Environmental Planning
Element 6

INTRODUCTION

The Environmental Planning Element is an oversight element and is intended to address any anticipated effects, if any, of other Element goals and strategies. Several other Elements of this Plan incorporate environmental planning goals and strategies that are targeted, more closely, to those specific elements. This Element addresses a variety of environmental strategies to ensure that the City considers resource conservation and environmental issues in its long-range planning. The environmental issues range from energy and water conservation to native plant and wildlife preservation and will involve the cooperation of citizens and public agencies.

Sierra Vista is a leader in many environmental areas, chief among them water conservation. The City has been proactive in adopting measures to conserve resources to include water, energy, and materials. Conservation has positively benefited the San Pedro River and Fort Huachuca, which in turn, benefits the local economy and improves the quality of life for residents and visitors.

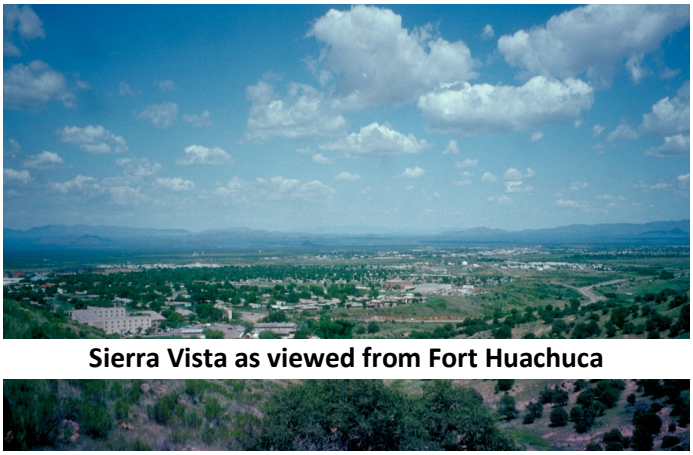
BACKGROUND

State law requires that this Element contain, "a*nalysis, policies and strategies to address anticipated effects, if any, of plan elements on air quality, water quality and natural resources associated with proposed development under the general plan."*

Air Quality

The goals and strategies found in the Elements for land use, transportation and circulation, open space, growth, and economic development are the goals and strategies that will most directly influence the air quality within City limits. Land use and growth strategies should encourage infill and result in a decrease in vehicle miles travelled. For example, transportation and circulation strategies encourage multiple modes of travel; preserving open space throughout the City can improve air quality by filtering pollutants; and, economic development strategies encourage non-polluting businesses and industries.

Air quality impacts affect, and are affected, by causes beyond City boundaries. The City needs to coordinate with Cochise County to encourage development regionally that is consistent with its strategies aimed toward protecting air quality. The City of Sierra Vista also needs to stay abreast of what federal and state agencies are doing to minimize cross-border air pollution.



Sierra Vista as viewed from Fort Huachuca

Water Quality

This Element, Environmental Planning, addresses water quality and aquifer protection. Water issues are also addressed in the Water Resources, Conservation, and Public Facilities and Services and Public Buildings Elements. The Water Resources Element is largely concerned with the available water supply for the community. The Conservation Element addresses water conservation, stormwater management, and watershed protection. The Public Facilities and Services and Public Buildings Element addresses facility locations, Surface Water Plan considerations, and the Wastewater Management and Sewerage Master Plan.

Natural Resources

Natural Resources include water, forests, soils and aggregates, plants, and animals. The applicable plan Elements addressing natural resources are the Land Use, Open Space, Growth, Water Resources, Conservation, Parks and Recreation, and Public Facilities and Services and Public Buildings Elements. Land Use, Open Space, and Growth Element goals and strategies consider impacts on water quality and quantity, native plants and animals, and environmentally sensitive areas. The Open Space Element goals and strategies reduce impacts to environmentally sensitive areas. The Water Resources Element and Conservation Element goals and strategies reduce water consumption. The Parks and Recreation Element strives to include goals and strategies that are environmentally sensitive. The Public Facilities and Services and Public Buildings Element likewise has strategies to reduce development and operational impacts on natural resources.

The quantity of water resources and conservation strategies are addressed in the Water Resources Element.

GOALS AND STRATEGIES

Goal 6-1 Maintain a high standard of air quality

Strategies

1. Encourage the efficient flow of traffic movement.
   The City is currently testing software and other technologies on the traffic signals to maximize traffic flow efficiency. The City can consider additional roadway features to increase traffic flow efficiency with the General Plan Update.

2. Encourage energy efficient building design to minimize the demand for power. One way the City is encouraging energy efficient building design is through the Architecture and Design Review standards. As an option, a developer can meet the required design criteria through site design by, "orienting buildings to take advantage of solar energy that will allow for passive heating, providing natural light, and harvesting solar energy." The City has also adopted the 2012 Energy Code which requires such items as higher installation standards, energy efficient windows, and vestibules for commercial development. The Development Code requires Energy Star rated appliances for all commercial developments.

3. Lead by example by designing and retrofitting City buildings to reduce energy and water demand.
   The City started the process of energy and water conservation in 2019 through the Schneider Electric project. Through this project, light bulbs at all City owned buildings, parks, athletic fields, parking lots, and streetlights were replaced with energy efficient bulbs. Regarding the water conservation measures, the new Domingo Paiz soccer field was constructed with artificial turf and the grass at Cyr Center Park and City Hall were replaced with artificial turf. Previously, the City used dynamic sprinkler systems and drought tolerant plants in public areas throughout the City.

4. Minimize blowing dust caused by land clearing and grading.
   The Public Nuisance Code prohibit blowing dust related to clearing and grading. The City can enforce this Code should a violation exist.

(See these Elements for additional goals and strategies related to air quality: Goal 2-Land Use, Goal 3-Transportation and Circulation, Goal 4-Open Space, Goal 5-Growth and Goal 15-Economic Development)

Goal 6-2 Maintain a high standard of water quality.

Strategies

1. Reduce and mitigate stormwater environmental impacts.
   The Arizona Department of Environmental Quality (ADEQ) requires that a Construction Activity General Permit be submitted for any construction project 1 acre or greater. The permit is to ensure that a plan, known as a Stormwater Pollution Prevention Plan (SWPPP) is in place to prevent stormwater discharges from the construction sites into the Arizona surface waters such as washes. The Public Works Department monitors each applicable construction site to verify a SWPPP has been developed and provided to ADEQ. A FAQ sheet provided to developers during pre-submittal meetings which provide information about SWPPP.

2. Implement Best Management Practices (BMPs) for stormwater management within City.
   The Community Development Department notifies Public Works of newly submitted projects in the City. Public Works follows up with inspections to verify ADEQ compliance.

3. Ensure compliance with stormwater management actions on the part of private development through training and project monitoring.
   Private developers are aware of the SWPPP requirements through previous SWPPP requirements and City monitoring.

5. Manage urban stormwater using the best management practices to include low-impact development.
   The Development Code was amended in 2018 to include low-impact/water harvesting techniques for commercial developments. One of the first amendments allowed roof and foundation drains to be discharged to a rain storage tank, or depressed landscape areas with sufficient buffer from building foundation. Another amendment in this Section allows landscaped areas that receive stormwater runoff to provide only a temporary irrigation system if the areas receive stormwater runoff. In addition, Section 151.08.008.(E)(15) states that storage capacity of a detention basin can be reduced if rooftop and parking lot runoff are either captured in a water harvesting tank or are directed to landscape areas.

6. Enhance, restore, and rehabilitate washes.
   The Surface Water Plan is a surface water management plan that addresses flooding and erosion issues within the City. The Plan was originally

adopted in 1988 and is currently being updated with the aid of a consultant. A large part of the Plan makes recommendations on wash improvements to ensure the stability of the washes. Recommendations include constructing culverts, stabilization or armoring, or leaving the washes in a natural state with expanded building setbacks. Developers are responsible for improving the washes if the development will be draining water runoff into the adjacent wash. Once the wash is dedicated, the City is responsible for maintaining the wash improvements.

7. Establish and maintain vegetated streamside buffers to help filter urban runoff.
   The Development Code and the Surface Water Plan both indicate building buffers to the washes are required. Many buffers are site specific based on the size, stability, and configuration of the wash.

8. Seek funding to assist in the establishment or expansion of local stewardship programs for each of the major washes.
   The City has created an Adopt-A-Area program where citizens can adopt and maintain areas such as roads, parks, and washes here in the City

9. Increase the amount of permeable surfaces in development.
   The Development Code requires that any new commercial site have a minimum of 15 percent open space. The City can consider increasing this minimum in the General Plan update.

10. Consider available water treatment techniques for the filtration of parking lot runoff.
    Development Code amendments in 2018 encouraged low-impact/water harvesting techniques for commercial developments. One of the first amendments allowed roof and foundation drains to be discharged to a rain storage tank, or depressed landscape areas with sufficient buffer from building foundation. In addition, Section 151.08.008.(E)(15) states that storage capacity of a detention basin can be reduced if rooftop and parking lot runoff are either captured in a water harvesting tank or are directed to landscape areas. Directing water runoff through landscape areas prior to the runoff escaping the site is a form of filtration and aids in the treatment of water.

11. Encourage the development of a demonstration site using pervious parking lot pavement methods that enable direct stormwater infiltration.

A demonstration site has not been constructed to date. The City can consider this in the future.

12. Incorporate water quality considerations into the Surface Water Plan, when updating.
    Although the focus of the Surface Water Plan is flood management and wash stability, the efforts to reduce erosion, head cutting, sediment transport, etc. will likely have a positive impact on surface water quality.

13. Implement the City's wash maintenance plan factoring in environmental considerations when practical and feasible.
    The goal of the Wash and Drainageway Maintenance Policy is to reduce the potential for flooding during wet seasons and wildfires during dry seasons, by removing vegetation and debris from urban washes and drainage ways. The Public Works Department does factor environmental considerations when maintaining the washes through the following methods:

    Herbicide chemicals are never used within the washes and drainageways;

    To preserve the natural vegetation around the washes and the park areas, Public Works will make great efforts to leave hard wood trees that are 6-inches or greater in diameter;

    Within the bank portion of the wash that contains dense, well nourished vegetation, Public Works will practice discretion in the removal of bushes and trees and make great efforts to leave most of the natural vegetation.

    Public Works will perform debris removal from the washes which shall include tree limbs, loose vegetation, solid waste, illegal dump material, construction debris, tires, and other objects not belonging in an urban wash.

14. Continue and increase hazardous waste collection events to ensure safe disposal. The City has provided programs that offer disposal for grease after Thanksgiving. The City also had a "free dump day," but it was discontinued because of a duplicate program that was organized by Cochise County.

15. Protect wellheads through proper zoning. The City does own a few wells at the parks and airport. However, there is currently no wellhead protection ordinance in the Development Code. Requirements such as the SWPPP

reduce industrial pollution from entering the waterways and ultimately the aquifer.

(See these Elements for additional goals and strategies related to water quality: Goal 8-Water Resources, Goal 9-Conservation, and Goal 11-Public Facilities and Services and Public Buildings).

Goal 6-3 Protect natural resources

Strategies

1. Incorporate natural resource considerations into the Surface Water Plan when it is updated. As stated previously, the Plan is currently being updated. The City will consider natural resources as part of the update.

2. Design wash crossings that facilitate wildlife movement.
   Many of the more recent bridge crossings over the washes do facilitate the movement of wildlife. The wildlife in the washes can traverse underneath the washes and avoid conflicts with vehicles on the roadway.

3. Create incentives for developers to retain native vegetation adjoining natural wash areas.
   The City requires a Native Plant Salvage for all proposed developed areas that are 1-acre or larger. The City will conduct a walk through of the property and tag and native plants to be relocated on the property. Per the Surface Water Plan and the Development Code, washes are defined as Natural Drainage Maintenance Corridors (NDMC) or Flood and Erosion Control Corridors (FECC). The purpose of the NDMC is to "maintain a continuous flood hazard and erosion hazard buffer along established channels. Preservation of the mature riparian environment along the channel should provide a natural stabilizing influence and reduce erosion." In addition, for NDMC's, there is either a 50-foot or a 100-foot setback from the low flow channel, depending on the size of the watershed. Therefore, the Surface Wate Plan dictates, based on the wash designation, the retention of the native vegetation. Additional incentives and wash buffers can be considered during the Surface Water Plan update.

4. Work with other jurisdictions to identify and protect aquifer recharge areas.

The Environmental Operations Park (EOP) is the largest recharge entity in the County. The City of Sierra Vista, Cochise County, Fort Huachuca, City of Bisbee, and the Nature Conservancy have formed the Cochise Conservation and Recharge Network. This Network implements and designs projects that are

designed to increase groundwater recharge and protect groundwater resources in the most strategic places. There are currently 8 projects along the San Pedro River that are either functional or are in the design and planning stages. The scope of the projects range from municipal recharge projects to regional detention basins. A list of all the projects can be found on this website: **https://storymaps.arcgis.com/stories/5110541947c54842958ad560ecdb334f**

5. Factor wildlife habitat protection into the management and maintenance of washes.

   As previously stated, the Wash and Drainageway Maintenance Policy strive to maintain the natural vegetation and habitat of the washes. In addition, there is specific language that addresses wildlife habitat protection. For example, the policy, "provides guidelines for maintenance that will provide a good balance between keeping washes and drainage ways flowing while also protecting wildlife habitat that is located along the banks of washes."

(See these Elements for additional goals and strategies related to natural resources: Goal 2-Land Use, Goal 4-Open Space, Goal 5-Growth, Goal 8-Water Resources, Goal 9-Conservation, Goal 10-Parks and Recreation, Goal 11-Public Facilities and Services and Public Buildings, Goal 15-Economic Development, and Goal 17-Urban Design).

STATE LAW REQUIREMENTS

Arizona Revised Statutes, Section 9-461.05-9 D 4

> *"An environmental planning element that contains analysis, policies and strategies to address anticipated effects, if any, of plan elements on air quality, water quality and natural resources associated with proposed development under the general plan. The policies and strategies to be developed under this element shall be designed to have community-wide applicability and shall not require the production of an additional environmental impact statement or similar analysis beyond the requirements of state and federal law."*

ATTACHMENTS

None

REFERENCES

None