

CITY OF SCOTTSDALE GENERAL PLAN 2035

Task Force Recommended Draft

November 2014



Experience. Livability. Prosperity.

2. ENVIRONMENT



INTRODUCTION

Scottsdale embraces environmental conservation and ample access to our magnificent open spaces. The community's distinctive natural and environmental features contribute significantly to quality of life and economic vitality. As stewards of the natural environment, community members commit to preserving the Sonoran Desert ecosystem, protecting biodiversity, and managing natural resources and open spaces to ensure the city remains a beautiful and enjoyable place.

Much of Scottsdale's reputation is built on creative solutions to solve environmental challenges. The need for flood control in the southern part of the community became the world-renowned Indian Bend Wash greenbelt. The desire to preserve the natural beauty and land forms of the Sonoran Desert resulted in the Environmentally Sensitive Lands and Native Plant Ordinances and the Scottsdale McDowell Sonoran Preserve. The Green Building Program was created to promote more sustainable desert living and reduce the environmental impacts of development.

Scottsdale also provides an exemplary open space system, which contributes to an exceptional quality of life and visitor experience. A large proportion of the city will remain as natural open space through privately-dedicated Natural Area Open Space (NAOS) and through citizen initiative. In established areas, a network of parks, scenic and vista corridors, paths, and trails provide access to nature, recreation opportunities, ecological benefits, and beauty. As the city nears build-out, almost half of all land in Scottsdale will be dedicated as open space and connected to the regional system of over 4,700 square miles of open space.



Scottsdale's population has steadily increased while the opportunity to create open space and preserve environmental resources has diminished. The city will need to acquire and create new open space in areas where it is most lacking, preserve unique natural features and environmental quality, provide greater access to and connectivity between open spaces, and retrofit existing open spaces to accommodate the community's needs in the future.

Scottsdale recognizes that economic growth, environmental stewardship, the provision of open space, and fiscal responsibility are interrelated and mutually achievable goals. Therefore, when environmental and open space goals compete with other goals, such as those related to economic development, the city commits to equally considering environmental and open space objectives.

The Environment Chapter fosters sustainable strategies for open space, natural resource, energy efficiency, and water conservation; air and water quality protection; waste reduction; and regional collaboration in environmental issues.

ELEMENTS IN THIS CHAPTER:

- Open Space
- Environmental Planning
- Conservation
- Water Resources
- Energy

Environment Chapter

OPEN SPACE ELEMENT[‡]

- Goal OS 1** Open space types[‡]
- Goal OS 2** Fulfill Preserve initiative[‡]
- Goal OS 3** Continuous open space system
- Goal OS 4** Open space opportunities
- Goal OS 5** Land use and character
- Goal OS 6** Open space management[‡]
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- Goal OS 8** Regional open space system[‡]

ENVIRONMENTAL PLANNING ELEMENT[‡]

- Goal EP 1** Protect & enhance habitats
- Goal EP 2** Environmental stewardship
- Goal EP 3** Air quality[‡]
- Goal EP 4** Recovery, reuse, & recycling
- Goal EP 5** Environmentally sound design
- Goal EP 6** Water quality[‡]
- Goal EP 7** Heat island reduction

CONSERVATION ELEMENT[‡]

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- Goal CONSV 2** Conserve water[‡]
- Goal CONSV 3** Protect ecosystems[‡]
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- Goal CONSV 5** Minimize erosion[‡]

WATER RESOURCES ELEMENT[‡]

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- Goal E 2** Reduce energy consumption
- Goal E 3** Energy efficiency in site design
- Goal E 4** Energy efficiency of City facilities
- Goal E 5** Renewable energy sources[‡]

[[‡] = State-required]



OPEN SPACE ELEMENT[‡]

Safe, accessible open space is vital for sustaining a high quality of life; thus, a strategically planned, balanced, and connected system of open spaces is essential to both citizen and visitor enjoyment. The City of Scottsdale commits to providing, maintaining, enhancing, and expanding both active and passive open spaces throughout the community to serve the local citizens and remain a highly desirable tourism destination.

Common open spaces serve a variety of functions, such as recreation, aesthetics, and flood control. Throughout Scottsdale, several types of open spaces create different experiences. The Scottsdale McDowell Sonoran Preserve is a continuous tract of natural open space. It protects significant wildlife habitat, maintains the community's connection to the natural Sonoran Desert, and represents an image and character that is uniquely Scottsdale. A major developed open space, the Indian Bend Wash greenbelt, serves as a recreation and flood control spine, as well as, a significant segment of the regional park system. Smaller parks next to school sites allow for dual use by the neighborhood and school. Preserved desert washes help maintain the lush desert character and wildlife corridors in developments. Still, other open spaces offer protection from natural hazards and conservation of natural resources, including watersheds, streams, and aquifers.

As Scottsdale nears build-out, sustaining existing open spaces and creating new open spaces will be even more important. Regional collaboration in open space matters will help to ensure that current and future community members and visitors continue to enjoy our open spaces.

Through the goals and policies of this element, Scottsdale will sustainably protect and manage its open space resources.

Goals and Policies

Goal OS 1 †

Provide four primary public and private open space types: the Scottsdale McDowell Sonoran Preserve, natural open spaces, developed open spaces, and continuous open spaces.

Policies

OS 1.1 (NEW) Scottsdale McDowell Sonoran Preserve. Provide an integrated desert open space system consisting of mountains, desert, and natural areas to maintain scenic views, preserve wildlife and desert plant habitats, and protect archaeological and historical resources and sites, while providing public access for educational purposes and passive outdoor recreational opportunities. It is important to sustain Scottsdale’s Preserve as natural Sonoran Desert for current and future generations. *[Cross-reference Land Use; Recreation; Environmental; Planning and Conservation Elements]*

OS 1.2 Natural Open Space. Provide public and private, natural open spaces to preserve wildlife habitat, views, and sensitive historical/archeological sites, and, where appropriate, incorporate areas for passive recreation. *[Cross-reference Land Use; Healthy Community; Arts, Culture & Creative Community; Recreation; Environmental Planning; and Conservation Elements]*

OS 1.3 Developed Open Space. Offer public and private parks and open spaces to accommodate both active and passive recreation. *[Cross-reference Land Use; Healthy Community; and Recreation Elements]*

OS 1.4 Continuous Open Spaces. Develop a system of continuous open spaces that connect citywide and regionally. Such open spaces include Vista Corridors, streetscapes, trails, and canals. *[Cross-reference Character & Design; Land Use; Healthy Community; Recreation; Environmental Planning; and Conservation Elements]*



Goal OS 2 †

Fulfill the Scottsdale McDowell Sonoran Preserve initiative to create an integrated desert open space and wildlife corridor system that connects to the regional Sonoran Desert open space system.

Policies

OS 2.1 Complete the land acquisition for the Scottsdale McDowell Sonoran Preserve. *[Cross-reference Land Use; Conservation; and Environmental Planning Elements]*

OS 2.2 Provide educational and research opportunities to learn and interpret the natural elements, history, and archaeology of the Sonoran Desert and mountains. *[Cross-reference Healthy Community; Arts, Culture & Creative Community; Recreation; Economic Vitality; Environmental Planning; and Conservation Elements]*



OS 2.3 **(NEW)** Ensure development next to the Scottsdale McDowell Sonoran Preserve respects its unique location, minimizes impacts to the natural environment, and contributes to the community’s visual and physical access to open space and the mountains. *[Cross-reference Character & Design; Land Use; Healthy Community; Environmental Planning; and Conservation Elements]*

OS 2.4 Restore ecological habitat in degraded areas (e.g. burned, grazed, vehicular damage, invasive species) of the Scottsdale McDowell Sonoran Preserve. *[Cross-reference Environmental Planning and Conservation Elements]*

OS 2.5 **(NEW)** Consider wildlife corridors, habitat, and trail crossings when planning mobility routes through and adjacent to the Scottsdale McDowell Sonoran Preserve. *[Cross-reference Recreation; Environmental Planning; Circulation; and Conservation Elements]*

Goal OS 3

Visually and physically connect open spaces to maintain a continuous open space system.

Policies

- OS 3.1 Develop a public trail and path system that links to other city and regional systems. *[Cross-reference Healthy Community and Recreation Elements]*
- OS 3.2 Identify and consider the positive and negative impacts of proposed projects on viewsheds. *[Cross-reference Character & Design and Land Use Elements]*
- OS 3.3 As development and redevelopment occurs along transportation corridors, encourage the preservation of mountain viewsheds, the Sonoran Desert, natural features, and landmarks that enhance the unique image and aesthetics of major streets through open space buffering. The following Visually Significant Roadway designations should be applied: *[Cross-reference Visually Significant Roadways Map in Character & Design Element]*

- **Scenic Corridors** should be designated along major streets where a significant landscaped buffer is needed between streets and adjacent land uses, where an enhanced streetscape appearance is desired, and where views to mountains and natural or man-made features will be maximized. Scenic Corridors may provide enhanced opportunities for open space, scenic viewing, trails, and pathways in the community.
- **Buffered Roadways** should be designated along major streets to provide an aesthetic or environmental buffer, enhance the unique image of the streetscape, and reduce the impacts that major streets may have on adjacent land uses.
- **Desert Scenic Roadways** should be designated along the one-mile and half-mile streets within Environmentally Sensitive Lands that are not already designated as Scenic Corridors or Buffered Roadways. These designations should maintain and enhance open spaces along streets in environmentally sensitive locations.
- Apply a **Preserve Scenic Buffer** along streets within and adjacent to the Recommended Study Boundary (RSB) of the Scottsdale McDowell Sonoran Preserve. *[Cross-reference Character & Design; Land Use; Arts, Culture & Creative Community; Recreation; Environmental Planning; and Conservation Elements]*

- OS 3.4 Encourage the use of drainage easements, Vista Corridors, and transmission line corridors as recreation and open space opportunities. *[Cross-reference Healthy Community; Recreation; Conservation; and Public Services & Facilities Elements]*
- OS 3.5 Locate parks to enhance unique landmarks and environmentally significant areas, when possible. *[Cross-reference Character & Design; Land Use; Recreation; and Conservation Elements]*

Goal OS 4

Provide open space and outdoor opportunities in Scottsdale neighborhoods, giving priority to areas that are most lacking open space.

Policies

OS 4.1 Provide opportunities for people to experience and enjoy the Sonoran Desert and mountains, while balancing public access and preservation needs.

OS 4.2 Provide open space access and trailhead areas with facilities for public use. *[Cross-reference Recreation and Public Buildings Elements]*

OS 4.3 **(NEW)** Ensure that open spaces in public ownership remain accessible to community members for compatible recreational use. *[Cross-reference Recreation and Public Services & Facilities Elements]*



OS 4.4 **(NEW)** Locate publicly accessible and useable open spaces within Growth and Activity Areas and established neighborhoods. *[Cross-reference Land Use; Healthy Community; Growth Areas; Recreation; and Neighborhood Preservation & Revitalization Elements]*

OS 4.5 **(NEW)** Encourage useable outdoor open space in new development. *[Cross-reference Character & Design; Healthy Community; and Recreation Elements]*

OS 4.6 **(NEW)** Capitalize on opportunities to create new, or connect and expand existing, open spaces in established areas when redevelopment occurs. *[Cross-reference Land Use and Conservation, Rehabilitation, & Redevelopment Elements]*

OS 4.7 † Encourage landowners in the development process to dedicate useable open space where there is an identified need. *[Cross-reference Character & Design; Land Use; Recreation; Environmental Planning; Conservation; Public Services & Facilities; and Neighborhood Preservation & Revitalization Elements]*

Goal OS 5

Design and manage open spaces to relate to surrounding land uses and character.

Policies

OS 5.1 † Evaluate the design of open spaces with the following primary determinants: aesthetics, neighborhood and service area needs, public safety, visual and functional connectivity, social and economic impacts, maintenance requirements, water consumption, drainage considerations, multi-use, Character Area, and desert preservation. *[Cross-reference Character & Design; Land Use; Healthy Community; Recreation; Environmental Planning; Conservation; Water Resources; Cost of Development; Safety; Public Services & Facilities; and Neighborhood Preservation & Revitalization Elements]*

OS 5.2 Protect the different priorities and management objectives for each of the Open Space Land Use categories. *[Cross-reference Land Use Element]*

OS 5.3 Aesthetically and sensitively integrate utilities and other public facilities into open spaces. *[Cross-reference Character & Design and Public Services & Facilities Elements]*

OS 5.4 Encourage development plans that respect existing topography, view corridors, wildlife corridors, and open space. Where possible, enhance existing viewsheds as areas are developed and redeveloped. *[Cross-reference Character & Design; Land Use; Environmental Planning; and Conservation Elements]*

OS 5.5 **(NEW)** Seek to provide ample shade in public open spaces as appropriate for the type of open space. *[Cross-reference Character & Design; Recreation; and Environmental Planning Elements]*



Goal OS 6 †

Manage a comprehensive open space program that is responsive to public and environmental needs.

Policies

OS 6.1 Continue to encourage active citizen involvement in the development and management of open space. *[Cross-reference Community Involvement Element]*

OS 6.2 Provide consistent and effective operations and maintenance for all open space facilities. *[Cross-reference Public Services & Facilities Element]*

OS 6.3 Promote “docent” or “steward” programs to help maintain open spaces and lower associated operational costs. *[Cross-reference Community Involvement and Healthy Community Elements]*

OS 6.4 Consider important natural areas, parks, and other open space systems as primary elements in growth planning and endangered species and watershed protection. *[Cross-reference Land Use; Growth Areas; Environmental Planning; and Conservation Elements]*



Goal OS 7 †

Acquire new, expand existing, and improve established open spaces for public use.

Policies

OS 7.1 † Provide development incentives to promote the dedication of new useable or visually significant open space. *[Cross-reference Land Use Element]*

OS 7.2 Encourage new development and redevelopment to connect and provide public access to neighboring open spaces, park sites, or planned open spaces. *[Cross-reference Character & Design and Land Use Elements]*



OS 7.3 † Encourage public acquisition of natural or developed open space through direct purchase, purchase of development rights, purchase of open space easements, or other means. *[Cross-reference Land Use Element]*

OS 7.4 † Create usable open spaces from existing rights-of-way, sidewalk widening, street realignment, development of trails, and other creative solutions. *[Cross-reference Character & Design; Recreation; Circulation; and Public Services & Facilities Elements]*

OS 7.5 † **(NEW)** Renovate, renew, and upgrade the city’s parks and recreation facilities in response to changing community demographics, priorities, and needs. *[Cross-reference Public Services & Facilities Element]*

OS 7.6 **(NEW)** Ensure the interconnectivity of trails and streets before abandoning rights-of-way. *[Cross-reference Circulation and Bicycling Elements]*

Goal OS 8 †

Cooperate with other agencies to preserve, protect, connect, maintain, and expand the regional open space system.

Policies

OS 8.1 † Engage with other public and private agencies on the planning and development of open space sites and facilities next to city boundaries.

OS 8.2 † Support the regional open space network and coordinate with adjacent jurisdictions to supply open space systems, interconnected trails networks, recreation opportunities, stormwater drainage, and sensitive wildlife habitat and migration routes. *[Cross-reference Recreation; Environmental Planning; and Conservation Elements]*

JENNY LIN RD.

CIRCLE MOUNTAIN RD.

HONDA BOW RD.

ROCKAWAY HILLS RD.

DESERT HILLS DR.

JOY RANCH RD.

STAGECOACH PASS

CAREFREE HWY.

DOVE VALLEY RD.

LONE MOUNTAIN RD.

DIXILETA DR.

DYNAMITE BLVD.

JOMAX RD.

HAPPY VALLEY RD.

PINNACLE PEAK RD.

DEER VALLEY RD.

LOOP 101

UNION HILLS DR.

BELL RD./FRANK LLOYD WRIGHT BLVD.

GREENWAY PKWY.

THUNDERBIRD RD.

CACTUS RD.

SHEA BLVD.

DOUBLETREE RANCH RD.

McCORMICK PKWY.

INDIAN BEND RD.

LINCOLN DR.

McDONALD DR.

CHAPARRAL RD./CAMELBACK RD.

CAMELBACK RD.

INDIAN SCHOOL RD.

THOMAS RD.

McDOWELL RD.

LOOP 202

McKELLIPS RD.

Spur Cross Ranch
Conservation Area

Cave Creek
Regional Park

BARTLETT DAM RD.

Tonto National Forest

RIO VERDE DR.

McDowell Mountain
Regional Park

Fountain Hills McDowell
Sonoran Preserve

CAVE CREEK RD.

TATUM BLVD.

96th ST

104th ST

112th ST

120th ST

128th ST

136th ST

142th ST

PALISADES BLVD.

BEELINE HWY. (87)

GALVIN PKWY.

Papago
Park

SCOTTSDALE RD.

HAYDEN RD.

PIMA RD.

LOOP 101

Open Space[†]

- Open Space, Useable
- Open Space, Common*
- Major Wash
- Regional Open Space
- Scottsdale McDowell Sonoran Preserve

* Does not include on-lot NAOS dedications.



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JENNY LIN RD.

CIRCLE MOUNTAIN RD.

HONDA BOW RD.

ROCKAWAY HILLS RD.

DESERT HILLS DR.

JOY RANCH RD.

STAGECOACH PASS

CAREFREE HWY.

DOVE VALLEY RD.

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LOOP 101

UNION HILLS DR.

BELL RD./FRANK LLOYD WRIGHT BLVD.

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McCORMICK PKWY.

INDIAN BEND RD.

LINCOLN DR.

CHAPARRAL RD./CAMELBACK RD.

CAMELBACK RD.

INDIAN SCHOOL RD.

THOMAS RD.

McDOWELL RD.

LOOP 202

McKELLIPS RD.

BARTLETT DAM RD.

RIO VERDE DR.

CAVE CREEK RD.

TATUM BLVD.

PALISADES BLVD.

BEE LINE HWY. (87)

56th ST.

64th ST.

SCOTTSDALE RD.

HAYDEN RD.

PIMA RD.

LOOP 101

96th ST.

104th ST.

112th ST.

120th ST.

128th ST.

136th ST.

142th ST.

GALVIN PKWY.








SCOTTSDALE RD.

HAYDEN RD.

PIMA RD.

LOOP 101

Scottsdale McDowell Sonoran Preserve

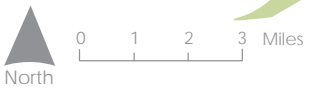
-  Recommended Study Boundary (RSB)
-  Scottsdale McDowell Sonoran Preserve, City Owned
-  Other Preserved lands, within RSB
-  State Trust Land, within RSB, not reclassified**
-  State Trust Land, within RSB, reclassified, suitable for conservation***
-  Existing Trailheads*
-  Planned Trailheads*

* Refer to McDowell Sonoran Preserve Access Areas Report for additional trailhead detail.

** Land that was not reclassified by the State Land Commissioner as suitable for conservation and therefore has no conservation restrictions.

*** Land reclassified by the State Land Commissioner as suitable for conservation, but not restricted to conservation use.

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JENNY LIN RD.

CIRCLE MOUNTAIN RD.

HONDA BOW RD.

ROCKAWAY HILLS RD.

DESERT HILLS DR.

JOY RANCH RD.

STAGECOACH PASS

CAREFREE HWY.

DOVE VALLEY RD.

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LOOP 101

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INDIAN SCHOOL RD.

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LOOP 202

McKELLIPS RD.

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CAVE CREEK RD.

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BEELINE HWY. (87)

56th ST.

64th ST.

SCOTTSDALE RD.

HAYDEN RD.

PIMA RD.

LOOP 101

96th ST.

104th ST.

112th ST.

120th ST.

128th ST.

136th ST.

142th ST.

GALVIN PKWY.








SCOTTSDALE RD.

HAYDEN RD.

PIMA RD.

LOOP 101

Visually Significant Roadways

-  Scenic Corridor
-  Scenic Corridor/Desert Foothills Scenic Drive†
-  Buffered Roadway
-  Themed Streetscape
-  Desert Scenic Roadway
-  Desert Scenic Roadway/Preserve Scenic Buffer
-  Scottsdale McDowell Sonoran Preserve



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ENVIRONMENTAL PLANNING ELEMENT[‡]

Scottsdale is a Sonoran Desert community, and citizens recognize that the unique and delicate desert environment is valuable for community health, character, economic vitality, and quality of life. We pride ourselves as a leader and are committed to environmental stewardship and sustainability.

The city's environment includes both the ecological systems, which sustain Sonoran vegetation and wildlife, and natural and man-made elements that provide clean air and water; protect the community from hazards; and create a naturally beautiful and enjoyable setting.

Without careful planning and stewardship, our healthy natural systems may be negatively impacted by regional population growth, urban development, and everyday life. This element provides goals and policies for protecting and enhancing Scottsdale's natural and human habitats for future generations.

Goals and Policies

GOAL EP 1

Protect and enhance Scottsdale’s human and Sonoran Desert habitats.

Policies

- EP 1.1** Retain Scottsdale’s Sonoran Desert aesthetic values and heritage. *[Cross-reference Character & Design; Arts, Culture & Creative Community; and Conservation Elements]*
- EP 1.2 †** Preserve the unique, rare, and significant features of Scottsdale’s natural environment, and educate landowners and developers on their preservation options. *[Cross-reference Character & Design; Open Space; and Conservation Elements]*
- EP 1.3** Require developments to retain and integrate the Sonoran Desert ecosystem, where appropriate. *[Cross-reference Character & Design and Conservation Elements]*
- EP 1.4 †** Preserve local plants, wildlife, and natural resources to maintain the biodiversity and long-term sustainability of the area’s ecology. *[Cross-reference Character & Design and Conservation Elements]*
- EP 1.5** Integrate environmental quality protection into all phases of local planning, policy, and development. *[Cross-reference Character & Design and Conservation Elements]*



GOAL EP 2 (NEW)

Demonstrate and expand the city’s leadership in environmental stewardship and sustainability.

Policies

EP 2.1 (NEW) Educate and inform the community of the significance and fragility of the Sonoran Desert environment and the City’s environmental protection efforts. *[Cross-reference Open Space and Conservation Elements]*



EP 2.2 (NEW) Support and encourage citizens, groups, and community partnerships to maintain and enhance environmental features and landscapes. *[Cross-reference Open Space and Community Involvement Elements]*

EP 2.3 (NEW) Foster community stewardship and a sense of personal responsibility for the natural environment. *[Cross-reference Open Space; Healthy Community; and Community Involvement Elements]*



EP 2.4 (NEW) Regularly update and enhance Scottsdale’s Green Building Program to maintain leadership in green and low-impact development. *[Cross-reference Conservation and Energy Elements]*

GOAL EP 3 †

Promote local and regional efforts to improve air quality.

Policies

EP 3.1 Reduce automobile emissions through traffic management; mobility system improvements; promotion of alternative modes, such as ridesharing and bicycling; and use of electric and alternative fuel vehicles. *[Cross-reference Energy; Circulation; and Bicycling Elements]*



EP 3.2 Actively participate in regional coordination, partnerships, and funding decisions for air quality improvement and reduced automobile emissions.

EP 3.3 Encourage migration to, and expand the use of, electric and clean fuel alternatives to achieve or exceed regional clean air goals. *[Cross-reference Energy Element]*

EP 3.4 **(NEW)** Seek to reduce activities that contribute to air pollution and significant air pollution events.

EP 3.5 **(NEW)** Reduce the community’s contribution to regional dust and particulate air pollution created by man-made sources, such as construction, maintenance equipment, vacant lots, unpaved parking areas, and vehicles.

EP 3.6 Incentivize the use of electric and clean alternative fuels by requiring preferred parking for electric, low-emitting, and fuel-efficient vehicles and incorporating electrical recharge and clean-fuel refilling stations throughout the community. *[Cross-reference Energy Element]*

GOAL EP 4

Maximize resource recovery, reuse, and recycling, and promote use of recycled, recyclable, and renewable materials.

Policies

- EP 4.1** Maintain and expand citywide recycling programs, particularly for tourist areas, businesses, multi-family housing, institutional facilities, special events, and public spaces. *[Cross-reference Public Services & Facilities Element]*
- EP 4.2** Encourage public and private establishments to minimize waste generation, and establish effective programs for waste reduction, reuse, and recycling of resources. *[Cross-reference Public Services & Facilities Element]*
- EP 4.3** **(NEW)** Whenever possible and appropriate, use paperless media and limit the use of hard copy materials for City programs and projects. *[Cross-reference Community Involvement Element]*
- EP 4.4** **(NEW)** Encourage the recycling and/or reuse of building materials to reduce construction waste.
- EP 4.5** **(NEW)** Support regional waste reduction efforts, policies, and regulations.
- EP 4.6** **(NEW)** Identify opportunities to use solid waste and recycled materials as marketable commodities.
- EP 4.7** **(NEW)** Strive to reduce single-use, non-recyclable, and non-compostable packaging and bags.
- EP 4.8** Promote composting programs that reduce the amount of biodegradable waste going to the landfill. *[Cross-reference Public Services & Facilities Element]*



GOAL EP 5

Encourage environmentally sound, green buildings and low-impact site plans that support sustainable desert living.

Policies

- EP 5.1** Protect and enhance the natural desert elements of all development sites. *[Cross-reference Character & Design; Open Space; and Conservation Elements]*
- EP 5.2** When appropriate, use low-impact development strategies and stormwater management techniques, such as green drainage infrastructure. *[Cross-reference Conservation Element]*
- EP 5.3** **(NEW)** Promote durable and sustainable buildings using green building principles. *[Cross-reference Character & Design; Housing; Conservation; and Energy Elements]*
- EP 5.4** **(NEW)** Promote passive solar site and building design strategies that recognize and respond to the Sonoran Desert climate. *[Cross-reference Character & Design and Energy Elements]*

GOAL EP 6 †

Meet or surpass all applicable water quality standards.

Policies

- EP 6.1** Continue to provide a safe and healthy environment for community members through water and wastewater treatment processes. *[Cross-reference Water Resources Element]*
- EP 6.2** Ensure Scottsdale drinking water continues to meet or surpass all Federal Environmental Protection Agency standards by updating or adding necessary treatment technologies to existing facilities. *[Cross-reference Water Resources Element]*
- EP 6.3** Maintain the Industrial Pretreatment Program to ensure businesses and industries meet City, State, and Federal regulations to protect publicly owned wastewater collection and treatment systems. *[Cross-reference Water Resources Element]*
- EP 6.4** Partner with public agencies and private citizens to research advancements in water quality regulations, water conservation efforts, and possible solutions for other water quality issues. *[Cross-reference Water Resources and Conservation Elements]*

GOAL EP 7 (NEW)

Identify and reduce heat islands.*Policies*

- EP 7.1** (NEW) Identify areas most impacted by the heat island effect, and create a reduction strategies program for these areas.
- EP 7.2** (NEW) Incorporate “cool materials” (e.g. landscaping, green roofs, reflective pavement) and development strategies that help reduce the heat island effect.
[Cross-reference Character & Design Elements]
- EP 7.3** (NEW) Develop and support programs, such as shade and tree plans, that increase and maintain vegetation and shading in areas of high pedestrian activity. *[Cross-reference Character & Design and Open Space Elements]*
- EP 7.4** (NEW) Educate the community on heat island reduction measures.
- EP 7.5** (NEW) Promote the long-term management and maintenance of urban-area vegetation to reduce the heat island effect.

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CONSERVATION ELEMENT[†]

Scottsdale is continuously improving efforts to safeguard its environmental resources. The community is dedicated to the efficient use of natural resources and steadfastly works toward the long-term sustainability of non-renewable resources. Many resources, such as wildlife, watersheds, and others, however, cross geographic and political boundaries. Therefore, regional coordination is essential in achieving the community's conservation goals.

One natural resource that is critical to our daily lives is water. As citizens, we can contribute to water conservation by consuming less, using water more efficiently, and avoiding waste; installing rainwater harvesting and gray water systems; and reusing treated wastewater.

As Scottsdale matures, development will place pressure on lands at the urban fringe. This can have unintended consequences on the natural environment, including degradation of water, loss of habitat, and diminished scenic views. The challenge remains at achieving a balance between orderly development and the protection of Scottsdale's natural resources.

The goals and policies in this element guide Scottsdale's conservation efforts to provide a healthy and diverse environment for future generations.

Goals and Policies

GOAL CONSV 1 †

Achieve a sustainable balance between the conservation of natural resources and development of the built environment.

Policies

CONSV 1.1 Promote public and private partnerships to reduce natural resource consumption, such as aggressive conservation, reuse, and recycling programs. *[Cross-reference Environmental Planning and Public Services & Facilities Elements]*

CONSV 1.2 Use best practices in natural resource management to enhance, restore, and sustain our Sonoran Desert ecosystem. *[Cross-reference Environmental Planning and Public Services & Facilities Elements]*

CONSV 1.3 Encourage cooperation among natural resource management agencies, professionals, and local school districts in developing environmental education materials and outreach programs. *[Cross-reference Environmental Planning Element]*

CONSV 1.4 Encourage landscape designs that promote water conservation, prevent erosion, reduce the heat island effect, and decrease stormwater runoff. *[Cross-reference Character & Design; Open Space; and Environmental Planning Elements]*

CONSV 1.5 Protect and restore ecosystems that maintain water quality, reduce flooding, and enhance sustainable resource development. *[Cross-reference Environmental Planning; Water Resources; and Safety Elements]*



GOAL CONSV 2 †**Protect and manage Sonoran Desert biodiversity and native ecosystems.***Policies*

- CONSV 2.1** Preserve, salvage, and/or restore native plants, wildlife habitat, and natural resources to maintain the biodiversity and long-term sustainability of the area's desert ecology and character. *[Cross-reference Character & Design and Environmental Planning Elements]*
- CONSV 2.2** Encourage landscaping that limits the amount of grass and makes optimal use of native desert plants. *[Cross-reference Character & Design and Environmental Planning Elements]*
- CONSV 2.3** **(NEW)** Where appropriate, maintain natural washes as wildlife movement corridors and avoid disturbances to preserve habitat linkages. *[Cross-reference Open Space and Environmental Planning Elements]*
- CONSV 2.4** **(NEW)** Identify, protect, and restore habitats for endangered, rare, and threatened species. *[Cross-reference Environmental Planning Element]*
- CONSV 2.5** **(NEW)** Prevent the introduction and control further spread of invasive species. *[Cross-reference Environmental Planning Element]*
- CONSV 2.6** **(NEW)** Incorporate and maintain wildlife habitat elements in park design and common area landscaped areas. *[Cross-reference Character & Design; Open Space; Recreation; and Environmental Planning Elements]*



GOAL CONSV 3 †

Protect the integrity of watersheds.

Policies

CONSV 3.1 † Identify potential sources of watershed contamination, continue to remediate groundwater contamination, and apply preventative measures to avoid future contamination of groundwater resources. *[Cross-reference Environmental Planning and Water Resources Elements]*

CONSV 3.2 Monitor stormwater runoff to identify opportunities to reduce surface water pollution. *[Cross-reference Environmental Planning Element]*

CONSV 3.3 Improve stormwater quality through best management practices.

CONSV 3.4 Explore groundwater contamination prevention techniques, such as minimizing use of chemicals for landscape maintenance. *[Cross-reference Environmental Planning Element]*

CONSV 3.5 **(NEW)** Educate sources responsible for watershed contamination, as well as the larger community, on watershed pollution prevention measures. *[Cross-reference Environmental Planning and Water Resources Elements]*

CONSV 3.6 **(NEW)** Use natural watercourse and watershed pollution management techniques, such as “green” or low-impact infrastructure, vegetation, erosion control measures, and settling ponds. *[Cross-reference Environmental Planning Element]*



GOAL CONSV 4 †**Conserve water and encourage the reuse of wastewater.***Policies*

- CONSV 4.1** Continue to expand and modify the reclaimed water distribution system, as feasible, and continue to develop and enhance a salinity reduction program for reuse of reclaimed water. *[Cross-reference Water Resources Element]*
- CONSV 4.2** Consider multiple-use facilities when planning resource conservation programs, including the integration of recharge sites with natural or constructed habitat, as allowed per the Arizona Department of Environmental Quality and Arizona Department of Water Resources.
- CONSV 4.3** Continue to thoroughly review development impacts on water use, and encourage development design that fosters water conservation. *[Cross-reference Character & Design; Environmental Planning; Water Resources; and Cost of Development Elements]*
- CONSV 4.4** Effectively monitor and maintain the water distribution system to minimize water conveyance loss. *[Cross-reference Water Resources Element]*
- CONSV 4.5** Increase recycled water use and encourage the adoption of water conservation measures and best management practices by local industries. *[Cross-reference Water Resources Element]*
- CONSV 4.6** Inform, educate, and incentivize community members on all aspects on water conservation. *[Cross-reference Water Resources Element]*
- CONSV 4.7** Support rainwater harvesting, stormwater capture, and gray water systems in site planning and building design, where appropriate. *[Cross-reference Character & Design; Environmental Planning; and Water Resources Elements]*
- CONSV 4.8** **(NEW)** Explore new and evolving water conservation and reuse technologies, and use them as appropriate. *[Cross-reference Water Resources Element]*
- CONSV 4.9** **(NEW)** Review and revise city code and ordinance requirements that potentially hinder water conservation practices. *[Cross-reference Water Resources Element]*

GOAL CONSV 5 † (NEW)

Retain and prevent erosion of significant watercourses and water bodies.

Policies

- CONSV 5.1** (NEW) Discourage clearing and grading of entire sites located in areas designated as Environmentally Sensitive Lands. *[Cross-reference Character & Design; Open Space; and Land Use Elements]*
- CONSV 5.2 †** (NEW) Maintain existing and promote wise placement of native plants as the primary means to control erosion and retain Sonoran Desert character. *[Cross-reference Character & Design and Environmental Planning Elements]*
- CONSV 5.3 †** (NEW) Strive to restore erosion-damaged areas to their previous conditions to reduce water consumption and restore desert wildlife habitat. *[Cross-reference Environmental Planning Element]*
- CONSV 5.4 †** Encourage preservation of the 100-year floodplains and washes as natural drainage ways, where possible. If hazard prevention measures are necessary, use context-sensitive design elements. *[Cross-reference Character & Design; Open Space; and Safety Elements]*
- CONSV 5.5** Manage streams, washes, and floodplains to maintain their multiple biological, physical, and social values.
- CONSV 5.6** For flood control channel design, a high priority should be placed on:
- Sensitive aesthetic treatment;
 - Neighborhood character compatibility; and
 - Effects on the entire ecosystem, including plant and animal habitat.

[Cross-reference Character & Design; Environmental Planning; and Neighborhood Preservation & Revitalization Elements]



WATER RESOURCES ELEMENT[†]

Scottsdale has a multi-faceted water resources portfolio aimed at providing the community with a long-term assured water supply. This portfolio consists of surface water supplies, which include Salt and Verde River water from Salt River Project and Colorado River water from Central Arizona Project; groundwater supplies; and reclaimed water. Scottsdale's water resource systems include water supplies, water treatment, water transmission and delivery, wastewater collection, wastewater treatment systems, and both reclaimed and irrigation water distribution systems.[‡]

As required by the State of Arizona, Scottsdale has an assured water supply designation that ensures sufficient water supplies are available for the next 100 years before allowing any new development. Scottsdale has focused on obtaining surface water supplies, increasing recharge efforts, and reducing groundwater pumping. In 2006, the city achieved a significant milestone by reaching safe-yield in groundwater usage, where groundwater recharge is greater than the amount pumped. Scottsdale is demonstrating responsible stewardship of groundwater resources and maintaining a sustainable water supply for future generations by not withdrawing more groundwater than is replenished through natural or artificial recharge.

Although Scottsdale manages and protects the water supply, the first and most critical step in planning and preparing for drought is proactive conservation of water by using water efficiently, reducing waste, and maximizing use of reclaimed water, gray water, and harvested rainwater. All citizens can help ensure we have enough water for future generations by efficient use of water on a daily basis.

The goals and policies of the Water Resources Element ensure that Scottsdale continues to provide safe, reliable, and quality drinking water to the community, now and into the future.

Goals and Policies

GOAL WR 1 †

Ensure renewable, long-term water supplies for the community.

Policies

- WR 1.1 †** Maintain State-mandated safe-yield conditions in the city’s water service area by minimizing groundwater pumping and maximizing the amount of groundwater recharge. *[Cross-reference Conservation and Water Resources Development Elements]*
- WR 1.2 †** Protect existing supply and ensure adequate future supply of renewable water sources, including Colorado River and Salt River Project water rights, credits, and/or reclaimed water, to meet growth projections. *[Cross-reference Conservation Element]*
- WR 1.3 †** Update the city’s 100-year Assured Water Supply designation as new sources of water supply are acquired.
- WR 1.4** Continue to manage water and wastewater resources as critical parts of a sustainable community. *[Cross-reference Environmental Planning; Conservation; and Public Services & Facilities Elements]*
- WR 1.5** Encourage private septic system users to connect to the city’s sewer collection system, where practical.
- WR 1.6** Continue to provide a reliable, high-quality water and wastewater system that achieves the highest level of customer satisfaction.
- WR 1.7 †** **(NEW)** Site, drill, construct, and equip new groundwater recharge wells, when needed, in the most effective locations available to help stabilize groundwater levels, protect water supplies, and mitigate land subsidence.
- WR 1.8** **(NEW)** Ensure the city’s drinking water distribution system can effectively deliver drinking water to every part of the water service area. *[Cross-reference Public Services & Facilities Element]*
- WR 1.9** **(NEW)** Continue working with regional partners, other government entities, and tribal communities to facilitate shared water demand and sustainable management of water resources.
- WR 1.10** **(NEW)** Proactively maintain and replace water delivery and effluent recapture system infrastructure. *[Cross-reference Public Services & Facilities Element]*
- WR 1.11** **(NEW)** Expand and modify the reclaimed water distribution system, as feasible, to enhance groundwater recharge and reuse. *[Cross-reference Conservation Element]*

GOAL WR 2 (NEW)

Plan, prepare for, and adapt to significant climatic impacts on the water supply, such as short-term and extended drought.

Policies

WR 2.1 (NEW) Educate the public on preparedness, planning, and response for drought and other emergencies affecting the water supply. *[Cross-reference Conservation and Safety Elements]*

WR 2.2 (NEW) Closely monitor drought conditions and implement the least drastic mitigation measures required. *[Cross-reference Conservation and Safety Elements]*

WR 2.3 (NEW) Minimize the impacts of drought on residents by using short-term and long-term approaches to drought preparedness, response, and recovery. *[Cross-reference Safety Element]*

WR 2.4 (NEW) Effectively communicate the procedures and available resources information to the community in the event of extreme drought or other emergency. *[Cross-reference Safety Element]*

WR 2.5 (NEW) Periodically update Scottsdale’s Drought Management Plan to reflect current and projected water supplies, demands, and infrastructure with an emphasis on water use efficiency. *[Cross-reference Conservation and Safety Elements]*



JENNY LIN RD.

CIRCLE MOUNTAIN RD.

HONDA BOW RD.

ROCKAWAY HILLS RD.

DESERT HILLS DR.

JOY RANCH RD.

STAGECOACH PASS

CAREFREE HWY.

DOVE VALLEY RD.

LONE MOUNTAIN RD.

DIXILETA DR.

DYNAMITE BLVD.

JOMAX RD.

HAPPY VALLEY RD.

PINNACLE PEAK RD.

DEER VALLEY RD.

LOOP 101

UNION HILLS DR.

BELL RD./FRANK LLOYD WRIGHT BLVD.

GREENWAY PKWY.

THUNDERBIRD RD.

CACTUS RD.

SHEA BLVD.

DOUBLETREE RANCH RD.

McCORMICK PKWY.

INDIAN BEND RD.

LINCOLN DR.

CHAPARRAL RD./CAMELBACK RD.

CAMELBACK RD.

INDIAN SCHOOL RD.

THOMAS RD.

McDOWELL RD.

LOOP 202

McKELLIPS RD.

BARTLETT DAM RD.

RIO VERDE DR.

CAVE CREEK RD.

TATUM BLVD.

PALISADES BLVD.

BEELINE HWY. (87)

SCOTTSDALE AVENUE

GALVIN PKWY.

SCOTTSDALE RD.

HAYDEN RD.

PIMA RD.

LOOP 101

96th ST

104th ST

112th ST

120th ST

128th ST

136th ST

142th ST

Water Resources

City of Scottsdale
Approximate Water Service Area

Scottsdale McDowell Sonoran Preserve
(See Open Space Element)



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ENERGY ELEMENT[†]

A safe, reliable energy supply is important to commerce and the city's overall health. Using renewable energy systems allows Scottsdale to become more independent and less reliant on imported fossil fuels. Moving to more reliable and affordable sources will showcase the city's commitment to a sustainable energy future. Furthermore, reducing energy consumption and encouraging conservation per capita are critical to future economic and environmental vitality. (NEW)

In Scottsdale, the most viable renewable energy resource is solar energy. Other sources of renewable energies include water and wind generation; however, Scottsdale has no significant sources of these other renewable energy generation types.

The city's total demand for energy will increase with projected population growth. Therefore, Scottsdale must provide flexibility and incentives for energy efficiency and renewable energy technologies.

The goals and policies included in this element seek to balance the energy needs of consumers with the sustainability of the community's renewable and non-renewable energy sources. (NEW)

Goals and Policies

GOAL E 1 (NEW)

Work toward becoming a net-zero energy community that balances energy efficiency with renewable energy generation.

Policies

- E 1.1 †** (NEW) Encourage and provide incentives for efficient use of energy.
- E 1.2 †** (NEW) Assess and identify policies and practices that provide for greater uses of renewable energy sources.
- E 1.3** (NEW) Support off-site or shared renewable energy generation for a group of buildings or entire neighborhood.
- E 1.4 †** (NEW) Consider the use of alternative finance options to achieve renewable energy supply goals.
- E 1.5** (NEW) Promote renewable energy-ready designs for new construction and major remodels. *[Cross-reference Character & Design and Environmental Planning Elements]*



GOAL E 2

Reduce per capita energy consumption and promote energy efficiency.

Policies

- E 2.1** (NEW) Develop public-private energy efficiency education programs.
- E 2.2** (NEW) Promote use and provide education on the benefits of energy efficiency best practices
- E 2.3** Explore emerging smart energy technologies and use them whenever possible.
- E 2.4** Support development of regional waste-to-energy facilities. *[Cross-reference Environmental Planning and Public Services & Facilities Elements]*
- E 2.5** (NEW) Encourage local industries to adopt energy efficiency measures and renewable energy to minimize the environmental impacts of their operations.
- E 2.6** (NEW) Support efforts to make energy usage and its associated impacts more transparent for greater understanding by property owners and tenants.



GOAL E 3 (NEW)

Promote building and site designs that maximize energy efficiency.

Policies

E 3.1 Encourage the use of natural properties and sustainable building systems (e.g. sun, shade, thick walls, insulation) to reduce the demand for and use of mechanical cooling and heating systems. *[Cross-reference Character & Design and Environmental Planning Elements]*

E 3.2 Encourage the use of landscaping to reduce summer solar heat gain. *[Cross-reference Character & Design and Environmental Planning Elements]*

E 3.3 Promote solar energy opportunities in building and site design. *[Cross-reference Character & Design and Environmental Planning Elements]*

E 3.4 Incorporate healthy, resource- and energy-efficient materials and methods in design, construction, and remodeling of buildings. *[Cross-reference Character & Design; Housing; Healthy Community; Conservation; and Environmental Planning Elements]*

E 3.5 **(NEW)** Orient buildings and lots in ways that minimize summer solar heat gain, maximize roof solar access and natural ventilation, and limit roof solar access obstructions of neighboring structures. *[Cross-reference Character & Design and Environmental Planning Elements]*

E 3.6 Improve the energy efficiency of the building envelope, heating and cooling systems, lighting, and appliances.



GOAL E 4 (NEW)

Seek creative means to increase the energy efficiency of city facilities and operations.

Policies

- E 4.1** Promote fuel conservation in city vehicles, and use clean, alternative fuels, whenever possible.
- E 4.2** Reduce energy consumption in the provision of municipal services and maintenance of city infrastructure, without affecting the quality and quantity of services. *[Cross-reference Public Services & Facilities and Public Buildings Elements]*
- E 4.3** **(NEW)** Develop strategies to lower utility costs and reinvest savings into energy efficiency measures and renewable energy. *[Cross-reference Public Buildings Element]*
- E 4.4** **(NEW)** Perform energy audits and benchmarking of city facilities, projects, and programs to assess their energy efficiency potential. *[Cross-reference Public Services & Facilities and Public Buildings Elements]*
- E 4.5** **(NEW)** Incorporate renewable energy technologies in the design of city facilities. *[Cross-reference Public Buildings Element]*

GOAL E 5 † (NEW)

Support the development of renewable energy sources that are compatible with Scottsdale’s environmental and aesthetic goals.

Policies

- E 5.1** **(NEW)** Support regional efforts to increase the supply of energy from renewable sources, distributed generation, and cogeneration. *[Cross-reference Public Services & Facilities Element]*
- E 5.2** **(NEW)** Optimize existing energy infrastructure and encourage interconnection with smart grid technologies. *[Cross-reference Public Services & Facilities Element]*
- E 5.3** **(NEW)** Diversify the city’s energy supply sources with emphasis on cost-effective, efficient, clean, renewable, reliable, and secure energy sources. *[Cross-reference Public Services & Facilities Element]*
- E 5.4** **(NEW)** Promote clean and renewable energy and fuel sources to reduce the community’s dependence on fossil fuels.