency Management, SC Fire Dept., Pinos Altos VFD, Whiskey Creek VFD, Tyrone VFD, Neighborhood Alliance, Silver Public School System, the Gila Regional Medical Center, Red Cross, State Police, Search and Rescue, FEMA, NM Dept. of Homeland Security and Emergency Management, and the OS Sustainability Task Force.

**Rationale:** See Emergency Services (section G2, Police and Fire)

#### **Goal 1: Implement the Emergency Operations Plan (EOP).**

Objective 1: Review; update and seek approval for the EOP (see section G2, Police and Fire, Goal 2).

Action 1: Incorporate lessons learned from Quail Ridge. With partners above:

- Clarify needs, and adjust protocols and procedures, for overall command to be performed at the EO Center vs. on-scene.
- Manage communications with State frequency or emerging radio channel such that the need to adjust communications is minimized.
- Create and publish a command flow chart from EOC to first responders.

Objective 2: Prioritize the actions needed that are contained in the Assumptions subsection, pg. 23, in the Emergency Response Strategy Section of the EOP and begin implementation.

Action 1: Evaluate EOP assumptions below (in quotes) for priority, and to validate current relevance, need and status, with special attention to the following assumptions:

- Assumption 5: “The experience and expertise of coordinators called to the EOC during an emergency will compensate for gaps in emergency planning.”
- Assumption 9: “The Town and other jurisdictions’ officials and response agencies should be trained in the Incident Command System (ISC) and in Emergency Operations Center (EOC) management.”

- Assumptions 10 & 11: “All emergency and medical response organizations, including volunteer groups, will be responsible for preparing and maintaining current Standard Operating Guides (SOGs), resource lists, checklists, plans and procedures, and treatment or cures required for medical response or the operations of their organizations.”

**Goal 2: Increase citizen participation in emergency services delivery.**

Objective 1: Build capacity in the community through the design, funding, and implementation of Community Emergency Response Teams (CERT) and Critical Incident Stress Management Teams (CISM) and conduct regular, required inter-agency and agency-CERT emergency trainings.

Action 1: Build partnerships with community organizations through which to attract volunteers for the CERT and CISM.

Action 2: Design and implement regularly offered and needed emergency operations training programs, assign staff to same, and develop memoranda of understanding with County personnel, Volunteer Fire Departments, and community CERT and CISM teams to increase the EOP-related training.

Action 3: Collaborate with the responsible partners above in participating in the Annual Preparedness Forum. (see section G1: Outreach, Education and Support).

**Benefits:** On average, a dollar spent by FEMA on hazard mitigation (actions to reduce disaster losses) provides the nation about \$4 in future benefits<sup>12</sup>.

**G4. Public Health: People and Public Services**

**Recommendation Statement:** Strengthen public/private partnerships to mitigate poor wellness and health status outcomes due to changing weather and growing income disparities<sup>13</sup> within the Town/Grant County.

**Responsible Partners:** Grant County Health Council (GCCHC) (Lead), Gila Regional Medical Center (GRMC), WNMU School of Nursing, Hidalgo Medical Services (HMS), Silver Health Care, The Volunteer Center, the regional NMDOH community specialists, and OS Sustainability Task Force.

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<sup>12</sup> *Natural Hazard Mitigation Saves*, National Institute of Building Science Multihazard Mitigation Council

<sup>13</sup> US Census shows the poverty rate increasing from 17.7% in 2007 to 20.6% in 2011 in Grant County. RWJ County Health Rankings shows the percentage of children living in poverty has been rising since 2006 from 24.4 % to now 33% of Grant County children living in poverty in 2011; this is above the 29% state average.

## **Rationale:**

- Weather related events are on the increase such as drought and increased heat;
- Resultant increased demand for water and energy resources, with higher costs of food; utilities; and fuel;
- Historical employment sectors of mining, agriculture and government have been cyclical for over 15 years and no longer ensure living wages; health insurance; long term job security; or retirement income for many people in Town/County;
- There is precedent in Town/County public/private partnerships to cooperate and/or collaborate around health and wellness issues.

## **Goal 1: Strengthen public/private cooperative and collaborative initiatives that address income disparities and access to basic health and wellness needs, including employment.**

Objective 1: By June 30, 2014, submit a written document that outlines all major Town/County organizations and initiatives working in the areas of housing, utilities, and food and health security.

Action 1: Convene initial and follow up meetings, in partnership with The Volunteer Center (TVC) and the Grant County Community Health Council to ascertain the “who, what, how and what more is needed” (to include local initiatives and models; NM Medicaid expansion possibilities; other Affordable Care Act [ACA] provisions).

Action 2: Continue meetings to ascertain any outreach and education needs for the target population of those needing assistance to support basic health and wellness. Collaborate with the Team working on Community Outreach, Education and Support.

Action 3: Develop a document for submission to TOSC, to include proposed “Next Steps” for TOSC Office of Sustainability (OS) staff, including possible policy and implementation support; i.e., local food production and farm to school policies.

Objective 2: By September 30, 2014, in partnership with appropriate community organizations, be involved with implementation of the document mentioned in Action 3 above.

Objective 3: Meet regularly to seek ways to collaborate in and between the efforts for the Sustainability Plan 2030 and the following: the TOSC Greenways Plan; the Regional Strategic Plan for Energy Efficiency and Renewable Energy and Associated Job Creation; and/or the TOSC Bicycle and Pedestrian Routes Master Plans.

Action 1: OS will convene the partners on a quarterly basis to review specific plans and identify collaborative efforts going forward.

**Benefits:**

- The Health Council leveraged \$1.2 million over the past 4 years .... \$34 into the community for every \$1 invested in the GCCHC.
- NMDOH staff serve in local public health offices and are “paid community staff” in a variety of health and wellness areas.
- Multi-modal transportation planning lessens community impact on the environment and climate and improves emergency preparedness in case of fuel and electricity shortages.

**G5. Public Health: Personnel and Support**

**Recommendation Statement:** Strengthen the Grant County public health infrastructure to address increased health and wellness vulnerabilities due to changing weather and to maintain a healthy and safe population.

**Responsible Partners:** Grant County Health Council (Lead), GC Public Health Office, GRMC, HMS, Silver Health Care, WNMU Nursing, NMDOH community specialists, and the OS Sustainability Task Force.

**Rationale:**

- Weather related events are on the increase, especially increased dust storms/fires.
- Resultant exposure to smoke, pollens, and other air borne particulates leads to increased incidence and severity of diseases such as asthma, allergies, Valley Fever, and cardio-pulmonary illnesses.
- There is precedent in Grant Co./TOSC for public/private partnerships to cooperate and/or collaborate around health and wellness issues.
- Grant County Public Health Office staff and Grant County Community Health Council staff can, when funded and with sufficient staff, work on emergent issues through assessment, planning, coordination and evaluation.

**Goal 1: Strengthen public health partnerships that include staff from the GC Public Health Office and the Grant County Community Health Council, and others.**

Objective 1: By June 30, 2014, begin conversation with the NM Department of Health (NMDOH) about changing weather, exacerbation of related disease and chronic illness, emergent issues and possible changes in “scope of work” for current and new staff.

Action 1: Meet with local GC Public Health staff to understand their current scope of work; coverage area; perceived needs; assessment of emergent issues; and possibilities for strengthened involvement in community partnerships.

Action 2: Develop Action Plan, to include “next steps” for addressing NMDOH needs.

Action 3: Set up initial and ongoing conversations with appropriate NMDOH personnel.

Objective 2: By June 30, 2014, have reinstated sufficient State funding for community health councils, including the Grant County Community Health Council to provide at least 1.5 FTE.

Action 1: Meet with GCCHC staff to ascertain current scope of work; staffing; 2013 Profile and Plan; perceived needs; and possibilities for strengthened involvement in community partnerships.

Action 2: In conjunction with the GCCHC; NM Alliance for Health Councils; and other community partners, develop a plan to educate legislators and the NMDOH of the value of health councils in collaboratively addressing the health and emergent issues related to changing weather.

Action 3: At 2014 legislative session, with partners, advocate for sufficient funding.

**Benefits:**

- The Grant County Community Health Council leveraged \$1.2 million over the past 4 years .... \$34 into the community for every \$1 invested in the GCCHC.
- NMDOH staff serve in local public health offices and are “paid community staff” in a variety of health and wellness areas.

**G6. Emergency Services: EMS**

**Recommendation Statement:** Increase reliability of EMS ambulances.

**Responsible Partners:** SC Fire Dept. (Lead), the Gila Regional Medical Center (Co-Lead), SC Police Dept/Emergency Management, GC Emergency Management.

**Rationale:** Increasing heat, wind-borne disease and smoke will result in increased demand for EMS services.

**Goal 1: Consider replacing ambulances as needed to meet current and future needs.**

Objective 1: Purchase one new ambulance for the near term.

**Benefits:** The number and age of ambulances contributes to the Town’s ISO (Insurance Service Organization) rating, and a higher rating results in lower insurance rates. (SCFD and www.FireServiceInfo.com)

## **G7. Transportation: Infrastructure**

**Recommendation Statement:** Maintaining and improving the transportation infrastructure in Silver City will improve public safety.

**Rationale:** A usable and reliable infrastructure for the Silver City transportation network is essential for the public and emergency services especially in response to climate change impacts such as wildfires and flooding.

**Responsible Partners:** Public Works Department (Lead), SWNM Council of Governments (COG), Utilities Department, NMDOT, and Grant County.

### **Goal 1: Improve condition of existing infrastructure.**

Objective 1: Prioritize major arterials needing improvement.

Action 1: Coordinate review with Public Works and Department of Transportation of roads that are most susceptible to closure from flooding or disruption caused by wildfires.

Action 2: Work with SWNM COG to obtain funding for improvements.

Objective 2: Coordinate design improvements with drainage improvements recommended in updated Stormwater Drainage Management Plan (G8).

Action 1: Model improvements for increased severity of flooding.

Action 2: Encourage use of multimodal transportation in all improvements.

**Benefits:** Lessened disruption of traffic flow on major arterials due to flooding or fire which could severely hamper emergency services and block critical evacuation routes having serious economic and personal consequences.

## **G8. Stormwater: Infrastructure**

**Recommendation Statement:** Manage stormwater by maintaining, repairing and upgrading infrastructure to meet a variety of objectives - to mitigate soil erosion, downstream flooding, stream bank and channel erosion, water quality degradation and infrastructure damage, and to provide landscape irrigation and improved soil moisture.

**Rationale:** With aging infrastructure, funding limitations, and a projected increase in extreme weather events, effective management depends on affordable solutions that meet many objectives at once.

**Responsible Partners:** Public Works (Lead), Floodplain Manager, Office of Sustainability and Utilities Departments

**Goal:** Update and implement Stormwater Drainage Management Plan to include preparedness and prevention measures that meet the recommendation statement.

Objective 1: Convey large storm events through natural vegetated channels with minimum land and stream erosion, flooding, and maintenance issues, while also protecting the riparian forest.

Action 1: Maintain and repair existing stormwater infrastructure

Action 2: Upgrade existing culverts to increase conveyance capacity where flooding has been experienced or is expected during large storm events.

Objective 2: Integrate stormwater harvesting into plan to decrease runoff and its impact on infrastructure.

Action 1: Encourage installation of localized small basins and other structures on private and public land that allow infiltration of small events into the soil.

Action 2: Identify potential sites for stormwater harvesting on Town and private property.

Action 3: Develop “shovel-ready” plans to construct stormwater harvesting projects when funding becomes available.

Objective 3: Infiltrate small events by retaining stormwater on the land using vegetation and soil where possible.

Action 1: Construct curb cuts or other infrastructure improvements that infiltrate stormwater into the ground as close to the source as possible

**Benefits:** In general, it costs less to proactively design and maintain infrastructure than to fix damaged infrastructure and compensate for land and property that has been damaged or destroyed. A cost benefit analysis could include calculating and comparing costs related to losses from flood events, pre-flooding costs like clearing conveyance channels and avoided costs from risk reduction.

## **G9. Stormwater: Floodplain Management**

**Recommendation Statement:** Preserve, manage and restore the natural and beneficial function of the floodplain, where possible, to reduce the threat to health and safety caused by flooding, decrease channel erosion and prevent damage to infrastructure and

properties from flooding during large storm events, and to infiltrate small events into the soil.

**Rationale:** Functioning floodplains handle flooding and erosion with natural features that provide floodwater storage and conveyance, reduce flood velocities and flood peaks, and curb sedimentation, as well as helping to maintain water quality, recharge the aquifer, and provide pleasant recreation areas and habitat for fish and wildlife.

**Responsible Partners:** Floodplain Manager (Lead), Office of Sustainability (Coordinator), Public Works and Utilities Department, NMED, NRCS, Grant County Soil and Water District, Army Corps of Engineers and Grant County.

**Goal:** Implement a new Floodplain Management Plan to include preparedness and prevention measures that meet the recommendation statement.

Objective 1: Develop a current Floodplain Management Plan.

Action 1: Review previous floodplain assessments and inspect known problem areas to help determine action priorities.

Action 2: Identify relevant goals and actions from the 2002 Floodplain Management Plan and integrate them into new Floodplain Management Plan.

Action 3: Develop implementation plan that identifies priorities and timeframes, as well as clear duty assignments for various Town departments responsible for floodplain management.

Objective 2: Preserve, manage and restore the natural and beneficial function of the Town's floodplains, where possible.

Action 1: Map existing and historical channels and existing drainage constructed features, regardless of ownership, within Town boundaries (and in the ETJ if possible) to identify potential sites where natural floodplain functions could be improved.

Action 2: Seek funding and implement stream and riparian restoration projects that enhance floodplain functions.

Objective 3: Educate, increase awareness, and work with landowners along the creeks to keep the drainages upstream of the Town clear of debris, buildings and other obstructions.

Action 1: Develop and distribute brochure to each landowner along the creeks about importance of floodplains and how to keep them functioning properly.

Action 2: Work with Grant County personnel in charge of floodplain management to educate & increase awareness of landowners in Extra Territorial Jurisdiction and higher in watershed.

Action 3: Work towards a goal of creating agreements between the landowner and the Town/County to allow Town/County assistance in the removal of downed trees and other debris that could cause obstruction and flooding problems downstream.

**Benefits:**

In general, it costs less to proactively manage floodplains than to fix damage from flooding. Cost benefit analysis could include calculating and comparing costs related to losses from flood events, pre-flooding costs like clearing culverts and maintaining functioning floodplains and avoided costs from risk reduction.

Preventing impairments in healthy watersheds protects valuable ecosystem services that provide economic benefits to society and prevent expensive replacement and restoration costs. Maintaining riparian connectivity and natural processes in the landscape provide a supporting network for ecological integrity, ensuring the sustainable and cost effective provision of clean water over time.

**G10. Land and Urban Forest Health: Land Management**

**Recommendation Statement:** Protect and conserve land and soil resources to decrease wildfire events, reduce soil erosion, and increase soil moisture.

**Rationale:** Sustainable land use and development involves protecting and conserving land and soil resources through a) pro-active land-use planning and implementation, b) decreasing loss of vegetation and soil from wildfires and c) extreme weather events.

**Responsible Partners:** Office of Sustainability (Lead), Public Works (Co-Lead), Utilities Department, GRIP, State Forestry, Emergency Services.

**Goal 1. Consider, in a practical and non-onerous approach, defensible space around structures, both public and private, throughout the Town of Silver City and surrounding lands.** [Note: Should grant funding not be available prior to the next fire season in CY2014, consideration should be given to starting this work strategically in high risk areas throughout the community] (Ref. sections G12, Drought and G13, Disasters Mitigation)

Objective 1: Develop and seek State Forestry approval for a Community Wildfire Protection Plan (CWPP) for both the Town and the Extraterritorial Jurisdiction (ETJ).

Action 1: Coordinate and contribute as appropriate with ongoing efforts in section G12, Drought and section G13, Disasters Mitigation.

Action 2: Evaluate the inclusion of green infrastructure and recommend as

appropriate to direct water flows for vegetation maintenance assistance or other fire prevention purposes.

**Goal 2. Reduce soil erosion and increase soil moisture on private and public lands and decrease flooding from stormwater runoff.**

Objective 1: Update land use plan to include soil conservation and green infrastructure for stormwater management, identifying high risk areas.

Action 1: Coordinate with Town staff to identify high risk areas and update the land use plan. Solicit public participation in the land use plan update.

Action 2: Continue to pursue funding for Capital Improvement projects, and seek additional outside funding to implement high priority action items

Objective 2: Implement actions, on a case basis, in high risk areas to conserve soil and mitigate stormwater runoff.

Action 1: Construct infrastructure projects that capture and control release, increase ground infiltration and increase vegetative uptake.

Action 2: Integrate these types of infrastructure projects into maintenance and replacement projects.

Objective 3: Educate public on variety of methods to decrease soil erosion and increase soil moisture.

Action 1: Provide information via public media, provide technical assistance.

Action 2: Construct water harvesting demonstration projects on Town property.

**Benefits:** In general, it costs less to proactively maintain healthy land resources than to restore land and property that has been damaged or destroyed. Cost benefit analysis for wildfire mitigation could include calculating and comparing costs related to losses from fire events, pre-suppression costs like clearing defensible space and avoided costs from risk reduction. Cost benefit analysis for excessive erosion and runoff could include comparing costs related to losses from soil compaction/erosion and increased impervious areas, preventative costs (construction, maintenance and contract costs) and benefits of avoided costs, including street cleanup after storms and sedimentation and water contamination.

**G11. Land and Urban Forest Health: Urban Forest Management**

**Recommendation Statement:** Conserve and protect urban forest resources, including trees on public and private lands, to maximize the multi-value benefits, and to decrease threat of catastrophic wildfire.

**Rationale:** Trees provide many goods and services such as decreases in temperature and energy use, improved air quality, decreased runoff and erosion, noise abatement, increased property values, and pleasant recreation areas.

**Responsible Partners:** Office of Sustainability (Lead), Public Works (Co-Lead), Utilities Department, GRIP, State Forestry, USFS/Gila NF, NRCS, GC Soil and Water District.

**Goal. Implement the Community Forest Management Plan.**

Objective 1: Manage and maintain the urban forest.

Action 1: Train new maintenance crew members in best management practices (trimming, mulching, irrigation, removal of hazard trees, replacement with a diversity of drought-tolerant native trees).

Action 2: Monitor urban forest health to plan/accomplish management activities.

Objective 2: Manage urban forest to decrease wildfire risk.

Action 1: Remove fuels that increase wildfire risk.

Action 2: Increase enforcement of land use codes that decrease wildfire risk.

Objective 3: Educate and increase awareness of all citizens on importance of trees, including reducing the urban heat island effect, enhancing recreational opportunities, improving quality-of-life, improving air quality, saving energy, and mitigating and adapting to climate change.

Action 1: Develop and complete a tree care pamphlet to inform residents about tree values and management. Distribute to all households and businesses.

Action 2: Implement urban forest restoration demonstration projects on Town-owned lands.

**Benefits:**

Values, functions, goods and services produced by community trees and forests can be evaluated for economic and quality of life components. While quality of life values are difficult to quantify, some of the economic factors include risk management costs (liability and safety); value-added/capital increases to tree values; appreciation of tree and forest assets; maintenance costs of tree and forest assets; and, level of management effectiveness and efficiency (total quality management of community trees and forests).

## **G12. Drought (Fire, Wind and Dust)**

**Recommendation Statement:** Prepare for an extended, hot drought.

**Rationale:** Drought, in conjunction with wind and heat, causes local impacts of wildfire and dust, threatening property, life and health.

**Responsible Partners:** SC Police Department (Emergency Management), SC Fire Department, Pinos Altos VFD, Tyrone VFD, GC Local Emergency Preparedness Committee (LEPC), Neighborhood Alliance, Silver Public School System, the Gila Regional Medical Center, Grant County Soil and Water District, Natural Resources Conservation Services, and the OS Sustainability Task Force. (Lead organization to be determined).

### **Goal 1: Prepare for the projected extended drought by becoming *Drought Ready*.<sup>14</sup>**

Objective 1: Implement the June 2013 *Silver City Water Conservation Plan (WCP)*.<sup>15</sup>

Action 1: Approve the *WCP*

Action 2: Obtain NMFA funding for *WCP* implementation.

Objective 2: Use the *Drought Ready Communities* process to address increasing preparedness for drought impacts of wildfire and dust. (See also Land and Urban Forest Health, sections G10 and G11).

Action 1: Form a leadership team and gather community perceptions of how drought has affected overall community well-being in the past.

Action 2: Gather data on water and climate.

Action 3: Initiate Outreach, Education and Support

- a) Participate in the Annual Preparedness Forum (see Community Outreach, Education and Support).
- b) Develop a *Drought Resources Kit* of educational, public awareness, climatological, hydrological, planning and mitigation resources.
- c) Publicize drought response actions during drought.

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<sup>14</sup> The *Drought-Ready Communities* Project is an initiative of NOAA, the National Drought Mitigation Center and partners.

<sup>15</sup> The TOSC-adopted GC Local Hazard Mitigation Plan identifies three mitigation measures for drought – all water conservation measures: 1) reduce water usage by Xeriscaping; 2) install low flow plumbing at government facilities; and 3) install gray water irrigation systems at the GC Detention Center.

## Goal 2: Alleviate the drought impact of wildfire.

Objective 1: Consider becoming a *Fire-Adapted Community (FAC)*<sup>16</sup>.

Action 1: Consider the Wildland Urban Interface (WUI) Fire hazard mitigation actions of section G13, Disasters Mitigation: defensible space around critical facilities – consider need based on location and type of vegetation; Community Wildfire Protection Plan (CWPP) and thinning of woody fuels; and education, outreach and support.

Action 2: Concurrently with Action 1 above, learn more about *FAC* and recommend the level of participation appropriate for the Silver City area.

Objective 2: Keep water on the land near homes and facilities to create fire resistant green spaces.

Action 1: Use a variety of water harvesting and reuse methods.

Objective 3: Consider the need for fire codes, and implement as determined to be necessary.

Action 1: Attend a conference on fire code, establish contacts and gather data.

Action 2: Evaluate what other municipalities are doing and make recommendations for Silver City.

Action 3: If recommendations above are accepted, develop and pass a non-onerous ordinance requiring implementation and maintenance of defensible space as defined in the CWPP.

## Goal 3: Alleviate the drought impact of dust.

Objective 1: Document the impact of dust in southern NM.

Action 1: Collaborate with Dave DuBois, NM State Climatologist.

Objective 2: Evaluate dust ordinances of other municipalities and make recommendations for Silver City.

**Benefits:** Water conservation efforts will be revenue-neutral from a combination of savings and rate adjustments. For hazards, on average, a dollar spent by FEMA on hazard mitigation (actions to reduce disaster losses) provides the nation about \$4 in future benefits<sup>17</sup>.

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<sup>16</sup> *Fire Adapted Communities* is a relatively new initiative of the U.S. Fire Administration (USFA)/FEMA aimed at strengthening a community's resiliency to wildfire by combining existing successful efforts such as the Firewise Communities/USA Program, Ready, Set, Go!, and Community Wildfire Protection Plans under one collaborative umbrella.

<sup>17</sup> *Natural Hazard Mitigation Saves*, National Institute of Building Science Multihazard Mitigation Council

### **G13. Disasters (Mitigation/Prevention)**

**Recommendation Statement:** Update the Town related portions of the Town-adopted (2008) *Grant County Local Hazard Mitigation Plan* (HMP), apply for funding, and implement approved projects.

**Responsible Partners:** SC Police Dept./Emergency Management, SCFD, Pinos Altos VFD, Tyrone VFD, GC Local Emergency Preparedness Committee (LEPC), GC Emergency Manager, Neighborhood Alliance, Silver Public School System, the Gila Regional Medical Center, Grant County Soil and Water District, Natural Resources Conservation Services, USFS Gila NF, State Forestry, and the OS Sustainability Task Force. (Lead agency for the Town to be identified)

**Rationale:**

- Grant County Local Hazard Mitigation Plan was adopted by Town Resolution No. 2008-32 with little progress made towards its implementation/maintenance.
- Likelihood of certain hazards, especially continuing drought and Wildland-Urban Interface (WUI) wildfire, is increasing.

**Goal 1: “Improve the ability of” Silver City “to make” the community and the municipality “less vulnerable to hazards”.** (All quotes from original adopted HMP)

Objective 1: Establish a Preparedness Commission to be responsible for updating the HMP, selecting projects, applying for funding, project implementation/oversight, and annual reporting to the Town Council re progress, issues and recommendations.

Objective 2: “Enact and enforce regulatory measures that ensure the community will be safer from harm”. )

Action 1: Incentivize Pre-Disaster Hazard Mitigation to reduce enforcement.

**Goal 2: “Reduce injuries and damages from Hazards”.** (All quotes from original adopted HMP)

Objective 1: Develop a Community Severe Weather Plan<sup>18</sup> (**new**)

Action 1: Incorporate aspects of the NWS *Storm Ready* Program as needed.

Objective 2: “Establish a method of providing information to citizens of the” Town and “County of hazard mitigation activities to ensure the individual preparedness needs of residents”.

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<sup>18</sup> Governor Martinez, Proclamation; May 31, 2012.

Action 1: Participate in Annual Preparedness Forum for community training and discussion (see section G1, Community Outreach, Education and Support).

Objective 3: "Create or install protective measures in public facilities" and the Town in general .

### **Mitigation Actions**

- a. Wildland Urban Interface (WUI) Fire:
  1. "Create defensible space and remove invasive species around critical facilities." Establish an annual budget for maintenance of same (**new**).
  2. Consider defensible space program in vulnerable/at risk neighborhoods (**new**).
  3. Develop and seek State Forestry approval for a Community Wildfire Protection Plan (CWPP) for both the Town and the Extraterritorial Jurisdiction (ETJ) [see Land and Urban Forest Health section 10], and apply for funding for thinning of woody fuels (**new**).
  4. Enhance fire prevention education (including defensible space), outreach and support in collaboration with the SCFD, PAVFD, the Tyrone VFD and the Neighborhood Alliance. Provide speakers, information and materials at the annual Preparedness Forum (**new**).
- b. Lightning: "Installation of lightning rods...and surge protectors on electrical equipment at critical facilities...Grounding metal bleachers at sport complexes."
- c. Hail:
  1. "Install over-head cover at government vehicle parking lots".
  2. Overlay windows with "Ballistic laminate".
- d. Wind:
  1. Perform "tree management around power lines...in partnership between government and PNM".
  2. "Construct covered storage areas at government facilities."
  3. Debris disposal: "waive disposal fees for 2 week period immediately following a *storm* event."
- e. Drought: Implement draft June 2013 Silver City Water Conservation Plan (**new**).
- f. Flooding: "Increase freeboard of new critical facility construction" (including the new Town Campus Buildings [**new**]) "to 18 inches."
- g. Heat:
  1. "Create a list of special populations for welfare visits."
  2. "Provide portable air conditioners to low income residents" through donations and volunteers.
  3. Establish cooling centers in places such as the recreation center where residents can go during heat waves.

**Benefits:** A safer community; and on average, a dollar spent by FEMA on hazard mitigation (to reduce disaster losses) provides the nation about \$4 in future benefits<sup>19</sup>.

## **G14. Fiscal Conservation**

**Recommendation Statement:** Reduce demand for resources and services.

**Responsible Partners:** Town Manager (Lead), Finance Department, Office of Sustainability, municipal Departments.

**Rationale:** Given the state of the National, State and local economy, the Town may save money by initiating a wider conservation of resources within the municipality.

**Goal 1: Initiate a broader conservation of energy in municipal buildings and fleet. (See Energy, section G16).**

**Goal 2: Initiate conservation of water use in municipal assets: buildings, parks and ballfields as appropriate. (See Water, section G15).**

**Goal 3: Invest in infrastructure that saves money based on nature of use and return-on-investment (ROI).**

Objective 1: Invest while interest rates remain low.

Action 1: Identify, evaluate and select projects in sections Water G15, Energy G16 and Waste G17 that can provide an attractive ROI.

**Goal 4: Enhance capacity to apply for, win, perform and administer Federal and state grants.**

Objective 1: Remain eligible for Federal and State funding

Action 1: Maintain key plans in current condition. Establish a schedule for regular plan review, update and reporting. Key documents like public safety should be reviewed and reported annually.

Objective 2: Invest in building grant writing capacity.

Action 1: Determine level of grant writing capacity needed.

Action 2: Evaluate investment in diverse grant writing sources (SWCOG, municipal departments, and vendors.

Action 3: Choose approach, implement and maintain.

Objective 3: Invest in building administrative capacity for grants management.

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<sup>19</sup> *Natural Hazard Mitigation Saves*, National Institute of Building Science Multihazard Mitigation Council

Action 1: Provide support for contract oversight – grantor and vendors; contract reporting and revision; reimbursement requests; account management support.

**Benefits:** Where return on investment is attractive, projects or programs may result in significant annual savings, which in turn result in more available options and flexibility.

## **G15. Water (Quantity, Quality and Delivery Infrastructure)**

**Recommendation Statement:** Water (Quantity, Quality and Delivery Infrastructure): Protect, manage and conserve water resources to ensure the long-term future supply and delivery.

**Rationale:** Clean, available and affordable water is the lifeblood of the community. Water conservation can prevent or delay the need for expensive capital expenditures for developing new water supplies and acquiring additional water rights, and can provide cost savings in reduced pumping and water and wastewater treatment costs.

**Proposed Responsible Partners:** Utilities Department (Lead - Infrastructure), Office of Sustainability (Lead – water conservation), Community Development Department, Grant County Water Commission, and GRIP.

### **Goal 1. Implement water use efficiency projects, programs and policies identified and recommended in the 2013 Water Conservation Plan.**

Objective 1: Decrease outdoor water use

Action 1: Implement “smart” irrigation project in Town parks.

Action 2: Implement rainwater and stormwater harvesting projects to water outdoor vegetation (both public and private).

Objective 2: Decrease water waste

Action 1: Install automatic-read meters - allows for instant feedback on use and leaks, data accuracy is increased and detailed data on use by day and hour for each account.

Action 2: Water waste ordinance allowing code enforcement officers to write tickets for customers that allow water to run off their property.

Objective 3: Changes in water rate structure

Action 1: Maintain current rate structure that encourages water conservation by including higher unit rate charges for higher water use. May need to increase rates over time to offset loss of revenue from lower water usage.

Action 2: Water conservation ordinance (with drought triggers) – time of day watering restrictions, restrictions on car washing or other specific

activities during drought.

**Goal 2. Increase community education on water use efficiency.**

Objective 1: Identify top 25 water users

Action 1: Dialogue with top 25 users about water use.

Action 2: Encourage implementation of outdoor water conservation.

Objective 2: Conduct tours of completed water harvesting projects.

Action 1: The Volunteer Center and others that harvest rainwater.

Action 2: Stormwater harvesting projects

Objective 3: Provide specific data in water bills to compare usage between yrs/mos.

Action 1: Follow up with newspaper and other forum articles about water savings.

Action 2: Recognize those who decrease water use through public media, rewards.

**Goal 3. Support technological improvements for water and wastewater infrastructure.**

Objective 1: Explore ways to reduce energy used to pump and treat water resources

Action 1: Implement more renewable energy production projects like WWTP, i.e. solar array to offset electricity used to pump water.

Action 2: Install backup systems in case of grid failure.

Objective 2: Capital improvement projects to replace old infrastructure

Action 1: Continue to pursue funding for Capital Improvement projects.

Action 2: Integrate green infrastructure into maintenance/replacement projects.

Objective 3: Increase efficiency in billing and data collection – currently, a zero is input for customers using less than 1,000 gal/mo. Also, manual data collection can be inaccurate.

Action 1: Install new billing software that increases efficiency in data collection (may come with automatic read meter installation).

Action 2: Document uses less than 1,000 gal/mo.

**Benefits:** Water conservation will be revenue-neutral from a combination of savings and rate adjustments. Projects implemented to conserve water from Town services and municipal building/personnel use will save the municipality \$10.25 per 1000 gallons.

## **G16. Energy**

**Recommendation Statement:** Increase Energy Security for critical Town functions, and reduce the Town's demand and cost for energy.

**Responsible Partners:** Office of Sustainability (Lead), PNM, NMEMNRD, Community Development Dept., Utilities Dept., SCPD, SCFD, volunteers Jim Kerstetter and Kurt Albershardt, and all municipal departments.

### **Rationale:**

- Proactively implementing steps to achieve secure, reliable and affordable energy may be less costly than paying for the results of not being prepared with expected rising energy prices, rising temperatures, and continued climate variability.
- The risk of extended electrical outages may be increasing due to larger and more frequent wildfires, projected increase in energy demand (e.g., air conditioning).
- NM/EMNRD is encouraging municipalities to develop and implement a local *Energy Assurance Plan*<sup>20</sup>.

### **Goal 1: Ensure that the Town's critical functions, including communications and emergency services, are energy secure.**

Objective 1: Develop an Energy Assurance Plan (EAP)<sup>21</sup> that establishes the future actions in response to the loss of services within the Town.

Action 1: Address issues of redundancy, energy diversity and backup.

Action 2: Develop the EAP in collaboration with PNM.

Objective 2: Provide backup power for the a) servers at City Hall that support municipal computer systems, especially Public Safety; and b) the Public Safety Building itself.

### **Goal 2: Conserve energy in residential buildings, municipal buildings and in Town operations.**

Objective 1: Track energy use and cost of all municipal operations, including vehicle fuel use.

Action 1: Monitor monthly energy use and cost.

Action 2: Create spreadsheet to record and display results.

Objective 2: Reduce energy use in residential, business, municipal buildings and municipal fleet.

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<sup>20</sup> NM Energy Assurance Plan, December 2012

<sup>21</sup> Ibid.

Action 1: Perform energy audit on municipal buildings and implement cost effective measures.

Action 2: Consider revising Town building codes for all substantial residential rehab projects to achieve higher performance in energy conservation.

Action 3: Consider all new municipal buildings be designed to LEED Silver.

Action 4: Consider all new vehicle purchases achieving a minimum of 20% higher fuel economy.

Objective 3: Engage and challenge Town employees in energy reduction efforts.

Action 1: Create energy saving information for all Town employees.

Action 2: Create incentives for departments or sections that save the most energy.

### **Goal 3: Increase the use of renewable energy.**

Objective 1: Increase municipal use of solar energy

Action 1: Continue efforts to utilize solar PV for municipal water pumping

Action 2: Continue efforts to utilize solar PV on municipal buildings.

Action 3: Determine economic feasibility of solar thermal for hot water heating at Fire Stations and City Shop.

Objective 2: Support efforts to establish “Community Solar” (ref Definitions) in New Mexico.

Action 1: Stay abreast of, and provide input into PNM’s concept development for community solar.

Action 2: Continue to advocate for a community solar pilot project in Silver City.

**Benefits:** Avoiding some unpredictable and increasing costs for energy paid by the municipality, and possible electrical outages. With the recommended actions, the Town and citizens will have more money to spend locally and will have a more secure energy and water supply.

As solar PV prices decrease, investments in systems will be more cost competitive, making outright acquisition (with low interest rate) an attractive option to decreasing Renewable Energy Credits (RECs). The wastewater plant by itself will save the Town an estimated 4 million dollars over a 20 year period. Money saved can be put to other critical needs.

## **17. Waste**

**Recommendation Statement:** Conservation of natural resources through reduction of waste by increased recycling and composting will help Silver City become more resilient and avoid future costs associated with waste disposal.

**Responsible Partners:** Office of Sustainability (Lead), WNMU, Silver School District, Gila Regional Medical Center, SW Solid Waste Authority, NMED Solid Waste Bureau, NM Recycling Coalition, Green Chamber of Commerce, SC Recycling Committee.

**Rationale:** Waste reduction through recycling and composting can reduce the amount of solid waste entering the landfill, and delay the costly opening of a new landfill.

### **Goal 1: Increase the rate of recycling in Silver City to 50% by 2030.**

Objective 1: Increase participation in curbside recycling.

Action 1: A Pay-As-You Throw rate structure for trash to encourage recycling

Action 2: Move to automated collection of recycling for all households.

Objective 2: Increase commercial recycling participation.

Action 1: Work with WNMU, Silver School District and Gila Regional Medical Center to encourage more recycling.

Action 2: Work with New Mexico Recycling Coalition and Green Chamber of Commerce to promote business recycling.

### **Goal 2: Implement a plan to compost organic wastes in Silver City.**

Objective 1: Divert woody biomass from landfill.

Action 1: Purchase a trailer mounted chipper or wood grinder for woody materials such as from urban forest fuel removal.

Action 2: Use chipper for woody biomass taken to landfill and make resulting mulch available for residential and municipal use.

Action 3: Provide chipper to neighborhoods wishing to create defensible space.

Objective 2: Divert food and green waste from trash stream.

Action 1: Provide education on backyard composting.

Action 2: Create public-private partnership to establish a local/regional large scale composting operation.

Action 3: Establish weekly collection program for residential food & green waste.

**Benefits:** The potential costs involved in opening a new landfill when the current landfill reaches capacity, in an estimated twenty years at current disposal rates, could be considerable. The amount of money actually saved through recycling depends on the efficiency of the recycling program and the market rates for various commodities. Silver

City will start to save money when they treat recycling as a replacement for their traditional waste system rather than an add-on to it.

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**Appendix 1:**  
**Adaptation Addendum 2,**  
**Silver City Climate Action Plan**

**ADDENDUM 2: CLIMATE CHANGE ADAPTATION,**

**Recommendation:** Enhance the Town’s resilience to the effects of a hotter and drier climate through **sustained community education**, project implementation as may be approved, and other actions focused on government operations, residences, businesses and the area’s ecosystem.

**Rationale**

**Hotter and dryer trends for the Southwest** are projected over the course of this century. According to the *National Climate Assessment 2009* of the U.S. Global Change Research Program, climate impacts in the Southwest will include the following (bold added):

1. “**Water** supplies will become increasingly scarce, calling for tradeoffs among competing uses, and potentially leading to conflict.”
2. “**Increasing temperature, drought, wildfire, and invasive species** will accelerate transformation of the landscape.”
3. “Increased frequency and altered timing of **flooding** will increase risks to people, ecosystems, and infrastructure.”
4. “Unique **tourism** and recreation opportunities are likely to suffer.”
5. “Cities and **agriculture** face increasing risks from a changing climate.”

The International Energy Agency (IEA), in its November 9, 2011 press conference, expressed serious concern about rising global temperature.

The rationale for adaptation is straight forward: it may be better to prepare for events to come, than to be solely reactive.

**Greenhouse Gas Emission Reduction (tons)**

Adaptation efforts will incorporate mitigation measures to the greatest extent practical. This will be addressed as part of specific recommended efforts to reduce vulnerability risks.

**Cost/Benefit**

Specific Cost/Benefit cannot be established at this time as the specific measures to be taken for the Silver City area must await the results of a vulnerabilities analysis. However, the literature consistently states that waiting to prepare, as conditions worsen, will be more expensive. The benefit is no less than an enhanced ability of the Town to adapt to what science is expecting.

**Implementation Plan**

1. Develop working relationships with the CLIMAS Program (Climate Assessment for the Southwest) at the Institute of the Environment, University of Arizona (UA)) and other partners. Obtain a copy of the March 2012 CLIMAS Report to NOAA for the National Climate Assessment 2013 Report.
2. Office of Sustainability should perform the following:
  - a. Prepare a preliminary climate impact and vulnerability analysis for the greater Silver City area, under the guidance of CLIMAS.
  - b. Attend the May 29-31, 2012 2<sup>nd</sup> Intn’l Conf on Climate Change Adaptation at UA.
  - c. Begin development of a Climate Change Adaptation Plan, identifying strategies, partners and projects to address higher risk vulnerabilities (e.g., food security (cost/availability), public health (increased smoke, dust, and windborne disease) and storm damage (water/wind). Apply for funding (e.g., Kresge Foundation) to complete the Plan.
3. Implement recommended and approved actions in Climate Change Adaptation Plan.

**Appendix 2:**

**Definitions**

# Definitions

**Adaptation:** planning and preparing for the changes that are predicted by the science (including the NM State Climatologist) to occur.

**Adapted Lifestyle:** with regard to hazards and uncertainty, the change in habits and behavior by individual residents that would be more supportive of protecting life, property and resources for their families and neighbors.

**Adaptive Capacity:** the ability of a system to accommodate change with minimal disruption or significant additional cost.

**Arid:** A region is arid when it is characterized by a severe lack of available water, to the extent of hindering or preventing the growth and development of plant and animal life. (Wikipedia, 2013)

**Citizen Auxiliary (Existing):** provides non-firefighting support (e.g., food during an extended incident) to the Department so that fire fighters do not have to be concerned directly with those functions after response to an incident.

**Climate Change:** a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. (Wikipedia, 2013)

**Climate Variability:** characterized by three phenomena:

1. Variations that are directly driven by a purely periodic external force, like the diurnal or the seasonal cycle of insolation;
2. Variations due to the non-linear interplay of feedbacks within the climate system, e.g., a temperature drop within the system will increase the amount of snow and ice, and thus lead to further cooling; and,
3. Variations associated with random fluctuations in physical or chemical factors such as aerosol loading due to volcanic eruptions

(Michael Ghil, *Natural Climate Variability*, UCLA, 2002)

**Community Solar:** Community solar (sometimes referred to as community solar gardens) is ideally located within a town limit and serves a number of potential users (residents, business and local government) who either pay to own a piece of it or

subscribe to the project without owning the equipment. Two ownership scenarios may apply:

1. In a community-owned solar garden, electricity from the solar panels goes to the grid and is sold to the local utility, which then credits the sale to the owners of the solar garden.
2. In a utility-owned solar garden (a possible scenario in New Mexico), electricity from the solar panels goes to the grid. The utility then credits the use of the generated electricity to the subscribers of the solar garden project.

In either case, the credits then show up on customers utility bills. The goal is to allow renters, or any entity that doesn't or can't put solar on their rooftops, to still benefit from localized solar electricity generation, which is encouraged by federal and many state governments through rebate and tax incentive programs.

(<http://gigaom.com/2011/07/22/community-solar-gardens-making-solar-accessible/>)

**Conservation:** an ethic of resource use, allocation, and protection. Its primary focus is upon maintaining the health of the natural world, its fisheries, habitats and biological diversity. Secondary focus is on materials conservation and energy conservation, which are seen as important to protect the natural world. (Wikipedia, 2013)

**Defensible space:** Defensible space is the required space between a structure and the wildland area that, under normal conditions, creates a sufficient buffer to slow or halt the spread of wildfire to a structure. Ref: New Mexico *Ready, Set, Go!*, Wildland Fire Action Guide,

<http://www.emnrd.state.nm.us/SFD/FireMgt/documents/RSGActionGuideNM.pdf>.

**Drought Ready Communities:** a guide to preparing and documenting a set of actions to take before and in response to a drought. (National Drought Mitigation Center, <http://drought.unl.edu/Planning/PlanningProcesses/DroughtReadyCommunities.aspx>)

**Ecosystem:** a community of living organisms (plants, animals and microbes) in conjunction with the non-living components of their environment (e.g., air, water and mineral soil), interacting as a system. (Wikipedia, 2013)

**Energy Assurance:** energy disruption prevention. (NMEMNRD, *State of New Mexico Energy Assurance Plan Final Report*, June 2012)

**Energy Security:** the uninterrupted availability of energy sources at an affordable price. (International Energy Agency; <http://www.iea.org/topics/energysecurity/>)

**Evidence-based:** informed by rigorously established objective evidence (Wikipedia, 2013)

**Exposure:** the contact between a system and a perturbation or stress. [Kasperson, et al. (2002)]

**Extraterritorial Jurisdiction (ETJ):** The ETJ (extraterritorial jurisdiction, also called the extraterritorial zone or ETZ) of the Town covers the three (3) mile zone outside of city limits over which the Town has planning and platting jurisdiction.  
([http://www.townofsilvercity.org/r/town\\_of\\_silver\\_city\\_NM.php?r=67,p7gkm](http://www.townofsilvercity.org/r/town_of_silver_city_NM.php?r=67,p7gkm))

**Flexibility:** a ready capability to adapt to new, different, or changing requirements; adaptable. (Webster's Dictionary)

**Hazard:** a situation that poses a level of threat to life, health, property, or environment (Wikipedia, 2013); wildland fire, lightning, hail, wind, drought, flooding, tornado and heat (Grant County Local Hazards Mitigation Plan).

**LEED:** Leadership in Energy and Environmental Design is a rating system for building construction that addresses the entire building lifecycle recognizing best-in-class building strategies. (U.S. Green Building Council; <http://www.usgbc.org/leed/rating-systems/new-construction>)

**Mitigation:**

- Mitigation (disaster) is the ongoing effort to lessen the impact of disasters on peoples' lives and property through damage prevention and flood insurance. (FEMA)
- Mitigation (climate) refers to the actions being taken to limit the magnitude and/or rate of long-term global warming induced climate change, and generally involves reductions in greenhouse gases. (Wikipedia, 2013)

**Preparedness:** a "set of actions that are taken as precautionary measures in the face of potential disasters" (Wikipedia). Potential disasters are both those that unfold over time, i.e., extended drought, as well as those that happen quickly (e.g., wildfire).

**Preparedness Commission:** a proposed Town commission to be responsible for updating the Hazard Mitigation Plan, selecting projects and applying for funding, project implementation and oversight, and annual reporting to the Town Council re progress, issues and recommendations.

**Protection (Community):** A set of actions to prevent loss of life and property to the community, its residents and its environment.

**Public/Private Partnerships:** a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies (Wikipedia, 2013)

**REAP Grant:** Rural Energy for America Program (REAP) Grants for Renewable Energy Systems for small businesses, farmers and ranchers. (USDA, Rural Development; [http://www.rurdev.usda.gov/ORreap\\_renew\\_grants.html](http://www.rurdev.usda.gov/ORreap_renew_grants.html)).

**Redundancy and diversity:** redundancy usually indicates simple replication of a component in identical copies, as adopted against random hardware failures. The term diversity has come to be used especially for multiple versions in which redundant versions are deliberately made to be different. (Bev Littlewood and Lorenzo Strigini, Centre for Software Reliability)

**Resilience:** multiple definitions are provided given the breadth of the word's use:

- The ability of a community to absorb a disturbance while retaining its essential functions. "Building Resilient Communities: A Preliminary Framework for Assessment", September, 2010; *Homeland Security Affairs*, Naval Postgraduate School Center for Homeland Defense and Security (CHDS), <http://www.hsaj.org/?fullarticle=6.3.6>
- "the positive ability of a system or company to adapt itself to the consequences of a catastrophic failure caused by power outage, a fire, a bomb or similar" event.<sup>1</sup> (Wikipedia, 2013)
- "...the capacity of a system, enterprise, or a person to maintain its core purpose and integrity in the face of dramatically changed circumstances." (Zolli, 2012)
- When referring to human systems, the term "resiliency" can be considered as a synonym of adaptive capacity. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures.
- When referring to natural systems, the amount of change a system can undergo without changing state.
- Tending to recover from or adjust easily to misfortune or change; flexible; adaptable. (Webster's Dictionary).

- The sustained ability of communities to withstand and recover from adversity. Resilient communities include healthy individuals and families with access to health care, both physical and psychological, and with the knowledge and resources to care for themselves and others in both routine and emergency situations. Enhanced Resilience is considered critical to mitigating vulnerabilities, reducing negative health consequences, and rapidly restoring community functioning. (US Dept. of Health and Human Services, Public Health Emergency: <http://www.phe.gov/Preparedness/planning/abc/Pages/community-Resilience.aspx>).

**Resilient Communities for America:** a national campaign that will mobilize hundreds of U.S. local elected officials—mayors, county executives, city council members, etc.—who pledge to create more resilient cities, towns, and counties, built to overcome our nation’s extreme weather, energy, and economic challenges. (<http://www.resilientamerica.org/>)

**Risk:** Likelihood of occurrence by 2030 when referring to a risk assessment in this Plan.

**Robustness:** "the ability of a [system] to resist change without adapting its initial stable configuration". (Wikipedia, 2013) {"...perhaps most counterintuitively, Resilience does not always equate with the *recovery* of a system to its initial state." (Zolli, 2012).

- Also, “capable of performing without failure under a wide range of conditions; strong. (Webster’s Dictionary)

**Sensitivity:** the extent to which a system or its components is likely to experience harm, and the magnitude of that harm, due to exposure to perturbations or stresses. [Kasperson, et al. (2002)]

**Solar PV:** Photovoltaic (PV) devices generate electricity directly from sunlight via an electronic process that occurs naturally in certain types of material, called semiconductors. Electrons in these materials are freed by solar energy and can be induced to travel through an electrical circuit, powering electrical devices or sending electricity to the grid. (Solar Energies Industry Association; <http://www.seia.org/policy/solar-technology/photovoltaic-solar-electric>)

**Storm Ready Program:** a NOAA/NWS nationwide community preparedness program that uses a grassroots approach to help communities develop plans to handle all types of severe weather. (<http://www.stormready.noaa.gov/index.html>)

**Sustainability:** from the word “sustain”, meaning “to endure” (Webster’s).

**Water Harvesting:** Rainwater harvesting captures, diverts, and stores rainwater for landscape irrigation and other uses. (City of Albuquerque; *Rainwater Harvesting, Supply from the Sky*; <http://www.slideshare.net/D6Z/y3h274>)

Other uses include landscape use, stormwater control, wildlife and livestock watering, in-home use, and fire protection. (Texas A&M AgriLife Extension Service; <http://rainwaterharvesting.tamu.edu/>)

**Vulnerability:** the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes; <http://weadapt.org/knowledge-base/vulnerability/vulnerability-definitions>.

The three components of vulnerability are the following:

- Exposure: the contact between a system and a perturbation or stress. [Kasperson, et al. (2002)]
- Sensitivity: the extent to which a system or its components is likely to experience harm, and the magnitude of that harm, due to exposure to perturbations or stresses. [Kasperson, et al. (2002)]
- Adaptive capacity: the capacity to accommodate change with minimal disruption or additional cost.

**Appendix 3:**

**Resilient Communities for America**  
**Agreement**

# Resilient Communities for America Agreement

**We, the mayors and local leaders of America, will lead the creation of more resilient cities, towns, and counties, built to overcome our nation's EXTREME WEATHER, ENERGY, and ECONOMIC challenges.**



## A CALL TO ACTION

Communities across the country are on the front lines of three related challenges: record-breaking extreme weather fueled by climate change, unreliable and costly energy, and ongoing economic uncertainty. As the pace of change quickens, city and county governments must work to make communities more “resilient”: able to bounce back from disruptions in a sustainable way and maintain a good quality of life for all. As local elected officials:

1. We urge state and federal leaders to support our local resilience initiatives and to take meaningful steps to build resilience and security throughout the nation.
2. We commit to building community resilience through our own local actions, such as the paths to resilience described below.
3. We commit to sharing our solutions, success stories, and annual progress with other local governments through the Resilient Communities for America online platform.

## PATHS TO RESILIENCE

### CLIMATE PREPAREDNESS

- Evaluating local vulnerabilities to extreme weather and a changing climate, from heat waves and air pollution to droughts and floods.
- Adopting and implementing preparedness policies that protect vulnerable populations and natural resources from extreme weather and other climate impacts.
- Reducing the community's carbon footprint to help reverse climate change and avoid the costs of adapting to more severe climate impacts.

### ENERGY SECURITY

- Transitioning to a renewable energy future to achieve greater energy independence, protect communities from price spikes, and ensure more reliable power during heat waves and other disruptions.
- Implementing energy efficiency programs that help residents, businesses, and municipal government save money and energy, lower carbon emissions, and reduce demand on the grid during severe weather events.

### INFRASTRUCTURE RENEWAL

- Investing in upgrades to community facilities to safely serve the needs of changing communities decades into the future.
- Creating new models to finance improvements and manage risks to community assets through engagement with the private sector.
- Harnessing innovations in information technology and green infrastructure to optimize performance and reduce costs through more efficient operation.

### ECONOMIC PROSPERITY

- Retaining and attracting investment by safeguarding businesses from extreme weather and ensuring reliable access to energy, water, and other key resources.
- Supporting the private sector in creating more diversified local economies that are more resilient to economic downturn, through job creation in sectors such as clean energy, advanced manufacturing, and local agriculture.

# Resilient Communities for America Agreement

## For Local Elected Official Signatories:



[www.resilientamerica.org](http://www.resilientamerica.org)

As a local elected official, I support the Resilient Communities for America Agreement.

Date: \_\_\_\_\_

Elected Official Name & Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Jurisdiction: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Elected Official's E-mail: \_\_\_\_\_

Staff Contact Name & Title: \_\_\_\_\_

Staff Phone: \_\_\_\_\_ Staff E-mail: \_\_\_\_\_

As an advocate for strong communities, I will assist the campaign in recruiting another five local elected officials as signatories. Please contact me at the e-mail address above.

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## For Other Government & Civic Leader Endorsers:

(Current and former governors, Congressional leaders, former local elected officials, federal agency leaders, military leaders, etc.)

As a civic leader, I endorse the Resilient Communities for America Agreement.

Date: \_\_\_\_\_

Name & Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Organization: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Appendix 4:**  
**Council Resolution**  
**-to be provided-**

Office of Sustainability

P.O Box 1188

Silver City, NM 88062

Contact: Denise Smith (575) 654-5117

[http://www.townofsilvercity.org/r/town\\_of\\_silver\\_city\\_NM.php?r=75,g2prb](http://www.townofsilvercity.org/r/town_of_silver_city_NM.php?r=75,g2prb)

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