COUNCIL DECISION REQUEST

MEETING DATE: 3-09-06 ITEM NO.:

SUBJECT: Town of Payson Multi-Hazard Mitigation Plan

SUBMITTED BY: Martin deMasi, Fire Chief

SUBMITTAL TO AGENDA
APPROVED BY TOWN MANAGER

EXHIBITS (IF APPLICABLE, TO BE ATTACHED): Town of Payson Multi-Hazard Mitigation Plan – Executive Summary Only

EXPENDITURE REQUIRED: $0

AMOUNT BUDGETED: $0

CONT. FUNDING REQUIRED: $0

RECOMMENDED MOTION:
I move to direct staff to create a resolution to adopt the Town of Payson Hazard Mitigation Plan.

SUMMARY OF THE BASIS FOR RECOMMENDED MOTION:
Town staff recognizes that natural and man-made hazards pose a threat to the welfare and safety of our residents and the economic stability of the Town. It is also known that remaining in a reactive state rather than a proactive state may lead to increased vulnerability and increased costs of recovery should a disaster occur. Accordingly, Town staff, using the capable assistance of the firm J.E. Fuller, has prepared the Town of Payson Multi-Hazard Mitigation Plan to assess the vulnerability to these hazards and developed mitigation strategies to reduce the risks associated with those hazards.

In the October 2004, jurisdictions in Gila County assembled in Globe to discuss initiating development of hazard mitigation plans for the towns, cities and the county. The Arizona Division of Emergency Management had contracted with the firm of J.E. Fuller to assist jurisdictions in compiling these plans. The plan uses a template to meet the federal requirements set forth by the Disaster Mitigation Act of 2000. The purpose of this Act was to establish a national program for pre-disaster mitigation, streamline administration of disaster relief and control federal costs of disaster assistance. The Act also requires all local, county and tribal governments to develop a hazard mitigation plan in order to be eligible for certain federal mitigation funds.

Early in the process it was determined that the Tonto Apache Tribe (Tribe) would need to be involved in the planning effort. First, because of their proximity, whatever disaster affects the Tribe also affects the Town and visa versa, it made sense to seek their input. Secondly, although they are a sovereign nation, the Tribe would be better served by being a partner in the Town's plan. Apparently if the Tribe desired a stand-alone plan there are much more stringent requirements and the Tribe did not believe they had the wherewithal to accomplish this. Consequently, the Tribe can only pursue pre and post disaster funds as sub-grantee of the Town. A Memorandum of Understanding must be developed and approved by both jurisdictions outlining each of the parties' responsibilities in this process.

The plan contains certain information that has homeland security sensitivities. This particular information will not be available to the general public but the balance of the plan will be available for public inspection. The Executive Summary is attached, however, the entire plan is available for review in the Town Clerk's offi

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After a resolution is approved adopting this plan, and a MOU with the Tribe has been crafted, it will be forwarded to the Federal Emergency Management Agency for final approval and at that time the Town will be able to apply for mitigation grant and other potential funding sources.

PROS: This plan identifies hazards and sets mitigation strategies to employ in mitigating the effect of those hazards. Essentially it gives us a template to plan future mitigation activities. It also provides the pathway to obtain funding to implement these mitigation strategies and provides an inventory of critical assets and infrastructures to reference during disaster recovery efforts.

CONS: None.

PUBLIC INPUT (if any):

BOARD/COMMITTEE/COMMISSION ACTIONS/RECOMMENDATIONS (if any) (give dates and attach minutes):

SECTION 1: INTRODUCTION

1.1 General Plan Description

Payson officials and public servants recognize that natural and human-caused hazards pose a significant threat at varying degrees of magnitude and frequency, to the safety and economic stability of the Town and its residents. Often, the potential reality of hazards within the Town is not fully understood or realized until a major disaster occurs, and then significant resources are required to respond and recover from the damages. Town officials also understand that responding to disasters on a post-incident basis can result in increased costs, in terms of both financial and human losses. Accordingly, Payson has prepared the **Payson Multi-Hazard Mitigation Plan** (PMHMP) in order to assess the Town's vulnerability to natural and human caused hazards, and to develop mitigation strategies that reduce the risks associated with those hazards.

The Tonto Apache Indian Tribe (TAIT) has participated in this planning effort with the Town of Payson. Although the Tribe is a Sovereign Nation and independent from Payson, the two communities share services and cooperate on a number of projects and planning efforts. The Tribe will likely develop a Tribal Hazard Mitigation Plan in the future but due to current resource limitations, has chosen for the interim to participate in the PMHMP. The Tribe understands that on their part, future disaster recovery funds and hazard mitigation grant applications must be pursued as a sub-grantee to the Town of Payson and cannot be applied for directly to the State of Arizona or FEMA until such time as the Tribe is able to prepare a stand-alone Tribal Mitigation Plan. Furthermore, Payson understands their responsibility and accountability for any applicable disaster recovery or hazard mitigation grant funds received on behalf of the Tribe. For the purposes of this plan, the TAIT is considered a part of Payson and will not be addressed further as a separate jurisdiction.

Although this plan is meant to be a *multi-hazard* plan, its primary function is to address mitigation for natural hazards and other environmentally related, human caused events or incidents. One human caused hazard generally known as *terrorism*, is specifically not addressed by this plan with regard to vulnerability, prevention or mitigation of its possible impacts. According to the Model Local Hazard Mitigation Plan[1] (AzMLHMP), the term *terrorism* is defined as encompassing intentional, criminal or malicious acts involving Weapons of Mass Destruction (WMDs), including biological, chemical, nuclear, and radiological weapons; arson, incendiary, explosive, and armed

[1] ADEM, November 2003, *Model Local Hazard Mitigation Plan*, prepared by JE Fuller / Hydrology & Geomorphology, Inc.

attacks; industrial sabotage and intentional hazardous material releases; and cyber-terrorism (attacks via computer means). While such terrorist acts may possibly occur, it is not the intent of the PMHMP to analyze vulnerability and provide effective mitigation measures for these specific events. Instead, mitigation for terrorism related hazards is deferred to other planning efforts sponsored by the Federal Department of Justice and the Arizona Office for Homeland Security.

This plan is generally arranged and prepared using the template set forth in the AzMLHMP. The AzMLHMP, and hence this plan, are prepared to satisfy recent federal requirements set forth by the Disaster Mitigation Act of 2000 (DMA2K). Compliance with these requirements will enable Payson to maintain eligibility for certain federal and state mitigation funds. Interim Final Rule citations of DMA2K rules are provided as appropriate in each section. Following this introductory section, the plan is divided into five primary sections as follows:

- Section 2 – Jurisdictional Participation Information
- Section 3 – Planning Process Documentation
- Section 4 – Risk Assessment
- Section 5 – Mitigation Strategy
- Section 6 – Plan Maintenance Procedures

Where appropriate, detailed information is documented or provided in appendices. There are also certain data sets pertaining to the Risk Assessment that are deemed "sensitive" by the Town. Those data are a part of this plan by reference, but are documented in a separate technical binder which will remain at the Town of Payson and will not be submitted for FEMA or State of Arizona review. Instead, general summaries of those specific data are provided herein.

1.2 Plan Purpose and Authority

The Disaster Mitigation Act of 2000 (DMA2K), commonly known as the 2000 Stafford Act Amendments, was approved by Congress on October 10, 2000. Section 322 is the DMA2K amendment[2] to the Stafford Act that primarily deals with hazard mitigation planning as it relates to the development of local hazard mitigation plans. The DMA2K legislation was signed into law by the President on October 30, 2000 (Public Law 106-390). The Interim Final Rule for planning provisions (implemented at 44 CFR Part 201) was initially published in the Federal Register on February 26, 2002. The Interim Final Rule was again published on October 1, 2002 to extend the

[2] Section 322 is enacted under Section 104 of DMA2K.

planning deadline to November 1, 2004. Local hazard mitigation planning requirements are implemented in the Interim Final Rule at 44 CFR Part 201.6.

The overall purpose of DMA2K was to amend the Stafford Act in order to establish a national program for pre-disaster mitigation, streamline administration of disaster relief at both the federal and state levels, and control federal costs of disaster assistance. Congress envisioned that implementation of these new requirements would result in the following key benefits:

- Reduction of loss of life and property, human suffering, economic disruption, and disaster costs.
- Prioritization of hazard mitigation planning at the local level, with an increased emphasis placed on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical services/facilities survive a disaster.
- Establishment of economic incentives, awareness and education via federal support to state, tribal, and local governments, that will result in forming community-based partnerships, implementing effective hazard mitigation measures, leveraging additional non-Federal resources, and establishing commitments to long-term hazard mitigation efforts.

In general, the DMA2K legislation requires all local, county, and tribal governments to develop a hazard mitigation plan for their respective communities in order to be eligible to receive certain federal mitigation funds including Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation Program (PDM), and Flood Mitigation Assistance Program (FMA) funds.

In addition to satisfying the regulatory requirements of DMA2K, the primary purpose of this plan is to identify natural and human-caused hazards that impact Payson, assess the vulnerability and risk posed by those hazards to community-wide human and structural assets, develop strategies for mitigation of those identified hazards, present future maintenance procedures for the plan, and document the planning process.

Funding for the development of the PMHMP was provided through a grant received from the Federal Emergency Management Agency and matching funds were provided by the Arizona Division of Emergency Management (ADEM). JE Fuller/ Hydrology & Geomorphology, Inc. (JEFuller) was hired by ADEM to assist each of the counties and communities to prepare their respective hazard mitigation plans and to enter the plans into the Arizona Hazard Mitigation Planning System (AzHMPS) [3]

[3] AZHMPS is an on-line hazard mitigation planning tool developed by VRisk for ADEM. This system can be accessed by the following URL: https://www.mitigationplan.com

1.3 Community Description

1.3.1 Geography

According to the Arizona Department of Commerce[4], Payson was founded in 1884 and incorporated in 1973. Payson historically was known as Union Park, Green Valley, Long Valley and Big Valley. Today, the Town of Payson covers 12,612 acres.

Payson is located in the northern Gila County, as depicted in Figure 1-1, and is situated at an elevation of 4,982 feet. Payson sits at the base of the Mogollon Rim and is part of the "Rim Country". The Mogollon Rim stands at an elevation of 7000 feet north of Payson and is a 200-mile long escarpment in the largest Ponderosa Pine forest in the world. The Town is geographically located at longitude 111.32 degrees west and latitude 34.23 degrees north, and is 93 miles northeast of Phoenix and 183 miles North of Tucson. State Routes 87 and 260 pass through Payson and serve as the main roadways servicing the community. The major transportation routes and land features around Payson are shown on Figure 1-2.

1.3.2 Climate

The Town of Payson is located within the Arizona Mountain Forest terrestrial ecoregion, which is described as:

> *... this ecoregion contains a mountainous landscape, with moderate to steep slopes. Elevations in this zone range from approximately 4,000 to 13,000 feet, resulting in comparatively cool summers and cold winters. Vegetation in these areas is largely high altitude grasses, shrubs, brush, and conifer forests.*[5]

Climatic statistics for weather stations within Gila County are produced by the Western Region Climate Center[6] and span records dating back to the early 1900's. Locations of reporting stations near Payson are shown on Figure 1-3. Average temperatures for Payson range from below freezing during the winter months to over 90 degrees Fahrenheit during the hot summer months. Figure 1-4 presents a graphical depiction of temperature variability and extremes throughout the year for the Payson station located within the Town limits.

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[4] Arizona Department of Commerce, 2004, *Community Profile for Payson, Arizona.*

[5] URS, 2004, *State of Arizona All Hazard Mitigation Plan.*

[6] Most of the data provided and summarized in this plan are taken from the WRCC website beginning at the following URL: http://www.wrcc.dri.edu/CLIMATEDATA.html

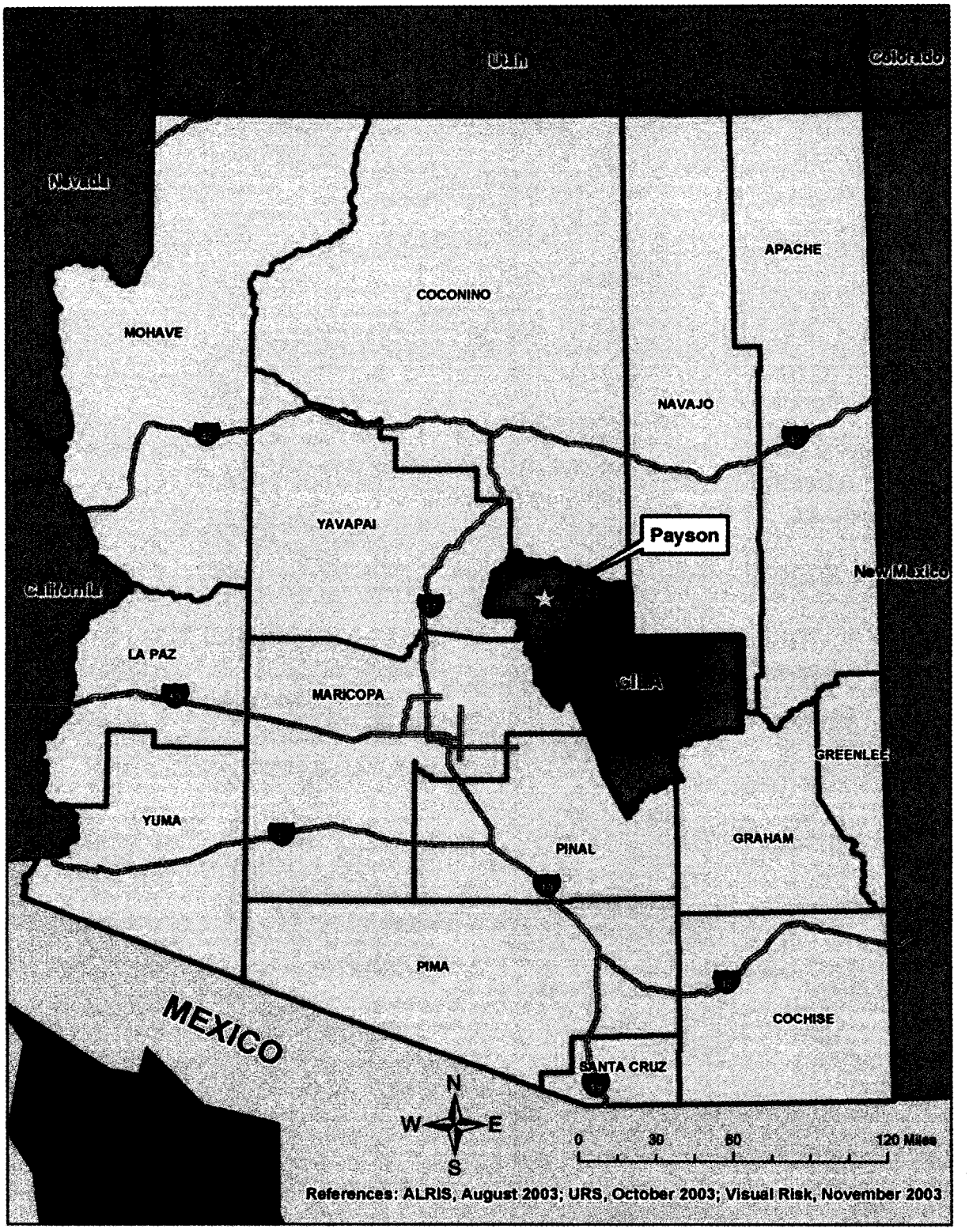

Figure 1-1

Vicinity Map

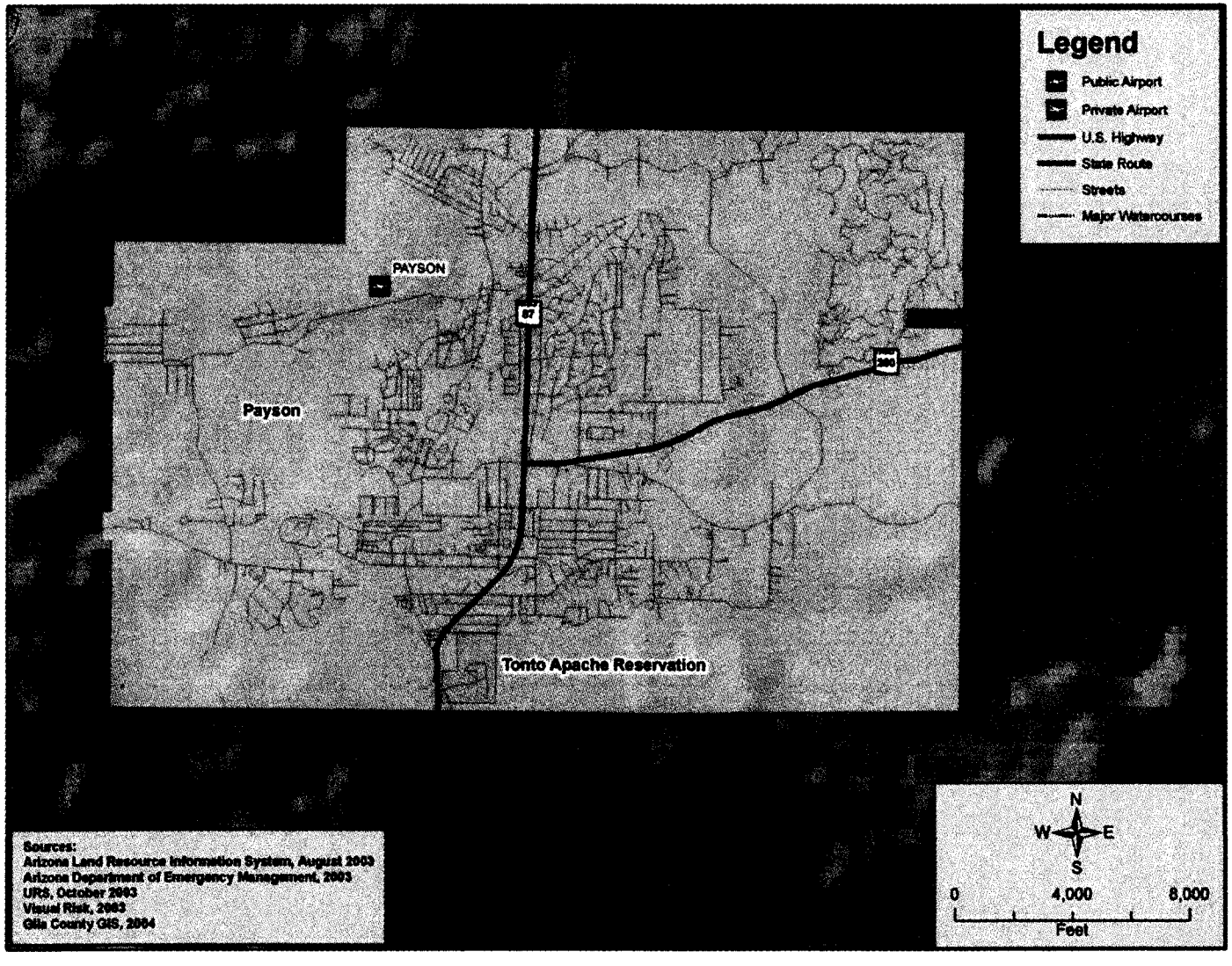

Figure 1-2

Transportation Routes Map

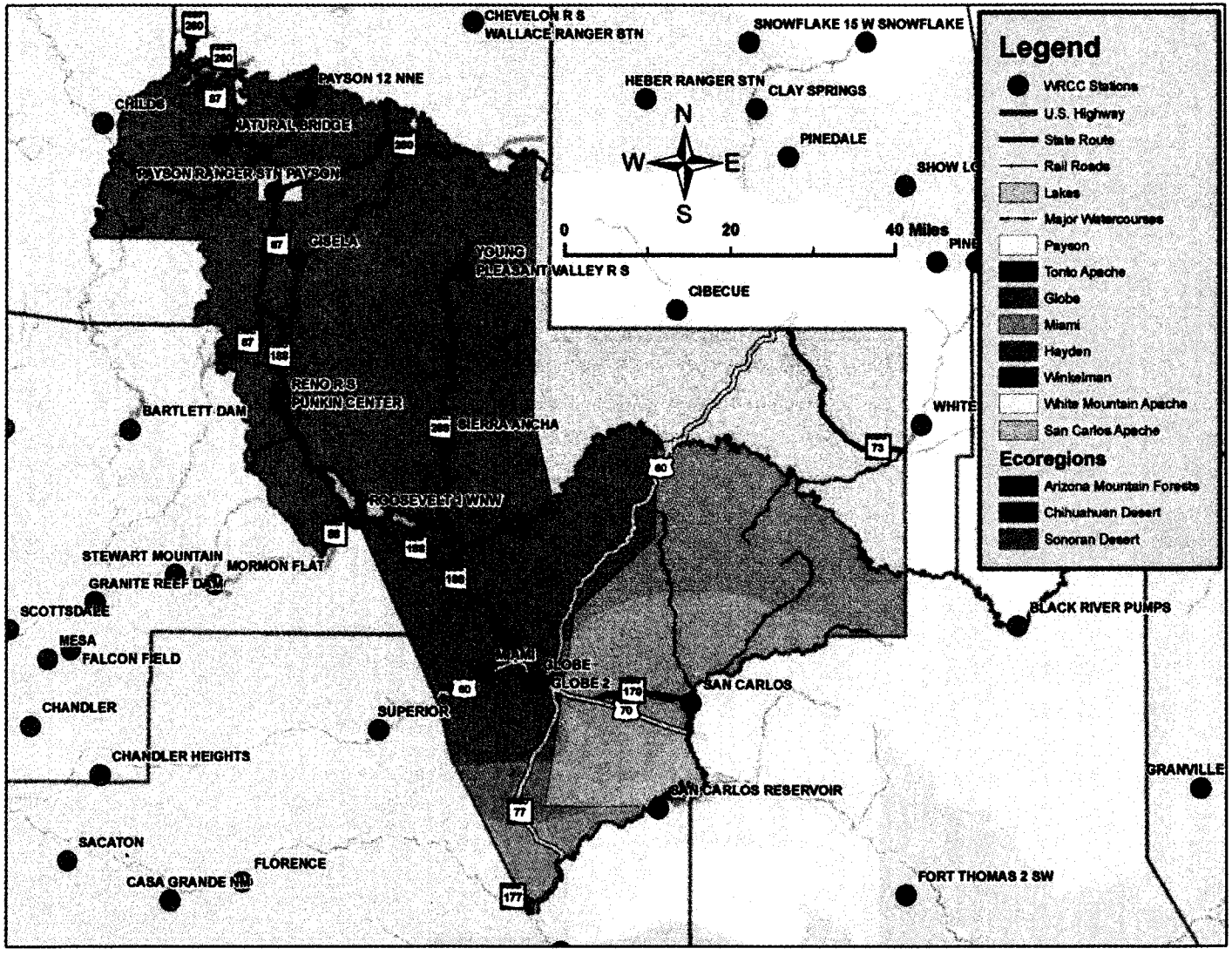

Figure 1-3

Terrestrial Ecoregions Map

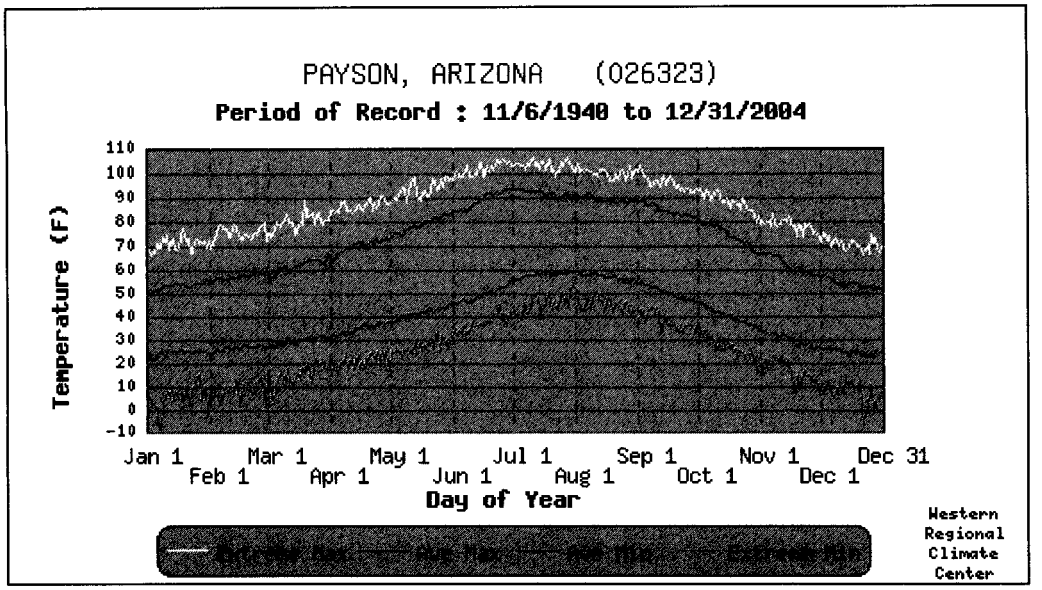

Figure 1-4

Daily Temperatures and Extremes for Payson, Arizona

Precipitation in Payson and northern Gila County is governed to a great extent by elevation and season of the year. From November through March, storm systems from the Pacific Ocean cross the state as broad winter storms producing mild precipitation events including snow on the Mogollon Rim and Mazatzal Mountains to the west. Summer storms between the months of May and October result in heavy downpours that make up almost half of Gila County's annual precipitation. Summer monsoons are created when moisture-bearing weather systems move into Arizona from the Gulf of California and from the Gulf of Mexico causing a shift in wind direction. The monsoons are often accompanied by thunderstorms caused by excessive heating of the land surface uplifting moisture-laden air[7]. Figure 1-5 presents tabular temperature and precipitation statistics for the Payson weather station.

[7] Office of the State Climatologist for Arizona, 2004. Partially taken from the following weblink: http://geography.asu.edu/azclimate/narrative.htm

PAYSON, ARIZONA (026323)

Period of Record Monthly Climate Summary

Period of Record : 11/6/1940 to 12/31/2004

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	53.7	57.4	62.1	70.3	79.2	89.4	92.4	89.7	85.1	74.9	62.3	54.4	72.6
Average Min. Temperature (F)	24.4	26.4	29.7	34.9	41.7	49.5	58.2	57.4	50.4	40.2	30.0	24.5	38.9
Average Total Precipitation (in.)	2.15	1.98	2.23	1.08	0.55	0.39	2.77	3.05	1.91	1.74	1.61	1.97	21.43
Average Total SnowFall (in.)	5.9	4.9	4.4	1.9	0.0	0.0	0.0	0.0	0.0	0.1	2.0	5.0	24.1
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	1	0

Percent of possible observations for period of record.
Max. Temp.: 86.6% Min. Temp.: 86.6% Precipitation: 86.6% Snowfall: 86% Snow Depth: 85.7%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Figure 1-5
Monthly Climate Summary for Payson, Arizona

1.3.3 Demographics

The Arizona Department of Commerce prepares annual community profiles for individual counties and communities within the state. The 2003 profiles for the Town of Payson and Gila County are provided in Appendix B for reference.

The total 2003 population for Payson is estimated at 14,820 [8]. The total 2005 Tonto Apache Indian Tribal membership is estimated at 125 [9]. Table 1-1 summarizes population estimates for Payson and other Gila County communities in 10-year cycles beginning in 1990 and projecting through 2040.

[8] Arizona Department of Economic Security, 2004, *July 1, 2003 Population Estimates for Arizona's Counties, Incorporated Places, and Balance of County Areas*

[9] Estimate based on Tonto Apache Tribal records.

Table 1-1

Summary of population statistics for Gila County and Incorporated Communities

Jurisdiction	1990	2000	2010	2020	2030	2040
Gila County	40,216	51,335	54,603	60,757	66,378	70,163
Globe	6,062	7,486	8,107	8,661	9,167	9,508
Hayden	909	892	912	913	914	915
Miami	2,018	1,936	2,094	2,127	2,157	2,177
Winkelman	676	443	422	425	428	429
San Carlos Apache Indian Reservation	7,294	9,385	n/a	n/a	n/a	n/a
White Mountain Apache Indian Reservation	10,394	12,429	n/a	n/a	n/a	n/a
Tonto Apache Indian Reservation	102	132	n/a	n/a	n/a	n/a

Notes: Figures for 1990 and 2000 from Arizona Dept. of Commerce.
Figures for 2010-2040 from AZ Dept of Economic Security with projections dating from 1997.

Payson's economy prospers from tourism, retirement and the construction industry. Payson is rich in culture and history and is the center of numerous outdoor recreational opportunities with the proximity to majestic Mogollon Rim. The civilian labor force in 2003 was 3,625 with an unemployment rate of 3.8 percent.

1.3.4 Development History

Payson got its start in the late 1800's as gold prospectors entered the region. With little gold found, the vast grazing lands turned residents to ranching. The forests brought trappers, hunters and eventually logging and milling to the region. The Town was platted in 1882 and called Union Park, but was named Payson in 1884 after Congressman Louis Edward Payson. Payson was considered an isolated mountain Town until 1959 after the construction of the Beeline Highway (SR 87) connecting Payson to Phoenix.

The Town of Payson has a long history in southwest heritage. With the quality of life and endless recreational activities, the community is growing and diversifying with businesses drawn to the area. The population of Payson from 1990 to 2003 increased by 77 percent and is expected to continue. Taxable sales in Payson increased by 179 percent between 1990 and 2003. New building permits increased from 321 in 1990 to 421 in 2003.