

Keep Sedona Beautiful

Comments and Questions on the V2 Draft of the Environmental Element

This document supplies Yavapai County Development Services with comments from Keep Sedona Beautiful on the V2 draft of the Environmental Element component of the updated County Comprehensive Plan.

The following information is included below:

- Comments that apply to the entire Comprehensive Plan.
- A set of questions and comments that apply specifically to the Environmental Element.
- A version of the Environmental Element that includes our suggested changes, deletions and additions, with specific comments and questions **highlighted in yellow and bolded**.
Wording we're suggesting be added shows in red.

Comments that apply to the entire Comprehensive Plan

1. The Comprehensive Plan needs a glossary of terms.
2. We suggest that “Goals, Objectives and Recommendations” be reframed as “Goals, Policies and Action Items,” and each of these are uniquely identified, so a reference to one is unambiguous. Goal EN1 can be referred to rather than Goal 1 of the Environmental Element. The County Team agreed to this in the Growing Water Smart Workshop.
3. Citations and footnotes are needed throughout.
4. We suggest the County add a section on the progress made over the last 10 years on meeting goals, objectives and recommendations from the 2012 Comprehensive Plan. What policies and/or programs resulted from the 2012 Comprehensive Plan’s implementation?

General Questions and Comments on the Environmental Element

1. We applaud and support the recommendation to create a county-wide Climate Action Plan.
2. We believe that the introduction needs a significantly stronger statement on climate change, mega drought, and sustainability. There should be acknowledgement in the section of the impact that Climate Change is having on our resources.
3. We suggest that the Environmental Element include sections on:
 - Science-based analysis
 - Threats to the land and its’ inhabitants
 - Preserving riparian areas
 - Wildfire impacts on the environment
 - Collaboration

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VII. ENVIRONMENTAL ELEMENT 2.0

Introduction

Arizona Revised Statutes (A.R.S.), 11-804 Comprehensive plan; contents – states the following as it relates to the importance of natural resources:

“The comprehensive plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the area of jurisdiction pursuant to the present and future needs of the county. The comprehensive plan shall be developed so as to conserve the natural resources of the county, to ensure efficient expenditure of public monies and to promote the health, safety, convenience, and general welfare of the public.”

Based on the above state requirements, Yavapai County Comprehensive Plan will include the Environmental Planning Element with sections on analyses, policies, and strategies to uphold the environmental integrity of Yavapai County in a sustainable way, which will address anticipated effects on air quality, water quality, **water quantity and availability** and natural resources associated with the existing and future developments. The policies and strategies to be developed under this element shall be designed to have countywide applicability and shall be consistent with County’s Values and Vision.

Outreach meetings and survey results as part of this Comprehensive Plan have demonstrated that Yavapai County residents take pride in the natural environment. Although our environmental quality is generally excellent, development pressures and human activities continually pose threats. Maintaining healthy natural systems is by most measures considered an investment in our future that supports our quality of life, helps maintain property values, promotes economic development and encourages growth in tourism. Residents have indicated a desire to protect the environment but acknowledge the need to balance competing interests. Approaches to large-scale planning and community development may consider limited public agency budgets, private property rights, market demand for certain types of development and State Statutes. Balancing these issues with conservation **is** a primary planning objective.

In the previous paragraph, Keep Sedona Beautiful asks that you clarify “State Statutes”. Protecting the environment must be a primary concern. This document needs to stress the priority of environment, then balance competing interests.

Keep Sedona Beautiful suggests adding the following language.

In order to guide the development of this Comprehensive Plan, Yavapai County conducted a series of surveys that provided residents an opportunity to express their priorities and opinions.^{1 2} While some residents felt they did not have enough information or were neutral on the survey items, residents strongly agreed or agreed with these statements as follows:

- 96% - The planning and approval of new developments should include a careful analysis of the projected impacts on the natural environment.

¹ The results of the initial survey, responded to by 906 residents can be found at: <https://experience.arcgis.com/experience/c4212562e8a546b88a0297213a8b0550/?draft=true>

² Results of follow-up surveys can be found at: <https://storymaps.arcgis.com/stories/2ba0fcec9cad4583890aea94b79703e3>

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- 95% - Ensuring clean air and clean water for future generations and for the health of our natural environment should be a priority.
- 92% - Protection of rivers, springs and streams, including their associated habitats, should be a priority.
- 86% - Protection of native plant and wildlife species, including habitat and wildlife corridors, should be a priority.
- 85% - Incentives should be provided for construction that protects land and conserves water.
- 78% - Off-highway vehicle use should be managed to reduce impact on the land, air quality, wildlife and residents, and to ensure public safety.
- 78% - The county should plan and implement a comprehensive governmental and public waste reduction and recycling program.
- 78% - A plan to permanently protect and preserve environmentally sensitive land should be implemented.
- 73% - Certification as the first “Dark Sky” county in the United States should be sought.
- 66% - A county-wide noise ordinance should be enacted.
- 58% - A county-wide Climate Action Plan should be developed and implemented.

Science-based Analysis

Science-based solutions to the regional challenges of climate change and drought are needed to protect habitats and landscapes, so the cumulative effects of human activity remain in balance with the needs of the natural ecosystem. Recent studies characterize the changes in the Southwest due to rising temperatures and prolonged mega-drought as potentially transformational.³ In strategizing to protect the natural environment, Yavapai County will use the most recent science-based research and programs. For example, the University of Arizona Climate Assessment for the Southwest⁴ focuses “on bringing science research and applications to the people of the state of Arizona.”

Arizona cities are adopting science-based sustainability measures such as climate action plans and sustainability plans. Corporations are aggressively moving to limit their carbon footprints and are investing in regions that provide stable and renewable energy. Yavapai County can save taxpayer money by collaborating with other counties and cities in the development and implementation of a Climate Action Plan.

Threats to the Land and Its Inhabitants

As the County becomes ever more attractive to tourists seeking outdoor adventure, effective planning will be required to save wildlife and habitat from destructive practices. For example, intrusion by Off Highway Vehicles (OHVs) is causing significant environmental damage. Due to the fragile nature of the soil and vegetation, the impact of this abuse is long lasting. The County will collaborate with federal agencies to identify and implement robust enforcement methods that limit this degradation, as well as to establish educational and monitoring programs.

The County will identify and preserve rare and critical habitats, as well as the endangered and threatened species⁵ that live there. Collaboration with federal agencies, such as the U.S. Forest Service and U.S Fish and Wildlife Service, will play a vital role in identifying these habitat areas. These areas will be designated for special protection on the Yavapai County land use map.

³ <https://www.swcasc.arizona.edu/sites/default/files/SWCSCworkshop%20FactSheet.pdf>
[https://www.cell.com/one-earth/fulltext/S2590-3322\(20\)30428-0](https://www.cell.com/one-earth/fulltext/S2590-3322(20)30428-0)

⁴ <https://climas.arizona.edu/>

⁵ <https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=04025>

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Species are threatened by both natural changes and human activity. A countywide commitment to fostering agriculture based on non-toxic practices will protect water, land and vegetation from harmful pesticides and herbicides, adding to species diversity rather than reducing it. The County will also encourage non-toxic herbicides and pesticides for both commercial and home use.

Native, low-water-use plantings are best suited to the soil, temperature range and moisture within the County. Plantings of locally native plants will reduce groundwater pumping for thirsty non-native species, reduce erosion, provide food for migrating and local birds and help retain the regional sense of place. The County will encourage use of locally native plants in landscaping and provide incentives to developers who commit to exclusive use of such plants and/or xeriscaping.

Yavapai County forests were stressed following the 2002-2003 Pine Bark Beetle infestation⁶ particularly in the Prescott area. This infestation was due to both natural and human activity: dense forest stands, fire suppression, reduced precipitation, ongoing urbanization and past grazing practices. Today, trees are dying due to on-going reduction of snow and rain, leaving the standing and fallen trees more susceptible to fire. Ecosystem health challenges will continue during this period of rising year-round temperatures. Additionally, unusually strong winds, torrential rain, dust storms and dry lightning are occurring more frequently. These novel conditions challenge preparedness. Some trees in the region are experiencing the stress of a shift in the climate, while wildfire is an increasing threat where parched rangeland abuts tinder-dry forests.

Environmentally Sensitive Lands

Keep Sedona Beautiful suggests that in the Plan you document what the County is currently doing to protect environmentally sensitive lands.

Environmentally sensitive lands include areas with critical resources. These include floodplains, riparian zones, rivers and streams, wetlands, springs and seeps and steep slopes. These areas provide habitat for rare or endangered plant and animal species. In addition, some are important for groundwater recharge. Environmentally sensitive lands require special consideration in the development/design process. Through integrated conservation design or similar measures, we can maintain or increase both the monetary and biological values of land by retaining as much of their natural characteristics as possible.

For the preceding paragraph Keep Sedona Beautiful asks:

- a. What role can special overlay districts play in protecting these sensitive lands?**
- b. The fact that these lands require special consideration needs to be strengthened in the Plan.**

Early settlement tended to occur along drainage ways and floodplains for practical reasons. These areas provided tillable land for farming and shelter, shade and a source of water in the arid climate. Today's private land ownership patterns reflect this pattern. Floodplains also provide habitat for a large percentage of native flora and fauna, create a wildlife movement area and serve as important repositories of biological diversity. The Federal Emergency Management Agency (FEMA) has designated floodplains for most watercourses, both year-round and ephemeral, on maps showing surface water elevations during

⁶ <https://cals.arizona.edu/yavapai/anr/fh/PrescottBarkBeetles.pdf>

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100-year floods. Although Yavapai County allows development within the 100-year floodplain, minimizing construction in these areas helps protect riparian vegetation and wildlife communities.

For the preceding paragraph Keep Sedona Beautiful notes:

- a. Why do we develop at all within a 100-year flood plain? This is particularly the case as it becomes more expensive to insure property in these floodplains.**
- b. How is minimizing construction accomplished?**
- c. When was the last flood plain map for the County redrawn, and is it finished for all of the County? Please cite in the document.**
- d. The riparian areas need to be preserved, because they are home to endangered species, and important to groundwater recharge. We suggest that this section needs to be strengthened significantly.**

Riparian areas facilitate movement of species and provide water, food and cover for many species of wildlife. Many land uses compete for riparian resources, challenging conservation efforts. Furthermore, because water is scarce, management decisions often balance human uses (recreation, drinking water, irrigation and livestock use) with conservation issues.

Wetlands are formally delineated by the U.S. Army Corps of Engineers, as specified in the Clean Water Act, based not only on the presence of water but also of saturated soils and certain vegetation types. Wetland habitat in Arizona is rare because of the State's aridity, high evaporation and rapid saturation rates, and steep topography. Consequently, it is highly valuable for wildlife. Wetlands typically contain shallow depths of permanent to semi-permanent fresh water, along with abundant plants such as duckweed, cattail, rushes and sedges, and certain types of trees, such as cottonwoods. These areas are used for recreation (fishing, canoeing/kayaking, hunting, bird watching), wildlife habitat, water protection, flood retention, groundwater recharge and a variety of municipal water needs.

Please elaborate on what is meant by 'a variety of municipal water needs.'

Perennial streams and rivers in Yavapai County include the Verde River, Oak Creek, Wet Beaver Creek, West Clear Creek, **Spring Creek** and the Agua Fria River and tributaries. Although highly valued for human uses, areas bordering surface water not only provide habitat, but they also perform important hydrologic functions: discharging floodwaters, filtering storm water runoff and recharging groundwater.

Steep slopes and ridgelines can also be environmentally sensitive for many of the same reasons mentioned previously. Property owners often desire steep slopes for residential construction because they can offer spectacular views, however, these slopes may contain a wide range of vegetation types and provide valuable habitat for a diversity of bird and wildlife species. Slopes can often have unstable, highly erodible soils, as well.

For the preceding paragraph:

- a. We suggest that the actual slope grade be called out specifically here.**
- b. We suggest that the need to protect steeply sloped land and the importance of its vegetation for erosion control needs to be strengthened.**

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Keep Sedona Beautiful suggests adding the following section.

Preserving Riparian Areas

The current prolonged drought presents a direct threat to our economic health. Water is our most vulnerable resource as this pattern of hotter and drier weather persists. The Verde River watershed provides water filtration and essential groundwater recharge that supports the regional economy and life itself. For science-based decision making, we will utilize existing studies and data that identify critical habitat areas and the effect of climate stressors. Using that information, the County will prioritize actions to mitigate the adverse changes that are projected for the region.

Streams, springs, and wetlands in Yavapai County, along with their associated wetlands, riparian areas and floodplains, all rely on discharge from groundwater to maintain base flow, shallow alluvial groundwater in the near vicinity and a natural flood regime. This includes, but is not limited to, the Verde River, the Hassayampa River, Granite Creek, Oak Creek, Wet Beaver Creek, West Clear Creek, Sycamore Creek, Spring Creek and the Agua Fria River.

Riparian and wetland areas comprise less than 0.5% of the surface area of Arizona, yet they support 80% of Arizona's wildlife species within their floodplains. These riparian areas also serve as wildlife movement corridors and provide vital habitats for a variety of invertebrates and plants - many of which occur nowhere else in North America. The Verde River, one of the few remaining rivers that flows year-round in Arizona, supports these ecosystems. The river is vital to Yavapai County's economy, providing a significant number of jobs in agriculture and recreation. Numerous studies have emphasized the importance of riparian areas for both the economy and ecosystem.⁷

Water sources can easily be degraded by human activities. Ground disturbance can degrade aquatic environments through changes in hydrology and water quality. When groundwater levels drop because of human use and reductions in precipitation, springs, streams and parts of perennial rivers can dry up. Community groups in Prescott and the Verde Valley continue to study the Verde River and its watershed. In 2020, Friends of the Verde River presented the Verde River Watershed Report Card⁸ that provides a roadmap for a healthy river system. They rate the current health of the Verde River as only C+. The Report Card also documented the continuing decline in river water flow.

County leadership, in collaboration with local organizations, will provide guidance, incentives and support to private landowners for adopting and using conservation and restoration practices. The County will bring the unincorporated areas together to manage human-caused impacts on land, water and natural processes. River Friendly Living⁹ is an exemplary program being developed by Friends of the Verde River that will include a certification system to evaluate protection of Verde River water quality and quantity.

⁷ <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1432.pdf>;
<https://www.fws.gov/wetlands/data/Water-Summary-Reports/National-Water-Summary-Wetland-Resources-Arizona.pdf>

⁸ <https://verderiver.org/watershed-report-card/>

⁹ <https://verderiver.org/river-friendly-living/>

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Yavapai County includes the only Wild and Scenic Rivers in the State of Arizona: Fossil Creek and the Verde River. In addition, Oak Creek has been designated an Outstanding Arizona Water.¹⁰ These priceless resources bring considerable tourist revenue to the region along with supplying water for the built and natural environments.

Wildlife

Keep Sedona Beautiful suggests that the Plan should document what the County is currently doing to protect wildlife.

Yavapai County features impressive, grand landscapes, valued not only for their scenic qualities, but also for the wildlife corridors that exist and wildlife that inhabits them. Many factors impact wildlife survival, including changes in the available habitat, vegetation and water, as well as species competition, predators, disease and parasites. Federally designated critical habitats are important components of our landscape and ecosystems because they protect Threatened and Endangered Species (TES).

Keep Sedona Beautiful suggests adding the following language. The list of Threatened and endangered species needs to be validated.

Sixteen threatened and endangered species can be found in Yavapai County, including the following. Since development can have the potential to impact these species, Yavapai County will work proactively with developers to minimize and mitigate impacts to these species.

- Arizona cliffrose
- Black-footed ferret
- California condor
- Chiricahua leopard frog
- Colorado pikeminnow
- Desert pupfish
- Gila chub
- Gila topminnow
- Loach minnow
- Mexican spotted owl
- Narrow-headed Gartersnake
- Northern Mexican Gartersnake
- Razorback sucker
- Southwestern willow flycatcher
- Spikedace
- Yellow-billed cuckoo

The health of a wildlife species is strongly related to the quality of its habitat. Contiguous habitat “patches” are critical to many species that migrate seasonally. These patches can be altered or destroyed by development, wildfires, roadways or concentrated human activity. Fragmentation of wildlife habitat can threaten a species survival, isolating wildlife populations and disrupting

¹⁰ <https://legacy.azdeq.gov/environ/water/permits/download/oaw.pdf>

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ecological functions. The Arizona Wildlife Linkages Workgroup (AWLW), a partnership of public and non-governmental agencies, is currently working on completing Arizona's Wildlife Linkages Assessment.¹¹ The assessment documents and maps initial efforts to identify habitat blocks, fracture zones and potential linkage zones in an effort to promote wildlife habitat connectivity for Arizona's wildlife. The Assessment is intended to provide a framework for land managers and planners to assess opportunities for mitigation, such as wildlife crossings, land protection measures and community planning.

For the preceding paragraph Keep Sedona Beautiful asks:

a. Is this assessment done?

b. Has linkage #24 (Sedona – Cottonwood) been completed?

Keep Sedona Beautiful suggests adding the following section.

Wildfire

While wildfires play a role in limiting fuel build-up and maintaining ecosystem health, planning must consider the ever-growing threat of wildfire to already developed areas. The County will provide residents safe exit from areas of potential fire by enforcing zoning that focuses development in fire-manageable zones. The recent fire in Paradise, California is an example that we need to heed. A July 2019 article published by AZ Central highlighted the extreme risk of wildfire faced by smaller communities in the American West.¹² Fire destroys habitat and disrupts natural systems. Fire degrades air quality while it is occurring and increases erosion during the next rainstorm or run-off event. A recent study¹³ has demonstrated that wildfire smoke is one of the worst forms of air pollution. Land use planning will limit development in the most fire-vulnerable pockets of the County.

Vegetation

Keep Sedona Beautiful suggests that the Plan should document what the County is currently doing to protect vegetation.

Within Yavapai County there are seven distinct biotic communities which support a diversity of vegetative communities. Additionally, riparian areas support different and diverse plant communities growing around springs and along perennial (usually running) and ephemeral (flows in response to storm events) waterways.

The Seven Biotic Communities in Yavapai County are:

Keep Sedona Beautiful suggests that the Plan include a discussion of how these different biotic communities impact land use decisions.

- Sonoran Desert scrub: Below about 3500 feet, characterized by large cacti and tall tree-like shrubs consisting of Saguaro, Teddy-Bear and Chain Fruit Cholla, Organ Pipe Cactus and Barrel Cactus. Mesquite, Ironwood, and Palo Verde are common "trees" found in this desert.

¹¹ <https://azdot.gov/business/environmental-planning/programs/wildlife-linkages>

¹² <https://www.azcentral.com/in-depth/news/local/arizona-wildfires/2019/07/22/wildfire-risks-more-than-500-spots-have-greater-hazard-than-paradise/1434502001/>

¹³ <https://phys.org/news/2021-03-fine-particulate-wildfire-pollution-sources.html>

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- Mojave Desert scrub: Generally located between 3,000 to 5,000 feet on gravelly slopes and characterized by very hot, dry summers and cold winters. Typically, it is quite barren and desolate in appearance with low, scattered shrubs such as Creosote Bush or Shadscale.
- Chaparral: Located on elevations from 4,000 to about 6,000 feet; consists largely of dense scrub thickets that are a mix of several species of shrubs such as Mountain Mahogany, Shrub Live Oak, Manzanita and Silk Tassel. Succulent plants, including Prickly Pear Cactus, Agave and Yucca, commonly grow alongside the scrubs as well.
- Plains and Great Basin Grasslands: Southwestern extensions of prairies found in the Great Basin and High Plains respectively with small shrubs or desert “trees” such as Mesquite located at elevations above 3,500 feet.
- Semi-desert Grasslands: Grasses located above 3,500 feet in elevation which are often mixed in with succulent plants such as Prickly-Pear Cactus, Yucca or Century Plant.
- Pinon Pine-Juniper Woodland: The woodland grows from about 5,000 to 7,000 feet where annual precipitation is 12 to nearly 20 inches. The open nature of the woodland allows many kinds of shrubs, grasses and wildflowers to grow among the small trees. The tree species of this community have inherited drought resistance from southern areas and cold resistance from northern areas. Juniper tends to grow in more arid areas as its scaled foliage allows it to conserve water more effectively than pinon pine, which grows in slightly wetter areas.
- Montane Ponderosa Pine Forest: From 6,000 to 8,000 feet often forming essentially pure strands covering thousands of acres. Characteristically open and park-like with large trees scattered about with grasses and shrubs beneath. Gamble oak is the most important associate of Ponderosa Pine in these forests. Other plant species include Cliffrose, Currant and Apache Plume.

Our ecosystems have been impacted by the intentional or accidental introduction of invasive, non-native species. These plants tend to initially occupy disturbed sites and then invade adjacent natural areas, spreading rapidly and displacing **locally** native species. Their colonization and spread seriously threatens ecosystems. If these plants are not aggressively controlled, many ecosystems risk significant impacts to their biological integrity.

Invasive, non-native species can disrupt complex ecosystems and their processes, reduce biodiversity, degrade wildlife habitat, jeopardize endangered species and alter genetic diversity.

Such species can harm to horses, livestock, wildlife and decrease the quality of life for residents. They can also damage meadows and riparian areas, increase fire frequency and increase the rates at which fire spreads. They tend to occupy severely burned areas, damaged riparian areas, roads and utility corridors, heavily used recreation areas and other disturbed sites.

Such species can harm to horses, livestock, wildlife and decrease the quality of life for residents. They can also damage meadows and riparian areas, increase fire frequency and increase the rates at which fire spreads. They tend to occupy severely burned areas, damaged riparian areas, roads and utility corridors, heavily used recreation areas and other disturbed sites.

When restoring damaged areas or landscaping at new developments of residences, native plant species, particularly drought-tolerant locally native species are preferable.

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Forest Ecosystem Health

The United States Forest Service (USFS) manages about 38 percent of the land in Yavapai County. Most of the land lies within the Prescott (## percent) and Coconino National Forests (## percent) and the rest lies within the Kaibab (## percent) and Tonto National Forests (## percent). To guide activities on these lands, the USFS relies on management plans, which it adopted mostly in the late 1980's and have been amended numerous times since. Federal management policies support multiple uses such as logging, grazing, mining and recreation. Recent years have brought increasing attention to forest health, fire hazards, the Wildland/Urban Interface, conflicting uses, access and road issues, and the tremendous increase in recreational use. The increased awareness has led to a public, open process for developing new wild land management plans.

Cooperation between the USFS and the local community may be essential for improving forest health and ensuring that future development in forested areas meets criteria for property protection and environmental conservation.

(Insert map of USFS lands in the County)

Air Quality

Yavapai County has exceptional air quality and that is considered one of our most important assets. Maintaining this quality is deemed important, not only for the public health but also for protecting our scenic views. Our air quality is high due to the lack of heavy industry. Attracting new, non-polluting industries will help us maintain this standard. Arizona Department of Environmental Quality (ADEQ) is responsible for issuing air quality permits, monitoring air quality and enforcing regulations. All areas in Northern Arizona meet Federal standards set by the United States Environmental Protection Agency (U.S. EPA).

Air pollution in Yavapai County comes from three sources; dust and other particulates, prescribed and unprescribed burns and regional haze. Occasionally, high particulate problems originate locally from wind-blown fugitive dust, dust from traffic on unpaved roads, construction activity and wood stove and fireplace smoke. Dust from dirt roads generates most of the local residents' concerns. We have little local control over the other sources. Prescribed burns are necessary to reduce fire risks, improve forest health, maintain wildlife habitat and improve grazing resources. ADEQ permits this burning and fire managers model the smoke dispersion characteristics to determine the best timing for prescribed burns.

Keep Sedona Beautiful suggests addressing the impact of dust from OHVs on the health of residents and on vegetation. Such dust also degrades cultural resources like rock art.

Keep Sedona Beautiful suggests suggest adding the following short section.

Collaboration

Yavapai County will work collaboratively with federal land use agencies, tribal and town governments, unincorporated communities and private landowners to minimize the negative

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impacts of future development on environmentally sensitive features, wildlife habitat and water resources.

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Keep Sedona Beautiful recommends that County add a section on the progress made over the last 10 years on meeting goals, objectives and recommendations from the 2012 Comprehensive Plan.

Meeting the Goals, Objectives and Recommendations from the 2012 Comprehensive Plan

2012 Goals and Objectives	Progress/Status
<p>Goal 1: Support programs which educate the public on maintaining a high level of water quality and conservation.</p> <p>Objective a: Create incentives to upgrade old septic systems and develop educational materials on maintaining septic systems.</p> <p>Objective b: Encourage projects to provide a wastewater treatment system to minimize septic systems.</p> <p>Objective c: Encourage developments to preserve riparian habitat and native landscaping, develop gray water and drip irrigation systems.</p> <p>Objective d: Support requirements that address run-off issues from roads and agriculture.</p> <p>Objective e: Enhance partnerships with watershed protective organizations.</p>	
<p>Goal 2: Encourage programs to maintain and improve air quality standards.</p> <p>Objective a: Encourage road improvement districts, dust control districts or road maintenance districts to help solve the dust problems with dirt roads and allocate the cost to those most affected.</p> <p>Objective b: Encourage the use of dust-free surfaces or pursue dust control measures on unpaved maintained roadways.</p>	

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<p>Objective c: Maintain clean air by mitigating sources of pollution (e.g. traffic congestion, open burning and heavily travelled unpaved roads).</p>	
<p>Goal 3: Encourage and support projects which maintain balance between the natural and built environment.</p> <p>Objective a: Develop standards to protect Wildland/Urban Interface. Objective b: Encourage land use strategies that conserve important wildlife habitat and environmentally sensitive lands. Objective c: Encourage projects that maintain wildlife connectivity and do not contribute to the habitat fragmentation.</p>	
<p>Goal 4: Support green development.</p> <p>Objective a: Encourage environmentally safe dust palliatives and permeable paving of roads. Objective b: Encourage wastewater treatment and effluent use. Objective c: Encourage water harvesting for outdoor watering uses. Objective d: Encourage more community gardens and open space with developments. Objective e: Encourage the development of green energy (such as solar) take into account the environmental impact (scenic vistas, wildlife corridors, etc.) and develop on already disturbed areas (e.g. rooftops compared to vacant land).</p>	
<p>Goal 5: Encourage waste and litter reduction.</p> <p>Objective a: Support recycling programs and on-going education programs. Objective b: Encourage the requirement for covered loads in the County. Objective c: Encourage landfills and transfer stations to provide discount days or free days to help alleviate some of the illegal dumping.</p>	

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2012 Recommendations	Progress/Status
Coordinate with Resource Management Agencies in order to create criteria to maintain wildlife integrity.	
Coordinate with public land agencies to create standards to protect Wildland/Urban Interface.	
Encourage developments to use the Open Space and Sustainable Development Option.	
Encourage lot split areas to create Road Improvement Districts to maintain dirt roads to some standard to alleviate dust issues.	

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As an alternative to the Goals, Objectives and Recommendations drafted by Development Services, Keep Sedona Beautiful offers the following alternative set of Goals, Policies and Action Items.

Please note that the Goals, Objectives and Recommendations from the County's V2 Draft are accounted for below.

Goals, Policies and Action Items

Goal EN1: Lead collaborative efforts among County stakeholders to address opportunities and challenges for a thriving, healthy natural environment, recognizing the resources that all County residents share.

- | | |
|-------------------|---|
| Policy EN1.1 | Apply for grants and fund community outreach programs supporting healthy environmental practices and recognition of diverse cultural values. |
| Policy EN1.2 | Hold stakeholders accountable for playing a proactive role in protecting the agricultural and tourist-based sectors of our economy through protection of natural resources: water, air, soil, species diversity, scenic features and cultural resources. |
| Policy EN1.3 | Coordinate with the appropriate entity to minimize the spread of invasive species from private to public land when new developments are proposed adjacent to public land. |
| Policy EN1.4 | Pursue opportunities with other agencies and volunteer groups to control the spread of invasive weeds on public lands and natural areas. |
| Policy EN1.5 | Support education programs to help residents learn how to identify and control invasive weeds on private property. |
| Action Item EN1.1 | Collaborate with government, tribal, business and non-profit interests to procure funding to mitigate degradation of riparian and forested areas through best practices, such as reduction of invasive species, planting native plants, tree thinning and use of downed timber. |
| Action Item EN1.2 | Inform the public on cost-effective means to reduce potable water consumption through the appropriate use of gray water and treated wastewater. |
| Action Item EN1.3 | Collaborate with federal land agencies to develop a system to monitor and prevent abuse (trash, speeding, fire rings, OHV proliferation) on public lands. |
| Action Item EN1.4 | Work collaboratively with local organizations to provide guidance, incentives and support to private landowners for conservation and restoration practices. |
| Action Item EN1.5 | Create and implement a County-wide Climate Action Plan to address future County mitigation efforts to prepare for drought, floods, and fires regarding infrastructure preparation and utility usage. |

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- Action Item EN1.6 Partner with local jurisdictions about Off Highway Vehicle (OHV) use, trails and preferred locations to develop a regional OHV Plan.
- Action Item EN1.7 Educate residents and businesses on the Dark Sky Ordinance and Light Ordinance to provide safety, visibility and limited glare and light spillage.
- Action Item EN1.8 Update the Lighting Ordinance to be up to date with the latest technology, lumens and requirements to ensure a dark sky community.
- Action Item EN1.9 Become the first Dark Sky County in the nation.
- Action Item EN1.10 Bring in the local Native American Community leaders and planners to engage in discussions about their sensitive land issues and future development plans for better coordination as a partnership.
- Action Item EN1.11 Create comprehensive guidance for invasive weed management and/or a weed ordinance. Weed management plans will be required for most development projects involving ground disturbance or road maintenance.
- Action Item EN1.12 Landscaping for new developments shall emphasize using native plants and drought-tolerant species that are appropriate to the area. Revegetating disturbed areas will be required in most cases and planting/seeding locally native species will be strongly encouraged

Goal EN2: Enact policies that protect sensitive ecological systems.

- Policy EN2.1 Protect sensitive watershed zones (riparian areas and grassland sponges) using science-based methods that apply knowledge of ecological stressors, such as drought, higher temperatures and groundwater pumping.
- Policy EN2.2 Reduce the impact of commercial development and housing encroachment on sensitive surface-water areas (rivers, streams, springs, seeps, marshes) by setting aside and preserving habitat-sensitive and water-sensitive features.
- Policy EN2.3 Minimize the introduction and spread of non-native species and use native and locally native plant species in restoration and landscaping.
- Policy EN2.4 Make land use decisions that are compatible with the landscape and the natural potential of the site.
- Policy EN2.5 Mitigate the effects of development on ecological processes and the landscape.
- Policy EN2.6 Development projects should minimize and/or mitigate impacts to federally listed and state sensitive species.
- Policy EN2.7 Work with partners to protect state sensitive and federally threatened and endangered wildlife and plant species.

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- Action Item EN2.1 Use scientific and cultural studies of sensitive zones to apply area-specific protection policies, including overlay zones, that protect habitat for endangered and threatened species, as well as connective corridors that help ensure species and ecosystem health.
- Action Item EN2.2 Maintain low-density zoning in rural areas to provide for wildlife corridors, fire safety, prevent habitat loss and promote ecological adaptation and balance.
- Action Item EN2.3 Evaluate and implement science-based regulations to protect surface water sources by reducing groundwater pumping. These will include native plant landscaping, xeriscaping, gray water uses and treated water use.
- Action Item EN2.4 Identify, adopt and enforce mitigation actions for dealing with the ongoing mega-drought.
- Action Item EN2.5 Identify, adopt and enforce mitigation actions to reduce carbon and particulate air pollution.
- Action Item EN2.6 Collaborate with federal agencies to identify and implement methods to control destructive OHV use and to establish educational and monitoring programs.
- Action Item EN2.7 Provide incentives for the expansion of electric vehicle charging stations throughout the County.
- Action Item EN2.8 Enact a county-wide noise ordinance.
- Action Item EN2.9 Adopt a native plant pallet which is sensitive to the different ecological zones in Yavapai County to encourage native plants and wildlife to thrive in their native ecosystems.
- Action Item EN2.10 Create a county guide including instructional materials for the use of low water landscaping and include the native plants suggested for various zones in the County.
- Action Item EN2.11 Evaluate adopting ordinances that protect environmentally sensitive features from the impacts of development.
- Action Item EN2.11 Pursue developing a county-wide Natural Resource Inventory System containing publicly available datasets related to environmental assets for use in project planning and review.

Goal EN3: Initiate and support programs which educate the public on maintaining a high level of water quality and conservation.

- Policy EN3.1: Advocate for the reduction of water on residential properties through educational programs about water harvesting, low water use appliances and efficient irrigation and xeriscape.
- Policy EN3.2: Pursue the latest strategies and studies to conserve water and reuse grey water.
- Action Item EN3.1 Offer and fund incentives to upgrade old septic systems and develop educational materials on maintaining septic systems

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effectively.

- Action Item EN3.2 Incentivize large projects to provide a wastewater treatment system to minimize septic systems.
- Action Item EN3.3 Incentivize developments to provide native landscaping, gray water irrigation systems and drip irrigation, and to preserve riparian habitat.
- Action Item EN3.4 Provide new design guidelines and landscaping standards which allow for water harvesting through storm water management and watercourse design with the use of right of way landscaping to allow water to flow where needed.
- Action Item EN3.5 Enact requirements that address run-off issues from roads and agriculture.
- Action Item EN3.6 Enhance partnerships with watershed protective organizations.
- Action Item EN3.7 Continue to refine the development code to incorporate evolving standards on water and wastewater requirements.

Goal 4: Institute programs to maintain and improve air quality standards.

- Policy EN4.1: Encourage and incent individual property owners, property owner associations, and road improvement/maintenance districts to provide low-dust surfaces or pursue dust-control measures on roadways under their jurisdictions.
- Policy EN4.2: Implement appropriate dust-control measures while constructing and maintaining County capital improvement projects.
- Policy EN4.3: Support conservation planning and management for dust control by land users.
- Policy EN4.4: New developments in forested areas will be evaluated on vulnerability to wildfire, and will be required to adhere to firewise practices.

- Action Item EN4.1 Establish and encourage road improvement districts, dust control districts or road maintenance districts to help mitigate the dust problems with dirt roads and allocate the cost to those causing the problems.
- Action Item EN4.2 Use environmentally safe dust-free surfaces or pursue dust control measures on unpaved maintained roadways or seek the option for permeable paving of roads where attainable.
- Action Item EN4.3 Maintain clean air by mitigating sources of pollution through improved design standards, improved roadway circulation and code enforcement (e.g. traffic congestion Level of Service (LOS), open burning and heavily travelled unpaved roads).
- Action Item EN4.4 Work with local jurisdictions to create an Off-Highway Vehicle (OHV) program for the safety of trail use, maintenance best practices and to determine best places to promote those uses through consistent signage and cross jurisdictional marketing

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focused on reducing air pollution and trespassing.

Action Item EN4.5 Establish monitoring systems to provide air quality data in sensitive areas, such as in urban zones for vehicle emissions, in rural zones for dust and in communities for wood fire particulates.

Action Item EN4.6 Use a county-wide map to limit development in the most fire-vulnerable pockets of the County.

Action Item EN4.7 Use county-wide, area-specific data to enforce local air quality control measures, such as restrictions on fires and wood burning.

Action Item EN4.7 Educate and encourage property owners to participate in fuels reduction and other measures such as Firewise USA¹⁴ that the reduce risk of wildfire.

Goal 5: Encourage and support projects which maintain balance between the natural, cultural, and built environment.

Action Item EN5.1 Engage with local Native American Communities to open communication and ensure tribal sensitive lands nearby are addressed during the review and design process to reduce or eliminate impacts.

Action Item EN5.2 Require developers to provide environmental and archaeological studies or letters with their development plans to address issues ahead of time.

Action Item EN5.3 Develop and implement standards to protect Wildland/Urban Interface areas.

Action Item EN5.4 Implement land use strategies that conserve important wildlife habitat and environmentally sensitive lands.

Goal 6: Support environmentally conscious development.

Policy EN6.1 Maintain or restore connectivity among habitats by minimizing the fragmentation of large contiguous areas of habitat.

Policy EN6.2 Strongly encourage the Transfer of Development Rights (TDRs) from areas of steep slopes, floodplains, watersheds and wildlife habitat areas to more developable areas to concentrate development where most appropriate in order to preserve open space and the natural environment.

Policy EN6.3 Strongly encourage energy production, whether private, municipal or industrial, to seek out low water-use technology for both, production and maintenance.

Policy EN6.4 Ensure regional impacts are part of the project review process and study how the project will affect the impact the County as a whole.

Policy EN6.4 Conserve the use critical nonrenewable resources.

Policy EN6.5 Practice conservation-based planning¹⁵.

Policy EN6.5 Locate development projects outside of floodplains to protect riparian areas, prevent property damage and facilitate water

¹⁴ <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA>

¹⁵ <https://www.conservationgateway.org/ConservationPlanning/Pages/conservation-planning.aspx>

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infiltration into the ground. Floodplains will be identified in the County Geographical Information System (GIS), delineated using the best available data.

- Action Item EN6.1 Incentivize efficient technologies for wastewater treatment and effluent use and enact overlay districts for critical/rare riparian areas with either flowing water or ephemeral streams.
- Action Item EN6.2 Incentivize water harvesting for outdoor watering uses on residential and commercial properties.
- Action Item EN6.3 Incentivize more community gardens and open space with developments.
- Action Item EN6.4 Incentivize development of green energy (such as solar, battery and wind) while accounting for the environmental impact (scenic vistas, wildlife corridors, etc.) and preferably, but not required, to develop on already disturbed areas (e.g. rooftops instead of vacant land).
- Action Item EN6.5 Create a Transfer of Development Rights (TDRs) code to help preserve open space and prevent development in environmentally sensitive areas.

Goal 7: Advocate projects and design which support the native wildlife and wildlife corridors.

- Action Item EN7.1 Advocate projects that maintain wildlife connectivity, prevent habitat fragmentation and offer solutions to move animals through a project.
- Action Item EN7.2 Seek to maintain wildlife corridors and install wildlife crossings or tunnels to avoid traffic conflicts and accidents.
- Action Item EN7.3 Advocate land use strategies that conserve important wildlife habitat and environmentally sensitive lands.
- Action Item EN7.4 Coordinate with Resource Management Agencies in order to create criteria to maintain wildlife integrity and trail corridors.
- Action Item EN7.5 Partner with public land agencies to create standards to protect Wildland/Urban Interface.
- Action Item EN7.6 Create designated wildlife protection corridors to ensure developments do not impede wildlife from migrating or passing through their natural territories.
- Action Item EN7.7 Create a marketing campaign to market Yavapai County as wildlife friendly with preserved corridors, open spaces and wildlife connections with wildlife bridges and tunnels to attract ecotourism from wildlife and nature enthusiasts.
- Action Item EN7.8 Encourage land owners and developers to use the Open Space and Sustainable Development Option
- Action Item EN7.9 Further incentivize land owners and developers to use the Open Space and Sustainable Development option.
- Action Item EN7.10 Utilize conservation easements where appropriate to protect

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wildlife corridors and important open space areas.

Goal 8: Actively work to reduce waste and litter.

- Action Item EN8.1 Financially support recycling programs and on-going education programs through schools and other local resident programs.
- Action Item EN8.2 Enact a covered load ordinance in the County.
- Action Item EN8.3 Require and sponsor landfills and transfer stations to provide discount or fee-free days to help alleviate some of the illegal dumping.
- Action Item EN8.4 Provide opportunities for residents, Homeowner Associations (HOAs), and businesses to rent a roll off Container at a cost-effective rate to encourage clearing out of properties and during remodels.
- Action Item EN8.5 Install trash and recycling receptacles every ¼ mile along highly pedestrian traveled roadways and trails.
- Action Item EN8.6 Provide residents easy access to dispose of landscaping, yard wastes and tree trimmings.
- Action Item EN8.7 Develop and enact rules that reduce use of plastic materials.