
6. ENVIRONMENTAL PLANNING ELEMENT

- 6.a Introduction
- 6.b Legislative Requirements
- 6.c Environmental Plan
- 6.d Goals, Objectives and Policies
- 6.e Implementation Strategies

6.a INTRODUCTION

Preservation of the natural environment in a clean, healthy state is very important to the people of Clarkdale. It is the purpose of the Environmental Planning Element to ensure that growth and development that occurs should be balanced with the interest of protecting natural resources, including open space, wildlife habitat, natural washes and floodplains, as well as addressing related issues of energy conservation, recycling, and air and water quality.

The Environmental Planning Element includes analysis, policies and strategies to address the effects of plan elements on such issues as air quality, water quality, energy conservation and natural resources. These policies and strategies address town-wide concerns and do not address specific environmental assessments or impact statements.

6.b LEGISLATIVE REQUIREMENTS

Arizona Revised Statutes specifies that a general plan must have an Environmental Planning Element to address various concerns. Requirements of ARS § 9-461.05.3. are as follows:

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.

6.c ENVIRONMENTAL PLAN

The Environmental Plan consists of five major categories, including:

- Air Quality
- Water Quality
- Natural Resources
- Waste and Resource Recovery
- Energy Conservation

Air Quality

Poor air quality can have a significant effect on public health and welfare. Additionally, air pollution is associated with a range of environmental and economic impacts. Burning of fuels from automobiles and industrial sources contributes to a range of air pollutants, including carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide and lead. Particulate matter whose aerodynamic size is less than ten micrometers (PM10) is primarily caused by a combination of wind borne dust, wood stoves and automotive travel on dirt roads and unpaved parking lots. The Arizona Department of Environmental Quality recommends paving dirt roads when use exceeds 250 vehicle trips per day; there are many sections of unpaved roadway in Clarkdale which already exceed that level of use.

During its early history Clarkdale was known to have very poor air quality due to the copper smelter. Historic photos show that very little vegetation grew in the vicinity during that period. After the smelter ceased operations in the early 1950's, air quality improved and the area has enjoyed very good air quality since that time. As Clarkdale and the region continue to grow, that expectation for good, clean air will become increasingly at risk. Automobiles and trucks, unpaved roads and parking lots, old-style wood burning stoves, general construction activities, sand and gravel mining operations, and other industrial uses contribute to air quality problems.

Land use planning that encourages mixed use and planned developments may result in fewer automobile trips which means a reduction in vehicle emissions. Circulation Element policies to encourage walking, bicycling and transit use also can result in lower automobile emissions. Programs to require paved roads and parking lots in association with new development will address significant air quality concerns associated with particulate matter.

Water Quality and Conservation

Programs to affect water conservation through pricing and regulatory controls are limited by the Town's lack of ownership of the system. Water conservation programs can be more easily administered through a municipal system since individual use can be directly monitored and tracked. Conservation programs, whether voluntary incentives or regulatory controls, can be more readily linked to a centralized system than to independent private wells which operate with limited oversight. A significant and growing problem with water quality in Clarkdale and throughout the Verde Valley is associated with elevated levels of nitrates. Most of this contamination is suspected to be associated with the increase of on-site septic systems for treating household wastewater. Efforts to limit installation of septic systems will assist in reducing groundwater nitrate contamination. Other sources of water pollution include non-point source pollution, such as run-off from streets and dumping of household toxic and automotive wastes. Programs to encourage alternative disposal of household toxic wastes will also assist in reducing water contamination.

Natural Resources

Natural resources found in the Clarkdale area include a range of plant and wildlife species and their associated habitats. The Verde River corridor, several major drainage washes and areas of desert

habitat define complex ecosystems that are home to many interrelated species of plants and animals. Land use policies that encourage preservation of natural areas in association with new development not only helps protect those natural areas but also provides a valuable amenity that adds value to the development. Circulation Element policies should evaluate the location of new streets within the town to consider compatibility with natural resource objectives.

Waste and Resource Recovery

Clarkdale residents depend on other jurisdictions to provide waste management facilities. A refuse transfer station is located in Cottonwood and the current landfill disposal site is located many miles away outside of the Verde Valley west of the Black Hills in Yavapai County. Participation in waste reduction and recycling programs addresses long-term regional interests in assuring adequate and affordable landfill capacity will be available in the future. Additionally, recycling programs can be associated with economic development through the promotion of secondary material markets, such as paper recycling mills.

Energy Conservation

Energy conservation can be applied to a range of areas, including electric power use, heating and cooling of buildings, and transportation needs. There are a number of things the Town can do to promote energy conservation, including retrofitting Town buildings to use energy efficient lighting, ensure new vehicles purchased are fuel-efficient models, support recycling by purchasing recycled content products when ever possible, and ensure any new Town buildings consider energy-efficient designs that incorporate solar and natural climatic principles, such as site orientation and use of local materials. In addition to the Town taking the lead on public projects, other energy conservation programs and policies can be directed to the general public. Land use policies can encourage new development to recognize and offer incentives for site development, building orientation and appropriate material use that take advantage of natural energy-efficient principles.

6.d ENVIRONMENTAL PLANNING GOALS, OBJECTIVES AND POLICIES

The following Goals, Objectives and Policies provide direction and guidance for existing and future environmental planning concerns for Clarkdale:

GOAL 6-A ENSURE CLARKDALE HAS A SAFE, HEALTHY ENVIRONMENT FOR RESIDENTS, BUSINESSES AND OTHER USES.

Objective 6-A. a.

Support efforts to maintain high standards of air quality in Clarkdale.

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| Policy | Support programs that result in paving of dirt and gravel roads. |
| Policy | Support programs to pave non-residential parking lots. |
| Policy | Provide support for application of dust control measures during construction and grading operations. |
| Policy | Evaluate policies for cleaner burning wood burning stoves. |
| Policy | Support and work with other incorporated and unincorporated communities and |

governments to ensure regional cooperation for clean air policies within the Verde Valley.

Objective 6-A. b.

Support programs to ensure the highest possible level of water quality and water conservation practices.

- Policy Encourage efforts to provide town-wide municipal wastewater infrastructure to minimize the installation of new septic systems.
- Policy Promote desert landscaping practices that minimize water use.
- Policy Support a comprehensive water conservation program.
- Policy Support gray water irrigation systems for residential uses.
- Policy Promote drip irrigation systems for all new commercial developments and for any new park development.

Objective 6-A. c.

Support preservation of the natural resources in Clarkdale

- Policy Support preservation of natural habitat in areas that are less desirable for development, such as floodplains, washes and steep slopes.
- Policy Support efforts to preserve native landscaping in new developments.
- Policy Support the Verde Valley Greenway Project.

Objective 6-A. d.

Support comprehensive waste reduction and resource recovery programs.

- Policy Support recycling programs by continuing to make space available for the material collection facility and through on-going education programs.
- Policy Encourage economic development programs that support use of secondary materials in local businesses.
- Policy The Town should consider using recycled products and materials whenever possible in Town operations.

Objective 6-A. e.

Support energy conservation in Clarkdale.

- Policy Support upgrading of Town buildings and facilities to use energy conservation techniques, including energy-efficient heating and cooling systems, and energy-efficient lighting.

1. Develop a wood burning stove ordinance to the Town Code that will ensure a cleaner air quality during the winter months.	Planning Department	2-5 years	General Fund
2. Develop a policy to pave new and existing dirt roads and existing dirt parking areas.	Town Engineer Town Council Finance Director	3-5 years	Improvement Districts General Fund
3. Develop a landscape ordinance for new development to ensure the utilization of drought tolerant plantings and water conservation watering techniques.	Planning Department	0-3 years	General Fund Grant Funding
4. Develop Town ordinance to preserve sensitive natural habitat in areas such as flood plains, washes and steep slopes.	Town Engineer Planning Department	2-4 years	General Fund
5. Upgrade current Town building facilities to energy efficient heating, cooling, and lighting to conserve energy.	Town Council	1-3 years	General Fund Grant Funding