

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

This document supplies Yavapai County Development Services with comments from Keep Sedona Beautiful on the V1 draft of the Water 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 Water Element.
- A version of the Water 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**. Wording we're suggesting be stricken is ~~crossed out~~.

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 W1 can be referred to rather than Goal 1 of the Water 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 Water Element

1. Portions of this text are taken verbatim or nearly verbatim from the 2015 Coconino County Comprehensive Plan. While using other county’s plans as an example is absolutely appropriate, the Coconino County Comprehensive Plan is nearly 7 years old.
2. One of the most critical issues facing Yavapai County over the coming decades is how the projected shortfall between supply and demand can be met. This dilemma does not seem to be addressed in this draft of the water element.
3. The Yavapai County Board of Supervisors recently voted unanimously not to enroll in MAWSP, but to instead pursue the ability to establish Rural Management Areas (RMAs). The initiative to allow establishment of RMAs needs more emphasis in this document.
4. The Action Items resulting from county participation in the Growing Water Smart Workshop should be included in this document.
5. Incorporate footnotes where needed in the body of the text rather than including a list of references at the end of the element.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

IV. WATER ELEMENT 1.0

Introduction

The Water Element of a County Comprehensive Plan is required in Arizona Revised Statute (ARS) §11-804. ARS §11-804.B.3 requires that comprehensive plans include planning for water resources that addresses: (a) The known legally and physically available surface water, groundwater and effluent supplies. (b) The demand for water that will result from future growth projected in the comprehensive plan, added to existing uses. (c) An analysis of how the demand for water that will result from future growth projected in the comprehensive plan will be served by the water supplies identified in subdivision (a) of this paragraph or a plan to obtain additional necessary water supplies.

Yavapai County is known worldwide as a recreational destination, with beautiful red rocks, forests, flowing rivers, and a thriving rural community. However, uncontrolled growth (with its demands on our finite water supplies) threatens the future of our natural open spaces as well as community sustainability. Inaction will result in unacceptable losses to our economy and vital ecosystems. Therefore, Yavapai County must use the Comprehensive Plan to guide development in a responsible manner to preserve the quality of life that its citizens value as a top priority.

An adequate supply of clean water is one of the most serious issues Yavapai County faces in planning for the future. Climate change, increased development, and the needs of a growing population factor heavily into determinations of water adequacy. The County must ensure that the quality and quantity of its water supplies meet future demand. To move toward a more water-secure future, the County must further its efforts in the areas of long-range planning, promoting water conservation and reuse, fostering cross-jurisdictional partnerships, and amending water policy where practical.

Keep Sedona Beautiful notes that water issues are extraordinarily complex, and that this Comprehensive Plan needs to provide enough information on those issues so that residents can understand the discussion below. The types of background information needed include:

- Surface water and groundwater are regulated under entirely separate sets of laws that "touch" only at the "subflow zone."
- The water adjudication process needs to be explained.
- Clarify that part of Yavapai County is in an AMA and part is not. The difference between groundwater regulation and management inside and outside the AMA needs to be clearly explained.
- It needs to be made clear that Yavapai County, unlike most areas in Arizona, is blessed with an abundance of flowing streams and springs, and these features are dependent on the same groundwater that is being pumped, and groundwater pumping reduces flow from springs and streams. Hence, there are consequences from groundwater pumping beyond declining groundwater levels and declining groundwater quality.

Purpose

The Water Resources Element is intended to comply with the Arizona Statutes by addressing known water supplies, current and future water demands, and either how future demand will be met by available supplies or a plan to obtain additional water supplies the impacts of future growth on water management. Yavapai County is not a water service provider and is not providing new hydrogeological studies for the purpose of this legislation document. The element includes Goals

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

and Objectives, adopted through a public participation process; a review of water management practices in Yavapai County; 2006 existing water supplies, water demands, and projected unmet demand and future impacts; and finally, Policies, and Implementation Strategies intended to address current and future conditions.

Keep Sedona Beautiful believes that it is absolutely critical to update the 2006 and 2050 water use and unmet demand estimates to 2020 and 2070. This can be done by utilizing the services of a knowledgeable hydrologic consultant.

Regulatory Framework

The draft version of the following paragraphs is taken nearly verbatim from the 2015 Coconino County Comprehensive Plan. If it is to be included in the Yavapai County Water Element, we suggest at a minimum the changes shown below in red.

Although Yavapai County is not a water provider and cannot assure long-term supplies, water security is vital to our stability and growth. **Drinking water in the county is supplied from** ~~Most unincorporated communities and households in the county draw their supplies from groundwater wells. However,~~ **irrigation water comes from both groundwater and surface water supplies.** There are concerns about long-term impact of continued growth and development on the limited water supplies and water-dependent ecosystems. **Private wells have gone dry in locations around the county, necessitating the expense of deepening or re-drilling. Declining stream and spring flow negatively impacts public health and general welfare.** The County **has historically played** must play a **leading** role in long-range water resources planning to protect property values and the environment, while simultaneously encouraging appropriate and sustainable growth. As the County undertakes this effort, it must navigate a complex web of local conditions, politics, and state and federal laws to produce carefully thought-out policies and practices that are appropriate.

The Arizona Department of Water Resources (ADWR) administers Arizona's surface water rights laws and groundwater codes. Most of the surface water in the county **is** ~~has already been allocated and subject to or is being adjudicated~~ through existing appropriation claims. Groundwater withdrawals are not nearly as constrained. Under current state law, any landowner can drill an "exempt" water well on his or her property. **Outside the Prescott AMA, groundwater withdrawal of any volume for "beneficial use" is completely unregulated.** The challenge with Arizona groundwater law is that the cumulative impact of wells pumping from the same aquifer and the potential impacts of groundwater overdraft, **including impacts on surface water features,** are not considered in the permitting of new developments or the **drilling** ~~appropriation~~ of new wells.

ADWR makes the determination of physical and legal availability of groundwater when a developer applies for an Adequate (outside AMAs) or Assured (inside AMAs) water supply determination. However, as demonstrated by Pima County, in the case of new subdivisions and rezoning requests, counties can require that sufficient information be submitted so that the impact of a new use on existing and future water supplies can be projected.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

In 2007, the Arizona State Legislature passed SB 1575, aka the Mandatory Adequate Water Supply Program (MAWSP), which gave counties and cities the ability to require new developments of more than six parcels to demonstrate a 100-year water supply for its residents for approval by ADWR and the platting agency. The MAWSP has been adopted by Cochise and Yuma Counties and the Cities of Patagonia and Clarkdale. Because each 100-year adequacy assessment must account for the ongoing water uses of surrounding wells, the program encourages sustainable growth through an analysis of local water supply and demand. **The Yavapai County Board of Supervisors recently voted unanimously not to enroll in MAWSP.** ~~Enrolling in the MAWSP is one way the County could move towards more sustainable water use. One potential drawback to requiring developers to prove water adequacy is that it could motivate some to exploit existing loopholes in the subdivision process, resulting in more lot splits. To enroll in the program, the County would have to obtain a waiver that would allow groundwater below a depth of 1,200 feet to qualify as an adequate water supply.~~

By working with ADWR, the Arizona State Legislature, and other partners, we may explore other options for creating more local and regional oversight on water withdrawals, such as well spacing requirements and metering. Along with promoting water conservation, these measures could help prevent overdraft of the county's groundwater supplies.

Groundwater Law

~~The Management Plans serve as a tool to assist in achieving the groundwater goals of each of the state's five Active Management Areas (AMAs).~~ Arizona's 1980 Groundwater Management Act (GMA or Code) created ADWR and put in place structures for water management, intended to curb the severe groundwater overdraft occurring in several parts of the state. **This included Management Plans, updated each decade, to assist in achieving the groundwater goals of each of the state's five Active Management Areas (AMAs).** These plans contain the conservation programs that are intended to guide each AMA to meet its management goal – and these conservation programs are to be designed to achieve reductions in groundwater withdrawals. The successive periods and plans are a particular strength of the Code, enabling the plans to evolve over time, adapting to incorporate the information and experience gained over time and to respond to changing technologies and circumstances.

The statutory management goal of the Prescott AMA (PrAMA) is safe-yield by the year 2025 (A.R.S. § 45-562(A)). Safe-yield is defined as “a groundwater management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area” (A.R.S. § 45- 561(2)). Groundwater withdrawals in excess of natural and artificial recharge lead to groundwater overdraft -- meaning that to progress toward the goal of safe-yield, the AMA should be moving in a direction of balancing their inflows and outflows. Safe-yield is a condition where inflows and outflows are balanced and maintained in the long-term. Both pieces of this are equally important and equally challenging – achieving that balance and thereafter maintaining the balance requires close attention and response to changing conditions and demands over time. The PrAMA is not at safe-yield and will be unlikely to achieve and maintain safe-yield.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

As the state moves into a drier future and supplies become increasingly constrained, the AMA management model may be modified to develop an expanded Rural Management Area (RMA), for resource management outside the AMA. The Assured Water Supply (AWS) Program was created to preserve groundwater resources and promote long-term water supply planning in the AMAs. AWS statutes and rules limit the use of groundwater by new residential and commercial subdivisions. Every person proposing to subdivide land within an AMA must demonstrate the availability of a 100-year water supply. An AWS demonstration must include proof of the following criteria: 1) water supplies will be of adequate quality; 2) water supplies will be physically available for 100 years; 3) water supplies will be legally available for 100 years; 4) water supplies will be continuously available for 100 years; 5) any groundwater use will be consistent with the management goal for the AMA; 6) any groundwater use will be consistent with the management plan for the AMA; and, 7) the developer or water provider has the financial capability to construct the necessary water storage, treatment and delivery systems.

Surface Water Rights

Surface water in Arizona is defined as “the waters of all sources, flowing in streams, canyons, ravines or other natural channels, or in definite underground channels, whether perennial or intermittent, flood, waste or surplus water, and of lakes, ponds and springs on the surface... and are subject to appropriation and beneficial use...”, (A.R.S. § 45-141). Early in its history, Arizona adopted the doctrine of prior appropriation to govern the use of surface water. This doctrine is based on the tenet of “first in time, first in right” which means the person who first puts the water to a beneficial use acquires a right that is senior to later appropriators of the water.

In Arizona, there are two ongoing general stream adjudications, judicial proceedings to determine the nature, extent, and relative priority of water rights: the Gila River System and Source (Gila Adjudication) and the Little Colorado River System and Source (LCR Adjudication). The ~~exterior~~ boundaries of these two ~~adjudication areas~~ include more than half the state **and nearly all of the major population centers**. ~~where most of the Indian reservations and federal land are located~~. **Water law in Arizona does not recognize a physical connection between surface water and groundwater except in the narrow “subflow” zone adjacent to perennial and intermittent river reaches. Because the physical reality is much more extensive and complicated than that, the adjudication court and parties have spent many decades trying to come to agreement on how to define the subflow zone, to determine which wells are in or out of the adjudication. This is the main reason that the adjudication court has completed few claims through the many decades of activity.**

While the regulatory authority in the Groundwater Code is based on the use of groundwater, the availability of ~~renewable supplies like~~ surface water, **a renewable supply, is** are inextricably linked to the use – and overuse – of groundwater. As climate change increases hydrologic variability, there may be increasing concerns about the reliability of surface water supplies in the County. Beyond climate impacts and considerations around annual surface flows, there is further uncertainty for surface water users due to the general stream adjudications. Progress toward resolving the amount and priority of surface water rights in the state will have divergent impacts – providing some certainty and resiliency for some users and causing others to lose access to water they may have assumed was reliable. Effective and coordinated water planning will have to be considerate of the interconnection of surface water and groundwater.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Water Quantity

Groundwater

The risks associated with the overuse of groundwater have been long recognized in Arizona. There were multiple efforts prior to the GMA to regulate groundwater, and the risks of overdraft were well-accepted enough that they were written into the “Declaration of Policy” in the Groundwater Code: “(overdraft) is threatening to do substantial injury to the general economy and welfare of this state and its citizens...” (A.R.S. § 45-401(A)). To address this threat, the GMA set forth what was then seen as a comprehensive and proactive set of regulations with the goal to shift water users to alternate supplies and preserve groundwater.

The regulations and goals laid out in the GMA have proven to be insufficient though: despite significant conservation efforts since 1980, the AMA has not reached, and is not expected to reach, its goal of safe-yield by 2025. Continued overdraft has resulted in growing pressure on groundwater supplies: physical availability challenges in the AWS program which have already been observed in Pinal County are expected eventually to also occur in Yavapai County, and there are additional concerns about the physical impacts (subsidence, fissures, water quality degradation, etc.) associated with continued groundwater mining.

Management plans and water management strategies – including the GMA itself – continue to rely in large part on correcting imbalances in water supply and demand by importing additional supplies. The importation of Colorado River water to central Arizona, the development of uses for reclaimed water, and provisions allowing for importation of groundwater from specified basins into the AMAs are all examples of these supply-side strategies. These types of strategies allowed for significant economic progress and progress toward the goals in the AMAs. However, the imported water was often used to support increases in total demands rather than offsetting existing groundwater demands and led to continued groundwater overdraft despite significant additional supplies.

Private Domestic and Exempt Wells

~~Private domestic wells are not monitored or regulated unless they are within the boundaries of the AMA. Private domestic wells outside of an AMA do not have a capacity restriction.~~ Wells within an AMA that pump 35 gallons per minute or less **for domestic purposes** are called “exempt wells” **and are not restricted in use.** Non-exempt wells **inside the AMA are** - those that are allowed to pump more than 35 gallons per minute - **are subject to a groundwater rights system** and are required to file ~~more stringent~~ **water use reports** records with regulatory agencies. From the period of 1985 to 2005 there has been a 267% increase in the number of exempt wells **in the PrAMA** (~~private domestic wells with less than 35 gal/min capacity~~). In 1985 there were 4,200 exempt wells ~~in the PrAMA~~; in 1997, the number had more than doubled to 8,700; and in 2005, over 11,200 had been registered in the PrAMA. **Groundwater pumping outside the boundaries of the AMA, from wells of any size, is completely unregulated. Private water companies report some data on water pumped to the Arizona Corporation Commission, but the data are often aggregated across broad areas. For the most part, pumping volumes and depth to water are not measured or reported.**

If RMAs can be established, Keep Sedona Beautiful recommends that provisions include pumping reporting requirements for wells outside the boundaries of the AMA.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Yavapai County Development Services is responsible for reviewing all well permit applications for referral to the Arizona Department of Water Resources on parcels 5 acres and smaller.

Current Supply

Keep Sedona Beautiful recommends that a distinct section be included discussing current supply. This section should summarize the water supply as detailed in CYHWRMS, but updated for 2020 water use. Data for the update can be obtained from municipal and private water providers and can be estimated for exempt wells, as detailed in CYHWRMS.

Future Water Demand

The quantity of water needed in the future and the ability to meet that demand depends on several factors including the amount of growth, the location of the growth and the water requirements of the growth. Water use is often expressed as per capita amount (**gallons per day per capita or gpcd**) and is typically estimated and projected based on current use. In Yavapai County, projections have been made for the planning areas in the CYHWRMS study (Phase 1) and in the Agua Fria Demand Analysis. Other areas of the county have not been analyzed in detail at this time.

Phase I of CYHWRMS has produced summary tables showing water demand from projected population growth until 2050. The population growth figures used in CYHWRMS are from the Arizona DES's projections as well as projections given by communities for a more locally accurate account of projected growth using land use data and future community plans. Summary tables from Phase I show water demand at ~~53~~ approximately 117,381 af/yr and supply ranging from 38,520 af/yr (with net natural recharge) using the Water Balance Method to approximately 72,103 af/yr using status quo data. **The "net natural recharge" method preserves the flow of rivers and springs in the county while the "status quo" method allows for reduced flow in rivers and springs.**

Keep Sedona Beautiful recommends that this section update the 2050 water demand numbers given in CYHWRMS to 2070. The projected demand can be based on population projections and per capita use data obtained from municipal and private water providers and can be estimated for exempt wells, as detailed in CYHWRMS.

What is the implication of this huge excess in demand over supply?

Keep Sedona Beautiful suggests that demand by tourists also be accounted for. We also believe that per capita use (factoring in tourist demand) needs to be documented, as should goals for reducing per capita use.

Regional Use and Water Planning Areas

The CYHWRMS is a comprehensive study of water demand and supply in the Central Yavapai and Verde Valley regions and highlights regional use and planning areas. There are 20 water planning areas within the CYHWRMS in which many water companies operate. The major water planning areas in the CYHWRMS area are Prescott and Camp Verde, using over 10,000 af/yr in each planning area. The amount of water used in each planning area in the region is separated into

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

three different kinds of use: municipal/domestic; agricultural; and commercial/industrial. Agricultural and domestic uses comprise a majority of the water use in the region. In recent years, however, some agricultural demand in the PrAMA has been reduced due to the purchase of the Big Chino Water Ranch. Exempt wells are also a major user of water resources.

It is important to note that although CYHWRMS is a comprehensive study, it does not include the Agua Fria, Bill Williams, or Hassayampa watersheds. A draft report on the demand in the Upper Agua Fria highlights the demands in the Upper Agua Fria Watershed, just south of the study area covered in CYHWRMS. The Upper Agua Fria report outlines the supply and demand in the region, and indicates that the study area's supply is greater than demand in 2057, but also indicates that the study area is somewhat smaller than the overall basin in which it is contained, and that many areas within the study have had to resort to occasional pumping in order to fulfill demands. **The Upper Agua Fria study supply and demand numbers should also be updated to 2020 and 2070.**

Keep Sedona Beautiful recommends that a map of the CYHWRMS planning areas and a table summarizing projected unmet demand by CYHWRMS planning area should be included in this plan. Ideally, those tables would show updates to 2020 (supply) and 2070 (projected demand).

Satisfying Future Demand

Many alternatives are being developed in the effort to meet future demands within Yavapai County. Although some alternatives are in appraisal stages, various water supplies and strategies are being used to manage demand in a rapidly growing state. These include, but are not limited to: groundwater, surface water, effluent, water harvesting, and conservation. Phase III of CYHWRMS is ~~identified a set of currently identifying alternatives~~ **and rough cost estimates** for the management of water resources in Yavapai County. ~~and~~ **The Water Resources Development Commission at the State level also provides alternatives for Water Resources Management.**

Keep Sedona Beautiful notes that the section on meeting future demand needs to be expanded significantly. At a minimum, alternatives described in CYHWRMS should be described in a summary manner, with their cost estimates (with an appropriate increase in costs to account for inflation that has occurred over the last decade).

Current Conditions

Water Quality

The Arizona Department of Environmental Quality (ADEQ) issues permits and monitors surface water via a network of volunteer "Citizen Scientists" and fixed stations. Most of these waters meet drinking water standards that are based on Clean Water Act criteria and/or standards established by the State of Arizona.

Keep Sedona Beautiful asks if there are water quality data that can be included here to support the prior paragraph.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

The next 3 paragraphs are taken nearly verbatim from the 2015 Coconino County Comprehensive Plan. KSB recommends that the information be updated based on data collected since that time.

Avoiding point- and nonpoint-source pollution will help protect our aquatic ecosystems and our surface and groundwater quality. Point sources of pollution typically originate from industrial discharges (atmospheric, solid, or liquid waste). This type of pollution is regulated by the U.S. Environmental Protection Agency (EPA) and ADEQ. Nonpoint pollution can be a problem in areas of high development, recreational use, or livestock use. The most common nonpoint source pollutants are sediment, animal waste, fertilizer, and motor oil, which wash into waterways during storm events.

The County's Stormwater Ordinance is designed to minimize nonpoint pollution to our waterways and drinking water. The intent behind this ordinance is to slow stormwater flows, enable infiltration into the ground, and protect riparian areas and floodplains from pollution. Low impact development (LID) structures, such as swales, detention basins, and pervious pavement may be used to retain stormwater on site.

Another important factor contributing to water quality is watershed health. Forest restoration and the prevention of high-severity wildfires are vital to our watersheds. The best way to protect watershed health is to minimize disturbance to native vegetation and soils. Land use activities should minimize soil disturbance; likewise, riparian areas and floodplains should be protected because they provide important buffers between upland uses and instream water quality.

Concerns are often raised about the impact of septic systems on groundwater. Nitrates are potentially of higher concern because heavy rains could leach them into aquifers, particularly in areas containing faults. However, ADEQ monitors nitrate levels regionally and has not yet identified any areas within Yavapai County that require mitigation. Recent studies (both national and local) have shown that EPA water quality standards (A or A+ water) for discharging reclaimed water still allow some organic and pharmaceutical compounds to pass into our waterways and that these compounds can percolate to groundwater.

Groundwater occurs close to the surface in perched water-bearing zones. Because this shallow water is more susceptible to impacts from septic systems and other surface contamination, **pumped water in these zones** should be tested or treated periodically to ensure safety. Also, perched water tables are closely tied to annual precipitation; as a result, long-term supplies from them may be less secure during extended periods of drought.

Watershed Management

A watershed is the land area that drains to one stream, lake, or river, affects the water quality in the water body that it surrounds. All land drains into a lake, river, stream or other water body and directly affects its quality. Because we all live on the land, we all live in a watershed — thus watershed condition is important to everyone.

Keep Sedona Beautiful recommends that the prior paragraph be rewritten. It is grammatically flawed, and we're not certain what's being said here.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

~~A healthy watershed is one in which natural land cover supports dynamic hydrologic and geomorphologic processes within their natural range of variation, contains habitat of sufficient size and connectivity to support native aquatic and riparian species, and has physical and chemical water quality conditions that can support healthy biological communities.~~

A healthy watershed is one:

- In which natural land cover supports dynamic hydrologic and geomorphologic processes within their natural range of variation
- That contains habitat of sufficient size and connectivity to support native aquatic and riparian species
- That has physical and chemical water quality conditions that can support healthy biological communities

Integrated land use and water management planning is a crucial step that the County ~~should~~ will take to address the interrelated challenges of climate change, ongoing population growth, and increasingly limited water supplies.

Integrated land use and water planning cannot occur without collaboration. Local planning departments and water management agencies are the leading actors. Additional local decision makers such as city councils and governing boards can offer valuable leadership and support necessary for success. Planners ~~should~~ will incorporate meaningful public participation into planning efforts and bring other major stakeholders to the table, including the public, developers, businesses, and nongovernmental organizations.

The County ~~should~~ will incorporate water management agencies into all stages of the development approval process so that the agencies can ensure adequate water supplies and provide developers with information on how a project may be more water-efficient, stormwater friendly, and low-impact, while ~~it~~ protectings water quality.

Environmentally Sensitive Lands

Environmentally sensitive lands include areas with critical resources: Floodplains, riparian zones, rivers and streams, wetlands, springs and seeps, and steep slopes. These spaces offer habitat for rare or endangered plant and animal species; in addition, some are significant for aquifer recharge. Environmentally sensitive lands require special consideration in the development-design process.

Through integrated conservation design or similar measures, we can maintain or increase land values by retaining as much of their natural characteristics as possible. Preserving private land for habitat, open space, or other nondevelopment purposes may require offsetting the owner using a method that reflects the fair-market value of the property. Such methods include purchasing the property outright, exchanging it for other lands, transferring easements or development rights, or offering property-tax breaks.

Early settlement tended to occur along drainageways 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 a great deal

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

of habitat for native flora and fauna, create wildlife movement areas, and serve as important repositories of biological diversity and are important natural recharge zones.

The Federal Emergency Management Agency (FEMA) has defined floodplains for most watercourses, whether perennial, intermittent, or ephemeral, on maps showing surface-water elevations during 100-year floods. Reducing construction and development in 100-year floodplains helps protect riparian vegetation and wildlife communities. Regardless of whether the drainage contains permanently flowing water, soils in riparian areas are generally deeper and moister than they are in adjacent uplands. Riparian areas facilitate movement and provide food, water, 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 favor human uses (recreation, drinking water, irrigation, and livestock use) over conservation. The capacity for conservation attainment is contingent on our proficiency to influence public land-management endeavors and provide motivations to private landowners for restoring degraded riparian habitats.

Water Conservation & Alternative Sources

Effluent

Arizona has long been and remains a leader in the reuse of effluent water. The ~~m~~Management plans have encouraged and incentivized massive investment in advanced treatment and the infrastructure to constructively ~~exploit~~ use this resource. Rather than simply discharge effluent to a streambed or wash, policies, agreements, infrastructure, and facilities were designed for the purpose of putting the supply to good use.

Over time, with innovations in treatment technologies and shifts in regulations, it became evident that effluent was more than a means to conserve or counteract the use of potable supplies – it could be used for almost any use and the supply was likely to ~~improve~~ increase over time. The initiation of underground water storage and recovery and of technology allowing for direct potable reuse of effluent (DPR) facilitated and enhanced this change in perception. Water management strategies have increasingly moved to a “one water” approach, in which all supplies of water – including effluent – are seen as equally valuable components of a water portfolio. Existing incentives for the use of effluent are increasingly being re-evaluated and scrutinized: when water supplies are considered “one water,” and new supplies are scarcer and more expensive, incentivizing any water use becomes questionable.

Keep Sedona Beautiful notes that the preceding sentence is unclear. Wouldn't we want to encourage a switch from non-effluent to effluent where possible and practical?

As competition has increased for effluent over time, there have been growing conversations around how the uses of effluent might be prioritized. While the longstanding paradigm of “the right water for the right use” may still be useful, there are increasing calls for deeper consideration of what the highest use for that resource might be. Currently, effluent supplies are used for power production, landscape irrigation, storage and recovery, and other uses. Effluent is also increasingly being considered as a potential source of water for restoration or riparian uses and as an additional source of potable supply.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

As all supplies become more constrained and as competition for effluent continues to increase, water managers in the state are increasingly discussing strategies to prioritize the use of effluent, particularly with considerations of prioritizing those uses that would allow the water to be repeatedly recaptured and recycled.

Gray Water (AAC Title 18, Ch. 9, Art 7 – Pt D)

Gray water is wastewater collected separately from sewage flow. It includes water from washing machines (laundry), bathtubs, showers or sinks.

It must only be used for residential gardening, composting, or landscape watering, where it is not accessible by the public or allowed to run off the property. Use must be less than 400 GPD.

It is important to understand which substances or chemicals go down household drains. Gray water may contain fats, oils, grease, hair, lint, soaps, cleansers, fabric softeners and other chemicals. ~~Do~~ **Residents should** not use gray water with elevated levels of chlorides, sodium, borax, or sulfate with a high pH, which could be harmful to plants.

Wastewater from a kitchen sink, dishwasher or toilet is not considered gray water. These sources produce "black water", which should not be reused at home because of the high risk of contamination by bacteria, viruses, and other pathogens.

Lastly, gray water may only be used in locations where groundwater is at least 5 feet below the surface throughout the year and cannot be in a floodway, wash, or drainage. ~~Do~~ **Residents should** not use gray water on plants that produce food, except trees and shrubs with edible portions not touched by gray water.

Keep Sedona Beautiful notes that the discussion of gray water (above) simply defines it. Does the county encourage its use?

Low Impact Development (LID) / Stormwater Capture

Green spaces, pervious surfaces, and green infrastructure all help manage stormwater for flood control. **The county would benefit in creating a water management agency staff, who have a close understanding of the community's hydrology, are keenly suited to advise where infrastructure for flood control would be most beneficial for recharging key aquifers. Land use planners should follow these recommendations to designate open space zoning and certain building types, and to plan densities accordingly.**

Keep Sedona Beautiful recommends that the sentences highlighted above be rewritten to clarify what is being recommended.

The following paragraphs have been excerpted directly from the Greater Phoenix Metro Green Infrastructure Handbook¹. Keep Sedona Beautiful recommends that this source be cited and that excerpts be identified by being italicized.

¹ https://www.phoenix.gov/oepsite/Documents/SCN%20GI%20Handbook_January%202019.pdf

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Low Impact Development (LID) designs have several identifiable environmental benefits. Utilizing LID practices can reduce the amount of runoff and stormwater conveyed through existing conveyance systems, which will directly translate to reductions in the amount of pollutants that are discharged into Yavapai County watersheds. Pollutants can be filtered naturally by increasing runoff infiltration into soils through LID installations. Additionally, implementation of LID practices can result in the beneficial use of stormwater as a supplemental source of landscape irrigation.

Community and secondary benefits include overall water conservation, urban heat reduction, improvements in population health, and the aesthetic benefits of additional green spaces.

When introduced in 1999, LID was a radically different approach to stormwater management. It was developed to address issues related to new residential, commercial, and industrial development through environmental design and implementation practices. As originally conceived, the LID approach combined a hydrologically effective and integrated design that incorporated site-scale pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID was intended to recreate natural (pre-construction) hydrologic patterns by utilizing landscaping and collection techniques that store, absorb, infiltrate, evaporate, and detain runoff throughout a site to keep as much rainwater as possible onsite near the location where it landed. This differed from the prevailing approach at that time, in which stormwater was shed from a site as efficiently as possible through structural methods.

The objectives of the LID approach are accomplished by:

- Minimizing stormwater impacts to the extent practicable. Techniques include reducing imperviousness, conserving natural resources and ecosystems, maintaining natural drainage courses, reducing the use of pipes and structural collection systems, and minimizing clearing and grading.
- Providing dispersed runoff storage measures throughout a site using a variety of detention, retention, and runoff practices.
- Maintaining predevelopment times of concentration by strategically routing flows to maintain travel times and to control the discharge.
- Implementing an effective public education program to encourage property owners to use pollution prevention measures and to maintain LID management practices on their sites.

Since its introduction, LID has gained wide acceptance and has been extensively practiced in portions of the United States. It is integral to land planning and development criteria in various parts of the country because of rainfall variability, greater potential for pollution via runoff, and obvious need for a higher level of stormwater management. There is newfound interest in LID practices in central Arizona for a variety of reasons. These include greater visibility of the concept through outreach efforts by a variety of organizations and entities, rising infrastructure and water costs, and higher public consciousness about the scarcity of water in the Southwest. There is also a recognition by local design and planning professionals and community leaders that LID is a sustainable approach that can continue to work in Arizona through thoughtful design consideration, site analysis, engineering, and planning.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

The basic concepts of working with natural patterns, reducing impervious surfaces, capturing stormwater and pollutants, reliance on vegetation to absorb stormwater, dispersed on-site capture locations to keep rainwater near where it falls on the ground, minimizing pipes, etc. are all valid and implementable in Yavapai County.

Some examples of LID structures are: 1) Permeable Pavements, 2) Curb Openings, 3) Sediment Traps, 4) Stormwater Harvesting Basins, 5) Vegetated or Rock Bioswales, 6) Bioretention Systems, 7) Curb Extensions, 8) Bioretention Planters, 9) Domed Overflow Structures, 10) Low or No Water Use Landscaping.

Water Education and Outreach

The County shall continue to promote water conservation and alternative water sources in a variety of ways. Educating the public, developers, and County staff is important. Incorporate conservation elements into development projects and encourage the use of reclaimed water, gray water, and rainwater systems wherever possible. Technologies and methods are constantly emerging that can help us reduce our consumption of this precious resource.

Keep Sedona Beautiful suggests the following section be added

Water Resource Impacts of New Development

The availability of an adequate supply of clean water is rapidly becoming the most critical factor in planning for the future. Balancing the needs of economic growth and the environment in the face of an ever-increasing population and climate change promises to be complex and challenging, particularly in an arid land. Yavapai County will embrace and employ the full range of tools and authorities at its disposal to meet these challenges.

Currently, the impacts of new development on water resources are not considered in land use decision making and permitting in Yavapai County. By increasing the amount of water resource information used to make land use decisions, Yavapai County will help ensure that the full consequences of development are understood.

In Yavapai County, any discussion of water needs must consider natural discharge from aquifers that sustain the year-round flow in many rivers, creeks and springs. Decisions about trade-offs can then be made by an informed public, leading to greater sustainability of the environment, economy and quality of life.

An adequate water supply will keep rivers flowing and riparian areas green for future generations. The alternative is dry sections of the Verde River and Oak Creek in the summer and die-back of riparian vegetation. Long-term, unwise development will threaten continued access to groundwater supply for human communities. Such outcomes would negatively impact the long-term economic and social health of Yavapai County.

While current state law constrains Yavapai County's authority to make decisions based on water availability, the County can consider the impact on water resources when evaluating new development proposals. For example, in 2008, Pima County amended the Water Resources Element of their Comprehensive Plan to integrate a more comprehensive Water Resources

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Element into their policies². The updated policies more adequately measure and mitigate impacts of proposed development on water supply. Yavapai County will undertake a similar effort, which will strengthen the interrelationship of water resources and land use planning consistent with water conservation efforts and water use ideals set out in the 2012 Yavapai County Comprehensive Plan.

A Call to Collaborative Action

Meeting the water supply challenges of a growing population in an arid land, without sacrificing flow in rivers and creeks, is daunting. To address the significant water-related issues facing Yavapai County, particularly considering the multiple jurisdictions involved, collaboration is essential. Such collaboration must be based on a common understanding of shared challenges. Yavapai County previously had a regional water collaboration group, which effectively leveraged local, state and federal funding to complete seminal water resources studies. The time has come for formation of a new regional water group, capable of addressing Yavapai County water resources planning in the 21st century.

To move towards a more water-secure future, Yavapai County will:

- Update the existing water supply and demand study to account for current conditions.
- Support creation of RMAs.
- Increase collaborative long-range planning and cross-jurisdictional water management, especially with respect to more sustainable water management and use approaches.
- Advocate for common-sense modifications to regional and state water policy by lobbying for more local control of water resources.
- Actively promote and incentivize water conservation and reuse.

² <https://webcms.pima.gov/cms/One.aspx?pageId=351192> (accessed 5/21/2021)

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Keep Sedona Beautiful suggests that the following information from the Growing Water Smart Workshop be included.
Growing Water Smart

In March of 2022 an interdisciplinary team from Yavapai County participated in a Growing Water Smart Workshop offered free of charge by the Sonoran Institute. Members of the team included:

Harry Oberg	Supervisor, District 1
Donna Michaels	Supervisor, District 3
Barbara Fox-Thomas	Executive Assistant to Supervisor Oberg
Veronica Stepanek	Executive Assistant to Supervisor Michaels
Jeremy Dye	Assistant Director, Yavapai County Development Services (since appointed Director)
Kazi Haque	Manager, Yavapai County Development Services
Elizabeth Glowacki	Hydrologist II, Yavapai County Flood Control District
Tony Angueira	Stormwater Engineer, Yavapai County Flood Control District
Kevin Osterman	Chair, Comprehensive Plan Advisory Committee and Commissioner, Yavapai County Planning and Zoning
John Black	Vice Chair - Comprehensive Plan Advisory Committee
Marianne Langridge	Resident of the Village of Oak Creek

During a number of facilitated sessions, the group identified current challenges in dealing with water availability and quality. The team also discussed some general aspects of the Comprehensive Plan, and arrived at an Action Plan to implement. The following table presents the Action Items that are pertinent to the Water Element and to this Comprehensive Plan as a whole.

Category	Action Resulting From Growing Water Smart Workshop
General	Explore funding for water projects from the Infrastructure Bill and other sources
Comprehensive Plan	Complete Goals, Policies, and Action Items for each element of the Comprehensive Plan
Comprehensive Plan	Complete the Implementation Chapter of the Updated Comprehensive Plan, reflecting each of the elements, or an implementation section at the conclusion of each element.

**Keep Sedona Beautiful Comments and Questions
on the V1 Draft of the Water Element**

Category	Action Resulting From Growing Water Smart Workshop
Comprehensive Plan	Articulate how Annual Update/briefing of Comp Plan will be conducted. Include a requirement for Yavapai County Development Services to present an annual assessment of how well the County is meeting the Goals, Policies, and Action Items listed within the Comprehensive Plan, and to propose changes to policies where needed to better attain those Goals, Policies, and Action Items.
Comprehensive Plan	Include information in the Comprehensive Plan related to tourist water use, and create water conservation policies to address non-resident populations
Comprehensive Plan	Create a density map as a layer in the County Geographical Information System (GIS) that is incorporated into the Comprehensive Plan and can help guide decisions during consideration of development proposals.
Comprehensive Plan	Explore water conservation programs and incentives (Transfer of Development Rights, etc.) to include in the Comprehensive Plan, ie. offering transfer of development rights (TDR) and/or conservation easements to disincentivize building in sensitive areas.
Comprehensive Plan	Create an environmentally sensitive areas map as a layer in the County Geographical Information System (GIS) that is incorporated into the Comprehensive Plan and can help guide decisions during consideration of development proposals: critical habitat such as riparian areas of locations of endangered species.
Comprehensive Plan	Solicit Community Vision Statements for Comp Plan
Comprehensive Plan	Articulate in the Comp Plan how the Community Vision Statements will inform development decisions
Communication	Formulate and execute an outreach plan for public input, including options for additional public input surveys.
Communication	As a result of public input survey(s), formulate and implement a water education program that speaks to different parts of the County depending on their concerns

**Keep Sedona Beautiful Comments and Questions
on the V1 Draft of the Water Element**

Category	Action Resulting From Growing Water Smart Workshop
Communication	Development Services develops a guidance document for discussing water during P&Z/Board of Supervisors meetings
Communication	Create a water working group, coordinated by Development Services and approved by Board of Supervisors - a Water Advisory Committee
Communication	Join the coalition of mayors working on water issues - Prescott, Verde Valley communities, etc.
Communication	Explore the creation of a Yavapai County Water Department or position (not a provider). One responsibility is to establish an ongoing public process and forum for submitting comments, etc., to discuss water issues
Update Codes	Update codes and requirements (landscape, zoning ordinance, etc.) based on the approved Comprehensive Plan.
Best Practices	Itemize water conservation policies, incentives and regulations that can then be implemented through commercial flood control requirements for commercial developments, zoning ordinances, building codes and subdivision regulations.
Best Practices	Study various methods for offering agricultural irrigation efficiency incentives (vertical farming, drip, etc.)
Data	Begin data collection/studies related to water supply and available quantity, according to recommendations of the Comprehensive Plan
Data	Contact ADEQ for water quality monitoring data - stream sampling
Data	Identify areas of Yavapai County that are critical for natural groundwater recharge and document those areas on a supplement to the Land Use Map.
Data	Propose long-range planner position or hire consultant to complete water-related studies and/or water management including aggregating existing data on water use and availability. (The CYHWRMS 2006 supply and 2050 projected demand numbers should be updated to current (2020) and projected (2070). This would not be “new studies” – it would take relatively little effort. For example, if I were to do it, I’d say it’s a \$30,000 job. That’s not much money in the realm of county expenditures.

**Keep Sedona Beautiful Comments and Questions
on the V1 Draft of the Water Element**

Category	Action Resulting From Growing Water Smart Workshop
Long-range Planning	Begin a County-wide Watershed Management Plan, in close coordination with FCD
Improve Water Quality	Partner on a Section 208 amendment for Yavapai County
Improve Water Quality	Work with ADEQ to articulate and implement policies aimed at protecting water resources.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

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: Promote conservation and reuse of water.</p> <p>Objective a: Promote conservation and reuse of water used for residential, agricultural and industrial uses.</p> <p>Objective b: Promote water wise landscaping.</p> <p>Objective c: Encourage efficiency in homes to conserve water.</p> <p>Objective d: Analyze any proposed water intensive uses and evaluate those uses based on their merits, environmental impacts and economic value to the residents of the county.</p> <p>Objective e: Encourage the preservation of the Verde River and all other major waterways in Yavapai County and support the protection of riparian resources.</p>	
<p>Goal 2: Continue County-wide education on water resources management.</p> <p>Objective a: Educate the public about strategies for rainwater harvesting including: active rainwater harvesting, passive rainwater harvesting, and low impact development.</p> <p>Objective b: Educate the public about existing knowledge of water resources management and the emerging scientific studies.</p>	
<p>Goal 3: Identify water resources.</p>	

**Keep Sedona Beautiful Comments and Questions
on the V1 Draft of the Water Element**

Objective a: Prepare a list of alternatives to continue to supply water to a growing county.	
2012 Recommendations	Progress/Status
Promote water recycling from industrial, agricultural and energy production.	
Promote approved methods of recharge or rainwater harvesting for new development.	
Educate the public about rainwater harvesting and land contouring to create catchment basins.	
Promote graywater harvesting, efficient plumbing and other methods of water harvesting, such as rainwater catchments, catchment basins and passive water harvesting in cases where technologically feasible.	
Discourage energy projects requiring substantial water use.	
Promote willing seller/willing buyer transactions that result in the transfer of development rights to preserve the Verde River and other major waterways.	
Encourage protection and creation of recharge areas.	
Continue to participate in the Water Advisory Committee (WAC)	
Educate the public about existing incentives for water wise landscaping	

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

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 all of the Goals, Objectives and Recommendations from the V1 Draft are accounted for below.

Goals, Policies and Action Items

Goal W1: Water Quantity - Provide long-term water security for human and natural communities.

Policy Item W1.1: Identify water supplies. Determine water supply sufficiency to meet growing/diverse demands.

Policy Item W1.2: Long-term planning efforts supported by the County will incorporate climate science into projections of future supply.

Policy Item W1.3: Encourage growth that makes conservative use of renewable water supplies such as effluent and surface water, and uses groundwater as the primary water source only in the absence of renewable sources.

Policy Item W1.4: Promote conservation and reuse of water used for residential, agricultural, commercial, and industrial uses.

Policy Item W1.5: Evaluate water resource impacts of new development when considering a comprehensive plan amendment or rezoning request.

Policy Item W1.6: Actively support the ability to create Rural Management Areas (RMAs) to better manage water resources in rural areas.

Policy Item W1.7: Collaborate with the appropriate agencies to pursue local, regional and/or state policies that support sustainable water management by allowing for the analysis of cumulative impacts to long-term groundwater supplies.

Policy Item W1.8: Ensure that no new development or policy degrades the water resources of existing water users.

Policy Item W1.9: Collaborate across jurisdictions, utilizing the most recent data and available tools, such as groundwater models, to implement water management that recognizes the growing population, the warming and drying climate and the depletion of groundwater and surface water supplies.

Policy Item W1.10: Consider the water needs of water-dependent ecosystems in all water planning, water use projections and water management decision making.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Action Item W1.1: Prepare a list of alternatives to continue to supply water to a growing county.

Action Item W1.2: Improve predictive use and availability.

Action Item W1.3: Increase storage and reduce waste.

Action Item W1.4: Improve local resource planning

Action Item W1.5: Inform the public on the need for required water adequacy through news articles and informational offerings.

Action Item W1.6: Reconstitute a water committee that is broadly representative of regional jurisdictions and land managers as well as professional hydrologists and water managers.

Action Item W1.7: Utilize, and update as needed, existing data sets and groundwater models to develop realistic projections of future water demand and impacts to groundwater and surface water resources. Involve the public, so they can understand the consequences of various future development paths and make informed decisions about their preferred future.

Action Item W1.8: Always include water demand for water-dependent ecosystems in the early stages of water planning.

Goal W2: Water Quality

Policy Item W2.1: Promote and protect public health with a clean water supply.

Policy Item W2.2: Reduce surface water pollution through utilization of the framework of federal and state laws, regulations, and guidelines.

Policy Item W2.3: Ensure compliance with ADEQ Water Quality Standards (WQS) for effluent treatment and reuse.

Policy Item W2.4: Increase water conservation and reduce groundwater depletion.

Policy Item W2.5: Actively participate in and pursue programs and activities that address the conservation and management of regional water resources.

Action Item W2.1: Improve impaired or not attaining waters.

Action Item W2.2: Conserve and enhance riparian buffers, protect floodplains from development, and require the capture of stormwater on site.

Action Item W2.3: Increase protection for Outstanding AZ Waters (OAW), and other high-quality waters.

Action Item W2.4: Support water conservation techniques in the planning and design of new development

Action Item W2.5: Make use of drought monitoring and predictive data

Action Item W2.6: Manage low flows for drought resiliency

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Action Item W2.7: Improve interagency flood and drought coordination

Goal W3: Water Conservation & Alternative Sources

Policy Item W3.1: Increase water conservation and reduce groundwater depletion.

Policy Item W3.2: Actively participate in and pursue programs and activities that address the conservation and management of regional water resources.

Action Item W3.1: Support water conservation techniques in the planning and design of new development.

Action Item W3.2: Encourage efficiency in homes to conserve water.

Action Item W3.3: Promote water wise landscaping.

Action Item W3.4: Work with incorporated towns/ cities to promote water conservation strategies for homeowners.

Goal W4: Watershed Management

Policy Item W4.1: To reduce stormwater runoff and improve water quality, the County encourages use of pervious surfaces and using LID principles within all developments.

Policy Item W4.2: Promote healthy, sustainable watersheds via proper land and water management.

Policy Item W4.3: Encourage development that complies with the ADEQ Aquifer Protection Program mandates.

Policy Item W4.4: Encourage developments that provide aquifer recharge benefits and utilize treated wastewater for irrigation of golf courses, neighborhood and community parks, roadside rights-of-way, etc.

Action Item W4.1: Promote graywater harvesting, efficient (low-flow) plumbing and methods of water harvesting, such as rainwater barrels and catchment basins where feasible.

Action Item W4.2: Encourage the preservation of the Verde River and all other major waterways in Yavapai County and support the protection of riparian areas.

Action Item W4.3: Promote land use practices that will improve watershed health.

Action Item W4.4: Protect critical aquifer recharge sites by identifying environmentally sensitive corridors.

Action Item W4.5: Analyze all proposed water-intensive plans for consideration of efficient alternatives, environmental impact, and economic value to the residents of the county.

Keep Sedona Beautiful Comments and Questions on the V1 Draft of the Water Element

Goal W5: Water Education and Outreach

Policy Item W5.1: Increase public awareness about the importance, methods, and benefits of water conservation

Action Item W5.1: Support informing the public about the importance and benefits of water conservation

Action Item W5.2: Educate the public about water resource management and associated scientific studies

Action Item W5.3: Promote low impact water resource management and associated scientific studies.

Goal W6: Maximize efficient use of water in all settings, considering maintaining base flow for the Verde River, its perennial tributaries and other perennial waters and water-dependent ecosystems throughout the County.

Policy Item W6.1: Support rainwater fed landscapes in residential and commercial settings.

Policy Item W6.2: Support water conservation by investing in reclaimed water infrastructure.

Policy Item W6.3: Encourage gray water use in residential and commercial settings.³

Action Item W6.1: Provide information and assistance to residential and commercial residents who would like to develop rainwater-fed landscapes.

Action Item W6.2: Coordinate with Friends of the Verde River on their “River Friendly Living” program.

Action Item W6.3: Supply reclaimed water to public park areas and byways under County jurisdiction to grow trees for shade and promote community health and well-being.

Action Item W5.4: Provide information and assistance to residential and commercial residents who would like to utilize gray water for landscape irrigation.

³ Please see the section below on Protecting our Natural Environment for more information about gray water.