

GOLDFIELD AREA PLAN

MARICOPA
COUNTY



2020

Eye To The Future



DECEMBER, 2007

MARICOPA COUNTY, ARIZONA



ACKNOWLEDGEMENTS

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ACKNOWLEDGEMENTS

Preparation of the Goldfield Area Plan was made possible through the cooperative efforts of many public and private stakeholders. Maricopa County extends its appreciation to all those that participated in the process, including the Maricopa County Board of Supervisors, Planning and Zoning Commission, citizens, property owners, Indian communities, cities, towns, state and federal agencies, and other stakeholders.

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

Plan Overview and Purpose

For many years, the Goldfield region has been a predominately low-density rural area minimally impacted by the rapid growth of the metropolitan Phoenix area. Located east and northeast of the Fort McDowell Yavapai Nation and Salt River Pima-Maricopa Native Community, and surrounded on the remaining three sides by the Tonto National Forest, the area covered by the plan is essentially a county island that has seen relatively little development other than scattered single-family residences in the Rural-190 zoned Goldfield Ranch subdivision. As a result, the residents in the plan area have come to enjoy a rural lifestyle and an appreciation of the natural desert environment, which many see as the ideal of southwestern living. However, as population growth continues to exert development pressures throughout Maricopa County, it is necessary to update existing plans like the Goldfield Area Plan, with more current information and revised goals, objectives, and policies to help identify current issues and address residents concerns. This plan update will include five additional planning elements – open spaces, water resources, environmental impacts, growth areas, and cost of development – now required by the Growing Smarter and Growing Smarter Plus legislation, which were not required as part of the original Goldfield Area Plan.

The Goldfield Area Land Use Plan was first adopted by Maricopa County in 1995 to preserve and enhance the region's environment, and to act as a guide to growth and development of the area. The original planning area included approximately 184 square miles and included the entire Fort McDowell Yavapai Nation and the northeastern portion of the Salt River Pima-Maricopa Native Community, approximately 68,000 acres of the Tonto National Forest, and unincorporated communities such as Tonto Verde, Rio Verde and Goldfield Ranch. However, in coordination with Goldfield residents, it was determined that the updated land use plan will focus instead on the approximately 5,000 acre Goldfield Ranch subdivision, including the area covered by the previously approved 2,200 acre development master plan (DMP) named "The Preserve." The Preserve DMP was approved in 1995 on the same day that the Goldfield Area Land Use Plan was adopted, but no further action has been taken. Based on comments received during the public participation process, particular consideration is given to the continuance of the rural and equestrian lifestyle and compatibility with the natural environment. Residential development at very low densities is intended for the entire planning area. Because total population is still relatively low and most residents currently prefer commuting to jobs and services out of the area, no employment or service-related land use designations are identified in the planning area. As future plan updates occur approximately every 10 years, the need for employment opportunities, neighborhood commercial services, and public facilities will be re-evaluated. Very low densities indicated in the land use plan will help preserve the rural lifestyle,



minimize impacts to the natural environment, provide compatible land use to adjacent public open space, and reduce the demand on groundwater resources.

Public Participation

Throughout the planning process, community participation was emphasized via several techniques. This participation allowed stakeholders to identify planning issues and concerns, as well as provide recommendations, comments, updates, and suggestions. Goldfield residents, landowners, workshop participants, government entities, and other stakeholders were very helpful in identifying current issues and concerns. While a more detailed list is included in the plan, some frequently identified local concerns include:

- The strong desire to maintain the low-density, rural residential and equestrian character of the planning area.
- The need to limit or prohibit commercial, retail, industrial, and similar uses.
- The need for a community trail system to link open space areas, particularly the Tonto National Forest
- The need to protect native plants, wildlife, and wildlife habitats and corridors.
- Air quality is threatened by increasing amounts of dust and unpaved roads; however, many residents favor minimizing paving in the planning area
- Groundwater resources are limited, and thus long-term availability is a concern

What's New in the Plan?

- Updated information and citizen issues
- Updated maps using Geographic Information Systems
- Five new planning elements required by Growing Smarter and Growing Smarter Plus legislation
- A revised planning area
- Inclusion of an Agenda for Action which identifies steps that can help implement objectives and policies in the area plan

Conclusion

It is important to note that the Goldfield Area Plan is not a document that represents ultimate buildout as is typically the case with many municipal general plans. Rather, it prepares for possible growth over the next ten to fifteen years, but will be reexamined and updated periodically to reflect current conditions and changes. While not a complete solution, the Goldfield Area Plan helps address the effects of possible growth and development by enhancing cooperation between public agencies, citizens, and other affected interests, and by considering regional implications.



EXECUTIVE SUMMARY

Area Plan Elements

This Area Plan contains a series of goals, objectives, and policies used to define development standards, guide public investment, and guide public and private decision making. A complete list of policies is included within the plan.

Land Use

The Land Use element discusses general land use, development, and preservation concepts. Efforts are directed at encouraging efficient and timely growth patterns.

Goal L1:

Promote efficient land development that is compatible with adjacent land uses, is well integrated with the transportation system, and is sensitive to the natural environment.

Objective L1.1: Accomplish orderly, efficient, and functional development patterns.

Objective L1.2: Attain high quality residential development that is sensitive to the natural environment and compatible with adjacent land uses.

Objective L1.3: Support only high quality special use permits that reinforce rural residential uses, and are consistent and compatible with adjacent land uses.

Goal L2:

Preserve the scenic, rural, and residential equestrian character of the Goldfield planning area.

Objective L2.1: Work with the goldfield community to prepare rural development guidelines for landscaping, lighting, and/or signage that reflect the rural community and regional character.

Transportation

The Transportation element defines a system of transportation facilities and services, including existing and future roads classification, transit and bikeway possibilities, road network connections, and system limitations. Efforts are directed at maximizing transportation system efficiency by coordinating land use and transportation planning.

Goal T1:

Provide an efficient, cost-effective, integrated, accessible, environmentally sensitive, and safe countywide multi-modal system that addresses existing and future roadway networks, as well as promotes transit, bikeways, equestrian and pedestrian travel.



Objective T1.1: Establish a safe, convenient, and efficient system for existing and future roadways that is compatible with the goldfield area, while considering the need for equestrian and multi-use trails in the Goldfield planning area.

Environment/Environmental Effects

The Environmental Effects element combines a survey of the physical and natural environment with an overview of anticipated effects that development may have on air quality, water quality, noise, visual quality, and sensitive plant and wildlife species.

Goal E1:

Promote development that considers adverse environmental impacts on the natural and cultural environment, preserves highly valued wildlife habitat, minimizes flooding and drainage problems, and protects historical and archaeological resources.

Objective E1.1: Generate and implement development guidelines to help establish that new development is compatible with significant natural environmental features and which does not lead to their destruction.

Objective E1.2: Improve air quality, water quality, and reduce noise impacts.

Objective E1.3: Preserve significant habitat areas for wildlife and desert plant species.

Economic Development

The Economic Development element focuses on creating a healthy economy in the planning area that increases living standards and quality of life.

Goal ED1:

Promote a growing, balanced, efficient, and diversified economy, consistent with available resources, that enhances quality employment opportunities, improves quality of life, and is sensitive to the natural and cultural environment.

Objective ED1.1: Support rural, low-density residential land uses, and equestrian oriented development during the 10 to 15 year horizon of the Goldfield Area Plan update, to retain the quality of life enjoyed by this area.



EXECUTIVE SUMMARY

Growth Areas

The Growth Areas element identifies future population projections and land use needs to accommodate growth in unincorporated Maricopa County and encourages efficient and functional growth patterns.

Goal G.1:

Promote orderly, timely, and fiscally responsible growth in Maricopa County.

Objective G.1.1: Encourage timely, orderly, and fiscally responsible growth patterns. Encourage and support residential development with gross densities that reflect the existing zoning of the area.

Objective G.1.2: Ensure that future growth is coordinated in an efficient manner with stakeholder input.

Open Space

The Open Space element provides an inventory of open space areas; analyzes future needs; and identifies policies and strategies for managing, protecting and acquiring additional open space areas.

Goal O1:

Maintain and, where necessary, encourage expanding the open space system for Maricopa County to address public access, connectivity, education, preservation, buffering, quantity, quality, and diversity of regionally significant open spaces.

Objective O1.1: Promote physical and visual public access to natural open space resources.

Objective O1.2: Establish regional natural open space connectivity and linkages for both recreation and wildlife purposes.

Objective O1.3: Protect and enhance environmentally sensitive areas, including existing natural washes, steep slopes, historic, cultural, and archaeological resources; view corridors; sensitive desert; and significant wildlife habitat and ecosystems.

Objective O1.4: Encourage appropriate natural open space between communities and other land uses.

Objective O1.5: Improve quantity, quality, and diversity of open space and recreational opportunities where public access is protected and preservation is encouraged.

Objective O1.6: Protect and promote the economic, environmental, and quality of life benefits of natural open space.



Water Resources

The Water Resources element describes the physical aspects of surface and groundwater features in the planning area, and addresses historic and projected water demand, future water supply and policy implications.

Goal W1:

Promote development that makes conservative use of renewable water supplies such as effluent, surface water, and Central Arizona Project water when feasible, and that uses groundwater as the primary water source only in the absence of renewable sources.

Objective W1.1: Encourage protection and enhancement of renewable water and groundwater supplies within the framework of state and federal laws, regulations, and guidelines for existing and future needs and that helps achieve safe yield requirements.

Goal W2:

Reduce the impacts of development on water quality, land subsidence, and riparian habitat.

Objective W2.1: Encourage voluntary actions and support federal, state, and local regulations and guidelines that protect and preserve the watershed, to safeguard current and future groundwater quality in the planning area.

Cost of Development

The Cost of Development element focuses on fiscal considerations relating to future growth in the planning area and Maricopa County in general.

Goal C1:

Ensure that new development pays its fair and proportional share of the cost of additional public facility and service needs generated by new development.

Objective C1.1: Develop a method to determine the need for, and assess costs of, new facilities and services required to serve new development in order to maintain service levels.

Objective C1.2: Support the adoption and implementation of level of service standards for new development to help promote consistency and certainty in the cost sharing process.



Agenda for Action

To help ensure effectiveness, stakeholders helped identify various long and short-term actions that will assist in plan implementation. Many of these actions require the continued participation of area residents, as well as public and private organizations. A complete list of actions is included within the plan.



INTRODUCTION

Adopted in 1997, *Eye to the Future 2020*, the Maricopa County Comprehensive Plan, requires an update of all County area plans to help ensure consistency with the Comprehensive Plan. This plan is an update of the previously approved *Goldfield Area Plan* adopted in 1995. The new *Goldfield Area Plan* reflects updated information and citizen issues, new demographic information, Growing Smarter and Growing Smarter plus requirements, revised future land use designations, and changes to the plan boundary. While the 1995 planning area encompassed 184 square miles in the northeast part of Maricopa County, the updated planning area does not include the Fort McDowell Yavapai Nation, the northeastern portion of the Salt River Pima-Maricopa Native Community, approximately 68,000 acres of the Tonto National Forest, or the unincorporated communities of Tonto Verde and Rio Verde. Instead, the plan now focuses on approximately 5,000 acres of unincorporated land in the Goldfield Ranch area.

Plan Organization

This document presents the results of the updated planning process for the Goldfield planning area. It is organized to follow the Maricopa County Comprehensive Plan guidelines, and includes the following seven sections:

Introduction: Describes how the plan is organized, how it should be used, a brief history of the planning area, and an overview of the area plan process in Maricopa County.

Inventory and Analysis: Analyzes existing conditions in the Goldfield planning area. Plan elements are based in part on information contained in this section.

Issue Identification: Summarizes important land use and planning issues raised by planning area residents. Key issues were condensed from a survey that was distributed at a public workshop and through the Maricopa County website.

Plan Elements: Defines specific goals, objectives, and policies that guide growth and development in the Goldfield planning area.

Action Plan: Outlines how the Goldfield Area Plan will be implemented through specific strategies and programs.

Amending the Plan: Specifies the process for changing this plan. By design, plans are flexible documents that can adapt to changing conditions. The amendment process highlights this and will facilitate the plan's evolution.

Appendix: Contains a glossary of terms, a list of acronyms, and other supporting documents.



INTRODUCTION

This area plan identifies goals, objectives, and policies for land use, transportation, environment, and economic development. In addition, per the state-enacted Growing Smarter and Growing Smarter Plus laws, the plan includes elements for open space, water resources, environmental impacts, growth areas, and cost of development.

Update Process

The Goldfield Area Plan reflects current citizen issues, population increases, Growing Smarter requirements, and land use and boundary changes. Maricopa County updates this and other area plans using the most recent Maricopa Association of Governments (MAG) population projections, Arizona Department of Economic Security (DES) projections, and U.S. Census data. Moreover, the boundaries of each area plan are reevaluated to determine if changes are necessary. As each plan is completed, it is considered at public hearings before the Planning and Zoning Commission and Board of Supervisors. Upon adoption, this updated area plan supersedes the Goldfield Area Land Use Plan approved in December, 1995.

How to Use the Plan

Each plan element contains a series of goals, objectives, and policies that define development standards, help formulate public policy, and guide public and private investment decisions. In this way, this plan serves as a decision making guide for the Planning and Zoning Commission and Board of Supervisors concerning growth and development. In addition to assisting public policy makers, it also helps private individuals and businesses make informed resource and investment decisions.

History of the Goldfield Region

The following brief history of the region is drawn largely from several books by local historian Robert Mason^{1,2,3}, a brochure on the history of the Tonto National Forest published by the National Forest Service⁴, and applicable websites^{5,6} providing historical background on Indian tribes in the region.

Due to its location near the Salt and Verde Rivers, one of the most lush river valleys in Arizona, the Goldfield area was a natural contact zone between various prehistoric peoples, and evidence suggests that it has supported a variety of settlements almost continuously for over 11,000 years. Although the Hohokam, who lived in the area

¹ Mason, Robert, *Our Desert Oasis*, Schuster Co., Inc., Scottsdale, AZ, 1999 (4th ed.)

² Mason, Robert, *Verde Valley Lore*, published by author, Rio Verde, AZ, 1997

³ Mason, Robert, *More Verde Valley Lore*, Phoenix Publishing Group, Phoenix, AZ, 2004

⁴ Wood, J. Scott, Martin E. McAllister, and Michael A. Sullivan, *11,000 Years on the Tonto National Forest*, Southwest Natural and Cultural Heritage Assoc., Albuquerque, NM, and Tonto National Forest, Phoenix, AZ, 1989

⁵ www.ftmcdowell.org/history.htm accessed 3/22/06

⁶ www.yavapai-apache.org/history.htm accessed 3/23/2006



from approximately 400 to 1450 AD are the most well known of the earliest inhabitants in the region due to their extensive irrigation canal system, there were other native groups including the Salado, Anchan, and Mogollon (Wood, p. 9). Findings of a large variety of encampments that existed along the Verde River, including a significant village of perhaps several thousand people, have been uncovered (Mason 1, pg. 6-7). There is also evidence that these groups conducted trade and had other political and cultural contact with many other prehistoric populations from northern Arizona to present day Mexico (Wood, p. 9). However, very little evidence exists for the period of time between the disappearance of the Hohokam and the arrival of the Apache and Yavapai in the 17th and 18th centuries (Wood, p. 15). Although the Apache and Yavapai are two distinctly different cultures with different languages, they lived in similar ways. They subsisted primarily by hunting and gathering, and also by planting small crops along the river where productive soil could be found, while also maintaining a somewhat nomadic lifestyle (Wood, p. 29).

The region that is now Arizona was considered Spanish territory from the time of the Coronado Expedition in 1540 until the formation of the Republic of Mexico in 1821, when it became part of Mexico. After the Mexican War of 1846, the area became part of the United States. However, there appears to be little permanent settlement activity that occurred in this period, perhaps in response to the fierce protection of land by the Yavapai and the Apache (Wood, p. 31). But the area does include historic sites related to mining, military, agricultural and ranching operations in territorial Arizona (Wood, p. 9). The discovery of gold, silver, and copper in the area in the mid 1800's was a turning point. Perhaps the best known legend is that of the Lost Dutchman Mine in the nearby Superstition Mountains. As the story goes, after Don Miguel Peralta discovered gold in 1845, he and a group of Mexicans transporting some of his takings were killed by Apaches in 1848 near Goldfield. Supposedly all signs of the mine were destroyed, until a German prospector, Jacob Walz, allegedly found it, but died without revealing its location. Many have since tried unsuccessfully to find it again (Mason 1, pg. 19). Also of note is the abundance of amethyst in the Four Peaks area, which was shipped to Europe by the Spanish in the 18th Century where some of the best specimens were added to the crown jewels of five countries (Mason 2, pg. 140).

Such stories led not only to the rapid arrival of prospectors seeking fortune, but also brought the American military into the area, including Camp (later Fort) McDowell, which was established in 1865 on what is now the Fort McDowell reservation. Resulting conflicts were considered part of the so-called Indian wars, when many Native Americans were rounded up and confined to reservations (Wood, p. 31). The most notorious event was the forced removal of thousands of Yavapai-Apache indigenous people, who were marched by the United States Army over 180 miles from the Verde Valley to San Carlos, resulting in numerous deaths. When they were released in 1900, only a fraction made it back to their homeland in the Verde Valley approximately 90 miles north of Phoenix (Yavapai-Apache website). After Fort



INTRODUCTION

McDowell was abandoned by the military, it was designated as an Indian Reservation in 1903 (Mason 2, pg. 49).

In the 1870's cattle ranchers and sheepherders arrived and competition for grazing rights sometimes turned deadly. In the early 1880s and again in the mid-1890s, a severe drought occurred in the region which was already being over-grazed. During this period, wells went dry, springs slowed to a trickle, creeks dried up, and cattle died. Cattle owners leased thousands of acres from the government for grazing purposes, as there was no privately owned land in this area through the early 1900s. When the Tonto National Forest was established, new government rules regarding grazing allotments were enacted, and for the first time cattlemen began to fence their ranges. Ranchers without well-watered ranges for their cattle began to leave in the early 1900s. When the rains finally came in torrents near the turn of the century, severe erosion resulted. But agriculture never materialized due to the harsh climate and unreliable water sources, despite attempts to reuse the existing Hohokam canals (Wood, p. 35).

In 1905, pressure from the Salt River Valley Water Users' Association resulted in the establishment of the Tonto National Forest, primarily in order to protect the water flow for the Salt River Project, the first major reclamation project in the United States prior to construction of the Roosevelt Dam (Wood, p. 3). This was only the first of many dam projects built in the period ending in the mid-1940's that were crucial in the development of the Phoenix region (Wood, p. 37). The lakes created by these projects also provided new recreational amenities, even though they also caused the loss of unique environmental areas that existed along the previously free flowing rivers (Wood, p. 37). Today, the Tonto National Forest helps protect the stunning views and open spaces that provide recreational activities and contribute to the area's quality of life (Mason 3, pg. 136). Of its three million acres, which makes it the second largest national forest in the continental United States, only about 3% consists of private land. Although exchange programs have traded land on the perimeter of the forest for private land within the forest boundaries, this practice is rare (Mason 3, pg. 135).

With respect to water reclamation, one dam that was never built also significantly affected the history of the area. In the early 1970's, construction of the Orme Dam was proposed at the confluence of the Verde and Salt Rivers, just outside the study area south of the Fort McDowell Yavapai Nation's southern boundary. The project would have flooded most of the reservation and forced the community from their homeland. However, the project was abandoned by the federal government after an opposition movement led by tribal members that included other Indian tribes and non-Indian groups forced reconsideration of the issue (Fort McDowell Yavapai Nation website). This group included a University of Arizona archaeologist who noted that there were hundreds of archaeological sites in the general area (Mason 1, pg. 9), and the president of the local Audubon Society, who noted the high concentration of nesting birds, including bald eagles (Mason 2, pg. 111). Another



important influence in the area is the presence of gaming casinos on the Fort McDowell reservation since the early 1990's. Despite the seizure of gaming machines by FBI agents in 1992 that resulted in a blockade and three-week standoff, a gaming compact was signed with the state allowing for the casino's continued operation. This has also resulted in related economic development, such as hotels, on the reservation (Fort McDowell Yavapai Nation website).

The Goldfield planning area, illustrated in **Figure 1: Planning Area**, remains primarily a rural residential and equestrian community. The opportunity to buy large parcels of undeveloped land and build a home in a quiet, rural area remains a major attraction for some people. As a result, the resident population in the Goldfield planning area has grown by approximately a factor of five since 1995 and more growth in the future is likely. However, growth and development creates potential issues such as the preservation of unique Sonoran desert areas, the provision of adequate infrastructure, ensuring compatibility between diverse recreational activities, and increasing air pollution from the use of unpaved roads. The Goldfield Area Plan update helps address these issues by providing policies to guide future development of the area.

Planning History

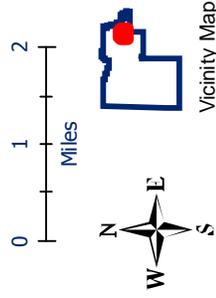
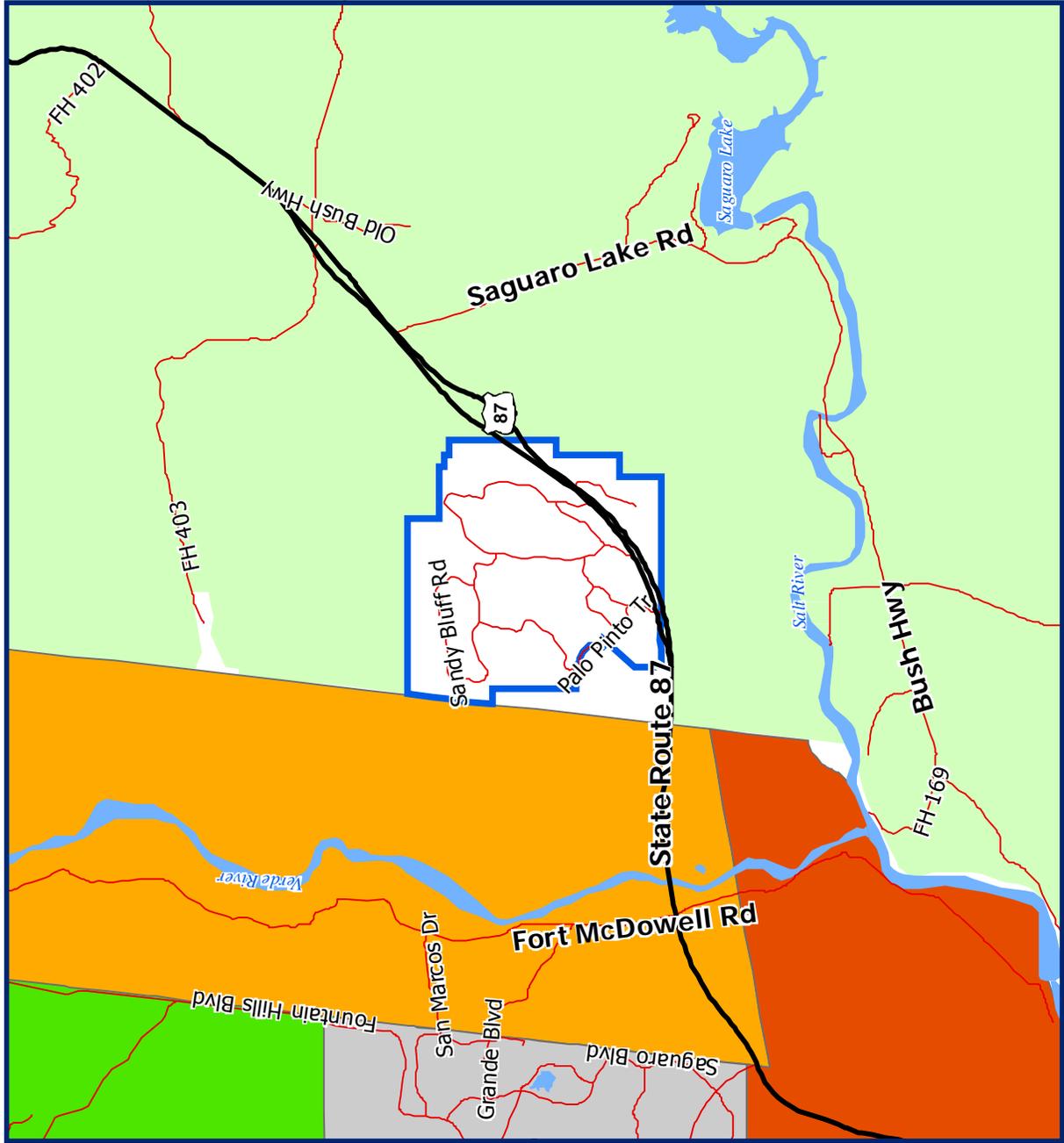
Maricopa County adopted its first comprehensive plan in October 1997. Titled *Eye to the Future 2020*, the comprehensive plan promotes healthy communities by encouraging growth in suitable areas, developing an efficient transportation system, maintaining a healthy environment, and creating a diverse economy. To effectively implement the Comprehensive Plan, the County's area plans will continuously be updated so they are consistent with *Eye to the Future 2020*.

Due to community interest in updating the Goldfield Area Plan, Maricopa County initiated an area plan update for a portion of the Goldfield planning area. After initial review and discussion with community members, it was decided to focus the update on approximately 5,000 acres of unincorporated Maricopa County lands included in the Goldfield Ranch area. The master-planned communities of Rio Verde and Tonto Verde, which were included in the original area plan, are not included in this update. However, it does include the area covered by the approved 2,200 acre development master plan (DMP) named "The Preserve," which is located in the western and southeastern portion of the Goldfield Ranch subdivision. The Preserve DMP was approved in 1995 on the same day that the Goldfield Area Land Use Plan was adopted, but no further action has since been approved.

Planning Area

Figure 1

- Legend**
- Arterial Roadway
 - Highway
 - Goldfield Area Plan
 - River
 - Fort McDowell Yavapai Nation
 - Salt River Pima - Maricopa Indian Community
 - McDowell Mountain Regional Park
 - Tonto National Forest
 - Fountain Hills



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Public Participation

During preparation of the Goldfield Area Plan, community participation was emphasized through various techniques. This participation allowed stakeholders to identify planning issues and concerns, and provide recommendations, comments, and suggestions. Public workshops were held to gather input from residents, property owners, interest groups, and public and private agencies. Informational letters announcing the workshops were prepared and distributed prior to each workshop. A summary of the first workshop was distributed in October 2005 and was also posted on the county's website which is used to disseminate basic information on the area plan update, announce public meeting dates, and to enable citizens to download a citizen survey. The Goldfield Concerned Citizens Association also disseminated plan information to their members through a newsletter.

Public Meetings

The Maricopa County Planning and Development Department held the first public workshop at Fountain Hills Middle School in September 2005. This "open house" style meeting provided an opportunity for staff to present project information and allowed citizens to ask questions of project staff and make comments and recommendations on the draft plan. A citizen survey was distributed at both public meetings to identify and gauge citizen attitudes.

Community Mailing

To encourage public participation, plan update notifications were sent to property owners and stakeholders in the planning area. These notifications explained the significance of County area plans, the plan update process, and how citizens could be included on an active mailing list. Over time, an active mailing list of nearly 150 addresses was developed based on public meeting sign-in sheets and those requesting to be added to the mailing list. Additionally, a mailing list of 32 agencies and interest groups was compiled. These included various community associations; municipal, state, federal and Indian community agencies; a regional planning agency; service providers (e.g. SRP, Rural/Metro Fire Department); and interest groups.

Other Input

Input was also obtained through meetings, telephone calls, letters, facsimile, and email messages from citizens, potentially affected interests, and public agencies. Project staff met with representatives of the Goldfield Concerned Citizens Association, the Fort McDowell Yavapai Nation, and Tonto National Forest. In addition, planning staff met with other Maricopa County agencies to ensure interagency coordination and planning, including the Maricopa County Environmental Services Department, Flood Control District of Maricopa County, Maricopa County Parks Department, and Maricopa County Department of Transportation.



INVENTORY AND ANALYSIS

Planning Area Growth and Change

The previous Goldfield plan encompassed approximately 184 square miles, but the updated planning area has been reduced to the approximately 5,000 acres of unincorporated Maricopa County land located within and immediately adjacent to the Goldfield Ranch subdivision. **Figure 2-Original Plan Boundary** shows the geographical extent of the original Goldfield plan versus the updated plan.

Population and Demographic Characteristics

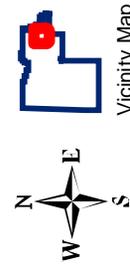
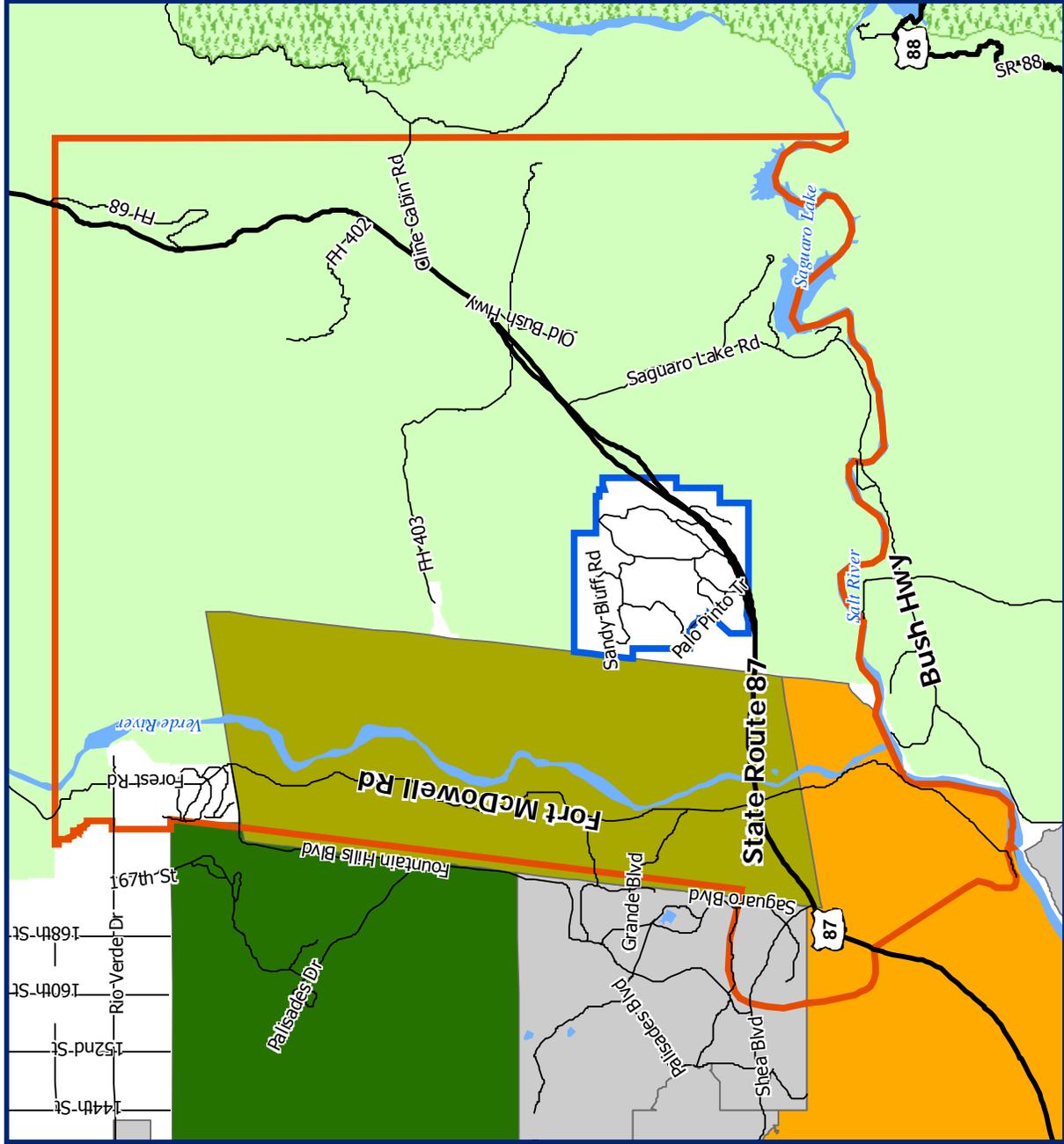
This section highlights historic and projected population and housing unit data to the year 2030. MAG projections and Census data are reviewed for the updated planning area and for Maricopa County as a whole. Since information was not available specifically for the planning area, total population and number of residential housing units are based on information received from residents of the Goldfield Ranch subdivision, building permit records, and a visual survey of aerial photographs. Based on this information, there were approximately 14 homes when the original plan was adopted in 1995, approximately 38 homes by 2000, and approximately 85 homes in 2005 with 11 additional permits pending in 2006 for new residences. Using the 2.48 persons per household figure from the 2000 Census for the zip code tabulation area in which the planning area is located, this equates to a population estimate of approximately 94 people in 2000 and 211 people in 2005. Although the actual number of people living in the planning area may vary due to the methods and assumptions used to make these calculations, this provides a general baseline population estimate. The methods used to calculate the projected population figures are discussed in more detail in this section under *Future Population and Housing Trends*. **Table 1** shows estimated and projected population for the planning area and Maricopa County, while **Table 2** provides the estimated and projected number of housing units for the planning area and Maricopa County.

Original Plan Boundary

Figure 2

Legend

-  Arterial Roadway
-  Highway
-  Original Goldfield Area Land Use Plan
-  Goldfield Area Plan
-  River
-  McDowell Mountain Regional Park
-  Fort McDowell Yavapai Nation
-  Salt River Pima - Maricopa Indian Community
-  Fountain Hills
-  Wilderness Areas (BLM)
-  Tonto National Forest



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Table 1: Estimated and Projected Population

Area	2000	2005	Projection 2010	Projection 2020	Projection 2030
Goldfield Planning Area	94 ¹	211 ¹	328 ²	562 ²	796 ²
Maricopa County	3,072,149 ³	3,635,528 ³	4,134,400 ⁴	5,164,100 ⁴	6,140,000 ⁴

Source: ¹ Maricopa County Planning & Development estimates

² Maricopa County Planning & Development projections

³ U.S. Census 2000 and 2005 population estimates

⁴ Maricopa Association of Governments projections

Table 2: Residential Housing Units

Area	2000	2005	Projection 2010	Projection 2020	Projection 2030
Goldfield Planning Area	38 ¹	85 ¹	132 ²	226 ²	320 ²
Maricopa County	1,250,231 ³	1,284,690 ⁴	1,606,600 ⁵	1,970,400 ⁵	2,309,500 ⁵

Source: ¹ Maricopa County Planning & Development estimates based on aerial photographs and permit data

² Projection derived from Maricopa County residential permit data

³ U.S. Census 2000

⁴ U.S. Census Bureau, 2004 American Community Survey

⁵ Maricopa Association of Governments projections

Note: Housing units in this table represent Total Units, not Occupied Units, except 2005 Maricopa County figure, which represents the total number of occupied units in 2004.

Table 3 provides persons per household data, and **Table 4** provides current population distribution by age for the planning area and for Maricopa County. Since information was not available for the planning area specifically, figures for the Goldfield planning area are based on the census block group that corresponds most closely to the planning area for persons per household figures, and the zip code tabulation area (ZCTA) that corresponds most closely to the planning area for age distribution and median household income figures. The methods used to calculate the projected persons per household figures are discussed in more detail in this section under *Future Population and Housing Trends*. The number of persons per household in block group 3 of census tract 101 is less than for Maricopa County as a whole. The median age for the 85264 ZCTA is 24.3 years, which is lower than the median age of 33 years for Maricopa County. **Table 5** shows the median household income reported for the 85264 ZCTA in the 2000 U.S. Census. Since the census was in April, income was for 1999. Income levels in the area are generally higher than for Maricopa County overall.



Table 3: Persons Per Household

Area	Census 1990	Census 2000
Goldfield Planning Area	2.12 ¹	2.48 ²
Maricopa County	2.59 ¹	2.67 ²

Source: ¹ 1990 U.S. Census block data
² 2000 U.S. Census block data

Table 4: Population Distribution by Age

Area	< 5 yrs	5-14	15-24	25-34	35-44	45-54	55-64	65+	Median Age
Goldfield Planning Area ¹	10.9%	23.6%	16.6%	13.3%	16.4%	9.9%	5.6%	3.7%	24.3
Maricopa County ²	7.9%	15.0%	14.3%	15.9%	15.5%	11.9%	7.8%	11.7%	33.0

Source: ¹ 2000 U.S. Census, Zip Code Tabulation Area (ZCTA) data for 85264
² 2000 U.S. Census

Note: ZCTAs are not U.S. Postal Service ZIP Codes. ZCTAs are approximate area representations of United States Postal Service ZIP Code service areas.

Table 5: Median Household Income - 1999

Area	Median Household Income
Goldfield Planning Area ¹	\$47,222
Maricopa County ²	\$45,358

Source: ¹ 2000 U.S. Census, Zip Code Tabulation Area (ZCTA) data for 85264
² 2000 U.S. Census

Note: ZCTAs are not U.S. Postal Service ZIP Codes. ZCTAs are approximate area representations of United States Postal Service ZIP Code service areas.

Future Population and Housing Trends

The Goldfield Area Plan represents an opportunity to plan for possible future growth in this region. Understanding the characteristics and pace of population and housing growth can lead to more prudent planning for future infrastructure, land uses, and natural resources. However, population projections vary depending on the method of projection and assumptions about future conditions. The methods used to calculate the projected population and housing units are discussed in more detail below.

Using historic aerial photographs, Maricopa County researched how many residences were completed in the planning area before 2000. It was estimated that approximately 38 homes existed in the planning area at the end of 1999. At an average of 2.48 persons per household (a figure based on the most recent census data for the census block in which the planning area is located) the planning area is estimated to have had a population of approximately 95. This figure could be lower



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depending on how many homes were unoccupied, and whether or not the planning area's average household size was consistent with that of the larger census block. Then, using building permit records it was determined that the planning area has added an average of 9.4 new homes per year from 2000 to 2005. If homes continue to be built at this rate, the planning area could add approximately 47 additional homes by the year 2010 (5 years x 9.4 homes per year), approximately 141 homes by the year 2020 (15 years x 9.4 homes per year), and approximately 235 homes by the year 2030 (25 years x 9.4 homes per year). Assuming that the 2.48 persons per household figure remains the same over this time period, approximately 580 additional persons could live in the planning area for a total population of approximately 795 by 2030.

Factors that are likely to affect future population growth and housing trends in the Goldfield planning area include topography, water supply, infrastructure, services, and the availability of residential lots. In particular, development of the approved development master plan known as *The Preserve*, may impact future population and housing units projections. This DMP was approved in 1995 for 2,032 total dwelling units, and was projected to have a population of over 5,000 people. These factors are discussed further in the *Growth Areas* and *Cost of Development* sections later in this area plan.



LAND USE

Existing Land Use and Development

The following land use topics are addressed in this section:

1. Land Development Patterns
2. Zoning Regulations
3. Public Land Ownership
4. Facilities and Utilities
5. Special Planning Concerns
6. Future Land Use Definitions, Guidelines, and Analysis
7. Buffering and Transitional Land Use Guidelines

Land Development Patterns

Until recently, the Goldfield planning area had little residential growth relative to the urbanizing areas of Maricopa County. The distance from metropolitan Phoenix, lack of services, and limited road maintenance delayed residential development. **Figure 3 - Existing Land Use** illustrates the land use patterns that exist within this region.

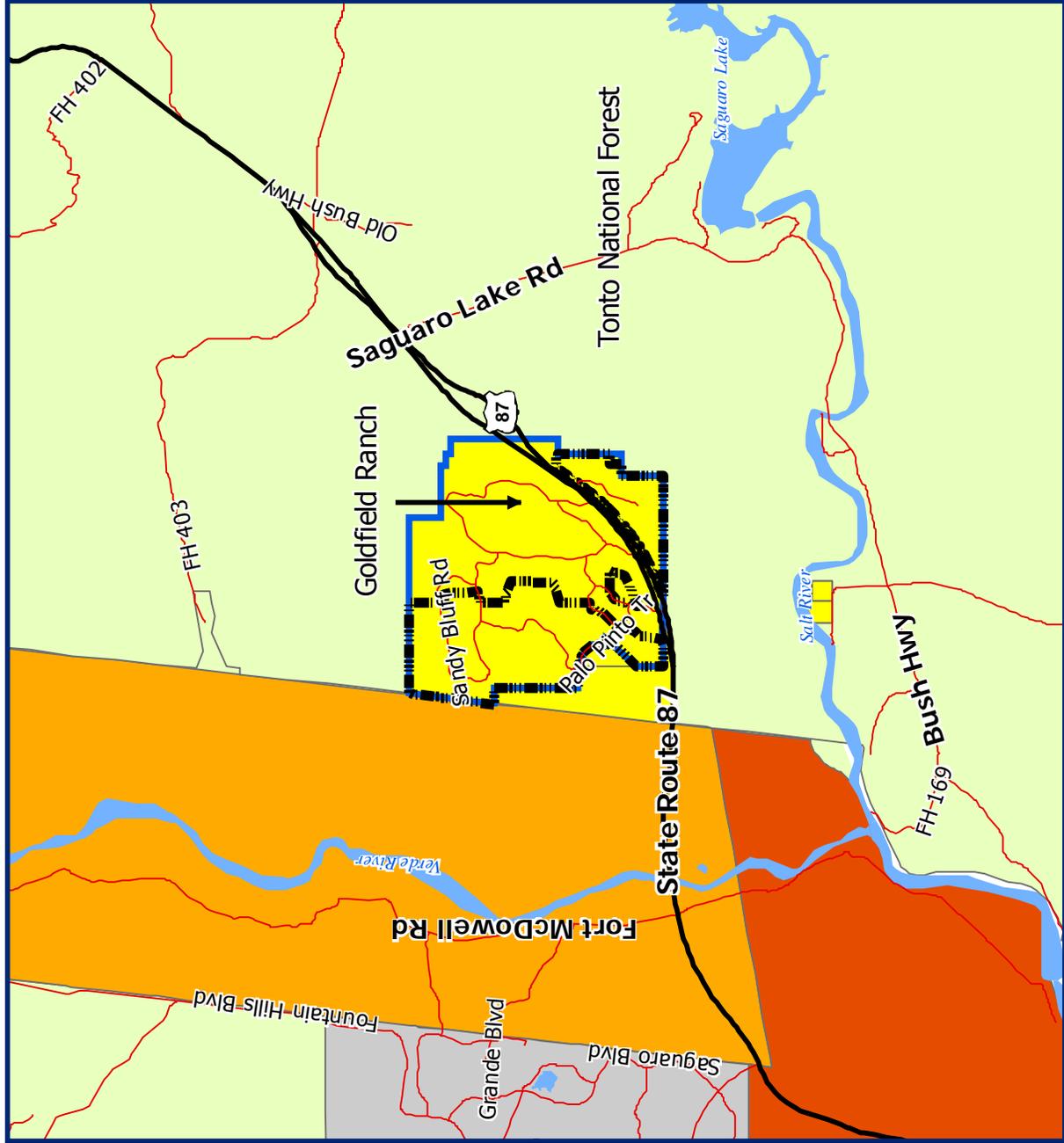
North, east, and south of the planning area is the Tonto National Forest, which is undeveloped except for a few recreational trails. West of the planning area is the Fort McDowell Yavapai Nation, which also remains predominantly undeveloped adjacent to the planning area. A casino and tourism related development, golf course, hotel, and restaurant are located on the reservation along State Route 87 approximately 3 miles southwest of the planning area. The reservation also includes agricultural and mining land uses, as well as community facilities. The Salt River Pima-Maricopa Indian Community is located approximately one-half mile southwest of the planning area, and is also predominately undeveloped in the area closest to the Goldfield area. Further west is the Town of Fountain Hills, which is developed primarily with a variety of residential and commercial uses.

Single-family homes on large lots have been the main development activity in the planning area. Since the early 1990s, the planning area began a transition from undeveloped desert land to single-family residential development with a distinctive rural and equestrian character. Around 14 homes were built in the Goldfield Ranch subdivision prior to 1995, 24 homes were built during the late 1990s, and nearly 50 new homes were constructed between 2000 through 2005. Existing development also includes many horse corrals and other accessory buildings. Few homes are located west of Vista Del Oro Drive. Goldfield Ranch is the only approved subdivision in the planning area, not including the *Preserve* DMP (**Table 8**) which was approved in December 1995 (**Table 9**). These developments are further discussed later in this report.

Existing Land Use

Figure 3

- Legend**
- Arterial Roadway
 - Highway
 - River
 - Goldfield Area Plan
 - Rural
 - Dedicated or Non-developable
 - Open Space
 - Fort McDowell Yavapai Nation
 - Salt River Pima -
 - Maricopa Indian Community
 - Fountain Hills
 - The Preserve DMP



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Per the Maricopa County Zoning Ordinance, the Board of Supervisors may permit through a special use permit certain uses in zoning districts from which they are otherwise prohibited. For example, while horse corrals are permitted in the Rural-43 zoning district as a use by right (an allowed use), a public riding and boarding stable must have a Special Use permit and comply with specific stipulations.

There are currently two special use permits for wireless communications facilities that have been approved in the planning area (**Table 6**). In addition, there is a special use permit for a private airstrip that was approved in 2003. This allows for the continued use of an otherwise non-conforming airstrip since it was in existence prior to the adoption of the Maricopa County Zoning Ordinance.

Zoning Regulations

The planning area includes one rural residential zoning district that Maricopa County enforces through its adopted zoning ordinance: Rural-190. This district primarily allows residential uses, farms, recreational, and institutional uses. Rural-190 permits one single-family dwelling per minimum lot area of 190,000 square feet (4.36 acres). Established zoning district categories are found in *Appendix B- Zoning District Categories* along with an existing zoning map shown in **Figure 15-Existing Zoning**.

Public Land Ownership

Figure 4 identifies privately held property in the Goldfield planning area and a combination of private land and publicly held land surrounding the planning area. Public property includes areas managed by the federal government. While not part of this area plan, the Fort McDowell Yavapai Nation owns approximately 600 acres of land southwest of the Goldfield Ranch subdivision that is adjacent to their jurisdictional boundaries. This land was the subject of land exchange with the National Forest Service in the 1990's.

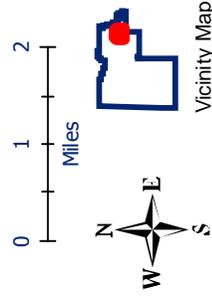
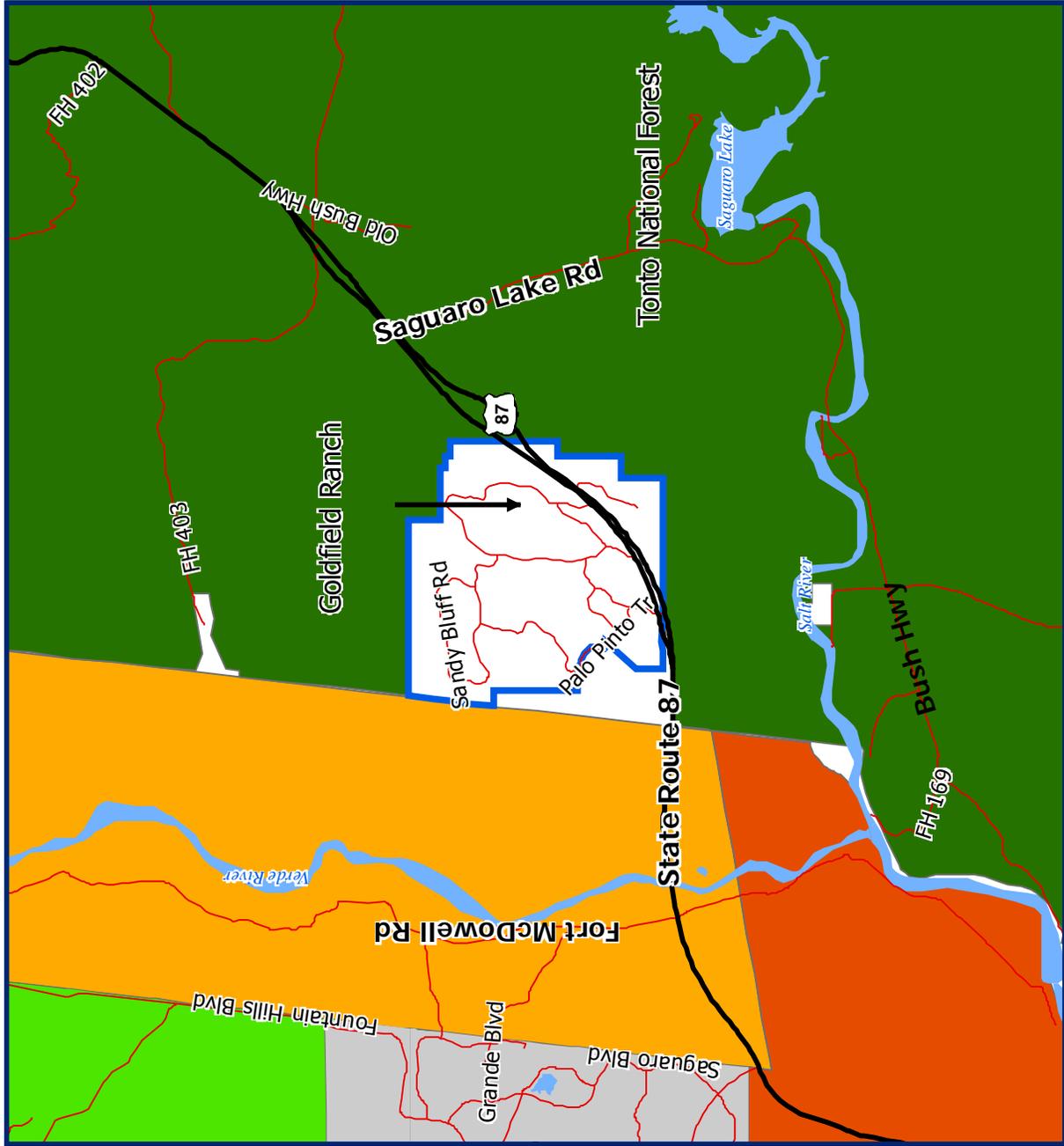
Federal Land

The United States Forest Service (USFS) manages the Tonto National Forest lands north, south, and east of the study area. The Tonto National Forest, occupying nearly three million acres of land, is the fifth largest forest in the United States. It has many outdoor recreational opportunities, including hiking, camping, horseback riding, limited off-highway vehicle (OHV) areas, boating, fishing and target shooting. However, along with these uses come impacts such as litter and habitat destruction. The Forest Service encourages volunteers to help their overstretched staff with tasks such as cleaning up trash. The USFS prepared and approved its National Forest Land Management Plan for the Tonto National Forest in 1985, which is scheduled for updating in late 2006.

Land Ownership & Management

Figure 4

- Legend**
- Highway
 - Arterial Roadway
 - Private Land
 - Goldfield Area Plan
 - Rivers
 - McDowell Mountain Regional Park
 - U.S. Forest Service
 - State Trust Land
 - Fort McDowell Yavapai Nation
 - Salt River Pima -
 - Maricopa Indian Community
 - Fountain Hills



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Table 6: Special Use Permits – Goldfield Planning Area

Name	Date Approved	Area (Ac.)	Special Use Type	Location
Adams Mesa/Fountain Hills Cell Site	November 21, 1988 (Renewed 11/5/2003, Modified 10/20/2004)	.06	Wireless Communications Facility	21915 E.Thirsty Earth Trail
Sprint Goldfield	April 3, 2002	.05	Wireless Communications Facility	East of White Face Canyon Rd. approx. 1/3 mi. NW of SR87

When considered in the public interest, the USFS has the authority to exchange lands with non-federal parties within the boundaries of National Forests within the same state. Public interest considerations include state and local needs; protection of habitats, cultural resources, watersheds, and wilderness and aesthetic values; enhancement of recreational 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.

In the 1990’s, a land exchange involving the area immediately southwest of the Goldfield Ranch subdivision resulted in the transfer of over 600 acres of National Forest land to private ownership by the Fort McDowell Yavapai Nation.

Tribal Lands

The Fort McDowell Yavapai Nation has jurisdiction over 24,680 acres of land east of the planning area. In 1903, President Roosevelt established the reservation near the military outpost of Fort McDowell. This land is a small percentage of land which was once considered ancestral territory of the Yavapai Indians. Fort McDowell’s prime economic activity is its casino, built in 1984. Other tribal businesses include a sand and gravel quarrying operation, a concrete plant, and a 2,000-acre farm. The community of approximately 1,000 people has an elementary school, library, a center for the elderly, and its own fire and police department. They are governed by an elected Tribal Council consisting of a President, Vice President, Treasurer, two Council Members, and a non-voting Secretary. While development can occur on tribal lands, it is subject to the rules and regulations of the tribal government.

The Salt River Pima-Maricopa Indian Community was created in 1879 and has jurisdiction over 53,600 acres of land located approximately one half mile southwest of the planning area that borders the cities of Mesa, Tempe, Scottsdale, and the town of Fountain Hills. The community has over 7,000 people, and is governed by a Community Council comprised of a President, Vice President and seven elected Council members. According to their official website, 19,000 acres of their land is preserved as open space, including the confluence of the Verde and Salt Rivers, and 12,000 acres is used for agriculture. However, there is also extensive commercial development along the western boundary near the Loop 101 highway, and a future commercial node designated on their economic development plan where State Route 87 enters the northern boundary of their land. Existing tribal commercial



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enterprises include a casino, two golf courses, a landfill, sand and gravel operations, as well as commercial office development and telecommunications firms, and a trap and skeet shooting club.

Facilities and Utilities

This section reviews the public and private utilities and facilities in and around the Goldfield planning area. This assessment is not intended to provide a detailed, in-depth analysis of operations or specific service programs. Rather, it provides an overview of existing conditions to help determine whether current services can support increased development. General facility locations are identified in **Figure 5**, and this review is organized into seven subsections:

- A) Water Distribution Systems
- B) Sanitary Sewer System
- C) Sheriff's Department
- D) Fire Protection
- E) Educational Facilities
- F) Parks and Open Space
- G) Landfills
- H) Electric Power

A. Water Distribution Systems

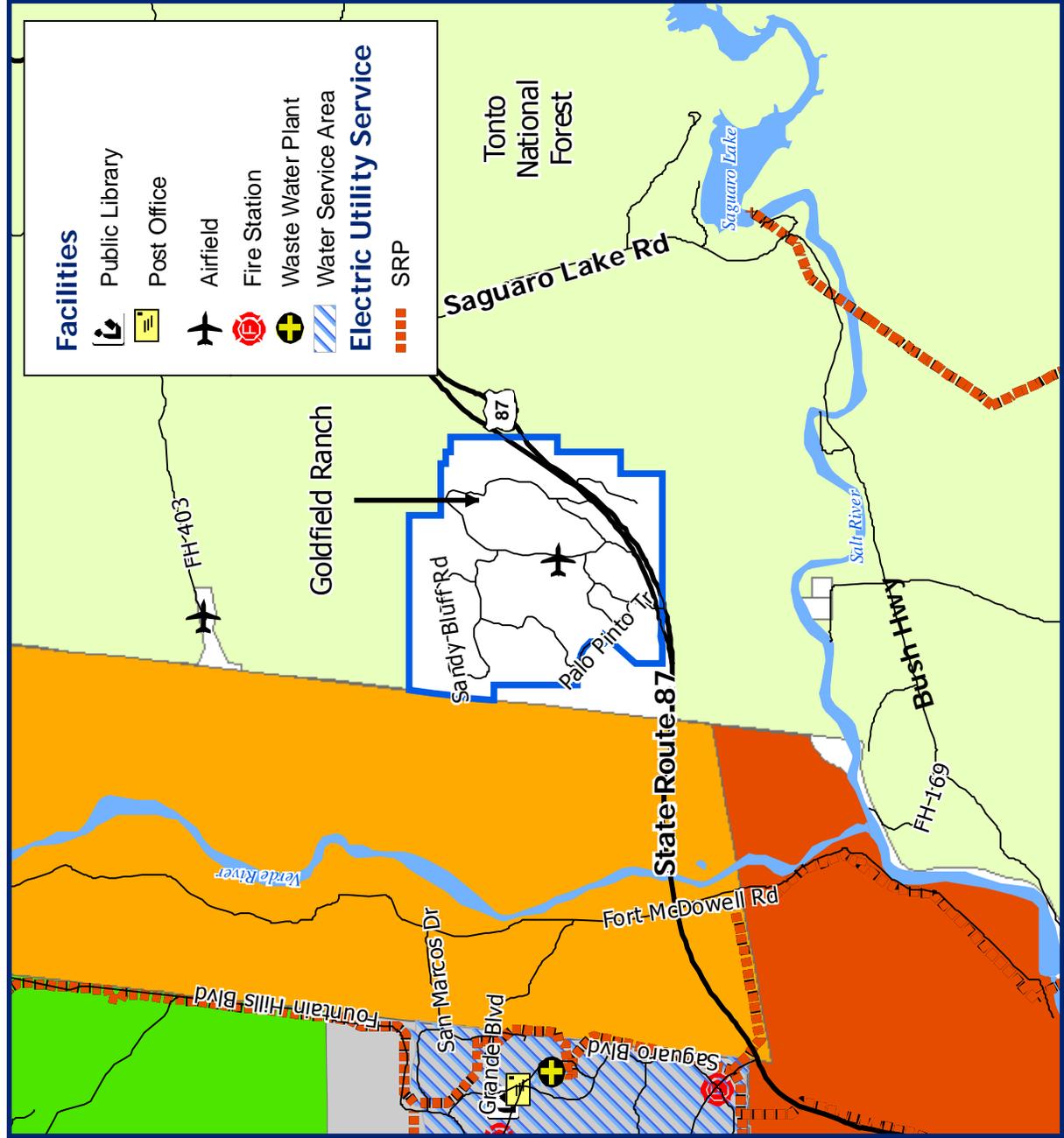
The Goldfield area is characterized by limited water facilities. Domestic water is currently obtained from private wells or hauled water. Because the planning area is located in the Phoenix Active Management Area (AMA), subdivisions are required to obtain a Certificate of Assured Water Supply from the Arizona Department of Water Resources (ADWR). The approved *Preserve* DMP in the planning area proposes two independent water distribution systems that have not yet been built and included the use of treated effluent for irrigation of the planned golf course after interim use of groundwater. The closest existing private water company regulated by the Arizona Corporation Commission is the Chaparral City Water Company, which serves the Town of Fountain Hills. An in-depth discussion of water resources is included in the Water Resource Element. Information on water quality is provided in the Environmental Resources Element.

B. Sanitary Sewer System

There are currently no community sewer systems in the planning area. Residential development operates on septic systems. The closest private sewer company regulated by the Arizona Corporation Commission is Rio Verde Utilities, Inc. which serves the master planned communities of Rio Verde and Tonto Verde. The *Preserve* DMP proposes a sewer system that includes an on-site wastewater treatment plant that has not yet been built.

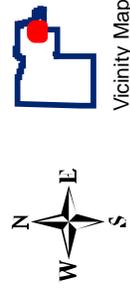
Existing Facilities & Utilities

Figure 5



Legend

- Arterial Roadway
- Highway
- Railroad
- Goldfield Area Plan
- Rivers
- McDowell Mountain Regional Park
- Wilderness Areas (BLM)
- Tonto National Forest
- Private Land
- Fort McDowell Yavapai Nation
- Salt River Pima - Maricopa Indian Community
- Fountain Hills



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C. Sheriff's Department

The Maricopa County Sheriff's Office (MCSO) primarily serves the unincorporated areas of Maricopa County. The MCSO has the responsibility of providing basic patrol, investigative, and detention services to contract towns, cities, and unincorporated communities within the county. The Goldfield planning area is within MCSO District VII. The main station for this district is at 16705 E. Avenue of the Fountains, in Fountain Hills.

D. Fire Protection and Medical Emergencies

Currently, there is no fire protection provided by Rural/Metro Corporation, or any other public fire department, in the planning area. However, Goldfield residents have recently established a fire district. Land was designated for public facilities, including a new fire station, as part of the approved DMP for The Preserve. The closest medical facilities are located in Fountain Hills.

E. Educational Facilities

There are no schools within the planning area. School district boundaries and nearest schools are shown in **Figure 6-School Locations**. Most students attend schools in the Fountain Hills Unified School District, located west of the planning area. The District operates two elementary schools (one serves grades K-2, the other 3-5); one middle school serving 6th through 8th grade; and one high school, which serves 9th through 12th graders. Currently, there is no bus transportation to and from the schools.

Post-secondary educational facilities are outside of the planning area but within commuting distance, and include several community colleges and Arizona State University in Tempe.

F. Parks and Open Space

The planning area contains abundant open space as discussed in the Open Space Element. However, open space within the planning area is privately owned and may be developed in the future. There are no public parks in the planning area, although McDowell Mountain Regional Park is located approximately four miles northwest of the study area. The planning area, however, is surrounded by the Tonto National Forest on three sides which provides an abundance of permanently protected open space.

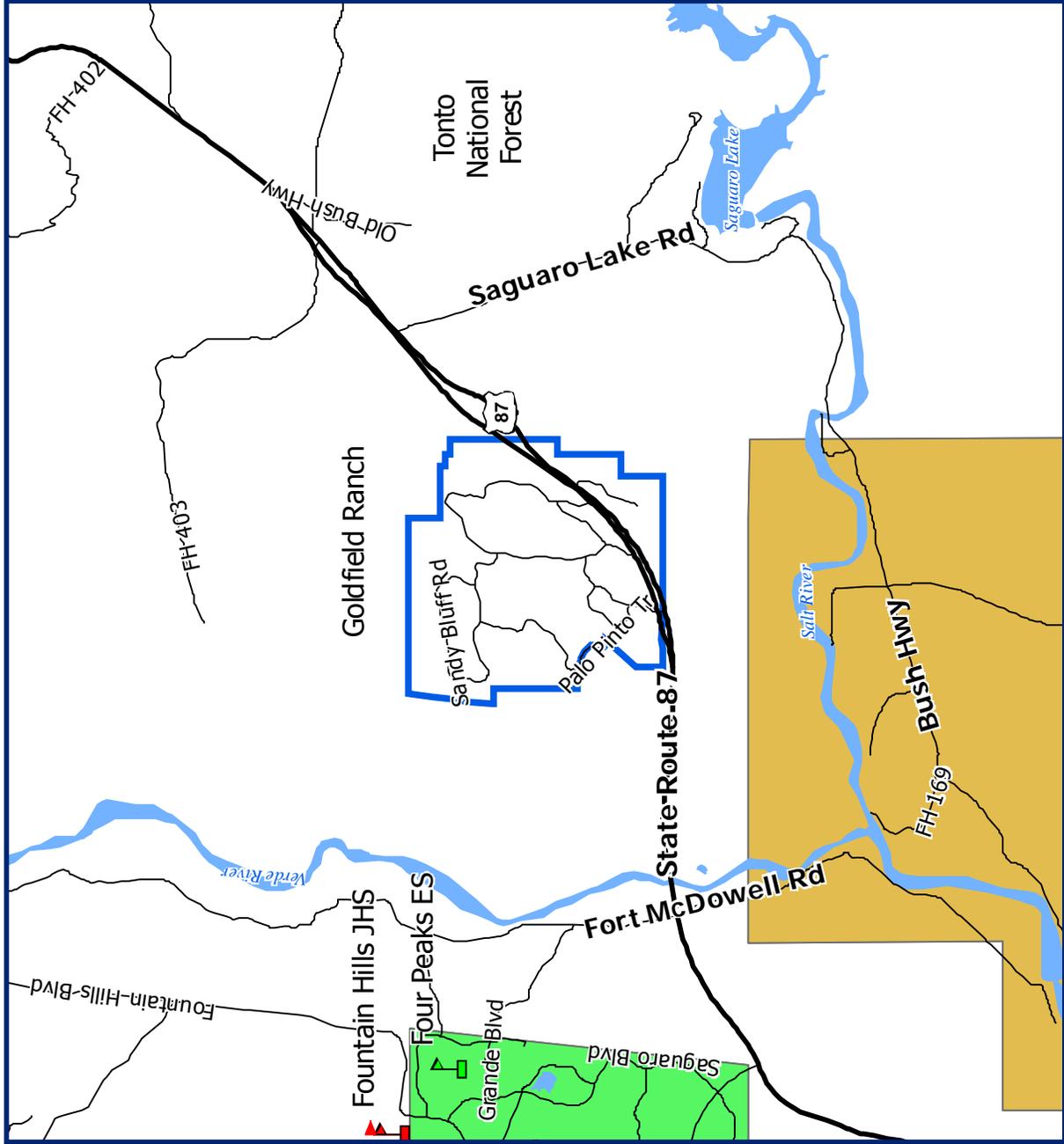
G. Landfills

There are no landfills in the planning area. The closest landfill is located approximately ten miles southwest of the planning area at the intersection of SR87 and Gilbert Rd. on the Salt River Pima-Maricopa Indian Community.

Schools

Figure 6

- Legend**
- Arterial Roadway
 - Highway
 - Interstate
 - Railroad
 - Goldfield Area Plan
 - Rivers
 - Existing Elementary School
 - Existing Middle School
- School Districts**
- Fountain Hills #98 in
 - Fountain Hills Unified HS
 - Mesa #4 in Mesa Unified HS
 - No District



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H. Electric Power

Area residents are served by Salt River Project (SRP) electricity. Existing power lines have been constructed above ground.

Facilities and Utilities: Conclusion

The Goldfield planning area currently contains scattered rural development in the very low-density Goldfield Ranch subdivision. Most of the single family homes rely on wells and septic systems, although residents in some areas must haul water to their homes. Facilities and services currently available to all residents in the area include electric and phone service, and sheriff's office patrol. Facilities not currently available in the planning area include community sewer; developed recreational parks; libraries; and elementary, junior high, and senior high schools. A new fire district has recently been formed to provide fire and emergency services to the Goldfield Ranch residents.

Maricopa County encourages urban growth (i.e. commercial, employment, and residential density greater than 1 dwelling unit per acre) to occur within the Urban Service Area (USA) where services, infrastructure, and facilities are readily available. The USA is not delineated on the land use map. Rather, it is defined by the ability of a jurisdiction, improvement district, or private entity to provide infrastructure and appropriate urban services to a specific site or project. The USA is considered suitable for higher density development, as well as an area considered efficient to expend public infrastructure funds. For development outside the Urban Service Area, various facilities, infrastructure, and services may not be required and will be reviewed by the County on a case-by-case basis.

Special Planning Concerns

As discussed earlier, the slow-growth pattern of residential development is changing in the Goldfield planning area. Lot splits continue to occur and some homes have been constructed on such lots. It appears that development will continue while growth generates concerns such as traffic, air pollution, and environmental degradation. Preparing for orderly, timely, and compatible growth is an important component of the Goldfield Area Plan.

If or when completed, the Goldfield Ranch subdivision and The Preserve master planned community combined could add approximately 5,500 residents to the area. While subdivision regulations require carefully planned traffic circulation and adequate planning for drainage, water supply, power, and other health and safety requirements, lot splits have minimal requirements. Minor land division is the legal division of land into no more than five lots. Such land division is commonly known as a "wildcat subdivision." Early in the lot splitting process, problems may not be apparent. However, as the splits continue and more homes are built, both minor land divisions and wildcat subdivisions can create haphazard conditions, dusty roads,



access problems, and costly services. A balance needs to be achieved between the private-property rights of landowners to divide and sell rural lots and the need for sound community growth. **Table 7 – Land Split Considerations** addresses several issues that should be considered when lot splitting.

A unique planning concern of the Goldfield area is its remote location between federally protected forest lands and Indian community, which provides both opportunities and constraints. Constraints include limited routes into and out of the area, open range hazards, flooding problems, distance to schools and other services, and limited services and infrastructure. However, the relatively undeveloped desert, the nearby Verde River, and surrounding scenic mountains provide opportunities for recreation, solitude, and rural activities. Sonoran desert vegetation supports abundant wildlife; the relatively remote setting is favorable for equestrian and other rural uses; adjacent protected open space provides a natural buffer to the community. The Goldfield Area Plan will help identify and plan for limitations and identify opportunities to plan for recreational trails, develop guidelines for sensitive development, preserve rural character, and ensure a high quality of life. During the citizen participation phase, land owners expressed the desire to maintain the existing rural character, preserve the scenic beauty of the area, and protect the existing natural environment. These objectives are included in area plan policies. In addition, the action plan recommends creating community-crafted rural development guidelines that would encourage appropriate landscaping, lighting, signage, and other voluntary development guidelines to maintain the rural character and scenic beauty.

Future Land Use Definitions, Guidelines, and Analysis

Definitions and guidelines are included to give a better understanding of the proposed land uses. In addition, for each land use designation the corresponding definitions and guidelines help assure consistent interpretation. Land use categories in the Goldfield Area Plan are consistent with the Maricopa County Comprehensive Plan. Proposed future land uses for the planning area are shown in **Figure 14-Future Land Use** in the appendices at the end of this document.

An analysis of existing land use categories in the Goldfield planning area follow each definition. While the goals, objectives, and policies are the basis of the area's desired future land use pattern, the ultimate development pattern is tempered by recognition of development activities and established patterns. This includes consideration for land uses and features outside the planning area that might affect future development patterns. In addition, adopted land use plans were considered during the analysis of land uses.



Table 7: Land Split Considerations

Issue	Consideration	Problems To Avoid
Current Zoning	Newly created parcels must meet all zoning requirements, including: Minimum lot width Minimum lot area Building setbacks	An improper land split renders the property involved unavailable or unsuitable for building and not entitled to a building or use permit.
Existing Structures	Existing structures such as buildings, wells, septic systems, and driveways should be considered when determining land division.	Structures that do not meet setback requirements will require a variance to remain on site.
Wastewater Disposal (Septic Systems)	Parcels should reserve adequate space for future on-site septic systems, and a reserve area for future use. Proposed system must meet all setback requirements, including minimum of 100' from any well, and typically 5' to 50' from any property line. Topography is essential to consider.	Improper lot splits can create property lines that overlap existing septic systems. This would typically require both homes to build new septic systems.
Wells	Well spacing requirements: Proposed well locations must be at least 100' from any septic or sewer system, or from another well.	Parcels that are too small or irregularly shaped may not be able to accommodate both a well and a septic system.
Drainage	Floodplain and drainage guidelines and regulations should be considered when planning land division.	Newly created parcels that do not plan for drainage may cause future flooding and drainage problems on site or for neighbors.
Access: •Public •Private •Fire •Emergency	Parcels should demonstrate physical access that is traversable by a two-wheel drive passenger motor vehicle. A turnaround area is preferred by emergency vehicles. New parcel should not block access to neighboring properties.	Parcels that do not have permanent legal access present problems for the landowner. Lack of access for fire and emergency vehicles presents serious safety problems.
Street and utility rights-of-way and easements	Existing and future rights-of-way and easements should be considered during land division process.	Parcels that do not meet zoning requirements after excluding public roadways will require a variance prior to building.
Land Division versus Subdivision	Land divisions of five or fewer parcels must comply with state and county requirements. Splitting a parcel into more than five parcels requires compliance with Maricopa Co. Subdivision Regulations.	Splitting land into more than five parcels requires a Subdivision Public Report issued by the Arizona Dept. of Real Estate (DRE). Subdivisions that cannot provide a Public Report could be in violation.
Topography	Topography such as hills, washes, and boulder outcrops should be considered during land division process.	Significant cuts, fills or disturbance of washes may impact marketability and value of new parcel(s).



Table 8: Recorded Subdivisions

Name	Date Approved	Gross Acres	Number of Residential Lots	Location
Goldfield Ranch Phases 1-5	Final Plat: March 9, 1977 (Phase 1)	Approx. 5,000	105*	North and southeast of State Route 87

* Note: There have been numerous lot splits, which have significantly increased the total number of lots.

Table 9: Development Master Plans

Name	Date Approved	Gross Acres	Number of Residential Lots	Location
The Preserve at Goldfield Ranch	December 13, 1995	2,204	2,032	North and southeast of State Route 87

Any and all changes in zoning for specific areas or parcels are evaluated in relation to overall advancement of plan goals, objectives, and policies. Guidelines following the land use definitions are used to help ensure that the intent and integrity of the Goldfield Area Plan is retained.

Open Space Land Use: Definitions and Guidelines

The preservation of open space, regional connections between open spaces, and public access to open space are important considerations in the Goldfield Area Plan. In addition, the Growing Smarter Law of 1998 requires that Maricopa County plan for the acquisition and preservation of open space. An inventory and analysis of open space is included in the *Open Space* chapter.

The Open Space category denotes areas best suited for open space and recreation. It includes uses such as parks, recreation and scenic areas, and drainage. Residential development of one (1) dwelling unit per acre or less is permitted in certain open space areas, provided development in environmentally sensitive areas like steep slopes, floodplains, and significant wildlife and plant habitats, is in compliance with all applicable federal, state, and county regulations.

The Maricopa County Comprehensive Plan defines two types of open space: Dedicated and Proposed. These categories, as well as potential preservation techniques, are described in the Open Space chapter. It is important to note that Dedicated Open Space areas are those under public ownership (except State Trust Land) such as county parks and land administered by the USFS. Proposed Open Spaces are areas that have been identified for potential open space and recreational purposes and are intended to be managed to protect and encourage environmental preservation. However, all private and State Trust Land identified as proposed open space may be developed at residential densities of one (1) residential dwelling unit per acre – subject to applicable planning and zoning regulations – unless it is added



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to the public domain or protected using other techniques that respect private property rights.

Open Space Land Use: Analysis

Preservation of open space, protection of native wildlife and plants, wildlife habitat, and wildlife movement corridors are key issues identified by planning area stakeholders. The Goldfield planning area is unique from other areas in that 100 percent of the land is privately owned, and National Forest or other public land is located outside of the planning area. As such, retention of open space in floodplains and preservation of the Sonoran desert will be a combination of voluntary support by landowners; regulations and drainage guidelines enforced and encouraged by the Maricopa County Planning and Development Drainage Review division; and open space set aside by property owners.

The open space category identifies areas best suited for potential open space and recreation. Open space increases land values, provides natural flood control, supports wildlife habitat connections, and facilitates recreational uses. Preserving these areas as open space is an achievable goal, given the large lot sizes of 190,000 sq. ft. and more, although it will require the commitment of landowners and careful attention to site design. It should be noted that preservation of the existing Rural-190 zoning is encouraged but is not shown on the land use map since this is a zoning regulation and not a land use category.

Open Space Protection Techniques

There are a number of techniques used by jurisdictions for protecting and/or acquiring open space. The following is a list of some of these techniques:*

- Arizona Preserve Initiative
- Cluster development
- Conservation easements
- Conveyance of property to HOA
- Density bonuses
- Design guidelines
- Federal land management
- Fee simple purchase
- Impact fees
- Land dedication
- Land exchange
- Lease agreements
- Performance zoning
- Planned unit development
- Purchase of development rights
- Slope/Hillside ordinance
- Transfer of development rights

* A description of these techniques can be found in the Open Space Element of *Eye to the Future 2020*, Maricopa County's comprehensive plan.)

Residential Land Use: Definitions and Guidelines

The Maricopa County Comprehensive Plan outlines 24 land use categories, five of which are residential. The Goldfield Area Plan contains only one residential land use category, although additional categories are permitted within Development Master



Plans that may allow higher density development. In addition, other uses such as schools and churches are permitted in residential land use categories per the Maricopa County Zoning Ordinance although special consideration should be given to their specific locations. As with all types of development, care should be given to ensure appropriate preservation of environmental and cultural features such as hillsides, washes, archaeological sites, and other sensitive areas.

In unincorporated Maricopa County, residential density within specific projects is calculated based upon the overall gross acreage of the site. With respect to the Goldfield Area Plan land use map, the Rural land use category mostly includes land zoned Rural-190 (requires minimum lots of not less than 190,000 square feet or 4.36 acres). It is important to note that land use designations do not supersede existing zoning. Land use designations are intended to guide future development, but existing zoning entitlements are not affected.

A. Rural (0-1 Dwelling Units per Acre)

The rural category identifies areas where low density single family residential development is desirable because urban services such as sewer, water, schools, parks, roads, and emergency services are limited or nonexistent. This is the least intensive residential land use category, and includes a range of possible densities from very low, such as one dwelling unit per five acres, to a maximum density of one dwelling unit per acre. Densities greater than 1 dwelling unit per acre may be permitted in new development, but only if areas of lower densities offset the increase such that an average of no more than 1 dwelling unit per acre is maintained. Development suitability is determined based on location, access, existing land use patterns, and natural or human constraints. Primary uses in this category include agriculture and single family residential.

Residential Land Use: Analysis

Several significant principles guide residential development in the Goldfield Area Plan. Particular consideration is given to the continuance of the existing rural lifestyle, the preservation of hillsides and floodplains, and compatibility with the natural environment to protect public health, safety, and general welfare. Therefore, only residential development at very low densities (1 dwelling unit/acre or less) is intended for most of the planning area. The goals, objectives, and policies outlined in the land use section of the Plan Elements chapter provide further direction on the type of development suitable to the Goldfield area. Residents who choose a rural lifestyle should not expect urban level services in the unincorporated areas.

Development Master Plans (DMPs)

Master planned communities have long been a preferred type of development in Maricopa County because they promote quality standards of prudent and sustainable land use. The County advocates using DMPs to allow flexibility in the master



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planning of large tracts of unincorporated land. DMPs provide opportunities for creative design and development techniques, and generally require a high level of commitment to ensure they have adequate facilities and infrastructure to serve their residents' needs. Master planned communities have the potential to provide mixed land use opportunities, a range of housing choices, open space and recreational opportunities, and a multi-modal transportation system connected to schools, parks, retail, and employment centers. A more complete discussion of DMPs is found in the Maricopa County Comprehensive Plan and the Maricopa County Development Master Plan Guidelines.

While DMPs might develop in unincorporated Maricopa County, appropriate development guidelines will vary depending on the individual circumstances and the goals, objectives, and policies set forth in the Comprehensive Plan and applicable area plan. In addition, DMPs must demonstrate how the project will impact the affected area plan, both positively and negatively, at project buildout. DMPs are required to establish urban level services, and adequate proximity to employment and commercial support services is an important factor. Water supply is one of the most restricting factors for a DMP in the Goldfield area. If an adequate water supply cannot be obtained, an urban project cannot be realized. Wastewater management is equally important. A DMP would require the construction of a new wastewater treatment plant or connection to an existing plant with adequate capacity. Any owner/developer wishing to urbanize a rural area will have to address the aforementioned constraints before any large scale planning or development can occur.

Commercial Land Use: Definitions

Small-scale commercial land use categories are used in some rural communities that desire potential service and retail uses. Direct access on arterial streets or freeway frontage roads is an important consideration. Limitations in terms of maximum acreage and building square footage may be used to tailor future development to the specific community. Guidelines for building scale, landscaping, and signage can also be developed. No commercial land use sites are designated in the Goldfield Area Plan at this time. However, there are approximately 25 acres of multi-neighborhood commercial land uses and 65 acres of mixed use commercial land uses approved as part of the *Preserve* DMP.

Commercial Land Use: Analysis

During the planning process, the majority of stakeholders strongly expressed the desire that no commercial or retail development be allowed in the planning area. The Goldfield Land Use Plan does not contain any commercial land use categories at this time. In future plan updates, citizens may desire to add locations for commercial and retail if population growth warrants.



Employment Center Land Use: Definitions

Employment Center categories denote areas for the concentration of major employers. The citizens in the Goldfield area were opposed to allowing major employment centers in the planning area, and no employment centers are designated in the Goldfield Area Plan. A number of stakeholders identified that the horse industry would continue to provide employment opportunities in the area. In addition, home-based businesses provide employment for some residents. It is not anticipated that major employment centers will be needed in the planning area for at least the next 10 years.

Employment Center Land Use: Analysis

The lack of employment centers is evident in the Goldfield planning area, but is not currently an issue due to the rural nature of development. Because this region may experience population growth over the next two decades, residents may desire employment opportunities closer to their homes. In addition, due to geographical constraints, providing residents the opportunity to work near their homes would help reduce traffic congestion, reduce commuting times, improve air quality, and create more efficient land use patterns.

Buffering and Transitional Land Use Guidelines

When two or more types of land uses are shown on the Goldfield Land Use Plan or are approved as part of a Development Master Plan, buffering and/or transitional land uses may be necessary. Buffering may consist of open space placed between two incompatible land uses, density transitions, walls, berms, landscaped setbacks, or other recognized methods. Buffering is required for intensive uses where a less intensive use already exists, or where the Goldfield Land Use Plan shows a less intense use adjacent to a more intense use. The use of transitional land uses consists of placing uses of intermediate intensity between incompatible uses. Examples which may require transitional land use include:

- Low density, single-family development adjacent to higher density development.
- Single or multi-family development adjacent to commercial land uses.

In cases where buffering is necessary, these and other methods may be considered:

- Areas of natural landscaped open space
- Arterial or collector streets with natural landscaping
- Block walls, landscaping, earth berms
- Providing densities and intensities along perimeter areas that are consistent and compatible with the densities and intensities of surrounding areas
- Any combination of the above



TRANSPORTATION

This portion of the Goldfield Area Plan analyzes existing transportation plans, studies, programs, and public transit service issues, as well as provides an inventory of the area's roadway system.

Maricopa County Transportation System Plan

The mission of the Maricopa County Department of Transportation (MCDOT) is to provide a quality transportation system for the citizens of Maricopa County. MCDOT coordinates new construction with surrounding jurisdictions when appropriate. The Transportation System Plan (TSP) was adopted in December 1997 as the transportation element of Maricopa County's Comprehensive Plan. The TSP states that the transportation network should support the safe and efficient movement of goods and people, be environmentally compatible with surrounding conditions, and be supportive of economic development. The TSP helps evaluate regional transportation system impacts; helps identify funding and maintenance priorities; and organizes roadways under MCDOT's jurisdiction into primary, secondary, and local roads.

MAG Roads of Regional Significance

The Maricopa Association of Governments developed the Roads of Regional Significance (RRS) concept and has assigned this designation to a limited number of key arterials whose primary function is to provide mobility within the urbanized area by supplementing and interchanging with the freeway system. Roads of regional significance are expected to receive priority for improvement to a regional standard where feasible. A six-lane divided roadway with 140 feet of right-of-way is the ultimate design standard for urban RRS. The only RRS in the Goldfield area is State Route 87, which is identified as a Gateway RRS.

Maricopa County Major Streets and Routes Plan

The TSP includes a Planning and Management chapter that calls for the preparation of a Maricopa County Major Streets and Routes Plan (MSRP). This plan was completed and adopted April 18, 2001 and later revised in September, 2004. The MSRP designates and maps future street widths and route overlays for all primary and secondary roads in the Maricopa County roadway system. These future classifications project the ultimate functional status of roads. The plan includes both a street classification atlas and a policy document to support the atlas.

The functional classification system used by Maricopa County to classify county streets includes expressway/freeway, principal arterial, minor arterial, major collector, minor collector, and local street. Typical design standards are illustrated in cross-section in the MSRP. However, it is important to note that all the existing



roads in the Goldfield planning area are private easements, not public streets, and are not part of the Maricopa County transportation system.

Expressway/Freeway

An expressway/freeway provides for the swift movement of large volumes of through traffic. These are divided roadways and are not intended to provide access to abutting land. Such roads also have complete separation of opposing traffic flows, and have grade separated intersections or at-grade, signalized intersections at a minimum of one-mile spacing. Although State Route 87 crosses the planning area, because it is a state highway it is not considered part of the Maricopa County transportation plan.

Principal Arterial Street

Principal arterial streets provide for long distance traffic movement within Maricopa County or between Maricopa County and urban areas. Service to abutting land is limited. Access is controlled through frontage roads and raised medians, as well as the spacing and location of driveways and intersections. Opposing traffic flows are often separated by a raised median. The ultimate cross section is four to six lanes in width and includes bike lanes. The only road in the study area with this classification is a proposed future extension of Rio Verde Dr. to SR 87 across Tonto National Forest land in the northern part of the study area.

Minor Arterial Street

Minor arterial streets provide for moderately long distance traffic movement within Maricopa County or between Maricopa County and urban areas. Moderate access is provided to abutting land. Access is controlled through frontage roads, raised medians, and the spacing and location of driveways and intersections. A raised median or a continuous left-turn lane separates opposing traffic flows. The ultimate cross section is four lanes in width and includes bike lanes. There are no minor arterial streets in the planning area, but Bush Highway/Lake Saguaro Rd. is an example of a road classified as a future minor arterial street in the larger study area.

Major Collector Street

Major collector streets provide for short distance (less than three miles) traffic movement, primarily function to collect and distribute traffic between local streets or high volume traffic generators and arterial streets, and provide direct access to abutting land. Raised medians and the spacing and location of intersections and driveways may control some access. Major collectors are two to three lanes in width and include bike lanes. Fort McDowell Rd., although it is located within the boundaries of the Fort McDowell Yavapai Nation, is included in the Maricopa County Transportation System Plan and is classified as a major collector street.



Minor Collector Street

Minor collector streets provide for short distance (less than three miles) traffic movement, primarily function to collect and distribute traffic between local streets and arterial streets, and provide direct access to abutting land. The spacing and location of intersections and driveways may control some access. Minor collectors are two lanes in width. There are currently two streets—Grande Blvd. and San Marcos Dr.—in the larger region designated in the MSRP as minor collectors, which extend from the Fountain Hills city limits to Fort McDowell Road.

Local Street

A local street provides for direct access to residential, commercial, or other abutting land, and for local traffic movements. Local streets connect to collector, arterial streets, or other roads of a higher classification. A local street is a two-lane roadway. The local, mostly unpaved streets that provide access to residential lots in the Goldfield Ranch subdivision are similar to the local street classification, although they are private, and therefore are not covered by the MSRP.

Transportation Overlays

The TSP introduces the concept of overlays by stating that “overlays acknowledge the special importance of roads for purposes other than mobility.” There are seven overlays established in the Transportation System Plan.

Scenic/Recreational Overlay

The scenic/recreational overlay acknowledges the need to minimize impacts to or preserve characteristics of a road’s environment, or it recognizes a road’s importance as access to recreational facilities. Characteristics such as design speeds, right-of-way, cuts and fills, existing vegetation and viewsheds will be carefully analyzed.

The only existing roads that are designated with the scenic/recreational overlay in the study area are SR 87 and Bush Hwy/Lake Saguaro Rd., although the future extension of Rio Verde Dr. to SR 87 in the northern part of the study area is also designated with this overlay.

Public Transportation Overlay

The public transportation overlay identifies potential regional rail or bus rapid transit corridors. There are no roads in the planning area with a public transportation overlay.



AZTech Overlay

The AZTech overlay recognizes the special importance of roadways and corridors to implement transportation-related technology. The AZTech overlay identifies corridors where technology will be incorporated to improve transportation service. The only roadways in the region designated with the AZTech overlay are Shea Blvd. within the Town of Fountain Hills, and SR 87 southwest of the intersection with Shea Blvd. within the Fort McDowell Yavapai Nation and the Salt River Pima-Maricopa Indian Community.

Oversize Load Overlay

The oversize load overlay identifies routes designed for use by oversize vehicles and restricted routes where oversize vehicle use is discouraged. An oversize load is defined as a vehicle having a gross weight of over 160,000 pounds or having dimensions larger than one of the following:

- 120 feet in length
- 14 feet in width
- 16 feet in height

Bush Hwy/Lake Saguaro Rd. is designated as a preferred route for oversize vehicles. There are no roadways in the planning area identified with this overlay.

School Safety Overlay

The school safety overlay identifies sites where special design or operational criteria will be implemented to provide for safety. There are no roads in the planning area with a school safety overlay.

Roads of Regional Significance (RRS) Overlay

The Roads of Regional Significance (RRS) concept and design guidelines were adopted by the MAG Regional Council in 1991 and by the Maricopa County Board of Supervisors in October 1992. Further analysis of this concept was completed in January 1996. The concept is a system of upgraded streets and roads to improve mobility in the urban areas, as well as into and out of the region. The adopted RRS concept includes Urban and Gateway routes. Urban routes are designed to complement the freeway system and are three to six miles apart. The concept facilitates the development of a system of routes with higher design standards and higher speeds that will help ensure regional mobility. Gateway routes provide access to the region and need protection to maintain free flow access in and out of the region. Design concepts for RRS include guidelines on the number of lanes, the locations for right and left turn lanes, speed limits, landscaping, and bicycle and pedestrian paths as warranted. Bush Hwy/Lake Saguaro Rd. and the future



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extension of Rio Verde Drive are roads in the study area with an Urban RRS overlay. State Route 87 is identified as a Gateway RRS.

Emergency Management Overlay

The emergency management overlay identifies roadways that are of special importance in case of emergencies or catastrophes. No roads in the planning area are identified by the TSP as being emergency evacuation routes.

Rural Maricopa Transit Development Program

In 1997, Maricopa County completed the *Rural Maricopa County Transit Development Program* study. The purpose of this study is to identify transit needs and ways to provide additional transit options in rural Maricopa County. The study also identifies several important recommendations, including:

- Having Maricopa County serve as the lead agency in establishing public transit service from rural to urban areas.
- Implementing a pilot transit program between Gila Bend, Buckeye, and Phoenix. Once operations prove successful; establish a similar program along the Wickenburg Highway.
- Continuing support for a regional transportation system through service coordination.

Currently there are no existing or proposed transit routes in the planning area.

MCDOT Bicycle Transportation System Plan

The MCDOT Bicycle Transportation System Plan recognizes bicycling as a viable transportation mode and encourages improving the transportation network to increase access and safety for bicyclists. The standard cross section for all County arterial and collector streets includes bike lanes.

The Bicycle Transportation System Plan identifies 473 miles of Maricopa County roads for the addition of on-road bicycle facilities. This network reflects a system for bicycle facilities to prioritize investment and guide project development. Bush Hwy/Lake Saguaro Rd. is identified as a future component of MCDOT's Bicycle plan.

Maricopa Association of Governments Transportation Plans

The Maricopa Association of Governments Regional Transportation Plan (RTP) was adopted in 2003 and represents the first comprehensive review of transportation investment needs for the region since the early 1960s. This plan is a comprehensive, performance based, multi-modal and coordinated regional plan, covering the period through Fiscal Year 2026. The RTP was developed under the direction of the Transportation Policy Committee, a public/private partnership charged with finding solutions to the region's transportation challenges.



The Long Range Transportation Plan (LRTP) identifies specific transportation facilities and services to be constructed or provided in the next twenty years. The LRTP is updated annually and is fiscally constrained, so it only includes projects for which funding is currently available or reasonably expected.

MAG's Transportation Improvement Program (TIP) is a five-year schedule of specific projects to be constructed across the Maricopa County region. In the current TIP (2006-2010) there are no proposed road improvements in the planning area.

MCDOT Transportation Improvement Program

Roadway investment decisions by MCDOT are based on a fundamental principle: to provide the right transportation system, at the right time, and for the right cost. To achieve this vision, Maricopa County develops an annual Transportation Improvement Program (TIP) to identify project funding priorities for the next five years. Each year new projects are added to the fifth year, while previously programmed projects move up a year in the schedule. As a structured finance plan, the TIP determines future road expansions and improvements. There are no projects in the Goldfield planning area identified in the 2006-2010 Transportation Improvement Plan.

Existing Conditions

Average Daily Traffic Counts

MCDOT provides average daily traffic count data for many major streets. **Table 10** summarizes traffic count information for the Goldfield study area. Due to the low population in the planning area, there are only traffic counts for Fort McDowell Rd. and Bush Hwy/Lake Saguaro Road at intersections with SR 87.

Dust Abatement

MCDOT paves many county maintained roads to help reduce dust. The Environmental Protection Agency (EPA) imposed the 1998 Federal Implementation Plan for PM-10 nonattainment in Maricopa County, requiring dust control measures for publicly maintained roads with more than 250 vehicles per day. In 1999 the EPA indicated that the measures submitted with the Serious Area Plan for PM-10 were inadequate and needed additional measures. Maricopa County proceeded to obtain MAG approval for CMAQ (Congestion Management and Air Quality) funding to assist with paving dirt roads, and has included this as a committed measure in the revised Serious Area Plan submitted in February 2000. Maricopa County's PM-10 traffic volume standard was changed in 2004 to require County-maintained dirt roads to be evaluated for paving if 150 vehicles or more per day use the road.



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Table 10: Peak Traffic Counts

Count date	Street	Direction	Ref. street	Peak AM hour	Peak AM volume	Peak PM hour	Peak PM volume
6/21/2004	Bush Hwy	South	SR 87	11:00	158	12:00	162
7/5/2004	Ft. McDowell Rd.	North	SR 87	10:00	337	3:00	333
7/5/2004	Ft. McDowell Rd.	South	SR 87	11:00	85	1:00	58

As of July 2005, MCDOT maintains approximately 561 miles of unpaved roads in Maricopa County. There are many more unpaved private roads that are the responsibility of the property owners to maintain. MCDOT helps property owners establish improvement districts to manage and finance paving and maintenance projects. With the exception of SR 87, which is maintained by ADOT, most of the roads in the planning area are privately maintained roads.

Existing Transportation System Inventory

The Goldfield Area Plan roadway network consists of one state highway (SR 87) and a number of unclassified roads. Unclassified roads are those not listed in any jurisdictions' inventory. Most of the roads in the planning area are private and are maintained by the residents. In addition, there are many forest roads maintained by the National Forest Service within the Tonto National Forest located adjacent to the planning area. Existing roadways in the planning area and their current functional classification are listed below:

State Route 87	Expressway (part of the state highway system)
Boot Hill Parkway	Unclassified
Burnt Water Trail	Unclassified
Goldfield Road	Unclassified
Northwood Pass	Unclassified
Pleasant View Road	Unclassified
Palo Pinto Trail	Unclassified
Sandy Bluff Road	Unclassified
Starfire Road	Unclassified
Thirsty Earth Trail	Unclassified
Vista Del Oro	Unclassified

Bicycle, Pedestrian, and Other Alternative Transportation Options

Bicyclists and pedestrians have access to all public roads in the planning area, except SR 87. In most cases, bike lanes or shoulders will be added during construction, reconstruction, or widening of existing public roadways. However, there is currently no continuous or integrated bikeway or pedestrian system serving the planning area. Within the Goldfield region, the MCDOT Bicycle Transportation System Plan identifies only Bush Highway/Lake Saguaro Rd. as a component of the regional bicycle network. In addition to bicycle and pedestrian uses, the Goldfield area also has many equestrians and off-highway vehicle users, which presents an



opportunity for alternative transportation networks. Although the existing roads in the Goldfield Ranch subdivision are not publicly maintained, future developers would be encouraged to include trails that consider these alternative transportation modes.

Existing Transit and Rail Services

There are currently no local bus routes serving the Goldfield area. The closest bus route is located in Fountain Hills at the corner of Palisades Boulevard and La Montana Drive. This Express Route, Scottsdale 512, travels to downtown Phoenix during certain times on weekdays.



ENVIRONMENT / ENVIRONMENTAL EFFECTS

This section combines an overview of the study area's physical and natural environment with the state-mandated Environmental Effects element. The Environmental Effects element complies with requirements of the Growing Smarter Act, and helps ensure that planning for future development in Maricopa County is consistent with federal, state, and local requirements for air quality, water quality, and other elements affecting the environment. This section addresses anticipated effects that development may have on air quality, water quality, noise abatement, visual quality, and sensitive plant and wildlife species. The report is organized into the following sections:

Physical Environment

- Physical Setting
- Topography
- Climate
- Soils
- Geology
- Vegetation
- Wildlife

Environment Effects

- Sensitive Species and Habitat
- Visual Character
- Air Quality
- Noise
- Archaeology
- Water Quality
- Hazardous Material

Physical Environment

Physical Setting

The Goldfield planning area is located in the northeast region of Maricopa County (**Figure 7-Physical Setting**). The planning area lies directly east and northeast of the Fort McDowell Yavapai Nation and Salt River Pima-Maricopa Native Community, and is surrounded on the remaining three sides by the Tonto National Forest. The area covered by the plan that has seen relatively little development other than scattered single-family residences in the Rural-190 zoned Goldfield Ranch subdivision. While the original Goldfield planning area encompassed 184 square miles in the northeast part of Maricopa County, the updated planning area does not include the Fort McDowell Yavapai Nation, the northeastern portion of the Salt River Pima-Maricopa Native Community, approximately 68,000 acres of the Tonto National Forest, or the unincorporated communities of Tonto Verde and Rio Verde. Instead,



the plan now focuses on approximately 5,000 acres of unincorporated Maricopa County lands in the Goldfield Ranch area. (**Figure 2-Original Plan Boundary**).

Topography

Rural, natural desert and equestrian scenes characterize the Goldfield planning area. Much of the area is comprised of very low-density residential development or horse-related facilities, and most of the natural scenes are composed of desert foothills where Palo Verde-Saguaro habitat is found. Some of the area also has severe slopes. The planning area generally drains either west towards the Verde River, or south towards the Salt River. The entire Goldfield area is laced with small to medium-sized washes. Striking mountain ranges such as the McDowell Mountains to the west, the Mazatzal range, including Four Peaks, to the east, and the Superstition and Goldfield Mountains to the south surround the planning area. In addition, the Goldfield planning area sits on the eastern bank of the Verde River valley and can be seen from a distance. Therefore, it is important to preserve views to and from the Goldfield area.

Figure 8-Elevation depicts general elevations within the planning area, which range from less than 1,500 feet above sea level near the southwest corner to 2,100 feet above sea level near the northeast corner. The planning area can be characterized as undulating terrain including many areas with short, steep slopes of greater than 15% leading up to small, narrow ridges. The planning area slopes approximately three percent over nearly four miles as measured from northeast to southwest.

Climate

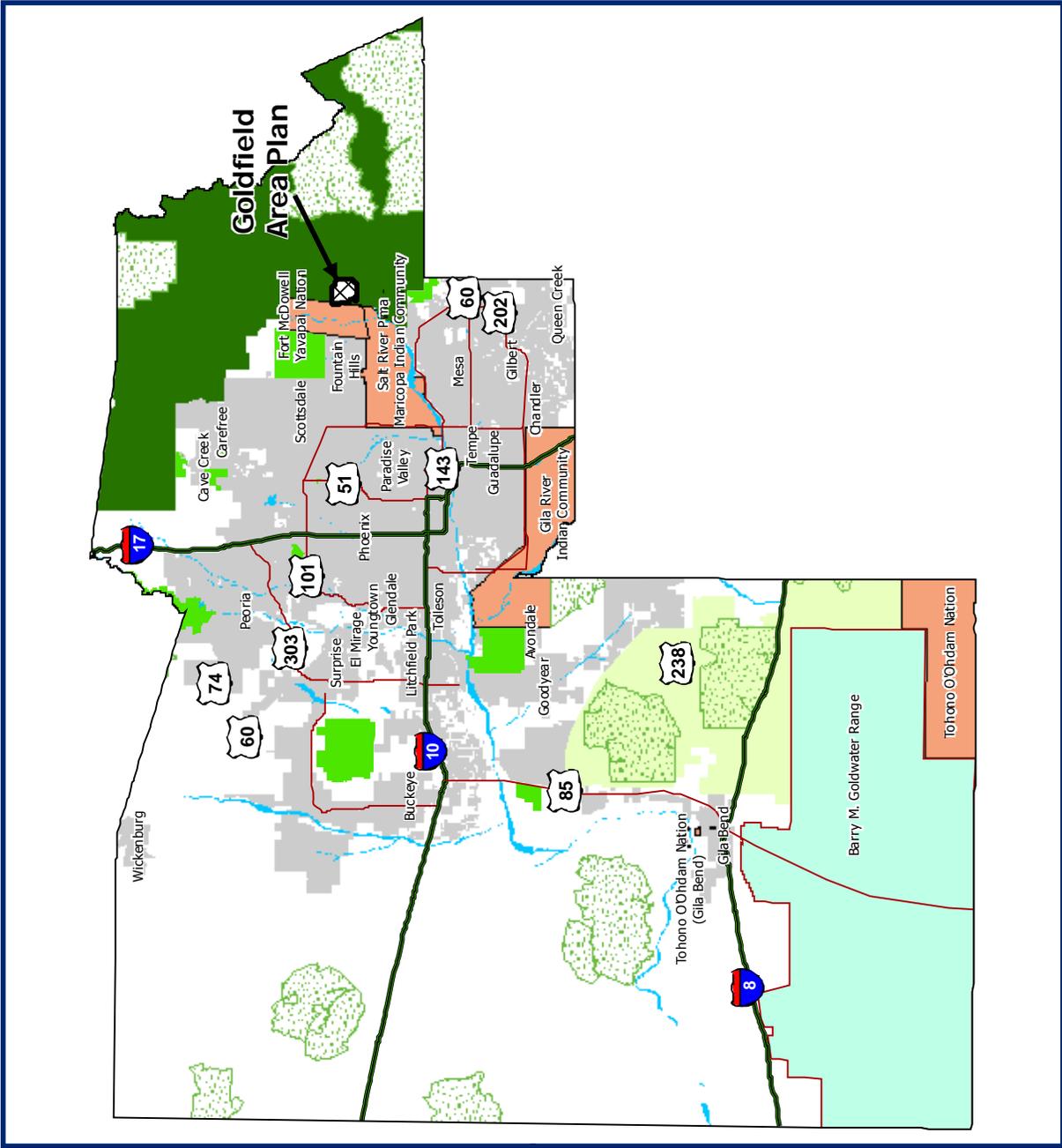
Generally, climate in the planning area is similar to the Phoenix metropolitan area with mild fall, winter, and spring seasons and hot, dry summer weather. Any differences that do occur are due to higher elevation and its location on the urban fringe. Over the past 30 years, precipitation has averaged 12.57 inches per year measured at the Stewart Mountain Dam approximately three miles southeast of the planning area, compared with only 8.29 inches for Phoenix. Precipitation can be up to three times greater in wet years than in dry years. Most of the precipitation occurs in the winter months and in July, August, and September. From mid to late summer, moist air from the Gulf of Mexico influences weather patterns, known as the Monsoon. From November through March, the region is impacted by storm systems from the Pacific Ocean and the northwest United States. Storms in both seasons can create flooding and drainage problems depending on their intensity and duration.

The average high temperature at the Stewart Mountain Dam approximately three miles southeast of the planning area is 84.9 degrees, compared to 84.3 degrees for Phoenix. **Table 11: Average Monthly Climate** summarizes monthly temperature and precipitation levels in the planning area.

Physical Setting

Figure 7

- Legend**
-  Freeway / Highway
 -  Interstate
 -  Goldfield Area Plan
 -  Rivers / Major Washes
 -  Barry M. Goldwater Range
 -  Indian Communities
 -  Wilderness Areas
 -  Sonoran Desert National Monument
 -  County Parks
 -  Tonto National Forest
 -  Incorporated



ONE STOP SHOP

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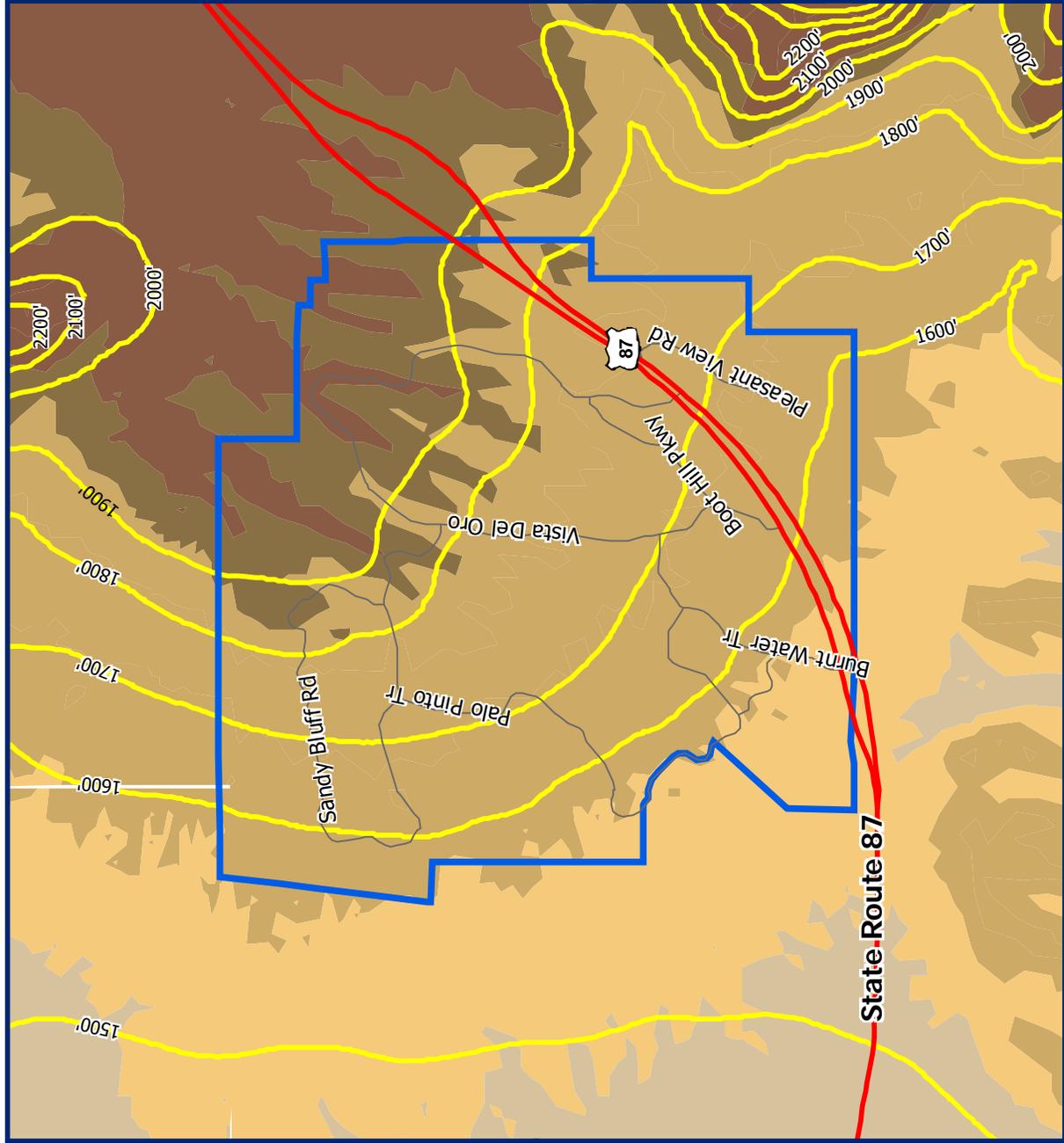
September 2007



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 PLANNING & DEVELOPMENT DEPARTMENT

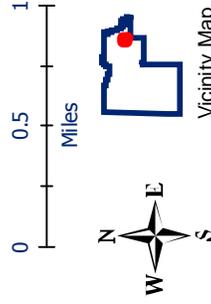
Elevation

Figure 8



Legend

- Arterial Roadway
- Highway
- Contour Lines - 100' Intervals (Units in feet)
- Goldfield Area Plan
- Rivers



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Table 11: Average Monthly Climate

Month	Average Maximum Temperature (F)	Average Minimum Temperature (F)	Average Total Precipitation (inches)
January	66.0	37.5	1.56
February	69.6	39.6	1.26
March	74.5	43.5	1.56
April	82.8	49.5	0.51
May	91.9	57.9	0.21
June	101.2	66.4	0.15
July	103.9	74.5	1.23
August	102.3	73.2	1.64
September	97.8	66.9	0.96
October	87.7	54.7	1.02
November	74.8	42.9	1.04
December	66.1	37.2	1.42
Annual	84.9	57	12.57

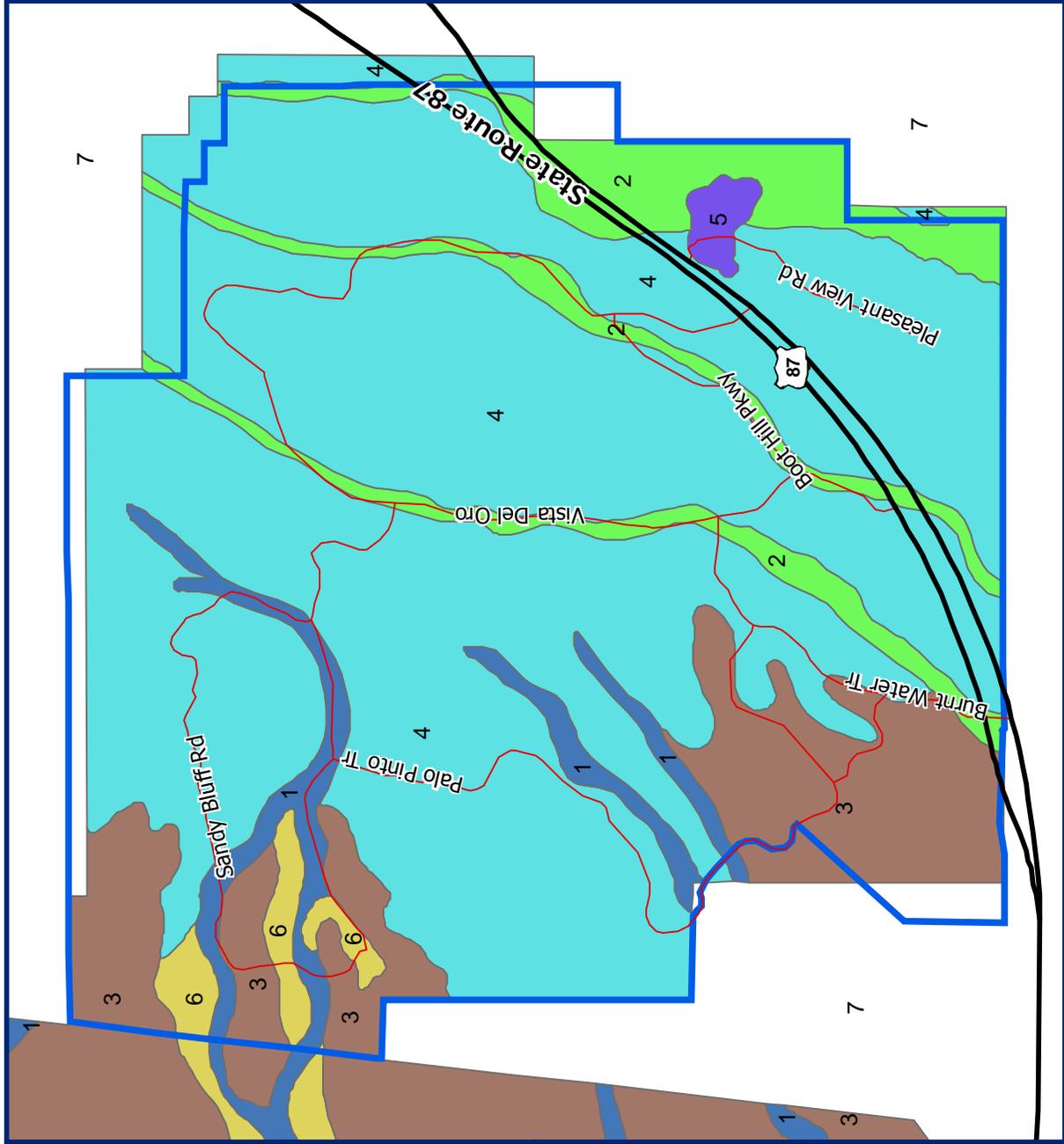
Information based on 30 year average, Stewart Mountain Dam, AZ. Source: Western Regional Climate Center (www.wrcc.dri.edu)

Soils

Soil types and their location have a direct effect on potential land uses. Development type, quality, and character can be significantly influenced by soil properties. Important soil properties include permeability, compaction, shear strength, shrink-swell potential, plasticity, salinity, susceptibility to erosion, corrosiveness, and the amount and type of cementation.

Soil types are categorized by associations. Soil associations describe a group of soils that occur in a repeating pattern, and usually consist of one or more dominant soil along with at least one minor soil. The association is typically named for the major soil it represents. There are seven major soil associations in the Goldfield study area, and their characteristics are described later in this section.⁷ Because soil characteristics vary, testing should be done prior to development to determine if soils pose problems for septic tanks, water and sewer lines, and/or building and road foundations. In the planning area, alluvial soils prohibit seepage pit type septic systems because of potential contamination of the water table. Therefore, shallow trench systems are required in the planning area. Seepage pits are only allowed if specially engineered and must pre-treat the effluent before disposing to the pit. **Figure 9–Soils** illustrates the seven major soil associations in the planning area. These soils and their characteristics are as follows:

⁷ Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions [Online WWW]. Available URL: ["http://soils.usda.gov/technical/classification/osd/index.html"](http://soils.usda.gov/technical/classification/osd/index.html) [Accessed May 2, 2006].



Soils

Figure 9

Legend

- Highway
- Arterial Roadway
- Goldfield Area Plan

Soil Association

- 1 Antho-Carrizo-Maripo Complex
- 2 Anthony-Arizo Complex
- 3 Beeline-Cipriano Complex
- 4 Eba-Continental-Cave Association
- 5 Lehmans-Rock Outcrop Complex
- 6 Luke-Cipriano Association
- 7 Tonto National Forest (unsurveyed)

Note: Tremant Gravelly Sandy Loams not shown, see Environment/Environmental Effects element for details.



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September 2007



MARICOPA COUNTY
 PLANNING & DEVELOPMENT DEPARTMENT



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- 1) *Antho-Carrizo-Maripo Complex*: Very deep and somewhat excessively to excessively well-drained soils on alluvial fans and floodplains of 0 to 15 percent slopes. Permeability of this soil is moderately rapid to very rapid, runoff is very low to medium, and the hazard of water erosion is moderate. These soils are typically used for rangeland and wildlife habitat. The shrink-swell potential of this soil is low.
- 2) *Anthony-Arizo Complex*: Deep to very deep and well-drained to excessively well-drained soils in flood plains and drainage ways on slopes of 0 to 15 percent. Permeability of this soil is rapid to very rapid; runoff is negligible to medium, and the hazard of water erosion is moderate. These soils are typically used for rangeland and wildlife habitat. The shrink-swell potential of this soil is low.
- 3) *Beeline-Cipriano Complex*: Shallow and very shallow to hardpan soils on fan terraces and hillsides with slopes of 3 to 45 percent. This soil is well-drained to somewhat excessively drained, permeability is moderate to moderately rapid, runoff is low to very high, and water erosion hazard is low. These soils are typically used for rangeland, wildlife habitat, and recreation. The shrink-swell potential of this soil is very low.
- 4) *Eba-Continental-Cave Association*: Very deep and well drained soils on fan terraces with slopes of 3 to 20 percent with some areas of very shallow and shallow to hardpan in the Cave soil. Permeability is slow to moderately rapid, runoff is low to very high, and the hazard of water erosion is low. These soils are typically used for livestock grazing, irrigated cropland, and wildlife habitat, but also some urban development on Cave soil. The shrink-swell potential of this soil is moderate.
- 5) *Lehmans-Rock Outcrop Complex*: Very shallow and shallow, well-drained soils on alluvium from volcanic rock with slopes of 8 to 65 percent. In the Lehmans soil permeability is slow; runoff is medium and water erosion hazard is low. In areas of rock outcrop, runoff is medium to rapid, and hazard of water erosion is moderate. These soils are typically used for livestock grazing. The shrink-swell potential of this soil is low.
- 6) *Luke-Cipriano Association*: Moderately deep and well drained to excessively drained soils in mixed alluvium on fan terraces with slopes of 1 to 15 percent with some areas of very shallow and shallow to hardpan in the Cipriano soil. Permeability is slow to moderate, runoff is low to very high and water erosion hazard is low. These soils are typically used for grazing and wildlife habitat. The shrink-swell potential of this soil is low.
- 7) *Tremant Gravelly Sandy Loams*: Very deep and well drained soils on fan and stream terraces with slopes of 0 to 5 percent. Permeability is moderately slow, runoff is medium, and water erosion hazard is low. These soils are



typically used almost entirely for livestock grazing and wildlife habitat. The shrink-swell potential of this soil is moderate. This soil is only found in a small portion of the southwest corner of the planning area, and possibly in parts of the unsurveyed area discussed below.

In addition to the soils listed above, there is also a part of the planning area that has not been surveyed for soils by the USDA's Natural Resources Conservation Service. This area includes five parcels adjacent to the Fort McDowell Yavapai Nation on the west side of the planning area, which was part of the Tonto National Forest, is now under the private ownership of the Fort McDowell Yavapai Nation. Although as forest land it was never surveyed, the adjacent tribal land was part of the survey that established the soil associations outlined above. Assuming that the soil types from the adjacent surveyed areas continue across this area in roughly the same pattern, it can be inferred that this land includes a combination of the Antho-Carrizo-Mariposo complex, Beeline-Cipriano complex, and Eba-Continental-Cave association soils, along with smaller areas of the Anthony-Arizo complex and Tremant Gravelly Sandy Loams soils. However, the precise locations of these or other soils in this area are unknown, and thus a soil survey should be conducted prior to any development in this area.

The four primary soil properties that effect development suitability are permeability, available water capacity, shrink-swell potential, and corrosivity. **Table 12: Soil Association Development Constraints** categorizes the degree of constraint associated with the type of development activity for each soil association.

Permeability

Refers to the rate at which water moves through soil and is usually determined by soil texture. Soils with slow permeability pose severe limitations for septic tank absorption fields. Soils with slow permeability do not allow adequate absorption of effluent from tile or perforated pipe into natural soil.

Available Water Capacity

Refers to the amount of water a soil can hold which is available for plants. The ability of soil to hold water helps determine the type of plants that can be used for landscaping and lawns. It should be noted that these soil limitations do not prevent the use of imported topsoil for landscaping purposes provided that it has a high available water capacity.



Table 12: Soil Association Development Constraints

Activity:	Antho-Carrizo-Maripo	Anthony-Arizo	Beeline-Cipriano	Eba-Continental-Cave	Lehmans-Rock Outcrop	Luke-Cipriano	Tremant Gravelly Sandy Loams
Septic tank absorption fields	Not limited	Very limited: flooding, filtering capacity	Very limited: depth to bedrock, slope, depth to cemented pan	Very limited: slow water movement, depth to cemented pan, slope	Very limited: depth to bedrock, slope	Very limited: slow water movement, depth to cemented pan, slope	Very limited: slow water movement
Dwellings without basements	Not limited	Very limited: flooding	Very limited: slope, depth to soft bedrock	Somewhat limited: shrink-swell, slope	Very limited: shrink-swell, slope, depth to hard bedrock	Somewhat limited: shrink-swell, slope	Somewhat limited: shrink-swell
Dwellings with basements	Not limited	Very limited: flooding	Very limited: depth to bedrock	Somewhat limited: shrink-swell, slope	Very limited: shrink-swell, depth to bedrock, slope	Somewhat limited: shrink-swell, slope	Somewhat limited: shrink-swell
Local roads and streets	Not limited	Very limited: flooding	Very limited: depth to soft bedrock, slope	Somewhat limited: shrink-swell, slope	Very limited: shrink-swell, low strength, slope, depth to bedrock	Somewhat limited: shrink-swell, slope	Somewhat limited: shrink-swell
Small commercial buildings	Not limited	Very limited: flooding	Very limited: depth to soft bedrock, slope	Somewhat limited: shrink-swell	Very limited: slope, shrink-swell, depth to bedrock	Somewhat limited: shrink-swell, slope	Somewhat limited: shrink-swell
Lawns and landscaping	Not limited	Somewhat limited: droughty, flooding, gravel content	Very limited: depth to bedrock, droughty, gravel content, slope, depth to cemented pan, small stones, large stones	Very limited: gravel content, droughty, large stones, depth to cemented pan, slope	Very limited: gravel content, slope, depth to bedrock, droughty, large stones	Very limited: gravel content, droughty, depth to cemented pan, large stones, slope	Somewhat limited: gravel content

Source: U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Aguila-Carefree Area (1986)



Shrink-Swell Potential

Identifies the capacity of a soil to expand or shrink as the moisture content is increased or decreased. Soils with a high percentage of clay tend to have a high shrink-swell capacity, which can contribute to structural problems for buildings and roads.

Corrosivity

Refers to a soil's capacity to induce chemical reactions that will corrode or weaken metals and concrete. Corrosive soils may create problems for underground utilities if installed unprotected.

Geology

The Goldfield planning area lies within the Sonoran desert region of the Basin and Range geographic province. The region is characterized by wide, essentially flat alluvium filled valleys surrounded by rugged, low relief mountain ranges. Central Arizona has a fascinating geologic history, which explains the dramatic escarpments, giant boulders outcrops, and vast mountain ranges seen in the landscape.

Robert Mason provides a brief account of the major geologic evolution that has occurred in the region. In summary, three billion years ago the land that is now Rio Verde and vicinity was at the bottom of a vast sea. Massive granite deposits seen today in the landscape are the result of great volcanic activity about one and one half billion years ago, during the formative Pre-Cambrian era. An uplifting process began about 600 million years ago and by approximately 100 million years ago this area became dry land. The former seabed, rich in silt and crustacean shells, nourished a variety of birds and land creatures, including the mammoth, dinosaur, giant sloth and saber-toothed tiger.

The last major volcanic activity occurred approximately 25 million years ago. During this volcanic period, the land in this region was actually higher than northern Arizona, and the waterway that is now known as the Verde River flowed north. It is estimated that the Verde River reversed its direction approximately five to 10 million years ago, following further uplifting to the north. The ancient Verde River was many miles wide and through its shifting deposited enormous amounts of sedimentary conglomerate rock. The McDowell Mountains were worn down into a gentle sloping pattern, primarily as a result of erosion by the once massive river. The Mazatzal Mountains display numerous valleys and canyons caused by water cutting away softer rock formations.

The McDowell Mountain range is a northwest-southeast ridge of gneiss, schist, and granite, all of which are classified as older Precambrian rocks, estimated to be two to three billion years old. The McDowells are partly composed of Miocene stream deposits. The Mazatzal Mountains, also oriented northwest-southeast, are composed



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of very hard, erosion-resistant Precambrian metamorphic and igneous rocks, with Quaternary lava flows between the foothills and Bartlett Reservoir. Coarse gravel with large rounded cobbles of Mazatzal Quartzite, basalt, and other hard rock types are found in the terraces of the Verde and Salt Rivers, which converge near the McDowell Mountains.⁸

Vegetation

The Goldfield planning area is located in the Arizona Upland subdivision of the Sonoran desert and includes two general types of native plant communities: Palo Verde-Saguaro and Mixed Riparian Scrub. The Palo Verde-Saguaro community, also known as "Upper Sonoran" vegetation, is found throughout the planning area. Naturalists describe this plant community as including some of the most picturesque portions of the Sonoran desert: "Truly spectacular, it is one of the best watered and least desert-like deserts in North America."⁹ This community is composed of small trees including Palo Verde (*Cercidium* spp.), Catclaw (*Acacia* spp.), and Mesquite (*Prosopis* spp.); shrubs such as Creosote (*Larrea tridentata*), Bursage (*Ambrosia deltoidea*), and Saltbush (*Atriplex* spp.); and cacti including the Giant Saguaro (*Carnegiea gigantea*), Barrel (*Ferocactus acanthodes*), Hedgehog (*Echinocereus engelmannii*), Prickly Pear (*Opuntia* spp.), and Cholla (*Opuntia* spp.). The Palo Verde-Saguaro community is rich in species diversity and supports a number of wildlife species. In addition, this vegetative community provides scenic quality that enhances the overall area and should be protected wherever possible.

The Mixed Riparian Scrub habitat is found along some washes in the planning area. The typical vegetation is composed of one or more of the following: Desert Willow (*Chilopsis linearis*), Mesquite, Catclaw, Blue Palo Verde (*Cercidium floridum*), and Ironwood (*Olneya tesota*). Not as lush or rare as true riparian habitat along rivers, riparian scrub habitat is nonetheless important for the control of erosion, natural flood control, and as habitat for wildlife. Due to the unique functions and values of the riparian scrub habitats, they should be preserved when feasible.

Most of the planning area is undisturbed Sonoran desert, although residential uses and roads are increasingly becoming woven into the overall landscape. While the eastern region of the planning area is a patchwork of natural desert and homes on approximately five acre lots, the western region remains undeveloped. Some residential landscapes have retained natural desert by building on small construction envelopes, with a narrow band of cleared land around the home. Other residential lots and most horse facilities have been partially or completely cleared of desert vegetation 100 feet or more away from structure(s). Analysis indicates an increasing number of driveways created to reach home sites. Five years ago there was a

⁸ Chronic, Halka. *Roadside Geology of Arizona*. Mountain Press Publishing Co., Missoula, 1983.

⁹ Turner, Raymond and D.E. Brown. *Biotic Communities - Southwestern United States and Northwestern Mexico*. University of Utah Press, Salt Lake City, 1994.



sparse network of dirt roads throughout the area. Today, these have branched off into more numerous private driveways into residences set back from the main road.

In areas where large amounts of vegetation have been removed, the natural beauty of the region and the flood mitigating capacity is at risk. Further, once vegetation has been disturbed it is often invaded by desert broom, mustard weeds, and annual grasses. Future residential development should seek to preserve native vegetation, revegetate areas such as abandoned roads, and consider building envelopes that would limit lot disturbance, but would not necessarily apply to livestock corrals or pastures. Some rural Arizona communities have initiated programs, modeled after the Town of Oro Valley’s Save-A-Plant Program, where residents rescue cactuses and other plants and replant them in the community.

Brush fires can occur in desert areas from mid-April through September. Rural-Metro Corporation recommends creating a 30-foot area of “defensible space” – an area free of dried grass or other highly flammable dry vegetation – around structures. Living plants need not be removed; only those that are dry or dead. They also recommend that dead branches be removed from trees, and that brush and grass around trees be cut very short.

The following is a partial list of some of the generally accepted common names of Arizona protected native plants which, by law can only be moved from one location to another with a state permit.¹⁰ Removing or destroying protected species from public and private property requires notification to the Arizona Department of Agriculture.¹¹

Cacti

- Barrel
- Cholla
- Hedgehog
- Mammillaria
- Night Blooming Cereus
- Pin Cushion
- Prickly Pear
- Saguaro

Other Plants

- Agave (Century Plant)
- Crucifixion Thorn
- Desert Holly
- Desert Spoon (Sotol)
- Ironwood Tree
- Jerusalem Thorn
- Mesquite
- Ocotillo
- Palo Verde
- Yucca

Wildlife

The Sonoran desert is thought to contain the most complex animal-plant community of any desert. The Palo Verde-Saguaro association, occurring in most of the planning

¹⁰(A.R.S. Title 3, Chapter 7, Article 1)

¹¹(<http://agriculture.state.az.us/PSD/nativeplants.htm>)



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area, is generally found on foothills and in valleys at an elevation of 1,200 to 4,400 feet. This habitat is important to a variety of birds that use the saguaro for nesting. Wildlife typical of this community include Gambel's Quail, Mourning Dove, Mule Deer, Javelina, Coyote, several species of bats, and the Black-Tailed Jackrabbit. More solitary species like the Mountain Lion and Bobcat can also be found. Species of special interest in this habitat include Desert Tortoise, Gila Monster, and Harris' Hawk. In addition, an array of small mammals, amphibians, and reptiles live in the area. Desert dwellers also include several poisonous creatures that deserve respect and awareness, especially in the warmer months. These include the seldom seen Gila Monster, several species of rattlesnake, scorpions, centipedes, black widows, and the Hualapai Tiger Beetle (also known as the assassin beetle or kissing bug).

A large variety of birds are found in the planning area due to the diverse desert habitat. More than 85 species have been counted in the nearby Cave Creek Foothills area. Roadrunners feed on grasshoppers, scorpions, lizards, and rattlesnakes, and in turn are food sources for hawks and Coyotes. Spring brings back several species of hummingbirds that feed on cacti, ocotillo, and wildflower blossoms. In addition, Cactus Wrens, Cardinal, Phainopepla, Woodpeckers, Great Horned Owl, Red-tailed Hawk, vultures, and Great Blue Herons make their home in and around the planning area. Besides the pleasure of watching these beautiful creatures, they help control rodent, snake, and insect populations, clean up carrion (vultures), pollinate flowers, and disperse seeds to help rejuvenate desert plant life.

Wildlife specialists recommend reserving a portion of one's property in a natural state, especially along washes and game trails, to provide habitat for desert inhabitants. This will be increasingly important as more people move to the planning area. Wildlife should not be fed as this encourages wild animals (e.g. Coyotes, Javelina) to become potential pests.

Mixed Riparian Scrub habitat is found in drainage ways in the region. These areas provide feeding, nesting, and shade areas for wildlife. Wildlife species in these areas are generally the same as the species in surrounding habitat but are more numerous. Conservation and preservation of local drainage ways could help provide some habitat preservation.

The McDowell Mountains, Mazatzal Mountains, and Verde River encourage migration of larger animals from the unpopulated areas. Within the desert habitats, higher concentrations of wildlife live along the local drainage ways and within the riparian habitats. These drainage corridors also function as movement corridors for wildlife, including larger animals such as Javelina and Mule Deer. The Arizona Game and Fish Department (AGFD) recommends protecting corridors that connect important habitat areas to facilitate wildlife movement between desert mountain ranges and other habitat areas.

Roads and highways can be a serious threat to wildlife as a result of roadkill, habitat loss, and habitat fragmentation. When roads disturb landscapes, they divide wildlife



populations into smaller, more isolated units. Habitat fragmentation threatens all wildlife species that have to cross roads or highways to meet their needs. Strategies to counteract these threats range from site-specific projects like wildlife-friendly underpasses to regional models that combine landscape ecology with long-range transportation planning. A small-scale example of helping wildlife along roads was implemented on a portion of Arizona State Route 86 on the Tohono O'odham Reservation. Installation of a sturdy, welded-wire fence along two miles of the highway reduced desert tortoise roadkill by 75%. Wildlife managers recommend the use of "wildlife friendly" fencing in rural or formerly undeveloped areas. For example, a barbed wire fence consisting of three horizontal wires would leave the bottom wire smooth and about 18 inches off the ground. Open fencing such as pipe fencing allows for flooding and enables wildlife to continue to use large washes as movement corridors.

The Verde River runs 63 miles through the district with 23 miles protected as a wild and scenic river. Several threatened and endangered species are protected along the river, including Bald Eagle, Bighorn Sheep, River Otter, and several native fish species. Approximately 10 miles northeast of the planning area is the Mazatzal Wilderness, on the Tonto National Forest, where larger wildlife such as Mountain Lion, bear, and Antelope are found.

Environmental Effects

Sensitive Species and Habitat

As identified in **Table 13**, the Arizona Game and Fish Department's (AGFD) Heritage Data Management System identifies several sensitive species that may occur in the study area. Five fish that may occur in or near the study area are listed by the AGFD as species of concern under the Federal Endangered Species Act and as sensitive by the BLM and/or USFS: Gila Longfin Dace, Desert Sucker, Sonora Sucker, Little Colorado Sucker, and Roundtail Chub. The last two species are also listed as wildlife of special concern by the AGFD. In addition, the Desert Pupfish and Gila Topminnow are listed as endangered under the Federal Endangered Species Act and as wildlife of special concern by the AGFD. However, since these fish would only occur in the Verde River or Salt River they are excluded from the above list. Development in the planning area could have potential effects on the health of the watershed, the river, and on sensitive species.



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Table 13: Sensitive Species

Scientific Name	Common Name	Federal Status*	State Status*
<i>Cicindela oregona maricopa</i>	Maricopa Tiger Beetle	SC; S (USFS & BLM)	N/A
<i>Coccyzus americanus occidentalis</i>	Western Yellow-billed Cuckoo	C; S (USFS)	WSC
<i>Falco peregrinus anatum</i>	American Peregrine Falcon	SC; S (USFS)	WSC
<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl	LE	WSC
<i>Gopherus agassizii</i>	Sonoran Desert Tortoise	SC	WSC
<i>Haliaeetus leucocephalus</i>	Bald Eagle	LT, PDL; S (USFS)	WSC
<i>Ictinia mississippiensis</i>	Mississippi Kite	N/A	WSC
<i>Leptonycteris curasoae yerbabuenae</i>	Lesser Long-nosed Bat	LE; S (USFS)	WSC

***Status Explanations:**

- Federal:**
- LE** = listed as endangered under the Federal Endangered Species Act
 - LT** = listed as threatened (imminent jeopardy of becoming Endangered) under the Federal Endangered Species Act
 - PDL** = Proposed Delisting
 - SC** = Species of Concern (USFWS)
 - C** = Candidate Endangered or Threatened (USFWS)
 - S** = Sensitive (USFS) (BLM)

State: **WSC** = wildlife of special concern in Arizona (AGFD)

Special Status Species Descriptions¹²

There are four general types of animals included in the species with special status: birds, bats, amphibians/reptiles, and invertebrates. The following is a brief description of each special status species.

Birds

The Bald Eagle is a large raptor with brown plumage and a golden wash on the back of the neck and head. They are over 3 feet in length with a wingspan of over 7 feet. They are mostly found in western states and nest on rock ledges, cliffs, or in large trees. This species can be found in the Tonto National Forest, north and east of the study area and often nest along the Verde River at the Box Bar site north of the planning area. Bald Eagles are carnivores that feed primarily on small mammals. This species is susceptible to power line electrocution, occasional shootings, and habitat loss due to development. They are extremely sensitive to human disturbance during the nesting period. Residents have reported that Bald Eagles have been observed in the planning area. Tonto National Forest personnel have noted that Bald

¹²NatureServe. 2006. NatureServe Explorer: an online encyclopedia of life [web application]. Version 5.0. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: August 3, 2006).



Eagles nest adjacent to the planning area at Box Bar Ranch, Needle Rock, and Bartlett Lake.

The American Peregrine Falcon is a medium-sized falcon with long pointed wings, a dark crown and nape, and a dark wedge extending below the eye. This species has widespread distribution across the country, and is found mainly in remote wilderness areas. It had been almost completely eliminated in the eastern United States and southeastern Canada due to pesticide poisoning and greatly reduced in numbers over many other portions of its range. However, their numbers are currently increasing and recovery objectives have been met in most areas.

The Cactus Ferruginous Pygmy-Owl is a small, long-tailed, yellow-eyed owl with gray-brown upperparts, and a faintly streaked crown with two white-margined black spots on its nape that resemble eyes. Its underparts have reddish-brown streaks and a tail that is reddish with dark or dusky bars, although distinct color differences occur between regional populations. This species lives singly or in pairs, except when caring for dependent young, and its diet includes lizards, large insects, scorpions, small birds and mammals, and other small animals, but may attack animals as large as or larger than itself. It resides in the southwestern United States and northern Mexico, although much of its United States population has been eliminated in the last 100 years mainly due to the loss and degradation of habitat as a result of human activities. However, lack of good baseline data makes analysis of the trends difficult. It was formerly common along lowland rivers of southern Arizona and in extreme southern Texas, but is now virtually extinct in Arizona and limited to a very small area of Texas. As much as 90% of its favored riparian breeding habitat in the U.S. has been altered or destroyed due to modification of Sonoran desert scrub habitats, especially along washes with dense Mesquite, Palo Verde, Desert Ironwood, Desert Hackberry, and Catclaw Acacia. This is primarily the result of urban and agricultural encroachment, wood cutting, water diversion, channelization, livestock overgrazing, groundwater pumping, and hydrological changes resulting from various land-use practices.

The Mississippi Kite is a bird that generally appears more falcon-like than hawk-like. The head and hind-neck are pale ashy gray with white tips, and its eyes are deep red. The bill, eyelids and interior of the mouth are deep black, and the corner of the mouth is orange-red. Its legs are a variable salmon-orange-red, to sometimes yellow, and the tail is almost always squarish to slightly forked with a slaty blackish color. The sexes are similar in appearance, although the female is larger with a darker gray head compared to the male. This species eats mainly large insects caught in flight, but also drops to the ground to eat mice, insects, small reptiles, and frogs. Its nests are found in groups sometimes referred to as colonies, and it arrives in the southern U.S. in late March or early to mid-April, and begins its southward migration in the U.S. usually in late August or September. Over the past century, raptor densities have been decreasing due to persecution (e.g. shooting), habitat loss, and pesticides, although increases in both numbers and distribution have been



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recorded more recently. In areas of Southwestern semi-desert, where kites have not begun to use urban areas, emphasis should be on maintaining riparian nesting habitat. Human and vehicular traffic does not dissuade kites from nesting in urban sites, so managing for aggressive birds in urban situations must be considered.

The Western Yellow-Billed Cuckoo is a neo-tropical migrant which winters in South America. This streamside bird is about 12" long and slender with short legs. The decline of riparian habitat is contributing to this species decline. River restoration has been identified as an important management need.

The Yuma Clapper Rail, a marsh bird (8 to 9" tall) with a short tail, long legs, and short rounded wings, is federally endangered and a state species of concern. The Rail can be found along the Colorado, lower Gila, and Salt Rivers below the Verde/Salt River confluence. Primary reasons for concern are that the Yuma Clapper Rail is very susceptible to modifications of wetland habitat, such as channelization, bank stabilization, and water impoundments. In addition, its prey base, including crayfish, is vulnerable to pesticide and heavy metal poisoning.

Bats

The Cave Myotis is a small bat with banded hairs, large feet, and medium-sized ears. Like many other bats, its diet may vary depending on the season and habitat, but generally feeds on small moths and beetles and forages at various heights in many habitats. This species tends to fly close to vegetation and records indicate a life expectancy of at least 6 years. They usually hibernate in large clusters. In Arizona, females leave their nursery colonies, which sometimes number up to 15,000 or as few as about 50, but typically number 2,000 to 5,000 individuals in August. They are common from the southwestern and south-central U.S. to northern Central America, but are threatened locally by habitat loss due to excessive development, and are extremely sensitive to disturbance of their nurseries.

California Leaf-nosed bats are large-eared, grayish or brown bats with a leaf like flap of thick skin projecting upward from the tip of the nose that live in large numbers in some mines in Arizona. They are usually found roosting in groups, but individuals do not cluster. They have few predators and life expectancy is estimated at more than 10 years. Their habitat is typically lowland desert scrub, but uses caves or abandoned mine tunnels for rest during the day, and small groups may also use natural rock shelters in canyon walls. They begin to leave their daytime roosts to forage for food about one hour after sunset, returning before sunrise. They mainly eat large, night-flying insects taken in flight and insect larvae, which may be taken from bushes or the ground. They fly low or hover while foraging, and individuals from southern Arizona and Sonora, Mexico are known to include fruit in their diet. They will use open buildings, bridges, rocks, and mines for temporary night roosts, and mine tunnels or caves as nurseries. This species does not hibernate, but may be less active during the winter.



The Lesser Long-Nosed Bat is large and usually reddish-brown with a long snout that has a leaf like projection at the tip. They are widespread from the southwestern U.S. to Central America, and roost in old mines and caves at the base of mountains near alluvial fans vegetated with Agave, Yucca, Saguaro, and Organ Pipe cactus. There is disagreement over the status and trends in the northern part of their range, but in the late 1980's the USFWS stated that the species was threatened by disturbance of roosts, loss of food sources through land clearing and human exploitation, and direct killing by humans. However, overall, this species does not appear to be very threatened, although better information on population size and trend is needed.

Amphibians/Reptiles

The Sonoran Desert tortoise lives primarily on rocky slopes and are known to use dry watercourses to move between habitats. These tortoises can reach 14 inches in length and have a brown to gray rounded shell. Desert tortoises cannot be collected, killed, transported, bought, sold, imported or exported from Arizona without authorization from the AGFD. The AGFD has developed guidelines for handling tortoises encountered on development projects. The AGFD should be contacted during the planning stages of any project that may affect desert tortoises.

The Lowland Leopard Frog is found in lower and upper Sonoran desert, but is able to survive in a wide variety of natural and human-made aquatic systems, including rivers, springs, abandoned swimming pools, and ornamental backyard ponds. They are considered a species of concern due to the negative impact of the introduction of bullfrogs, crayfish, and predatory fish. Their population has also been stricken with the chytrid fungus, a fatal skin disease.

The Northern Mexican Gartersnake has a large range extending from Arizona and New Mexico to central Mexico, and is locally common to abundant, although populations in the U.S. have declined. In Arizona, substantial range contraction has been noted with populations eliminated at several locations since 1950. Cover is a critical habitat component for this species, and the decline is closely associated with the loss, alteration, dewatering, siltation, and pollution of streams, wetlands and riparian zones. The decline of native frogs and native fishes, which serve as food resources, is another significant factor in the decline of the Northern Mexican Gartersnake. Additionally, this snake is negatively affected by predation and competition, particularly from the non-native bullfrog, domestic geese, and introduced fish.

Invertebrates

The Maricopa Tiger Beetle is colorful with a brilliant green head and thorax, with violet wings and abdomen. This species can fly, so it has some dispersal ability, but its habitat is always sandy, riparian situations such as stream banks, edges and sand



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bars. Management needs noted for this species include protecting sites from water impoundments and from vehicular access.

The Obsolete Viceroy Butterfly is widespread but is tied to cottonwood-willow riparian areas and desert arroyos in desert grassland and desertscrub habitats. Adults are livid brown in color with the median line of the hindwing edged in white. The Viceroy flies with and mimics the Queen butterfly and is also similar in appearance to the Monarch butterfly. Its total range includes southeastern Utah, Nevada, western California, Arizona, New Mexico, and western Texas. This species has been documented on the Mesa Ranger District of the Tonto National Forest at the confluence of Sycamore Creek and Mesquite Wash. This subspecies has lost much of its habitat due to development, water impoundment, and the exotic aggressive saltcedar. Management needs that have been noted for the species include restoration of riparian habitats and the conservation of existing habitats.¹³

Visual Character

Visual resources in the planning area range from lush Sonoran Desert accented by majestic Saguaro cactus, sandy-bottomed washes lined with desert trees and shrubs, to more sparsely vegetated areas, and scattered low-density rural residential areas. The overall visual character is composed of gently rolling desert with some more significant hillside areas in the eastern portion of the planning area; however, dramatic mountain vistas can be viewed in nearly every direction.

Primary visual elements in foreground areas along the street network in the Goldfield Ranch subdivision include unpaved sections of road, some pipe-rail fencing outside of the roadway shoulder, cleared areas for future construction of homes, overhead 12kV electric transmission lines, and a cellular communication tower along Thirsty Earth Trail. Many of the custom built homes that currently exist in the area are quite impressive, and represent a wide range of styles from geodesic domed houses to southwestern style mansions with large verandas on all sides. However, most of the area remains undeveloped, and a few horses were even seen roaming free in the vicinity during a site visit. Middleground areas, approximately one mile from the roadways, include Sonoran desert vegetation, with distant background views of the Mazatzal Mountains including Four Peaks to the east, the Superstition and Goldfield Mountains including Weaver's Needle to the south, and the McDowell Mountains to the west, with occasional views of Fountain Hills' namesake fountain and views of undisturbed Sonoran desert in the National Forest to the north. More than any other visual element, the views of the surrounding mountains are what make this area unique.

¹³ Tonto National Forest. Threatened, Endangered and Sensitive (TES) Species 2000 Draft Abstracts, Tonto TES Invertebrates: Butterflies. Prepared by Debbie Lutch June 26, 2000. Accessed from <http://www.fs.fed.us/r3/tonto/naturalResources/wildlife-tess.shtml> on August 4, 2006.



In addition, there are several equestrian facilities that are typically enclosed by pipe-rail fencing, and include several boarding stables, corrals, hay canopies, round pens, arenas, and other related structures. Several smaller equestrian-related facilities associated with the personal keeping of horses on residential sites of 1+ acre lots are also located throughout the planning area.

Very few structures are located in the larger study area and relatively dense desert vegetation covers almost the entire area. Surrounding most of the planning area is a barbed-wire fence, marking the edge of the Tonto National Forest. The gentle downhill slope to the Verde River is evident, but the Verde River cannot be seen from most points in the planning area.

Air Quality

The Environmental Protection Agency (EPA) is the federal agency in charge of setting air quality standards to protect public health and welfare. National Ambient Air Quality Standards (NAAQS) have been set for six criteria pollutants: carbon monoxide, nitrogen dioxide, particulate matter, ozone, sulfur dioxide, and lead. States are required to adopt ambient air quality standards, which are at least as stringent as the federal NAAQS for the six criteria pollutants. The Arizona Department of Environmental Quality (ADEQ) is the state agency responsible for compliance and enforcement for all portable sources of air pollution within the state and all stationary sources outside Maricopa, Pinal, and Pima counties. The Maricopa Association of Governments is responsible for maintaining plans and addressing problems with carbon monoxide (CO), ozone (O₃), and particulate matter (PM₁₀) within Maricopa County. The Maricopa County Environmental Services Department issues air quality permits to regulated businesses, monitors ambient air for pollutants, writes the Maricopa County Air Pollution Control Rules & Regulations and determines facility compliance. The Department sets the long-range direction for clean air within Maricopa County.

The EPA normally designates nonattainment areas only after air quality standards are exceeded for several consecutive years. Maricopa County has been designated as a nonattainment area for CO, O₃, and PM₁₀. The Goldfield planning area lies within the nonattainment boundary. Carbon monoxide is an odorless, colorless, toxic gas formed when carbon-containing compounds or fuels are burned incompletely. Potential primary sources of CO in the planning area are on-road mobile sources (e.g. automobiles and trucks), non-road mobile sources (e.g. lawn and garden equipment, construction, farm, and recreational equipment), and area sources (e.g. fuel combustion, open burning, fire places, and woodstoves). The EPA classified all of Maricopa County as a serious CO nonattainment area in June 1996. CO pollution can reach unhealthy levels in Maricopa County during the winter months.

At ground level, ozone (O₃) is a primary component of photochemical smog. It presents a serious health threat to people suffering from respiratory disease. The primary emission sources include volatile organic carbons and nitrogen oxides from



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non-road, area, motor vehicle and biogenic sources (certain types of vegetation including citrus and eucalyptus). O₃ can reach unhealthy levels in Maricopa County during the summer months.

PM₁₀ refers to fine particulate matter suspended in the atmosphere. These particles have a diameter equal to or less than 10 micrometers. When inhaled, the fine particles can be deposited in the lungs, resulting in difficult breathing, bronchitis, aggravation of existing respiratory diseases, and permanent lung damage. Earthmoving and windblown emissions from unpaved roads and parking lots, agricultural areas, construction sites, and disturbed open areas are the predominate causes of exceedences of air quality standards. Maricopa County's PM₁₀ traffic volume standard was recently changed to require dirt road paving of County-maintained roads if 150 vehicles or more per day use the roadway. In 1996, the EPA classified Maricopa County as a serious PM₁₀ nonattainment area.

In the Goldfield planning area, the main sources of dust include unpaved roads; trucks, ATVs, and other traffic; corrals and arenas; and construction sites. Maricopa County has implemented several air pollution control programs including a Clean-Burning Fireplace Ordinance, Clean Burning Gasoline, Fugitive Dust, and Vehicle Emissions Inspection programs.

Noise

Prolonged exposure to loud noise can cause general community annoyance and reductions in property values. Residents in the Goldfield community indicate the area is mostly quiet. The primary sources of noise are vehicular traffic and ATV use. While there is a private airstrip located within the planning, no flight paths from any of the major airports in Maricopa County significantly affect noise levels in the planning area. In the Tonto National Forest, one potential source of noise is the use of makeshift shooting pits that are scattered throughout areas of the forest closest to the metro area.

Archaeology

Arizona, and especially Maricopa County, has one of the highest concentrations of archaeological sites in the United States and possibly the world. There have been over 800 Hohokam sites recorded just within the Salt River Valley. One Forest Service archaeologist estimated that there are at least 750 archaeological sites in the Tonto National Forest, some as old as 1,700 years, and potentially thousands more that have not yet been found.¹⁴ The State Historic Preservation Office (SHPO) has detailed information on file for site locations and surveys that have been conducted in the planning area. For resource protection, only members of federal, state, or local government agencies can examine the files.

¹⁴ Coomes, Jessica. "Endless Forest Patrol: Officials work to protect Tonto's land from trash, thieves, crime." The Arizona Republic (on-line edition), Aug. 6, 2006.



If a federal or state agency is involved in a project that will affect an undisturbed area, that agency is required to consult with the SHPO to determine if any historic or archeological properties exist in the project area and/or if a survey is necessary. Given the high potential for sensitive sites, prior to development, excavation, or grading an archaeological/historical review should be performed to determine an area's full archaeological potential, and preservation precautions should be taken where necessary. On private property, Arizona state law requires the landowner to notify the Arizona State Museum of the discovery of human remains at least 50 years old or of the intent to disturb a known burial site.

Although no systematic reconnaissance field survey of the county has been conducted, preliminary studies indicate high potential for significant archaeological resources within the Verde River basin. The SHPO, in cooperation with federal, state and other agencies is developing a statewide electronic database to provide comprehensive survey information of all historic sites in Arizona. In general, there is evidence to show that the lower Verde River valley supported a large variety of encampments, including Hohokam villages, ball courts, and several irrigation canals built near the river. As their population grew, the Hohokam spread out from the Salt and Gila River into the Verde and Agua Fria River valleys.

In 1991, the Bureau of Reclamation contracted an excavation project around the Horseshoe and Bartlett Reservoir areas north of the planning area. During this excavation one Hohokam Indian village was discovered, Scorpion Point Village. Hohokam Indians are believed to have inhabited the area from around 300 A.D. until the early 1400's when they vanished. The Scorpion Point Village contained two ball courts, cemeteries, plazas, and between 200 to 400 pit houses.¹⁵

Another significant site was found in Troon Village, northwest of the planning area, near Pinnacle Peak. Discovered in this site were seven pit houses, 30 trash mounds, jars, bowls, grinding stones, a complete shell pendant and whole-shell ornament carved as a snake head, 679 human bone fragments, and a copper bell that is assumed was traded for in Mexico. This property has since been donated to the Archaeological Conservancy.

One large archaeological site was found along the bank of the Verde River near Rio Verde Ranch. This land is said to have once supported several thousand Native Americans around 800 A.D. This inference is drawn from the large number of artifacts found in the area, including trash mounds, fire pits, irrigation canals, pottery, arrowheads, and five ball courts.

¹⁵ More information on this site and others found in the lower Verde Valley is found in the book published from this project, *Vanishing River: Landscapes and Lives of the Lower Verde Valley: The Lower Verde Archaeological Project*.



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One concern regarding the preservation of archaeological sites in the area is the inadvertent destruction of historic ruins by off-road vehicle riders who stray from designated paths. A group of off-road vehicle enthusiasts is working with the Forest Service to map out sustainable trails that satisfy both the government and the riders. Thieves, also known as pot hunters, are also a concern. They steal artifacts for profit, sometimes using sophisticated methods and equipment to circumvent laws forbidding their removal.

Water Quality

The entire Goldfield planning area lies within the Fountain Hills sub-basin, which is located in the northeastern part of Maricopa County and covers an area of approximately 360 square miles. Limited groundwater quality data indicate that most of the groundwater in the Fountain Hills sub-basin is suitable for most uses, including domestic use.

Per a 1983 study, in the Fountain Hills sub-basin, total dissolved solids (TDS) concentrations have been estimated to range from 294 milligrams per liter (mg/l) to about 834 mg/l.¹⁶ Most groundwater in the Phoenix area contains TDS concentrations between 500-1,000 mg/l. TDS is an indicator of salinity or hardness of the water. The Environmental Protection Agency (EPA) has established a secondary maximum contaminant level (SMCL) of 500 mg/l for TDS, primarily for aesthetic reasons. From the perspective of human health, dissolved solids are less of a concern than pesticides or nitrates, for example. Dissolved solids are considered secondary contaminants that affect taste, smell, and appearance of drinking water.

Fluoride concentrations in the sub-basin ranged from 0.4 to 9.2 mg/l.¹⁵ The EPA's primary maximum contaminant level (MCL) for fluoride is 4.0 mg/l and the recommended SMCL (secondary MCL), an aesthetic standard, is 2.0 in order to prevent mottling of teeth. Although there is no water provider currently located within the planning area, The Water Utility of Northern Scottsdale (WUNS), which has no affiliation with the City of Scottsdale, is the water provider for an area north of the planning area that is also located within the Fountain Hills sub-basin. Lab reports for the water utility's well no. 2 indicate a fluoride concentration of 1.4 mg/l. Water quality testing for the WUNS well no. 2 indicated very little arsenic, less than 2 parts per billion (ppb). In January 2001, the EPA lowered the arsenic standard from 50 ppb to 10 ppb, with an effective date of January 23, 2006. A nitrate concentration of 1.6 mg/l was found for well no. 2. Drinking water supplies are required to have less than 10 mg/l of nitrate. Lab reports for another WUNS well indicated a relatively low TDS concentration of 270 mg/l.

Surface water pollutants can originate from both single point sources such as a pipe or ditch, and non-point sources such as runoff from agricultural fields, construction

¹⁶ Arizona Water Resources Assessment, Volume II Hydrologic Summary. Arizona Department of Water Resources, August 1994



sites and urban development. In Maricopa County, agriculture, industry, construction, wastewater treatment plants, motorized recreation, landfills, and resource extraction are the primary contributors to surface water pollution. Sources of elevated levels of nutrients may include fertilizers, livestock-feeding operations, sewer and septic systems. Best management practices and regulation of point-source pollution are methods to reduce the quantity of nutrients entering streams. Regulatory agencies and environmental legislation have resulted in greater attention to the mitigation of existing pollution problems and the prevention and mitigation of future problems.

In the planning area, there are a number of horses and other livestock in corrals, as well as free-roaming livestock. All of these animals contribute to the potential for effluent contamination of surface waters. Large horse operations, in particular, have a responsibility to clean up manure on a daily basis and store it in enclosed containers for proper weekly disposal, as indicated in the Maricopa County Environmental Health Code.

The U.S. Army Corps of Engineers regulates activities in the nation's waterways. In 1972, Section 404 of the Clean Water Act was passed to prohibit discharging dredged or fill material into U.S. waters without a permit from the Corps. The Corps' first priority is to protect the aquatic environment and other public interest resources. The Section 404 program's geographic jurisdiction extends to all waters of the U.S., including all tidal waters; interstate waters; virtually all wetlands, lakes, rivers, perennial and intermittent streams; and dry washes in the arid west.

The quality of CAP water, although naturally high in dissolved solids, is acceptable for most uses with appropriate treatment. Imported from the Colorado River, CAP water has become a major source of water in the Valley. CAP water is not currently used in the planning area but is used as a primary water source in the City of Scottsdale. Additional information on water quality in Maricopa County is available in the Water Resource element of *Eye to the Future 2020*, the Maricopa County Comprehensive Plan. A discussion of water quality issues in the Goldfield planning area is also presented in the Water Resources section of this area plan.

Hazardous Material

ADEQ's Emergency Response Unit responds to hazardous material and pollutant releases that pose an immediate threat to public safety. The Unit provides containment and proper disposal of materials when responsible parties are not capable of doing so. They also operate the statewide hazardous substance spill reporting network.

Wildfire Prevention

Community wildfire protection planning is a priority issues that emerged with the enactment of the Healthy Forests Restoration Act in 2003. The legislation includes incentives for the USFS and Bureau of Land Management to consider priorities of



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local communities as they develop forest management and hazardous fuel reduction projects. The Goldfield community may benefit from developing a Community Wildfire Protection Plan (CWPP) with assistance from the Healthy Forests Restoration Act. A website containing information on preparing a CWPP is available at: www.wildfire.org. Tonto National Forest policy is to aggressively suppress any wildfires in the wild land/urban interface area. The USFS is not likely to conduct any major fuel reduction projects in the planning area because of its location within the Sonoran desert vegetative community. Currently, the USFS works with Rural/Metro or other local fire departments when fire threatens communities adjacent to the national forest. Approximately 6 million people currently visit Tonto National Forest annually, making it one of the most heavily used national forests in the country. As public use of the Tonto National Forest increases along with the population growth of the surrounding areas, there is an increased risk of fires caused by humans. For instance, gunshots caused 8 of the 12 human-started fires in 2005 in the Tonto forest district that borders the East Valley.¹⁷

¹⁷ Coomes, Jessica. "Endless Forest Patrol: Officials work to protect Tonto's land from trash, thieves, crime." The Arizona Republic (on-line edition), Aug. 6, 2006.



ECONOMIC DEVELOPMENT

Social and Economic Characteristics

The social and economic characteristics of the Goldfield planning area are described in the following five sections:

- Area Economy/Economic Base
- Housing
- Residential, Commercial, and Industrial Demand
- Economic Base Potential
- Policy Implications

Area Economy/Economic Base

Two types of markets provide income and employment within any economy. The local market, or non-basic sector, sells products to consumers within a city or area, and the export market, or basic sector, which sells products to consumers outside a city or area. Economic theory asserts that a region must produce and export goods and/or services to an outside market in order to increase local income.

One of the major goals of economic development is to create jobs. Many established rural areas include some employment opportunities such as manufacturing operations, distribution centers, agricultural activities, local government offices, or public schools. Industrial employment activities are typically located close to an Interstate freeway or regional highway. The Goldfield area, by contrast, remains largely undeveloped and does not currently include any commercial parcels. The only economic activity in the planning area is comprised of equestrian-related activities that produce income and/or contribute to the economy through direct and indirect expenditures. As with many other so-called bedroom communities, residents in the planning area are willing to trade convenient urban services and short commutes to gain quality of life benefits of living in a less congested, more natural environment.

Table 14 provides the total number of establishments by employee size based on the U.S. Census Bureau's County Business Patterns (2004) for the ZIP code in which the planning area is located. The zip code area includes the Goldfield Ranch subdivision, which is roughly equivalent to the planning area, as well as the Fort McDowell Yavapai Nation. Although the zip code area is larger than the planning area, it provides a general idea about the type of employment found in the Goldfield area. However, all of the employment sites are outside the planning area. There were 10 business establishments and 1,005 total jobs reported in the area in 2004. The top employment category was "arts, entertainment & recreation," which accounts for over half of the jobs in the area. This category includes the casino located on the Fort McDowell Indian reservation, which employs over 500 people.



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Table 14: ZIP Code 85264 Business Patterns - 2004 Industry Code Summary

Industry	Number of Employees						Total Establishments
	1-4	5-9	10-19	20-49	50-499	500+	
Construction	1	1	2	0	0	0	4
Retail	0	0	1	0	0	0	1
Finance & insurance	0	0	1	0	0	0	1
Administrative, support, waste management & remediation services	0	0	1	0	0	0	1
Health care & social assistance	1	0	0	0	0	0	1
Arts, entertainment & recreation	0	0	0	1	0	1	2
Total	2	1	5	1	0	1	10

Source: US Census Bureau. County Business Patterns – 2004 Industry Code Summary for ZIP code 85264.

According to the U.S. Census Bureau’s Metro Business Patterns (2004), the top employers in the greater Phoenix area are in the retail trade sector. The largest retail employer in terms of number of employees in the greater Phoenix area is Wal-Mart Stores, Inc., followed by Albertsons Inc., Bashas’, Kroger Co. and Target Corp. The second highest employment sector in greater Phoenix is health care and social assistance. The top healthcare sector employer is Banner Health Systems, which is the third largest employer in the region overall. The region also has a number of large high-tech manufacturers such as Honeywell, Raytheon, Intel, and Motorola. Large public sector employers include the State of Arizona, Maricopa County, City of Phoenix, U.S. Postal Service, and Arizona State University. The largest financial services employer is Wells Fargo Company.¹⁸

In 2005, Arizona ranked behind only Nevada in percentage of job growth. The Arizona Department of Economic Security (DES) continues to believe that Arizona’s economy will expand and improve the pace of job growth over the next several years. Arizona’s economy had a growth rate of 4.7 percent from May 2005 to June 2006, and the unemployment rate for Arizona in June 2006 was 4.4 percent.

For the Phoenix-Mesa metropolitan area, DES indicates that the professional and business services industry is forecasted to add 19,600 jobs from 2006 to 2007. Trade, transportation, and utilities are forecast to add 16,700 jobs, while the construction industry is expected to add more than 15,900 jobs. The education and health services sector is expected to add 7,800 new jobs during the same period, and government will increase by nearly 5,300 jobs. Both Arizona’s tourism and financial services industries are expected to show an increase of 5,700 jobs each

¹⁸ www.azcentral.com/relocatingguide04/planning/topemployers_box.html



during the 2006-07 period. Arizona's manufacturing industry has been slow to recover from the post-2000 recession and is forecast to add only 2,100 jobs in 2007.

Currently, construction related jobs are a leading growth industry in the state. According to DES, many of Arizona's rural areas are experiencing strong housing demand, a trend that is likely to continue through the next decade. This trend is attributed to retirees seeking value and less congested lifestyles, a reaction to terrorist attacks of 2001 to relocate to low-density communities, and out of state residents seeking a southwestern lifestyle.

Besides modest improvement in employment growth, a longer-term trend at the county, state, and national level is an increase in workforce age. Over the next twenty years, the number of younger workers available to replace older workers will decline, creating a possible shortage of workers. Whereas growth in the number of working adults (ages 25 to 55) will increase by about 34% between 2000 and 2020, the number of people over the age of 60 will increase by 104%.

Horse Industry

As previously noted, equestrian-related activities make up the primary economic activity in the planning area. In 2001, the University of Arizona (U of A) College of Agriculture and Life Sciences conducted an economic impact analysis of Arizona's horse industry, sponsored by the Arizona State Horsemen's Association. The study found that direct, indirect, and induced expenditures by Arizona's horse industry total between \$1.1 and \$1.3 billion. Direct effects are the result of purchases by horse owners and users. Indirect and induced effects are created by ripple effects throughout the economy, resulting from expenditures of end users.

The largest portion of this expense comes from the direct expenses of the pleasure horse owners, \$500 to \$600 million (78%). Money is spent on the care and maintenance of pleasure horses and related infrastructure (including the annualized cost of horse, tack, equipment, land and facilities ownership). Horse racing in Arizona generates an estimated \$108 million (16%) in expenditures. Horse show events contribute an estimated \$43 million (6%) in expenditures. Arizona resident spectators at other horse-related events (rodeos, roping, polo, and gymkhana) spent \$9 million in 2001. The combined indirect and induced effect of the above contributed an additional \$444 to \$504 million to the total Arizona horse industry expenditures. Major categories not included in this study are commercial pleasure riding, participants at rodeo, roping and polo events, and breeding of horses for export sale outside Arizona.

The U of A study looks at four of the state's largest horse shows, two in Tucson and two in Scottsdale. Combined, these shows had a direct economic impact of over \$27 million between December 2000 and March 2001. The number of Arizona households with one or more horses is between 48,000 and 64,000, and it is estimated that there are more than 170,000 horses in Arizona. According to a 1990



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study by the U of A, over 15,000 jobs are directly or indirectly linked to expenditures on horses.

In the planning area, many residents have horses, and as more people move into the area, these numbers are anticipated to increase. However, there may be potential for conflict between equestrians and vehicles sharing the roads as development increases.

Existing Plans

As seen in **Figure 10 – Fort McDowell Yavapai Nation (FMYN) Beeline Corridor Plan** (adopted April 2000), the FMYN corridor plan identifies mixed-use commercial, existing and proposed resort/recreational areas, and some existing and proposed residential uses west of the planning area. The resort areas are located near the Rodeo Grounds on the east side of the Verde River south of the highway and also west of the river on both sides of the highway, while the recreational areas are designated west of the river and east of Fort McDowell Road. The mixed-use and commercial areas are centered on the casino and hotel near the intersection of the highway and Fort McDowell Road. There is also a smaller residential area to the north of the casino, and locations designated for community services. However, open space is the designated land use for the area adjacent to the Goldfield planning area. Areas further north are identified in the Ft. McDowell Yavapai Master Plan as special use.

The Salt River Pima-Maricopa Indian Community has an economic development plan for their community that is available on their website. Although it designates most of the land closest to the Goldfield area as open space, there is a commercial node identified where State Route 87 and Shea Blvd. intersect on the northern boundary of the reservation, approximately four miles southwest of the planning area.

Housing

Over the last several years, growth in the Phoenix metropolitan area housing market has been strong. Maricopa and Pinal counties combined took in nearly 50,000 residential permits in 2003.

A steady increase in residential building permits within the planning area reflects a similar trend. **Figure 11-Residential Completions** indicates those parcels that contain residential structures. Most of the housing in the planning area is characterized as custom-built single-family homes, and most homes are less than 10 years old. Between 2000 through 2005, 47 single-family homes were completed in the planning area, whereas only about 14 homes in the planning area were constructed prior to 1995.

Beeline Corridor Plan

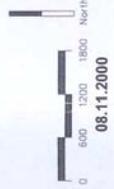
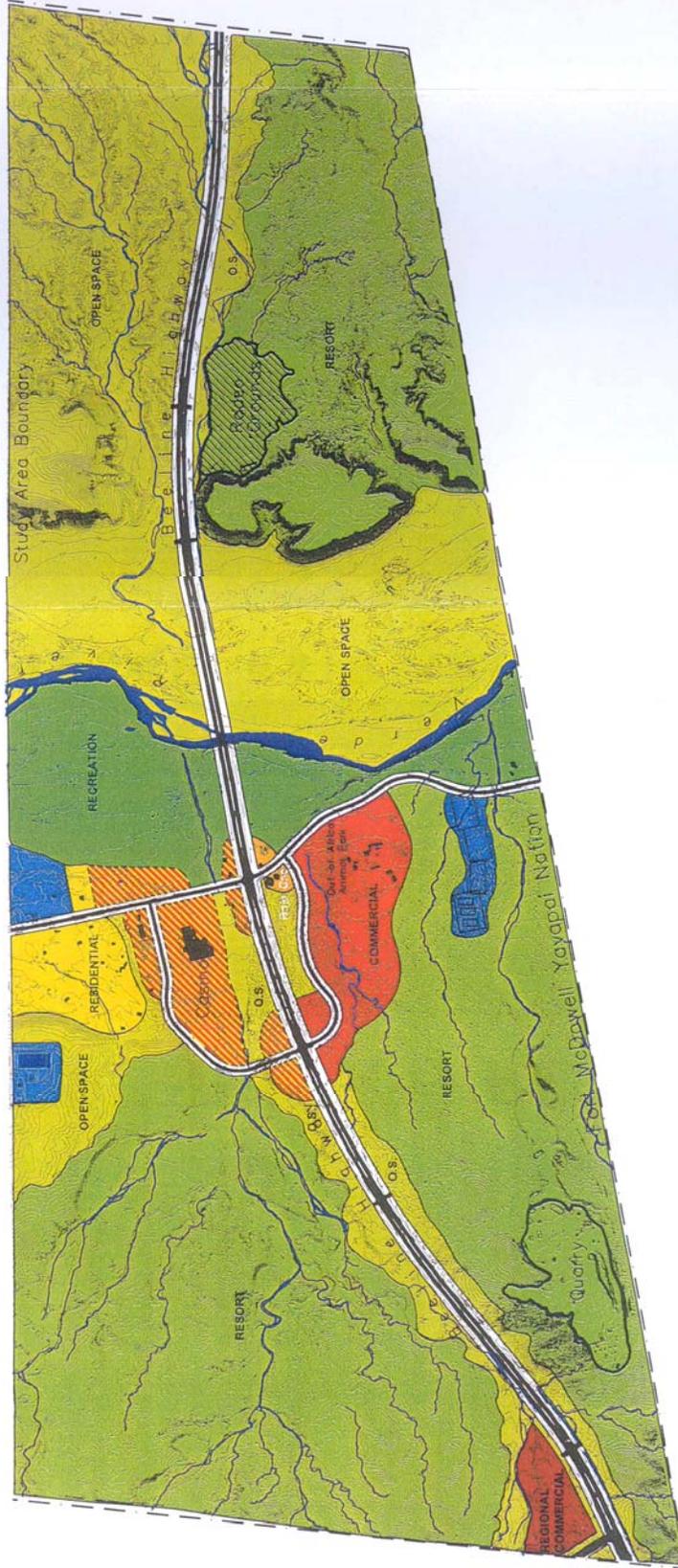
Land Use Plan

Fort McDowell
Yavapai Nation
Fort McDowell, Arizona

Prepared by
DESIGNWORKSHOP

LAND USE LEGEND

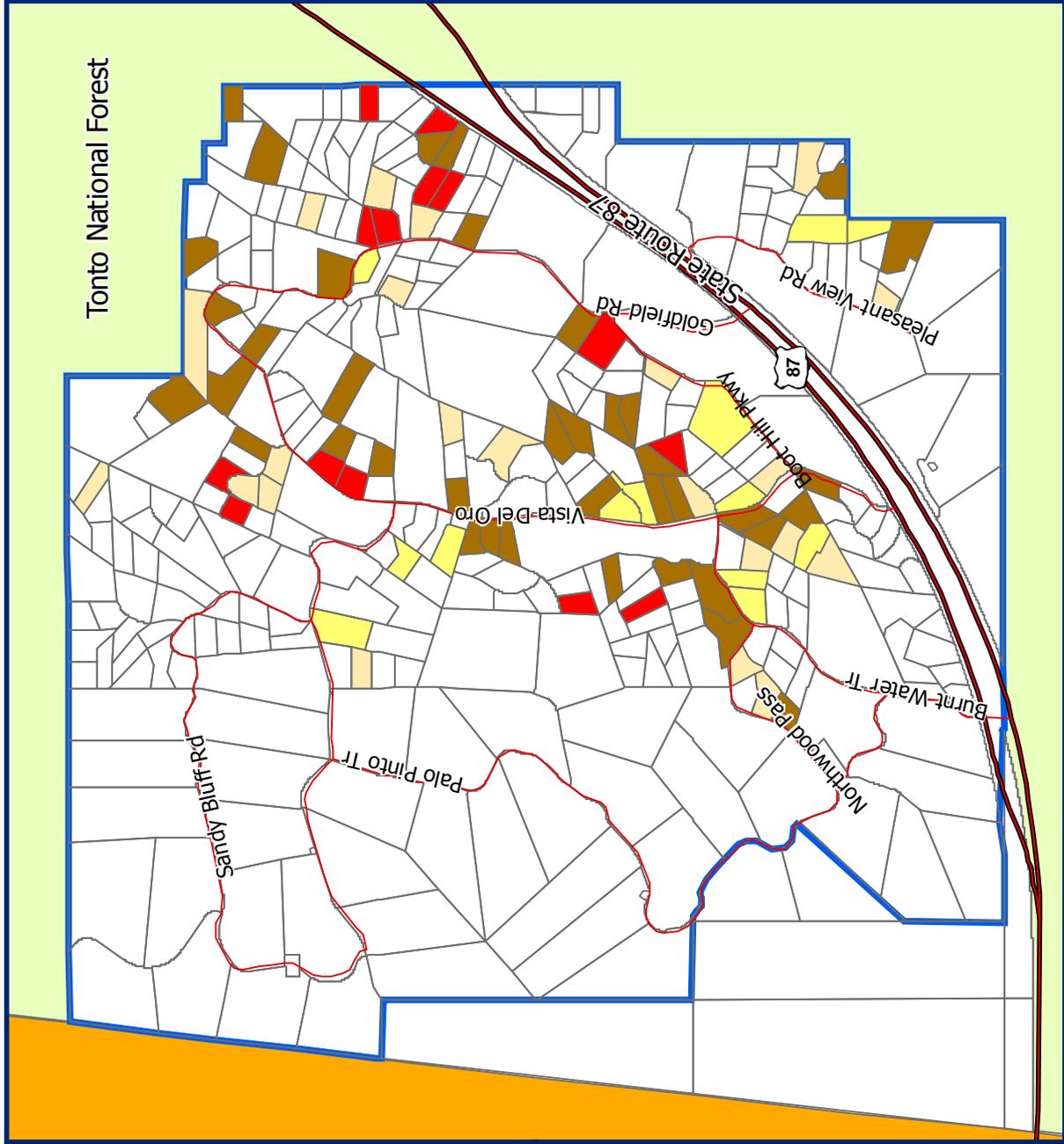
	RESIDENTIAL
	REGIONAL COMMERCIAL
	NEIGHBORHOOD COMMERCIAL
	CONVENIENCE COMMERCIAL
	MIXED USE
	COMMUNITY SERVICE
	RECREATIONAL
	RESORT
	OPEN SPACE
	SPECIAL USE



Residential Completions

Figure 11

- Legend**
- Arterial Roadway
 - Highway
 - Goldfield Area Plan
 - Rivers
 - Tonto National Forest
 - Fort McDowell Yavapai Nation
- Residential Completions**
- 2005 - present
 - 2000 - 2004
 - 1995 - 1999
 - prior to 1995
 - Vacant



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September 2007



MARICOPA COUNTY
 PLANNING & DEVELOPMENT DEPARTMENT



Another indicator of housing demand is approved final subdivision plats in the planning area. Although Goldfield Ranch is the only subdivision approved in the planning area, there is an approved DMP called The Preserve, which covers almost half of the total acreage of Goldfield Ranch. However, this development has yet to be subdivided or built. It is anticipated that this project will eventually be built, which will increase the amount of residential development in the area. Planned densities in the approved plan for The Preserve are between 0.2 and 3.2 units per acre, with a total of 2,032 dwelling units over 2,204 gross acres, resulting in an overall gross density of 0.92 units per acre. The plan also identifies approximately 40 acres of neighborhood and mixed-use commercial, and 190 acres of open space, mostly in the form of a proposed golf course.

Personal Income

Although the 2000 Census provides household and per capita income data for Arizona and Maricopa County, it does not include income data specifically for the Goldfield planning area. However, it does provide this data for the larger zip code tabulation area (ZCTA) in which the planning area is located. **Table 15** shows income levels for the state, county, and the ZCTA in which the planning area is located.

Population data by age was also not available specifically for the planning area. However, age data was available for the Zip Code Tabulation Area (ZCTA) that roughly corresponds to the planning area. **Table 4** indicates that the median age of ZCTA 85264 residents (24.3 years) is lower than the county's median age of 33. The median age of males for the ZCTA is 23.1, compared to a median age for females of 25.0 years. Census 2000 data indicates that out of the 935 residents living in this ZCTA, 548 (58.6%) were older than 18 years, and 387 (41.4%) were 17 years and under. The 5-14 year old age group is the highest percentage (23.6%) of the total population in the ZCTA. Therefore, one could assume that a relatively high number of children or young adults with families live in the area. This may be due largely to the demographics of the Fort McDowell Yavapai Nation, which makes up the majority of this zip code. The relatively high number of children and fewer young adults without children may also explain the lower per capita income figure even though the median household income is higher than the county average.

Construction and Real Estate

Over the past several years, Maricopa County has been one of the nation's leaders in residential construction. The planning area reflects a similar pattern to Maricopa County, although on a much smaller scale, in that the number of residential permits has remained relatively high in the past several years. From approval of the first phase of the Goldfield Ranch subdivision in 1977 through the year 1999, 38 houses were built in the planning area. By contrast, 47 homes were permitted from 2000 – 2005, and at least 11 building permits for new houses were pending in 2006.



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Table 15: 1999 Median Household and Per Capita Income¹

Area	Median Household Income	Per Capita Income
Arizona	\$40,558	\$20,275
Maricopa County	\$45,358	\$22,251
Goldfield planning area	\$47,222	\$18,962

Source: ¹ U.S. Census Bureau, Census 2000.

Note: The median divides the income distribution into two equal parts: one-half of the cases falling below the median income and one-half above the median income.

Some of the proposed dwelling units are manufactured homes, including those used temporarily during construction of a permanent home. It should be noted that multi-sectional manufactured homes are allowed in the rural zoning districts. However, singlewide trailers permanently remaining on property require a special use permit through the County.

According to the Greater Phoenix Economic Council, between 1990 and 2000 the greater Phoenix area was the fastest-growing large metropolitan area (population above 2 million) in the United States, adding 1,013,396 new residents (a 45.3% increase). By 2010, the population is expected to grow by another 24% to 3,709,566, an increase of 718,316 new residents. The population growth trend, along with other factors, is predicted to be a key driver of growth and development in the greater Phoenix area. The Goldfield area will likely remain attractive to many people who want to escape the city and reside in a quiet, rural setting.

Residential, Commercial, and Industrial Demand

Residential, commercial, and industrial demand calculations can be found in the Growth Areas element of this plan. Estimates for the amount of land needed to accommodate future land uses are also provided in the Growth Areas element.

Economic Base Potential

The economic base of this 7.8 square-mile planning area is very modest. The area is characterized by scattered, low-density residential development, some non-commercial equestrian facilities, and large areas of undeveloped desert.

Economic development activities that are expected to continue include equestrian activities (trail riding, boarding, breeding, buying, selling), real estate activity, construction activity, well drilling, fencing, and other residential-related service businesses. Some residents conduct small-scale, home-based businesses such as real estate and equestrian related services. According to the Maricopa County Zoning Ordinance (MCZO), residents in rural areas are permitted to conduct certain businesses from their home, subject to specific requirements. In general, the business must be conducted within an enclosed dwelling; no signs or advertising are allowed on the premises; the business must not generate any noise, odors, dust, etc., or use toxic or dangerous material; and only residents of the dwelling may be employed in the business.



Commercial growth during the next 10 to 15 years is expected to be limited to the activities described above due to the distant geographic location, the unknown status of water availability, lack of infrastructure, distance from existing services, and the desire of the community to maintain the rural residential character. However, there may be some potential for limited small-scale neighborhood retail or service development within the *Preserve* master planned communities.

Policy Implications

During data analysis, Maricopa County identified several important social and economic considerations that should be addressed in this plan:

Residential Development

Residential development will continue to impact the region's environment and character. Current development regulations and lot splitting requirements do not necessarily prevent development in washes, areas with high quality Sonoran desert, or in areas that lack typical services and infrastructure (sewer, water, and streets). Policies and guidelines can help encourage suitable locations for new development and to help ensure that appropriate access and services are provided. For new subdivisions, incentives such as flexible development standards and voluntary agreements can be explored to protect sensitive riparian areas, open space, and trails.

Commercial Development

Currently there is almost no commercial development in the planning area, and plan policies discourage such land uses. Any future development should be sited and designed so that the activities will not detrimentally affect adjacent residential neighborhoods. The community should provide input so that any such development is compatible with the area. In addition, creation of scenic corridor status for State Route 87 could be pursued in order to develop policies and design guidelines that will help preserve the existing rural character and conserve significant scenic resources. The design guidelines would be developed with community participation and would apply to all new special use permit development, new residential subdivisions, or any other new zoning entitlements within a designated corridor. The design guidelines would not apply to individual single-family home construction outside of a subdivision. However, individual property owners may elect to comply with design guidelines to support the community effort.

Coordinated and Comprehensive Economic Development Strategy

For the next 10 to 15 years, a comprehensive economic development strategy may not be critical since commuting to employment centers outside of the planning area, along with a component of home-based business, may continue to be feasible. However, as the surrounding region becomes more urban, long-term policies and



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strategies may be needed that will help create employment opportunities closer to the planning area, create a better jobs/housing balance, reduce traffic volumes, and increase multi-modal transportation alternatives. Maricopa County can participate in and support development and implementation of such strategies and programs if they become necessary.



GROWTH AREAS

Introduction

In 1998, the State of Arizona passed the Growing Smarter Act to ensure the wise management of growth and protect our state's natural heritage. Among other elements, Maricopa County is now required to include a plan for growth areas. Specifically, Maricopa County must identify those areas, if any, that are particularly suitable for planned multi-modal transportation and infrastructure expansion and improvements designed to support a planned concentration of a variety of land uses. This includes residential, office/employment, commercial, tourism, and industrial uses. This mixed use planning must include policies and strategies designed to:

- Make automobile, transit, and other multi-modal circulation more efficient
- Make infrastructure expansion more economical
- Provide for rational land development patterns
- Conserve significant natural resources and open space areas within growth areas, and coordinate their location to similar areas outside of growth areas
- Promote timely and financially sound infrastructure expansion

The Growth Areas element is important because it allows Maricopa County to accommodate growth in an orderly and fiscally responsible manner that is sensitive to the natural environment and residents' quality of life. This type of growth will keep Maricopa County economically, socially, and environmentally successful. For a county perspective on growth areas, refer to the *Eye to the Future 2020* Growth Areas element. Although there are fewer opportunities to plan for urban growth in rural county areas, it is still important to plan for and anticipate growth in these areas.

Development Pattern Analysis

Past

An early history of the Goldfield region is described in the Introduction section. In the 1960s, over 6,000 acres of Bureau of Land Management (BLM) land were exchanged to develop what is now Fountain Hills. The Fountain Hills master planned community was approved in 1970 and encompassed 12,000 acres west of the current planning area. The planning area experienced little growth or development until the 1980s, when a few homes and equestrian ranches began to appear. In 1995, Maricopa County approved the first Goldfield Area Plan. The area covered by this first plan was 184 square miles and included the entire Fort McDowell Yavapai Nation and the northeastern portion of the Salt River Pima-Maricopa Native Community, as well as approximately 68,000 acres of the Tonto National Forest, and unincorporated communities such as Tonto Verde, Rio Verde and Goldfield Ranch. Demographic research for this first area plan included population figures based on



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an aggregation of Traffic Analysis Zones (TAZ), which included large areas outside of the original study area. In 1990 the population in the area of analysis was 7,650, and the estimated population in 1995 was 10,710, representing a five year growth rate of approximately 40 percent. By 2010, the population was estimated to increase to approximately 16,226 residents, and 21,644 residents were estimated by 2020. Over the thirty year period from 1990 to 2020 the population was projected to increase at an annual rate of 6.1 percent.

However, the updated Goldfield planning area only covers approximately 7.8 square miles of unincorporated private land. In 1995, there were approximately 35 people living in the updated planning area, and by 2000, the population had increased to around 95 residents. USFS land exchanges also provided private land at the edge of the planning area, which is now owned by the Fort McDowell Yavapai Nation although it is not within their jurisdictional boundaries and has not been developed.

Present

Today, Maricopa County is one of the fastest growing counties in the United States, and with a current population of over 3 million residents is also one of the largest. Growth continues throughout Maricopa County in both incorporated and unincorporated areas. Over the last couple of decades, much of the growth in unincorporated Maricopa County occurred in the southeast, the far northeast, and the near northwest portions of the Phoenix metropolitan area. Maricopa County also has several large-scale master planned communities. These Development Master Plans (DMPs) tend to be large, self-sustaining communities with mixed land uses. The Preserve DMP, which was approved in December 1995, is located within the planning area. The Tonto National Forest surrounds the planning area on three sides, and will remain mostly undeveloped.

Future

Given its strong economy, mild climate, and quality of life, Maricopa County is expected to continue growing rapidly over the next several decades. Whereas it took Maricopa County over 100 years to reach approximately 3 million in population, DES projections show population rising to approximately 4.5 million by 2020, and more than doubling to 7 million over the next 50 years. Development over the next 20 years will continue to shift from southeast Maricopa County to areas in the southwest, west, and northwest portions of the metropolitan area. Growth is also expected along existing and new transportation facilities. This includes Interstate highways (I-10 and I-17), as well as the expanded metropolitan freeway system (Loop 101, Loop 202, Loop 303, and U.S. 60).

Population growth is influenced by many variables. One of several limitations in the planning area is water availability. Assuming that groundwater will continue to be available through private wells and possibly a water improvement district, growth can reasonably be expected to continue. At full buildout, the Goldfield planning area



could have a population of approximately 3,500 to 7,000 people, depending on whether, and how, The Preserve DMP develops.

Projected Population and Land Use: Goldfield

Using historic building permit data and a visual survey of aerial photographs, existing population projections for the Goldfield planning area were established. Calculations for future projected population are complicated by uncertainty over the status of The Preserve DMP. To determine projected population and land use for the planning area, several assumptions were made:

- 5-year growth rate of 9.4 new homes per year (consistent with average planning area increase from 2000 to 2005)
- 2.48 persons per occupied household (per 2000 Census for larger block group area)
- One household equates to a single dwelling unit
- Average residential density per gross acre equals 0.2 dwelling units (typical for Rural-190 zoning)
- 8 acres per 1,000 population for commercial land use (typical)
- 8 acres per 1,000 population for industrial land uses (per Maricopa County Subdivision Regulations – Administrative Guidelines, 1990)

Residential Demand

The Goldfield planning area had a population of approximately 211 people in January 2005. Assuming a continuance of the recent growth rate, the planning area could increase to approximately 560 persons by the year 2020. However, if The Preserve DMP were to be built according to its approved plan, approximately 5,000 additional people could be expected to live in the area. At 0.2 dwelling units per acre, the remainder of the planning area not included in the DMP could add an additional approximately 800 dwelling units. Based on 2.48 persons per household, this equates to approximately 2,000 additional residents at full build out. If The Preserve is never developed, the land it covers could still be developed at 0.2 dwelling units per acre, resulting in an additional 500 homes and approximately 1,250 people.

Not including the densities approved for The Preserve DMP, there are approximately 5,700 acres of land zoned Rural-190. Based on this zoning, over 1,000 lots could theoretically be created at build-out, if land division continued indefinitely. If the areas zoned Rural-190 were allowed to be rezoned to Rural-43, an additional 4,500 lots could theoretically be created. For example, 100 acres zoned Rural-190 could theoretically yield 23 lots, whereas 100 acres zoned Rural-43 could yield 100 lots. These buildout calculations do not take into account an average of 20% of the land area for tracts and easements typically required when creating new lots. However, these buildout scenarios may not occur because of geographic, environmental, water supply, and other limitations.



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The planning area is unique in being surrounded by dedicated open space on three of its borders, and an Indian community on the other. Considering the geographic location, the unknown status of water availability, distance from existing services, and the desire of the community to maintain rural residential densities, there is limited potential for increased residential densities beyond what is already approved, and scattered rural residential development will likely continue at a moderate rate in the remainder of the planning area.

Commercial Demand

Surveys indicate that a majority of residents in the planning area oppose commercial development in this area. Also, typical land absorption calculations do not always apply in rural areas. However, in order to address the Growth Areas element, commercial demand will be calculated for hypothetical purposes. Estimated commercial land use demand is based on the high end of the projected resident population increase, which includes the assumption that The Preserve DMP is built according to its originally approved plan.

Based on a projected 7,000 planning area residents and the commercial land use ratio listed above, it is estimated that a minimum of 56 acres of commercial land would be needed to support the population. Historically, there has been very little demand for commercial uses in the Goldfield planning area. With existing commercial uses in the Fort McDowell Yavapai Nation and other locations in Fountain Hills, the majority of residents would prefer to shop outside of the planning area and exclude any commercial development in the area. Depending on future population growth, this could be feasible for the next 10 to 15 years. At present, no commercially zoned property exists in the planning area, although approximately 90 acres of The Preserve DMP is designated for multi-neighborhood and mixed-use commercial uses.

Industrial Demand

Public comments indicate that industrial-type uses are strongly opposed and would not be appropriate in the planning area. Rural areas do not necessarily have the same demand for urban industrial uses, nor the urban infrastructure and services to support such uses. Demand for industrial land is calculated using the same method as commercial land. Based on a resident population of 7,000, a minimum of 56 acres of industrial land would be required. At present, there is no industrial zoned property in the planning area, and none planned in the Preserve DMP. The closest industrial zoned land is in the Fort McDowell Yavapai Nation, approximately 5 miles from the planning area.

With the commercial and industrial land use needs it is important to note that these numbers should be used as a guide rather than definitive criteria. Various factors, such as economic conditions, demographic conditions, and land use patterns could alter population growth and demands in the planning area.



Growth Areas Issues and Considerations

Included in this section is an overview of growth-related issues identified during the public participation process. Also included is a review of some potential physical, built, and jurisdictional considerations that may affect future growth and development patterns.

Growth Area Issues

Stakeholders involved in the planning process were very helpful in identifying a variety of growth-related issues and concerns. A list of some of the more frequently identified local concerns is included below.

- Limit residential growth to densities allowed under the existing Rural 190 zoning
- Discourage commercial/business/industrial development, except home-based businesses such as limited equestrian facilities
- Protect the western, rural character of Goldfield Ranch
- Concerns about impacts of development on water availability
- Maintain open spaces and provide trails for local recreational activities

Growth Area Considerations

Besides public attitudes about growth, there are also potential natural, built, and ownership constraints to growth. While not necessarily a complete list, this section presents a brief overview of some of these possible constraints.

Physical Considerations

Topography

The planning area is generally a sloped desert valley surrounded by rugged terrain on the east and south, a series of small hills to the north, and the Verde River on the west (see **Figure 12**). Slopes generally range from zero to over fifteen percent. Due to the rugged topography and surrounding forest land and Indian community, the planning area can only be accessed from State Route 87 (Beeline Highway). There is no direct access from the north or south. Numerous unnamed washes, which can constrain development, run toward the Verde and Salt Rivers.

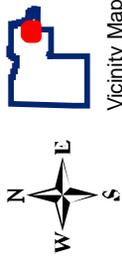
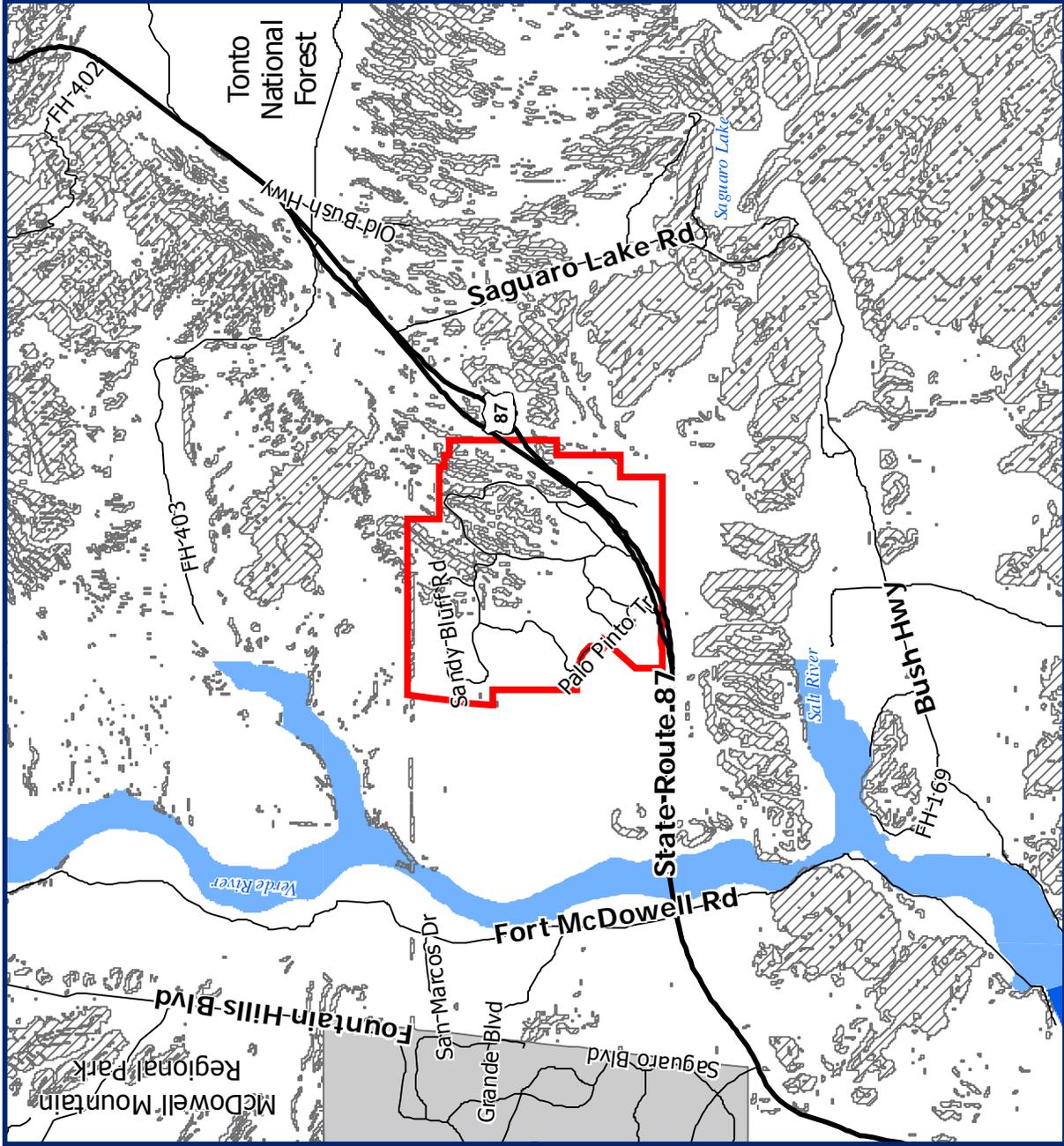
Floodplains and Topography

Figure 12

Legend

-  Highway
-  Arterial Roadway
-  Goldfield Area Plan
-  Fountain Hills
-  Slope > 15%
- ** Floodplains Approved by FEMA**
-  Floodway
-  100-year Floodplain
- * Subject to change
- ** Contact the Flood Control District of Maricopa County for the latest floodplain information

Note: Entire Goldfield area is unsurveyed.



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September 2007



MARICOPA COUNTY
PLANNING & DEVELOPMENT DEPARTMENT



Maricopa County encourages preservation of significant slope areas, especially those above 15%. For areas over 15% slope, the Maricopa County Zoning Ordinance provides guidelines for development to protect public health, safety, and welfare, and to minimize the impacts to the existing character of such areas. Much of the planning area has slopes exceeding 15%.

Floodplains

Floodplains are areas that are susceptible to flooding during significant rain events. The most common delineation is the Federal Emergency Management Agency (FEMA) 100-year floodplain. The 100-year flood is defined as the flood level having a 1% chance of occurring within a year. It is important to note that the 100-year flood may occur more often than once every 100 years, and that it is not the maximum flood that can occur along a waterway. Although there are no floodplains found within the planning area, the potential for flood hazards still exists. Rather, the lack of floodplains is due to the fact that no floodplain delineation studies have been conducted at this time.

Subsidence and Earth Fissures

In areas where extensive pumping has significantly lowered groundwater levels, subsidence and cracking of the land surface can occur. Groundwater depletion can make it economically infeasible to pump water in some cases. Land subsidence and earth fissuring have been documented in certain portions of Maricopa County and have caused water quality problems, flooding, damage to well casings and building foundations. No land subsidence or fissures have been documented in the Goldfield planning area.

Water Supply

Water in the planning area comes from groundwater sources. The planning area is located in the Fountain Hills Subbasin, where water quantities have not been established. Groundwater supply and depth varies widely throughout the planning area. Test wells must be drilled to establish the depth and quantity of groundwater. Currently, individual wells are the largest users of groundwater in the planning area. The major determinant of groundwater pumping will be both the physical and legal availability of water and whether a domestic water improvement district is eventually formed.

Colorado River water is not available in the planning area, nor will it be in the foreseeable future due to cost and distance from distribution facilities. Most of the planning area will not be annexed due to the surrounding forest land and Indian community. As such, it is likely that water will be provided by wells, or brought in via delivery trucks/tanks over the next 10 to 15 years. Although the Verde River is just over two miles away, legal rights would have to be established to divert any water



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from the Verde. A more in-depth discussion of water supply is found in the Water Resources element.

Vegetation and Wildlife Habitat

The Goldfield planning area currently contains abundant open space, which supports a large variety of animals and plants. Located in the Sonoran Desert, two general types of native plant communities are represented. The Palo Verde-Saguaro community, also known as “Upper Sonoran” vegetation, is found throughout the planning area and is the most scenic of the Sonoran Desert plant communities. The Mixed Riparian Scrub habitat is found along washes in the planning area. Citizens have expressed the strong desire to protect the native vegetation and wildlife found throughout the planning area by maintaining low-density residential development and through sensitive development practices.

A variety of federal and state laws that protect biological resources help govern development. This includes the Endangered Species Act, the Clean Water Act, the National Environmental Policy Act (NEPA), and the Arizona Native Plant law. A more complete discussion of vegetation and wildlife is found in the *Environmental Effects* element report of this area plan.

Built Considerations

Infrastructure and Services

One of the principles of *Eye to the Future 2020* is ensuring that growth occurs in an orderly and fiscally responsible manner. This includes ensuring that necessary infrastructure and services such as roads, utilities, schools, police, fire, and medical facilities are available to meet the needs of future residents. The availability of infrastructure and services can dictate the type and timing of future development, particularly with urban development. This generally refers to residential densities greater than one dwelling unit per acre. This subject is discussed in more detail in the Cost of Development element.

For most development within the Goldfield planning area, a full compliment of facilities and services has not been required and is usually not expected. However, with any increase in future residential development, the planning area will face situations where water service is required and other facilities expected, depending on the character and magnitude of development.

Noise Generating Operations

Careful consideration must also be given to noise generating operations. Significant and sustained noise can affect health, sleep, and learning patterns. Prolonged exposure to loud noise can cause general community annoyance and possibly a reduction in property values. The Goldfield planning area can generally be



characterized as a quiet, rural area. The primary sources of noise are vehicular traffic, occasional flyovers by aircraft, and ATV use. Several residents identified dirt bikes and ATVs as a source of irritating noise.

Flood Control

The location of existing and future flood control structures can impact the location and type of future development. While flood control structures minimize the impacts of floods on human safety, health, and welfare, they can also influence where specific development is appropriate. The Flood Control District of Maricopa County conducts comprehensive watershed studies throughout Maricopa County. Plans are then prepared based on hydraulic analyses, future land use development, and environmental considerations. The plans incorporate information provided by watershed studies and recommend specific, project-oriented solutions for flooding problems. Although there are no Flood Control District planning studies specific to the planning area, they may become necessary if growth occurs in the area.

In 2005, the Maricopa County Planning and Development Department assumed responsibility for drainage permitting, drainage inspection, development plan review, and enforcement. The Flood Control District reviews plans for residential, commercial, and industrial development for compliance with floodplain regulations, while the Planning and Development Department checks for compliance with design drainage guidelines and issues drainage clearances.

Ownership Considerations

Besides potential physical and built constraints, land ownership can also impact growth and development. All of the 5,600 acre Goldfield planning area is held in private ownership. This compares with approximately 29% private ownership in Maricopa County as a whole. The surrounding land, by contrast, is predominantly publicly owned. Land west of the planning area boundary is within the Fort McDowell Yavapai Nation, and land north, east, and south of the planning area is managed by the Federal government (Tonto National Forest).

Federal and Fort McDowell Yavapai Nation

The USFS manages the Tonto National Forest, located north, east, and south of the planning area. 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 within a state. In the past, the USFS has traded lands along the Tonto National Forest border, including land that is now within the Goldfield planning area, for tracts of private property within USFS boundaries. One of these land exchanges involved approximately 600 acres in the southwest corner of the planning area. The USFS traded this land to the FMYN, which now owns it. However, it is not located within the reservation boundaries, and thus is considered privately owned land that could be developed in the future.



Development Considerations: Conclusion

The potential constraints identified in this section will continue to affect the amount, type, and location of future development. Indeed, some of these constraints make development impossible, while others may only have a minimal effect. However, the combination of these potential constraints will continue to guide public and private decision makers in future land use decisions.

Growth Area Opportunities

Based primarily on the need for services and infrastructure, Maricopa County's area plans typically identify where urban growth and development should occur over the next several years. As outlined in the Maricopa County Comprehensive Plan, growth opportunities most typically occur in the General Plan Development Areas of municipalities.

General Plan Development Areas

The General Plan Development Area (GPDA) is unincorporated area that is likely to be annexed by a city or town in the future, and is therefore included in an adopted municipal general plan. These municipal general plans often provide specific recommendations for proposed land use. Future growth is encouraged within GPDAs for the reasons outlined in *Eye to the Future 2020 – Growth Areas Element*. The Goldfield planning area is not currently within a GPDA.

Growth Opportunities in the Goldfield Area Plan

County area plans include areas that are generally located outside of a municipal general plan. Most county area plans contain some locations where urban growth opportunities exist. These locations of higher intensity use (i.e. commercial, industrial, mixed use, and residential density greater than 1 dwelling unit per acre) are typically selected based on compatibility with municipal general plans, available services and infrastructure, and residents' input during the planning process. However, because the Goldfield planning area is outside of an urban service area, the only growth opportunity that has been identified in the area plan is within the approved *Preserve DMP*. Although a low-density project, the provision of urban-level services must still be addressed before this project can be developed. With the notable exception of The Preserve DMP, considering that the majority of residents and landowners express a strong desire to maintain the existing rural nature of the community, the planning area is anticipated to continue to experience mostly rural growth that is consistent with the underlying zoning for the current 10 to 15 year planning horizon.

Some requirements of the Growing Smarter law that relate to growth areas and may be implemented in this area plan are discussed below. In particular, the identification of areas that are potentially suitable for multi-modal transportation.



Areas identified as General Plan Development Areas and growth areas are suitable for certain multi-modal transportation systems.

Although the Goldfield planning area is more rural and isolated from urban growth than other parts of the Valley, development is occurring near the planning area. Future residential development will generate greater traffic volumes. While an urban bus system may not be suitable for the area, it would be prudent to plan for appropriate future options that could reduce vehicle trips within the area. For example, bicycling, walking, horseback riding and telecommuting could reduce vehicle trips. Improvements to road network, particularly along the shoulders would be an important element of the multi-modal system for this area. Safe and efficient biking and walking routes will be especially important in the future if a local school(s) is built within the area.

The Growth Areas element encourages rational land development patterns that include a balance of employment and housing to improve transportation efficiency and reduce automobile travel. For rural communities outside of urban service areas, planning for employment is not always feasible, or may be premature. Currently, planning area residents prefer to commute to jobs outside the area, have home-based businesses, or operate equestrian and other animal-related operations on their properties. As described in the Land Use element, special use permits can allow riding and boarding stables, kennels, or special training facilities.

The Growing Smarter Law promotes conservation of significant natural resources and open space within growth areas, and encourages coordinating their location to similar areas outside of growth areas. Natural resource and open space planning in developing areas can have long-lasting effects on a community's quality of life and can minimize environmental impacts of development. Examples may include integrating open space areas such as major desert wash corridors into a regional open space plan. Also, environmentally sensitive techniques for site selection, site preparation, and construction contribute to long-term ecosystem health, quality of life, and increased land values.

Development Master Plans

Eye to the Future 2020 recognizes Development Master Plans, also known as master planned communities, as a preferred type of development because of the opportunity to provide mixed land uses. Historically, DMPs have been allowed throughout Maricopa County. As such, Maricopa County will continue to evaluate DMPs on an individual basis to determine if they provide mixed use, multi-modal development opportunities, and that they either have or will provide the necessary infrastructure and services to support urban type development.

As previously mentioned, The Preserve Development Master Plan was approved in December 1995. Located in the western half of the planning area this mixed-use project has never materialized, but may eventually be developed according to the



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adopted plan. Proposed utilities include water and sewer services, including a proposed wastewater treatment plant, which will be done with private funds. Electricity will be provided by Salt River Project and telephone by cellular providers, or a communications provider such as Cox Communications who decides to provide the necessary infrastructure to extend land based cable and telephone lines in the future. Fire protection and emergency medical services will most likely be supplied by a recently proposed fire district which does not currently have a station, but does have plans to purchase equipment. The nearest Sheriff substation is located in Fountain Hills, with a response time of approximately 20 minutes. Most of the land use in the approved DMP (1,152 ac. of 2,204 ac. total) is planned to be Rural Residential with an overall average gross density of less than 1 dwelling unit per acre, and approximately 50 acres designated as mixed-use neighborhood retail to accommodate a community center and clubhouse for the proposed 190 acre golf course, as well as commercial uses along the highway.

Growth Area Opportunities: Conclusion

With the recognition of mixed-use development master plans as growth opportunities, Maricopa County reaffirms its commitment to orderly and fiscally responsible growth that is consistent with requirements of the Growing Smarter law. While planning for future growth, Maricopa County will continue its long-standing policy of cooperation with adjacent jurisdictions and local community groups. Opportunities for urban growth are not identified in the Goldfield Area Plan. However, any future rural subdivisions or DMP proposals will still be evaluated on an individual basis in concert with the potential constraints noted in this report. Also, because the areas best suited for growth will continue to change, Maricopa County will periodically review these growth areas and make changes to them as necessary. Although significant growth in the County is expected to continue for the foreseeable future, where and when growth occurs is determined by a variety of factors. Both physical and built features can impact growth, as can land ownership and existing infrastructure. Public opinions regarding growth and development will also continue to be important in determining growth patterns.



OPEN SPACE

The Open Space element complies with the requirements of the Growing Smarter Act by providing an inventory of open space areas; an analysis of future needs; policies and strategies for managing, protecting, and acquiring additional open space; and promoting a regional system of integrated open space and recreational resources. In the Goldfield area, there are unique opportunities to connect open space corridors and areas to protect sensitive lands while allowing for future community growth and development. This section addresses open space issues in and around the Goldfield planning area. For a countywide perspective on open space issues, refer to the *Eye to the Future 2020 – Open Space Element*.

Background Plans

It is important to consider a number of regional and local open space planning efforts that may be relevant to Goldfield open space and recreation planning.

Desert Spaces - An Open Space Plan for the Maricopa Association of Governments

The Maricopa Association of Government's Regional Council adopted the *Desert Spaces* plan on October 25, 1995. The plan provides a non-regulatory framework for decision making and coordinating local and regional efforts toward establishing a viable open space system. The Desert Spaces plan identifies and recommends conservation and management strategies for natural resources and open spaces critical to the quality of life in Maricopa County. The foundation of the plan is existing parks and preserves.

The Desert Spaces plan seeks to preserve, protect and enhance the mountains and foothills, rivers and washes, canals and cultural sites, upland desert vegetation, wildlife habitat, and existing parks and preserves. Mountain areas identified in the plan include the Utery, White Tank, New River, McDowell, Estrella, Heiroglyphic, Deem, Hedgepeth, and Union Hills mountains. The primary rivers and washes in the plan are the Salt, Gila, Verde, Agua Fria, and New Rivers, and parts of the Cave and Skunk Creeks and Hassayampa River. Also identified are trails, which primarily follow rivers, washes, and canals, and allow the public to enjoy a diversity of open spaces. Proposed trails are seen as linking and integrating existing parks and preserves throughout the region. The plan encourages infill development in urbanized areas to reduce the need to develop undisturbed open space.

Two basic management approaches, based on public comments, are identified in the Desert Spaces plan for protecting priority areas and resources – Conservation Areas and Retention Areas. Approximately two-thirds of Maricopa County lands, including almost the entire Goldfield Planning Area, are not categorized as being within either category.



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Conservation Areas are public and private lands with outstanding open space value. Lands in this category are recommended for protection from development and its effects through policy amendments, easements, restrictions, and/or acquisition. According to a map of "Management Approaches," the mountainous areas near the Goldfield planning area, including Adams Mesa to the north, Stewart Mountain to the east, and Mount McDowell (Red Mountain) to the southwest are identified as Conservation Areas. In addition, land further north and southeast of the planning area, including the Mazatzal and Superstition Mountains, as well as areas along the Verde and Salt Rivers are also identified as Conservation Areas.

Retention Areas are public and private lands with high open space value and are recommended for sensitive development regulation. The Desert Spaces plan identifies all the remaining land surrounding the Goldfield planning area as Retention Areas, including most of the Tonto National Forest and the Fort McDowell Yavapai Nation.

The plan also identifies several specific Sonoran desert areas that serve as major links between regionally significant open space resources and should be protected. For the region in and around the Goldfield area this includes lands that connect the McDowell Mountains and the Mazatzal Mountains. Maricopa County area plans recognize the recommendations provided by the *Desert Spaces* plan and will integrate them into open space policies where feasible.

Maricopa County Regional Trail System Plan

In 2004, the Maricopa County Board of Supervisors adopted the Maricopa County Regional Trail System. The trail system's goals are to connect the County Park System, link recreational corridors around the Valley, and help preserve open space. The project will capitalize on existing right-of-ways such as canals, parks, utility corridors, and flood control projects. The Maricopa County Trail Commission is developing community partnerships to make the program a reality. When implemented, a large non-motorized trail will loop around the County with branches into important open space and recreation areas. Although there are no identified trail segments in the Goldfield Planning Area, the McDowell Mountain Regional Park is identified for possible incorporation into the regional trail system.

Existing and planned trails identified for the system cross through many jurisdictions, communities, and properties, so partnerships and agreements are important to creating the regional trail. Maricopa County will serve as the facilitator to bring the different links together. Many types of non-motorized recreational opportunities are anticipated for the trail system, including biking, walking, jogging, and horseback riding.



Regional Off-Street System (ROSS) Plan

The ROSS Plan, initiated by MAG, identifies a region-wide system of off-street paths and trails for non-motorized transportation. Easements for canal banks, utility lines, and flood control channels intersect numerous arterial streets where local destinations are typically located. The goal of the ROSS Plan is to help make bicycling and walking viable options for daily travel using off-street opportunities. The plan encourages trail connectivity between jurisdictions. A potential corridors map shows a trail that follows the CAP canal approximately 5 miles southwest of the planning area. Although the primary project goal is to provide trails for bicycling and walking, the plan also considers a wide range of users, including equestrians.

Tonto National Forest Management Plan, United States Forest Service

The Tonto National Forest Plan, adopted in 1985, provides long-term direction for managing forest resources. The mission of the Tonto National Forest is to provide a continuing supply of quality water for downstream needs; provide a quality mix of year-round outdoor recreational activities; support archeological investigation and interpretation; promote quality wildlife and fish habitat; provide for grazing of livestock; provide for the utilization of timber, minerals, and other special land uses; expand public understanding of the environment; and coordinate activities with interested city, county, state, and other federal agencies as well as with individuals and groups.

The Forest Plan is currently in the process of being updated using an approach in place since 2005 that highlights the achievement of strategic, long-term management goals as opposed to specific management prescriptions. According to their website, the Tonto Forest's revised Forest Plan will have five main components: desired conditions; objectives; guidelines; suitability of areas; and special areas. The Forest Service's southwestern region plan revision strategy further identifies five general principles: revisions must be developed in a collaborative environment; strategic in nature; based on the need for change; adaptable; and scientifically credible. The update is expected to be complete by the end of 2009, and will undergo a comprehensive evaluation every three to five years after it is adopted.

Fort McDowell Yavapai Nation's Beeline Corridor Plan

The Fort McDowell Yavapai Nation is located immediately to the west of the planning area. In 2000, the Tribal Council approved an update to land use policies for the area along Beeline Highway within their jurisdiction. The recommendations in the plan included preservation and protection of existing open space on both sides of the highway. This area is approximately 200 to 300 feet wide and is primarily steep slopes. In addition, the plan designates the area east of the Verde River and north of the highway adjacent to the Goldfield Planning Area for open space preservation. As described in the plan, the open space area is intended to preserve the beauty of the area by protecting views of the mountains and desert vegetation



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and help distinguish the FMYN from other more urban settings and ensure a “sense of place” when entering the reservation. It is also intended to protect washes, flood plains and steep slopes that will help integrate the built environment into the existing natural features.

The Goldfield community could adapt some of Fort McDowell Yavapai Nation’s rural design guidelines into its own set of rural development guidelines to implement the open space policies identified in this plan. The potential for rural development guidelines is discussed in more depth in the Land Use element.

Salt River Pima-Maricopa Indian Community Economic Development Plan

Although not immediately adjacent to the planning area, the land uses planned by the Salt River Pima-Maricopa Indian community may still impact the Goldfield area. According to the economic development plan available on their website, 19,000 acres of their land is preserved as open space, including the area closest to the Goldfield planning area where the Verde and Salt Rivers meet. An additional 12,000 acres of their land is used to grow crops including cotton, melons, potatoes, onions, broccoli and carrots. The vision statement for their economic development plan states that the Community intends to balance the forces of economic development with the foundations of their long-established values, such as a sense of community pride, vision, and control of destiny. The vision statement goes on to state that physical identity, quality of facilities, character of services, and community activities are all intended to support this idea.

The Preserve Development Master Plan

The *Preserve* is a 2,200-acre Development Master Plan (DMP) located in the eastern half of the planning area that will guide the development of the site. Approved plans include 2,032 lots, 18 holes of golf, a clubhouse and recreation facility, and commercial uses. Several major desert washes traverse the site, draining to the southwest depending on their location within the site and eventually flow into the Verde River approximately two miles to the west, or the Salt River approximately one and a half miles to the south. These washes are identified to be maintained in their natural state wherever possible. Trails will be integrated into the open space for use by the public including pedestrians, bicyclists, and equestrians, and be coordinated so they can access existing trails within the Tonto National Forest along the northern and southern boundaries of the project.

A minimum of 762 acres of undisturbed, natural open space are approved, which include the golf course, open space wash corridors, and areas of steep slope. The clubhouse includes an amphitheater or community pool that will serve as the focal point for social interaction within the community. In addition, there is a proposed 100 foot setback along the northern and western sides of the project to act as a buffer between the development and the Indian reservation or National Forest land.



Open Space Issues

Research of Maricopa County open space documents, as well as input from local stakeholders, have identified the following regional and Goldfield open space issues:

- Regional connectivity and linkages are important for both recreation and wildlife.
- Recognition of the economic benefits of open space is important. Natural open space is a desirable adjacent land use which enhances property values and maintains the long-term investment in the Goldfield community.
- Recognition of environmental benefits of open space is important. Natural open space recharges the aquifer, improves water quality, controls soil erosion, improves air quality, moderates temperatures, and provides habitat for wildlife.
- Recognition of the quality of life benefits of natural open space is important. Natural open space provides areas of natural beauty, physical and visual access, educational opportunities, and sustains the passive and active recreational needs of the community.
- Environmentally sensitive areas including mountains and slopes; rivers and washes; historic, cultural, and archeological resources; view corridors; Sonoran Desert; and wildlife habitat and ecosystems need to be protected.
- Implementation of existing plans is important (i.e., *Desert Spaces* plan; Maricopa County Regional Trail System Plan; ROSS Plan).
- Preserving existing open space and planning for future open space is important.
- Planning for trails and paths along easements and roadways are important to many stakeholders.
- A coordinated trail system is needed to link the Goldfield community to the Tonto National Forest, and other areas for equestrian use, biking, and hiking.
- Plan for non-motorized trail access to public lands.
- Plan for non-horse activities such as quads, motorcycles, bicycles, and hiking trails.
- Keep large washes and flood prone areas open for equestrian trails and open space.
- Maintain the existing Rural-190 zoning because large lots provide a natural open setting and unique sense of place that is compatible with adjacent open spaces. However, both the Ft. McDowell Yavapai Nation and Grayhawk Development expressed a desire to allow residential densities of up to two residential units per acre. The Ft. McDowell Yavapai Nation also expressed a desire to identify retail commercial land uses on the approximately 600 acres in the planning area that are owned by the nation. However, neither property was ultimately included in the updated goldfield area plan.
- Consider scenic corridor status for State Route 87 (Beeline Highway)



Open Space Inventory

Dedicated Open Space

Dedicated open spaces are areas under public ownership, excluding State Trust and BLM lands, which have unique environmental and physical qualities. In Maricopa County, dedicated open space exists as regional parks, wilderness areas, wildlife areas, national monuments, and the Tonto National Forest. Proposed open space is discussed later in this section.

For this inventory, open space is separated into seven categories, which are derived from the National Recreation and Park Association (NRPA):

Neighborhood Park: A neighborhood park is defined as an area of 15 or more acres, which is suitable for intense recreational activities. No dedicated neighborhood parks are located in the Goldfield planning area.

Community Parks: A community park is defined as an area 25 acres or larger that has a diverse environmental quality and may include areas suitable for intense recreational activities. No dedicated community parks are located in the planning area.

Regional Parks and Recreation Areas: A regional park is defined as an area 1,000 acres or larger that is suitable for nature-oriented recreation. McDowell Mountain Regional Park, located approximately four miles northwest of the planning area, is the closest regional park to the Goldfield area. Preliminary purchases and leases of this 21,100-acre park began in the 1940s. One of the largest in the Maricopa County Parks System, McDowell Mountain Park rates as one the most scenic with majestic mountain views. The park offers over 40 miles of hiking, mountain biking, and horseback riding trails, and 14 miles of competitive track. There are two large picnic areas with restroom facilities and three large camping areas with restroom and shower facilities. The main entrance to the park is off McDowell Mountain Road, on the east side of the park.

The Usery Mountain Recreation Area, located approximately six miles south of the planning area, is another example of a regional park near Goldfield. This 3,648-acre park at the western end of the Goldfield Mountains offers over 29 miles of trails for hiking, biking, and horseback riding. The park also offers a campground, picnic area and other specialty facilities, including an archery range and model airplane runway. The park shares a border with the Tonto National Forest, and is also adjacent to the Usery Mountain Shooting Range, as well as the Equestrian Park in Pinal County. The Maricopa County Planning and Development Department will continue its long standing policy of coordinating and assisting the Maricopa County Parks and Recreation Department to determine when and where park expansion and/or acquisition would best serve county residents.



Special Use Parks: Special use parks may include plazas, civic malls, town squares, historical sites, small parks, botanical gardens, zoos, fairgrounds, outdoor museums, or outdoor amphitheatres. No special use parks are located in the Goldfield planning area.

Conservancy Areas: The NRPA defines conservancy area to mean the protection and management of natural or cultural environments with recreational use as a secondary objective. Conservancy areas within Maricopa County include municipal preserves and open spaces, federally administered wildlife areas, designated wilderness areas administered by the BLM and the USFS, and other lands managed for conservation purposes by the BLM or the USFS. The primary conservancy areas near the planning area are the Four Peaks Wilderness Area, located approximately eight miles to the east, and the Superstition Wilderness Area, located approximately eight and a half miles to the southeast as shown in **Figure 13**. The total area of these wilderness areas is over 220,000 acres.

Other Conservancy Areas: Forming the northern border of the planning area, the Tonto National Forest encompasses approximately three million acres, of which nearly 25% are within Maricopa County. Most of the forest, excluding designated wilderness areas, is managed for watershed protection and multiple uses including timber, range, water, wildlife and dispersed recreation. Recreation activities include hiking, backpacking, wildlife viewing, picnicking, mountain biking, hunting, jeep tours, motorized and non-motorized trails, some designated off-highway vehicle routes, horseback riding, and camping. In addition, water-related recreation is available at several reservoirs and portions of the Salt and Verde rivers. Designated Tonto National Forest lands bordering the Goldfield planning area are closed to shooting, other than for taking game in accordance with Arizona hunting laws.¹⁹

Linear Parks: A linear park (which can include trails) is defined as an area developed for one or more varying modes of recreational travel, such as hiking, biking, horseback riding, cross-country skiing, canoeing, and pleasure driving. The Maricopa County Parks and Recreation Department maintains over 150 miles of trails within the existing regional parks, including the 40 miles of trails in McDowell Mountain Regional Park.

Maricopa County approved a comprehensive trail system that connects regional parks and conservancy areas in a large loop around the county. In August 2004, Maricopa County adopted the Maricopa County Regional Trail System. The primary regional trail, named the Maricopa Trail, will be a non-motorized, multi-modal, shared-use trail system that will run along a portion of the western boundary of McDowell Mountain Regional Park then southwest through the City of Scottsdale's McDowell Mountain Preserve to make a connection to the CAP canal southwest of

¹⁹ Order 12-182, Special Restriction, Tonto National Forest, pursuant to 36 CFR §261.50(a).



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the planning area. From this point, the trail will run southeast to connect to Utery Mountain Regional Park as shown in **Figure 13**.

Other Regional Open Space: Several other open spaces in Maricopa County may be considered important, but are not necessarily dedicated or publicly accessible. These areas include golf courses; agriculture; and designated open space in master-planned developments, subdivisions, and other types of development. While most of the land in this category is not necessarily accessible to the public, it is nonetheless important for visual and aesthetic purposes.

Needs Assessment

Research shows that open space protection is one of the most important public policy issues for Maricopa County residents. A 1999 Arizona State University survey identified that open space is an important priority to 93 percent of the population. In addition, a survey by the Maricopa Association of Government's *Valley Vision 2025* plan identifies that open space preservation ranked third in importance for regional issues. Other research documents the importance of physical activity in helping to prevent heart disease, diabetes, obesity, asthma, and depression.²⁰ Planning for bicycle, equestrian, and pedestrian trails will help ensure that citizens have access to safe and welcoming activities.

Dedicated Open Space Analysis

Open space and trail needs will become more important as the Goldfield planning area grows and develops. The Goldfield planning area currently does not have any community parks or dedicated open space. The planning area is bordered by a number of mountains including the McDowell Mountain (foothills) to the southwest, the Mazatzal Mountains to the northeast, and the spectacular Four Peaks mountains to the east. Although these mountains are outside the planning area, foothills of the McDowells and Mazatzals are accessible to planning area residents. In addition, areas along the Verde River provide activities such as fishing, water activities, camping, picnicking, and wildlife observation. It should be noted that some areas in the Tonto National Forest occasionally experience recreational user conflicts with all-terrain vehicle (ATV) riders and equestrians.

Some communities find that schools and their recreational facilities are an important source of open space. If the future school-age population in the planning area becomes great enough to warrant a new school, there may be opportunities to plan for associated recreational areas. Some school districts are willing to share facilities such as baseball, softball, soccer fields, and gymnasiums with public groups for recreational purposes under liability agreements.

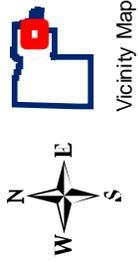
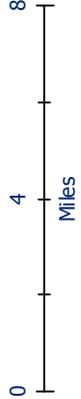
²⁰ Creating a Healthy Environment: The Impact of the Built Environment on Public Health. Centers for Disease Control and Prevention, November 2001.

Maricopa County Regional Trail

Figure 13

Legend

-  Maricopa Co. Regional Trail System
-  Arterial Roadway
-  Highway
-  Goldfield Area Plan
-  River
-  County Park
-  Wilderness Areas (BLM)
-  Private Land
-  Tonto National Forest
-  Fort McDowell Yavapai Nation
-  Salt River Pima -
-  Maricopa Indian Community
-  Incorporated

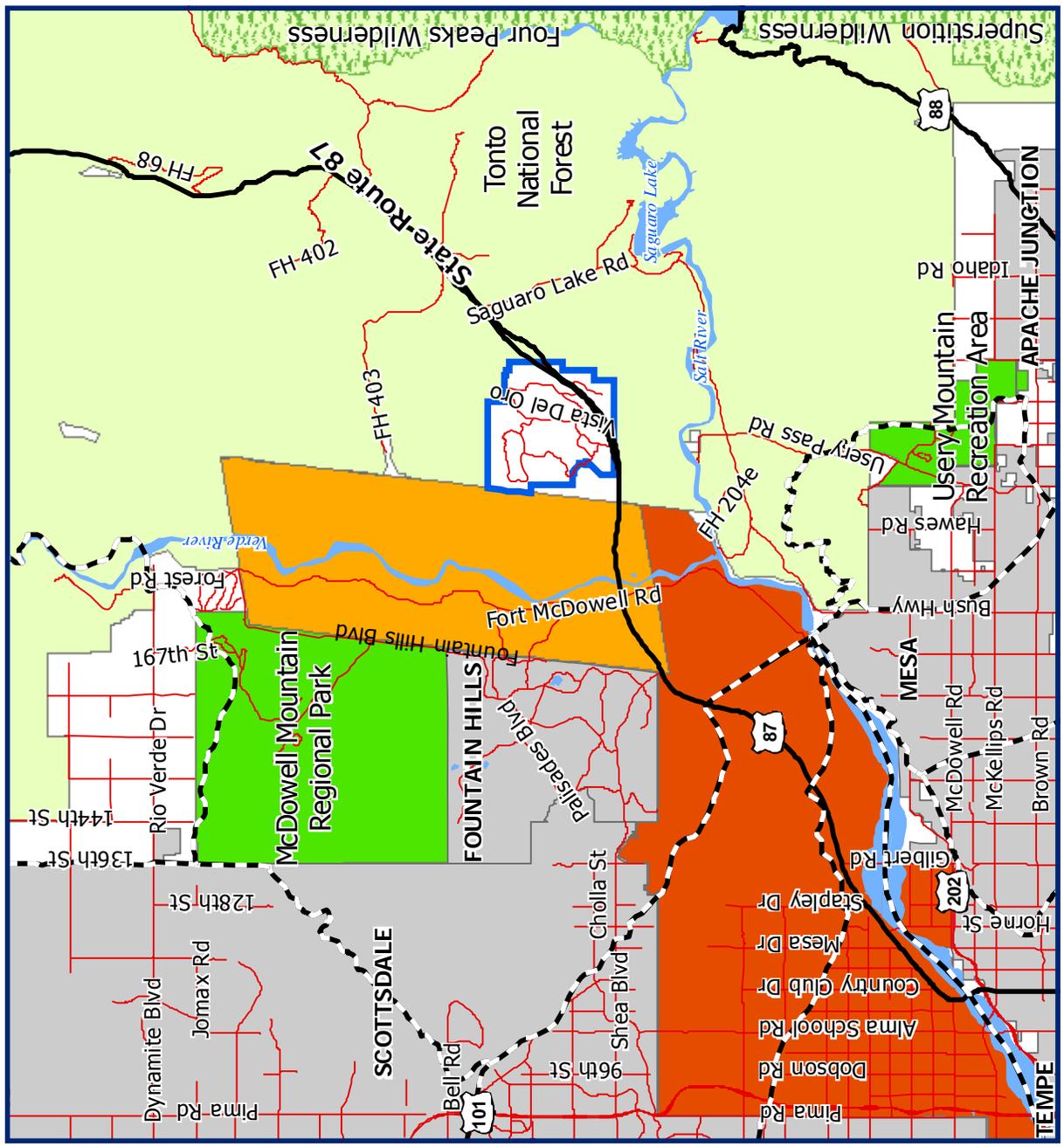


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September 2007



MARICOPA COUNTY
 PLANNING & DEVELOPMENT DEPARTMENT





Proposed Open Space

The Maricopa County Comprehensive Plan separates proposed open space into publicly-owned and privately-owned proposed open space. Proposed open spaces are areas that, if acquired for the public domain, are intended to be planned and managed to protect, maintain, and enhance their intrinsic value for recreational, aesthetic, and biological purposes. It is recommended that proposed open space be protected through policy, easements, restrictions, and/or acquisition.

In unincorporated Maricopa County, two-thirds of the privately owned land proposed as open space is either in the 100-year floodplain or located on slopes over 15 percent. Most of the remaining one-third is State Trust land. According to state law, all privately owned and State Trust land may be developed unless added to the public domain or protected using other techniques that respect property rights. As such, limited opportunities exist in the planning area for proposing open space in privately owned land. Prior to any designation of private land as open space, the county must receive the written consent of the landowner. This would typically only occur in subdivisions and master plans as public or private easements. Developments may also establish natural open space tracts that provide trail linkages and preserve natural drainage ways.

The Desert Spaces concept plan considers the Salt and Gila Rivers as the spine of the open space system and other regionally significant rivers and washes as arms that connect major open space destinations. Canals, off-road trails, and utility corridors connect components of the open space system and provide visual relief from urban development. Policies also include on-road bicycle paths to provide connections to Maricopa County Regional Parks and other major open space destinations.

Near the planning area, Adams Mesa to the north, Stewart Mountain to the east, and Mount McDowell (Red Mountain) to the southwest are identified by the Desert Spaces plan for protection because of their outstanding open space value. There are also several parcels of land owned by the Fort McDowell Yavapai Nation in the planning area that were the subject of a land exchange with the Tonto National Forest that are identified as lands that should be managed as retention areas in the Desert Spaces plan, where development is allowed, but only if it is sensitive to maintaining open space resources and values. Locally important washes are encouraged to be managed to enhance wildlife movement and to allow for appropriate recreational activities. Historic and archaeological sites are to be protected and are considered extremely valuable as educational opportunities as well as economically important to the tourist industry.

In addition to open space system opportunities, MAG's Regional Off-Street System Plan (ROSS) identifies flood control structures and rights-of-way, utility easements, freeway rights-of-way and railway corridors as potential routes. Near the planning area, a potential corridor is identified along the CAP canal approximately five miles



southwest of the planning area. Potential opportunities in the Goldfield planning area for regional connectivity include protection of washes and floodplains as potential trail corridors and to protect wildlife habitat connections. Existing drainage regulations will assist in preserving open space, preserving natural desert vegetation, and minimizing the impact of development.

Scenic corridor status along State Route 87 could help promote sensitive development guidelines, and help preserve the outstanding scenic quality and mountain views currently provided. As discussed in the Transportation element, State Route 87 (Beeline Highway) is included in a scenic corridor overlay that was established in the Maricopa County Transportation System Plan (TSP). Development of scenic corridor guidelines for State Route 87 would help implement the TSP. Maricopa County currently has seven scenic corridors with development guidelines that were put together by local residents and stakeholders. They include Carefree Highway, Wickenburg Highway, State Route 74, Interstate 17, Olive Avenue, McMicken Dam, and Castle Hot Springs Road. Scenic corridor design considerations may include landscaping, scenic quality, community character and identity, streetscapes, connectivity, structure height, lighting, signs, and perimeter walls.

One of the open space issues identified by Goldfield stakeholders involves planning for trails and paths along easements and roadways in the planning area. According to MCDOT policy, the public (including bicyclists and equestrians) has a right of passage on County road right-of-ways. The County will not assume liability for passage, and does not allow building or improving trails, other than normal "wear and tear." MCDOT acquires right-of-way only as required by its geometric design standards as described in the Major Streets and Routes Plan policy document. However, while MCDOT currently does not have any right-of-way within the planning area, they do have a procedure for including trail easements onto Maricopa County road rights-of-way if applicable. The first step is finding out if the right-of-way is wide enough for a trail easement. If the Transportation Department determines that a trail easement is technically possible, the next step is to find an agency to sponsor those trail easements.

The Maricopa County Parks and Recreation Department administers the county's regional trail system. A citizen group would need to make a request for sponsorship to the Trail Commission. If the Trail Commission approves of the trail system plan, they will recommend to the County Board of Supervisors that the trail system be adopted. If the Board of Supervisors agrees, The Parks and Recreation Department will assume responsibility, including liability, for the trail system. They will then develop an intergovernmental agreement with the Transportation Department. Once this is signed, the Planning and Development Department will be notified. Finally, The Planning Department would amend the Goldfield Area Plan to include the trail system. Trail plans would also be given to the Transportation Department to include in their road development plans.



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It would be up to the citizen organization to work with Parks and Recreation to develop details, including trail guidelines. The trail system would be designated for shared-use. The citizen group may be responsible for material and labor costs but Parks and Recreation would have final decision-making authority.

Land Ownership Considerations for Open Space

General land ownership is illustrated in **Figure 4 – Land Ownership and Management**. All of the land in the planning area is privately owned. Nearly all of the surrounding lands, however, are publicly owned, as described below.

Federal Land

The USFS manages all of its resources (wood, water, forage, wildlife, and recreation) for multiple use and sustained yield of goods and services to maximize long-term public benefits in an environmentally sound manner. The USFS has authority, when it is in the public interest, to exchange lands with non-federal parties within the boundaries of National Forests within a state. 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.

The Tonto National Forest, north and east of the planning area, is the fifth largest forest in the United States, occupying nearly three million acres of land. USFS land in Maricopa County is one of the most visited forests in the United States (approximately 5.8 million visitors annually). Historically, the Tonto National Forest has traded lands along its borders, including some of the land that is now in the Goldfield planning area, for tracts of private property within USFS land. Land ownership adjustments help to increase efficiency in resource management and satisfy needs of expanding communities. The USFS plans no major land exchanges in or near the planning area.

Tribal Land

The Fort McDowell Yavapai Nation is located along the entire western boundary of the planning area. The FMYN was created in 1903 and is approximately 40 square miles in size with the Verde River flowing through the reservation from north to south. FMYN also owns several parcels totaling approximately 600 acres outside of, but adjacent to, the planning area that were part of the National Forest, but were the subject of a land exchange in the 1990's. Although the land is outside the jurisdiction of the FMYN and, therefore, is not included in any of their existing plans, they do have a Beeline Corridor Plan that designates the area within their jurisdiction immediately west of the Goldfield planning area as open space.



The Salt River Pima-Maricopa Indian Community is approximately 84 square miles in size and is located approximately one half mile southwest of the planning area, including the confluence of the Verde and Salt Rivers. Although not immediately adjacent to the Goldfield planning area, the land uses planned by the Indian community may still impact the area. According to their website, 19,000 acres of their land, including the part closest to the Goldfield planning area, is preserved as open space. However, a commercial node located where State Route 87 enters the northern boundary of the reservation is identified on their economic development plan.

County Land

Maricopa County manages McDowell Mountain Regional Park, located approximately 4 miles northwest of the planning area. Maricopa County controls access to its parks and often requires user fees. Fees are used to fund operations and maintenance. Park access is controlled to protect and prevent overuse. The County Parks and Recreation Department does not plan to acquire any more land in this region of the county.

The Flood Control District provides flood and storm water management services for the benefit of the residents of Maricopa County. It is responsible for administration of the Maricopa County Floodplain Regulations and does so through the study and delineation of County floodplains and the regulation of development within floodplain boundaries. The Flood Control District has authority, provided by the state, to acquire property through eminent domain, purchase, donation, dedication, or exchange. However, this is done only for flood control projects such as constructing a basin or channel and not for open space purposes. The Flood Control District currently owns no land in the planning area.

Access to Open Space

The *Desert Spaces* plan identifies that for people in rural areas of the county access to natural open space is more important than accessing developed parks. In rural areas there is a general perception of “impermanence” of access to open lands as new development may close off access to privately held lands that were once accessible for open space. Desert Spaces-Environmentally Sensitive Development Areas -Policies and Design Guidelines (2000) recommends developing safe public access to passive recreational activities and trails linking open spaces, between existing park facilities and new development areas. The ROSS plan recommends providing sufficient, convenient access that is highly visible.

In the planning area, as new development occurs it will be critical to ensure access to Tonto National Forest land. To this end, it will be important to encourage communication between developers, public land managers, and the community to coordinate access to trails within the Goldfield area and to forest lands.



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There are approximately 900 miles of trails currently designated within Tonto National Forest. The Forest Service works with local communities to identify and designate future trails and access points. Currently, there are numerous uncontrolled access points into the forest. Future plans may continue access points that connect to existing forest service roads, but there may be fewer access points than currently exist. Routes are proposed for motorized and non-motorized trails within the National Forest. Eventually, these routes will be numbered, signed, and identified as to specific uses.



WATER RESOURCES

Water supply and quality are important considerations in planning for future growth. State law requires that Maricopa County address water resources by including an inventory of county water supplies in its comprehensive plan, and calculations of historic and projected water demand. This section describes the physical aspects of rivers, streams, groundwater basins and subbasins in and around the Goldfield planning area, as well as historic and projected water demand, future water supply and policy implications.

Water Supply Inventory

Surface Water

The planning area is drained by numerous washes that flow towards either the Verde River to the west or the Salt River to the south depending on their location within the planning area. Dry washes in the planning area flow only in response to rainfall events and may overtop during heavy rainfall events. Flooding is more likely to occur during the monsoon season lasting from July through September, but may also occur during the winter storms from December through February.

The Verde River, which flows year-round, originates in Chino Valley north of Prescott and enters Maricopa County north of Horseshoe Dam, west of the Mazatzal Mountains. The Verde River drains an area over 7,000 square miles and meanders a distance of about 140 miles from Sullivan Lake south to its confluence with the Salt River southeast of Fountain Hills. The Verde's flow is regulated by Horseshoe Dam and Bartlett Dam, northeast of the study area. These reservoirs, operated by the Salt River Project, provide flood control and water for agricultural, industrial, and municipal use in the Phoenix area. The average annual flow of the Verde River above the confluence with the Salt was 456,400 acre-feet from 1962-1990.²¹

Central Arizona Project

Since 1985, Colorado River water has been transported to the Phoenix area via the Central Arizona Project (CAP) canal. The CAP was constructed to help Arizona conserve groundwater supplies by importing surface water. The relatively high cost of CAP water and lack of infrastructure needed to convey this water to users who are far from the CAP aqueduct prevents widespread use. However, it is projected that full utilization of CAP water supplies in Arizona will be reached by the year 2040.

²¹ Corkhill, Edwin et al. A Regional Groundwater Flow Model of the Salt River Valley – Phase I, Phoenix Active Management Area. Arizona Department of Water Resources, Phoenix, 1993



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Currently, no water from the Central Arizona Project is being used in the planning area. However, several jurisdictions near the planning area do have CAP allocations. The City of Scottsdale has a current (as of September 3, 2004) annual CAP allocation of 51,129 acre-feet of water for municipal and industrial purposes.²² Scottsdale gets about 63 percent of its drinking water from the Colorado River through CAP aqueducts, 32 percent from city wells, and five percent from Salt River Project. Any future golf courses are required to provide their own renewable surface water supply in order to locate in Scottsdale. The City of Scottsdale charges every new development in Scottsdale a water resources acquisition fee, which is used to buy surface water supplies like CAP water. In 2003, Scottsdale recharged nearly 6,000 acre-feet of treated CAP water and reclaimed water at its Water Campus. Scottsdale's goal is to replace any groundwater pumped with groundwater recharge, as required by the Arizona Department of Water Resources.

Rio Verde Utilities, Inc. has an annual CAP allocation of 812 acre-feet for municipal and industrial purposes. The utility company obtains its CAP allocation through an exchange agreement with Salt River Project. Wells in the lower aquifer contain fluoride levels that exceed drinking water standards. High quality water from the upper aquifer near the Verde River is blended with water in the lower aquifer to bring fluoride levels down.

The Fort McDowell Indian Community (FMIC) has an annual CAP allocation of 18,233 acre-feet. Under a 1990 federal agreement, the FMIC is provided an annual entitlement of 35,950 acre-feet of water from the Verde River and CAP. The 18,233 acre-feet of CAP in the water budget may be leased for 100 years or less off-reservation within Pima, Pinal, and Maricopa counties. A lease of 4,300 acre-feet to Phoenix has already been signed. This settlement also creates a minimum stream flow on the Lower Verde River of 100 cubic feet per second (cfs).

Groundwater

The primary source of water in the planning area is groundwater. The withdrawal and use of groundwater is governed by the 1980 Arizona Groundwater Management Act. The entire study area is within the Phoenix Active Management Area (AMA). Within the AMA, The Arizona Department of Water Resources (ADWR) oversees the groundwater rights system; prohibits the development of new farmland; requires new subdivisions to have long-term, dependable supplies; and requires measuring and reporting of groundwater withdrawals. These provisions were put into place to help the Phoenix area achieve safe-yield by 2025. To achieve safe yield, the amount of groundwater pumped from AMA aquifers on an average annual basis must not exceed the amount that is naturally or artificially recharged.

²² An acre-foot of water contains approximately 326,000 gallons and is roughly the amount of water needed to serve a family of five for one year.



The planning area lies within the Fountain Hills Subbasin, one of seven groundwater subbasins in the Phoenix AMA. Located in the northeastern part of the Phoenix AMA, the subbasin covers approximately 360 square miles, all of which drains into the lower part of the Verde River. The subbasin includes the Goldfield study area, Fort McDowell Yavapai Nation, the Town of Fountain Hills, and the developments of Rio Verde and Tonto Verde. The amount of recoverable groundwater in the Fountain Hills Subbasin has not been quantified.

Depth to bedrock (solid rock) in the Fountain Hills Subbasin ranges from a few feet near the basin margins to over 1,200 feet near its center. The regional aquifer consists of two distinct hydrogeological units: an older basin-fill sequence and unconsolidated alluvium deposited by the Verde River. The unconsolidated alluvium that underlies the modern floodplain of the Verde River is approximately one mile wide and at least 90 feet thick.²³ The alluvium, which is the principal source of groundwater, is composed mostly of gravel and sand, with floodplains of sandy silt. Water in these aquifers occurs in small pores between the grains of sediment.

The composition of the older basin-fill is not well defined due to a lack of subsurface data. Data from 1977 indicated that wells drilled in this unit yield from a few tens to several hundred gallons of water per minute. At the time of the Arizona Water Resources Assessment report (1994) there were very few wells in the Fountain Hills Subbasin and groundwater conditions were not well defined. The general direction of the groundwater flow is from north to south, parallel to the axis of the subbasin. Available information suggests that the regional aquifer in the Fountain Hills Subbasin is not connected to adjacent subbasins. According to ADWR, the unconsolidated alluvium is hydraulically connected to the Verde River.

Until recently, groundwater pumping in the Fountain Hills Subbasin was relatively minimal. In 1922, the City of Phoenix began diverting groundwater from the Verde River alluvium for municipal water supply, and a few years later the City installed a number of wells. Currently, groundwater is pumped by Chaparral City Water Company (for Fountain Hills), Rio Verde and Tonto Verde master-planned communities, and an increasing number of domestic wells. Almost all of the groundwater pumping occurs in the southern region of the subbasin. Approximately 2,600 acre-feet of groundwater were pumped in 1990. Groundwater pumping from individual wells in the planning area is addressed later in this chapter.

Long-term water level records are not available for the subbasin; however, available information suggests that water levels have not been significantly affected by groundwater pumping. Depth to groundwater in 1982 ranged from 16 feet below land surface in the Verde River floodplain south of Bartlett Dam to 490 feet below land surface near the McDowell Mountains. In 1998, depth to groundwater ranged from 19 feet below land surface in the Verde River floodplain south of Bartlett Dam

²³ Arizona Water Resources Assessment. Arizona Department of Water Resources, Phoenix, 1994.



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to over 500 feet below land surface near the McDowell Mountains.²⁴ ADWR has a monitoring well near Jomax Road and 144th Street. Between 1983 and 1998, the well experienced a high average decline rate of 3.6 feet per year.

In the Fountain Hills Subbasin, sources of groundwater recharge (additions to the aquifer) include streambed recharge from the Verde and Salt Rivers and their tributaries, and mountain-front recharge. Sources of groundwater discharge (depleting the aquifer) include groundwater pumping, discharge to the Verde and Salt Rivers, and usage by phreatophytes (water-loving plants with roots that extend into the water table) distributed along the Verde and Salt Rivers.

Effluent (treated wastewater)

In the Phoenix Active Management Area (AMA), effluent is used for landscape irrigation (mainly golf courses), cooling purposes at power plants, irrigation of crops, and riparian areas downstream from the 91st Avenue wastewater treatment plant. Effluent production in rural areas is typically low to nonexistent due to the higher occurrence of septic systems. Effluent production in urbanized areas of Maricopa County is increasing. In 1990, effluent production and use in the Phoenix AMA was 202,700 acre-feet and 89,757 acre-feet respectively. In 1998, that increased to 257,000 acre-feet and 175,083 acre-feet respectively. By 2010, it is projected that 374,000 acre-feet of effluent will be generated annually. Looking at percent utilization, effluent use in the Phoenix AMA has increased from approximately 20% in 1985 to approximately 60% in 1998.²⁵

Water Supply Analysis

This section provides an analysis of historical and future groundwater use in the planning area. Recoverable groundwater amounts for the Fountain Hills Subbasin have not been quantified. Updates to this area plan will provide new information that may be available from groundwater studies.

Historical Water Demand

Historical water use is estimated more accurately than groundwater supplies because of well records and pumping data recorded by the Arizona Department of Water Resources (ADWR). ADWR divides wells into two reporting categories: *exempt* and *non-exempt*. *Exempt wells* are those with a pump capacity of 35 gallons per minute or less and are exempt from ADWR reporting requirements. These smaller wells are generally for home use or stock watering purposes. *Non-exempt wells* are those with a pump capacity of greater than 35 gallons per minute and are

²⁴ Third Management Plan for Phoenix Active Management Area (2000-2010). Arizona Department of Water Resources, 1999.

²⁵ Renewable Supplies Issues #1: Availability, Reliability & Utilization of Renewable Supplies. Governor's Water Management Commission-Technical Advisory Committee, Phoenix, Arizona, November 2000.



required to report annual pumpage if within an active management area. Most non-exempt wells are used for agricultural irrigation or belong to a city, town, or private water company.

By 2006, approximately 120 exempt wells were approved within the planning area. Because they are exempt from ADWR reporting requirements, it is assumed that each well pumped one acre-foot of water per year.

Projected Water Demand

Water demand projections in the planning area were determined using an estimate of new homes projected to be built in the planning area. In the Goldfield planning area, an average of 10 homes per year were built between 2000 and 2006. Assuming this rate continues, an estimated 140 new homes could be built resulting in a total of approximately 236 homes by the year 2020 including the 96 existing homes already built. However, if the *Preserve* DMP were to be developed according to its approved plan, there could be an additional 2,032 homes built in the planning area for a total of approximately 2,268 homes by the year 2020. Therefore, 1,250 homes is a reasonable assumption for purposes of calculating projected water demand. Assuming the Census 2000 figure of 2.67 persons per household for Maricopa County is also accurate for the planning area over the next 15 years, this equates to a population estimate of approximately 6,055 people, although the actual number of people living in the planning area may vary due to the methods and assumptions used to make these calculations, and changes to any existing or future development.

Because the average per capita use rate of 223 gpd typically used for small providers seems too high to use as an assumption for the planning area, a more accurate residential gallons per capita per day rate is the ADWR conservation requirements set for other water providers in similar areas. For example, Desert Hills Water Company's rate was set at 101 residential gallons per capita per day between 2005-2009. This is similar to the residential use rate of Cave Creek Water Company, which is required by ADWR to maintain a residential gallons per capita per day rate of no more than 109 between 2005-2009. These water companies' service areas in Cave Creek and Desert Hills are rural residential, similar to the planning area. Therefore, for this projection, an average per capita use rate of 105 gallons per day (gpd) is used as an assumption for the planning area. Assuming a similar average use rate, one can estimate the quantity of water that could be needed for residential use in the planning area by 2020:

$$105 \text{ gal. per person per day} \times 365 \text{ days} = 38,325 \text{ gal. per person per year}$$

$$38,325 \text{ gal. per person per year} / 325,851 \text{ gal. per acre-foot} = 0.118 \text{ acre-foot/person/year}$$



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0.118 acre-foot/person/year x 6,055 persons = 712 acre-feet per year
(needed by 2020)

This estimate does not include other water use for dust control, pasture watering, or stock watering. Many factors can influence residential water demand, including landscaping (native vs. non-native), swimming pools, and low-flow plumbing fixtures.

Water Related Issues

Land Subsidence and Earth Fissures

In areas where extensive pumping has significantly lowered groundwater levels, subsidence and cracking of the land surface can occur. Groundwater depletion can make it economically infeasible to pump water in some cases. Land subsidence and earth fissuring are documented in the Phoenix AMA and cause water quality problems, flooding, and damage to well casings and building foundations. No significant land subsidence has been documented in the Goldfield planning area.

Projected Water Level Trends

Substantial water level decreases have been documented in the Carefree and North Scottsdale area, northwest of the planning area. The Carefree Subbasin has experienced water level declines exceeding 10 to 12 feet per year due to growth and development. Projected decline rates of up to eight feet per year have been projected for the extreme north Scottsdale area. Drought conditions can contribute to lowered aquifer levels. Maricopa County is currently in its tenth year of drought, and if drought conditions persist local aquifers could experience lower water table depths. Seasonal changes in pumping rates also cause local fluctuations in groundwater levels.

While Arizona's Groundwater Management Act and the Assured Water Supply (AWS) rules provide one of the strongest groundwater regulatory programs in the nation, they do not have the regulatory authority to prevent legal groundwater pumping. For example, new exempt wells can continue to be drilled for residential uses and do not require well impact analyses. All new subdivisions in the Phoenix AMA must demonstrate the use of renewable supplies or join the Central Arizona Replenishment District if they plan to use groundwater. Although groundwater will be recharged into AMA aquifers, it may not replenish the local aquifer from which it was withdrawn. Also, the AWS rules allow groundwater levels to decline to 1,000 feet below land surface over 100 years; a level that could mean irreversible damage to the aquifer. These issues are addressed in ADWR's Third Management Plan and have been identified as issues that the Department will examine.

Population growth is a significant factor in projecting future demands on an aquifer. The Goldfield Area Plan recommends maintaining the current low density of one or



less homes per acre. Even under the existing Rural-190 zoning, each landowner could potentially divide their land into 4.37-acre parcels, resulting in over 1,400 homes that could be built in the planning area (not including the approved *Preserve* development master plan). Until more is known about the availability of water in this area, landowners and developers should be aware of the impact that new development may have on water supplies. Many planning area residents feel that the area should not have any new golf courses, and it appears that water supplies are not sufficient to develop golf courses in the planning area.

It should also be noted that the Verde River, whose subflow constitutes much of the available water within the planning area, is impacted by well drilling that is occurring far outside the planning area. For example, there are eight new large wells proposed in the Chino Valley located in Yavapai County that will pump 2.8 billion gallons of water a year starting in 2009 to serve the growing cities of Prescott and Prescott Valley. Some hydrologists and conservation groups believe this will dry up the first 24 miles of the river by the end of the century. Although some consultants have concluded that the wells would draw on a part of the aquifer physically separated from the Verde's headwaters, and that the Chino area aquifers only supply about five percent of the base flow of the river in its southern half, others have found that as much as 86% of the upper Verde River's flows originate from the aquifer, and that it will dramatically effect the river downstream. This debate underscores the complexity of not only river hydrology in Arizona, but also the volatile issue of water rights in a desert region. Regardless of the outcome of this project, groundwater pumping from unregulated subdivisions, including as many as 7,000 unmonitored wells along the Verde River by SRP's count, are already taking unknown quantities of water from the river, threatening to reduce its flow as has already occurred in other rivers in the state like the Santa Cruz and San Pedro rivers in southern Arizona.²⁶

Water Availability

Area residents have built homes, successfully drilled wells, or are satisfied hauling water. A potential source of water that could be used to serve this area includes drilling deep wells that would produce enough water to serve a neighborhood. However, the Verde River's subflow is considered surface water. According to a November 23, 2005 letter from SRP's Water Rights and Contracts division, Verde River surface water, including the subflow, is fully appropriated. Since the Goldfield Area has no surface water rights, any use of Verde River water must consider the effects of pumping surface water on neighboring water users and water right holders, such as the Fort McDowell Yavapai Nation and SRP. Historically, the use of the subflow of the Verde River in this region has been accomplished through a water exchange with SRP. In the future, use of Verde River subflow to supply the Goldfield

²⁶ McKinnon, Shaun. "Water wells draining rivers at their source." The Arizona Republic (on-line edition), Aug. 7, 2006.



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Area will require not only a water exchange, but coordination with other users of the Verde River subflow such as the Fort McDowell Yavapai Nation. Should a dependable source of water be developed, this could provide increased incentives for land division, home construction, and subdivision applications, and possibly increase development activity.

Water Quality

Groundwater quality data indicates that most of the groundwater in the Fountain Hills Subbasin is suitable for most uses, including domestic use. Deeper aquifer wells in other areas of the county have higher than recommended fluoride levels. These levels are lowered to meet drinking water standards by mixing with high quality water. Water quality tests for the Water Utility of Northern Scottsdale (no affiliation with the City of Scottsdale) well #2 located northwest of the planning area indicate a fluoride concentration of 1.4 mg/l, below the recommended standard of 2.0 mg/l. Tests indicate less than 2 parts per billion (ppb) arsenic, well below the new standard of 10 ppb arsenic. A nitrate concentration of 1.6 mg/l was found in the tested well, below the standard of 10 mg/l.

In Maricopa County, agriculture, industry, construction, wastewater treatment plants, motorized recreation, landfills, and resource extraction are the primary contributors to surface water pollution. In the planning area, possible sources of pollutants include livestock operations, construction sites, fertilizers, and septic systems. If deep percolation water reaches the groundwater, the upper part of the aquifer can be contaminated.

Best management practices, such as waste disposal plans for livestock operations, can reduce the quantity of pollutants entering drainage ways. Maricopa County Environmental Services Department now requires the use of leach trenches for residential septic systems in some areas due to unique soil properties to prevent aquifer contamination. Prior to 2001, seepage pits with depths of 30 feet or more were allowed; however, new state Aquifer Protection Program rules require that disposal systems be designed to prevent any movement of pollutants into the aquifer. The new shallow systems (no deeper than 60") result in a higher quality of water that goes back into the ground. Any future commercial projects in the planning area would be directed to have a public wastewater system as septic systems are strongly discouraged for commercial uses.

Proposed drinking water standards for arsenic, radon, and uranium have major implications for groundwater supplies. In the central Arizona basins, proposed standards for radon and uranium are more likely to be exceeded than for arsenic. Many public water systems are required to treat drinking water to decrease concentrations of these substances. A more in-depth discussion of water quality in the Goldfield planning area may be found in the Environmental Effects element of this plan.



Riparian Habitats

Riparian habitat is located along the Verde River, and preserving healthy riparian habitat near the Verde is critical to maintaining the high water quality present in the river. Although some of the desert wash habitats within the planning area are considered semi-riparian, trees and shrubs in these desert wash habitats are generally taller and denser than those of surrounding desert habitats, and support more bird species than other habitats with the exception of riparian. Dense vegetation also provides food and cover for other wildlife. Riparian areas can be negatively affected by diversion of the natural water channel or excessive drawdown of an aquifer. Desert wash habitats should be protected for their habitat value, flood mitigating functions, and recharge potential.

Use of Renewable Supplies

Groundwater is the primary source of water used in the planning area. In most cases, groundwater is less expensive and easier to obtain than renewable supplies such as surface water or effluent. No surface water or treated effluent is currently being used in the planning area.

Assured Water Supply

To ensure protection of future water supplies, the 1980 Groundwater Code included Assured Water Supply (AWS) provisions. The 1980 Code prohibits the sale or lease of subdivided land in an Active Management Area without demonstrating that there is sufficient water of adequate quality for at least 100 years. A subdivision is defined in state law as land divided into six or more parcels with at least one parcel having an area less than 36 acres. This includes subdivisions for residential, commercial, or industrial uses. The AWS program helps minimize groundwater use where feasible. Maricopa County does not approve final subdivision plats until an AWS certificate is provided by the applicant.

The AWS provisions were strengthened with the adoption of the Assured Water Supply Rules in February 1995. Applicants must now demonstrate the use of renewable supplies to meet most of the demand of the development for 100 years. Renewable supplies include surface water, Central Arizona Project water, and effluent. The 1995 rules also raised the physical availability depth-to-water standard from 1,200 to 1,000 feet below land surface. The Arizona Department of Water Resources administers the Assured Water Supply program.

There are several ways in which a subdivision or water provider can meet the "consistency with the management goal" requirement, including using renewable supplies and/or extinguishing groundwater rights. The intent is to maximize the use of renewable supplies. However, it is possible for subdivisions or water providers to pump groundwater to serve a development if the subdivision or water provider enrolls in the Central Arizona Groundwater Replenishment District (CAGRD). The



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CAGRDR will then recharge CAP water into AMA aquifers to replace "excess" groundwater used by its members. However, replenishment does not necessarily take place within the same subbasin from which groundwater was withdrawn. Subdivisions and water providers pay an annual assessment to the CAGRDR based on the amount of groundwater used. No recharge sites are located in the Goldfield area.

Effluent Use

Effluent production in the metropolitan Phoenix area is increasing with population. The 91st Avenue wastewater treatment plant accounts for most of the effluent production within the Phoenix area. Although remote, effluent is being used on golf courses a few miles west of the planning area, including the Vista Verde DMP golf courses northwest of the planning area.

Supplying Future Population

On a regional scale, effluent treatment will continue to be enhanced, making it an increasingly valuable source of water. In June 2001, the Arizona Department of Environmental Quality adopted new standards that allow private residential reuse of gray water if certain standards are met.

Groundwater will likely be the primary source of water used in the Goldfield area. Central Arizona Project water, while not currently used in the planning area, could potentially be obtained with subsequent water rights agreements. Future water resource planning in the Goldfield area will need to be coordinated with regional planning efforts to consider water quantity, quality, conservation methods, and flood control issues.



COST OF DEVELOPMENT

This section provides an overview of fiscal considerations relating to future growth in the Goldfield planning area. The Cost of Development element is one of several new elements added to the Maricopa County Comprehensive Plan to comply with the Growing Smarter and Growing Smarter Plus laws. Policies and strategies are identified that Maricopa County will use to require development to pay its fair share toward the cost of additional public facility needs generated by new development. In addition, existing techniques are identified that can be used to fund additional public services associated with new development, and policies to ensure that any funding mechanism(s) bear a reasonable relationship to the financial burden imposed on the County.

Cost of Development goals and policies will be integrated with other plan elements, particularly the Growth Areas element. The Cost of Development element as presented in this plan will provide the preliminary basis for more detailed future studies of funding techniques and public costs.

Existing and Future Conditions: Demographics

The Goldfield planning area's population grew significantly from 1995 to 2005. This growth can be attributed primarily to the low number of residents present in the planning area in 1995. However, the growth rate in the planning area is expected to continue to be high over the next ten to fifteen years. For comparison, the Town of Fountain Hills population increased approximately 100% during the same time. Further, Maricopa County's growth rate from 1990 to 2000 was 45%, and was the fastest growing county in the United States, adding over 950,000 people. Maricopa County's current population exceeds 3.5 million. Significant population growth is expected to continue, and the Arizona Department of Economic Security conservatively projects the County population will top 4.5 million by the year 2020, and 6.2 million by 2040.

Besides population growth, demographic characteristics is also an important consideration because it can affect public revenues from sales taxes, residential property taxes, vehicle taxes, and user fees, as well as public expenditures for services like health care, education, social services, and infrastructure. Based on Census 2000 data for Zip Code Tabulation Area 85264, the Goldfield planning area population is 50.6% male and 49.4% female. The median age of Goldfield residents, 24.3 years, is significantly lower than Maricopa County's median age of 33. By 2040, the percentage of Maricopa County residents under age 50 is expected to decrease approximately 10%, while the percentage of population over the age of 50 is expected to increase by approximately 10%.

Over the next several decades Maricopa County's population is expected to not only become older, it will become more diverse. This is likely to be reflected to a lesser



degree in the Goldfield planning area as well. Based on Census 2000 data for Zip Code Tabulation Area 85264, in addition to the 9.6% who identified themselves as “Hispanic or Latino (of any race),” approximately 81% identified themselves as “American Indian and Alaska Native,” approximately 14% as “White,” less than 1% as “Black or African-American,” less than 1% as “Asian,” and none as “Hawaiian or Other Pacific Islander.” In addition, 4% identified themselves as “Some other race” or as “Two or more races.” These figures reflect the fact that the 85264 Zip Code is comprised almost entirely by the Fort McDowell Yavapai Nation.

Existing and Future Conditions: Economics

Some highlights from the *Eye to the Future 2020* Cost of Development element are included in the following discussions, some which may pertain to the Goldfield planning area. Information on employment, construction, and real estate is found in the Economic Development section of this area plan.

Issues and Considerations

- As growth occurs in Maricopa County—primarily at the urban fringe—the cost to service development in rural areas such as Goldfield generally increases.
- Maricopa County’s diversifying and aging population might affect County revenues and expenditures with respect to providing County services in unincorporated rural areas. New programs may be needed to serve the diversifying and aging population.
- Certain development costs are higher in rural areas like Goldfield than in urban areas. For example, road maintenance, schools, busing, and emergency services are generally more expensive to develop and maintain in rural areas. Costs associated with growth are higher for development that is far from existing services and infrastructure.

Available Funding Techniques

It is important to identify all financial mechanisms available to local governments (including Maricopa County) to help fund the additional public service and infrastructure costs of new development. A list of some of these techniques is provided in this section. A more in-depth discussion of these funding techniques is included in the Maricopa County comprehensive plan

- Property tax
- Specialty/industry tax
- User fees
- Bonds
- Lease purchase finance
- Lease purchase finance
- Dedication
- Development agreement
- Development fee/exaction
- Special districts



Improvement District

Improvement Districts are available to residents of unincorporated Maricopa County to provide roadway maintenance or other improvements. To form an improvement district, residents must first submit a request for a petition to the MCDOT Office of the Superintendent of Streets outlining the improvements desired (e.g., street paving, water or sewer lines, street lights, etc.). A petition, which includes the district boundary and a cost estimate, would then be returned for signatures of either a majority of persons owning real property within the district or the owners of 51% or more of the real property within the district. Proceedings and hearings as required by state law are conducted with the Maricopa County Board of Supervisors serving as the district Board of Directors. All costs associated with Improvement Districts are paid for by those property owners through property assessments. The process of organizing an improvement district is available from the Maricopa County Department of Transportation.

Current Cost Sharing Efforts

Although Maricopa County does not have an impact fee ordinance, there are ways in which new development is required to pay for and provide facilities and services associated with growth. A brief discussion of these efforts follows.

Urban Service Area

The Urban Service Area exists as part of the Maricopa County Comprehensive Plan, and helps guide decision making to coordinate future development with urbanizing areas. It is based on the necessity for services and infrastructure to establish and maintain a high quality of life. The Urban Service Area doesn't exist as a designation on a map. Rather, it is based on the ability of new urban development to provide infrastructure and appropriate urban services to future residents at a particular location. The type of new development referred to here includes higher intensity uses such as residential densities greater than 1 dwelling unit per acre, commercial, industrial, and mixed use development. The Goldfield planning area is not expected to see these higher intensity uses for the current planning horizon of 10-15 years, except for the portion that is located within The Preserve DMP. However, if at some point such uses are proposed, or as part of any amendment to the existing DMP, the applicant must demonstrate (at a minimum) that the following infrastructure and services exist or will be provided by the development:

- All necessary roads
- All necessary flood control structures
- Adequate utilities, including water, sewer, electric, and natural gas
- Adequate capacity and appropriate proximity to elementary, middle, and high schools
- Appropriate emergency service (police and fire) facilities and response times
- Adequate library facilities within appropriate proximity



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- Adequate supply and proximity to parks
- Appropriate proximity to or supply of commercial and large-scale employment centers
- Appropriate proximity to hospital and emergency medical facilities
- Adequacy and proximity to multi-modal transportation facilities

Development Agreements

Development agreements are contractual arrangements between local governments and property owners regarding service and infrastructure funding. Maricopa County frequently uses development agreements, especially with respect to master planned communities, to ensure adequate infrastructure is available for future residents.

Stipulations

Stipulations are conditions or restrictions placed upon the approval of entitlements granted to landowners. Stipulations cover a wide range of issues, including requirements for services, infrastructure, and facilities. Stipulations frequently set conditions in order to begin or continue construction.

Voluntary Contributions

Developer donations and contributions are another way in which new development helps pay for infrastructure and service costs. Voluntary contributions are used for various services, including monetary donations for regional parks and libraries, as well as property and monetary donations for schools and emergency service facilities. Contributions are beneficial because they are usually amenable to both the public and private stakeholders.



ISSUE IDENTIFICATION

Issue History

This section summarizes current planning issues identified by Goldfield residents, land owners, and other stakeholders during the planning process.

Issue Identification Workshops and Survey Results

On September 22, 2005, Maricopa County Planning and Development Department hosted the first public workshop for the Goldfield Area Plan update. Approximately 70 people attended this workshop at Fountain Hills Middle School, which introduced the area plan update project and identified citizen issues. Based on this meeting and other methods of public participation, over 40 issues and comments were identified for land use and growth areas; transportation; environment; economic development; open space and water resources.

On March 7, 2007 the Maricopa County Planning and Development Department hosted a second public meeting to discuss the draft plan, including plan goals, policies, and land uses, and to receive additional input regarding whether the draft plan is consistent with the needs and desires of planning area residents. Approximately 65 people attended this meeting to provide additional input and recommendations.

Issue Analysis

Land Use

Regarding land use and growth areas, there is a strong desire among those that participated in the planning process to maintain the existing low-density residential character by maintaining the existing Rural-190 zoning. The majority of participants also do not want commercial, retail, or industrial business uses in the area. A smaller number of survey respondents would consider allowing some small home-based or equestrian-related businesses. In addition, most residents feel that subdivision development should be limited. Many residents want to maintain the rural, equestrian-oriented nature of the area, including open spaces and trails for local recreational activities like horseback riding, bicycling, hiking, and responsible all-terrain vehicle use, but would like to see golf courses discouraged.

While there is a desire among those that participated in the plan update process to maintain the existing low-density residential consistent with the Rural-190 zoning, this opinion is not unanimous. Specifically, both the Ft. McDowell Yavapai Nation (owners of approximately 600 acres within the planning area) and Grayhawk Development (owners of approximately 80 acres within the planning area) believe that residential densities of up to two units per acre are appropriate for the property they own. Further, the Ft. McDowell Yavapai Nation also believes that up to 50 acres



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of commercial development on land they own along the beeline highway is appropriate to meet area needs. However, neither property was ultimately included in the updated goldfield area plan.

Transportation

The principal transportation issue is whether or not to pave dirt roads. Slightly more survey responses favor paving the main access roads in the area versus keeping the existing graded dirt roads but with dust control measures in place. Many residents also feel that the roads should incorporate trails for equestrian, bicycling, and pedestrian uses. Many respondents also feel that the access points from State Route 87 (Beeline Highway) need to be made safer, including improvements to the intersections and grooming vegetation for visibility. Some residents believe traffic speeds on main roads need to be lowered, and that construction traffic should not be allowed on Vista del Oro Drive. Some think that ATV's need to be restricted for noise, dust, and safety reasons, and separated from equestrian riding areas. Many stakeholders support pursuing a scenic corridor for State Route 87 (Beeline Highway).

Environment

The key environmental issue identified by survey respondents is the restriction of future growth so the natural environment can flourish with minimal land disturbances. In particular, there are concerns about higher density development on hillside areas, and that the *Preserve* DMP should compliment existing development in the area. Maintaining views, minimizing lighting to preserve night skies, and improving air quality are also cited as important issues. Water quality protection is noted as an important issue, as is better regulations for disposal of horse-related waste. Finally, traffic noise is also listed as an issue to be addressed.

Economic Development

Most residents feel that economic development and associated commercial or office development is not appropriate or necessary, with the exception of rural and equestrian-oriented facilities through special use permits.

Open Space

Preserving existing open space by maintaining the current Rural-190 zoning and planning for future open space and trails are important issues to stakeholders. Residents also want to maintain access to surrounding public lands, especially the Tonto National Forest. Several stakeholders want a coordinated trail system that links open space for equestrian use, biking, and hiking. Some also want to see more planning for non-horse activities such as bicycles, ATVs, and motorcycles in addition to equestrian activities.



Water Resources

The majority of survey respondents believe that groundwater extraction should be minimized. Residents are concerned about the impact of large developments on the community’s water supply, and recommend strict evaluation of water usage before allowing higher density development to occur. Some respondents also believe high water use vegetation and swimming pools should be banned from the area.

Miscellaneous

Other comments include improving cellular/telephone service, and wanting to maintain the type of privacy that is unique to this isolated area. **Table 16: Issue Identification** provides an overview of some of the more frequently cited issues.

Table 16: Issue Identification

The following issues are listed in order of most frequently cited to least frequently cited. The number in parenthesis indicates the number of times that issue was cited in returned surveys:

1. Land Use & Growth Areas

- Keep Rural 190 zoning (44)
- No uses beyond residential, except home occupations (20)
- Protect the rural/wide open western character of Goldfield Ranch (19)
- Open space and trails (17)
- Lower density residential (16)
- No golf courses to protect groundwater levels (13)
- Avoid becoming urbanized (8)
- Local recreational activities only (5)
- Improved emergency services (3)
- Limited equestrian industry (2)
- Allow residential densities of up to two units per acre on lots 13 and 14, which are owned by Grayhawk Development (2)
- Allow residential densities of up to two units per acre on the approximately 600 acres owned by the Ft. McDowell Yavapai Nation, and allow commercial land uses on the same property west of the preserve and adjacent to the Beeline Highway, not to exceed 50 acres (1)
- Allow a small amount of commercial development (1)
- Height restrictions (1)

2. Transportation

- Asphalt pavement for main access roads (15)
- Provide safer access from Beeline Highway (State Route 87) including trimming vegetation at main access for visibility (15)



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- Roads compatible for equestrian, bicycling, pedestrian & recreational environment (14)
- Maintain graded roads without paving (13)
- Dust control with roadways (11)
- Maintain lower speeds on roadways (3)
- Abandon plans for extending a road from Mesa (3)
- Using landscape as a sound barrier along SR 87 (2)
- Construction traffic use of Vista Del Oro should not be allowed (1)

3. Environment/Environmental Effects

- Restrict growth so natural environment can flourish with minimal land disturbances (20)
- Minimal lighting to preserve night skies (13)
- Maintaining views (7)
- Air quality (5)
- Concerns with high density development due to topography/hillside ordinances (4)
- Development of the *Preserve* DMP should compliment existing development (4)
- Better regulations for disposing of waste (3)
- Horse arenas are space consuming (1)
- Traffic sounds need to be addressed (1)

4. Economic Development

- No economic development necessary (22)
- No employment outside of the equestrian industry (9)

5. Open Space

- Maintain current zoning to provide compatible open space (20)
- Equestrian, hiking and recreational vehicle access to Tonto National Forest (19)
- Additional recreational vehicle and equestrian trails desired (11)

6. Water Resources

- Minimize water extractions and preserve groundwater (20)
- Evaluate water usage before allowing higher density development to occur (7)
- Better regulations for septic to prevent contamination of groundwater (4)
- Ban vegetation which uses heavy quantities of water (3)
- Ban on swimming pools (1)

7. Other Issues:

- Privacy (8)
- Better telephone service via buried wires or discrete cellular towers (2)



It is important to note that there are other issues that were identified by plan participants. This table is only intended to provide a synopsis of some of the more frequently cited issues.



PLAN ELEMENTS

The Goldfield Area Plan establishes comprehensive goals, objectives, and policies that are derived from input obtained from community workshops, stakeholder meetings, surveys, telephone conversations, letters, and electronic mail. The goals, objectives, and policies help support and implement Eye to the Future 2020, the Maricopa County Comprehensive Plan.

Using the Comprehensive Plan's format, the area plan elements are organized within eight subject areas.

- Land Use
- Transportation
- Environment/Environmental Effects
- Economic Development
- Growth Areas
- Open Space
- Water Resources
- Cost of Development

Several general definitions are included to help explain their purpose:

Goal: A concise statement describing a condition to be achieved. It does not suggest specific actions, but describes a desired outcome.

Objective: An achievable step towards a goal. Progress towards an objective can be measured and is generally time dependent.

Policy: A specific statement to guide public and private decision-making. It is derived from the goals and objectives of the plan.

The goals, objectives, and policies are the action components of this area plan. Therefore, determination of land use on any specific parcel must be in conformance with the goals, objectives, and policies contained in this plan.

Goals, Objectives, and Policies

The following goals, objectives, and policies are designed to achieve specific outcomes in the Goldfield Area Plan, and new growth and development will be evaluated in relation to these goals, objectives, and policies.



Land Use

Goal L1:

Promote efficient land development that is compatible with adjacent land uses, is well integrated with the transportation system, and is sensitive to the natural environment.

Objective L1.1: Accomplish orderly, efficient, and functional development patterns.

Policy L1.1.1: Encourage densities consistent with the existing Rural-190 zoning district

Policy L1.1.2: Encourage federal, state, Indian community, and local agency cooperation and coordination for area planning efforts.

Policy L1.1.3: Encourage county inter-agency cooperation and coordination for area planning efforts.

Objective L1.2: Attain high quality residential development that is sensitive to the natural environment and compatible with adjacent land uses.

Policy L1.2.1: Encourage developers to cooperate and communicate with residents and local associations during the development review process. In addition, encourage subdivision developers to notify potential homebuyers that the new development is adjacent to an equestrian community.

Policy L1.2.2: Discourage the development of golf courses.

Policy L1.2.3: Review development proposals adjacent to existing and approved land uses to determine compatibility with those uses.

Policy L1.2.4: Support enforcement of existing real estate disclosure requirements for status of public services, flooding and drainage hazards, roads and access, and other information when parcel splitting and sales occur.

Policy L1.2.5: Encourage property owners to contact Maricopa County Environmental Services Department to obtain septic system requirements prior to land division.

Policy L1.2.6: Encourage property owners to contact the Maricopa County Planning and Development Department for drainage requirements prior to land division.



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Policy L1.2.7: Evaluate development master plans to determine if they are high quality, are compatible with surrounding areas, provide the necessary infrastructure and services, and meet the intention of Maricopa County's Development Master Plan Guidelines.

Objective L1.3: Support only high quality special use permits that are reinforce rural residential uses, and are consistent and compatible with adjacent land uses.

Policy L1.3.1: Encourage land uses that are compatible with the rural residential and equestrian character of the Goldfield planning area and that are sensitive to the natural environment.

Policy L1.3.2: Encourage adequate buffers between land uses to protect adjacent or affected residents from potentially incompatible uses.

Policy L1.3.3: Consider existing transportation system when determining allowable land uses.

GOAL L2:

Preserve the scenic, rural, and residential equestrian character of the Goldfield planning area.

Objective L2.1: Work with the goldfield community to prepare rural development guidelines for landscaping, lighting, and/or signage that reflect the rural community and regional character.

Policy L2.1.1: Discourage commercial, retail, or industrial development in the Goldfield planning area, except for home occupations and limited equestrian-related businesses.

Policy L2.1.2: Minimize lighting to preserve rural character and dark night skies.

Policy L2.1.3: Encourage continued low density rural residential uses of land in the Goldfield planning area.

Transportation

Goal T1:

Provide an efficient, cost-effective, integrated, accessible, environmentally sensitive, and safe countywide multi-modal system that addresses existing and future roadway networks, as well as promotes transit, bikeways, equestrian and pedestrian travel.

Objective T1.1: Establish a safe, convenient, and efficient system for existing and future roadways that is compatible with the goldfield area,



while considering the need for equestrian and multi-use trails in the Goldfield planning area.

- Policy T1.1.1: Use Maricopa County’s Major Streets and Routes Plan to determine the functional classification of roads.
- Policy T1.1.2: Support MCDOT efforts to ensure that new or improved transportation facilities within the community are designed and constructed in a manner consistent with County standards.
- Policy T1.1.3: In coordination with MCDOT, explore alternative road standards due to unique drainage conditions, and to help ensure compatibility with equestrian, bicycling, pedestrian and other recreational activities in the Goldfield area.
- Policy T1.1.4: Support the continued maintenance of existing roadways and the future paving of main access roads consistent with adopted County design standards, EPA standards, and any recorded public easements or CC&R’s. Unpaved county-maintained roads will be evaluated for paving per the County’s PM-10 program.
- Policy T1.1.5: In coordination with ADOT, support maintenance and improvements of the access points from State Route 87 (Beeline Highway) within the planning area to ensure safety, and support ADOT and MCDOT efforts to analyze the feasibility of creating additional access points from the highway to help improve safety and minimize traffic congestion.
- Policy T1.1.6: Consider equestrian crossings and access in future roadway improvement projects.
- Policy T1.1.7: Encourage adequate access for fire and emergency vehicles for new development.
- Policy T1.1.8: Support efforts to develop scenic corridor design guidelines along State Route 87 (Beeline Highway) to protect the scenic environment and adjoining Sonoran desert vegetation.
- Policy T1.1.9: When evaluating new residential subdivisions and development master plans, work with ADOT and MCDOT to help determine if an overpass is necessary or feasible across State Route 87 (Beeline Highway).
- Policy T1.1.10: Evaluate new residential subdivisions and development master plans to help determine if its own entrance from State Route 87



(Beeline Highway) is necessary or feasible to help discourage traffic being routed or diverted through surrounding rural areas.

Policy T1.1.11: Evaluate new residential subdivisions and development master plans to help establish that future roadways adequately consider and mitigate impacts to topography, existing easement rights, and equestrian and multi-use trails.

Policy T1.1.12: Evaluate new residential subdivisions and development master plans to help establish that such development mitigates traffic impacts on adjacent areas of lower density or intensity development, except for emergency vehicle uses.

Policy T1.1.13: Discourage cut-through traffic

Environment/Environmental Effects

Goal E1:

Promote development that considers adverse environmental impacts on the natural and cultural environment, preserves highly valued wildlife habitat, minimizes flooding and drainage problems, and protects historical and archaeological resources.

Objective E1.1: Generate and implement development guidelines to help establish that new development is compatible with natural environmental features and which does not lead to their destruction.

Policy E1.1.1: Encourage land uses and development designs that are compatible with environmentally sensitive areas such as the Palo Verde-Saguaro community, floodplains, significant washes, hillsides, wildlife habitat, scenic areas, and unstable geologic and soil conditions.

Policy E1.1.2: Encourage building envelopes and localized grading to minimize blading and cut and fill in environmentally sensitive areas.

Policy E1.1.3: Encourage the preservation of the scenic quality of the Goldfield area and views of the Mazatzal Mountains, Four Peaks, and other prominent mountains.

Policy E1.1.4: To help protect mountain views in the Goldfield area, promote the use of buffering, judicious placement of structures, as well as reasonable height on structures and signs.



- Policy E1.1.5: Encourage under grounding of all utilities.
- Policy E1.1.6: Discourage new development in major washes.
- Policy E1.1.7: Support Maricopa County Planning & Development Drainage Review division efforts to help property owners minimize adverse impacts to existing natural washes, erodible soils, desert vegetation, and landforms through drainage guidelines developed for single-lot development in the planning area.
- Policy E1.1.8: Encourage the preservation of washes in a natural state by avoiding re-grading, realignment, or channelization of washes.
- Policy E1.1.9: Encourage property owners to consult with the Maricopa County Planning & Development Drainage Review division prior to land division to adequately plan for local washes and landforms.
- Policy E1.1.10: Encourage property owners to maintain local washes free of debris and to plan development of land so there will be no change of flow of water off the property.
- Policy E1.1.12: Support natural drainage corridors and protective buffering techniques along significant wash systems where new development is proposed to provide flood control, preserve wildlife corridors, and protect open space.
- Policy E1.1.13: Prior to development, excavation, or grading, request that developers submit a letter from the Arizona Historic Preservation Officer stating that the proposed land development will have no effect on historical or cultural resources.

Objective E1.2: Improve air quality, water quality, and reduce noise impacts.

- Policy E1.2.1: Support and encourage local and region-wide efforts to preserve air quality.
- Policy E1.2.2: Support and foster federal, state, and local surface water and groundwater quality management programs to reduce pollutants in wash/drainage systems and groundwater.
- Policy E1.2.3: Discourage the construction of new dirt roads where feasible by encouraging common access that is agreed to by end users. Encourage revegetation of abandoned dirt roads.

Objective E1.3: Preserve significant habitat areas for wildlife and desert plant species.



PLAN ELEMENTS

- Policy E1.3.1: In conjunction with new development, encourage cooperation with the Arizona Game and Fish Department (AGFD) and the U.S. Fish and Wildlife Service to help prevent encroachment on riparian scrub habitat and/or channels associated with significant local wash systems.
- Policy E1.3.2: Support Maricopa County Planning & Development Drainage Review efforts to encourage open fencing (where fencing is needed) across washes.
- Policy E1.3.3: Encourage the use of replacement vegetation that is indigenous to the Sonoran desert plant community.
- Policy E1.3.4: In conjunction with new development, encourage and support efforts to salvage and replant cactuses and other desert plants in public spaces, neighborhoods, and abandoned roads.
- Policy E1.3.5: Encourage cooperation with the AGFD to protect wildlife in the area and minimize disturbance of critical habitat from development, all-terrain vehicles, and illegal activities.

Economic Development

Goal ED1:

Promote a growing, balanced, efficient, and diversified economy, consistent with available resources, that enhances quality employment opportunities, improves quality of life, and is sensitive to the natural and cultural environment.

Objective ED1.1: Support rural, low-density residential and equestrian oriented development to retain the quality of life enjoyed by this area.

- Policy ED1.1.1: Discourage commercial or industrial development.
- Policy ED1.1.2: Encourage rural and residential development that is sensitive to the environment, maintains connections to open space, and preserves amenities.
- Policy ED1.1.3: Promote land use guidelines that encourage suitable locations for new residences and help ensure that appropriate access and services are provided.
- Policy ED1.1.4: Support the continuation of low density rural residential and equestrian-related activities that are compatible with existing uses



in the community and that produce income and/or contribute to the economy through direct and indirect expenditures.

Policy ED1.1.5: Encourage special use permit applicants to work with the community to obtain input on project design to help ensure compatible development.

Growth Areas

Goal G.1:

Promote orderly, timely, and fiscally responsible growth in Maricopa County.

Objective G.1.1: Encourage and support residential development with gross densities that reflect the existing zoning of the area.

Policy G1.1.1: Within new Development Master Plan development, require community water and sanitary sewer systems, and other necessary public services to meet the needs of future residents, and evaluate other types of development to determine and confirm that the necessary level of infrastructure and services necessary to serve such development.

Policy G1.1.2: New development should demonstrate conservation of significant natural resources and open space areas and coordinate their location with adjacent open space areas.

Policy G1.1.3: Promote development that is appropriate given physical constraints such as topography, roadway constraints, washes, water supply, habitat, subsidence and fissures.

Objective G.1.2: Ensure that future growth is coordinated in an efficient manner with stakeholder input.

Policy G.1.2.1: Work with residents and other stakeholders in the review of future growth and development.

Policy G.1.2.2: Encourage coordination between developers and school districts for future school site planning.

Policy G1.2.3: Continue to update the Goldfield Area Plan with input from local organizations and area residents to determine appropriate growth areas, if any, and make changes as necessary.



Open Space

Goal O1:

Maintain and, where necessary, encourage expanding the open space system to address public access, connectivity, education, preservation, buffering, quantity, quality, and diversity of regionally significant open spaces.

Objective O1.1: Promote physical and visual public access to natural open space resources.

Policy O1.1.1: Encourage efforts to protect and improve public access to natural open space resources such as the Tonto National Forest and the Maricopa County Regional Trail.

Policy O1.1.2: Support efforts to protect and establish points of access to existing and proposed equestrian, hiking, and bicycle trails.

Policy O1.1.3 In coordination with the Tonto National Forest, evaluate new development to determine if pedestrian, equestrian, and ATV access to the Tonto National Forest is feasible from the north and/or south side of State Route 87, and establish such connections if feasibility is confirmed.

Policy O1.1.3: Promote development that preserves mountain views.

Objective O1.2: Establish regional natural open space connectivity and linkages for both recreation and wildlife purposes.

Policy O1.2.1: Where feasible, work with the Goldfield community to establish local trail linkages in new developments.

Policy O1.2.2: Coordinate trail linkages in new developments with drainage easements and other open space projects and/or resources.

Policy O1.2.3: Investigate opportunities for development of trails adjacent to major washes as interconnected linkages throughout the region.

Policy O1.2.4: Where roads must cross washes, design all road crossings to minimize disturbance to the natural environment, and to accommodate identified trails.

Policy O1.2.5: Encourage preservation of Palo Verde-Saguaro plant communities to serve as major links between regionally significant open space resources and, where appropriate, smaller areas of foothills and flatlands to provide connectivity and transition functions.



Policy O1.2.6: Coordinate with the Tonto National Forest, Maricopa County Parks Department, and other jurisdictions in planning for future local and regional trails.

Policy O1.2.7: Promote interconnected trail/natural open space systems as wildlife corridors and for use by hikers, bicyclists, and equestrians while respecting and protecting personal property rights.

Objective O1.3: Protect and enhance environmentally sensitive areas, including existing natural washes, steep slopes, historic, cultural, and archaeological resources; view corridors; sensitive desert; and significant wildlife habitat and ecosystems.

Policy O1.3.1: Discourage development in environmentally sensitive areas, natural washes, identified wildlife corridors, or in densely vegetated Palo Verde-Saguaro habitat.

Policy O1.3.2: Encourage the use of native plant material for all types of landscaping in environmentally sensitive areas, including the Palo Verde-Saguaro plant community.

Policy O1.3.3: Encourage effective buffers between development and washes.

Policy O1.3.4: Identify and implement an open space trails system that is coordinated with existing regional trail systems.

Policy O1.3.5: Where feasible, encourage trail alignments to correspond to existing trails, paths, utility easements, or roads that have already disturbed the environment.

Policy O1.3.6: Encourage compliance with the applicable hillside standards outlined in Maricopa County’s zoning ordinance.

Objective O1.4: Encourage appropriate natural open space between communities and other land uses.

Policy O1.4.1: Promote transitional land uses around the Tonto National Forest, and include open space linkages and public access points.

Policy O1.4.2: Maintain low-density residential land uses adjacent to the Tonto National Forest.

Objective O1.5: Improve quantity, quality, and diversity of open space and recreational opportunities where public access is protected and preservation is encouraged.



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Policy O1.5.1: Protect significant cultural resources from degradation by encouraging sensitive development or public acquisition.

Policy O1.5.2: Monitor and coordinate with the Tonto National Forest regarding classification, exchange, disposal, and acquisition of lands under their management.

Policy O1.5.3: Support additional monitoring programs of natural open space areas to reduce damage from uncontrolled off-road activities, shooting, and illegal dumping.

Policy O1.5.4: Support community efforts to pursue acquisition of additional natural open space resources via techniques that respect personal property rights.

Objective O1.6: Protect and promote the economic, environmental, and quality of life benefits of natural open space.

Policy O1.6.1: Encourage communication efforts with stakeholders to share information and discussion on current issues and/or projects.

Policy O1.6.2: Discuss and encourage open space preservation with applicants during the land entitlement process.

Policy O1.6.3: Cooperate with neighboring jurisdictions to develop shared natural open space and outdoor recreation amenities.

Policy O1.6.4: Support efforts to educate residents on the economic benefits of natural open space.

Policy O1.6.5: Support efforts to educate residents on the environmental and quality of life benefits of natural open space.

Water Resources

Goal W1:

Promote development that makes conservative use of renewable water supplies such as effluent, surface water, and Central Arizona Project water when feasible, and that uses as minimal amount of groundwater as possible.

Objective W1.1: Encourage protection and enhancement of renewable water and groundwater supplies within the framework of state and federal laws, regulations, and guidelines for existing and future needs and that helps achieve safe yield requirements.



- Policy W1.1.1: Support Arizona Department of Water Resources programs, rules, and regulations for new development and for water conservation.
- Policy W1.1.2: Support Arizona Department of Environmental Quality standards for effluent treatment and reuse.
- Policy W1.1.3: Support efforts to develop a sustainable alternative supply of water, and encourage the use of renewable water sources within new development in the planning area.
- Policy W1.1.4: To help ensure balanced water supplies, discourage new development that utilizes more groundwater than is naturally or artificially recharged within the planning area, or that meets ADWR requirements.

Goal W2:

Reduce the impacts of development on water quality, land subsidence, and riparian habitat.

Objective W2.1: Encourage voluntary actions and support federal, state, and local regulations and guidelines that protect and preserve the watershed, and safeguard current and future groundwater quality in the planning area.

- Policy W2.1.1: Consider incentives and options for preserving Sonoran desert vegetation and other land conservation practices to maximize penetration and filtering of surface water runoff into the soil to replenish the local aquifer.
- Policy W2.1.2: Support ongoing depth to groundwater monitoring conducted by the Arizona Department of Water Resources to assess water levels and water quality throughout the Phoenix Active Management Area and encourage additional monitoring wells in the planning area.
- Policy W2.1.3: Support existing drainage guidelines for single-lot development that help property owners minimize adverse impacts to existing natural washes, erodible soils, desert vegetation, and landforms in the planning area.
- Policy W2.1.4: Support existing state aquifer protection rules and county regulations that prevent potential contamination of the aquifer.
- Policy W2.1.5: Encourage development that complies with the Arizona aquifer protection program, and evaluate new development to examine whether such development will help protect water supplies.



PLAN ELEMENTS

Policy W2.1.6: Encourage the use of animal waste disposal methods, pest management practices, and landscape/pasture fertilization methods that reduce the risk of groundwater and surface water contamination.

Cost of Development

Goal C1:

Ensure that new development pays its fair and proportional share of the cost of additional public facility and service needs generated by new development.

Objective C1.1: Develop a method to determine the need for, and assess costs of, new facilities and services required to serve new development in order to maintain service levels.

Policy C1.1.1: Work with County agencies and affected stakeholders to establish cost sharing programs.

Policy C1.1.2: Seek regional coordination to promote cost sharing for regional services and infrastructure.

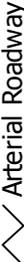
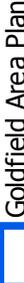
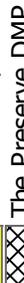
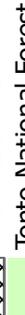
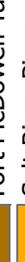
Objective C1.2: Support the adoption and implementation of level of service standards for new development to help promote consistency and certainty in the cost sharing process.

Policy C1.2.1: Maintain and support Maricopa County's capital improvement programs that help meet service needs and standards.

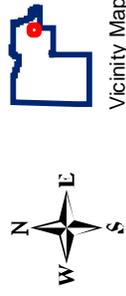
Policy C1.2.2: Adopt and periodically update level of service standards for new development to maintain viability.

Future Land Use

Figure 14

- Legend**
-  Arterial Roadway
 -  Highway
 -  Goldfield Area Plan
 -  Rural 0-1 du/acre*
 -  The Preserve DMP
 -  Tonto National Forest
 -  Fort McDowell Yavapai Nation
 -  Salt River Pima - Maricopa Indian Community

* Land Use within the "Preserve at Goldfield Ranch" is governed by the approved DMP.



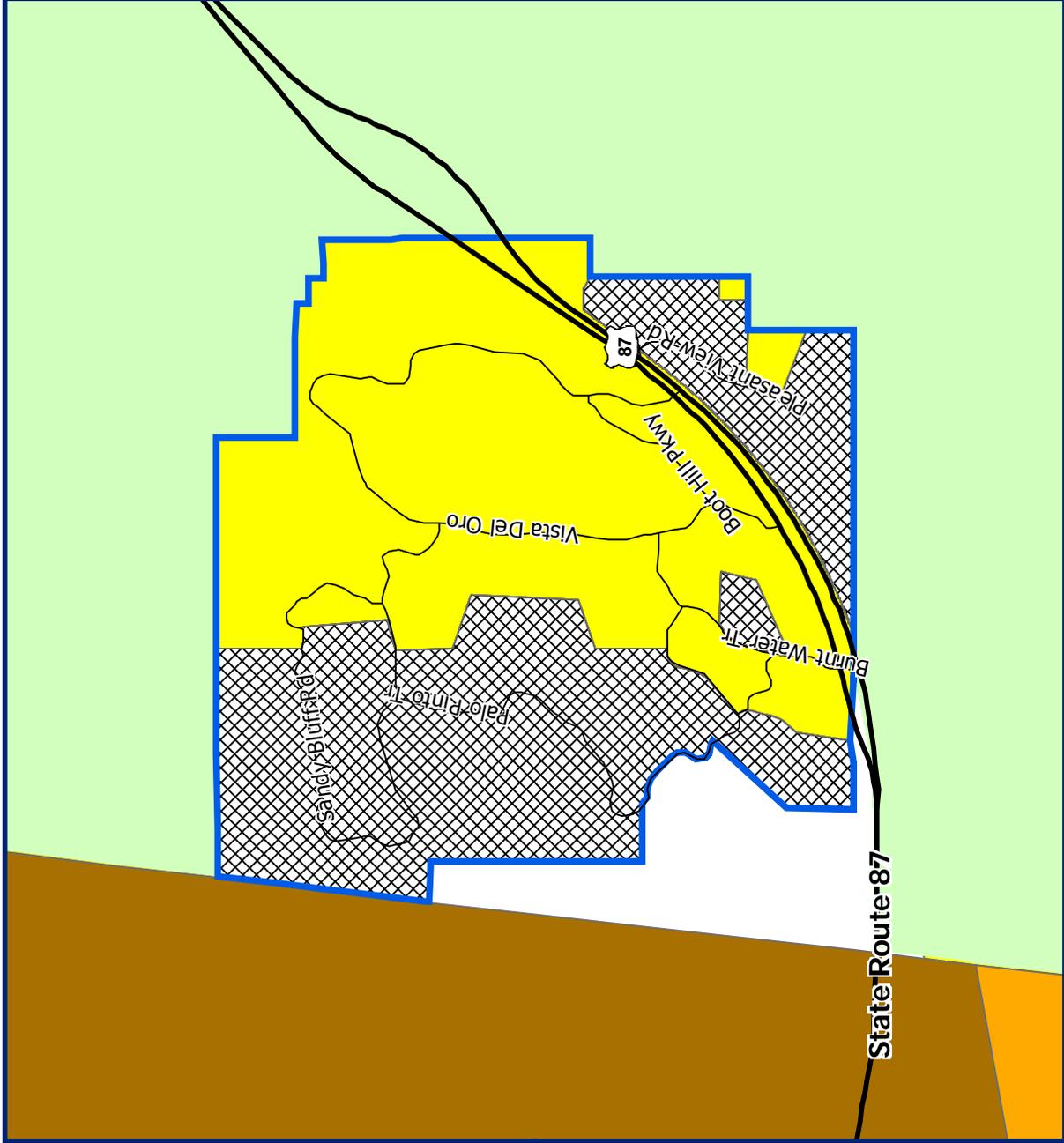
ONE STOP SHOP

Maricopa County
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September 2007



MARICOPA COUNTY
 PLANNING & DEVELOPMENT DEPARTMENT





AGENDA FOR ACTION

Purpose

The Maricopa County comprehensive plan promotes vibrant communities by encouraging growth in areas suitable for development, an efficient transportation system, a healthy environment, and a diverse economy. The Goldfield Area Plan is intended to reflect the character of the region. Ensuring the plan’s success requires an effective implementation program.

The Goldfield action plan identifies both long- and short-term measures that can help implement the plan’s goals, objectives, and policies. While some of the activities require actions for a specific period of time, most will require ongoing efforts. In addition, successful plan implementation will require close cooperation, coordination, and communication between public and private agencies, as well as citizens and other concerned interests. Each of these groups will play an important role in plan success, and Maricopa County encourages their continuing participation. **Table 17** details the Goldfield Action Plan, and is organized as follows:

Action	Lists actions necessary to implement the area plan
Description	Describes the action in detail
Elements Involved	Lists the elements of the area plan that will be implemented
Department/Agency	Identifies County departments and/or partnering agencies

Involved in plan implementation, which include the following:

MCP&DD	Maricopa County Planning and Development Department
MCDOT	Maricopa County Department of Transportation
MCESD	Maricopa County Environmental Services Department
FCDMC	Flood Control District of Maricopa County
MCPARKS	Maricopa County Parks Department
COMM DEV	Maricopa County Community Development
CITIZENS	Interested residents and landowners in Goldfield planning area
PRIVATE AGENCIES	Includes private and non-profit organizations such as chambers of commerce, interest groups, homeowners associations, civic organizations, land trusts, etc.
DEVELOPERS	Homebuilders and related organizations operating within the planning area
AGFD	Arizona Game and Fish Department
USFS	U.S. Forest Service
FIRE DIST	Fire District



Table 17: Action Plan

Action	Description	Plan Element	Participants
Rural development guidelines for rural designated areas	Create rural development guidelines for issues such as landscape, signs, and/or design and incorporate into planning documents	All	MCP&DD MCDOT CITIZENS DEVELOPERS
Fire protection plan	Form a regional workgroup to discuss and prepare a fire protection plan	Environment/Environmental Effects Growth Areas Land use Transportation	MCP&DD CITIZENS PRIVATE AGENCIES FIRE DIST BLM
Trails	Identify and implement an open space trails system that is coordinated with the Maricopa County Regional Trail System and BLM.	Land Use Transportation Environment/Environmental Effects Open Space	MCP&DD FCDMC MC-PARKS CITIZENS PRIVATE AGENCIES DEVELOPERS BUCKEYE GILA BEND BLM
Update area plan	Update area plan to maintain viability	All	All



AMENDMENTS

Amending the Area Plan

Area plan amendments may be filed with or without rezoning requests or development master plan applications. Arizona Revised Statute §11-829A states that all applications for zoning changes in the unincorporated Maricopa County must be in compliance with the county's comprehensive plan and/or adopted area plan.

Plan amendments should not occur in an uncontrolled manner, and should only be allowed after careful public review and evaluation. The statutory requirements which guide area plan adoption will be followed for all requested amendments. The term amendment will apply to both text and map revisions.

All proposed amendments are evaluated based on the following criteria:

1. Whether the amendment constitutes an overall improvement to the adopted plan, and is not solely for the good or benefit of a particular landowner or owners at a particular point in time.
2. Whether the amendment will adversely impact all or a portion of the planning area by:
 - A. Altering acceptable land use patterns to the detriment of the plan.
 - B. Requiring public expenditures for larger and more expensive public improvements to roads, sewer, or water systems than are needed to support the planned land uses.
 - C. Adversely impacting existing uses because of increased traffic.
 - D. Affecting the livability of the area or the health and safety of present and future residents.
 - E. Adversely affecting the natural environment or scenic quality of the area in contradiction to the plan.
3. Whether the amendment is consistent with the overall intent of the adopted plan.
4. The extent to which the amendment is consistent with the specific goals and policies contained in the adopted plan.

The requirements and guidelines necessary for Area Plan amendments are the same as those for the Maricopa County comprehensive plan. Therefore, any change in comprehensive plan amendment requirements and guidelines will apply to the area plan amendment process.



Maricopa County, private individuals, or other agencies may initiate plan amendments. It is the burden of the party requesting the amendment to prove that the change constitutes a plan improvement. Conversely, it is not Maricopa County's burden to prove that an amendment should be denied.



APPENDICES

Appendix A – Glossary of Terms

Alluvial: General term for riverbed, floodplain, lake, estuary, and mountain base sediments laid down in relatively recent geologic times.

Annexation: Incorporate an area/territory into a city, service district, etc.

Area Plan: Plans adopted by Maricopa County for specific subareas of the unincorporated County. Area plans provide basic information on natural features, resources, and physical constraints that affect development in a planning area. They also contain detailed land use designations which are used to review specific development, service, and facility proposals.

Arterial: Street providing traffic service for large areas. Access to adjacent property is incidental to serving major traffic movement.

Agriculture: Any use of land for growing, harvesting, and sale of crops or animals. Also includes uses which are ancillary to the growing and harvesting of crops or animals, which is the exclusive or primary use of the lot, plot, parcel, or tract of land; processing crops to a generally recognizable level of marketability; or the open range grazing of livestock.

Aquifer: Saturated underground formation of permeable materials capable of storing water.

Basic Sector Employment: Industries that sell products to consumers outside of a particular city or region.

Buffer: Method of separating incompatible uses; examples include opaque fencing, vegetated berms, and dense landscaping.

Capital Improvement Program: Board of Supervisors approved timetable or schedule of future public improvements to be carried out during a specific period. These improvements are listed in order of priority together with anticipated costs and finance methods.

Cluster Development: Development design that concentrates buildings in areas of a site to allow remaining land to be used for recreation, common open space, and/or preservation of environmentally sensitive features.

Community: Group of individuals living in a common location sharing common interests.

Comprehensive Plan: Document containing guidelines for growth and land development within a jurisdiction. Also contains policies regarding public services, benefits, and regulations.

Developed Recreation Site: Distinctly defined area where facilities are provided for concentrated public use (e.g. campgrounds, picnic areas, boating sites, and interpretive facilities).



Density: Numeric average of families, individuals, dwelling units, or housing structures per unit of land, usually referred to as total dwelling units per acre.

Density Bonus: Allowing additional development on a parcel in exchange for items of public benefit such as affordable housing, recreation sites, infrastructure expansion, open space, etc.

Dwelling Unit: Room or group of rooms (including sleeping, eating, cooking, and sanitation facilities) that constitutes an independent unit, occupied or intended for occupancy by one household on a long-term basis.

Endangered Species: A type of animal or plant listed as threatened according to the federal Endangered Species Act.

Environment: All the factors (physical, social, and economic) that affect a population.

Floodplain: The channel and the adjacent areas of a natural stream or river which has been or may be covered by floodwater.

Floodway: The channel of a watercourse and portion of the adjacent floodplain that is needed to convey the base or 100-year flood event without increasing flood levels by more than one foot and without increasing velocities of flood water.

Floodway Fringe: The areas of a delineated floodplain adjacent to the Floodway where encroachment may be permitted.

Floor Area Ratio (FAR): The zoning control number that regulates the total square footage of floor area allowed on a lot. For example, a FAR of 1.0 on a 10,000 square foot lot would allow a building with a maximum of 10,000 square feet of floor area, with 1 story, covering the entire lot, or two stories of 5,000 square feet for each floor, each covering ½ of the lot.

Goal: An ideal future end, condition or state related to the public health, safety, or general welfare toward which planning and planning implementation measures are directed.

Groundwater: Water that is stored beneath the land surface in cracks and crevices of rocks, and in the pores of geologic materials that make up the earth's crust.

Habitat: The typical place(s) occupied by a species or organism.

Housing Unit: A house, apartment, mobile home or trailer, group of rooms, or single room occupied as a separate living quarter or, if vacant, intended for occupancy as a separate living quarter. Separate living quarters are those in which the occupants live and eat separately from any other person in the building and which have direct access from the outside of the building or through a common hall.

Incorporated City: Area(s)/neighborhood(s) joined together for the purpose of self-government.



APPENDICES

Infrastructure: Facilities and services needed to sustain a particular type of development. This includes water and sewer lines, streets, electrical power, fire and police stations, etc.

Jobs-Housing Balance: An attempt to balance the number and types of jobs with the amount and cost of housing.

Landfill: A site for disposal of solid wastes. At specific intervals, a layer of soil covers the waste and a process of deposit and compaction is repeated to reduce nuisances and hazards to public health and safety. The purpose is to confine wastes to the smallest practical area, and reduce them to the smallest practical volume.

Land Use: Occupation or use of land or water area for any human activity or any purpose defined in the Comprehensive Plan.

Multi-modal: Accommodating a variety of transportation modes, such as buses, automobiles, rapid transit, rail, bicycles and pedestrians. A multi-modal transportation hub is a facility for the transfer of passengers and/or goods between different modes of transportation.

Natural Resources: Elements relating to land, water, air, plant and animal life, and the interrelationship of those elements. Natural resources include soils, geology, topography, floodplains, vegetation, wildlife, surface and groundwater, and aquifer recharge zones.

Neighborhood: Area of a community with characteristics that distinguish it from other community areas and which may include distinct demographic characteristics, schools, social structure, or physical boundaries.

Neighborhood Park: Recreation site developed for active and passive activities which is designed to serve one or a few neighborhoods within a short walking or driving distance. Typical equipment and facilities in a neighborhood park include playground equipment, playing fields, picnic tables, landscaping, and on-site parking. Neighborhood parks are generally smaller than community parks, and typically lack the variety of recreation facilities available in a larger park.

Non-attainment Area: Areas that do not meet the National Ambient Air Quality Standards (NAAQS) for one or more pollutants. Such pollutants include lead, oxides of nitrogen, sulfur dioxide, ozone, carbon monoxide, and PM₁₀.

Nonbasic Sector Employment: Industries that sell products to consumers within a particular city or region.

Objective: A condition that is an intermediate step toward attaining a goal. An objective should be achievable and, when possible, measurable and time specific.

Open Space: Publicly or privately owned lands maintained in their natural state. Open Space lands are generally comprised of mountains and foothills, rivers and washes, canals, vegetation, wildlife habitat, parks, and preserves.

Particulates: Small particles suspended in the air and generally considered pollutants.



Permeability: Rate at which water runs through soil.

Planning: Establishment of goals, policies, and procedures for social, physical, and economic growth and order.

PM₁₀: Airborne particulate matter of 10 microns or less in diameter. PM₁₀ is the result of agricultural and construction operations, suspended dust, tire abrasion from vehicles traveling on roads, and natural occurrences such as wind storms.

Policy: Specific statement that guides decision making. Policies are statements of intent for actions to be taken in pursuit of a given objective.

Population Density: The number of people in a given area. Population density may be obtained by multiplying the number of dwellings per acre by the number of residents per dwelling.

Potable Water: Water suitable for drinking.

Protected Species: Any species or subspecies subject to excessive taking and with significant threats or declining populations making it illegal to take them under the auspices of a hunting or fishing license.

Regional Park: Recreation area of 200 or more acres offering passive recreation opportunities such as hiking, camping, picnicking, and climbing, but has no facilities for organized forms of recreation.

Right-Of-Way: Strip of land occupied or intended to be occupied by transportation and public facilities, such as roadways, railroads and utility lines.

Riparian Area: Ecosystem associated with bodies of water, such as streams, lakes, or wetlands, or is dependent upon the existence of perennial, intermittent, or ephemeral surface or sub-surface drainage.

Rural: When used in the context of this Plan, rural areas are those intended for residential development on no greater than one acre lots, characterized by the lack of urban services and infrastructure.

Rural Residential: Single family residence on a 1 or more acre parcel, and may include mixed residential and agricultural use.

Scenic Corridor: A roadway with recognized high quality visual amenities that include mountain vistas, open country, or city.

Subdivision: Improved or unimproved land divided into 6 or more lots, parcels, or fractional interests for immediate or future sale or lease. Subdivided land includes a stock cooperative and lands divided or proposed to be divided as part of a common promotional plan (as defined by A.R.S. §32-2101-50).

Subsidence: The gradual, settling or sinking of the earth's surface with little or no horizontal motion. Subsidence is usually the result of water extraction from underground supplies and not the result of a landslide or slope failure.



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Threatened Species: Any species or subspecies that is likely to become endangered within the foreseeable future because of serious problems and populations are (1) lower than they are historically or (2) extremely local and small.

Urban: When used in the context of a Maricopa County Area Plan, includes development with densities exceeding one residential unit per acre and accompanying nonresidential and public development.

Wastewater: Includes sewage and all other liquid waste associated with human or animal habitation, or from production manufacturing or processing operations.

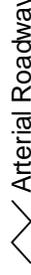
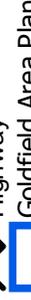
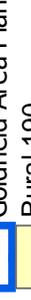
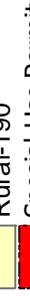
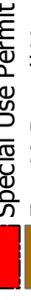
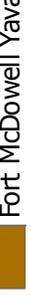
Watershed: The entire area that contributes water to a drainage system or stream.

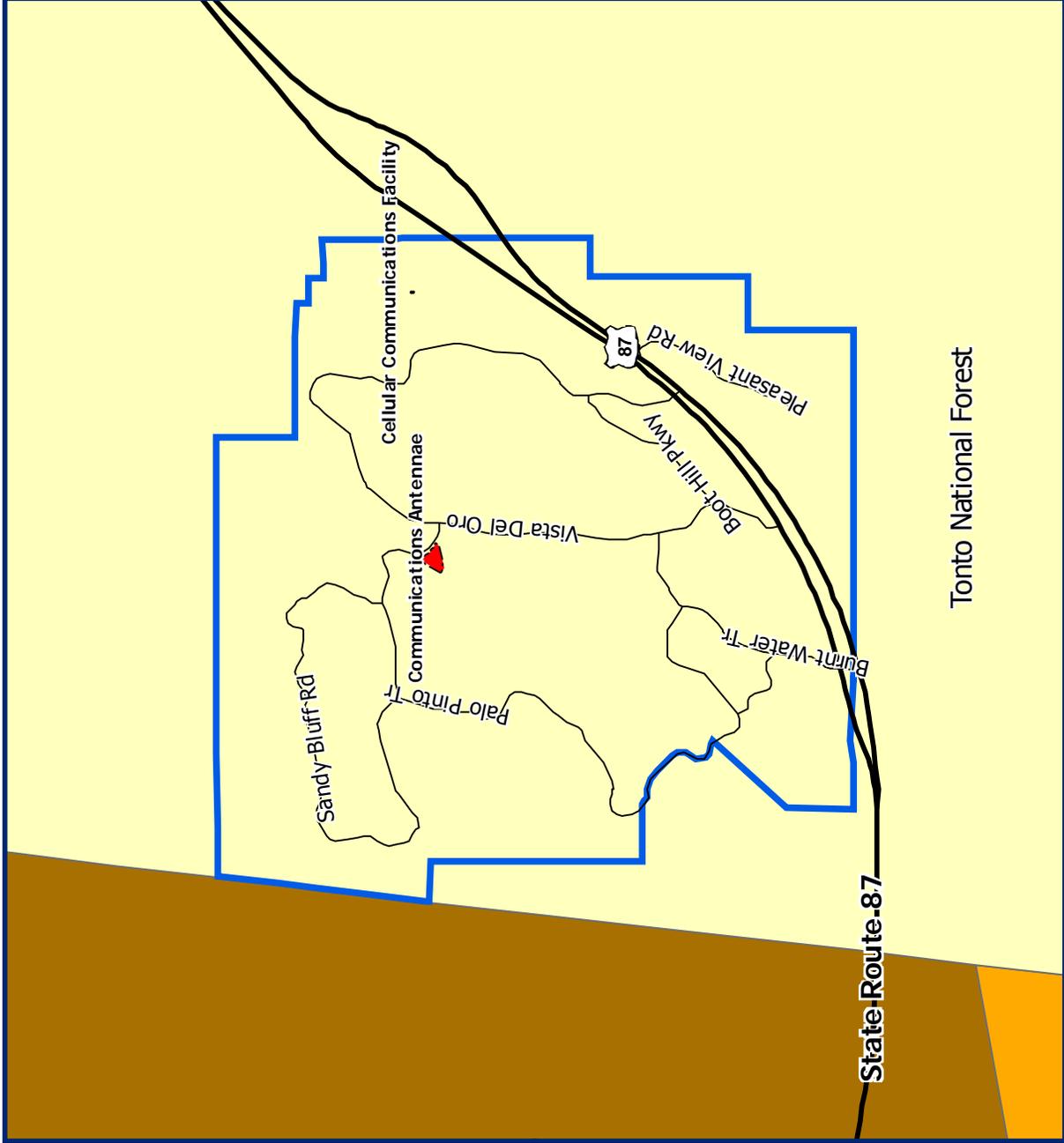
Zoning: Classification of land into specific categories that govern the use, placement, spacing, and size of land and buildings corresponding to the categories.

Existing Zoning

Figure 15

Legend

-  Arterial Roadway
-  Highway
-  Goldfield Area Plan
-  Rural-190
-  Special Use Permit
-  Fort McDowell Yavapai Nation
-  Salt River Pima -
-  Maricopa Indian Community



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September 2007



MARICOPA COUNTY
 PLANNING & DEVELOPMENT DEPARTMENT



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Appendix B – Zoning District Categories

(Note: Existing zoning districts in the planning area are illustrated in Figure 16)

Zoning Districts	Permitted Uses	Density
Rural Residential		
Rural-190	Residential, agricultural activities	1 du/4.36ac (190,000 sq. ft.)
Rural-70	Residential, agricultural activities	1 du/1.6 ac (70,000 sq. ft.)
Rural-43	Residential, agricultural activities	1 du/1 ac (43,560 sq. ft.)
Single Family Residential		
R1-35	Residential	1du/35,000 sq. ft.
R1-18	Residential	1du/18,000 sq. ft.
R1-10	Residential	1du/10,000 sq. ft.
R1-8	Residential	1du/8,000 sq. ft.
R1-7	Residential	1du/7,000 sq. ft.
R1-6	Residential	1du/6,000 sq. ft.
Limited Multiple Family Residential		
R-2	Multi-family dwelling	1du/4,000 sq. ft.
Multiple Family Residential		
R-3	Multi-family dwellings	1du/3,000 sq. ft.
R-4	Multi-family dwellings	1du/2,000 sq. ft.
R-5	Multi-family dwellings	1du/1,000 sq. ft.
Commercial		
C-1: Neighborhood Commercial	Food markets, drugstores and personal service shops	
C-2: Intermediate Commercial	Hotels and motels, travel trailer parks, restaurants, and some commercial recreation and cultural facilities	
C-3: General Commercial	Retail and wholesale commerce and commercial entertainment	
C-O: Commercial Office	Professional, semi-professional and business office	
C-S: Planned Shopping Center	Retail and service businesses w/ development site plan approved by the BOS	
Industrial		
Ind-1: Planned Industrial	Business and manufacturing activities w/ development site plan approved by the BOS	
Ind-2: Light Industrial	Light industrial activities w/ development site plan approved by the BOS	
Ind-3: Heavy Industrial	Heavy industrial activities w/ development site plan approved by the BOS	



Appendix C – Land Regulations

In addition to zoning districts, other public and private techniques and guidelines are used to accommodate development. Such techniques include:

1. **Hillside Development Standards (HD):** Allows the reasonable use and development of hillside areas while maintaining its unique character, identity, and image. This district applies to development on slopes of 15 percent and greater.
2. **Senior Citizen Overlay (SC):** Provides for planned residential development designed specifically for residency by older populations.
3. **Planned Development Overlay (PD):** Establishes a basic set of conceptual parameters for the development of land and supporting infrastructure, which is to be carried out and implemented by precise plans at the time of actual development.
4. **Special Use Permit (SUP):** Allows a class of uses that are otherwise prohibited by the Ordinance.
5. **Temporary Use Permit (TUP):** Allows a class of uses for a specific period of time.
6. **Unit Plans of Development (UPD):** Provides for large scale development where a variation in lot size, dwelling type and open space is warranted due to topographic or other considerations.
7. **Subdivision Regulations / Administrative Guidelines:** Method which helps ensure adequate traffic circulation, lot design, water supply, fire protection, sewage disposal, utilities, drainage, flood protection, community facilities, and the conveyance of land by accurate legal descriptions.
8. **Uniform Building Code (UBC):** Establishes standards for building construction and site preparation.
9. **Maricopa County Health Code:** Includes development regulations for domestic water supply systems, refuse collection and disposal, sanitary sewage treatment systems, and mobile home parks. Additional regulations include vector control, bathing places, food handling establishments, childcare facilities, kennels, pet shops, and air pollution control.
10. **Private Land Use Controls:** Many developers use private land controls to supplement government regulations. These controls are known as covenants, conditions, and restrictions (CC&Rs). CC&Rs are contained in the deed to property or are otherwise formally recorded and may include deed restrictions,



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which are limitations in the deed to a property that dictate certain uses that may or may not be made of the property.



Appendix D – Acronyms

ADEQ	Arizona Department of Environmental Quality
ADMP	Area Drainage Master Plan
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
API	Arizona Preserve Initiative
AGFD	Arizona Game and Fish Department
A.R.S.	Arizona Revised Statutes
ASLD	Arizona State Land Department
BLM	Bureau of Land Management
BOS	Board of Supervisors
CAP	Central Arizona Project
CC&Rs	Covenants, Conditions, and Restrictions
CIP	Capital Improvement Program
CRC	Community Retail Center
DES	(Arizona) Department of Economic Security
DMP	Development Master Plan
DSP	Desert Spaces Plan
EPA	Environmental Protection Agency
FAR	Floor Area Ratio
FCDMC	Flood Control District of Maricopa County
GPDA	General Plan Development Area
GPEC	Greater Phoenix Economic Council
I.U.P.D.	Industrial Unit Plan of Development
MAG	Maricopa Association of Governments
MCDOT	Maricopa County Department of Transportation
MCESD	Maricopa County Environmental Services Department
MCP&DD	Maricopa County Planning and Development Department
NRC	Neighborhood Retail Center
NRPA	National Recreation and Park Association
RAZ	Regional Analysis Zone



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RDA	Rural Development Area
ROSS	Regional Off-Street System (Plan)
RPTA	Regional Public Transportation Authority
SHPO	State Historic Preservation Office
TAZ	Traffic Analysis Zone
TSP	Transportation System Plan
USA	Urban Service Area
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WCMP	Water Course Master Plan
WWTP	Wastewater Treatment Plant