



Sustainability Action Plan

Town of Cave Creek

September 21, 2009

Sustainability Strategy

Sustainability is a point in the future when a community meets all of its needs while remaining in balance with the natural flows and systems of the environment in ways that ensure a shared continuance of both.

Building a sustainable infrastructure is a collaborative responsibility of local government and the community. This plan provides guidance for community leaders of the Town of Cave Creek to create a sustainable vision that promotes long term health and viability of the Town, the community and the natural environment in which it resides. This plan identifies challenges and defines logical, measurable and systematic approaches to tackle each of the issues. It provides strategic planning so that priorities can be set, innovative approaches encouraged, partnerships established, and opportunities pursued when they match the shared goals. This plan establishes the foundation for a framework to guide the community in making smart decisions as we travel toward our sustainable future.

Like nature, communities are complex and diverse systems with multiple stakeholders and agendas. There can be many interpretations of the details of sustainability and different ideas about the best paths to reach the goal. This plan outlines the elements that the Town of Cave Creek has established as vital to reaching our sustainable future.

Key to this plan is the measurement of progress. For each element, baseline metrics are established and progress gauged and quantified. Periodic reports will be prepared so that the advancements made can be evaluated. This plan is organic, and as such, changes in methods to achieve the goals can, and should be encouraged, as new knowledge, technologies and approaches emerge.



Sustainability Strategy , continued.

This plan also recognized that a holistic approach is needed. As we are all connected in the community, so are the elements of this plan. No element is isolated without affecting the totality of the whole. Whenever possible, integrated solutions will be sought. Establishing partnerships with businesses, non-profits, and other government agencies with shared objectives will be promoted. Community members are encouraged to work with the Town to implement the change. The Town of Cave Creek recognizes that it must be a leader in sustainable actions. As such, the Town encourages education, facilitates opportunities, and invites the sharing of local successes and collaboration on innovative approaches to meeting the sustainability goals. The Town will act as focal point for dissemination of information, so the businesses and residents in the community can progress collectively toward sustainability.



Key Elements of Sustainability

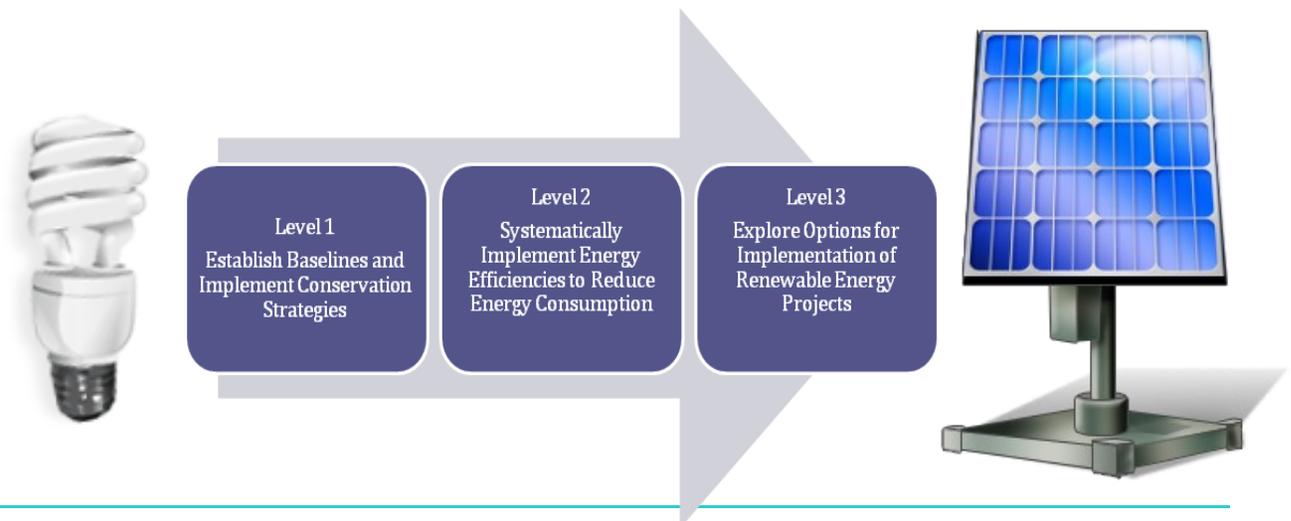
- ⇒ Energy Conservation, Efficiency and Renewable Energy
- ⇒ Green Building
- ⇒ Sustainable Development
- ⇒ Water Conservation and Management
- ⇒ Open Space and Habitat Protection
- ⇒ Community Gardening
- ⇒ Green Purchasing
- ⇒ Pollution Prevention, Waste Reduction and Recycling
- ⇒ Green Community Education and Involvement
- ⇒ Air Quality
- ⇒ Transportation
- ⇒ Reduce the Carbon Footprint



Energy Conservation, Efficiency and Renewable Energy

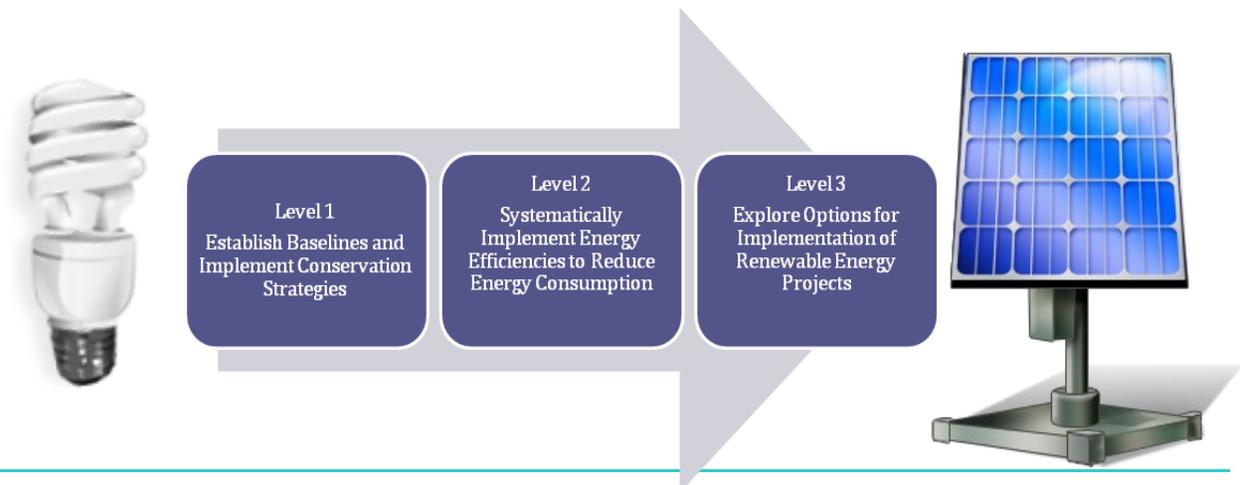
Energy is vital to our way of life. We strive to use it wisely, conserve it where possible, invest in energy efficient technologies, and obtain energy from sources that are renewable and sustainable.

- ◆ Analytically review energy consumption, identify opportunities for conservation, and implement procedural and operational changes to optimize energy efficiencies.
- ◆ Track energy consumption for each town facility on a regular and ongoing basis, and use the data to evaluate and make improvements in energy efficiency of each facility.
- ◆ Employ benchmarking principles that establish best management practices based on lessons learned from other entities so that the Town can continue to economize its energy use.
- ◆ Work with the local service providers to explore energy efficiency opportunities, utilize incentive programs and optimize the service rate plans for economy and energy savings.
- ◆ Systematically upgrade town facilities with energy conserving equipment and features to reduce overall energy consumption.



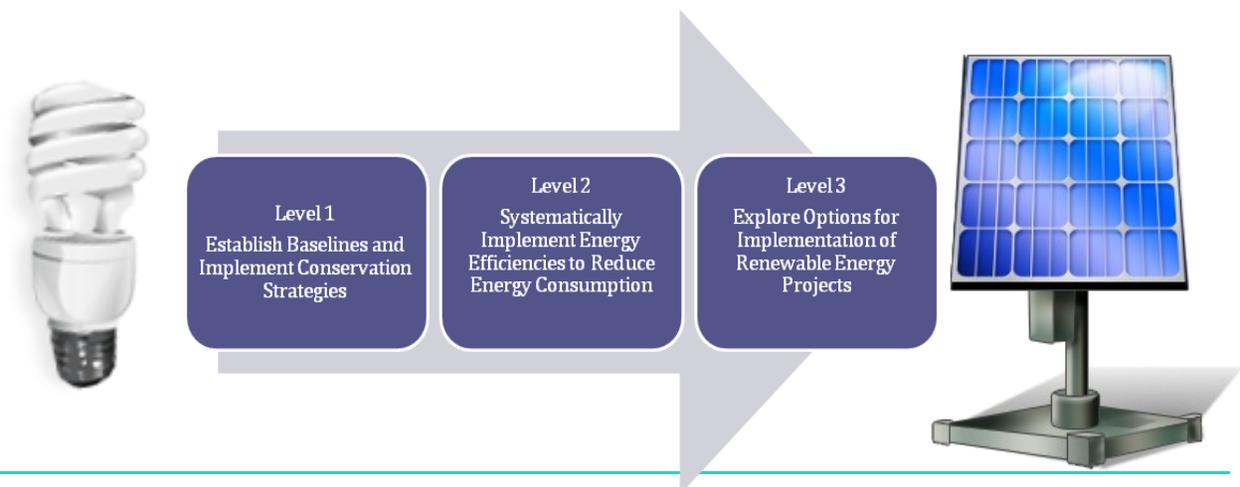
Energy Conservation, Efficiency and Renewable Energy

- ◆ Identify grant opportunities and special funding sources to help offset the cost of providing efficient and renewable energy programs.
- ◆ Support and actively promote the development of renewable energy resources.
- ◆ Strive for innovative ways to procure renewable energy for town facilities including the use of power purchasing agreements, other financing options, and incentives.
- ◆ Work with public and private partners to identify suitable sites for renewable energy facilities.
- ◆ Promote the adoption of building codes that support energy conservation and efficient structures.
- ◆ Educate employees about ways to increase energy efficiency in the work place.
- ◆ Recognize Town employees and volunteer committee members who identify new energy-conserving programs that are both practical and cost-effective.
- ◆ Provide conservation, energy efficiency, and renewable energy information, resources, and opportunities to the Town residents and businesses.



Energy Conservation, Efficiency and Renewable Energy

- ◆ Promote opportunities where incentives (such as grants, rebates, tax credits, etc.) can be used to as a catalyst for implementing energy conservation (i.e., weatherization programs), energy efficiency (i.e., Energy Star) or renewable energy options for Town residents and businesses.
- ◆ Provide regular reports to the Town on the progress made on energy conservation so that these successes can be shared.



Green Building

Green building is the practice of optimizing the use of resources, increasing the efficiency of new buildings, reducing their impact on human health and the environment through better site location, design, construction, operation, maintenance, and removal.

- ◆ Encourage environmentally sound "green building" alternatives that support sustainable desert living.
- ◆ Incorporate healthy, resource- and energy-efficient materials and methods in design, construction, and remodeling of buildings.
- ◆ Maximize the use of existing buildings, thereby conserving resources and the embodied energy from prior construction.
- ◆ Protect and enhance the natural elements of all development sites.
- ◆ Improve the energy efficiency of the building envelope.
- ◆ Encourage the selection of energy efficient equipment for all town operations and appliances.
- ◆ Use low impact building materials when suitable, cost-effective options exist.
- ◆ Integrate water-harvesting techniques into site planning and design where appropriate.
- ◆ Approve and implement Chapter 18- Renewable Energy Systems for the Town of Cave Creek Zoning Ordinances.
- ◆ Review the Town Building Codes and work towards the adoption of the energy codes that achieve significant energy consumption reductions.



Green Building

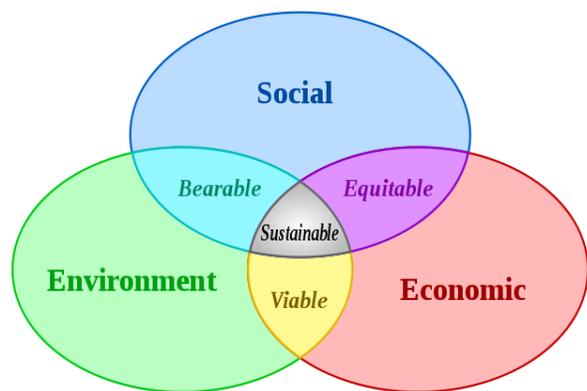
- ◆ Be knowledgeable in *Leadership in Energy and Environmental Design (LEED)* standards for green buildings which, by design, use less water and energy, generate less waste products, provide a more comfortable environment for their occupants, and contribute to a more sustainable environment..
- ◆ Support and encourage education in sustainable design and LEED principles for employees, community leaders and residents.
- ◆ Preserve natural dark sky conditions, to the maximum extent possible, through the selection of outdoor lighting fixtures that reduce sky glow impacts.
- ◆ Explore utility credits, grants and other incentives for financing green building construction, operation and maintenance.



Sustainable Development

Sustainable development is a pattern of resource use that aims to meet community needs while preserving the environment so that these needs can be met not only in the present, but also for future generations to come.

- ◆ Ensure growth is directed and sustained in areas within the Town without overtaxing the municipality's existing and planned service systems and physical infrastructure, and without seriously impacting the health, safety and general welfare of neighboring residents and guests of the community.
- ◆ Manage the finite and renewable environmental, economic, social, and technological resources of the community to ensure their sustainability and availability to serve future needs.
- ◆ Conserve significant natural resources and open space areas in growth areas and coordinate their locations to similar areas outside growth areas.
- ◆ Promote the public and private construction of timely and financially sound infrastructure expansion through the use of infrastructure funding and fiscal planning that is coordinated with development activity.
- ◆ Identify legal mandates and policies concerning future growth, development, revitalization, redevelopment, and expansion of public infrastructure and facilities, services and crime prevention within the Town boundaries.
- ◆ Promote development timing that is guided by the adequacy of existing and/or expandable infrastructure, services, and facilities.
- ◆ Encourage restoration and rehabilitation of older and original businesses, buildings and homes.
- ◆ Update the Town Core Plan to reinforce its role in achieving a more compact, pedestrian-friendly environment.



Water Conservation and Management

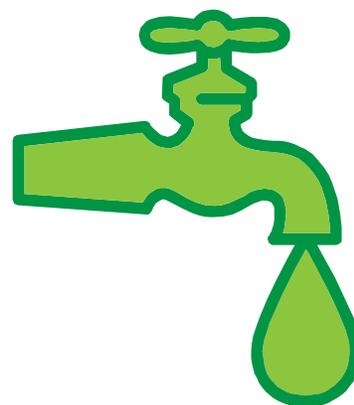
In a desert community, such as ours, water is a precious and finite resource. We need to recognize the natural hydrologic cycle of our environment and strive to live within its limits whether utilizing local available resources or water from the Central Arizona Project.

- ◆ Emphasize water conservation in the design of new or retrofitting of existing Town facilities.
- ◆ Require that landscaping use appropriate, native and drought-tolerant plants.
- ◆ Develop a Town Native Plant Policy.
- ◆ Plant species that are indigenous to the local area when landscaping next to natural open space or riparian corridors.
- ◆ Use water-conserving practices and technologies including rainwater harvesting, grey water plumbing, “smart” irrigation timers and controls, drip irrigation, flow meters, master valves, water audits, and hydro-zoning.
- ◆ Incorporate public education in Town landscaping projects including ; education on native plant species, demonstration gardens, rainwater harvesting techniques, use of grey-water, and permaculture concepts.
- ◆ Track Town water consumption and water utility expenditures separately so that the data can be used to evaluate, make improvements and track progress toward water efficiency of each facility.
- ◆ Encourage flood control projects that serve multiple purposes, including maintaining and creating wildlife habitat and habitat connectivity.
- ◆ Educate the customers of the Cave Creek and Desert Hills Water systems on the importance and practicality of water conservation.



Water Conservation and Management

- ◆ Actively seek innovative approaches to water conservation methods and education.
- ◆ Develop, fund and implement community water saving programs.
- ◆ Implement a landscape audit program for the Town and community to track and measure the performance of water conservation improvements.



Open Space and Habitat Protection

The Town of Cave Creek welcomes and embraces its natural surroundings and has already established a strong commitment to preservation of the natural habitat in which it resides. Cave Creek has shown its willingness to preserve environmentally sensitive land by the community purchase of the Spur Cross Ranch. Recently the State Trust Land annexation and development agreement was implemented to allow Cave Creek to protect additional native lands while also providing opportunities for sensible and community-oriented development.

- ◆ Protect and improve the quality of Town of Cave Creek's natural and urban environments as defined in the quality and quantity of its open spaces.
- ◆ Provide a variety of opportunities for passive and active outdoor recreational activities such as hiking, horseback riding, mountain biking and wildlife observation.
- ◆ In cooperation with Maricopa County Parks and Recreation and the Desert Foothills Land Trust, assist in the management of a comprehensive open space program that is responsive to public need, delivers high quality customer service, and exemplifies the Town's commitment to leadership in environmental affairs.
- ◆ In partnership with the Desert Foothills Land Trust and other land conservation organizations, acquire and develop open space identified as high priority through land dedication or purchase.
- ◆ Encourage landowners with land suitable for future development to dedicate open space or trail easements in advance at locations where there is an existing need to preserve open space, natural features, scenic views and trail access with the provision of credit toward future development.
- ◆ Provide attractive, well-maintained community recreational and park facilities that serve the entire community.
- ◆ Provide access to educational, recreational, and cultural services for all residents.



Open Space and Habitat Protection

- ◆ Establish and maintain connections between wildlife habitats by identifying and protecting corridors for unimpeded movement.
- ◆ Limit development in areas that may pose natural or man-made environmental hazards.
- ◆ Ensure that there is an accessible public park or recreational open space within three mile of every Town resident.
- ◆ Accelerate urban re-forestation.
- ◆ Encourage the use of indigenous or desert adapted plants.



Community Gardening

The simple act of touching the earth provides connections that are more far reaching than the mere physical contact. Mayor Francia in a Town Council meeting on August 4, 2008, appointed a citizens Green Advisory Committee and tasked them with envisioning, developing, promoting, growing and reaping the fruits of a Community Garden. The garden is envisioned to provide the following benefits to the Town:

- ◆ Serve as a catalyst for community involvement and personal commitments to grass-roots environmental issues.
- ◆ Provide educational material and demonstrations on rainwater harvesting, the use of native or low-water use plants, locally adapted agricultural techniques, composting and permaculture philosophy.
- ◆ Support grey-water reuse from the Town's Waste Water Treatment Plant.
- ◆ Provide a vehicle for community social interaction; encourage self-reliance, conservation of resources, and production of nutritious locally grown food.
- ◆ Create gardening opportunities that contribute to self-enrichment, recreation, exercise, therapy and education. Provide opportunities for intergenerational and cross-cultural connections.
- ◆ Preserve green space as the garden is integrated into riparian restoration and native habitat preservation plans.
- ◆ Provide opportunities for local vendors, farmers markets and other community supported agriculture (CSA) opportunities that reduce pollution by buying food from local sources.
- ◆ Recognize that non-paved land and cultivated areas help to reduce city heat island effect..
- ◆ Investigate opportunities for incorporation of solar energy demonstration projects and education with the garden.



Green Purchasing

Green Purchasing is the coordinated purchasing of goods and services that minimize impact on human health and the natural environment. Alternatives exist for almost every product used by the Town of Cave Creek that are less hazardous, save energy and water, and reduce waste.

- ◆ Encourage purchases that provide a positive impact on the environment, economy, and community.
- ◆ Support the identification, evaluation, use and measurement of innovative, environmentally-friendly products, services and practices.
- ◆ Purchase equipment and products that meet or exceed Energy Star efficiency standards.
- ◆ Consider purchasing products that optimize the use of recycled materials.
- ◆ Eliminate or minimize the use of toxic or hazardous materials, including those used in the manufacture or subsequent use of products.
- ◆ Consider the ultimate disposition of purchased materials, and, when feasible, acquire products that can be recycled or re-used.
- ◆ Encourage employees to use surplus equipment or adaptively reuse existing equipment when the equipment can safely and efficiently satisfy the objectives of the Town.



Pollution Prevention, Waste Reduction & Recycling

Waste reduction is really just common sense. It's the goal of obtaining only the resources that are actually needed, to reduce the amount of waste generated, to maximize the utility of a product and convert it to another product so its usefulness can continue in another form. Recycling is a major part of the process and functions only if the three chasing elements are implemented: collection of materials for recycling, use recycled materials in manufacturing and buying products made from recycled materials. The Town of Cave Creek utilizes, supports and encourages the following philosophies.

- ◆ Employ an integrated waste reduction approach to establish a waste reduction ethic that emphasizes the hierarchy listed below. Waste prevention is the first option, followed by waste minimization, reuse, recycling, and finally disposal.
- ◆ Work with the local waste companies to ensure businesses and residents within the Town have options for curbside or central location recycling programs.
- ◆ Encourage business and residents to implement internal practices that establish recycling programs for the easiest items to recycle; such as paper, cardboard, metal and approved plastic materials.
- ◆ Encourage the purchase of products that use recycled materials.



Pollution Prevention, Waste Reduction & Recycling, continued.

- ◆ Establish partnership to increase opportunities for recycling items such as: used oil, tires, computers, cell phones, electronic waste, and organic compost materials that have other reuse potentials.
- ◆ Encourage the use of local businesses that resale items for reuse.
- ◆ Work with other agencies and local partners to provide opportunities for the community to properly store and dispose of pesticides, batteries, fluorescent lighting, paints, solvents, hazardous waste and prescription drugs.
- ◆ Increase public awareness of the principles of the integrated waste reduction approach and the importance of being part of the recycling process through the use of internet, newsletters, workshops and other communication techniques.



Green Community Education and Involvement

When we envision our sustainable future, it is similar to a gardener planting a seed and imagining the mature tree that will grow. The concept is so fresh that we are excited to learn all that we can, and to share the knowledge with the businesses and residents so that we can each progress together.

- ◆ Actively search for information, technologies, advancements, trends and opportunities regarding sustainability and the key elements that are identified in the plan.
- ◆ Establish the Town of Cave Creek and the Green Committee as a focal point for moving both the Town and the Cave Creek community to action in their efforts toward sustainability.
- ◆ Set up a network of communication that can be used as a resource for the Town and community to obtain environmental information.
- ◆ Utilize various communication venues including newsletters, website, and other web-based posting (i.e., blogs, Twitter, video, etc.) that provide opportunities for successes to be shared.
- ◆ Seek fresh strategies for inspiring community involvement and multiple venues to disseminate information including seminars, training sessions, classes and hands-on-demonstrations.
- ◆ Develop partnerships with other agencies, non-profits, community groups, or events that share similar interests or accommodate shared venues.
- ◆ Identify opportunities where incentives (such as grants, rebates, tax credits, etc.) can be used to as a catalyst for change.
- ◆ Investigate funding opportunities to support community education and involvement.



Air Quality

Many of the residents moved here for the wide open spaces and the clean fresh desert air. The Town of Cave Creek recognizes that it is part of larger air sheds and as such understands that air pollutants can affect multiple communities. The Town promotes local and regional efforts to improve air quality.

- ◆ Promote ridesharing, the use of non-auto travel modes (walking, biking, horseback riding, etc), telecommuting, and off-peak travel in order to reduce traffic congestion, energy consumption and air pollution.
- ◆ Reduce emissions for Town fleet vehicles by selection of vehicles with higher mile per gallon efficiency.
- ◆ Support completion of the bike lane system.
- ◆ Employ land use strategies, like creating "live, work, play" relationships or mixed-use structures to reduce air quality impact.
- ◆ Actively participate in regional discussions about air quality improvements.
- ◆ Support the development of programs that allow traffic reduction incentives, such as flextime, ridesharing, and telecommunications.
- ◆ Develop partnerships with other communities, agencies and the State to implement regional transportation and air quality improvement programs.
- ◆ Encourage the use of non-gasoline equipment (e.g. leaf blowers) to reduce emissions and improve air quality.



Transportation

The journey is often as important as the destination, yet many of us in the modern day, travel isolated in our vehicles. There are more ways to travel than by cars. Cave Creek encourages citizens to consider alternative modes of transportation.

- ◆ Encourage transit-oriented developments that address all transportation options (vehicular, pedestrian, bicycle, bus and rail).
- ◆ Support the development of a multi-modal path and trail network as an alternative safe route that connects with adjacent regional networks.
- ◆ Improve transportation options for the community.
- ◆ Seek local, state, and federal funding sources that provide funds for multi-modal transportation and better connect the community to the Town's open space areas.



Reduce the Carbon Footprint

Every individual, organization, and community has a “carbon footprint” which is the sum of all of the carbon dioxide emitted as a result of the daily activities. Most carbon dioxide is generated as a result of the burning of fossil fuels for transportation, the heating and cooling of buildings, electrical use and for other industrial activities. Although carbon dioxide is just one of the greenhouse gases associated with climate change, it is the most prevalent.

- ◆ Inventory and monitor greenhouse gas emissions.
- ◆ Seek information and research on new and emerging technologies, financing options, and partnership opportunities that will foster measurable reductions in the Town’s greenhouse gas emissions and associated carbon footprint.
- ◆ Stay abreast of new developments in the science of climate change and ways to adapt to, and mitigate the effects of climate change on the health and quality of life of Cave Creek Town residents, our natural ecosystems and economy.



Sustainability Program Development Steps

This document services as a guide to the Town of Cave Creek’s sustainable future. But, like a journey, planning is only the start of the adventure. This plan represents only one step in an integrated process that moves the Town and the community toward sustainability. For each element baselines need to be established, plans developed, employees and community leaders engaged, projects implemented and progress reported. This system allows for the feedback needed to show the advancement being made. It is an exciting quest that we are undertaking and we look forward to our shared sustainable future.

