

#### **ACKNOWLEDGEMENTS**

The Yavapai County Comprehensive Plan represents the vision to preserve the County's character that makes it a unique place to live- now and for future generations. The Staff thanks the efforts of its citizens, federal, state, and local agencies for their participation and recommendations throughout the Comprehensive Plan Update.

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# I. INTRODUCTION AND BACKGROUND

#### Yavapai County Vision

The guiding vision for the Yavapai County Comprehensive Plan is to provide a flexible and adaptable approach to managing growth while respecting the values of our past, to achieve our common goals, and to plan for a future that enhances our high quality of life while protecting a permanently sustainable natural environment.

Our vision is to protect the unique quality of life characteristics within each of Yavapai County's diverse communities, to preserve our Western rural and ranching traditions, and to responsibly manage the process of urbanizing communities, when desired, through sensible planned growth and the sustainable use of finite resources. This vision is a reflection of the shared desire to protect and enhance rural character; small town friendliness; abundant natural open spaces, public lands, and scenic vistas; and to ensure the compatibility between rural and urbanizing areas. To best serve a diverse population, our vision is to be flexible and adaptable to the wide variety of needs within the County's distinct regions.

The County's vast recreational and outdoor opportunities, abundant natural beauty, scenic vistas, clean air, forests, grasslands, healthy rivers and bio-diverse riparian areas will be protected and preserved through the implementation of the Yavapai County Comprehensive Plan's goals and objectives. We recognize the importance of safeguarding the County's resources for future generations, including our treasured rivers, streams and other resources, so our Plan supports conservation and re-use whenever possible, and incorporate smart design standards. Our Plan supports public policies that effectively protect the viability of working ranches, open space and our rural character.

The responsibly planned and managed growth of Yavapai County will provide compatibility between rural areas and more compact, clustered development, to better preserve highly valued open space, conserve water and other limited natural resources and to avoid unsustainable sprawl. Efficiency in travel will be achieved by planning for better, safer connections for multi-modal transportation options and to help prevent sprawl. Our Plan uses transportation as an essential tool in forming future land use decisions in the County.

Our plan recognizes the important role Yavapai County has in participating in open communication and collaborative planning partnerships with incorporated cities and towns, unincorporated communities, various regions within the County and public land management agencies. By working cooperatively together, we maximize the efficient use of available and planned infrastructure, tax revenues, resource management and public services. Our vision is for a County that understands we all benefit by working well together.

The Yavapai County Comprehensive Plan is a guide that addresses the opportunities and challenges of future development in the unincorporated areas of Yavapai County in order to promote sustainable, balanced and high quality growth. The plan includes the following eight elements: Transportation, Land Use, Growth Areas, Water, Energy, Open Space, Environment and Cost of Development. The specifics of each element are explained in detail within the body of this text. Yavapai County will achieve sustainable, high quality future growth by incorporating a flexible and adaptable balance between the respective elements of this Plan, while protecting the unique quality of life inherent in each of the County's distinct communities.

#### Comprehensive Plan Description and Purpose

Arizona Revised Statutes (ARS) state that a "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."

The Statutes mandate that the Board of Supervisors adopt a Comprehensive Plan and that the Plan include all of the related elements. The Statutes also require that the Plan be updated on a decennial basis.

The Comprehensive Plan does not amend or delete existing codes. Rather it acts as a tool to guide decisions of the Board of Supervisors, Planning and Zoning Commission and the staff in relation to current and future development issues.

### **Recent Planning Legislation**

In 1998 and 2000, the Arizona State Legislature added the "Growing Smarter" and "Growing Smarter Plus" Acts, with amendments in 2002, to city and county planning statutes. The Growing Smarter Acts created additional mandates in the preparation of the General Plan for counties with populations over 125,000. These include a broadbased Public Participation Plan, coordination with the Arizona State Land Department, a planning 60-dav period elements land agency review and of use. circulation/transportation, and water resources. Other elements are required for counties over 200,000 in population.

The Growing Smarter Acts also specify that "the policies and strategies to be developed under these elements shall be designed to have regional applicability." Other significant statutory additions state that the plan "is effective for up to ten years" and that a new plan or re-adoption of the existing plan must happen at that time; and that "zoning and rezoning ordinances, regulations and specific area plans" must be "consistent with and conform to the adopted county plan."

As stated, the Comprehensive Plan is required to be updated and re-adopted every ten years. It is noted that the current General Plan was adopted in 2003. However, due to state and local budget constraints experienced during fiscal years 2008 through 2012, the legislature did adopt provisions to extend the update and re-adoption of Comprehensive Plans until the year 2015. Additional legislative context changed the official name of the document from a General Plan to a Comprehensive Plan. In referencing historic documents, legislative references and citizen initiatives, readers should be aware that the two references to the Plan may be used interchangeably.

### Yavapai County Context and History

Yavapai County is located in north-central Arizona; it covers an area of land over 8,000 square miles, its boundaries stretching south to north reach from just north of the Phoenix Metro Area to approximately 60 miles south of the Grand Canyon. With Maricopa County adjacent to its southern border, Coconino County to its northern and northeastern boundaries, Mohave and La Paz Counties to the west, and Gila County to the southeast, Yavapai County encompasses a vast area of the state as well as a diverse physical and cultural landscape. Yavapai County has extremely varying topographies with low Sonoran Deserts at 1,700 ft. above sea level to mountain ranges with peaks at almost 8,000 ft. above sea level.

Yavapai County is one of Arizona's four original territorial counties, and Prescott, Yavapai County's County Seat, was the first territorial capitol in Arizona. However, Yavapai County's history extends long before territorial times. The area is believed to have been populated by indigenous peoples as early as 700 A.D. The Sinagua people from the north and east migrated to the Verde Valley about 400 years later and much of the evidence of this ancient civilization can be found in the Tuzigoot ruins, Montezuma Castle and Montezuma Well. By the late 1500's the Yavapai People were contacted by early Spanish explorers. The County was named for the Yavapai Indians.

Yavapai County was established by the Arizona Territorial Government in 1864, with 85,000 square miles, it stretched from New Mexico to Mohave County and from the Gila River to Utah. The territorial capitol was established in Prescott from 1864 to 1867 and again from 1877 to 1899. With the construction of Forts Whipple and Verde in the 1860's, miners migrated into the mountains of southern and western Yavapai County. In the 1870's, large copper deposits were discovered at Jerome and smelters were constructed, resulting in the early development of the Jerome-Verde Valley area.

With the end of the Indian wars in the 1880's, as well as the construction of a railroad across Northern Arizona, Yavapai County's population began to grow. The existence of grasslands attracted farming and ranching to the Verde Valley, Chino Valley and Peeples Valley. During this period and beyond the turn-of-the-century, successful mining, farming and ranching in the Jerome-Verde Valley area and the southwestern mountain regions meant expansion for the County's cultural amenities, housing and population.

By 1910, the County had a population of approximately 16,000 people. It rose rapidly to over 24,000 by 1920 and remained somewhat constant for the next 40 years. The 1970 U.S. Census showed a population of nearly 37,000, which reflected the beginning of new, rapid migrations to the County that continued through the end of the 20<sup>th</sup> Century. During the 2000 U.S. Census, the population was counted at 165,000. The most recent Census in 2010 showed us that Yavapai County experienced another period of growth with a population of 211,033.

The first half of the 2000-2010 decade saw a significant increase in both population and development, both regulated and non-regulated. Both increases were primarily due to a housing anomaly whereby easy mortgage terms served to fuel sales and development, resulting in increased housing prices. As the trend reversed in 2006, growth and sales levels flattened, and a significant amount of housing inventory and raw land flooded the

market. It is anticipated as these inventories are absorbed that growth will return to the more sustainable pre-2000 levels.

### 1975 Yavapai County General Development Plan and 35 Years of Change

Long before the Growing Smarter legislation, Arizona adopted other planning statutes requiring long range, comprehensive plans for cities, towns and counties. In compliance, Yavapai County had the "Yavapai County General Development Plan" prepared in 1975, and adopted it in 1979. The Plan contained land use, housing, circulation and public facilities elements, and basic community plans for Ash Fork, Bagdad, Black Canyon City, Camp Verde, Dewey, Humboldt, Mayer, Seligman, West Sedona and Yarnell. At the time of the Plan's preparation, Yavapai County was predominately a rural, ranching and agricultural county of approximately 43,000 residents.

In the early 1970's there were five incorporated municipalities and ten communities/places of over 400 persons. Only Prescott, Bagdad, Camp Verde, Cottonwood and West Sedona contained more than 1,000 people each in the 1970 U.S. Census. By comparison, the 2010 U.S. Census established Yavapai County's population at over 211,000, with 20 communities having populations over 1,000 persons each.

The enormous growth in Yavapai County was unforeseen in the 1975 Plan, which projected a County population for the year 2000 of only 82,000 persons, when in fact 2000 census data reflected a population of over 168,000. During the early 1970's, urban areas were expanding rapidly and growth was expected to continue in the metropolitan areas. Unprecedented changes in lifestyles, however, began to occur with large movements away from urban cores, unexpected numbers of retirees desiring more rural, small town atmospheres and technological advances enhancing mobility. During the first decade of the 21<sup>st</sup> Century, Yavapai County experienced unprecedented growth in both rural and urban areas driven by strong economic conditions as well as enhanced abilities to telecommute.

With the growth over the past 35 years, the size and number of cities and towns in Yavapai County increased with the incorporations of Prescott Valley, Camp Verde, Chino Valley, Dewey-Humboldt and annexation of West Sedona into Sedona. Additionally, the City of Peoria and the Town of Wickenburg in Maricopa County have annexed property inside the County boundaries. State and County highways have been created or improved. Significant amounts of commercial development border the highways, and large scale retail outlets have been developed near the increasingly expanding urbanized areas. Unregulated splitting of large residential parcels has been rampant in the unincorporated areas, creating concerns about the impact on wildlife habitats and corridors, transportation, drainage and on groundwater quality and supply.

As a result of a nationwide downturn in real estate and housing in the latter half of the 2000s, the rapid rate of growth declined significantly. Yavapai County experienced a significant reduction in new home starts as well as an increase in vacancies of both residential and commercial buildings. In spite of this trend, the overall population of Yavapai County still exceeded the Census 2000 predictions for the year 2010 by over 13,000 people.

# CHANGES IN YAVAPAI COUNTY, 1970 – 2010

			#	#	#
			Communities/places	Communities/places	Communities
		#	Over 1,000	Over 5,000	23,000 –
	County	Incorporated	Population	Population	34,000
Year	Population	Municipalities			Population
1970	36,837	5	5	1	0
2000	167,517	9	20	9	2
2010	211,000	11	21	9	3

# The Yavapai County Comprehensive Plan Update Process

In January of 2010 the Yavapai County Board of Supervisors and Development Services Department staff began discussions about what steps might be taken in order to update the existing 2003 General Plan. In considering volumes of resources available, it was determined that 2011 would be the optimum opportunity to produce the updated Plan with an anticipated adoption in the fall of 2012.

In September of 2011 staff presented the proposed process to the Board. The Board approved the process by which the new Plan would be adopted:

- Phase 1: Public Participation (February through July 2011)
- Phase 2: Technical Review (August 2011 through February 2012)
- Phase 3: Public Comment, review and adoption (March through September 2012)

### Public Participation

In reviewing the process of the Plan adoption, a significant amount of consideration was given to the importance of ensuring that all citizens of Yavapai County had an opportunity to offer input on the content of the Plan. With a strong appreciation for the importance of citizen involvement, the following course was taken.

The process commenced in February of 2011 by addressing the City and Town Councils within the County's boundaries to advise them of the process of the update, the body of the Plan and how they could participate. In tandem, fifteen meetings were attended by staff within unincorporated communities in the County reviewing the process with a strong emphasis on participation. Attendees in both series of meetings were strongly encouraged to attend future meetings and to participate to any extent they felt warranted. Participants were also invited to volunteer on Citizen Advisory Committees, the technical body that would review comments and assist in drafting the text of the Plan.

Upon completion of the initial informational meetings, four general workshops were held. The workshops were intentionally scheduled to take into consideration both geographic locations of citizens as well as potential for participation when considering interested participant's work schedules and other obligations. In accounting for these factors, Citizen Workshops were held at the following dates and locations:

### Eastern Yavapai County

Wednesday, June 15th, 2011 Camp Verde High School 6:00 PM to 9:00 PM Saturday, July 23rd, 2011 Sedona High School 10:00 AM to 1:00 PM

#### Western Yavapai County

Saturday, June 25th, 2011 Chino Valley High School 10:00 AM to 1:00PM Wednesday, July 13th, 2011 Bradshaw Mountain High School 6:00 PM to 9:00 PM

### Technical Review

Phase 2 of the process included the formation of Citizen Advisory Committees. The primary role of the Committees was to review the comments and concerns of the public, refine the data into contextual form and craft same into the resultant Plan. The four committees consisted of eight volunteers and one staff member. Each committee was responsible for addressing two of the eight elements included in the Plan.

In considering the results of the public's input the Committees were charged to determine the applicability of the comments as they pertained to the specific element, to determine possible strategies and goals to implement addressing the issues brought forth by the comments and to act as liaisons with the community as it pertained to the progress of the update process.

The Committees also met as a whole to review the body of their collective works to ensure that undue overlap and repetition was avoided to the extent possible. The Committees met from August through December 2011, presenting the final draft to the Committees for comment in February of 2012.

Upon completion of the draft Plan, it was distributed to the public, all cities and towns in Yavapai County, adjacent counties and all applicable regulatory agencies as well as public land holders. A sixty day window for review and comment was offered that ended on March 15, 2012. Two public meetings were held in the Prescott and in Cottonwood to allow the public to discuss any comments with Staff. Upon receipt of all comments, Staff reviewed the comments and made any technical changes that were felt warranted.

Upon completion of the review period the Plan was referred to the Planning and Zoning Commission for review and recommendation. After holding meetings in both the Verde Valley and Prescott the Commission gave a recommendation of approval to the Board of Supervisors.

The Yavapai County Board of Supervisors approved the updated Comprehensive Plan on September 17, 2012. Staff will report to the Commission and Board of Supervisors on a biannual basis to update them on the implementation status of this plan.

### II. LAND USE ELEMENT

#### Introduction

The Land Use Element, as directed by ARS §11-804.b (Comprehensive Plan) states: "In addition to the other matters that are required or authorized under this section and this article, for counties with a population of more than one hundred twenty-five thousand persons, the Comprehensive Plan shall include, and for other counties the Comprehensive Plan may include:

- 1. Planning for land use that designates the proposed general distribution and location and extent of uses of the land for housing, business, industry, agriculture, recreation, education, public buildings and grounds, open space and other categories of public and private uses of land appropriate to the county.
  - a. A statement of the standards of population density and building intensity recommended for the various land use categories covered by the Plan.
  - b. Specific programs and policies that the County may use to promote compact form development activity and locations where those development patterns should be encouraged.
  - c. Consideration of air quality and access to incident solar energy for all general categories of land use.
  - d. Policies that address maintaining a broad variety of land uses including the range of uses existing in the County at the time the Plan is adopted, readopted or amended.
  - e. Currently identified sources of aggregates from maps that are available from state agencies, policies to preserve currently identified aggregates sufficient for future development and policies to avoid incompatible land uses, except that this subdivision shall not be construed to affect any permitted underground storage facility or limit any person's right to obtain a permit for an underground storage facility pursuant to title 45, chapter 3.1.

This Element addresses existing and future land uses, characterizes the relationship between all elements of the Comprehensive Plan and explores opportunities for creating conservation areas by creating Growth Categories and Land Use Plan Designations. Its purpose is to describe our various uses of land, identify current sources of aggregates sufficient for future development, show the locations and distribution of some concentrated land uses, and examine the land uses of both public and privately owned lands and how the majority of land uses in Yavapai County have evolved through time depending on many factors, such as growth, transportation or our natural resources. This Land Use Element is not intended to restrict future growth but to manage it in a way that minimizes environmental impacts while offering residents a range of choices.

Land Use patterns in Yavapai County have been shaped not only by Zoning and Subdivision regulations, but also by physical factors such as topography, water availability, transportation corridors (both present and proposed) and location of the floodplain. Costs of development, circulation systems, land ownership, railroad lines, tourist attractions, wildlife habitat, incorporated areas and Native American reservations have also contributed to land use patterns. Future development will depend on factors

such as transportation planning, population trends and employment growth, as well as availability and assurance of natural resources.

### Definitions

Benefit Area: A "benefit area" is a geographic area in which public facilities are of direct benefit to development within the area.

Dedications: A dedication occurs when a property owner conveys land to a county at no cost. Rights-of-way for local streets are typically provided in this manner. Retention basins in residential subdivisions that are jointly used for recreation areas are also typically dedicated. This is done in situations where there is a reasonable relationship or nexus between the public service needs generated as a result of the new development and the municipality's need for land or right-of-way in order to provide that service. This methodology allows for the participation of the new development in the provision of infrastructure for localized needs.

Development Agreements: An agreement between the Board and developer through which the Board agrees to vest development use or intensity or refrain from interfering with subsequent phases of development through new legislation in exchange for the provision of public facilities or amenities by the developer in excess of those required under current regulations. Development agreements are authorized by and must conform to A.R.S. 11-1101 & 1102.

Intergovernmental agreements: ARS 11-1103 states: A county may enter into an intergovernmental agreement to accept or disburse development fees for construction of a public facility pursuant to a benefit area plan, including an agreement with a city or special taxing district for the joint establishment of a needs assessment, the adoption of a benefit area plan and the imposition, collection and disbursement of development fees to implement a joint plan for development.

Property tax: Property tax can be defined as a "tax imposed by municipalities upon owners of real property within their jurisdiction based on the value of such property." This is a very common way to pay for development on real estate. When development occurs, the tax is based upon the value of the land and the development upon it.

Special/Improvement Districts: A defined area within which businesses or property owners pay an additional tax or fee in order to fund improvements within the district's boundaries. Often, these districts provide services, such as cleaning streets, providing security, making capital improvements, construction of pedestrian and streetscape enhancements and marketing the area.

### Historic Land Use and Growth - Past

<u>Background</u> - Yavapai County offers many local attractions ranging from physical and natural to cultural and educational. One of the most spectacular places on earth, Yavapai County is home to four national monuments (Agua Fria, Montezuma Castle, Montezuma Well and Tuzigoot), four national forests (Coconino, Kaibab, Tonto and Prescott), the Verde River and Oak Creek Canyon, among other unique natural features. Each year, it attracts millions of visitors and hundreds of new residents who are drawn to its welcoming communities and vast spaces. Institutions of higher learning include two colleges and an aeronautical university. The County is named after the Yavapai people, who were the principal inhabitants at the time that this area was appropriated by the United States.

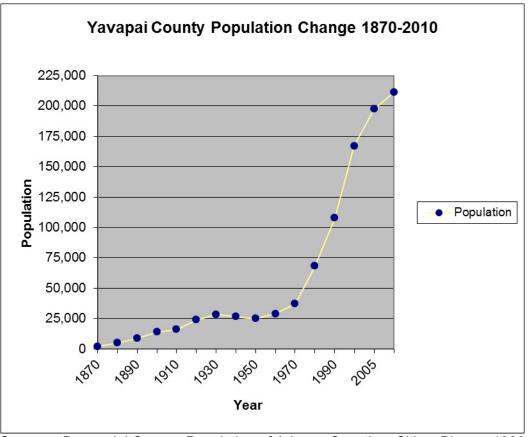
Historically land uses in Yavapai County were largely ranching, agriculture and mining. During the past forty years of rapid population growth, much of the ranching and agricultural uses have developed into urban Growth Areas and expansions of municipalities. Residential developments have also occurred in many unincorporated portions of the County near established incorporated towns and urbanizing areas where major infrastructure, such as County highways, contribute to development.

<u>Transitions from Ranching</u> - In the Prescott/Prescott Valley Area from the late 1960's through the late 1970's, many sections of the Fain family ranch holdings in the "Lonesome Valley" area developed into the Prescott Country Club Subdivision and almost all of the present-day Town of Prescott Valley. Similar planned development of former ranch and farm properties occurred in the late 1960's-70's in the Verde Valley (e.g., the Verde Villages and the Village of Oak Creek area), and in the Highway 69 Corridor areas (e.g., Spring Valley and Cordes Lakes). In the 1980's-90's, planned area developments, such as Yavapai Hills, Haisley/Hidden Valley Ranches, the Ranch at Prescott and Sandretto Hills, were developed and annexed into the City of Prescott.

More recent transitions from ranch land to master planned communities, from 1990 through to 2010, include those in Chino Valley/Paulden (e.g., Del Rio Springs and Bright Star/Meadow Ridge Ranch) and in the Williamson Valley Road Area (e.g., Inscription Canyon, Whispering Canyon, American Ranch and Talking Rock Ranch). Other large ranches are currently being developed in several parts of the County.

Transitions from agriculture and mining uses also resulted in many non-regulated land developments throughout Yavapai County.

<u>Historic Population Growth</u> - Since its founding in 1864, Yavapai County has experienced population growth that has been almost as variable as its terrain. The graph that follows depicts this historic growth over the past approximately one-hundred forty years.



Source: Decennial Census Population of Arizona Counties, Cities, Places: 1860 – 2010,

### **Current Zoning and Existing Land Uses - Present**

Residents express widespread satisfaction with Yavapai County as a place to live; however, they also want to manage growth and development to ensure that the qualities they value are not destroyed in the process of accommodating change. The Comprehensive Plan serves as a roadmap for the future by establishing goals and policies to direct growth responsibly, solve problems, and improve the quality of life for County residents. The Land Use Element's main objectives currently are to:

- Preserve and promote stable, safe, attractive, rural communities where residents share a sense of pride.
- Avoid incompatible land uses.
- Coordinate strategies for economic development, transportation and affordable housing so that we can better link the places where people work and live.
- Protect our unique natural resources, ecosystems and habitats.

In the 21<sup>st</sup> Century, Yavapai County is no longer a completely "rural" county. Ranching and rural lifestyles still occur in the more remote portions of the County, but the dynamic growth over the past forty years has resulted in significant urbanization. New municipalities and unincorporated communities have been created, while the expansion of many existing cities, towns and suburban areas has intensified. The predominant land uses of private properties in the unincorporated areas of the County are residential and ranching.

<u>Residential Zoning and Land Development</u> - Approximately 96% of the unincorporated land in Yavapai County is zoned for residential land use with a requirement of 2 acres minimum lot size. This 2-acre minimum zoning contains over one million acres of private properties, equivalent to over 500,000 two acre parcels and 3.7 million acres of government-owned lands.

ARS §32-2101 requires that the creation of six or more contiguous parcels less than 36 acres in size be subject to subdivision approval. A subdivision approval addresses issues such a water adequacy, infrastructure, road standards and water and sewer service.

Parcel creation not subject to the law may legally occur in two ways. Land split into parcels of not less than 36 acres in size may be split with no limitation on the total parcels created. Parcels less than 36 acres in size may be split into no more than five parcels as long as all of the parcels are of an area required by the property's existing zoning density requirements. This method does not require subdivision regulatory review through the County.

Larger, private properties are often split many times utilizing the methods noted above, resulting in numerous 2-acre parcels. Given this scenario, a section of land could ultimately be legally split from 640 acres down to 320 individual parcels, all with minimal regulatory review, as state law does not require any infrastructure construction or dedications for parcel splits. Additionally ARS §45-454 permits the installation of private domestic wells, sometimes known as "exempt wells." An exempt well is one with less than 35 gallons per minute capacity. As a point of reference, small wells with 3 to 10 gallons per minute capacity support a typical family with a small garden or lawn.

As a result of the State laws which permit exempt wells and unregulated parcel splits, a large percentage of land development in Yavapai County is relatively unplanned, with no consideration given to road standards, water adequacy, infrastructure, open space or other development standards. These allowances serve as a significant impediment to sound planning policies, resulting in issues such as inadequate access and road maintenance, lack of utilities, drainage issues and financing impediments. It is not uncommon for end users of the non-regulated development to look to the County to solve the problems created by un-managed activity.

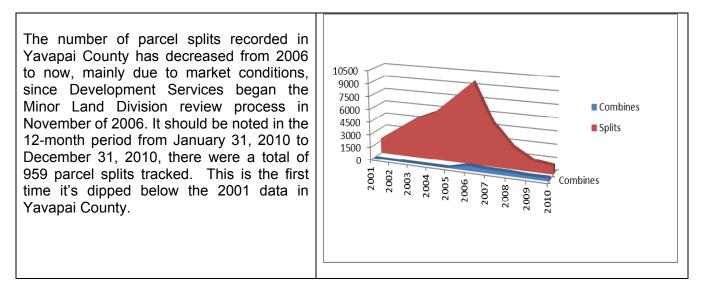
Due to the concern of development occurring without legal access and zoning conformance, Yavapai County Development Services has implemented a review process of these Minor Land Division requests to assess the usability of a split parcel regarding access and zoning conformance as provided by ARS §11-831. This process also serves as a disclosure document to a potential purchaser of raw land in Yavapai County's jurisdiction.

ARS §33-422 further requires that sellers of non-subdivided lands in unincorporated areas provide an Affidavit of Disclosure that addresses the deficiencies that may exist when purchasing unregulated parcels. The document is designed to disclose the conditions of the property as well as potential issues that may arise when choosing to purchase outside of a subdivision.

Although the two statutes do offer some mitigation to the issues of non-regulated development, they do not completely resolve the problem. Until such time that there is a balance of clear statutory limitations and equaled enforcement, the issues will continue.

Data from the past several years reflects the potential speculative nature of the housing market. The line graph clearly depicts the rise and decline in parcel splits Yavapai County, including incorporated areas, experienced during this timeframe. The data from 2002 to 2005 is an average calculation, based on the total number of parcel splits recorded in 2001 and when the Development Services Addressing Unit started tracking parcel splits in 2006.

Data from 2006 to 2010 are actual counts tracked by the Addressing Unit. The chart shows how fast unmanaged growth can occur given the right market conditions. If State laws continue to permit exempt wells and parcel splits to occur, Yavapai County and the State of Arizona may continue to see this trend of comparably unregulated growth.

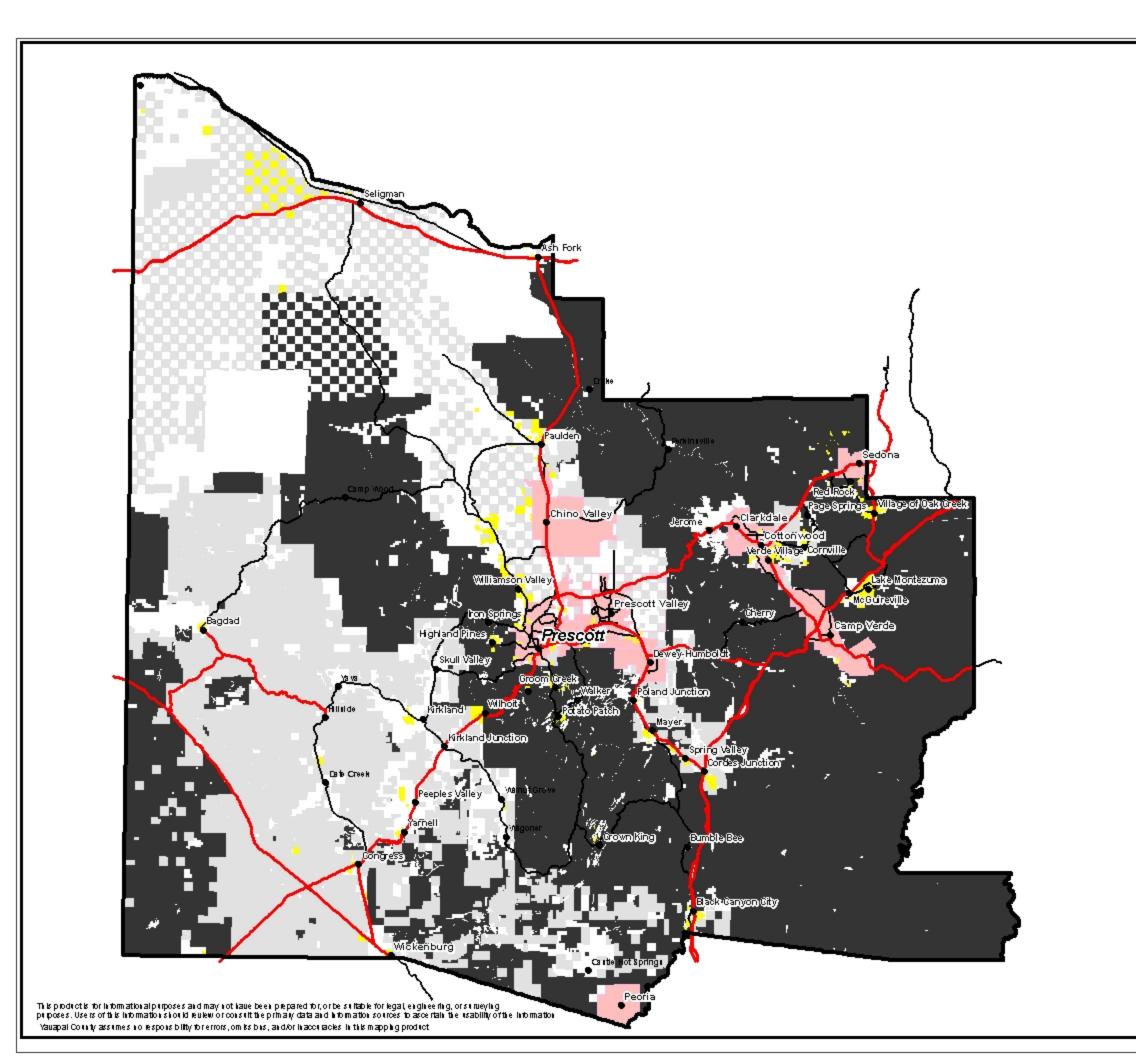


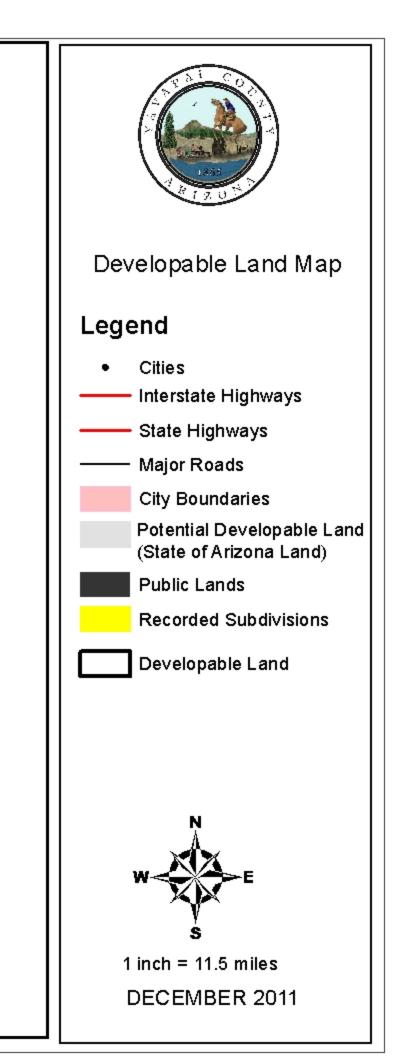
The following map demonstrates the volume of land in Yavapai County that could be subject to non-regulated development.

### Map: Yavapai County Developable Land

<u>Planned Development and Other Land Use</u> - For the most part, master planned developments throughout the County provide orderly development, generally with complete infrastructure, such as water and wastewater systems, utilities, and well-constructed roads and circulation networks. The overwhelming majority of developed properties in the unincorporated areas of Yavapai County, however, have not had the benefit of planning or infrastructure due to parcel splitting, rather than subdivision or planned area development.

County Subdivision Regulations and Planned Area Development (PAD) Zoning Ordinances require dedication and installation of complete infrastructure, coordinated roadway networks and major circulation alignments. Other amenities, such as a minimum of 25% open space, are required for PAD's. Most open space, trails and





recreational uses on private land have been provided through PAD's. Additionally, many schools, public safety and other civic-use sites may be reserved through that process.

In September of 2009, the Board of Supervisors adopted the Open Space and Sustainable Development Option. The purpose of the Open Space and Sustainable Development Option is to provide an alternative, voluntary method of land division that encourages sustainable development and the preservation of open space through flexible lot sizes and locations of single-family residential dwellings. The Open Space and Sustainable Development Option also contain density reductions for hillside areas, cut and fill limitations and floodplain preservation and density incentives for sustainable building practices.

While large PAD's may include some mixture of different land uses, very few have provided amenities other than major recreational and resort type development to augment the primary residential uses.

Other land uses including retail, service, general business and industrial exist mostly near or within cities and towns. Historic downtown business centers remain viable in older cities and towns such as Prescott, Clarkdale, Cottonwood and Jerome.

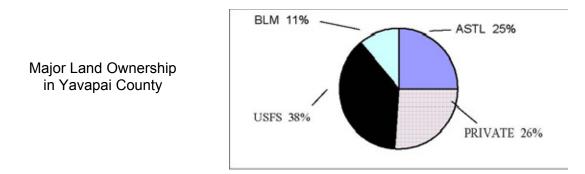
General and tourist commercial and industrial employment type land uses are usually located, or proposed for, major intersections along State Routes 69, 89, 89A, 179 and 260, and at interchanges of Interstate 17 and Interstate 40. Some strip developments of commercial uses have also occurred along the State highways.

Mining as a major land use in Yavapai County has declined, however, mining operations continue in the areas of Drake (Drake Cement Plant), Clarkdale (SRMG/Phoenix Cement Plant) and Bagdad (Freeport McMoran), with smaller mining entities in various parts of the County.

The vast majority of Yavapai County stands as a viable source of aggregate adequate to provide for future infrastructure and development needs. Mining, of which retrieval of aggregate is included, is exempt from planning and zoning codes per ARS §11-812.A.2. Therefore, when considering approval of development, consideration may be warranted as to the potential for unregulated land use conflicts.

Ranching and agricultural uses are still predominant in the western and southern regions of the County and along the Verde River, creeks and major watercourses even though those areas are zoned as rural residential.

<u>Major Land Ownerships and Jurisdictions/Federal, State, Private</u> - The majority of Yavapai County's 8,123 square miles is owned and managed by Federal and State agencies. The United States Forest Service (USFS) maintains 38%, the Bureau of Land Management (BLM) controls 10.5% and Arizona State Trust Lands (ASTL) manages 25% of the County's land area. The remaining 26% of Yavapai County is privately owned property.



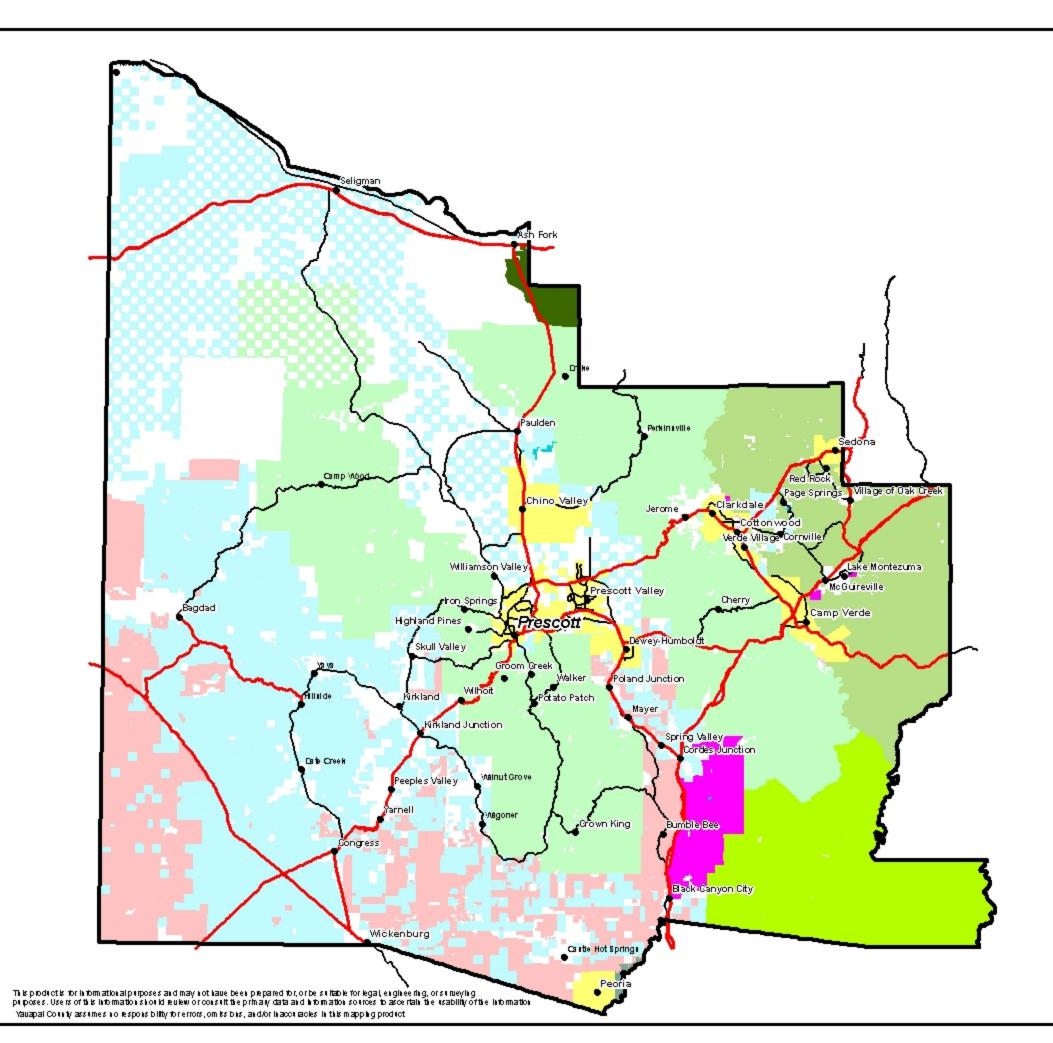
The above chart depicts the existing pattern of public and privately owned lands in Yavapai County. As can be seen, vast areas are owned by the USFS, the BLM and the ASTL. Within the Forest Service boundaries are four separately operated forests: Prescott National Forest running throughout central Yavapai County; Coconino National Forest in eastern Yavapai County; Tonto National Forest in southeastern Yavapai County; and a small portion of Kaibab National Forest in the north-central corner of Yavapai County. Most of the land in eastern Yavapai County is held in USFS ownership.

BLM properties, including four national monuments (Agua Fria, Montezuma Castle, Montezuma Well and Tuzigoot), are found primarily in the southwestern and southcentral parts of the County in scattered sections or clusters of sections. The ASTL properties, together with lands owned by the BLM, the USFS, and the U.S. Bureau of Reclamation in the southern tip of the County, occupy almost all the southern half of Yavapai County. Checkerboard sections of State Lands also occupy much of the northwest quadrant and north-central County areas, alternating with privately owned sections.

Typical uses found on public lands include: environmental preservation areas, parks, camping, pedestrian and bicycle trails, wilderness areas or other recreational uses. It should be noted that Federal lands often have non-recreational uses, such as grazing, logging or mining, consistent with the Federal Land Policy and Management Act. Federal lands which are not dedicated for public recreation, wilderness or as national monuments are occasionally subject to land-exchange processes.

<u>Other Jurisdictions</u> - In addition to the Federal and State agencies mentioned above, there are fourteen other jurisdictions in the County: eleven incorporated cities and towns and three Tribal Reservations. The Towns of Chino Valley, Prescott Valley and Dewey-Humboldt, the City of Prescott and the Yavapai-Prescott Indian Reservation are in the Central Yavapai Region. The Towns of Camp Verde, Clarkdale and Jerome; the Cities of Cottonwood and Sedona; and the Yavapai-Apache Indian Reservation are in the Verde Valley area. A portion of the City of Peoria is located in the southern-most tip of the County; a small portion of the Town of Wickenburg is located in the southwestern elbow of the County, while a portion of the Hualapai Indian Reservation is at its extreme northwest corner. The boundaries of these jurisdictions are also shown on the Public & Private Property Map.

Map: Public and Private Ownership





#### Growth Areas and Population – Then and Now

Arizona's Growing Smarter legislation requires that counties with populations exceeding 200,000 devote a section of their comprehensive plan to Growth Areas. Specifically, they must identify areas that are suitable for multi-modal transportation and infrastructure improvements applicable to concentrated uses. Growing Smarter requires policies for mixed-use planning to increase the efficiency of circulation systems, to make infrastructure expansion more economical, and to conserve natural resources and open areas. Responsible development is consistent with our resource base, enhances our communities, and protects the integrity of our environment.

<u>Population Trends</u> - While the population in Yavapai County increased by more than 400% during the past four decades, its rate of change decreased from approximately 84% from 1970-1980, 58% between 1980-1990, 56% between 1990-2000 to 26% between 2000-2010 and remains above the State average in increase. This declining rate of change is common as the base population enlarges. The 2010 Census data show that the majority of "Places" in Yavapai County have populations with median ages above the child-bearing years. The average persons per household is decreasing, reflecting this trend.

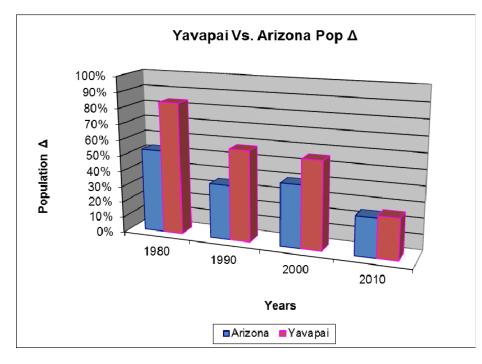
<u>Median Age and Households</u> - Yavapai County's median age, 47.7 years, is older than the United States' median age, 36.5 years, and older than Arizona's median age, 34.8 years. Consequently, it is not surprising that Yavapai County's average household size, 2.41, is smaller than Arizona's 2.76 persons per household and the U.S. average of 2.6.

If these trends continue, in only a few decades, there will be a much higher proportion of seniors living in small and rural communities. And, if even a portion of these older residents cannot or choose not to drive, communities will need to carefully rethink personal transportation options and the County will have to reconsider its Land Use policies to address the needs of these communities.

<u>Major Growth Areas and Population</u> - Yavapai County started its rapid growth rate approximately 100 years after its founding. The most prominent growth occurred in the 1970-80 decade and slowly tapered during the next two decades; the County's population more than doubled during that period. It is also important to note that Yavapai County's population growth from 1980 to 2000 is significantly higher than the State's population growth, but is very close to the growth rate from 2000-2010, as illustrated in the chart and accompanying graph below.

	Arizona	Yavapai County	Arizona	Yavapai County
Year	% Pop. Change	% Pop. Change	Population	Population
1980	53%	84%	2,716,546	68,145
1990	35%	58%	3,665,339	107,714
2000	40%	56%	5,130,632	167,517
2010	25%	26%	6,392,017	211,033

Source: Decennial Census Population of Arizona Counties, Cities, Places: 1860-1990; "Census 2000, 2010 Redistricting Data"; U.S. Census Bureau



<u>Municipal and Community Growth Areas</u> - The municipalities and communities in the Central Yavapai Region and the Verde Valley area have shown considerable population growth and development over the past decade. The population changes of these two major growth areas are shown in the following charts.

The Verde Valley area contains a population of over 60,000 persons according to the 2010 U.S. Census data. This area includes the five cities and towns of Camp Verde, Clarkdale, Cottonwood, Jerome and Sedona (2/3 of Sedona lies within Yavapai County and about 1/3 in Coconino County); the four unincorporated "Places" of Big Park, Cornville, Verde Village, and Lake Montezuma; and the Yavapai-Apache Nation Reservation.

Eastern Yavapai County Population Changes from 1990-2010				
	1990	2000	2010	Total Change
Yavapai County	107,714	167,574	211,033	96%
City of Cottonwood	5,918	9,179	11,197	89%
Verde Village/Bridgeport	7,223	10,610	13,483	87%
Town of Clarkdale	2,144	3,422	4,110	92%
Cornville Area	2,420	3,335	3,433	42%
Town of Camp Verde	6,243	9,451	10,873	74%
Lake Montezuma Area	1,841	3,344	4,775	159%
City of Sedona*	5,327	7,229	6,911	30%
Village of Oak Creek Area	3,024	5,245	6,335	109%
Town of Jerome	403	329	444	10%
Cherry Area	14	60	75	436%
Rural Yavapai County	2,059	2,738	1,828	-11%
Total Population Eastern Yavapai County	36,616	55,543	64,321	76%

Source: 1990 Census Summary File1A-Arizona; 2000 Census Redistricting Data (PL94-171) Summary File; 2010 Census Redistricting Data (Public Law 94-171) Summary File, Tables P1 and H1 (\* Population not separated out between Yavapai and Coconino County)

The Eastern Yavapai County area's 2010 Census equals approximately 35% of the County population at about 65,000 residents and includes the cities of Cottonwood and Sedona as well as the Towns of Clarkdale, Jerome, and Camp Verde, and many unincorporated communities.

Prescott Area Population Changes from 1990-2010					
	1990	2000	2010	Total Change	
Yavapai County	107,714	167,574	211,033	96%	
City of Prescott	26,455	33,938	39,847	51%	
Williamson Valley Area	1,344	2,907	4,940	268%	
Mountain Club Area	709	888	1,090	54%	
Groom Creek Area	312	650	599	92%	
Highland Pines Area	170	636	651	283%	
Ponderosa Park Area	163	300	355	118%	
Diamond Valley Area	635	1,318	2,254	255%	
Yavapai Prescott Tribe	-	182	192	5%	
Other Prescott Vicinity	6,270	5,042	4,868	-22%	
Total Prescott Area	36,058	45,861	54,796	52%	

The Prescott area includes the City of Prescott and many unincorporated communities as well as the Yavapai Prescott Tribe and constitutes approximately 25% of the County's population at about 55,000 residents.

Prescott Valley Area Population Changes from 1990-2010				
	1990	2000	2010	Total Change
Yavapai County	107,714	167,574	211,033	96%
Town of Prescott Valley	8,858	23,535	38,785	338%
Castle Canyon Mesa Area	2,112	2,718	2,909	38%
Prescott Country Club Area	1,822	2,394	2,693	48%
Coyote Springs Area	0	2,939	2,361	-20%
Other Prescott Valley Vicinity	644	0	55	-91%
Total Prescott Valley Area	13,436	31,586	46,803	248%

The Prescott Valley area includes the Town of Prescott Valley and many unincorporated areas adjacent to Prescott Valley, and is about 21% of the County's population with about 45,000 residents.

Chino Valley Area Population Changes from 1990-2010				
	1990	2000	2010	Total Change
Yavapai County	107,714	167,574	211,033	96%
Town of Chino Valley	4,837	7,835	10,805	123%
Paulden	1,079	3,420	4,322	301%
Other Chino Valley Vicinity	875	4,092	5,592	539%
Total Chino Valley Area	6,791	15,347	20,719	205%

The Chino Valley area includes the Town of Chino Valley, the community of Paulden and rural areas in the vicinity and is about 10% of the County's population with about 20,000 residents.

Dewey-Humboldt & Western Yavapai Cty. Pop Changes 1990-2010				
	1990	2000	2010	Total Change
Yavapai County	107,714	167,574	211,033	96%
Town of Dewey-Humboldt	2,004	3,556	3,894	94%
Mayer Area	1,039	1,408	1,386	33%
Poland Junction Area	124	211	238	92%
Spring Valley Area	206	1,019	1,122	445%
Black Canyon City Area	1,811	2,697	2,876	59%
Cordes Lakes Area	1,404	2,058	2,770	97%
Crown King Area	63	123	174	176%
Bagdad Area	2,102	1,578	2,016	-4%
Yarnell Area	617	645	654	6%
Hillside Area	88	129	96	9%
Congress Area	692	1,717	2,037	194%
Wilhoit Area	316	664	879	178%
Kirkland Area	181	246	204	13%
Skull Valley Area	112	283	433	287%
Ash Fork Area	447	457	962	115%
Seligman Area	500	458	798	60%
Peeples Valley Area	-	374	530	42%
Walker Area	-	67	212	216%
Potato Patch Area	-	60	17	-72%
Yava Area	-	35	32	-9%
Wagoner Area	-	29	32	10%
Kirkland Junction Area	-	29	19	-34%
Castle Hot Springs Area	-	21	44	110%
Drake Area	-	14	-	-100%
Bumble Bee Area	-	14	43	207%
Camp Wood Area	-	12	40	233%
Nelson Area	-	10	8	-20%
Date Creek Area	-	8	23	188%
Walnut Grove Area	-	6	40	567%
Rural Western Yavapai County	3,107	2,091	2,815	-9%
Total Area Population	14,813	20,019	24,394	65%

Dewey-Humboldt and Western Yavapai County includes the Town of Dewey-Humboldt and a great deal of unincorporated communities in the western portion of the County – this remainder makes up about 25,000 people and about 21% of the County's population.

Of the total Yavapai County population (211,033) at the time of the 2010 U.S. Census, about 71% (about 150,000) reside in incorporated cities, towns and directly adjacent communities. Another approximately 60,000 residents, or 29%, live in the unincorporated areas. A trend of larger concentration in incorporated areas has been observed in the past decade in Yavapai County – this could be due to incorporation of towns (such as Dewey-Humboldt), large annexations by cities and towns, or could be due to large population influxes in existing incorporated areas.

### Growth Trends - Future

<u>Growth Estimates</u> – Using current and past data from the U.S. Census as well as local communities, projections can be made about possible growth in Yavapai County. Below is a chart of the projected growth rates as well as current U.S. Census data and 2000 U.S. Census data for areas in Yavapai County – the possibilities for this growth are planned for in the following pages.

Throughout most of Arizona, especially Yavapai County, population growth has been continually rapid for many decades. Yavapai County experienced 26% change in population from 2000 to 2010, compared to a State-wide rate of 24%.

# Land Use Categories

The entire area of Yavapai County, with the exception of incorporated cities/towns, shall be divided into four (4) categories, based on each area's existing or foreseeable infrastructure, character and capacity for growth:

<u>Municipal Growth Area (MGA)</u> – This category includes those areas adjacent to or surrounded by incorporated cities/towns, and having the necessary facilities and services to support it. These areas are largely built-out or established but may have pockets of vacant land.

- 1. The area has established or planned residential and/or non-residential development and has the potential to be annexed by an abutting incorporated city/town or become incorporated.
- 2. The area could be adequately served by a community sewer system, water system and fire district.
- 3. Average residential lot sizes are less than one acre in size.
- 4. The area provides regional commercial and other non-residential services.
- 5. The area has the potential for or is currently served by adequate drainage, transportation and K-12 school systems, as well as organized recreational facilities that can serve high-density development.

<u>Transitional Growth Areas (TG)</u> – This category includes those areas adjacent to MGA's as well as the larger unincorporated communities of the County, which are experiencing growth. These are areas in transition from a traditional rural environment to something more urbanized. Transitional Growth Areas include the areas that have been determined to meet the following criteria:

- 1. The area to be designated has a moderate level of residential and/or non-residential growth.
- 2. The area serves as a logical transition between urban growth and rural areas and/or has a distinctive identity.
- 3. The area has, or could accommodate, adequate water, access, drainage and sewage disposal capability to accommodate medium to high density development.
- 4. In general, residential lot sizes are one acre or less in size but may transition to larger lot sizes at the fringes of the area. Smaller lot sizes have access to sewer and/or water and are commonly found in established subdivisions and manufactured/mobile home parks or historic town sites.

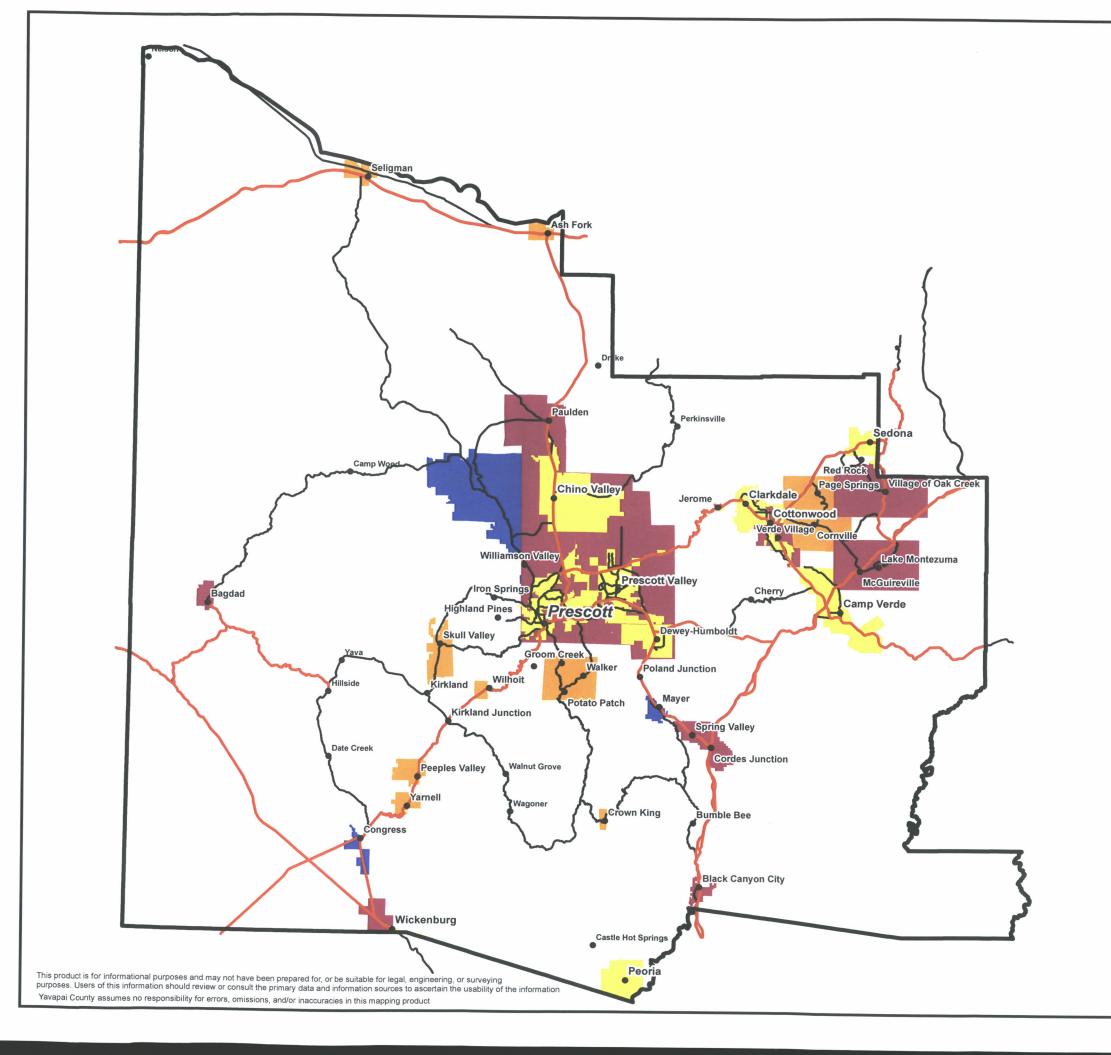
- 5. Improved streets designated as arterial or collectors can support limited non-residential development.
- 6. There is substantial potential for further development along with opportunities to preserve undeveloped recreational resources, i.e. open space and washes.

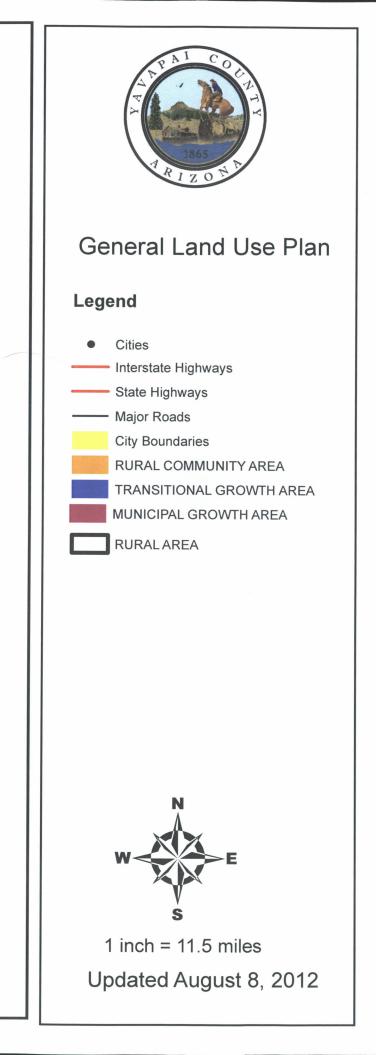
<u>Rural Community Areas (RC)</u> – This category includes less populated rural communities that are characterized by moderate growth and the desire to maintain the existing neighborhood or rural atmosphere. These areas are generally found as small clusters of residential and non-residential development adjacent to agricultural production areas and public lands. Non-residential enterprises generally serve or coincide with local agricultural, ranching or tourist activities. Rural Community Areas are often populated enough to warrant or provide a K-8 grade school. Their rural, low density and often scenic qualities have the potential to attract future residents at a growth rate that may warrant consideration of a Plan change to TG. Rural Community Areas include those areas that have been determined to meet the following criteria:

- 1. Residential and non-residential development is clustered in settlements on a variety of lot sizes as typified in established town sites and immediate environs.
- 2. Other than arterials and collectors, roads are generally unimproved. However, increases in residential and non-residential development will likely warrant improvements, such as paving, in the future.
- 3. Farming and ranching are prevalent activities adjacent to these areas.
- 4. Non-residential enterprises generally serve the rural/agricultural community as well as visitors passing through if located on a major arterial road.

<u>Rural Areas (RA)</u> – This category includes the outlying rural areas between cities and unincorporated communities and is characterized by a low rate of growth; unimproved roads; low density, agricultural production and large tracts of undeveloped private and public lands. Non-residential development is geared toward providing local services, tourism or intensive uses that are not appropriate in more of the densely populated parts of the County, such as power plants and feedlots. These sparsely populated rural lands also have the potential for future master-planned communities that will provide the infrastructure to support any proposed increases in residential density or non-residential activities.

Map: General Land Use Plan





#### Goals, Objectives and Recommendations

#### Goal 1: Maintain compatible land use formations.

- Objective a: Promote compact form developments, which reduce reliance on natural resources.
- Objective b: Support Planned Area Developments that balance housing and flexible land uses with multiple modes of transportation and open space to enhance sustainability and preserve air quality.
- Objective c: Encourage energy-saving and efficient design proposals to preserve open space, ecological regeneration, biodiversity and habitat connectivity.

#### Goal 2: Sustain the County's attractive image.

- Objective a: Mitigate fragmentation of landscapes to preserve the County's natural character.
- Objective b: Identify sites of scenic interest and recreational opportunities.
- Objective c: Discourage undesirable and incompatible land uses along scenic corridors.
- Objective d: Encourage site design of mixed uses that enhance and protect the aesthetic quality of the local region and scenic routes.

#### Goal 3: Maintain a variety of land uses and design standards.

- Objective a: Foster sustainability by supporting strategically placed commercial projects to attract major employment and shopping uses.
- Objective b: Support industrial development projects in areas that are, or could be, appropriately zoned and where an adequate level of infrastructure exists.
- Objective c: Discourage incompatible land uses.
- Objective d: Encourage mitigation of impacts that are undesirable but necessary land uses.
- Objective e: Consider planning and land use updates as they relate to the evolution of transportation corridors, intersections and future plans.

#### Goal 4: Maintain coordination with existing Local, State and Federal entities.

- Objective a: Review regional transportation plans for compatibility and development.
- Objective b: Support local jurisdictions and encourage intermediary communication with multiple agencies.
- Objective c: Continue to support coordination with local and regional transportation entities.
- Objective d: If a development proposal is within a Growth Area designation adjacent to an incorporated city or town, recommendations of the municipality shall be considered.

#### Goal 5: Maintain public participation criteria for land use decisions.

- Objective a: Consider the impact of new development on existing communities, cities or towns, and existing natural resources.
- Objective b: Support better public understanding as to the importance of necessary land uses that serve the greater community need.

Objective c: Respect and protect private property rights.

Objective d: Consider zoning amendments with the purpose of community improvement, and place priority on existing and future community vision statements and input from local area citizens regarding local projects.

#### Recommendations

- Locate compatible land uses along major transportation corridors designated in Regional Transportation Plans.
- Encourage and support integrated approaches ranging from legal subdivisions for low density projects to master planned communities where a mix of uses or housing types is proposed.
- Promote open space preservation with emphasis on land dedication, clustering, density transfer, buffers between communities, and non-development easements.
- Encourage communities to create Vision Statements that reflect how they see their communities developing and where appropriate land uses such as commercial, industrial and large scale renewable energy projects may be appropriately located.
- Promote policies that encourage regulated development over lot splitting to the extent the laws governing the County allow.
- Support legislation that discourages unplanned lot splitting while still protecting the rights of individual property owners.
- Consider potential conflicts with unregulated activity when reviewing development proposals.
- Continue to provide opportunities for public input.

### III. TRANSPORTATION ELEMENT

#### Introduction

Transportation systems are integral in planning the future development for any region.

<u>Legislative Context</u> -The following Section contains the legal requirements of transportation planning from the State and Federal level.

Arizona Statutes require all counties with populations over 125,000 persons to include within their Comprehensive Plan an element pertaining to circulation. The Statutes specify consideration of various transportation modes and the relationship to land use plans, as quoted below:

ARS §11-821.C.2 states, "Planning for circulation consisting of the general location and extent of existing and proposed freeways, arterial and collector streets, bicycle routes and any other modes of transportation as may be appropriate, all correlated with the land use plan."

The laws governing the Federal transportation planning process are found in Title 23 of the US Code of Federal Regulations Section 450. Both the Statutes and Regulations include references to the role of land use considerations and transportation related issues when transportation stakeholders, the public and elected officials make decisions regarding the maintenance, operations and expansion of transportation systems.

In 1973, the Federal Transportation Act required areas to establish a Metropolitan Planning Organization (MPO) based on population thresholds. An MPO is designated for urbanized areas, as defined by the Census Bureau, with a population exceeding 50,000 persons.

As a result of the 2000 Census, Prescott and Prescott Valley met the minimum population threshold of 50,000 for an urbanized area with an urbanized population of 61,909. On May 1, 2003 the affected local governments formed the Central Yavapai Metropolitan Planning Organization (CYMPO) to conduct transportation planning for western Yavapai County. Subpart C of Title 23 Section 450.300 defines the purpose and process by which an area that becomes "urbanized" is formed and how it conducts its transportation planning and programming. The CYMPO is governed by a local appointed board of elected officials from each of the participating governmental entities. The participating entities within the CYMPO planning boundary include Prescott, Prescott Valley, Chino Valley, Dewey-Humboldt and the associated unincorporated areas of Yavapai County.

The US Department of Transportation (DOT) and the Federal Highway Administration (FHWA) support transportation policies that focus on people and communities who use the transportation system. US DOT's <u>Livability Initiative</u> will "enhance the economic and social well-being of the public by creating and maintaining a safe, reliable, integrated and accessible transportation network that enhances choices for transportation users, and promotes positive effects on the surrounding communities." \*

Integrating land use and transportation planning has been a key topic at the local, State and Federal levels for some time. This is because coordinating land use and transportation planning and development embodies "smart growth" concepts. The 2003 Yavapai County General Plan included policies and recommendations related to alternative modes of transportation and coordinating land use planning with transportation improvements based on Smart Growth principles.

In addition to these initiatives, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which became federal law in August 2005, reconfirms the need to consider land use through the federally-supported transportation planning program. One of the eight planning factors states: "(E) protects and enhances the environment, promote energy conservation, improve the quality of life and promote consistency between transportation improvements and state and local planned growth and economic development."

# Purpose

The Transportation Element is intended to comply with Arizona Statutes by providing descriptions of existing major transportation corridors (Federal, State and County highways), existing status of bicycle routes and alternative transportation modes. This Element also provides information on regional and long range transportation planning endeavors. The purpose of this section is to look at a strategic approach to transportation planning that integrates transportation in a manner that fosters sustainable development to ensure economic growth, livable communities, enhanced mobility and a range of transportation opportunities.

# Background

Transportation has been instrumental to the growth and development of Yavapai County and is vital to its economic health and quality of life for its residents. A balance of safe, convenient, economical roadways and alternative transportation modes, where needed, is essential to the well-being of County residents and businesses. Transportation throughout the region has been developed through a network of local, collector and arterial roads connected to a central highway system traversing the County that make up the regional transportation network.

Yavapai County has been taking a proactive approach to transportation planning for some time. The passage of the Intermodal Surface Transportation Act in 1991, commonly referred to by its acronym, ISTEA, helped trigger interest in the connection between transportation and land use policy and planning and the realization that better coordination is needed. These polices were later refined in next highway bill reauthorization, TEA-21, enacted in 1998 and then again in SAFETEA-LU, enacted in 2005. Yavapai County has thoughtfully planned and coordinated regional transportation networks during the last decade to provide an integrated approach to future growth and development patterns. This multi-jurisdictional planning approach is evidenced by several transportation studies that have been done in partnership with Arizona Department of Transportation (ADOT) and other stakeholders both in the public and private sectors.

To better coordinate transportation and land use issues Yavapai County, ADOT, FHWA, CYMPO, the Prescott National Forest, Arizona Game and Fish Department and the ASLD meet regularly to discuss and coordinate future planning studies and projects through the Coordinating Transportation and Land Use Committee (CT-LU).

Transportation needs will always outweigh available resources. One of the key benefits to maximizing land use and transportation interconnectivity and providing options for moving people is to ensure a high level of access for everyone and an effective use of resources. Achieving this balance requires thoughtful, proactive planning. In short, taking a holistic approach to transportation and land use is the fiscally and environmentally sustainable thing to do.

Yavapai County regularly compares its transportation plans with the ongoing development in the County. The map that follows indicates which areas of the County have a high potential for development and, therefore, the associated transportation infrastructure to serve it.

### Map: Yavapai County Developable Land

#### Definitions

Functional Classification: Roads are classified according to their function and the type of service they provide. The functional classification system serves as both a guideline for planning as well as a means for determining funding. The general classifications from the highest level of service to the lowest are arterials, collectors and local roadways.

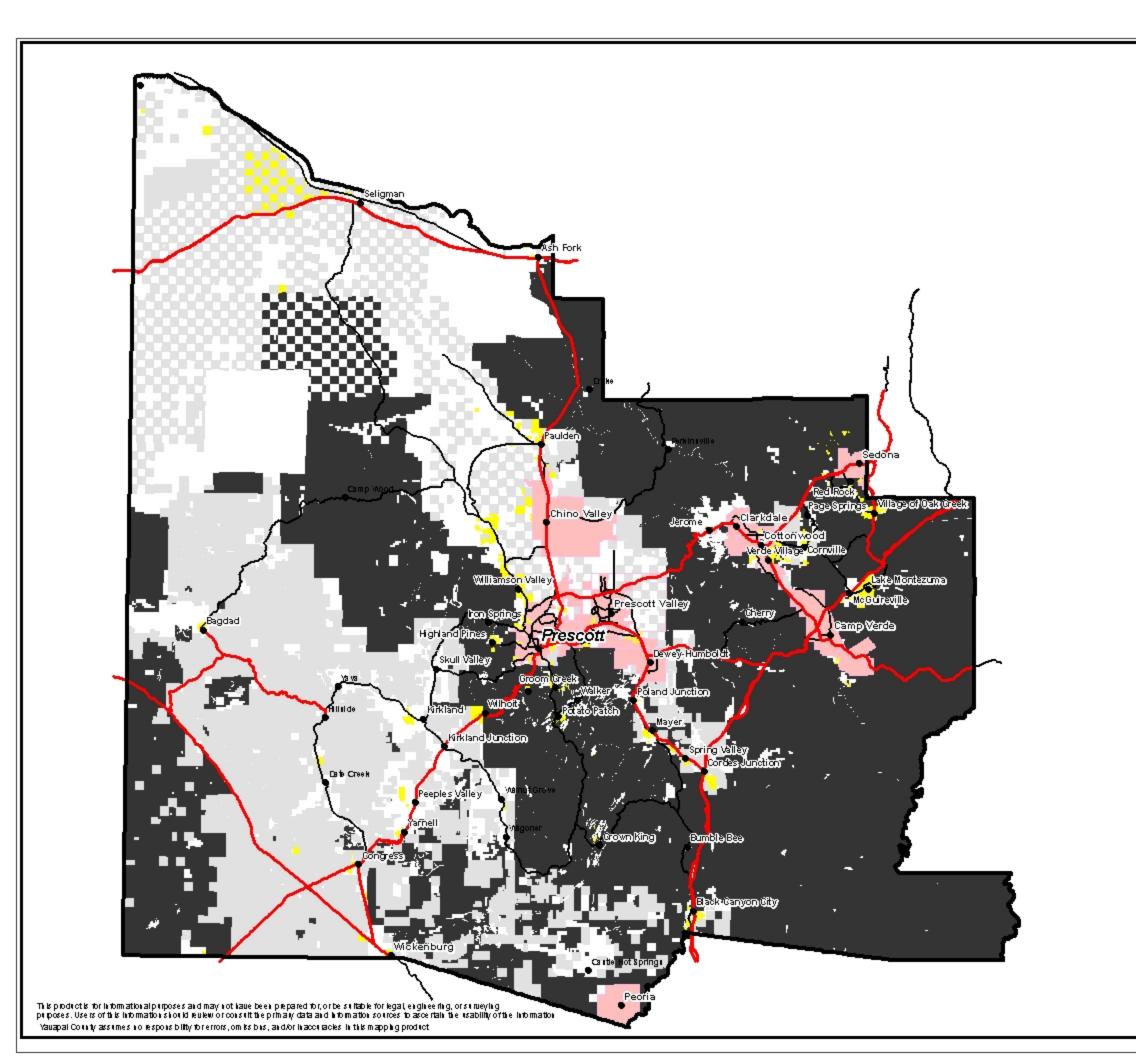
Multi-modal Transportation: A connected system of roadways, trails and pathways that connects automobile transportation, airplanes, buses, trains, bicycles and pedestrians in a system, allowing for choices in transportation.

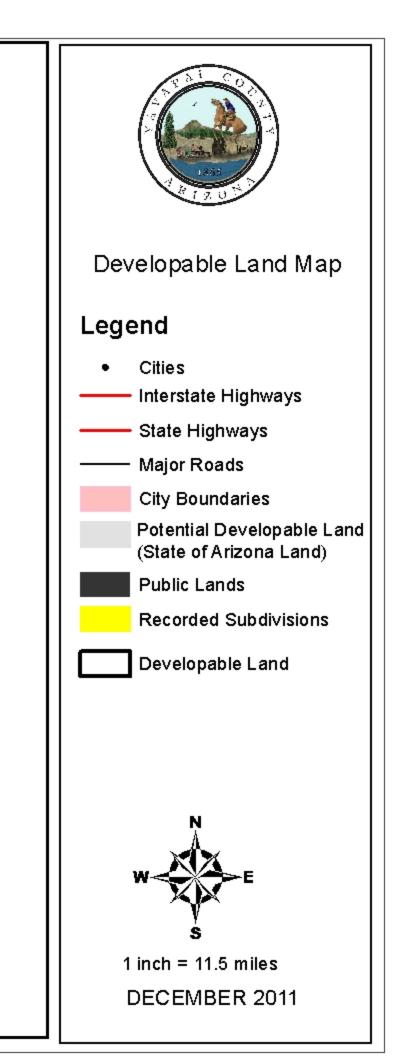
Access Management: Access management is a set of techniques that State and local governments can use to control access to highways, major arterials and other roadways. Access management is primarily used to increase the safety and the capacity of roadways. \*

Controlled Access: The highest level of access control on a roadway. ARS §28-601 defines a controlled access highway as "a highway, street or roadway to or from which owners of occupants of abutting lands and other persons have no legal right of access except at such points only and in the manner determined by the public authority that has jurisdiction over the highway, street or roadway." Sometimes referred to as "fully access controlled" and may only include access by way of ramps from graded separated interchanges, typically applied to freeways. These access points are defined by the original design of the roadway.

Limited Access: Some sources for this definition use "limited access" and "controlled access" interchangeably which can cause confusion as to its application. For that reason the next definition will be used to further define the difference.

Partial Access: "Preference is given to through traffic to a degree. Access connections, which may be at-grade or grade-separated, are provided with selected public roads, and





private driveways."\*<sup>1</sup> Access points are limited in some way to defined locations or to some minimum interval. These access points are typically at grade and can be controlled by a center raised median. Access points are typically permitted by the local government in accordance with an adopted policy or plan for this type of roadway.

Full Access: No defined access plan exists for the roadway with individual properties having single or multiple access points at any point along the roadway.

\*1 "Benefits of Access Management" brochure Federal Highway Administration

document # FHWA-OP

\*2 "Geometric Design of Highways and Street", 2004, AASHTO, p 88

# Existing Conditions

#### Major Transportation Corridors

Transportation in Yavapai County is primarily provided via the State and Federal Highway systems, augmented by major County roads. Although Yavapai County measures over 100 miles in its width and length at its extremes, there is a limited number of major transportation corridors within the County's large geographic area. This is due to the varying topography and the vast amounts of vacant Federal and State lands. The majority of the developed communities and privately owned areas are within the Eastern and Central "thirds" of the County. Consequently, the major transportation network runs through these two-thirds of the County, with a small portion of Federal and State highways in the southwest corner.

The major State and Federal highway corridors which serve the majority of Yavapai County communities, cities and towns are:

- Interstate 40 (I-40) the only transcontinental highway in Yavapai County, running east-west along the County's extreme northern area.
- Interstate 17 (I-17) running north-south in the eastern third of the County connecting Phoenix to I-40 in Flagstaff.
- State Route 89 (SR 89) running south-north through the center of the County from US 93 near Wickenburg through Prescott and Chino Valley to I-40.
- State Route 89A (SR 89A) running northeasterly from SR 89 in Prescott through Jerome, Cottonwood, and Sedona to Flagstaff.
- State Route 69 (SR 69) running southeast from SR 89 connecting Prescott and Prescott Valley to I-17 at Cordes Junction
- State Route 260 (SR 260) running southeast from SR 89A in Cottonwood

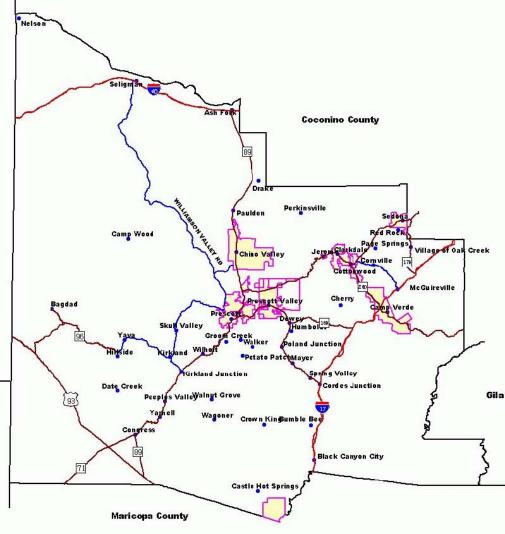
connecting Clarkdale and Cottonwood to I-17 and points further east.

- State Route 179 (SR 179) running southeast from SR 89A connecting Sedona to I-17.
- Fain Road running north-south connects SR 89A to SR 69.
- State Route 169 (SR 169) from SR69 in Dewey-Humboldt running east northeast to I-17.

The major County roads that serve the County's regional needs are:

- County Route 5, Williamson Valley Road running northwest from Prescott with a connection to Chino Valley and SR 89 by way of Outer Loop Road.
- County Route 10, Iron Springs Road running southwest out of Prescott through the communities of Skull Valley and Kirkland to SR 89 south of Prescott.
- County Route 6, Pioneer Parkway running east-west connects Williamson Valley Road to SR 89 and SR 89A in Prescott.
- County Route 30, Mingus Avenue and Cornville Road running southeasterly connect Cottonwood and the community of Cornville to I-17 at the McGuireville Interchange.
- County Route 78, Beaverhead Flat Road connects SR 179 south of the Village of Oak Creek to Cornville Road east of Cornville.

Map: Major Transportation Corridors



# Transportation Planning

# Introduction

Transportation planning in Yavapai County focuses on the need for more efficient transportation corridors in the major populated regions of the County that form the regional transportation network. Rapid growth and development in recent years have resulted in many County, State and Federal highways having reached levels of saturation. The historic 2-lane arteries of transportation and new major roadways are now being planned as multi-lane highways with access control elements and grade separated interchanges. These projects have been planned and implemented in Yavapai County in partnership with other stakeholders.

# Yavapai County Regional Road Programs

Efficiently managing this network requires regional cooperation and coordination. Forward thinking by Yavapai County elected officials, other government agencies, staff and transportation planning organizations resulted in the 1994 adoption of the Regional Road Program using a portion of a one-half-cent sales tax for funding transportation projects. The plan includes a Partnering Program, which has successfully permitted the County to share costs with ADOT, cities, towns and tribal governments for transportation studies, engineering design and construction. A majority of the Yavapai County regional road projects are coordinated through the planning organizations discussed in the next section.

# Planning Organizations

For Central Yavapai County the Central Yavapai Planning Organization (CYMPO) coordinates plans from each of the participating agencies for the Prescott urbanized area. The CYMPO planning area encompasses one of the fastest growing areas in Arizona and is the fifth Metropolitan Planning Organization MPO in Arizona, including two others, Flagstaff and Yuma, outside of the Phoenix and Tucson metro-areas. The CYMPO has taken over transportation planning from the Central Yavapai Transportation Planning Organization (CYTPO), which had been operating for over 16 years.

Transportation planning in the eastern portion of Yavapai County in the Verde Valley region is conducted through the Verde Valley Transportation Planning Organization (VVTPO) and the Northern Arizona Council of Governments (NACOG). In the areas of the County not served by the planning areas of CYMPO and the VVTPO, the County coordinates its planning efforts with those planning organizations and NACOG

Transportation planning processes and plans developed at the local level by CYMPO and VVTPO/NACOG are continually coordinated with the State transportation plans developed by ADOT in accordance with the requirements in Title 23. Local plans are typically 5-year plans and become part of the statewide 5-year plans

On November 18, 2011 The Arizona State Transportation Board approved ADOT's Long-Range Transportation Plan, "What Moves You Arizona" for the time period of 2010 to 2035. The Long-Range Plan "defines visionary, yet pragmatic, investment choices Arizona will make over the next 25 years to maintain and improve its multimodal

## transportation system."

The Plan "provides strategic direction to guide future investments in transportation" – the Plan does not identify a specific list of projects for implementation. However, many regional plans were reviewed including CYMPO's 2006 Regional Transportation Plan (CYMPO 2030 Plan) that is discussed in more detail later in this document. A list of regional projects studied by CYMPO is also referenced by the ADOT Plan as "Examples of Significant Transportation Infrastructure Projects" and is listed as "Potential New State Roads". That list includes The Western By-Pass, Great Western Extension, Chino Valley Extension, the Fain Road Extension from Fain Road to SR 169 and the Fain Road Extension II from SR 169 to I-17.

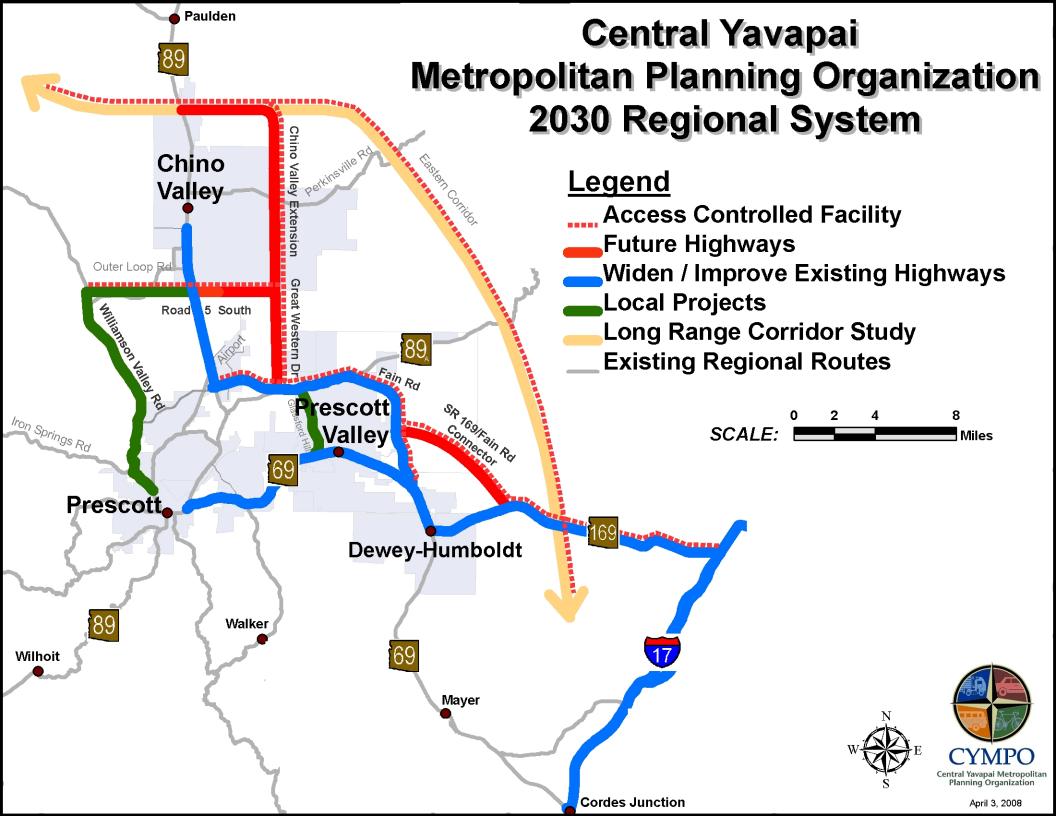
The ADOT Long-Range Plan also utilized the comprehensive land use and 2050 vision developed in the Building a Quality Arizona Study (bqAZ) as a framework for the State's desired future.

# **Regional Plans**

<u>Central Yavapai</u> - The CYMPO conducted a Transportation Study in 2006 prepared by Lima and Associates. This study was one of the latest in a series of regional planning efforts that have been conducted in the County, beginning with the 1995 Central Yavapai County Transportation Study and the 1998 update of that study. The scope of this study was to create a regional transportation plan designed to offer guidelines on the phasing schedule for the design, reconstruction and new construction of roadways and general recommendations for transit and non-motorized modes of transportation. The 2030 Proposed Roadway Improvement Program identifies a proposed timeline for short term, (2006-2011) mid-term (2012-2020) and long range regional road projects (2021-2030). This study is planned to receive a minor update in 2012 and are typically updated every 5 years.

Projects developed as a result of the transportation studies are coordinated through the CT-LU Committee to ensure their integration with land use. Land development projects are also coordinated through the CT-LU Committee to ensure their compatibility with the transportation plans and projects.

Map: Central Yavapai Metropolitan Planning Organization 2030 Regional System



<u>Verde Valley</u> - A Transportation Study was prepared by Lima and Associates in May 2009 for the Eastern Yavapai County titled the <u>Verde Valley Multimodal Transportation</u> <u>Study</u>. This document identifies existing conditions, future improvement needs and assesses levels of service up to 2030. The transportation system study area consists of about 600 square miles and includes the incorporated municipalities of Camp Verde, Clarkdale, Cottonwood, Jerome and Sedona as well as the Yavapai Apache Nation and unincorporated areas of northeast Yavapai County. Input and data were provided by cities and towns as well as the Yavapai-Apache Nation and a Technical Advisory Committee comprised of major stakeholders from the public and private sectors was also involved to share information and review draft documents.

The purpose of this study was to develop a long-range, regional transportation plan to guide the implementation of transportation improvements on the roads of regional significance in the Verde Valley including I-17, State Routes and roads on the County Regional Road System. Both the CYMPO and the Verde Valley Regional Transportation Study have taken into consideration the relationship between future regional road demands and projections on socioeconomic conditions such as population densities and locations of potential growth areas.

The exhibit on the following page contains the recommended projects between 2009 and 2030.

# Map: Verde Valley 2030 Recommended Transportation Projects

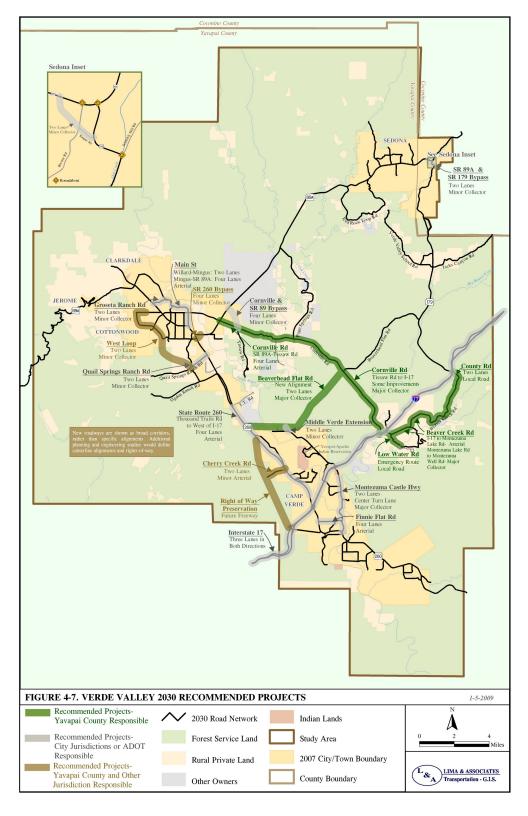
# Regional Road Projects

The following information represents the status of the major Regional Road Projects that have been completed; as of January 2012. There are several projects in various stages of progress, or have been identified as proposed long range projects that are recommended, based on future indicators of population and projected traffic volumes, but have not been funded. A complete inventory and status of road projects is contained in the CYMPO Transportation Study as well as the Verde Valley Multi-Modal Transportation Study. Additional information regarding road projects is available at the ADOT website as well as the County website.

Major Projects that have been completed since 2003

# Central Yavapai

- SR 69 and SR 89 Interchange: ADOT rebuilt the traffic interchange at the intersection for capacity and safety improvements.
- SR 89A and SR 89: ADOT built a new traffic interchange at the intersection.
- The Viewpoint Traffic Interchange: Completed by a partnership with ADOT and CYMPO, the new bridge interchange connects Viewpoint Drive with SR 89A and allows traffic on SR 89A to flow more freely.



- SR 89A Spur: ADOT constructed 3.3 miles of new 4-lane controlled access highway, from the Viewpoint Interchange to the Fain Road Realignment with a new grade separated structure at Viewpoint Drive in anticipation of the planned Fain Road widening.
- Fain Road: ADOT is in the process of widening Fain Road to 4 lanes from the end of the SR 89A Spur to SR 69.
- Williamson Valley Road: Yavapai County completed improvements and widening to 4 lanes, 2.5 miles, from the City of Prescott limits to Pioneer Parkway.
- SR 89 Widening: ADOT completed the widening in Prescott to a 4-lane section from the Sundog Ranch Road intersection to just north of the Willow Lake Road intersection including a round-about at the intersection of Willow Lake Road/89.
- SR 89 Widening: ADOT completed the widening in Chino Valley to a 4-lane section with partial access controlled medians from Center Street to Road 5 South.
- Cordes Junction Interchange: improvements are under construction at the intersection of SR 69 and I-17. The project is being done in partnership between ADOT and the Federal Highway Administration (FHWA). Improvements include a new diamond interchange to the north along with new ramp improvements at the existing interchange to carry traffic toward Prescott as well as several strategic roundabouts.

# Eastern Yavapai

- SR 260 Reconstruction: SR 260 was reconstructed by ADOT from just west of I17 as a 4-lane partial access control divided highway in 2004 to serve as a bypass to the south and west of the developed area of Camp Verde. In 2009, ADOT completed a 3 mile long 4-lane partial access control divided highway on SR 260 from Thousand Trails to Western Drive in Cottonwood to improve traffic flow and safety.
- Mingus Avenue Extension: Yavapai County constructed a new alignment and bridge crossing the Verde River, 2.0 miles from Main Street to SR 89A.
- SR 89A Widening: SR 89A was widened by ADOT to a 4-lane highway from Cornville Road through most of Sedona. The roadway is divided and has several partial access control features.
- Cornville Road Reconstruction: Yavapai County reconstructed Cornville Road from Tissaw Road to Aspaas Road as a 2-lane road with shoulder widening and drainage improvements.
- SR 179: ADOT conducted a collaborative community-based process between

August 2003 and December 2004 to plan corridor improvements called the <u>Needs Based Implementation Plan (NBIP)\*</u>. The outcome of this collaborative effort was two separate projects along SR 179 that were constructed between 2006 and 2009. These projects contain a special combination of functional improvements for this 2-lane arterial and include: reconstruction of the existing road from the Village of Oak Creek to the north Forest boundary, a number of roundabouts at strategic intersections including two at the intersection of 89A/179 and Brewer Ranger Road, raised medians and a new vehicular bridge over Oak Creek together with a separate pedestrian bridge alongside. Because SR 179 is still a 2-lane road, traffic build up will continue to exacerbate the capacity and safety issues of the road over the next 20 years.

• I-17/McGuireville Interchange: ADOT constructed an improved traffic interchange with widened bridges and ramp improvements.

#### \*Scenic179.com/Project Overview

#### Major Planned Regional Road Projects

#### Central Yavapai

- Great Western/Glassford Hill Extension: a need for a new high capacity access controlled roadway was identified by CYMPO, ADOT and the County to efficiently move regional traffic north and east of the City of Prescott from Prescott Valley to Chino Valley and Williamson Valley. In spring 2010, a final feasibility study and public hearings were completed by Yavapai County for this project known as the Great Western/Glassford Hill Extension. The study encompasses a corridor length of approximately 9 miles and passes through portions of the Town of Prescott Valley and the Town of Chino Valley. It also traverses State Trust Land and privately owned lands. The preferred corridor alignment begins at SR 89A near Old Highway 89 (referred to as Great Western Road) and ends at SR 89 near the future Road 5 South alignment which is one mile south of Outer Loop Road. No construction funding has been identified, however, it is anticipated State and Federal monies will be used to fund this project; therefore, all State and Federal requirements were addressed as part of this Plan.
- I-17 to Fain Road Connector: ADOT and FHWA are conducting a preliminary study to evaluate and identify potential corridor alternatives for a new access-controlled facility to connect I-17/SR 169 to the Fain Road Connector. The I-17 to Fain Road Connector will provide a continuous, access-controlled route from I-17 to SR 89A via either a new alignment or a combination of SR 169 and a new alignment. The project is being proposed as a parallel route to Highway 69 to alleviate future congestion. A previous study for an alignment that extended from SR 169 to Fain Road was overseen and approved by CYMPO in February 2009 as a precursor to a design concept report.
- Williamson Valley Road: Yavapai County has plans for the widening of this road from Pioneer Parkway to Outer Loop Road to a 4-lane roadway with turn lanes and raised medians for partial access control.
- SR 89: ADOT is currently in the design phase of a widening project from Chino

Valley to Prescott.

- SR 89: ADOT and Chino Valley is currently in the design phase of an intersection at Road 4 North in order to improve safety for those turning off of SR 89.
- SR 89: ADOT and Chino Valley is currently in the design phase of an intersection at Perkinsville Road in order to improve safety for the large volume of semi-trucks entering SR 89 from Perkinsville Road.
- SR 89: ADOT is currently beginning design of the portion of SR89 between Road 5 South in Chino Valley and SR89A near the Prescott Airport. The road is planned to be widened to 4-lanes with partial access control elements.
- SR 89: ADOT and Yavapai County jointly funded a Project Assessment and Access Management Study for portions of SR 89 between Wickenburg and Congress, milepost 258 to milepost 272 which includes an implementation plan. The document serves as a guide for future development along this corridor and includes recommendations for implementing partial access control measures.
- SR 93 is currently being studied by ADOT and a concept has been developed for an urban, 4-lane divided highway that includes a number of controlled intersections. In addition, a Feasibility Report for a Wickenburg Bypass has been completed for this road and ADOT has completed the final design for the Interim Bypass to improve traffic conditions at US 60/93 where traffic is currently experiencing congestion.\*
- SR 89 SR 69 connector: The Yavapai-Prescott Indian Tribe is planning and constructing a connector from SR 89 to SR 69.

# Eastern Yavapai

• SR 260 widening: the remaining portion of SR 260 from Thousand Trails Road to I-17 has undergone preliminary planning for improvements.

# Major Long-Range Regional Road Projects (2030)

# Central Yavapai

- SR 69 is identified on the CYMPO Improvement Program for FY 2012-2020 to be constructed as a 6-lane controlled access road from SR 169 to SR 89.
- I-17 widen to six lanes (study area) from Cordes Junction to SR 169.

# Eastern Yavapai

• I-17 is identified on the 2030 Road Modeling Alternative in the Verde Valley

Multi-Modal Transportation Study to be 6 lanes (3 in each direction) through the study area.

- SR 179 the results of a Needs Based Improvement Plan project level modeling on this road recommend that due to travel demand by 2030 several improvements could be necessary including multiple turn lanes, raised medians, 8 foot shoulders and passing lanes.
- Other Long Range County and municipal road improvements identified in the Verde Valley Multi-Modal Transportation Study in Eastern Yavapai include Cornville Road, Main Street in Cottonwood, Finnie Flat Road and Beaver Creek Road.

Additionally on November 18, 2011 The Arizona State Transportation Board approved ADOT's Long-Range Transportation Plan, "What Moves You Arizona" for the time period of 2010 to 2035. The Long-Range Plan "defines visionary, yet pragmatic, investment choices Arizona will make over the next 25 years to maintain and improve its multimodal transportation system." This Plan includes significant improvements throughout Yavapai County.

# Alternative Modes of Transportation

Arizona Statutes require that "the general location and extent of existing and proposed bicycle routes and any other modes of transportation as may be appropriate" be considered, in addition to that of major streets, highways and freeways, in planning for circulation. Alternative modes of transportation, including public transit, bicycling and pedestrian networks, are in various stages of planning and development in the unincorporated areas of Yavapai County. Incorporated cities and towns are currently taking the lead in this area and are coordinating cooperative planning with the County. Additional planning for alternative modes of transportation is being facilitated through the CYMPO and the VVTPO regional plans.

As a result of growth throughout Yavapai County, there has been much public comment requesting the establishment of transit and additional pedestrian, bicycle and trail systems in recent years. This section of the Transportation Element discusses existing and proposed alternative circulation modes, including rail and air services, primarily as a means of transportation rather than for recreational pursuits.

<u>Public Transit Services</u> -The 1999 Verde Valley Regional Transportation Study Update notes "transit service is a viable mode of transportation for the Verde Valley." The Study Update explains that the "concentration of specialty retail and hospitality employment in Sedona and commercial activities in Cottonwood" provide transit opportunities "between these activities and residential areas in Cottonwood, Clarkdale and Camp Verde." This study was updated in 2009 with the Verde Valley Multi-modal Transportation Study which recommends adding service and increasing the number of daily trips between Cottonwood and Sedona. Yavapai County helps to provide funding for a public transit system with the City of Cottonwood using Local Transportation Assistance Funds (LTAF II). The Cottonwood Area Transit System (CATS) provides ride-on-demand, door-to-door services to the Clarkdale, Cottonwood, Bridgeport and Verde Village areas. CATS currently utilizes nine, 14-passenger mini-buses weekdays and Saturdays with some funding augmentation from fares and grants. An hourly, fixed-route bus system for a portion of its vehicles was established in January 2002. CATS now has three (3) fixed bus routes serving the communities of Cottonwood, Clarkdale and Verde Village. Routes will connect on the hour at Garrison Park where riders can transfer from one bus route to another without waiting. On January 1, 2011 the City of Cottonwood signed an agreement with the Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) to administer the public transit system for the City.

Recently, the State legislation for LTAF II funding ended; further reducing the available funding for local municipalities to provide the local share for matching the Federal Transit funds.

The Sedona Community Plan Update 2001-2002 recognized the lack of transit facilities and provided a goal for the establishment of "a shuttle transit system" and "regional commuter system to serve the needs of residents, employees and visitors." Consequently, proposals for planning and design of a Sedona Area Transit Study were requested and a consultant hired in January 2002, to assess the feasibility of shuttle service, financial resources and other requirements, and to create a systems design and implementation plan. The study received funding from the City of Sedona, ADOT, Yavapai and Coconino Counties. In 2006 the City of Sedona entered into an agreement with the NAIPTA to administer the public transit system for the town. Recently the city council voted to end the fixed route downtown circulator route known as the Road Runner as of June 30, 2011. NAIPTA will continue to operate the commuter link known as the Verde Lynx 8 trips a day between Cottonwood and Sedona.

In January 2012 Northern Arizona intergovernmental Public Transportation Authority (NAIPTA) was awarded a grant to develop a transit system to serve the 179 and 89A corridors. This plan will be developed in partnership with the Forest Service and will serve both City sites and the Forest Service's recreational sites along these corridors. The plan also seeks to connect the Village of Oak Creek with Sedona and to fill the gap left by the defunct Road runner service.

Recently both the City of Sedona and City of Cottonwood voted to terminate their agreement with NAIPTA effective June 30, 2012. The City of Sedona will continue to work with NAIPTA through current grant opportunities to develop a transit system to meet local and regional transportation-related goals.

A private company, The Prescott Transit Authority, offers limited fixed-route service in the Prescott Area. This company also provides private taxicab services, Greyhound Bus, and shuttle companies connecting cities in Yavapai and Coconino Counties, as well as with Sky Harbor Airport in Phoenix.

<u>Bicycle Routes</u> - Both Prescott and Prescott Valley are planning a network of interconnecting bicycle and pedestrian routes to provide access throughout their

communities from the Peavine Trail and its extension. Prescott Valley's Parks and Recreation Commission has approved a Pedestrian/Bicycle System Master Plan, derived from the Town's General Plan, to provide for non-motorized transportation routes to schools, libraries, civic centers, employment and shopping areas. Similarly, the City of Prescott has completed a citywide master plan for bicyclists and pedestrians, while developing the second phase (7 miles to Chino Valley) of the Peavine Trail. Graphic depictions of the Prescott and Prescott Valley trail systems can be found in the Open Space Element.

Other volunteer organizations, such as Prescott Alternative Transportation (PAT), are studying potential circulation routes for bicyclists, pedestrians and the handicapped. An important area being undertaken by PAT is safe transportation for children en-route to school. The Prescott Safe Routes to School Program aims at reducing vehicular trips of school-bound children through development of bikeways and walkways connecting neighborhoods to schools. Education and classroom instruction on pedestrian and bicycle safety are primary features of the program.

According to the Association of Pedestrian and Bicycle Professionals (APBP), over 90% of school children arrive at school by car or bus, adding to the number of vehicular trips per day. The 1995 Nationwide Personal Transportation Survey found the following on length of trips:

63% of all trips are less than 5 miles in distance;49% of all trips are less than 3 mile in distance;40% of all trips are less than 2 miles in distance;

28% of all trips are less than 1 mile in distance

Of commuter trips, 44% are less than 5 miles to work. Short-distance trips add to the financial burden of school districts, city and County road departments and to traffic congestion. Accordingly, many cities and Yavapai County have established alternative transportation goals, including those pertaining to pathways and routes for short-distance trips, as well as coordinated transit service for longer trips.

<u>Rail Service</u> - Rail service within Yavapai County is limited to the transfer of freight and passengers through the County's boundaries, and to scenic-recreational train travel in a portion of the Verde Valley. The Burlington Northern Santa Fe Railway from Phoenix to Ash Fork and the Southwest provides freight service. In Maricopa County, the main freight track begins in downtown Phoenix, running northwesterly to Wickenburg. It then enters Yavapai County, meandering northward through Congress, Hillside, Skull Valley, Drake and Ash Fork. The freight line connects at Williams Junction in Coconino County to the main transcontinental track to eastern and western states. In its western route, it runs through Seligman and other rural areas in northwestern Yavapai County, paralleling Historic Route 66.

Some limited freight service is available from the Arizona Central Railroad between

Drake and Clarkdale. The Arizona Central Railroad/Verde Canyon Railroad is the purveyor of the only scenic-recreational, passenger train service in the County. Its historic train route from early mining days runs between Clarkdale and Perkinsville on its way through the Verde Canyon following the Upper Verde River. The four-hour round trip, including a 680-foot tunnel, offers views of wildlife and scenic geology to visitors and County residents.

Amtrak's Southwest Chief, passing through northwestern Yavapai County, Seligman and Ash Fork on its way from Los Angeles to Chicago, provides nationwide passenger service. Passenger stations in Northern Arizona are in Kingman, Flagstaff and Winslow, with passenger connections at Williams Junction. Passenger train services throughout the central and southwestern portions of Yavapai County were discontinued in the 1960's. Some of the abandoned railroad rights-of-way in Central Yavapai County are being developed for non-motorized transportation in the Rails-to-Trails Program discussed previously.

<u>Air Service</u> - There are five Public Use General Aviation Airports in Yavapai County. The Sedona Airport Administration (SAA) has a lease with Yavapai County to operate the Sedona Airport. The Yavapai County Public Works Department oversees Bagdad and Seligman Airports. The other two, in Prescott and Cottonwood, are operated by their respective municipal governments.

Earnest A. Love Airport is a major transportation and economic asset to the entire region. Owned and operated by the City of Prescott, it is a Non-Primary Public Use, Commercial Service Airport. It is located at the geographic center of the cities, towns and unincorporated areas of the Central Yavapai Region, just north of the intersection of SR 89 with the realigned SR 89A/Pioneer Parkway. Love Field's three runways include its 150-foot-wide asphalted, primary runway of 7,616 feet in length, and navigational aids, state-of-the-art lighting and encompassing taxiways. Other onsite features are the airport control tower, FAA Automated Flight Service Station and all-weather instrument approach. The airport handled 350,000 flights annually in 1999 with a decline to around 242,000annually by 2011. Love Field (Prescott Municipal Airport) contains numerous hangars and aircraft tie-down parking areas and approximately 20 aviation-related businesses including flight schools, aircraft maintenance and fueling, Civil Air Patrol, USFS Fire Center, and training facilities for Embry-Riddle Aeronautical University. The terminal building houses a restaurant, pilots shop, rental car businesses and a regional airline service provider. The City of Prescott is responsible for the future of the airport and relies on the cooperation of the regional partners to ensure the continued viability of this regional asset. To help guide and protect the viability of the Prescott Municipal Airport, the City of Prescott adopted the Airport Business Plan (1997), the Airport Specific Area Plan (2001), and recently adopted the 2009 Airport Master Plan. These plans have been adopted to address airport area land-use protection and to ensure the continued economic vitality of the airport as is required by FAA regulations, standards and guidelines. It is imperative that the regional partners surrounding the Prescott regional Airport including, but not limited to Yavapai County, coordinate and work closely with the city of Prescott to pro-actively address airport land use, airport noise and other concerns, and to ensure that the future residential or other incompatible plans use infringement on the airport does not occur which would impede the development of a regional airport to serve the regions needs.

Primary Public Use, General Aviation Airports are in Bagdad, Sedona and Cottonwood. The Bagdad Airport, in the unincorporated community of Bagdad in western Yavapai County, contains one 60-foot-wide, asphalted runway of 4,575 feet in length. The airport area also maintains two aircraft parking aprons and vehicle parking areas. The Sedona Airport's runway is 75 feet wide by 5,132 feet long and is surfaced with asphalt/concrete. The airport contains a helipad, parallel taxiway, aircraft aprons, hangars, fueling facilities, a terminal and restaurant. Tour operators as well as businessmen and residents utilize the Sedona Airport for access to the region and other parts of the County. The Cottonwood Airport, owned and operated by the City of Cottonwood, contains an asphalted, 75-foot-wide runway of 4,250 feet in length. The airport provides for fueling, parking, aircraft and car rentals, flight training and supplies, a terminal and lounge.

The Seligman Airport is a Secondary Public Use, General Aviation Airport, located approximately ½-mile west of the unincorporated community, off Historic Route 66 in northern Yavapai County. The airport contains one asphalt/concrete runway, 75 feet wide by 4,800 feet long, with lighting, parallel taxiway, aircraft apron and parking facilities.

#### Goals, Objectives and Recommendations

# Goal 1: Ensure coordination between Transportation Planning, Land Use Planning and other stakeholders.

- Objective a: Promote planning policy that incorporates transportation as it relates to future land use categories.
- Objective b: Promote Land Use categories that reflect development allowances as they relate to transportation corridors.
- Objective c: Ensure that future development does not impede future transportation plans.
- Objective d: Ensure future development is consistent with current transportation plans and standards.

# Goal 2: Promote standards that encourage multi-modal transportation opportunities.

Objective a:	Encourage local and regional public transit efforts.
Objective b:	Encourage new development to include multi-modal transportation
	in development plans.
Objective c:	Encourage Coordinated Regional Mobility.

# Goal 3: Ensure consistency between transportation corridors and land use allowances.

- Objective a: Review current zoning on land in near proximity to transportation corridors and intersections.
- Objective b: Review current zoning on land as it relates to future transportation corridors.
- Objective c: Promote consistency in land uses as they relate to current and future transportation corridors.

# Recommendations

- Ensure that Land Use designations reflect correlation to current and future transportation plans.
- Continue to coordinate planning and communication efforts between Yavapai County and other transportation and land use agencies including the utilization of studies from wildlife management agencies to mitigate impacts on wildlife corridors.
- Adopt processes that ensure adequate review of future development, including continuing of County/State cooperative review process for proposed development in Yavapai County, including unregulated lot splitting, as it relates to adequate access and potential transportation corridors.
- Incentivize multi-modal connectivity in new development.
- Codify allowance of public transit facilities.
- Continue to construct new infrastructure to standards that encourage safe multimodal opportunities.
- Review new development for consistency with current regional transportation plans and standards that may include access control measures identified in the regional plans.
- Adopt Land Use policies that promote appropriate Land Use categories as they relate to high volume traffic corridors and intersections.

# IV. WATER RESOURCES ELEMENT

## Introduction

#### Statutory Requirements

Water Resources is a required element of the Comprehensive Plan for counties with a population of 125,000 or more which is mandated by the Growing Smarter Legislation. The Statutes (ARS §9-461.05 and ARS §11-804) stipulate that the Water Resources Element will address the following:

- "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 county 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...or a plan to obtain additional necessary water supplies."

The Statutes add that "the Water Resources Element does not require: new independent hydrogeological studies; nor the County to be a water service provider."

#### Purpose

The Water Resources Element is intended to comply with the Arizona Statutes by addressing known water supplies, current and future water demands, and 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. The element includes the Water Resources Goals and Objectives, adopted through a public participation process; a review of water management practices in Yavapai County; existing water supplies; water demands and future impacts; and finally, Recommendations, Policies, and Implementation Strategies intended to address current and future conditions. The data and information provided in this Plan includes various studies, reports, and plans created by the Arizona Department of Water Resources (ADWR) as well as Yavapai County Water Advisory Committee (WAC) and other organizations.

# **Current Conditions**

<u>Water Supply and Demand</u> - Yavapai County is geologically complex and mostly is within the Transition Zone geologic province situated between the Colorado Plateau to the north and the Basin and Range to the south. While rock types and water production amounts vary by location, the primary source of drinking water for Yavapai County residents is groundwater pumped from wells drilled into aquifers. The primary water providers are municipalities, private water companies, special districts and private domestic "exempt" wells. Agriculture uses water from wells in some areas and surface water flowing in streams in other areas where available such as in the Verde Valley.

Our understanding of current supply and demand is based on existing studies (e.g. water budgets), water provider information and estimates based on per capita use. For the central part of the County, the Central Yavapai Highlands Water Resources Management Study (CYHWRMS) a joint study with US Bureau of Reclamation, ADWR, and the Yavapai County WAC, is the most comprehensive and most recent water supply and demand analysis for the County. For other areas of the County, information is from other available sources such as the ADWR Arizona Water Atlas (ADWR, 2010).

The CYHWRMS divides the study area into Water Planning Areas (Phase 1 summary table from the study show each planning area's water supply and demand). The CYHWRMS shows that for the study area current water supply ranges from approximately 40,000 acre feet per year (af/yr) to approximately 72,000 af/yr depending on how it is calculated (the study documentation explains the source of the supply and demand values). The low value is based on the net natural recharge component of published water budgets (groundwater) and the high value assumes the current demand is equal to the supply because it is currently being met. Both approaches have limitations for comparison to demand which includes surface water for agriculture and demand met by effluent.

The CYHWRMS calculates a current demand in the study area of approximately 73,000 af/yr including municipal domestic, commercial, industrial, and agricultural demands as reported for 2006. In places the supply is determined by Adequate and Assured Water Supply data from the ADWR and water provider reports. For estimates of water supply and demand for individual water planning areas, please see the "CYHWRMS- Demand Analysis Water Planning Area Water Use and Available Supply Summary Table" and supporting documentation.

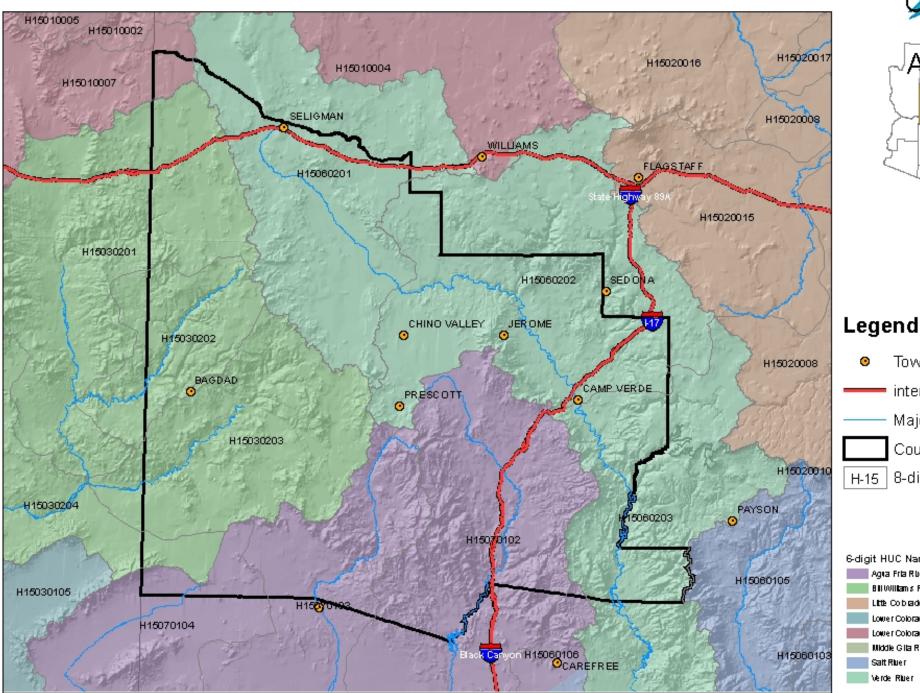
Many of the legally available supplies of water in Yavapai County have yet to be adjudicated, and some of these supplies are not physically available due to geology, environmental concerns or technological limitations. See map below for major aquifers in Yavapai County.

#### Map: Yavapai County Watersheds

Areas of Yavapai County not included in the CYHWRMS have less documentation for estimating current supply and demand. For a portion of the Agua Fria sub basin, the US Bureau of Reclamation in cooperation with the Yavapai County WAC and the Upper Agua Fria Watershed partnership prepared a current demand estimate of about 4,100 af/yr for human water use (year 2007). The current supply for the Agua Fria study area is approximately 9,000 af/yr as defined in the ADWR Water Atlas (ADWR 2010 Volume 1). The study recognizes the total supply value is for the basin as a whole and recognizes that individual communities may not have access to the supply. Below is a map of the Agua Fria study area.

Map: Upper Aqua Fria Water Demand Study Water Planning Areas

# Yavapai County Watersheds



NE MO - Unite is thy of Arizonia Cooperature Extension in partnership with the Arizonia Department of Enulionmental Quality, Water Quality Duision and the Water Resonaces Research Center. Data Sources: ART-U of A, Arizonia Natural Resonaces Conservation Service and US Nationial Attas. Projection: Unite Ball Transverse Mercator Projection and Coord hate System , Zone 12, North American Datum 1983, Horizontal Units Meters. Cartographic Composition by Juan Parra, Advanced Resonace Technology Group, The Unite sity of Arizonia, November 2005, [Vauapal Watersheds\_11-22-2005 mixit]

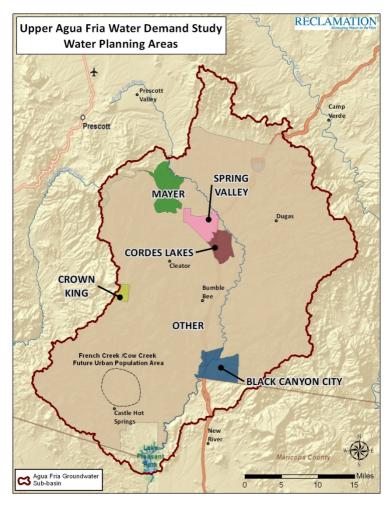












# Prescott Active Management Area

An Active Management Area (AMA) is defined by ARS §45-402 as: "a geographical area which has been designated by the Legislature as requiring active management of groundwater, or in the case of Santa Cruz AMA, active management of any water, other than stored water withdrawn from a well." The Statute adds that "subsequent active management areas may be designated through local initiative or by the director of the Department" (of Water Resources). AMA boundaries are delineated to reflect groundwater basin divides and water use patterns. Often, these boundaries do not reflect municipal boundaries. Groundwater rights systems, established by the code (ARS §45-451) for areas within AMAs, provide the following regulations:

- 1) limit groundwater withdrawals,
- 2) require measuring and reporting of withdrawals,
- 3) prohibit new irrigation areas for farmland, and
- 4) require long-term, dependable water supplies for subdivisions.

Although the code focuses on the designated AMAs, it also contains provisions on a statewide basis. These include requirements for well drilling, registration and construction; water adequacy for subdivisions; and restrictions on groundwater transportation crossing watershed boundaries. The Code also establishes the aforementioned ADWR to enforce all statutory regulations for managing the water resources of the State.

The Prescott Active Management Area (PrAMA) is the only AMA in Northern Arizona. The PrAMA comprises 485 square miles in central Yavapai County, from Del Rio Springs to Walker; north to south; and from the Williamson Valley area to Dewey-Humboldt; west to east. The PrAMA includes the Towns of Chino Valley, Dewey-Humboldt and Prescott Valley, the City of Prescott, the Yavapai-Prescott Tribe and all the unincorporated areas in the vicinity. Small portions of the Phoenix AMA also extend into Southern Yavapai County. Below is a map of the PrAMA.

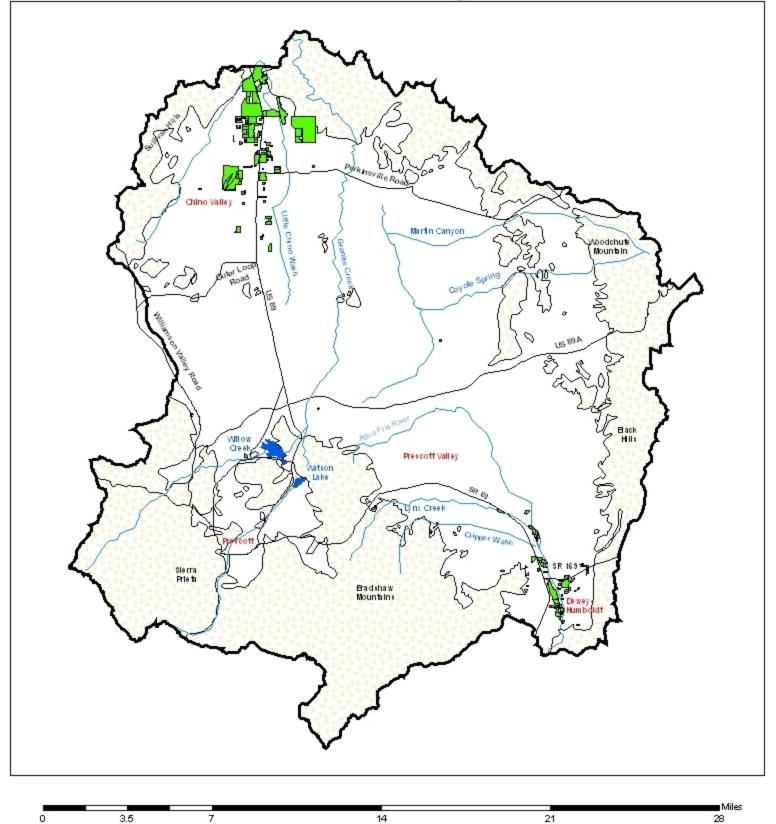
#### Map: Prescott Active Management Area

The PrAMA consists of two sub-basins (also known as watersheds), the Little Chino and the Upper Agua Fria, which are bisected by a surface drainage divide. Granite Creek, Big Draw and Little Chino Creek drain the Little Chino sub-basin into the Verde River. Lynx Creek and other smaller ephemeral streams drain the Upper Agua Fria sub-basin into the Agua Fria River. The Little Chino sub-basin encompasses western and northern portions of the PrAMA, while the Upper Agua Fria sub-basin spans the southeast portion of the PrAMA.

The purpose of groundwater monitoring, reporting and withdrawal limitations is to understand our water supply and demand and determine whether a safe-yield condition is existing. Safe-yield is defined by ARS § 5-561 as: "achieving and maintaining a long-term balance between the annual amount of groundwater withdrawn in an AMA and the annual amount of natural and artificial recharge in the AMA"

In 1999, ADWR found the PrAMA to be in an overdraft condition and proclaimed a "non-safe yield" declaration. The 2003-2004 Hydrologic Monitoring Report (ADWR Hydrology

# **Prescott Active Management Area**



Roads
 Rivers and Streams
 Rescott AMA Boundary
 Lakes
 GF Rs (1,743.93 acres)
 Hardrock

Arizona Department of Water Resources Prescott Active Management Area 2200 East Hillsdale Road Prescott, AZ 86301

Phone: (928) 778-7202 Fax: (928) 776-4507 www.azwater.gov





Division, 2005) showed that pumping increased and groundwater levels declined over 90% of the monitoring wells. The primary goal of the PrAMA is to achieve safe yield. The PrAMA Groundwater Flow Model Update published in 2006 prepared by Daniel Timmons for ADWR indicates that the PrAMA's "groundwater resources continue to be depleted on a regional basis". This has resulted in decreased groundwater storage in the aquifer; additionally, natural groundwater discharge from the area has decreased, with potential impacts on riparian areas and downstream users (Timmons & Springer, 2006). This report serves as an update to the 2003-2004 Hyrdological Monitoring Report. Timmons also published a Thesis which states that safe-vield can be reached with "population-growth strategies, conservation and augmentation". To enable the PrAMA to achieve safe-yield, water resource augmentation through increased recharge supplies and importation from outside the PrAMA are anticipated. The City of Prescott has purchased a portion of the JWK Ranch – known now as the Big Chino Water Ranch to be developed as an importation source. Legally, about 8,600 acre/feet per year can be imported from the Big Chino Water Ranch. As well as importation, wastewater treatment plants, mainly those of the City of Prescott and the Town of Prescott Valley, produce treated effluent for the irrigation of golf courses and for recharge groundwater credits. (The City of Prescott, 2008)

Arizona Statutes permit groundwater resources to be imported into the PrAMA for purposes of replacing Central Arizona Project (CAP) allocations or meeting obligations to Indian Tribes. Importing water for these purposes will help the AMA achieve safe-yield.

An ongoing challenge in managing groundwater resources in the PrAMA has been the quick increase in exempt wells. Exempt wells are defined as wells that pump less than 35 gallons per minute and are commonly used to supply domestic water needs. They are called exempt wells because they are exempt from the most of the State groundwater regulations, including monitoring, reporting and conservation requirements. 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.

#### Legally Available Water - Current Arizona Water Law

As defined in the ARS, there are four categories of legally recognized water supplies available in Arizona: Colorado River water, surface water other than Colorado River water, ground water and effluent (ARS §45-101). Each water supply is administered in a different manner. Colorado River water is allocated through the law of the river and Arizona's water banking program, surface water rights are based on prior appropriation ("first in time, first in right"), and groundwater rights vary depending on location (ADWR, 2001). In Arizona, surface water is administered separately from groundwater. Yavapai County does not have access to Colorado River water although a number of communities and tribes were initially granted allocations to supplies from the Central Arizona Project.

<u>Surface Water Rights</u> – According to the ADWR, 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 that the person who first puts the water to a beneficial use acquires a right that is better than later appropriators of the water. Prior to June 12, 1919, a person could acquire a surface water right simply by applying the water to a beneficial use and posting a notice of the appropriation at the

point of diversion. On June 12, 1919, the Arizona surface water code was enacted. Now known as the Public Water Code, this law provides that "a person must apply for and obtain a permit in order to appropriate surface water" (ADWR). The State is in the process of defining rights to surface water in much of Yavapai County through general stream adjudication.

<u>Surface Water Rights Adjudications</u> - The general stream adjudication is a judicial proceeding to determine or establish the extent and priority of water rights in the Gila River system. Much of Yavapai County including the Verde River and Agua Fria River watersheds are within the Gila River system. Any person or entity that uses water or has made a claim to use water on property within the Gila River system, potentially may be affected. According to ADWR, which administers water rights claims in Arizona, thousands of claimants and water users are joined in these proceedings. In Yavapai County the number of claims exceeds the annual flow of the river by several times (CYHWRMS Phase 2). The adjudication will result in the Superior Court issuing a comprehensive final decree of water rights for the river system which will establish the existence and ownership of claimed water rights, as well as important characteristics of the water rights including location of water uses, quantity of water used and date of priority of the water rights. The adjudications are conducted pursuant to ARS §45-251 to §45-264.

<u>Groundwater Law</u> - Groundwater is administered separately, or non-conjunctively, from surface water in Arizona. In recognition of supply depletion in some areas of the state, the Arizona legislature passed the Groundwater Management Code of 1980 in order to create a framework to manage the state's groundwater supply within designated AMAs. The primary goals of the Code, to be administered by the ADWR, are to control severe overdraft within AMAs; provide a means to allocate the state's limited groundwater resource; and augment the groundwater supply through water supply development. The Groundwater Code is administered pursuant to ARS §45-401 to §45-704

The Code established three levels of water management to respond to different groundwater conditions (ADWR Overview of Groundwater Code). The lowest level of management includes general provisions that apply statewide and includes most of Yavapai County. The next level of management applies to Irrigation Non-expansion Areas (INAs) of which there are none in Yavapai County. The highest level of management, with the most extensive provisions, is applied to AMAs where groundwater overdraft is most severe. The PrAMA is the only AMA located in Yavapai County.

<u>Private Domestic and Exempt Wells</u> - 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 are called "exempt wells". From the period of 1985 to 2005 there has been a 267% increase in the number of exempt wells (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.

<u>Effluent</u> - Effluent is defined as "water that has been collected in a sanitary sewer for subsequent treatment in a facility that is regulated pursuant to Title 49, Chapter 2. Such water remains effluent until it acquires the characteristics of groundwater or surface water" (ARS §45-101). A city that produces effluent is free to use it without regard to the

laws governing surface water and groundwater. Effluent use is considered a renewable supply and AMA management plans contain a number of regulatory incentives for effluent use (ADWR 2011 Water Atlas Volume 1 Appendix C). Some communities in Yavapai County currently utilize effluent and Yavapai County has provision for use of effluent for golf courses.

<u>Recent Legislation</u> - Groundwater is intensively managed within Arizona's five Active Management Areas by the Arizona Groundwater Management Code. Although there is constantly new legislation regarding water in Arizona, only a portion of it applies directly to the PrAMA. A summary of pertinent, recent (2007) legislation is given below. Please note that in many cases, the legislation enables the jurisdiction to create policies, but does not require action from them.

It is important to note that while some of this legislation allows the County to take action, it has not all been adopted by the Board of Supervisors. An example of this is SB 1575 which has not been adopted by the Board of Supervisors of Yavapai County.

HB 2484 amended ARS §45-596 (2007) prohibits drilling a new well that is likely to cause contaminated groundwater to move from one polluted site to another well.

HB 2692 amended ARS §41-3014.06, §49-1201, §49-1202, §49-1203, §49-1261, §49-1263, §49-1264, §49-1265 and §49-1267 (2007) authorizes the Water Infrastructure Finance Authority (WIFA) to provide financial assistance for water supply development projects, creates a Water Supply Development Revolving Fund and establishes the Water Supply Development Fund Committee. HB 2962 also contains a conditional enactment, which links HB 2692 to passage of legislation that establishes water adequacy provisions.

SB 1575 amended ARS §9-463.01, §11-806.01, §32-2181, §32-2181.02, §32-2183, §32-2197.08, §45-108 and added §33-406, §45-108.01, §45-108.02 and §45-108.03 (2007) allows counties, cities and towns to require new subdivisions that are located outside an AMA to have an adequate water supply in order for the proposed development to be approved.

# The Arizona Department of Water Resources' Third Management Plan

According to the Arizona Groundwater Code, the Arizona Department of Water Resources is required to utilize management plans that encompass 10 year time blocks to help reach the goal of Safe Yeild in the AMAs. Currently, ADWR is developing the Fourth Management Plan and began this process with an assessment of historical water supply and demand characteristics (November 2010). The assessment notes that "the total volume of groundwater in the Prescott AMA is about 3 million acre-feet." The Department maintains over 100 wells and many surface water gauges for monitoring throughout the AMA.

Ongoing hydrogeological studies in the AMA provide a groundwater flow model of the regional aquifer system. The PrAMA was declared in 1999 to no longer be in a safe-yield condition as a result of monitoring and these studies. The PrAMA is still in a non-safe-yield condition according to the November, 2010 assessment. This assessment includes a projection of supply and demand to 2025 (See the PrAMA Water Use Summary in the appendix).

Using the groundwater flow model, well monitoring, population projections by the Arizona Department of Economic Security (DES), and other fact-finding methods, ADWR considers water supplies and demands for determining on-going progress toward a safeyield condition in the PrAMA. Water budgeting scenarios have been developed to establish current baseline and future projected conditions. The graph of these scenarios can be found in the appendix.

Throughout most of Arizona, population growth has been consistently rapid for many decades. In fact, Yavapai County experienced a 25.9% change in population from 2000 to 2010, according to the 2010 U.S. Census; this is compared with a 24.6% change in Arizona population from 2000 to 2010. The Arizona DES projects that the County will continue to grow at an average annual growth rate of 2.05% over the next twenty years, with a 2030 population of approximately 355,642.

# Yavapai County Water Advisory Committee

The City of Prescott began investigating the Big Chino Sub-Basin\_as a possible source of additional water supplies beginning in 1977. By the early 1990's Prescott had purchased water ranch properties near Paulden, and had exchanged its CAP allocation for recognition in State Statute that it had a right to transport water from the Big Chino Sub-Basin. By 1999, concerns arose over the possible impact on the Verde River flow resulting from potential Big Chino Basin groundwater withdrawals. This issue sparked growing concern over the County's water resource planning. As a result, the Yavapai County Board of Supervisors, in conjunction with the cities, towns, Tribes and ADWR, created the Yavapai County WAC. The WAC functions as a County-wide "consensus committee that is working to provide a water management strategy for Yavapai County." The WAC's discussions focus on managing County-wide "water resources in a sustainable fashion, maintaining economic viability and protecting aquatic and riparian environments.' The WAC's key objectives are:

- 1. Identify and promote Yavapai County regional water management and conservation strategies that ensure sustainable use of water supplies, enhance economic vitality and that protect the base flows of the County's rivers and streams.
- 2. Maintain strong communication links among federal, tribal, state, county, local government, individual citizens and all other stakeholders.
- 3. Promote education regarding water resource knowledge and promote informed use of water resource studies and planning tools.
- 4. Monitor and analyze enabling legislation that will provide a local basis for management of water resources (Yavapai County, 2011)

In its research and communications with all stakeholders, the WAC shares information and resources with many government agencies and committees, boards and citizen groups, most of which are delineated in a list in the appendix.

# **Developed Water Supplies and Projected Demands**

This subsection presents known, existing data on water use in the Verde River Watershed and demands from private water planning areas and companies. Projected

demands in the PrAMA are also presented, while estimates of water use and/or projections in watersheds are discussed.

<u>Water Supply</u> - Almost all domestic water demand in Yavapai County is provided for by either centralized water distribution systems or individual wells. These water systems primarily rely on groundwater for the source of supply although communities throughout the county are either actively recharging reclaimed water or are looking at ways to augment aquifers through recharge. Additionally, the City of Prescott actively recharges surface water from Watson and Willow lakes into the aquifer to augment regional groundwater supplies. Irrigation users throughout the county depend on wells, but the largest irrigation use of water occurs in the Verde valley where direct diversion from the Verde River and tributary streams provides the water supply. Centralized distribution systems are generally owned and operated by either municipalities or private water companies or districts. Municipalities such as Prescott, Prescott Valley Chino valley, Cottonwood, and Jerome maintain water production and distribution systems for water users within their individual corporate limits.

In 2006, the CYHWRMS was initiated. While the CYHWRMS study is at an appraisal level only, Phase 2 of the CYHWRMS is an inventory of the existing known water resources within and outside of the study area that could be considered in development of alternatives to meet the future unmet demands. There are many potential sources of water including groundwater which may be part of alternative to meet the future demand. CYHWRMS is progressing with development and evaluation of potential alternatives, however, the study is not complete and results are not yet available.

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.

As previously stated and referenced, the Arizona Water Atlas provides a summary of knowledge of water resources in the Hassayampa and Bill Williams watersheds. Groundwater is the most probably source for future water demands resulting from population in those basins.

# 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 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

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.

# 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 following map depicts the approximate locations of planning areas and the boundaries of the PrAMA as well as the CYHWRMS area, discussed in the next subsection.

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 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. See map below for reference.

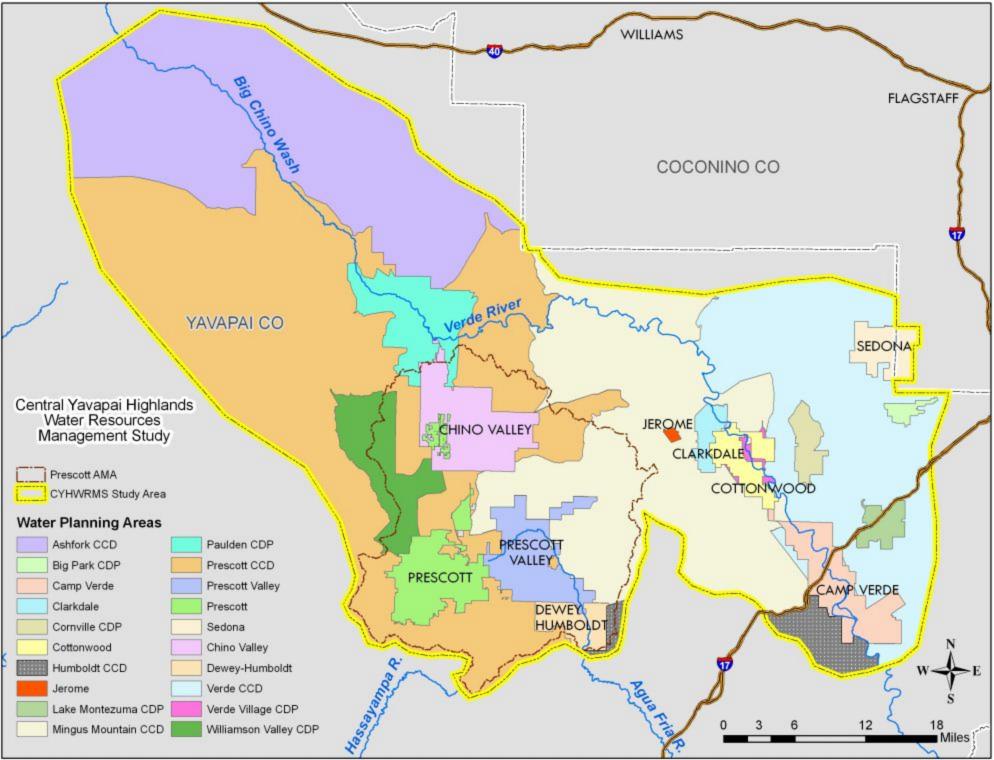
#### Map: Central Yavapai Highlands Water Resources Management Study

# Upper Agua Fria Demand Analysis Report

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.

#### Satisfying Future Demand

Many alternatives are being developed in the effort to meet future demands within Yavapai County. Although many alternatives are in appraisal stages, many 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 currently identifying alternatives 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.



#### Goals, Objectives and Recommendations

#### Goal 1: Promote conservation and reuse of water.

- Objective a: Promote conservation and reuse of water used for residential, agricultural and industrial uses.
- Objective b: Promote water wise landscaping.
- Objective c: Encourage efficiency in homes to conserve water.
- 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.
- Objective e: Encourage the preservation of the Verde River and all other major waterways in Yavapai County and support the protection of riparian resources.

#### Goal 2: Continue County-wide education on water resources management.

- Objective a: Educate the public about strategies for rainwater harvesting including: active rainwater harvesting, passive rainwater harvesting, and low impact development.
- Objective b: Educate the public about existing knowledge of water resources management and the emerging scientific studies.

#### Goal 3: Identify water resources.

Objective a: Prepare a list of alternatives to continue to supply water to a growing county.

#### Recommendations

- 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.
- Educate the public about existing incentives for water wise landscaping
- 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)

# V. OPEN SPACE ELEMENT

#### Introduction

The Arizona Statutes of the late 1990's through mid-2002, known as the Growing Smarter legislation, mandate "planning for open space acquisition and preservation" for all counties with populations over 200,000. The Statutes add that Open Space planning is to include inventories of open space areas, recreational resources and designations of access points; analysis of forecasted needs; and policies for management and protection and for the promotion of a regional system of integrated open space and recreational resources.

Additionally, the Statutes direct that an Open Space Element "shall not designate private or State land as open space, recreation, conservation or agriculture unless the county receives the written consent of the landowner or provides an alternative, economically viable designation in the general comprehensive plan or zoning ordinance, allowing at least one residential dwelling per acre. If the landowner is the prevailing party in any action brought to enforce this subsection, a court shall award fees and other expenses to the landowner. Each county shall incorporate this subsection into its comprehensive plan and provide a process for a landowner to resolve discrepancies relating to this subsection."

The Yavapai County Open Space Element does not designate private or State land as open space, recreation, conservation or agriculture.

#### Federal and State Open Space and Recreation Lands

Open Space is commonly defined as dedicated, reserved or conserved lands, generally held in the public domain for specific purposes, such as for recreational uses, and for unique historic, environmental or scenic quality protection. Yavapai County is richly endowed with hundreds of thousands of acres of public lands. Almost 74% of the County's area is owned and maintained by Federal or State agencies as shown in the accompanying chart.

#### FEDERAL/STATE LANDS IN YAVAPAI COUNTY

USDA, U.S. Forest Service Lands	38.0%
Tribal Reservations	1.0%
AZ State Lands	25.0%
Bureau of Land Management	9.2%
National Monuments	1.3%
All Other Land Private Property	25.5%

<u>State Trust Lands</u> - Although the ASLD controls 25% of the County's area, most of it is held in trust for Arizona's educational and other institutions, and are not dedicated or reserved for public open space or recreation. Under State charter, ASLD has the responsibility on behalf of beneficiaries to assure the highest and best use of trust lands. The Federal enabling act and State constitution mandate that fair market value must be obtained from all trust land transactions that include sales and commercial leasing. All revenues derived from the sale of trust lands are placed in a fund that benefits fourteen (14) beneficiaries. Given this well-defined mission, development can and does occur on State-owned land.

<u>U.S. Forest Service (USFS)</u> - USFS manages lands for the sustained yield of goods and services from national forest lands to maximize long-term public benefits in an environmentally sound manner. The USFS has authority under a number of statutes, when it is in the public interest, to exchange lands with non-federal parties within the boundaries of national forests. Public interest considerations include: State and local needs; protection of habitats, cultural resources, watersheds, and wilderness and aesthetic values; enhancement of recreation opportunities and public access; consolidation of lands for efficient management; implementation or accommodation of existing or planned land uses or plans; and fulfillment of public needs.

Nearly two million acres of USFS lands occupy most of the eastern third of Yavapai County and large portions of the Central Region. The majority of the USFS properties are contained in Prescott National Forest's approximately 1.2 million acres which adjoins both the Central Yavapai Region and the Verde Valley area. East of the Verde Valley area is the Coconino National Forest. The Verde Valley cities, towns and unincorporated communities are almost entirely surrounded by the two National Forests. The Tonto National Forest, to the south of the Prescott and Coconino National Forests, occupies the southeast corner of Yavapai County. A small portion of the Kaibab National Forest is located north of the Prescott National Forest, east of Ash Fork and south of I-40.

The Prescott National Forest consists of three ranger districts: Bradshaw, Chino and Verde, that run diagonally north to south through central Yavapai County. This area includes eight wilderness areas totaling 104,000 acres, eleven campgrounds and approximately 450 miles of trails.

The Red Rock Ranger District in the Coconino National Forest covers the most northeastern portion of the County adjacent to Coconino County. This area includes six wilderness areas totaling 156,981 acres, six campgrounds, and many miles of trails.

<u>National Park Service (NPS)</u> - The NPS plans for one purpose--to ensure that the decisions it makes are as effective and efficient as possible in carrying out the NPS mission. Their mission is to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education and inspiration of this and future generations and to cooperate with partners to extend the benefits of resource conservation and outdoor recreation throughout the country. The NPS also helps administer dozens of affiliated sites, the National Register of Historic Places, National Heritage Areas, National Wild and Scenic Rivers, National Historic Landmarks and National Trails.

East Yavapai County enjoys four National Monuments. Tuzigoot National Monument, northeast of the Town of Clarkdale contains a 110-room prehistoric site on 42 acres. Montezuma's Castle and Montezuma's Well National Monuments, on 840 acres near Camp Verde, contain five-story, 20-room prehistoric cliff dwellings. The Agua Fria National Monument is spread over approximately 71,000 acres east of I-17 between Cordes Junction and Black Canyon City. It has some 450 prehistoric sites, historic ruins and diverse habitat areas. A summary chart of National Monuments in the County follows.

MONUMENT NAME	LOCATION	ACRES	AMENITIES
Agua Fria National	gua Fria National East of I-17, Cordes		450 prehistoric sites,
Monument	Junction to Black Canyon		historic ruins, diverse
	City		habitat
Montezuma	Southeast of I-17, north of	840	5-story, 20-room
Castle/Montezuma	Camp Verde		prehistoric cliff dwelling,
Well National			visitor center/ museum,
Monuments			restrooms
Tuzigoot National	Northeast of Clarkdale, from	42	110 room prehistoric
Monument	SR 89A/Main Street,		site, visitor
	Cottonwood		center/exhibits,
			restrooms
Approximate Total Area	of Monuments	71,882	

<u>Bureau of Land Management (BLM)</u> - BLM preserves open space by managing public lands for multiple uses including recreation, livestock grazing and mining, and by conserving natural, historic, cultural, scenic and other resources found on public lands. The disposal of public lands is authorized through sales and exchanges as directed by the 1976 Federal Land Policy and Management Act. Pursuant to the Recreation and Public Purposes Act (R&PP), BLM lands may be entitled to a county or municipality to operate and manage as parks and recreational open space through a land patent.

The Department of Interior, BLM, governs almost one-half million acres of land in Yavapai County. There are five designated wilderness areas and the Agua Fria National Monument on BLM properties in western and central Yavapai County. Recreational uses include camping by permit in designated Long-Term Visitor Areas. The Lake Pleasant/Hieroglyphic Mountains Area in south Yavapai County, from the Prescott National Forest to Lake Pleasant and Wickenburg, contains numerous Off-Highway Vehicle trails on both BLM and State Trust lands. In April of 2010, the BLM approved the Bradshaw-Harquahala Record of Decision and Approved Resource Management Plan. This plan provides guidance for future land use decisions and management of the mineral estate within the management area.

<u>Arizona State Parks</u> - Four Arizona State Parks totaling more than 600 acres are located in close proximity to the Verde Valley communities. Dead Horse Ranch State Park is a large park of 897 acres, containing hiking and equestrian trails, ramadas, picnicking areas, fishing, canoeing, 45 full-service campsites and other amenities. Red Rock State Park, located 5 miles west of the City of Sedona, is a sizeable park of 286 acres known for its beautiful red rock outcroppings and educational facilities, as well as for hiking and picnicking. Jerome State Historic Park within the Town of Jerome, and Ft. Verde State Historic Park in the Town of Camp Verde, each contain historic buildings relating to Arizona's Territorial and early Statehood days.

## Yavapai County Parks

In addition to the thousands of acres of Federal and State recreation lands, Yavapai County provides parks throughout the County, mostly in the unincorporated areas. There are thirteen (13) County parks primarily scattered through the Central Region. Most County parks have been developed cooperatively with community and city/town residents. Some park properties are provided by subdivision developers or by the BLM, and often partial funding of park construction comes from Arizona State Parks Department grants.

The largest County park, Pioneer Park, contains almost 300 acres. It is located central to the entire Central Yavapai Region and was acquired for use from the BLM. It has been partially developed through a partnering with the City of Prescott, recreation organizations and citizen volunteers. Pioneer Park contains various recreational uses including 4 baseball/softball fields, two soccer fields, hiking/equestrian and picnicking activities.

Three other County parks, Quail Ridge in Chino Valley, Tenderfoot Hills in Congress and High Desert Park in Black Canyon City, have ball fields, playground and picnic equipment. The remaining County parks primarily contain picnic and playground facilities.

In the eastern parts of Yavapai County, there are County parks in the communities of Cordes Junction, Mayer, Spring Valley and Black Canyon City. Windmill Park and five other County parks have been partially funded through grants received from Arizona State Parks Department. The following chart summarizes the Yavapai County Park locations, sizes and amenities.

PARK NAME	LOCATION	ACRES	AMENITIES/DEVELOPMENT STATUS
	Prescott		Playground equipment, ramada with picnic
Castle Court Park	Valley	5.16	tables, restroom, barbeque grill
Flora Mae Ludden			Playground equipment, picnic tables, trail,
Park	Yarnell	2.98	restrooms, basketball court
			Playground equipment, large ramada with 3
	Cordes		picnic tables, 3 small ramadas/picnic tables,
Henry Cordes Park	Junction	59.89	trails, restrooms, basketball court
	Black		Community meeting building, playground
	Canyon		equipment, 1 baseball field, trails, sand
High Desert Park	City	89.71	volleyball court, ramadas, restrooms
			Playground equipment, ramadas/picnic
	Spring		tables, barbeques, 1/2 basketball court,
Kyllo Park	Valley	3.85	nature/fitness trail, restrooms
Mayer Centennial			Playground equipment, restrooms, ramadas
Park	Mayer	4.25	with picnic tables, basketball court
Morgan Ranch			
Nature Park	Prescott	14	1 mile trail, picnic table, benches
			Baseball/softball fields, soccer fields, trails,
			food service, ramadas with tables, restrooms,
Pioneer Park	Prescott	280	in-line hockey court
Prescott Country	Prescott	_	
Club Park	Valley	7	Undeveloped
Sycamore	Lake		2 picnic tables, benches, walking trails,
Community Park	Montezuma	3	restrooms, next to Beaver Creek
			2 softball fields, playground equipment, 4
		40.07	ramadas with picnic tables, restrooms,
Tenderfoot Hills Park	Congress	19.07	basketball court
			Playground equipment, multipurpose
			playfield, horseshoe & volleyball pits,
Mindmill Dork	Corpyillo	4 50	ramadas with picnic tables, pond, restrooms,
Windmill Park	Cornville	4.59	trail, next to Oak Creek
	Parks Total:	493.5	
	i Ulal.	493.3	Historic Gazebo, picnic tables, cultural
Courthouse Plaza	Prescott	4.5	activities
Courtinouse Flaza	Other Total	4.5	
		4.5	COUNTY PARKS AND RECREATION
	TOTAL	498	AREAS
	IUTAL	430	

# Yavapai County Parks and Recreation Areas

#### County and Regional Trail Networks

With the abundance of natural environmental beauty in Yavapai County, there has been much desire expressed by residents for trails, especially for hiking and equestrian purposes. The hard work of numerous volunteers, supported by governmental officials has resulted in both County-wide and regional planning efforts for future interconnected trail systems. Many trails have been adopted and developed by various agencies in the on-going implementation of the County goal.

<u>Regional Trail Networks</u> - The Towns of Chino Valley, Prescott and Prescott Valley, as well as other volunteer groups, are working together to create a region-wide connecting trails and pathways system.

One of the tri-city regional trail networks is a rail-to-trails project known as the Peavine Trail. Currently, this is an approximate 5 mile trail system that runs along the former Santa Fe Railroad bed along Watson Lake and through the Granite Dells area. Extensions of the Peavine Trail on other former rail beds extend to the Iron King Mine trail in the Town of Prescott Valley and there are plans to connect to Chino Valley. Portions of the completed Peavine Trail will run through areas of unincorporated Yavapai County as well as the three municipalities in the region.

Additionally, alternative transportation policies have been adopted in the municipal areas, such as bicycle and multi-purpose lane installations on major streets or in separated pathways, for the purpose of interconnected routing within regions. Some of the municipal/regional trail systems, e.g., Prescott's Parks/Trails, Prescott Valley's Pedestrian/Bicycle System and Sedona's Trails/Urban Pathways. The Town of Chino Valley is currently working on a Master Trails Plan which they plan to link up to the surrounding communities' trail systems, including to the Verde Valley. Details are in each municipality's General Plan.

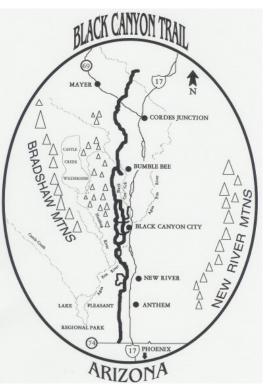
<u>Regional Trail Partnerships</u> - Other regional trails systems involve partnerships of Federal, State, County and municipalities. Three regional trail systems that exemplify these partnerships are the Prescott Circle Trail, Black Canyon Trail and the Dead Horse Trail System.

The Prescott Circle Trail, not yet completed, is a non-motorized public trail system around the Prescott basin. Segments are administered by the Prescott National Forest, Yavapai County, the City of Prescott and Embry Riddle Aeronautical University. The Prescott Circle Trail includes and connects too many trail networks throughout the Central Yavapai Region, such as the Peavine National Recreation Trail, other "Rails-to-Trails" projects and the Gheral Brownlow Trail System at Pioneer Park.

The Dead Horse Trail System, in the Verde Valley, is administered by the Arizona State Parks Department and Coconino National Forest. The trail system begins along the Verde River Greenway in Dead Horse State Park, a scenic, water-based park which offers access to the Verde River. The Park provides picnicking, full-service camping, canoeing, fishing, hiking and equestrian trails. The State Park trails connect to the Dead Horse Trail System in a 7.2 mile loop around Raptor Hill, Thumper and Lime Kiln Trails, as well as to other trails in the Coconino National Forest, providing a regional trails network. Currently, there are proposals with the Coconino National Forest to expand this trail system. The Black Canyon Trail is a non-motorized trail approximately 78 miles long, stretching

from the Carefree Highway (AZ SR 74), northward along the base of the Bradshaw Mountains, beyond SR 69 near the Town of Mayer to the Prescott National Forest. The development of this trail system is organized by the Black Canyon Trail Coalition in cooperation with the BLM, NPS and the USFS.

Dedicated public parks, trails, greenways and other conservation areas are primarily maintained by the Arizona State Parks Department, Yavapai County, cities and towns. Private individuals, organizations and homeowner associations also provide open spaces, trails and parks. Participation by private property owners in trail networks is an important part of several municipal greenway Greenwav projects programs. aim at preserving and enhancing areas along creeks river beds. while providing and trail connections to parks, schools and other community facilities.



The Prescott Greenways project encompasses approximately 10 acres which extends from the Downtown area to Yavapai College, following Miller and Granite Creeks. Currently, there is a 1.5 mile multi-use trail with plans to extend it up to 3 miles.

The Verde River Greenway State Natural Area encompasses nearly 480 acres along 6 miles of the Verde River between the Tuzigoot and Bridgeport bridges. This is a natural area adjacent to Dead Horse State Park that has been created to preserve the river in its natural state. There have been other land acquisitions along the Verde River to extend the Verde Greenway to preserve the Verde River and to create an interconnected trail system along the river.

There have also been efforts to preserve the Agua Fria as a Greenway to create a regional connection and for preservation.

In September of 2009, the PNF initiated a sustainable recreation planning process to serve as a catalyst for a landscape scale "all hands all lands" approach to address common recreation challenges and enhancing the joint capacity of land managers, communities and recreationalists to implement shared recreation goals. Goals and Strategies were developed through the collaborative process with input from a wide cross section of community members, recreation interests, as well as local government and State and Federal agencies.

<u>Other Regional/State-Wide Trails</u> - In addition to the rapidly expanding network of nonmotorized trails throughout Yavapai County, there is a growing interest in Off-Highway Motorized Vehicle (OHV) trail riding. As noted previously, there are OHV designated trails in the County on State Lands maintained by the Arizona State Parks Department. Many of these trails also run through BLM and USFS properties due to the checkerboard pattern of ownerships. An OHV trail network has been created in the "Great Western Trail", (not to be confused with "The Arizona Trail", a non-motorized trail network located in eastern Arizona, outside of Yavapai County). The Great Western Trail's alignment covers five western States, including Arizona, from Mexico to Canada. It is a corridor of a series of existing back roads, for motorized and non-motorized leisure touring.

Three segments of the Great Western Trail within Arizona have been dedicated, comprising some 700 miles of the approximate 850 total miles. This includes 80 miles through the Prescott National Forest in Yavapai County. The Great Western Trail enters the County at its south boundary, east of Black Canyon City and I-17 in the Tonto National Forest. It then meanders northerly through the Prescott National Forest, crossing I-17 at its junction with SR 169. The Trail then meanders northwesterly, around Mingus Mountain; then northerly through Perkinsville to the Kaibab National Forest at the Coconino County boundary. Segments of the Trail utilize existing Yavapai County and USFS primitive roads. A goal of the volunteer organization, the Arizona Great Western Trail Association, Inc., is to have all segments of the trail "adopted" by clubs, organizations and individuals for stewardship.

A publication of leisure tours for conventional motorized vehicles in the Central Yavapai Region was recently prepared by the Yavapai Heritage Foundation, Prescott. "Forest & Grasslands: A History of Living with the Land" describes four road trips designed for the average motor vehicle with some conditions requiring 4-wheel drive, utilizing existing State, County, municipal and USFS roads. The Forest and Grasslands Tours allow for appreciation of Yavapai County's history, as well as its grasslands and forests.

#### Regional Open Space Preservation and Acquisition

<u>The Arizona Preserve Initiative</u> - The Arizona Preserve Initiative legislation and amendments were passed by the State legislature and approved by voters during the late 1990's. The Preserve Initiative provides a process for the conservation of State Trust Lands within cities and towns, or within 1 mile of cities under 10,000 population, or within 3 miles of cities over 10,000 population which are nominated and reclassified for conservation. Two State Trust areas in Yavapai County have been petitioned and reclassified as suitable for conservation. The 1,893 acres on Glassford Hill was considered eligible for conservation based on its role in early Arizona military history, its grassland habitat for Pronghorn and other wildlife, and its scenic vistas located between two fast growing urban areas. Petitions for Glassford Hill Preserve were jointly filed by the City of Prescott and the Town of Prescott Valley. The 1,560 acres of the Badger Mountain area, located immediately southeast of the City of Prescott, is abutting the Prescott National Forest. Petitions for Badger Mountain Preserve - based on eligibilities similar to those of Glassford Hill - were filed by the Open Space Alliance of Central Yavapai County.

<u>Other Preservation/Acquisition Methods</u> - For the past several years, regional open space efforts in the Verde Valley have been on-going. Through the efforts of community leaders and planners studies and forums have been conducted. In November of 2006, the Yavapai County Board of Supervisors adopted the Verde Valley Regional Land Use Plan which expressed the desire for protection of open spaces. This Plan referred to the

Sedona Academy's "Implementing a Verde Valley Open Space Plan, 2002 Forum" document which discussed potential methods for acquiring regional Open Space with representatives of the Prescott and Coconino National Forests, Yavapai County and Verde Valley area community leaders. Strategies included partnering with State and Federal agencies or non-profit organizations such as the Nature Conservancy, Heritage Fund and the Arizona Land Trust. The use of conservation easements which prohibit development of private properties through the purchase of development rights is another implementation tactic.

Other methods include grass roots and governmental leadership, volunteer organization efforts, citizen participation and voter approvals of special taxes, among others. Intense grass roots efforts by volunteers and strong citizen participation is a method that has accomplished the creation of the Watson Woods Riparian Preserve and the acquisition of Watson and Willow Lakes in Prescott. These open space acquisition areas were the result of Prescott voters approving financing through bonds and sales taxes. Other open space parcels in the Granite Dells and Thumb Butte areas have also been procured similarly.

The Nature Conservancy and its partners have conserved nearly 6,000 acres along the Verde River's headwaters and the Verde River Greenway Natural Area in the Verde Valley. This has been a collaborative effort to conserve the Verde River; one of the Southwest's few remaining free-flowing rivers. The Verde River is an important water source for people and wildlife along its 189 mile course, including communities in the Verde Valley and in the Phoenix metro area. Three of the most recent purchases are: the Verde Springs property in conjunction with Arizona Game and Fish consisting of 293 acres that was combined with the Upper Verde River Wildlife Area; the Shield Ranch consisting of 306 acres at the confluence of the Verde and West Clear Creek and will possibly be transferred to the USFS; and the Rockin' River Ranch consisting of 209 acres across from the Shield Ranch along the Verde River that was transferred to State Parks.

Government leadership for open space and recreation acquisition is exemplified by the Yavapai County Board of Supervisors' role enabling the use of almost 1000 acres for Pioneer Park from undeveloped property of the BLM. Commitment to recreational development for County residents has been on-going in keeping with BLM guidelines at Pioneer Park.

Another method of preserving properties for open space is through the use of the Yavapai County's Planned Area Development Overlay Zoning District (PAD). The PAD encourages developers to set aside and dedicate a minimum of 25% of the development property for open space. The PAD Ordinance offers the incentive of allowing smaller home site areas than are traditionally permitted in the underlying zoning classification in return for the permanently dedicated open space areas. Many master planned communities have been approved throughout the County as PAD's, providing as much as 50% reserved open space and recreation areas.

#### Goals, Objectives and Recommendations

#### Goal 1: Enhance open space and recreational opportunities.

- Objective a: Continue participating in Sustainable Recreation Planning in conjunction with the Prescott National Forest to reserve desirable public lands for recreation, open space protection of wildlife habitats and buffering of residential areas.
- Objective b: Use open space buffers to separate communities and preserve their identities.
- Objective c: Encourage the preservation and connectivity of existing trails in new developments for multi-use and motorized trails.
- Objective d: Promote wildlife corridor connectivity between open spaces in new and existing developments, in support of the 2011 Yavapai County Wildlife Connectivity Assessment and 2006 Arizona Wildlife Linkages Assessment.

#### Goal 2: Preserve the open space character of the county.

Objective a:	Protect scenic views and mountain vistas by encouraging new
,	development to adapt sensitively to natural areas and by
	protecting wildlife corridors.
Objective b:	Encourage the protection of riparian areas, watercourses and
-	associated floodplains in new developments.
Objective c:	Support and encourage the retention of agricultural operation (e.g.
-	ranches, farms, vineyards and wineries).
Objective d:	Encourage property owners to maintain and protect historic
	access to public lands through their property.

#### Recommendations

- Identify techniques for acquisition or easements on open lands, including farmland, riparian areas and wildlife corridors (e.g. transfer development rights, conservation easements, etc.).
- Discourage development in environmentally sensitive locations such as floodplains, view sheds and wildlife corridors.
- Encourage developments to use cluster development or the conservation subdivision alternative.

#### VI. ENERGY ELEMENT

#### Introduction

The Energy Element of a County Comprehensive Plan is required in ARS §11-804. The Statute calls for a plan to reference policies that encourage and provide incentives for the efficient use of energy and an assessment to identify policy and practices that increase the use of renewable energy sources. The Energy Element is required for jurisdictions with populations between 125,000 and 200,000 by the Growing Smarter Plus Legislation that went into effect in May of 2000.

#### Purpose

The Yavapai County Energy Element is an important component of the Comprehensive Plan. By developing a comprehensive energy strategy now, the County can be prepared to shape sustainable growth. Through the Energy Element the County can encourage the efficient use of energy and promote clean, renewable sources of energy production. The regional environment can be affected by the method of energy generation and distribution. It is important for Yavapai County to promote conservation to protect sensitive areas in the regional environment. In order to minimize the impact and issues of siting large scale facilities, key items will need to be addressed such as noise, visual aesthetics, water usage, protection of sensitive areas and energy storage. These desired outcomes may be facilitated thru formalized coordination with the Arizona game and Fish Department in the pre-evaluation of proposed utility scale renewable energy projects, and by promoting compliance with Arizona Game and Fish Department Wind and Solar Energy Guidelines for proposed utility scale renewable energy projects in Yavapai County.

The County can also encourage responsible energy use by supporting enhanced building construction design in order to provide additional energy efficiencies, as well as by encouraging mixed sustainable land uses. Sound energy policies can provide economic and environmental benefits for the County residents. There is new societal awareness of the use of renewable energy resources and technologies as a departure away from the primary non-renewable energy resources. This increased awareness is due in part to local, State and Federal incentive programs along with the requirements and guidelines for various agencies beyond Yavapai County.

#### Background

The United States Congress passed the Energy Policy Act of 2005 which was seen as an attempt to address the country's growing energy concerns. This allowed for what is called "net metering" which is defined by the Act as:

"Each electric utility shall make available upon request net metering service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term 'net metering service' means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period." In October of 2008 net metering rules were adopted by the Arizona Corporation Commission (ACC) which went into effect in March of 2009. The ACC net metering requires that utility companies buy back excess electricity produced by a homeowner up to 125% of their consumption needs. These net metering rules do not apply to large scale power generating facilities which are designed specifically to generate power for off-site sale.

The above mentioned net metering rules in addition to rebates and tax incentives have driven the citizenry of the Country to invest in alternative energy sources be it solar, wind, geothermal, as well as others.

#### Current Conditions

In 2009 the Board of Supervisors adopted basic guidelines for solar and wind energy development into the Planning and Zoning Ordinance for both small scale (residential on-site use) and large scale (commercial production for off-site use) power generating facilities. The adopted guidelines allow for net metering to be allowed as a matter-of-right as long as specific criteria are met. Several studies have been done in regard to the viability of renewable energy sources in the State of Arizona by the National Renewable Energy Laboratories (NREL), the U.S. Department of Energy and non-governmental agencies. There have been no specific studies produced in Yavapai County for either solar, wind, or other renewable energy sources.

Recently the Arizona State Legislature passed ARS §11-254.07 which established the concept of Renewable Energy Incentive Districts (REID) patterned loosely after the Growing Smarter Act's existing infill incentive districts which was adopted under HB 2336 in 2009. This would enable County Supervisors to establish a REID district provided the proposed area meets specific criteria.

The Development Services Department adopted the 2006 International Energy Conservation Code (IECC) standards for new residential construction. There are 5 Leadership in Energy and Environmental Design (LEED) certified commercial buildings and Energy Star home construction is on the rise in Yavapai County. To earn the Energy Star rating, a home must meet strict guidelines for energy efficiency set by the U.S. Environmental Protection Agency (EPA). These homes include additional energy-saving features that typically make them at least 20–30% more efficient than standard homes. The trend towards energy efficiency will only increase as sustainable renewable energy solutions remain on the forefront of the nation's agenda. Even new or proposed County buildings have been designed with energy conservation in mind. Yavapai County has also purchased hybrid vehicles to supplement its fleet.

<u>Solar Conditions</u> - Currently in Yavapai County there are two large scale solar power generating facilities each over 100 acres that have been approved by the Board of Supervisors. Since 2008, there have been approximately 767 on-site residential solar permits issued by Yavapai County. These permits include solar water heating units, roof mounted solar systems and ground mounted solar systems. The Megapolitan Sun Corridor study designates portions of Yavapai County as ideal locations to harvest solar energy. (See Morrison Institute for Public Policy, 2008.) Solar development will only increase as time goes on, both as technology becomes more efficient and as benefits of solar increase which include rebates and tax credits, lower energy costs and less expensive technology.

<u>Wind Conditions</u> - There have been studies done to analyze the wind energy potential in Arizona statewide; however, these studies are only as accurate as the data that is collected. There have not been studies that have focused on Yavapai County in particular. A possible reason for the lack of specific information on Yavapai County wind possibilities is that there are very few meteorological or MET towers that have been erected in the County. MET towers are towers generally 60 meters tall that are constructed for the purpose of collecting meteorological data. The data collected from these MET towers would be used to determine whether an area would be suitable for harvesting wind energy. Recently, several MET towers have been constructed in Yavapai County. The Yavapai County Board of Supervisors has approved one wind power generating facility. Staff continues to receive many inquiries for potential future wind projects. In regard to on-site (typically residential) wind power generation, Yavapai County issued 10 permits between the years 2008-2010.

<u>Geothermal Conditions</u> - There are a variety of geothermal resources that can be used on both large and small scales. A utility company can use the hot water and steam from reservoirs to drive generators and produce electricity for its customers. Other applications apply the heat produced from geothermal directly to various uses in buildings, roads, agriculture and industrial plants. Still others use the heat directly from the ground to provide heating and cooling in homes and other buildings. Additional geothermal resources exist miles beneath the earth's surface in the hot rock and magma. In the future, these resources may also be useful as sources of heat and energy. The NREL, which is a division of the U.S. Department of Energy, predicts that up to 20 geothermal power generating facilities could be built in Arizona within the next 10 years. Yavapai County has permitted 23 residential geothermal systems. These systems can provide heating, cooling and hot water to a home.

#### Goals, Objectives and Recommendations

#### Goal 1: Encourage and provide incentives for efficient use of energy.

- Objective a: Identify areas that could be conducive to large scale renewable energy production.
- Objective b: Encourage the creation of criteria in order to minimize potential issues/impacts with large scale facilities (i.e. noise, visual aesthetics, preservation of wildlife corridors, microclimate and sensitive habitats, and energy storage).
- Objective c: Encourage the formulation of a volunteer renewable energy group to formulate ideas and plans on different size projects.
- Objective d: Encourage proponents of utility scale renewable energy projects to consult early with and comply with direction provided by the Arizona game and Fish Department and US Fish and Wildlife Services and their Renewable Energy Guidelines, to reduce impacts to resources identified in Goal #1, objective b.

#### Goal 2: Identify policies and practices for the greater use of renewable energy.

- Objective a: Provide non-financial incentives for the incorporation of renewable energy in new and existing construction, both residential and commercial, in order to promote local and on-site energy production and sustainability.
- Objective b: Adopt residential and commercial codes to encourage energy efficiency.

#### Goal 3: Encourage education of the public regarding renewable energy.

Objective a: Promote and encourage education to County residents regarding types of renewable energy and potential benefits of renewable energy.

#### Recommendations

- Encourage dialogue with internal and external agencies both State and Federal, on placement of large scale renewable energy facilities.
- Continue to encourage the preservation of wildlife corridors in the siting of large scale renewable energy facilities by providing potential applicants with various agency guidelines during the planning process.
- Encourage the development of renewable energy sources that are not water intensive.
- Encourage on-site renewable energy infrastructure as part of the technological design for public and private facilities.
- Streamline the permitting process with pre-engineered plans for renewable energy projects.

#### VII. ENVIRONMENTAL ELEMENT

#### Introduction

Arizona State Statutes require that an Environmental Planning Element contain "analysis, policies and strategies to address any anticipated effects of the plan's elements and new development called for by the plan on air and water quality and natural resources. These policies and strategies will have countywide applicability and will not require environmental impact statements beyond those already required".

Recent outreach meetings 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 may be considered a primary planning objective.

#### 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 land values by retaining as much of their natural characteristics as possible.

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 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.

Riparian areas facilitate movement 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.

Perennial streams and rivers in Yavapai County include the Verde River, Oak Creek, Wet Beaver Creek, West Clear 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.

#### <u>Wildlife</u>

Yavapai County features impressive, grand landscapes, valued not only for their scenic qualities, but also for the 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 and habitat fragmentation in association with new roadways and other forms of development. Federally designated critical habitats are important components of our landscape and ecosystems because they protect Threatened and Endangered Species (TES).

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 ecological functions. The Arizona Wildlife Linkages Workgroup, a partnership of public and non-governmental agencies, is currently working on completing Arizona's Wildlife Linkages Assessment. 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.

#### **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.

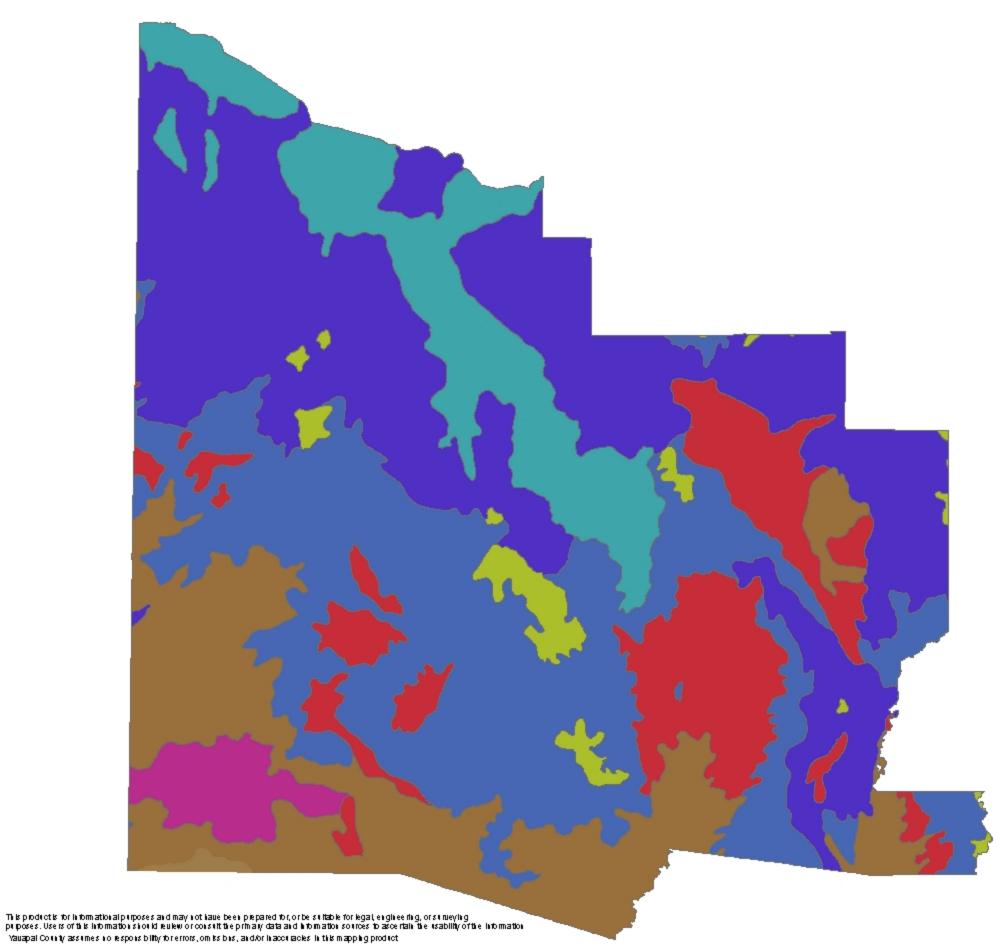
The Seven Biotic Communities in Yavapai County are:

- Sonoran Desertscrub: 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.
- Mojave Desertscrub: Generally located between 3000 to 5000 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 Shadescale.
- Chaparral: Located on elevations from 4000 to about 6000 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 3500 feet.
- Semi-desert Grasslands: Grasses located above 3500 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 5000 to 7000 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 pinion pine, which grows in slightly wetter areas.
- Montane Ponderosa Pine Forest: From 6000 to 8000 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. Gambel oak is the most important associate of Ponderosa Pine in these forests. Other plant species include Cliffrose, Currant and Apache Plume.

#### Map: Yavapai County Biotic Communities

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 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 horses, livestock and wildlife. They can also damage meadows and riparian areas, increase fire frequency and increase the rates at





### Yavapai County Biotic Communities

Legend

### COMMUNITY

SONORAN DESERTSCRUB

PINON PINE-JUNIPER WOODLAND

CHAPPARAL

MOHAVE DESERTSCRUB

MONTANE PONDEROSA PINE FOREST

PLAINS AND GREAT BASIN GRASSLAND

SEMIDESERT GRASSLAND



1 inch = 11.93 miles 1 centimeter = 7,558.41 meters

### DECEMBER OF 2011

which fire spreads. They tend to occupy severely burned areas, damaged riparian areas, roads and utility corridors, and heavily used recreation areas and other disturbed sites.

#### Forest Ecosystem Health

The USFS manages about 38 percent of the land in Yavapai County. Most of the land lies within the Prescott and Coconino National Forests and the rest lies within the Kaibab and Tonto National Forests. 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.

#### 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. 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 U.S. EPA.

Air pollution in Yavapai County comes from three sources; dust and other particulates, prescribed 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. ADEQ does have rules applicable to reducing dust from open areas, dry washes or riverbeds, roadways and streets. 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.

A small portion of Southern Yavapai County falls within an area that is regulated by ADEQ according to vehicle emissions. This area is located in a maintenance area or a nonattainment area for any air quality regulated pollutants.

#### **Goals, Objectives and Recommendations**

## Goal 1: Support programs which educate the public on maintaining a high level of water quality and conservation.

- Objective a: Create incentives to upgrade old septic systems and develop educational materials on maintaining septic systems.
- Objective b: Encourage projects to provide a wastewater treatment system to minimize septic systems.
- Objective c: Encourage developments to preserve riparian habitat and native landscaping, develop gray water and drip irrigation systems.
- Objective d: Support requirements that address run-off issues from roads and agriculture.

Objective e: Enhance partnerships with watershed protective organizations.

#### Goal 2: Encourage programs to maintain and improve air quality standards.

- 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.
- Objective b: Encourage the use of dust-free surfaces or pursue dust control measures on unpaved maintained roadways.
- Objective c: Maintain clean air by mitigating sources of pollution (e.g. traffic congestion, open burning and heavily travelled unpaved roads).

### Goal 3: Encourage and support projects which maintain balance between the natural and built environment.

- 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.

#### Goal 4: Support green development.

- 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).

#### Goal 5: Encourage waste and litter reduction.

- 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.

#### Recommendations

- 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.

#### VIII. COST OF DEVELOPMENT ELEMENT

#### Introduction

Providing adequate infrastructure is increasingly important as the County grows. A basic premise of this element is to provide background information recognizing the direct link between the build-out of land and the costs of providing infrastructure to new developments.

ARS §11-804.C.4 requires that the Comprehensive Plan contain a cost of development element that identifies policies and strategies that the County may use to require development to pay its fair share toward the cost of additional public facility needs generated by new development, with appropriate exceptions when in the public interest.

This element shall include:

(a) A component that identifies various mechanisms that are allowed by law and that can be used to fund and finance additional public services necessary to serve the development, including bonding, special taxing districts, development fees, in lieu fees and facility construction, dedications and privatization.

(b) A component that identifies policies to ensure that any mechanisms that are adopted by the county under this element result in a beneficial use to the development, bear a reasonable relationship to the burden imposed on the county to provide additional necessary public facilities to the development and otherwise is imposed pursuant to law."

#### Background

As stated above, the intent of the enabling Statute is to address methods by which new development contributes to the increased service costs of the growth it creates. Examples of increased burdens include, but are not necessarily limited to, transportation infrastructure, law enforcement, county administrative services, public health services and education.

Currently, the only contributions that Yavapai County receives for cost of development are in the form of road development impact fees and property taxes that increase when vacant land is improved.

In 1997 Yavapai County adopted a Road Development Impact Fee. The \$3400 fee is payable upon issuance of a building permit for a single family dwelling. Units in hotels and motels are assessed half this amount.

It is important to note that the Road Development Impact Fee is dedicated solely to the funding of construction of roadways identified in a specific regional roadway development plan. The fee cannot be utilized for general maintenance or minor road construction. The Road Development Impact Report as well as the Road Impact Development Fee Plan Map is available on the Yavapai County website.

#### Funding Options

The following is a list of funding options referenced in the Statute when considering paying for growth:

- Bonding
- Special Taxing Districts
- Development/Impact Fees
- In Lieu Fees
- Facility Construction
- Dedications
- Privatization

A brief description of each funding option is provided below. It is important to note that when the word "developer" is utilized, it is applicable not only to the large scale developer but may, in some cases, also be applicable to the individual builder or lot owner.

<u>Bonding</u> - Bond issued by a state, city, or local government. Municipalities issue bonds to raise capital for their day-to-day activities and for specific projects that they might be undertaking. Usually bonding pertains to development of local infrastructure such as roads, sewerage, hospitals, etc.

<u>Special Taxing Districts</u> - Special taxing districts are generally created through the County legislative authority to meet a specific need of the local community. The need may be a new service or a higher level of an existing service. They are political subdivisions of the state and come into existence, acquire legal rights and duties, and are dissolved in accordance with statutory procedures. Enabling legislation sets forth the purpose of the district, procedures for formation, powers, functions and duties, composition of the governing body, methods of finance and other provisions. Examples include waste-water districts, water districts and road improvement or maintenance districts. With improvement districts the cost of these services is paid solely by the property owners within the district and not by County general service funds.

<u>Development Impact Fees</u> - A fee imposed on property developers by jurisdictions for the new infrastructure that must be built or increased due to new property development. These fees are designed to offset the impact of additional development and residents on the County's infrastructure and services, which may include roads, the water and sewer network, police and fire protection services, schools and libraries. Impact fees can be paid by the original developer or subsequent land owners when construction is permitted. Currently Yavapai County only imposes Road Development Impact Fees.

<u>In Lieu Fees</u> - A service or improvement dedicated to the public by the developer; the value of which offsets future development service or infrastructure costs the County may pay. For instance, as a condition of approval a developer may offer to dedicate and build roads, or improve existing roads impacted by the proposed development.

<u>Facility Construction</u> - A developer may offer to construct certain types of facilities as part of a defined development agreement to defray or offset public facility costs of the

County. Examples include construction of schools, fire stations, law enforcement facilities, parks and wastewater treatment plants.

<u>Dedications</u> - A developer may agree to dedicate tracts of land for specific uses that benefit the public being served by the uses. Examples include those in the Facility Construction definition with the caveat that the developer is not responsible for the construction of the facility. It could also include dedication for rights-of-way, trails and open space.

<u>Privatization</u> - The process of providing services from a private entity that would normally be provided by a governmental agency. Examples include fire protection or water distribution. A developer may choose to cause these services to be available at a cost to the end user in order to offset future service costs normally incurred by the County. For instance many incorporated jurisdictions have privatized trash collection.

#### Goals, Objectives and Recommendations

### Goal 1: Encourage new development to pay their fair share of facility and service costs to support its users' demand impacts.

- Objective a: Promote cluster development to support efficient design methods.
- Objective b: Factor in estimated operations and maintenance expenses.
- Objective c: Promote fiscal impact analyses of proposed projects' infrastructure and service expense into the future.
- Objective d: Ensure developers provide financial assurances for infrastructure maintenance.
- Objective e: Support service infrastructure in subdivisions (including, but not limited to; fire defense, water/sewer service, improved roads, parks and applicable needs of the local community).

## Goal 2: Ensure that new development does not adversely affect existing development, infrastructure, and the community.

Objective a: Ensure developers prove the resources are available to sustain their development without any additional cost or detriment to cities/towns/counties resources.

- Objective b: Encourage cost-beneficial infill development by utilizing existing systems and facilities already in place.
- Objective c: Review & update application, development impact and user fees on a regular basis.
- Objective d: Encourage establishment of special districts to pay for infrastructure and improvement costs.
- Objective e: Scale impact fees and allocate appropriately for future growth and needs.

#### Recommendations

- Support multiple secure mechanisms to fund and finance public services necessary to serve the development.
- Support efforts to form special districts.
- Support legislation that streamlines the special district process.
- Ensure policies/programs imposed are pursuant to law.

#### IX. GROWTH AREAS ELEMENT

#### Introduction

Arizona's Growing Smarter legislation and ARS §11.804.C.2 require that counties with populations exceeding 200,000 devote a section of their Comprehensive Plan to growth areas. Specifically, they must identify areas that are suitable for multi-modal transportation and infrastructure improvements that apply to concentrated uses. Growing Smarter requires policies for mixed-use planning to increase the efficiency of circulation systems, to make infrastructure expansion more economical and to conserve natural resources and open areas.

#### Purpose

Historically Yavapai County's Comprehensive Plan has included references to growth trends in the Land Use Element of the Plan. However, because 2010 Census data confirms the County has exceeded the 200,000 population threshold, it will be necessary to adopt a stand-alone Growth Element that addresses growth areas, specifically as they relate to transportation and infrastructure improvements. Growing Smarter requires policies for mixed-use planning to increase the efficiency of circulation systems, to make infrastructure expansion more economical and to conserve natural resources and open areas.

The Growth Area Element should be used in tandem with the Transportation and Land Use Elements to guide sound planning and growth policies.

#### Background

#### Current Conditions

<u>Population Trends</u> - While the population in Yavapai County increased by more than 400% during the past three decades, its rate of change decreased from approximately 84% from 1970-80, 58% from 1980-1990, 56% from 1990-2000 and 26% from 2000-2010. This declining rate of change is common as the base population enlarges. Other data also reveals aspects of the current populations which may affect future growth trends. The 2010 Census shows that the majority of areas in Yavapai County have populations with median ages above the child-bearing years. Average household sizes correspond to this statistic.

<u>Median Age and Households</u> - Yavapai County's median age, 47.7 years, is older than the United States' median age, 36.5 years, and older than Arizona's median age, 34.8 years. Consequently, it is not surprising that Yavapai County's average household size, 2.41, is smaller than Arizona's 2.76 persons per household and the US average of 2.6.

If these trends continue, in only a few decades, there will be a much higher proportion of seniors living in small and rural communities. And, if even a portion of these older residents cannot or choose not to drive, communities will need to carefully rethink personal transportation options and the County will have to reconsider its Land Use policies to address the needs of these communities.

<u>Long Range Population Projections</u> – The CYHWRMS provides population projection rates for the County and certain places in the County – other places have been projected with this same rate. As a point of reference, the 1990, 2000, and 2010 Census populations have been included in the charts below.

State, County & Area Projections								
	J	US Census			Population Projections*			
	1990	2000	2010	2015	2020	2025	2030	
Arizona State	3,665,228	5,130,632	6,392,017	7,144,215	7,984,930	8,924,578	9,974,801	
Yavapai County	107,714	167,574	211,033	235,867	263,623	294,646	329,319	
Total Eastern Yavapai County	36,616	55,543	64,321	71,890	80,350	89,805	100,374	
Total Prescott Area	36,058	45,861	54,796	61,244	68,451	76,507	85,510	
Total Chino Valley Area	6,791	15,347	20,719	23,157	25,882	28,928	32,332	
Total Prescott Valley Area	13,436	31,586	46,803	52,311	58,466	65,347	73,037	
Total Western Yavapai Area Population	14,813	20,019	24,394	27,265	30,473	34,059	38,067	

#### LONG RANGE POPULATION PROJECTIONS

Throughout most of Arizona, especially Yavapai County, population growth has been continually rapid for many decades. Yavapai County experienced a 26% change in population from 2000 to 2010, as compared to the State's rate of 24%.

The following charts review the population projections in the major growth regions of Yavapai County. The same 2.25% growth rates have been applied to each region, although it is important to acknowledge that some areas have grown more quickly than others and some have more potential for growth than others.

State, County, and Eastern Yavapai County Projections							
	L L	IS Census	S				
	1990	2000	2010	2015	2020	2025	2030
Arizona State	3,665,228	5,130,632	6,392,017	7,144,215	7,984,930	8,924,578	9,974,801
Yavapai County	107,714	167,574	211,033	235,867	263,623	294,646	329,319
City of Cottonwood	5,918	9,179	11,197	12,515	13,987	15,633	17,473
Verde Village/Bridgeport	7,223	10,610	13,483	15,070	16,843	18,825	21,040
Town of Clarkdale	2,144	3,422	4,110	4,594	5,134	5,738	6,414
Cornville Area	2,420	3,335	3,433	3,837	4,289	4,793	5,357
Town of Camp Verde	6,243	9,451	10,873	12,153	13,583	15,181	16,967
Lake Montezuma Area	1,841	3,344	4,775	5,337	5,965	6,667	7,451
City of Sedona	5,327	7,229	6,911	7,724	8,633	9,649	10,785
Village of Oak Creek Area	3,024	5,245	6,335	7,080	7,914	8,845	9,886
Town of Jerome	403	329	444	496	555	620	693
Cherry Area	14	60	75	84	94	105	117
Red Rock Area	0	344	551	616	688	769	860
Page Springs Area	0	257	306	342	382	427	478
Rural Yavapai County	2,059	2,738	1,828	2,043	2,284	2,552	2,853
Total Eastern Yavapai County	36,616	55,543	64,321	71,890	80,350	89,805	100,374

State, County, and Prescott Area Projections							
	L	JS Census	S				
	1990	2000	2010	2015	2020	2025	2030
Arizona State	3,665,228	5,130,632	6,392,017	7,144,215	7,984,930	8,924,578	9,974,801
Yavapai County	107,714	167,574	211,033	235,867	263,623	294,646	329,319
City of Prescott	26,455	33,938	39,847	44,536	49,777	55,635	62,182
Williamson Valley Area	1,344	2,907	4,940	5,521	6,171	6,897	7,709
Mountain Club Area	709	888	1,090	1,218	1,362	1,522	1,701
Groom Creek Area	312	650	599	669	748	836	935
Highland Pines Area	170	636	651	728	813	909	1,016
Ponderosa Park Area	163	300	355	397	443	496	554
Diamond Valley Area	635	1,318	2,254	2,519	2,816	3,147	3,517
Yavapai Prescott Tribe	-	182	192	215	240	268	300
Other Prescott Vicinity	6,270	5,042	4,868	5,441	6,081	6,797	7,597
Total Prescott Area	36,058	45,861	54,796	61,244	68,451	76,507	85,510

State, County, and Prescott Valley Area Projections							
	ι	JS Censu	s				
	1990	2000	2010	2015	2020	2025	2030
Arizona State	3,665,228	5,130,632	6,392,017	7,144,215	7,984,930	8,924,578	9,974,801
Yavapai County	107,714	167,574	211,033	235,867	263,623	294,646	329,319
Town of Prescott Valley	8,858	23,535	38,785	43,349	48,450	54,152	60,524
Castle Canyon Mesa Area	2,112	2,718	2,909	3,251	3,634	4,062	4,540
Prescott Country Club Area	1,822	2,394	2,693	3,010	3,364	3,760	4,202
Coyote Springs Area	0	2,939	2,361	2,639	2,949	3,296	3,684
Other Prescott Valley Vicinity	644	0	55	61	69	77	86
Total Prescott Valley Area	13,436	31,586	46,803	52,311	58,466	65,347	73,037

State, County, and Chino Valley Area Projections							
	ι	JS Censu	S				
	1990	2000	2010	2015	2020	2025	2030
Arizona State	3,665,228	5,130,632	6,392,017	7,144,215	7,984,930	8,924,578	9,974,801
Yavapai County	107,714	167,574	211,033	235,867	263,623	294,646	329,319
Town of Chino Valley	4,837	7,835	10,805	12,077	13,498	15,086	16,861
Paulden	1,079	3,420	4,322	4,831	5,399	6,034	6,745
Other Chino Valley Vicinity	875	4,092	5,592	6,250	6,986	7,808	8,726
Total Chino Valley Area	6,791	15,347	20,719	23,157	25,882	28,928	32,332

State, County, and Prescott Valley Area Projections								
	ι ι	US Census			Population Projections*			
	1990	2000	2010	2015	2020	2025	2030	
Arizona State	3,665,228	5,130,632	6,392,017	7,144,215	7,984,930	8,924,578	9,974,801	
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Coyote Springs Area	0	2,939	2,361	2,639	2,949	3,296	3,684	
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Total Prescott Valley Area	13,436	31,586	46,803	52,311	58,466	65,347	73,037	

State, Co	unty, Dewey-Hu	mboldt ar	nd Wester	n Yavapai Are	ea Projection	าร	
	U	IS Census	5	P	opulation P	rojections*	
	1990	2000	2010	2015	2020	2025	2030
Arizona State	3,665,228	5,130,632	6,392,017	7,144,215	7,984,930	8,924,578	9,974,801
Yavapai County	107,714	167,574	211,033	235,867	263,623	294,646	329,319
Town of Dewey-Humboldt	2,004	3,556	3,894	4,352	4,864	5,437	6,077
Mayer Area	1,039	1,408	1,386	1,549	1,731	1,935	2,163
Poland Junction Area	124	211	238	266	297	332	371
Spring Valley Area	206	1,019	1,122	1,254	1,402	1,567	1,751
Black Canyon City Area	1,811	2,697	2,876	3,214	3,593	4,015	4,488
Cordes Lakes Area	1,404	2,058	2,770	3,096	3,460	3,867	4,323
Crown King Area	63	123	174	194	217	243	272
Bagdad Area	2,102	1,578	2,016	2,253	2,518	2,815	3,146
Yarnell Area	617	645	654	731	817	913	1,021
Hillside Area	88	129	96	107	120	134	150
Congress Area	692	1,717	2,037	2,277	2,545	2,844	3,179
Wilhoit Area	316	664	879	982	1,098	1,227	1,372
Kirkland Area	181	246	204	228	255	285	318
Skull Valley Area	112	283	433	484	541	605	676
Ash Fork Area	447	457	962	1,075	1,202	1,343	1,501
Seligman Area	500	458	798	892	997	1,114	1,245
Peeples Valley Area	-	374	530	592	662	740	827
Walker Area	-	67	212	237	265	296	331
Potato Patch Area	-	60	17	19	21	24	27
Yava Area	-	35	32	36	40	45	50
Wagoner Area	-	29	32	36	40	45	50
Kirkland Junction Area	-	29	19	21	24	27	30
Castle Hot Springs Area	-	21	44	49	55	61	69
Drake Area	-	14	-	-	-	-	-
Bumble Bee Area	-	14	43	48	54	60	67
Camp Wood Area	-	12	40	45	50	56	62
Nelson Area	-	10	8	9	10	11	12
Date Creek Area	-	8	23	26	29	32	36
Walnut Grove Area	-	6	40	45	50	56	62
Rural Western Yavapai County	3,107	2,091	2,815	3,146	3,517	3,930	4,393
Total Area Population	14,813	20,019	24,394	27,265	30,473	34,059	38,067

\*The population estimates in the chart above are at an assumed rate of 2.25% percent growth per year, the Central Yavapai Highlands Water Resources Management Study (CYHWRMS) uses this rate to project demands for water. This growth rate is below the Department of Economic Security (DES) rate of 2.87% growth due to market conditions in Yavapai County as well as consideration of water resources.

#### Future Growth Areas

In anticipating future growth areas the following considerations should be made:

<u>Relationship of potential growth areas to transportation corridors, both present and proposed</u> - Arizona's Growing Smarter legislation requires that counties specifically identify areas that are suitable for multi-modal transportation and infrastructure improvements that apply to concentrated uses. Growing Smarter also requires policies for mixed-use planning to increase the efficiency of circulation systems, to make infrastructure expansion more economical, and to conserve natural resources and open areas.

<u>Property ownership as it relates to private, federal and state jurisdiction</u> - The majority of Yavapai County's 8,123 square miles is owned and managed by Federal and State agencies. The USFS maintains 38%, the BLM controls 10.5% and ASTL manages 25% of the County's land area. The remaining 27% of Yavapai County is privately owned

property. Although the most likely candidates for development are privately owned properties, the possibility of development through land exchanges or sales of State Trust Land should not be excluded.

Review of the map indicates potential for development in the areas northwest of the Central Yavapai Region northward to the Seligman area, the southwestern portion of Yavapai County from Wickenburg to Congress and west to the County line as well as relatively smaller in-fill opportunities throughout the County.

#### Map: Public and Private Land Ownership

#### Wildlife Habitat

Yavapai County features multiple wildlife habitat areas as well as wildlife corridors. Many factors impact wildlife survival, including changes in the available habitat, vegetation and water, as well as species competition, predators and growth. Federally designated critical habitats are important components of our landscape and ecosystems because they protect TES. Locations of these habitats and corridors can be a significant factor in considering future growth areas and the character of same

#### Availability of Water and Water Assurances

State Subdivision Law, ARS §11-806.01 requires that subdivisions inside of AMAs provide Certification of Assured Water Supply (CAWS) prior to recordation of a final plat. The majority of what is referenced as the quad-city area does lie within an AMA. Historically this requirement has resulted in subdividing of lands within the AMA being problematic as CAWS become more difficult to obtain. However, there still exists ample opportunity to develop land through the subdivision and lot splitting process and utilizing exempt wells as a water source.

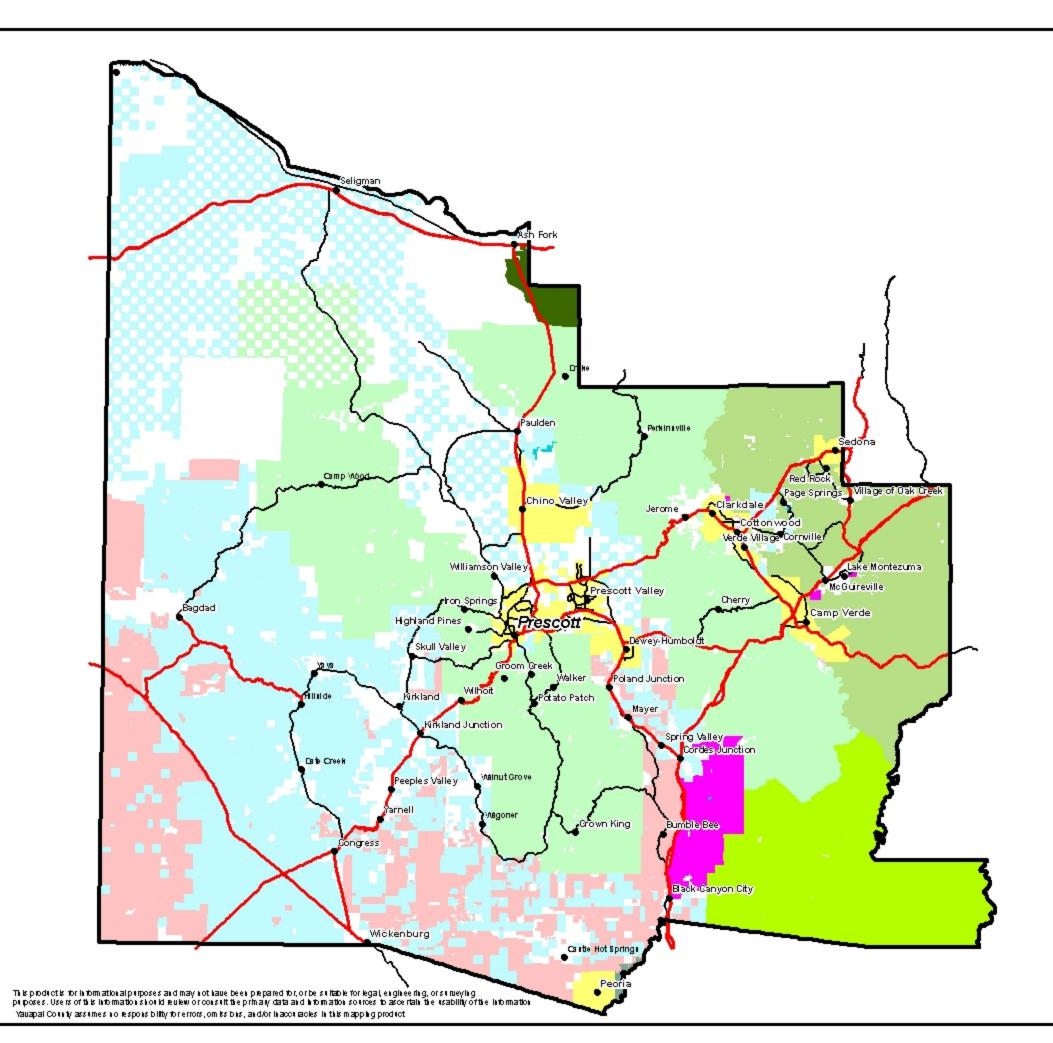
The Statute also requires that subdivisions that lie outside of an AMA provide evidence of water adequacy. However, the law also allows, but does not require the Board of Supervisors to exempt a proposed development from the requirement if the Board finds that no practical alternative other than water transport exists.

Included below is a map of the PrAMA within the County.

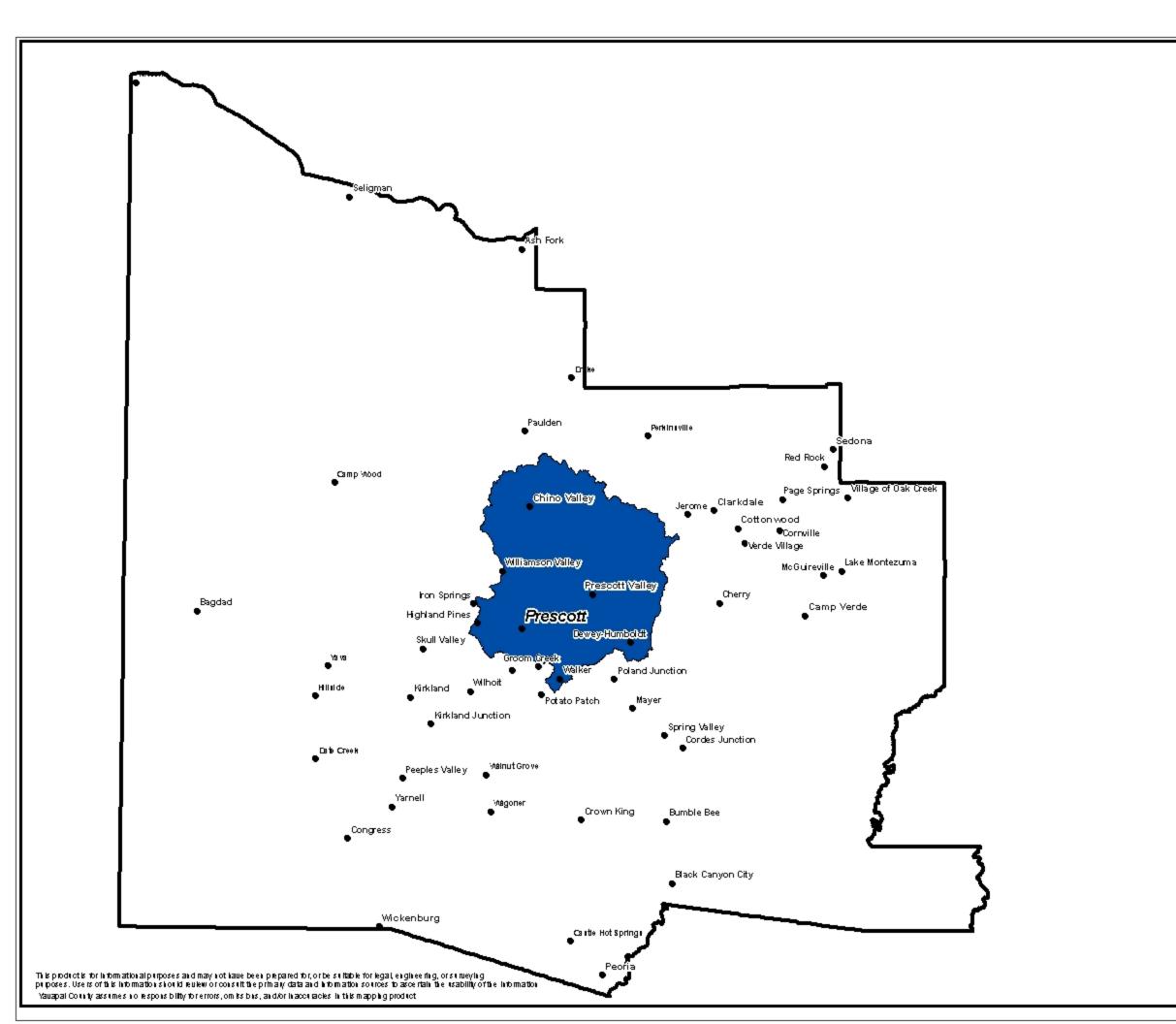
#### Map: Prescott Active Management Area

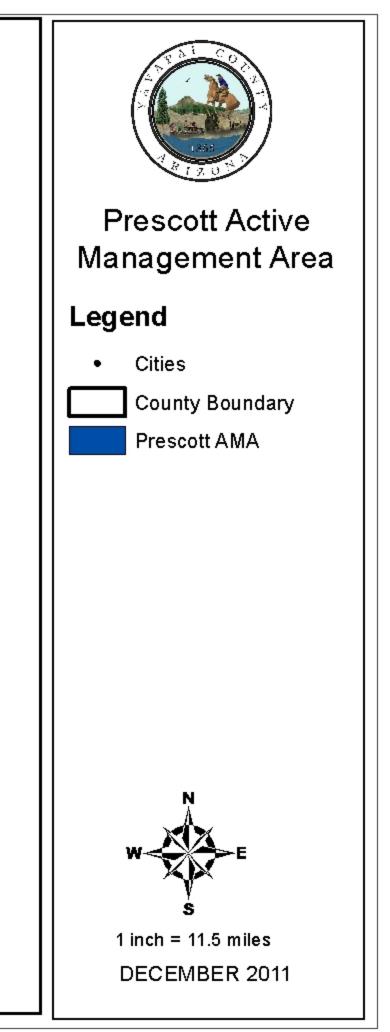
#### Location of Floodplains

Yavapai County is impacted by approximately 212 square miles of regulated watercourses or floodplains. Currently, large areas of the County remain unstudied by FEMA, and development in those areas may require additional studies be performed adding to the regulated floodplain area. Location of floodplains can have a significant impact on the costs of physical development. Although location within a regulated area does not preclude development, it may be a factor on how the area is developed or what densities may be allowed.









# Future Annexation or Incorporations That May Affect the Plan's Growth Area Policies

There are fourteen (14) other jurisdictions in Yavapai County: eleven (11) incorporated cities and towns and three (3) Tribal Reservations. The Towns of Chino Valley, Prescott Valley and Dewey-Humboldt, the City of Prescott and the Yavapai-Prescott Indian Reservation are in the Central Yavapai Region. The Towns of Camp Verde, Clarkdale and Jerome; the Cities of Cottonwood and Sedona; and the Yavapai-Apache Indian Reservation are in the Verde Valley area. A portion of the City of Peoria is located in the southern-most tip of the County; a small portion of the Town of Wickenburg is located in the southwestern elbow of the County, while a portion of the Hualapai Indian Reservation is at its extreme northwest corner.

With few exceptions all of the referenced incorporated communities have and most likely will continue to annex properties within the County's jurisdiction. Once areas have been annexed they do fall under the Comprehensive Plans of the respective jurisdiction.

#### Growth Area Categories

The entire area of Yavapai County, with the exception of incorporated cities, shall be divided into four (4) categories, based on each area's existing or foreseeable infrastructure, character and capacity for growth:

<u>Municipal Growth Area (MGA)</u> – This category includes those areas adjacent to or surrounded by incorporated cities, and having the necessary facilities and services to support it. These areas are largely built-out or established but may have pockets of vacant land.

- 1. The area has established or planned residential and/or non-residential development and has the potential to be annexed by an abutting incorporated city or become incorporated.
- 2. The area could be adequately served by a community sewer system, water system and fire district.
- 3. Average residential lot sizes are less than one acre in size.
- 4. The area provides regional commercial and other non-residential services.
- 5. The area has the potential for or is currently served by adequate drainage, transportation and K-12 school systems, as well as organized recreational facilities that can serve high-density development.

<u>Transitional Growth Areas (TG)</u> – This category includes those areas adjacent to MGA's as well as the larger unincorporated communities of the County, which are experiencing growth. These are areas in transition from a traditional rural environment to something more urbanized. Transitional Growth Areas include the areas that have been determined to meet the following criteria:

- 1. The area to be designated has a moderate level of residential and/or non-residential growth.
- 2. The area serves as a logical transition between urban growth and rural areas and/or has a distinctive identity.

- 3. The area has, or could accommodate, adequate water, access, drainage and sewage disposal capability to accommodate medium to high density development.
- 4. In general, residential lot sizes are one acre or less in size but may transition to larger lot sizes at the fringes of the area. Smaller lot sizes have access to sewer and/or water and are commonly found in established subdivisions and manufactured/mobile home parks or historic town sites.
- 5. Improved streets designated as arterial or collectors can support limited nonresidential development.
- 6. There is substantial potential for further development along with opportunities to preserve undeveloped recreational resources, i.e. open space and washes.

<u>Rural Community Areas (RC)</u> – This category includes less populated rural communities that are characterized by moderate growth and the desire to maintain the existing neighborhood or rural atmosphere. These areas are generally found as small clusters of residential and non-residential development adjacent to agricultural production areas and public lands. Non-residential enterprises generally serve or coincide with local agricultural, ranching or tourist activities. Rural Community Areas are often populated enough to warrant or provide a K-8 grade school. Their rural, low density and often scenic qualities have the potential to attract future residents at a growth rate that may warrant consideration of a plan change to TG. Rural Community Areas include those areas that have been determined to meet the following criteria:

- 1. Residential and non-residential development is clustered in settlements on a variety of lot sizes as typified in established town sites and immediate environs.
- 2. Other than arterials and collectors, roads are generally unimproved. However, increases in residential and non-residential development will likely warrant improvements, such as paving, in the future.
- 3. Farming and ranching are prevalent activities adjacent to these areas.
- 4. Non-residential enterprises generally serve the rural/agricultural community as well as visitors passing through if located on a major arterial road.

<u>Rural Areas (RA)</u> – This category includes the outlying rural areas between cities and unincorporated communities and is characterized by a low rate of growth; unimproved roads; low density, agricultural production and large tracts of undeveloped private and public lands. Non-residential development is geared toward providing local services, tourism or intensive uses that are not appropriate in more of the densely populated parts of the County, such as power plants and feedlots. These sparsely populated rural lands also have the potential for future master-planned communities that will provide the infrastructure to support any proposed increases in residential density or non-residential activities.

#### Goals, Objectives and Recommendations

## Goal 1: Identify potential growth areas for appropriate land uses that are compatible to surrounding communities.

- Objective a: Review existing zoning, land use, topography and transportation studies to ensure potential growth areas are consistent with the goals of the Growth Area Element.
- Objective b: Encourage community vision statements that provide a more detailed study and analysis of the community including recommendations on potential land uses, open space and infrastructure needs.

## Goal 2: Promote efficiency of automobile, transit and other multi-modal circulation.

- Objective a: Ensure future development is consistent with the goals and objectives of the Transportation and Land Use Elements.
- Objective b: Promote development in areas that are conducive to mixed use and multi-modal transportation opportunities.

Goal 3: Conserve significant natural resources and open areas in the growth areas.

- Objective a: Ensure future development is consistent with the goals and objectives of the Open Space Element.
- Objective b: Encourage dialogue and review with and by Open Space stakeholders.

# Goal 4: Promote the public and private construction of timely and financially sound infrastructure expansion through the use of infrastructure funding and financing planning that is coordinated with development activity.

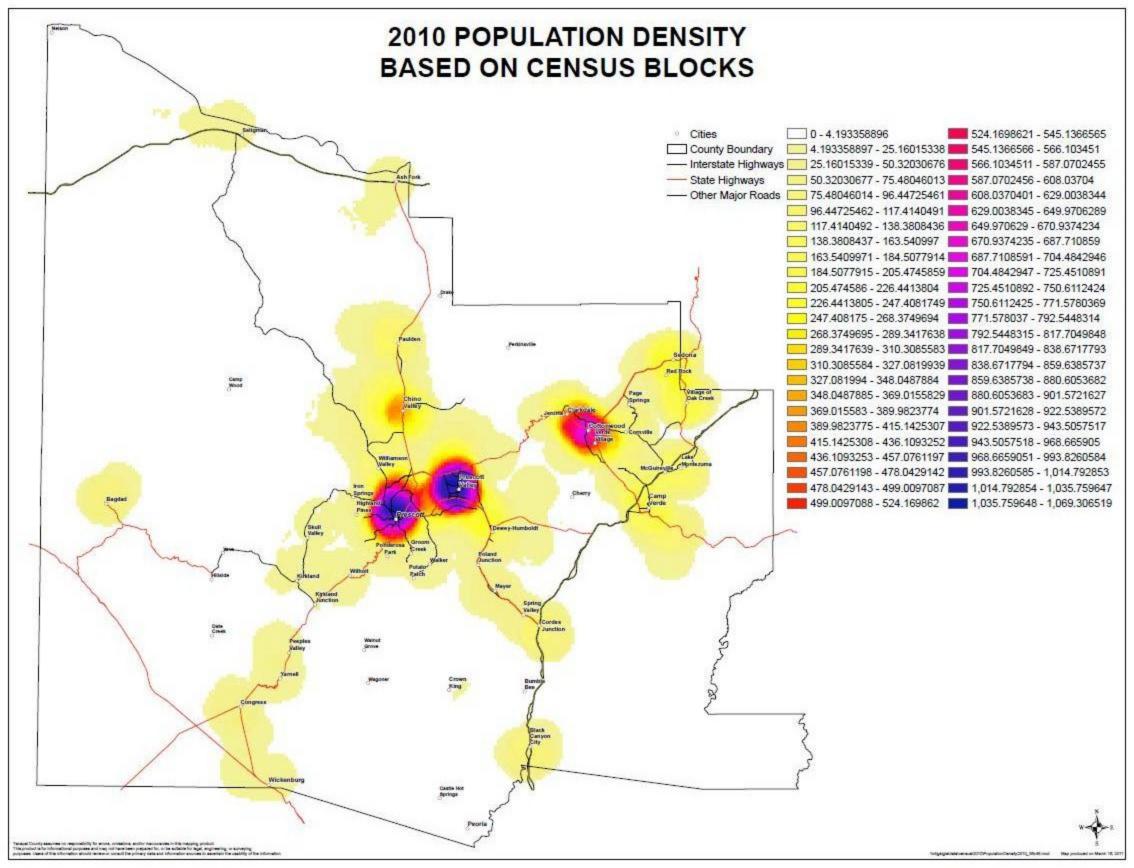
Objective a: Ensure future development is consistent with the goals and objectives of the Cost of Development Element.

#### Recommendations

- Proactively identify those areas where the greatest potential for growth appears.
- Encourage unincorporated communities to create vision statements for their community.
- Review transportation plans every 3 years for any upgrades required due to changes in development patterns throughout the County.
- Review market conditions indicative of development trends in undeveloped areas.
- Review recommendations in the other elements to ensure development patterns are in compliance with the Comprehensive Plan.
- Coordinate with wildlife agencies to evaluate regions to preserve wildlife linkages and mitigate habitat fragmentation.

See map below for current population density:

#### Map: 2010 Population Density Based on Census Blocks



#### X. EXISTING PLANS AND STUDIES, COMMUNITY VISION STATEMENTS, GENERAL PLAN ADOPTION AND AMENDMENTS

#### Existing Plans and Studies

Over the last ten years since the last update of the Yavapai County General Plan, there have been updates to existing Transportation studies, new plans, and an update to the ordinance for Comprehensive Plan Amendments that have been adopted. The adoption of the new 2012 Yavapai County Comprehensive Plan readopts the following planning documents:

#### Transportation Studies

- Central Yavapai County Transportation Study Update, 1998
- Verde Valley Multi-modal Transportation Study, 2009

#### Special Study Plans

• Verde Valley Regional Land Use Plan, 2006

#### Community Vision Statements

Over the last decade, many of the communities throughout the County experienced rapid growth and development. In the past, community plans were created with assistance from staff and adopted by the Yavapai County Board of Supervisors. In March of 2010, a Moratorium on Community Planning was adopted by the Board of Supervisors in favor of creating a policy of considering a Community Vision Statement process for communities to create a document describing how they envision their community growing.

A Community Vision Statement is a document created by the residents of the community to be used as a tool to review proposed land use projects. The document is not adopted by Yavapai County, and is therefore not binding. Statements will be used in reviewing projects within the community area in concurrence with other community comment.

The following is a recommended structure for preparing Community Vision Statements, but is not required.

- Follow the format of the Yavapai County Comprehensive Plan and include a Public Participation Component approved by staff that addresses the eight elements in the Comprehensive Plan.
- Inventory of existing conditions for each element within the community area.
- A list of the needs and concerns gathered from the public outreach.
- Goals, Policies, and Recommendations specific to the community area.
- Summary of meetings, surveys, and other means of collecting comments from the community. The committee must validate the number of residents that participated in the vision process.

#### The Comprehensive Plan Adoption and Amendments

The 2012 Yavapai County Comprehensive Plan, contained herein, was adopted September 17, 2012, and replaces the "2003 Yavapai County General Plan". This Comprehensive Plan may be amended in conformance with the following.

#### Amendments to Yavapai County Comprehensive Plan

Amendments to the Comprehensive Plan are classified as either "major amendments" or "minor amendments". The following identifies the criteria that must be met for both types of amendments:

#### Major Amendment

A major amendment is any proposal that does not conform to the adopted County Plan and meets the following criteria:

RESIDENTIAL

- 1. Any proposal on 5000 or more acres that increases the maximum number of allowable residential units by more than 250 residential units.
- 2. Any change from a residential land use classification to a non-residential land use classification of 5000 or more acres.

NON-RESIDENTIAL

- 1. Any change from a non-residential land use to a residential land use of 5000 or more acres.
- 2. Any change from one category of non-residential land use to another category of non-residential land use on 5000 or more acres.

PROCESSING

- Major amendments are considered on an annual basis by the Board of Supervisors and require a minimum two-thirds majority vote of the Board of Supervisors.
- The Board of Supervisors hearing for major amendments will be scheduled for a date in the month of December. The Board of Supervisors shall be responsible for identifying the specific hearing date.
- It is recommended that applications for major amendments be made no later than July 31<sup>st</sup> of the calendar year in which the major amendment is intended for public hearing.
- Major amendments are subject to the requirements contained within the Yavapai County Public Participation requirements.

#### Minor Amendment

A minor amendment is any proposal that is greater than 40 acres in size, does not conform to the adopted County Plan and does not meet the criteria for a major amendment. Minor amendments are subject to the requirements contained within the Yavapai County Public Participation requirements. A minor amendment over 100 acres in size must adhere to the notification criteria established for a Major Comprehensive Plan Amendment as set out in Arizona Growing Smarter Legislation of 2003. Minor amendments may be scheduled for public hearing throughout the calendar year.

#### XI. BIBLIOGRAPHY

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- Arizona Department of Water Resources. (2001). *Water Rights Fact Sheet.* Phoenix: Arizona Department of Water Resources.
- Arizona State Legislature. (2003). *Comprehensive Plan: Contents Section 11-804 C. 4.* Phoenix: Arizona State Legislature.
- Arizona Senate. (2007). Senate Bill 1575. *Authority of Board of Supervisors*. Arizona, United States of America: 48th Legislature, 1st Session.
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- Energy Policy Administration. (2011). Energy Star. Retrieved January 10, 2011, from http://www.energystar.gov/index.cfm?c=new\_homes.hm\_index\_
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- House of Representatives. (2007). Notice of Intention to Drill: Fee. *House Bill 2484*. Arizona, United States of America: 48th Legislature; 1st Session.
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- Morrison Institute for Public Policy. (2008). *Megapolitan: Arizona's Sun Corridor.* Retrieved January 1, 2011, from Morrison Institute: http://morrisoninstitute.asu.edu/publications-reports/Mega\_AzSunCorr
- Pinal County Development Services. (2009, November 19). *Pinal County Comprehensive Plan*. Retrieved January 2011, from Pinal County Development Services:

http://www.pinalcountyaz.gov/Departments/PlanningDevelopment/ComprehensivePlanUpdate/Doc uments/Pinal%20County%20Comprehensive%20Plan.pdf

Rowland, P. (1999). Retrieved February 2011, from Arizona Roadside Environments: http://dana.ucc.nau.edu/~are-p/road\_map/eco/mogrim.html Timmons, D., & Springer, A. (2006). *Prescott AMA Groundwater Flow Model Update Report.* Flagstaff, AZ: Northern Arizona University.

Yavapai County. (2006, August 25). *Water Advisory Committee*. Retrieved 2010, from Yavapai County Official Website: http://www.co.yavapai.az.us/Content.aspx?id=20562

#### XII. Appendix

#### A. Water Element- Additional references

Legislation:

HB 2484 – <u>http://www.azleg.gov/legtext/48leg/1r/bills/hb2484s.pdf</u> (House of Representatives, 2007)

HB 2692 – <u>http://www.azleg.gov/legtext/48leg/1r/bills/hb2692s.pdf</u>

(House of Representatives, 2007)

SB 1575 – <u>http://www.azleg.gov/legtext/48leg/1r/bills/sb1575s.pdf</u> (Arizona Senate, 2007)

Names of Water-Related Organizations in Yavapai County and Organizations that Influence Water Issues in Yavapai County

Government Sponsored Water Organizations

- 1. Water Resources Development Commission (WRDC)
- 2. Northern Arizona Municipal Water Users Association (NAMWUA)
- 3. Groundwater Users Advisory Council (GUAC)
- 4. Upper Verde River Watershed Protection Coalition (UVRWPC)
- 5. Yavapai County Water Advisory Committee (WAC)
- 6. Upper Agua Fria Watershed Partnership
- 7. Central Yavapai Water Conservation Partnership (CYWCP)
- 8. Yavapai County Local Drought Impact Group (LDIG)
- 9. City of Prescott Water Allocation Committee
- 10. City of Prescott Water Conservation Committee
- 11. Town of Dewey-Humboldt Environmental Committee
- 12. Natural Resources Committee (Verde Valley Cities and Towns)
- 13. Clarkdale Water Advisory Committee

Citizen's Water Advocacy Groups

- 1. Verde Valley Water Users
- 2. Verde River Basin Partnership (VRBP)
- 3. Verde Watershed Association (VWA)
- 4. Citizens Water Advocacy Group (CWAG)
- 5. Verde River Citizens Alliance
- 6. Sustainable Arizona
- 7. Arizona Water Consortium
- 8. Southern Yavapai Water Users Association (SYWUA)

Groups that address Water as a part of their mission

- 1. Arizona Water Protection Fund
- 2. Cocopai RC&D (Resource Conservation and Development Area)
- 3. NRCDs (Natural Resource Conservation Districts)
  - a. Verde NRCD Verde Valley
  - b. Chino Winds NRCD Big and Little Chino Valleys and Cordes Junction to New River
  - c. Triangle NRCD Skull Valley, Kirkland, Yarnell
- 4. League of Women Voters Sedona/Verde Valley
- 5. Keep Sedona Beautiful

- 6. Friends of Cottonwood
- 7. Williamson Valley Corridor Plan Committee
- 8. Responsible Residents of the Red Rocks
- 9. Yavapai Cattlegrowers Association
- 10. Hyde Mountain Vista Group
- 11. Citizens for Reasonable Growth
- 12. Paulden Area Community Organization (PACO)
- 13. Prescott Creeks
- 14. Arizona Water Well Association
- 15. Open Space Alliance of Central Yavapai County
- 16. The Nature Conservancy
- 17. Center for Biological Diversity
- 18. Sierra Club
- 19. Audubon Society
- 20. Northern Arizona Council Of Governments (NACOG)
- 21. Maricopa association of Governments (MAG)

#### Water Providers

- 1. Prescott Valley Municipal System
- 2. City of Prescott
- 3. Town of Chino Valley
- 4. Chino Valley Irrigation District
- 5. City of Cottonwood
- 6. Town of Clarkdale
- 7. Town of Jerome
- 8. Arizona Water Company (Private, serves Sedona, Big Park, Rimrock)
- 9. Camp Verde Water System (Private)
- 10. Other Private Water Companies (approximately 50)
- 11. Verde Valley Ditch Companies (approximately 20)
- 12. Exempt Wells
  - a. 10,000 in Prescott AMA
  - b. 25,000 in Yavapai County (includes Prescott AMA)

#### Federal and State Agencies involved with Water

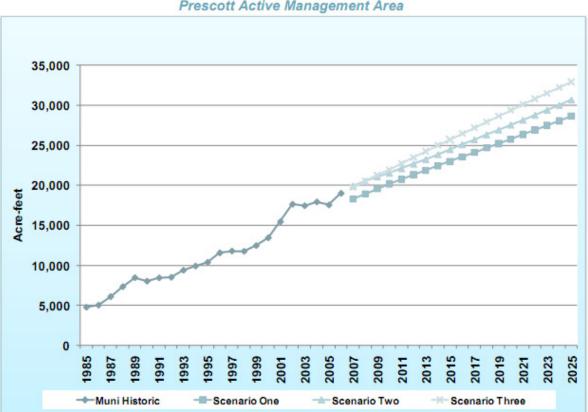
- 1. Arizona Department of Water Resources
- 2. Arizona Department of Environmental Quality
- 3. Arizona State Land Department
- 4. Arizona Game and Fish Department
- 5. US Geological Survey
- 6. US Bureau of Reclamation
- 7. US Fish and Wildlife Service
- 8. US Army Corps of Engineers
- 9. US Bureau of Land Management
- 10. US Forest Service
- 11. US Natural Resources Conservation Service

#### Other out-of-area Water Groups/Organizations

- 1. Arizona Water Resources Research Center University of Arizona
- 2. Arizona Water Institute Governor's Initiative, all three Universities

- 3. Morrison Institute at Arizona State University Water Sustainability
- 4. Arizona Municipal Water Users Association (AMWUA) Most cities in the Phoenix area are members
- 5. Central Arizona Water Conservation District (CAWCD) the operator of the CAP
- 6. Central Arizona Groundwater Replenishment District (CAGRD) replenishes groundwater on behalf of members within the three central AMAs.
- 7. Water Conservation Alliance of Southern Arizona (Water CASA)
- 8. Watershed Research and Education Program (NAU)
- 9. Salt River Project (SRP)
- 10. Arizona Cattle Growers Association
- 11. American Water Works Association (AWWA)
- 12. Arizona Hydrologic Society (AHS)

<u>Baseline Scenarios</u> - Generally, the highest population projection was paired with the highest water demand projection method and the lowest population projection was paired with the lowest demand projection method. This established the end points of the range of projected municipal population and demand. A third scenario fell between the highest and the lowest scenarios (See Figure 9-2 from ADWR's Water Atlas).





_	Timeline of Water Events
Date	Explanation
1863	Gold rush near Prescott, water appropriations begin, including Del
	Rio Springs for first territorial government and military
1864	Prescott established
1864	First State Water Code (Howell Code)
1865	Camp Verde established, irrigation in Verde Valley begins
1867	Jack Swilling and miners from Prescott start irrigating in Salt River
	Valley to raise crops for Prescott-area miners and settlers
1881	Shallow wells dug on courthouse square for fire fighting
1884	Miller Creek and Mt. Vernon reservoirs for fire protection
1898	Prescott passes bond for Potts and Aspen Creek reservoir (but were
	never built). President McKinley designates Prescott Forest Preserve
	for watershed protection related to the City reservoirs.
1900	Prescott downtown burns down, main town well was out of service
	and unavailable for fire-fighting
1901	Pumping from Del Rio Springs to Prescott begins
1902	Newlands Reclamation Act initiates SRP and Roosevelt Dam
1911	Roosevelt Dam Completed
1916	Hassayampa Canal Company formed, construction begins on
	Granite Creek Dam (Watson Lake) to irrigate in Chino Valley
1919	State Water Code enacted
1922	Colorado River Compact – Arizona refused to ratify until 1941
1929	Prescott builds lower Granite Creek infiltration gallery well for
	municipal supply
1931	Southwest Cotton case begins – first groundwater/surface water
	decision
1933	Prescott constructs Goldwater Dams for Municipal water supply
1940's	Large-scale groundwater pumping begins, Big and Little Chino
1945	First well registration – agriculture wells in critical groundwater
	basins
1948	Prescott drills deep wells in Chino Valley for municipal water
	supply. Replaces surface water sources near Prescott
1963	Arizona v. California decision, US Supreme Court
1966	Prescott Valley Inc. begins selling lots in Prescott Valley
1968	CAP Authorized, federal subsidies for Central Arizona
1970	Town of Chino Valley is incorporated
1973	Adequate Water Supply Rules initiated as a result of Ned Warren
	land fraud cases throughout Arizona
1973	Construction begins on CAP
1976	SRP files a petition to adjudicate water rights on the Verde River
	system
1977	President Carter puts CAP funding on hold
1977	Prescott begins looking to Big Chino for water supply
19//	riescou degins looking to big Chino for water supply

#### **Timeline of Water Events**

1978	Town of Prescott Valley is incorporated
1980	Groundwater Management Act, ADWR established, CAP funding
	ensured
1983	ADWR allocates CAP water to Prescott and Yavapai Prescott Indian
	Tribe – 7,667 af
1985	First CAP water delivered to Harquahala Valley Irrigators
1991	Prescott purchases Dugan Ranch and Weber Ranch in Big Chino for importation project
Mid-1990's	Municipal water use exceeds water use for Agriculture in Prescott AMA
1999	Prescott AMA declared to be mining groundwater by ADWR
	Director, new subdivisions cannot be platted based on Prescott
	AMA groundwater
2004	Prescott purchases Big Chino Water Ranch, forms partnership with Prescott Valley
2009	Prescott prevails in challenges to Big Chino water rights, final
	decision is 8,067 af in 45-555(E)
2010	SRP, Prescott and Prescott Valley reach a settlement agreement on
	water rights to the Big Chino

#### Related Reading

#### Prescott Active Management Area Water Use Summary Graphs

http://www.adwr.state.az.us/azdwr/WaterManagement/Assessments/documents/PRESC OTTASSESSMENTGRAPHSAUGUST302010.pdf

#### Draft 2010 Demand and Supply Assessment

http://www.adwr.state.az.us/azdwr/WaterManagement/Assessments/documents/DRAFT PrescottAMAAssessment9-21-2010.pdf

Prescott Active Management Area 2003-2004 Hydrologic Monitoring Report

http://www.azwater.gov/AzDWR/Watermanagement/AMAs/PrescottAMA/documents/PrescottAMA 2004 monitoring report final 1 31 05 revision.pdf

#### Prescott AMA Groundwater Flow Model Update Report

http://www.azwater.gov/AzDWR/Watermanagement/AMAs/PrescottAMA/documents/AD WR Prescott model update report Oct3106.pdf

#### B. AZ Game and Fish Department Resources

- 2011 Yavapai County Wildlife Connectivity Assessment Stakeholders Input Report: The Department has completed and submitted this report to Yavapai County. Associated maps will be completed and provided to the county in the near future.
- **2006 Arizona Wildlife Linkages Assessment (Section VI and VII):** Produced by the Arizona Wildlife Linkages Workgroup:

http://www.azdot.gov/inside\_adot/OES/AZ \_WildLife\_Linkages/assessment.asp

• AZGFD Species and Habitat Conservation Guide:

This guide and associated map was produced for the State Wildlife Action Plan. It prioritizes habitat in the state, identifying those areas that are sensitive, threatened, or warrant special protections for a variety of different reasons. Additionally, it identifies important habitat resource areas in the State that should be avoided if possible, and recommends close consultation and cooperation between the project proponent, the County, and the Department if development (roads, renewable energy, etc) is proposed in key habitat areas, in order to avoid, minimize, or mitigate impacts to wildlife and habitat resources. http://www.azqfd.gov/w\_c/cwcs.shtml

- Arizona Game and Fish Department Wind Energy Guidelines: <u>http://www.azqfd.gov/hgis/guidelines.aspx</u>
- Arizona Game and Fish Department Solar Energy Guidelines: <u>http://www.azgfd.gov/hgis/guidelines.aspx</u>
- Wildlife Passage Guidelines (Including both Bridge and Culvert Construction): These documents are intended as a general guideline to assist in the design, planning, placement, maintenance, or repair of bridges and culverts to minimize impacts to fish and wildlife passage/movement. http://www.azqfd.gov/hgis/guidelines.aspx
- Fence Guidelines:

The Department developed these guidelines to assist the landowner, project manager, land management agency, and others in designing wildlife compatible fences, with the goal of providing guidance in designing fences that will achieve their objectives with minimum impacts to wildlife. http://www.azqfd.gov/hgis/guidelines.aspx