

6 • ENVIRONMENTAL PLANNING



Introduction

Scottsdale has long valued its healthy, safe, clean, and sustainable environment, and its future is dependent on a sustainable approach to planning. This includes consideration of environmental opportunities and challenges beginning at the earliest stages and continuing throughout the planning process. For an urban employment center, such as the Greater Airpark, considerations for alternative, low-cost energy generation, energy and fuel use reductions, improved air quality, urban heat island mitigation, and balancing economic vitality while being sensitive to the environment, are all priorities.

In the Greater Airpark, energy efficiency is key to maintaining future economic viability for businesses. This can be accomplished through sensitive design, green building measures, reducing overall heat island impacts, and promoting flexibility for new and innovative energy generation and reduced consumption. Developments that strive for net-zero energy efficiency are deemed the highest priority and should be rewarded through appropriate development incentives because of their benefits to the community at large.

The Environmental Planning Chapter of the Greater Airpark Character Area Plan provides the framework for environmental stewardship, reductions in energy consumption, water conservation, stormwater management, and other sustainability measures in development and redevelopment.

Goals and Policies

GOAL EP 1

Reduce energy consumption through environmentally sensitive land use practices and design policies.

- **Policy EP 1.1**
Promote green building alternatives that support sustainable, energy-efficient development.
- **Policy EP 1.2**
Encourage integration of smart grid technology into Greater Airpark buildings to help businesses and residents monitor and reduce peak energy usage.
- **Policy EP 1.3**
Promote landscape design and irrigation methods that contribute to water and energy conservation.
- **Policy EP 1.4**
Promote solar and alternative energy development standards in building and site design.
- **Policy EP 1.5**
Establish performance-based incentives and provisions to encourage environmentally sensitive development projects within the Greater Airpark.
- **Policy EP 1.6**
Provide performance-based incentives for buildings that achieve net-zero energy efficiency or significant energy reductions.
- **Policy EP 1.7**
Encourage design concepts that maximize building efficiency, such as building orientation, air circulation, and shading.
- **Policy EP 1.8**
Establish advisory assistance to businesses and individuals on green building renovations and developments.
- **Policy EP 1.9**
Integrate into building design the practice of passive solar elements and the use of renewable energy generation systems, such as solar panels and rainwater harvesting storage tanks.



Low-water use plants in landscaping conserve water while still providing a lush landscape palette.



Sun screens can be incorporated into building architecture to reduce heat absorption.

GOAL EP 2

Promote the Greater Airpark as a laboratory for methods of energy efficiency and sustainable design.

- **Policy EP 2.1**
Develop programs to attract environmentally sensitive or “clean” industries to the Greater Airpark.
- **Policy EP 2.2**
Support the attraction and development of green and other energy-efficient technologies to the Greater Airpark.
- **Policy EP 2.3**
Provide performance-based incentives that will encourage new and innovative energy efficient design in development and redevelopment.

GOAL EP 3

Reduce the Urban Heat Island effect in the Greater Airpark.

- **Policy EP 3.1**
Educate businesses, developers, and citizens on the heat island effect and reduction measures.



Vines on solid wall surfaces can help cool public spaces where there is little room for shade trees.

- **Policy EP 3.2**
Increase the use of effective natural and man-made shading for parking lots, streets, and pedestrian areas.
- **Policy EP 3.3**
Incorporate opportunities for “cool” technologies that will help reduce heat island effects, such as alternative pavement material, high solar reflectance building surface treatments, passive cooling elements, open spaces, and “green” roofs.

- **Policy EP 3.4**
Increase tree planting as a ground-level ozone reduction measure.



Passive cooling elements can include water features and shade.

GOAL EP 4

Foster a sustainable balance between environmental stewardship and the development and redevelopment of the Greater Airpark.

- **Policy EP 4.1**
Concentrate land uses with greater environmental impacts in the Employment and Aviation Future Land Use Areas to make the best use of infrastructure.
- **Policy EP 4.2**
Encourage all developments to respect and respond to the Sonoran Desert climate.
- **Policy EP 4.3**
Integrate environmental quality and protection practices into all development types through local planning and policy implementation.
- **Policy EP 4.4**
Promote efforts to improve air quality, enhance the environment, and protect health and welfare through environmentally friendly transportation practices, such as carpooling, bicycling, and public transit.
- **Policy EP 4.5**
Promote public and private partnerships that will reduce adverse impacts to the natural environment through aggressive conservation, reuse, and recycling programs for industrial and commercial users.
- **Policy EP 4.6**
Reduce existing and seek to limit future impervious surfaces in development, such as asphalt and concrete, in order to reduce the heat island effect and stormwater runoff.
- **Policy EP 4.7**
Encourage the efficient use of natural and man-made resources in building and site design.
- **Policy EP 4.8**
Building design should respect and enhance the Sonoran Desert context of the Greater Airpark using building orientation, landscape buffers, colors, textures, materials, and lighting.



Developments can provide shade using desert plants and other passive cooling techniques.

GOAL EP 5

Improve water conservation efforts and encourage the reuse of graywater.

- **Policy EP 5.1**
Review future development impacts on water use, and encourage development design that fosters water conservation.
- **Policy EP 5.2**
Encourage a variety of water conservation techniques in redevelopment and new development throughout the Greater Airpark.
- **Policy EP 5.3**
Promote rainwater harvesting techniques in site planning, landscape design, and landscape improvements for all development types.
- **Policy EP 5.4**
Encourage landscape improvements that limit the amount of turf area and make optimal use of indigenous and adapted desert plants.
- **Policy EP 5.5**
Use the City's Water Campus as an environmental education center to foster public awareness of water use and wastewater reclamation.
- **Policy EP 5.6**
Encourage water conservation by using reclaimed and graywater in areas with access to delivery systems.
- **Policy EP 5.7**
Work regionally with water providers to limit groundwater consumption within the Paradise Valley Sub-basin, and maximize groundwater recharge in order to maintain the Greater Airpark's natural water supply and minimize the rate of area subsidence.



Water harvesting techniques, such as this rain chain, help to reduce water demand, a precious desert resource.

GOAL EP 6

Effectively manage and protect local and regional stormwater drainage ways.

- **Policy EP 6.1**
Establish flood control channel design criteria that recognize, considers and respect:
 - Sensitive aesthetic treatment;
 - Multiple uses that harmonize with the character of the adjacent neighborhood; and
 - Impact on wildlife habitats.
- **Policy EP 6.2**
Continue to monitor stormwater runoff to identify and reduce stormwater pollution.
- **Policy EP 6.3**
Educate citizens and businesses on best management practices for preventing stormwater pollution.
- **Policy EP 6.4**
Explore new and innovative stormwater management strategies, such as swales and micro-basins, to promote redevelopment of smaller properties and new development.
- **Policy EP 6.5**
Integrate alternative stormwater detention practices, such as rainwater harvesting and water infiltration methods.
- **Policy EP 6.6**
Develop and implement a comprehensive stormwater management plan for the Greater Airpark.



*Stormwater retention can sometimes be addressed using green roof technology.
Photo source: Henkel.*