

YUMA COUNTY



Yuma County 2020 Comprehensive Plan

Effective March 26, 2012

Includes Amendments through May 5, 2014

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Section One—Overview

1.1 Purpose

The Yuma County 2020 Comprehensive Plan, herein after referred to as the “Plan”, is intended to accomplish coordinated, adjusted and harmonious development of the unincorporated area of Yuma County. In accordance with Arizona Revised Statutes 11-804, the Plan was developed so as to conserve the natural resources of Yuma County, to ensure efficient expenditure of public monies and to promote the health, safety, convenience and general welfare of the public. The Plan is the official guide for the development of the unincorporated area of Yuma County.

1.2 Legislative Authority

The *Growing Smarter Act* was Arizona’s first growth management legislation and became effective August 21, 1998. In February 2000, part two of the Growing Smarter Act, *Growing Smarter Plus*, was passed and became effective May 18, 2000. Together, these laws form the basis of planned growth management legislation in the State.

Growing Smarter Plus attempts to address problems associated with growth. The legislation strengthened requirements for county planning. Under Growing Smarter Plus, each Arizona county is required to prepare and adopt a new ten-year comprehensive plan. Consequently, the legislation ensures regulated growth.

1.3 Scope

The Plan addresses a wide variety of countywide characteristics, concerns and issues that the impacts of growth will generate. Central to developing the components of the Plan are the core concepts set forth by the *Growing Smarter* legislation and recommended by the *Growing Smarter* Commission

Yuma County Context:

- Yuma County covers 5,500 square miles
- From 2000 to 2010, Yuma County has experienced a 22.3% increase in population
- Continued growth rates would result in county population increasing from 195,751 residents to a projected 239,451 residents by 2020.

1.6 Core Concepts

Public Participation—In updating the Plan, it was understood that uncoordinated and unplanned growth, combined with a lack of common goals, posed a threat to the future quality of life enjoyed by Yuma County residents. Hence, in adopting *Growing Smarter Plus*, broad-based citizen participation was required to ensure the public's interest was incorporated throughout the process. The Plan includes policies, priorities and actions proposed through extensive citizen participation and designed to be representative of county residents.

Yuma County Character—A primary intent of the Plan is to reflect the unique characteristics of the county and to enhance and preserve those qualities. These characteristics include its rural heritage, strategic location, river corridor and a diverse economy supported by bi-national activities including retirement communities, military facilities, government employment and tourism.

Important concepts and high priority items suggested by county residents to provide a framework for the Plan are as follows:

- **Agricultural Lands**—Preserve rural character, encourage the conservation of agricultural lands, and discourage uses that conflict.
- **Transportation**—Encourage efficient and effective transportation systems based on regional priorities and coordinated with county, municipal, State, military and Federal management agencies.
- **Growth Management**—Promote development in areas where adequate public facilities and services exist or could be provided in an efficient manner.
- **Open Space**— Encourage conservation of open space, retention of open space sites and expansion of recreational resources.
- **Property Rights**—Ensure the property rights of landowners are protected.
- **Environmental Resources**—Protect, conserve and enhance environmental resources, access to natural resource lands, air and water quality and availability of water.
- **Economic Development**—Encourage a stable and enduring economic base by planning for adequate land use development.
- **Financial Resources**—Ensure the efficient spending of public funds by analyzing the fiscal impacts of land use decisions.

Section Two—Introduction

2.1 Purpose

The county’s annual average population growth over the last decade has been 22.3 percent. If this growth rate remains constant, the character of the county will change in ways that reflect the ongoing urbanization and growth in all communities. This will include demographic changes, increased ethnic and cultural diversity, land use densities, land costs, traffic and a need to preserve the natural environment.

Arizona Department of Economic Security Yuma County Population Projections

- 2020 population 239,451
 - Or 43,700 new residents in ten years
 - Or 4,370 new residents per year
 - Or 364 new residents per month
 - Or 12 persons per day
-

Given the trends and changes occurring in the county, maintaining and/or enhancing the quality of life will require considerable foresight, ongoing cooperative efforts and broad-based planning. Once development occurs, it cannot be easily reversed. The results of the decisions the community makes, or fails to make, will be with us for generations to come. Therefore, it the purpose of the Plan to be a basic document that provides a rational decision making framework to aid in these decisions.

2.2 Evolution of the Plan

The Plan is written to fulfill mandates of the State and the Growing Smarter legislation. The *Yuma County 2020 Comprehensive Plan* provides an updated foundation for long term growth and development in the county. The *Yuma County 2010 Comprehensive Plan* was adopted by the Board of Supervisors December 10, 2001. Arizona Revised Statutes §11-824B states as follows: “A county comprehensive plan, with any amendments, is effective for up to ten years from the date the plan was initially adopted or until the plan is readopted or a new plan is adopted pursuant to this subsection and becomes effective. On or before the tenth anniversary of the plan’s most recent adoption, the board shall either readopt the existing plan for an additional term of up to ten years or shall adopt a new county plan as provided by this article.”

The county was divided into Development Study Areas (DSAs) to handle the organization, allocation of resources and writing of the Plan. Ten of Development Study Areas Background Studies and Community Assessments were completed to provide a base of information for the development of the Plan.

The Plan further evolved through a series of public participation efforts conducted from the kick-off of the Plan's update that started with the creation of Citizen Advisory Groups (CAGs) from the first annual meeting held on November 16, 2006 in the Dome Valley/Wellton Planning Area. The last CAG meeting took place on May 25, 2011.

2.3 Public Participation Approach

Public participation was the single-most vital element in the creation of the *Yuma County 2020 Comprehensive Plan*. Multiple public meetings were held by Planning staff at locations all across the County at which the Plan was discussed. The Plan was structured around extensive citizen involvement in implementing Growing Smarter legislation. The Public Information/Public Participation (PI/PP) Program was a central focus to the overall efforts and was designed and coordinated in order to ensure the broadest possible base of citizen and group involvement. The Plan was then written to incorporate the needs, desires and issues county citizens felt are important and articulate the different visions expressed regarding growth and development.

Citizen Advisory Groups (CAGs) were fundamental to the public involvement component of the planning process. In the initial phase of the PI/PP, CAGs were formed for the designated planning areas. These CAGs met a number of times and were involved in a variety of tasks and exercises. This involved defining policies and priorities for their area and expressing concerns and opinions relative to the general content of the Plan. The results are contained within the final report written for each CAG. These reports, as well as all other supporting documents, are available upon request or on the Yuma County website at www.yumacountyaz.gov.

2.4 Designated Planning Areas

The county was divided into nine planning areas for analysis of county resources and growth trends. Additionally, as part of the Plan update, seven Citizen Advisory Group Studies were written to provide a base of information and an in-depth understanding of existing conditions and future development and infrastructure needs for each one of the planning areas.

These Planning Areas include the following:

- 1) North Gila
- 2) Yuma Mesa
- 3) Northwest Yuma
- 4) Gila Valley
- 5) Foothills
- 6) Yuma Valley
- 7) Martinez Lake
- 8) Dome Valley/Wellton
- 9) Dateland/East County

Planning Area Descriptions: The nine geographically assigned Planning Areas are described as follows: *(Refer to the Land Use Element for detailed maps of each planning area.)*

- 1. North Gila Planning Area:** The North Gila Planning Area is comprised of the area roughly bounded by California to the west, Yuma Proving Ground and the Gila Mountains to the east, Levee Road to the south and Imperial Dam to the north. The planning area is almost exclusively located in the Colorado and Gila River valley. The confluence of the Colorado and Gila Rivers is located along the southern boundary of the planning area.
- 2. Yuma Mesa Planning Area:** The Yuma Mesa Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the East Main Canal and a small portion of the City of Somerton to the west, the Barry M. Goldwater Range and City of Yuma to the east, the City of San Luis and Mexico to the south and Interstate 8 and MCAS-Yuma to the north. A portion of the Cocopah Reservation is located within the planning area; however, it is part of a sovereign nation and not under the land use planning jurisdiction of Yuma County.
- 3. Northwest Yuma Planning Area:** The Northwest Yuma Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by Avenue D to the west, the City of Yuma to the south and east and the West Main Canal and 1st Street to the north.
- 4. Gila Valley Planning Area:** The Gila Valley Planning Area is comprised of the area roughly bounded by Pacific Avenue to the west, Fortuna Wash to the east, Levee Road to the north and the City of Yuma to the south. The planning area is almost exclusively located in the Colorado and Gila River valleys. The confluence of the Colorado and Gila Rivers is located along the northern boundary of the planning area.
- 5. Foothills Planning Area:** The Foothills Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the City of Yuma to the west, the crest of the Gila Mountains to the east, the Barry M. Goldwater Range to the south and the Gila Gravity Main Canal and County 9th Street to the north. Fortuna Wash, which runs in a northeasterly direction, more or less bisects the planning area.
- 6. Yuma Valley Planning Area:** The Yuma Valley Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by Mexico to the west, the City of Yuma, Avenue D, the City of Somerton and the East Main Canal to the east, the City of San Luis to the south and California to the north. The planning area is located in the Yuma Valley close to the Colorado River.
- 7. Martinez Lake Planning Area:** The Martinez Lake Planning Area is comprised of two geographically separate areas that can be roughly defined as the portion of Yuma County that is located north of Imperial Dam and west of Yuma Proving Ground and the Kofa National Wildlife Refuge. The topography of the southern portion of the planning area is dominated by the Colorado River and Martinez Lake which forms the western boundary of the planning area and the County. Development in this area centers around the Martinez Lake shoreline. The northern portion of the Martinez Lake Planning Area is a sliver of land located between the La Paz County line and the Kofa Mountains and the Kofa National Wildlife Refuge.

- 8. Dome Valley/Wellton Area:** The Dome Valley/Wellton Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the crest of the Gila Mountains to the west, the Barry M. Goldwater Range to the south, the crest of the Mohawk Mountains to the east and Yuma Proving Ground to the north. The Gila River runs from east to west, bisecting the planning area.
- 9. Dateland/East County Planning Area:** The Dateland/East County Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the crest of the Mohawk Mountains and Yuma Proving Ground to the west, the Barry M. Goldwater Range to the south, Maricopa County to the east and La Paz County to the north. The Gila River runs from east to west bisecting the planning area. The Eagle Tail Mountains Wilderness Area covers 12 square miles. This area is managed by the Bureau of Land Management in a manner that minimizes as much as possible human impact on the land.

Section Three—Land Use Element

The Land Use Element provides guidance for future growth and any potential changes to land use patterns in unincorporated Yuma County. The Land Use Element can be divided into three major components.

The first component details existing and projected demographics and examines existing land use patterns in unincorporated Yuma County. A special emphasis is placed on agricultural and military activities because, in addition to being the two most important segments of the Yuma County economy, 47% of nonmilitary land in unincorporated Yuma County is being used for agricultural purposes, and a further 29% is being used as federal wildlife refuges, leaving 29% or 1,542 square miles (an area comparable in size to the state of Rhode Island) available for other types of land use.

The second component contains land use designations and a set of maps depicting how all land under the planning jurisdiction of Yuma County is designated. Each land use designation contains the allowed uses and densities that are desired on land with that designation. All lands under the planning jurisdiction of Yuma County have been assigned a land use designation.

The third component covers the amendment process and criteria. Changing circumstances can lead to a need and/or desire to make specific changes to a land use plan and the maps by which it is implemented. For this reason, the land use designation maps contained within the Yuma County 2020 Comprehensive Plan can be altered through the major or minor amendment process. When an amendment to change a land use designation map is submitted, it is judged on criteria contained in *Section 3.3* to determine if the proposed change is an improvement to the land use pattern and will help achieve the goals and objectives of the 2020 Comprehensive Plan.

The Land Use Element is comprised of three sections:

Section 3.1: Demographics and Existing Land Use Patterns

- Estimated year-by-year population change from 2001 to 2009
- Building permit trends from 2000 to 2010
- Population projections from 2011 to 2020
- Projected housing units needed from 2011 to 2020
- Land ownership patterns
- Military land use
- Agricultural land use
- Planning areas
- Profile of each planning area detailing its demographics and land use patterns

Section 3.2: Land Use Designations

- Definition of twenty one land use designations containing the allowed uses and densities
- A detailed set of maps that show the land use designation of all land under the land use planning jurisdiction of Yuma County

Section 3.3: Amendment Process and Criteria

- Major/minor amendment definition
- Major amendment process
- Minor amendment process
- Criteria for amending the land use maps

3.1 Demographics and Existing Land Use Patterns

The past decade (2001 to 2010) has seen two distinct trends in the annual population growth rate. In the first half of the decade there were nearly uninterrupted increases in the annual population growth rate for both Yuma County as a whole and unincorporated Yuma County. The annual population growth rate peaked in 2005 at nearly 4%. The second half of the decade saw the real estate bubble burst, housing prices decline and a major recession. These were likely major factors in the population growth rate slowing every year after 2005. By 2009 the annual growth rate for unincorporated Yuma County had declined to 0.31% per year.

Population growth has two components. The first is natural increase, which is the rate at which the number of births to Yuma County residents exceeds the number of deaths of Yuma County residents. In Yuma County both numbers of births and deaths, as reported to the Arizona Department of Health Services, have held remarkably stable over the past decade with almost no variation between years. In a typical year between 2002 and 2009, the rate of natural increase for Yuma County is approximately 2,000 people.

The second component of population change is the net migration rate, or the number of people moving into and out of Yuma County. Unlike births and deaths for which comprehensive statistics are available, net migration has to be estimated. This is done by taking the overall estimate of population change calculated by the Arizona Department of Commerce and subtracting out portions which can be attributed to births and deaths. What is left over is the net migration rate. For all years 2002 through 2009, the net migration rate for Yuma County was positive, meaning for all years more people moved in than moved out. However, the annual net migration rate into Yuma County fluctuated greatly between 2002 and 2008. Between 2002 and 2005 it grew greatly, peaking in 2005 with about 5,000 more people moving into Yuma County than moving out. As economic conditions deteriorated in 2007, the net migration rate declined dramatically. In 2008 and 2009 only about 300 more people moved into Yuma County than moved out.

Building Permit Trends

Between 2000 and the end of 2010, Yuma County issued 7,964 housing unit building/placement permits. Of these, 4,861 were building permits for new site built single family homes. All of these represent additions to the housing stock of unincorporated Yuma County. Yuma County issued 2,824 placement permits for manufactured homes. It is unclear what percentage of these manufactured homes represent additional housing or were replacements for existing manufactured housing as Yuma County does not regulate or track the removal of manufactured or mobile homes. There were 279 placement permits issued for mobile homes which are defined as structures built on or prior to June 15, 1976 on a permanent chassis.

The Foothills Planning Area was the center of residential growth in unincorporated Yuma County. Approximately 77% of the permits issued for additional housing units were in the Foothills Planning Area. The next most active planning area in terms of growth was the Yuma Mesa Planning Area, accounting for about 10% of added housing units. The remaining 10% was split between the seven other planning areas with the Northwest Yuma Planning Area accounting for 4.2% of the total.

Unincorporated Yuma County saw three very different trends in the rate at which housing units were added between 2000 and 2010. From the beginning of 2000 through the third quarter of 2003, there was nearly steady growth in the number of housing units added. The rate at which housing units were added stayed relatively high and steady through the first quarter of 2006. From this point on the rate at which housing units were added declined steeply at first then leveled off some time around the third quarter of 2007 and remained the same for the rest of the decade. Between 2006 and 2010, 14 out of 16 quarters saw a decline in the number of housing units added. The initial decline was likely caused by an issue regarding sewer capacity in the areas of highest growth.

Population Estimates

	2001	2002	2003	2004	2005	2006	2007	2008	2009
San Luis	16,846	17,688	18,838	20,158	21,488	22,351	23,680	24,654	25,682
City of Yuma	79,699	80,975	81,944	83,315	85,352	87,180	88,664	89,842	91,105
Somerton	7,973	8,225	8,660	9,110	9,944	10,600	11,057	12,146	12,754
Wellton	1,869	1,876	1,879	1,896	1,900	1,908	1,908	1,921	1,951
Unincorporated Yuma County	56,780	57,307	57,976	59,521	61,510	63,228	63,872	64,736	65,480
All of Yuma County	163,167	166,071	169,297	174,000	180,194	185,267	189,181	193,299	196,972

Table 1: Population by Year and Jurisdiction¹

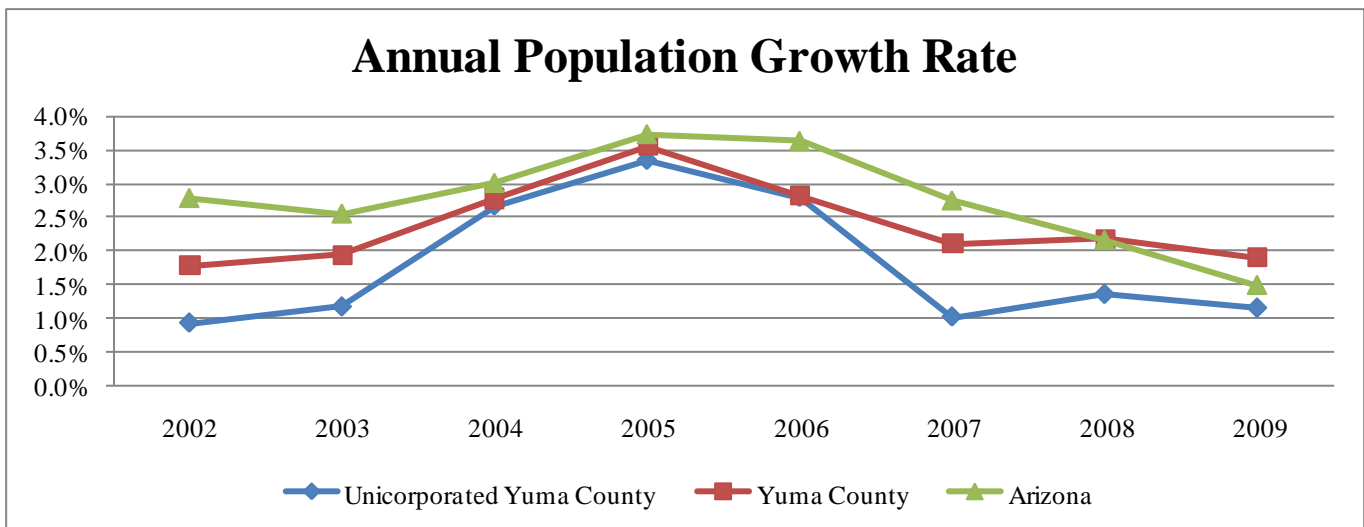


Figure 1: Annual Population Growth Rate¹

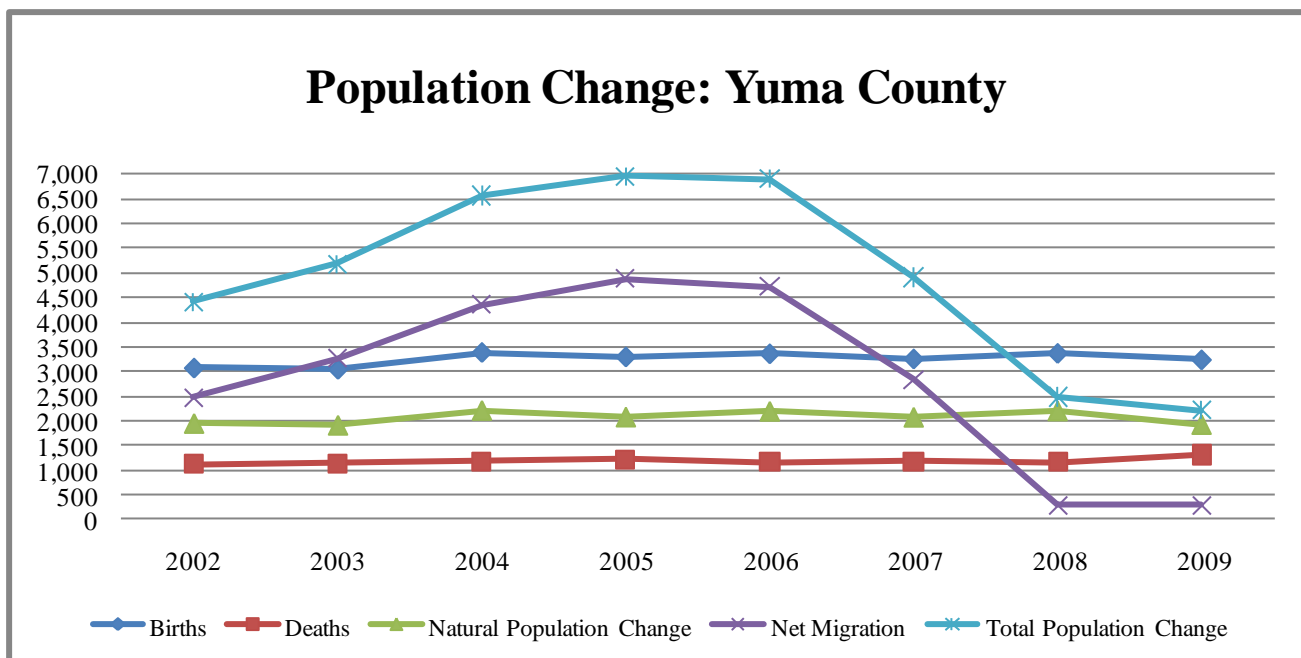


Figure 2: Population Change Factors 2002 through 2009¹

¹ U.S Census estimates

Land Use Element

<i>Planning Area</i>	<i>Single Family Site Built</i>		<i>Manufactured Home</i>		<i>Mobile Home</i>		<i>Total Housing Units</i>	
Foothills	3,976	65.2%	2,056	33.7%	66	1.1%	6,098	76.6%
Dome Valley/Wellton	63	29.7%	124	58.5%	25	11.8%	212	2.7%
Dateland/East County	6	5.9%	70	68.6%	26	25.5%	102	1.3%
Yuma Mesa	620	75.6%	165	20.1%	35	4.3%	820	10.3%
Yuma Valley	56	47.1%	45	37.8%	18	15.1%	119	1.5%
North Gila	4	9.3%	36	83.7%	3	7.0%	43	0.5%
Gila Valley	14	6.9%	164	80.8%	25	12.3%	203	2.5%
Martinez Lake	24	80.0%	6	20.0%	0	0.0%	30	0.4%
Northwest Yuma	98	29.1%	158	46.9%	81	24.0%	337	4.2%
Total	4,861	61.0%	2,824	35.5%	279	3.5%	7,964	100.0%

Table 2: Housing Units Added by Type and Planning Area from 2000 through 2010

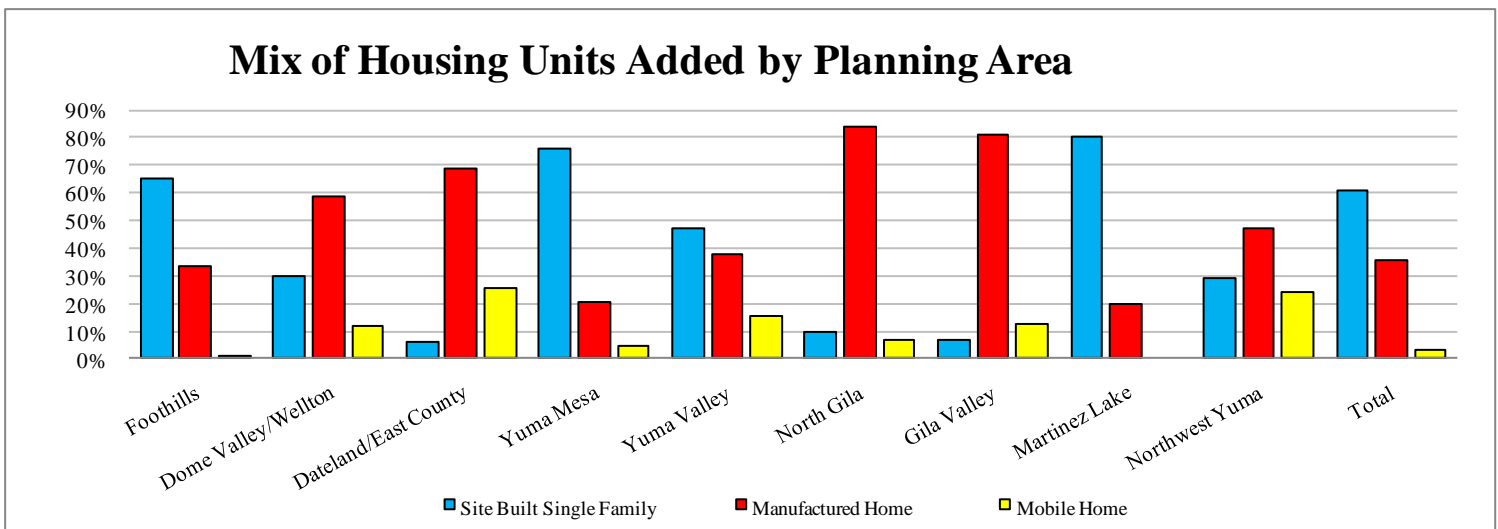


Figure 3: Mix of Housing Units Added by Planning Area from 2000 through 2010

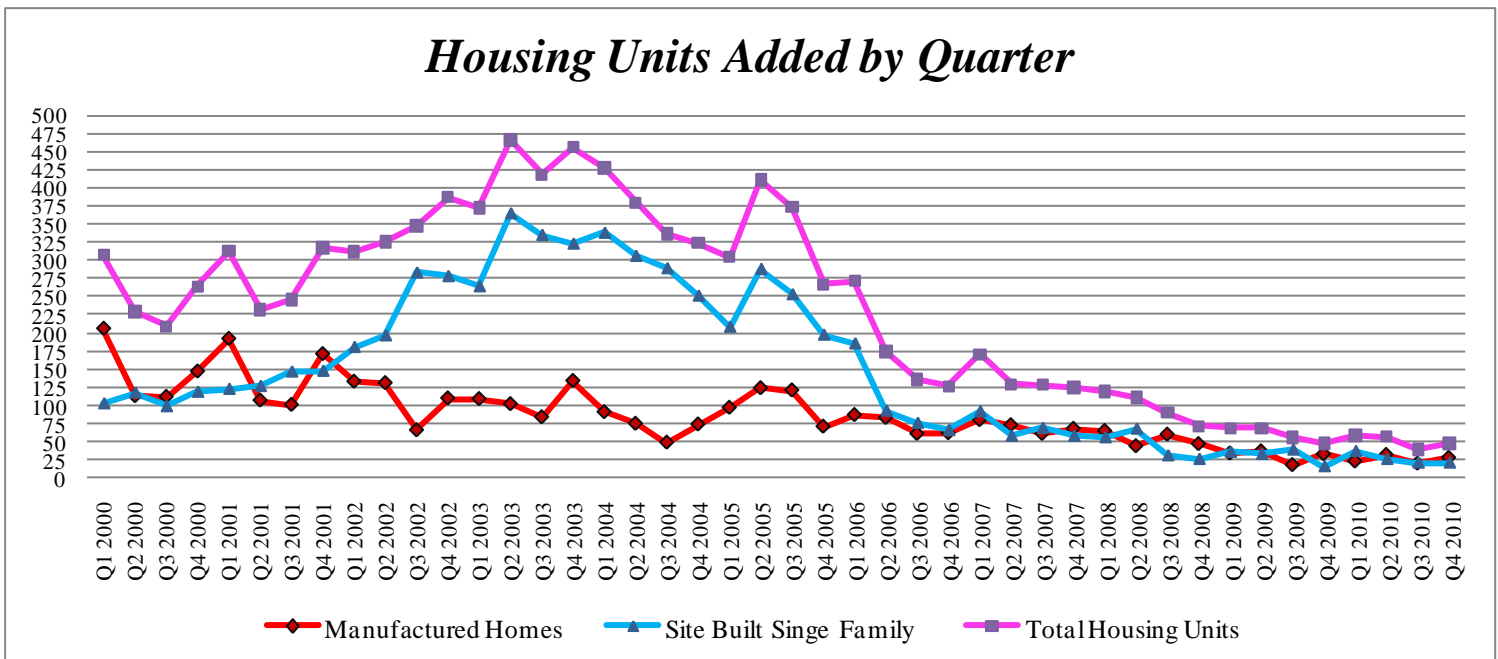


Figure 4: Mix of Housing Units Added by Quarter

Projected Change From 2010 Levels in Population and Housing								
Growth Scenario	2012		2015		2018		2020	
	People	Housing Units	People	Housing Units	People	Housing Units	People	Housing Units
Matches 2007 through 2009, 0.3% Annual Growth Rate	421	240	1,058	603	1,700	969	2,131	1,215
Matches 2002 through 2006, 3.36% Annual Growth Rate	4,935	2,813	12,976	7,397	21,856	12,458	28,284	16,122
Matches 2001 through 2009, 2.24% Annual Growth Rate	3,236	1,845	8,368	4,770	13,852	7,896	17,716	10,098
Recovery Begins in 2010	4,330	2,468	11,324	6,455	18,966	10,811	24,451	13,937
Recovery Begins in 2011	3,366	1,918	10,177	5,801	17,619	10,043	22,960	13,087
Recovery Begins in 2012	1,440	821	8,073	4,601	15,320	8,732	20,521	11,697
Recovery Begins in 2013	421	240	6,024	3,434	13,081	7,456	18,146	10,343
Recovery Begins in 2014	421	240	4,029	2,296	10,901	6,214	15,833	9,025
Recovery Begins in 2015	421	240	2,086	1,189	8,778	5,004	13,581	7,741
Recovery Begins in 2016	421	240	1,058	603	6,711	3,825	11,388	6,491
Recovery Begins in 2017	421	240	1,058	603	4,698	2,678	9,252	5,274
Recovery Begins in 2018	421	240	1,058	603	2,738	1,560	7,172	4,088
Recovery Begins in 2019	421	240	1,058	603	1,700	969	5,147	2,934
Recovery Begins in 2020	421	240	1,058	603	1,700	969	3,175	1,810

Table 3: Projected Gains in Population and Housing Units in Unincorporated Yuma County Under Different Growth Scenarios

In order to better plan for future changes in land use patterns, it is important to understand what type of changes in population and resulting changes in the number of housing units are most likely to occur during the period of time covered by this plan. Table 3 provides projected changes in population from their 2010 levels for 2012, 2015, 2018 and 2020 based on various growth scenarios.

The bursting of the housing bubble and the beginning of the recession in 2007 has dramatically reduced population and housing unit growth. Historically, growth in both unincorporated Yuma County and Yuma County has been both robust and reasonably predictable. Between 1980 and 2000, the average annual growth rate for Yuma County was 3.84%.

Uncertainty in regard to when Yuma County will return to its historical growth patterns makes it very difficult to project population and housing unit growth for the years 2010 through 2020. To account for this, the above table projects population and housing growth for a number of different growth scenarios that vary based on what year historical growth patterns resume. Projecting growth in this manner allows for a range of expected growth under the most optimistic and most pessimistic conditions that can be established. An increase of about 24,000 people and 14,000 housing units would be expected by the end of 2020 were historical growth patterns to resume in 2010. If historical growth patterns do not resume until the year 2020, a population increase of about 3,000 people and 1,800 housing units would be expected by the end of 2020. If the assumption is made that the historical growth patterns return to a growth rate more in line with historical norms sometime between 2011 and 2015, the range of expected growth shrinks to an increase of about 23,000 to 13,000 people and 13,000 to 8,000 housing units by the end of 2020.

Land Ownership Patterns

In unincorporated Yuma County there are approximately 472 square miles of privately owned land. This is the area under the direct land use planning jurisdiction of Yuma County and is home to approximately 70,000 people and nearly all of Yuma County’s agricultural industry. There is a perception that because only 8.88% of unincorporated Yuma County is privately owned that there is a shortage of developable land. The low percentage of privately owned land in unincorporated Yuma County is more a factor resulting from the presence of two large national wildlife refuges and two large military installations than of a lack of privately held land. The 472 square miles of privately owned land, while small when compared to the overall size of unincorporated Yuma County, is nonetheless a large area of land. It is exactly equal in size, for example, to the City of Los Angeles. This does not even take into account the significant amount of privately held land located within the incorporated areas of Yuma County.

The State of Arizona owns 5.98% ² of the land in unincorporated Yuma County with the overwhelming majority of this being state trust land. State trust lands are managed by the Arizona State Land Department which is mandated to achieve the highest and best use of the land in order to maximize revenues to the trust’s beneficiaries. For state trust lands to be available an interested party must apply for a parcel to be put up for auction. If the State Land Department feels that an auction at that time is the best way to maximize revenue from that parcel, a public auction is then held. Historically, state trust lands have been an important source of developable lands. For example, Martinez Lake and much of the Foothills were originally state trust land. This trend is likely to continue as large areas of state trust land remain in the portions of Yuma County that have been experiencing the most development.

Type of Land Ownership or Management	Acres	Square Miles
State of Arizona	203,399	317.8
Indian Reservations	8,063	12.6
Bureau of Land Management	341,581	533.7
Cabeza Prieta National Wildlife Refuge	449,530	702.4
Kofa National Wildlife Refuge	527,316	823.9
Yuma Proving Ground	448,244	700.4
Barry M. Goldwater Range	928,263	1,450.4
Private Land	302,254	472.3
<i>Total Unincorporated Yuma County</i>	<i>3,403,938</i>	<i>5,318.7</i>

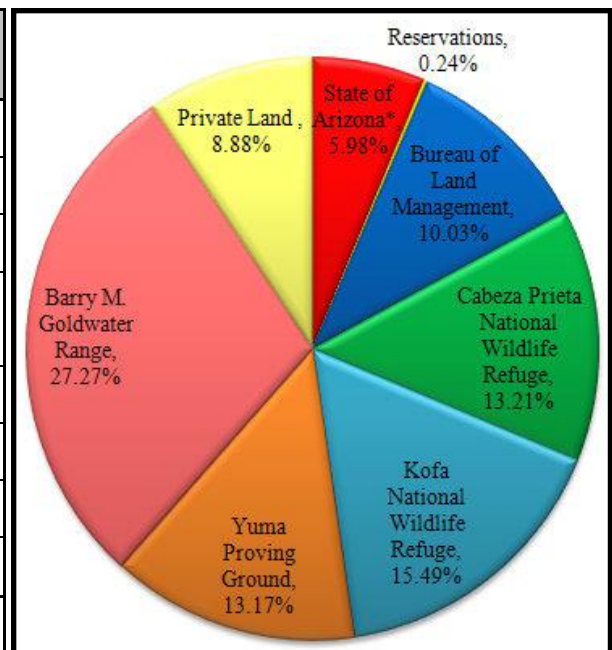


Table 4: Land Ownership in Unincorporated Yuma County

Figure 5: Land Ownership in Unincorporated Yuma County

² Does not include the approximately 305 square miles of land titled to the State of Arizona that are located within the boundaries of Kofa National Wildlife Refuge, Yuma Proving Ground and Barry M. Goldwater Ranges that are managed as part of these entities.

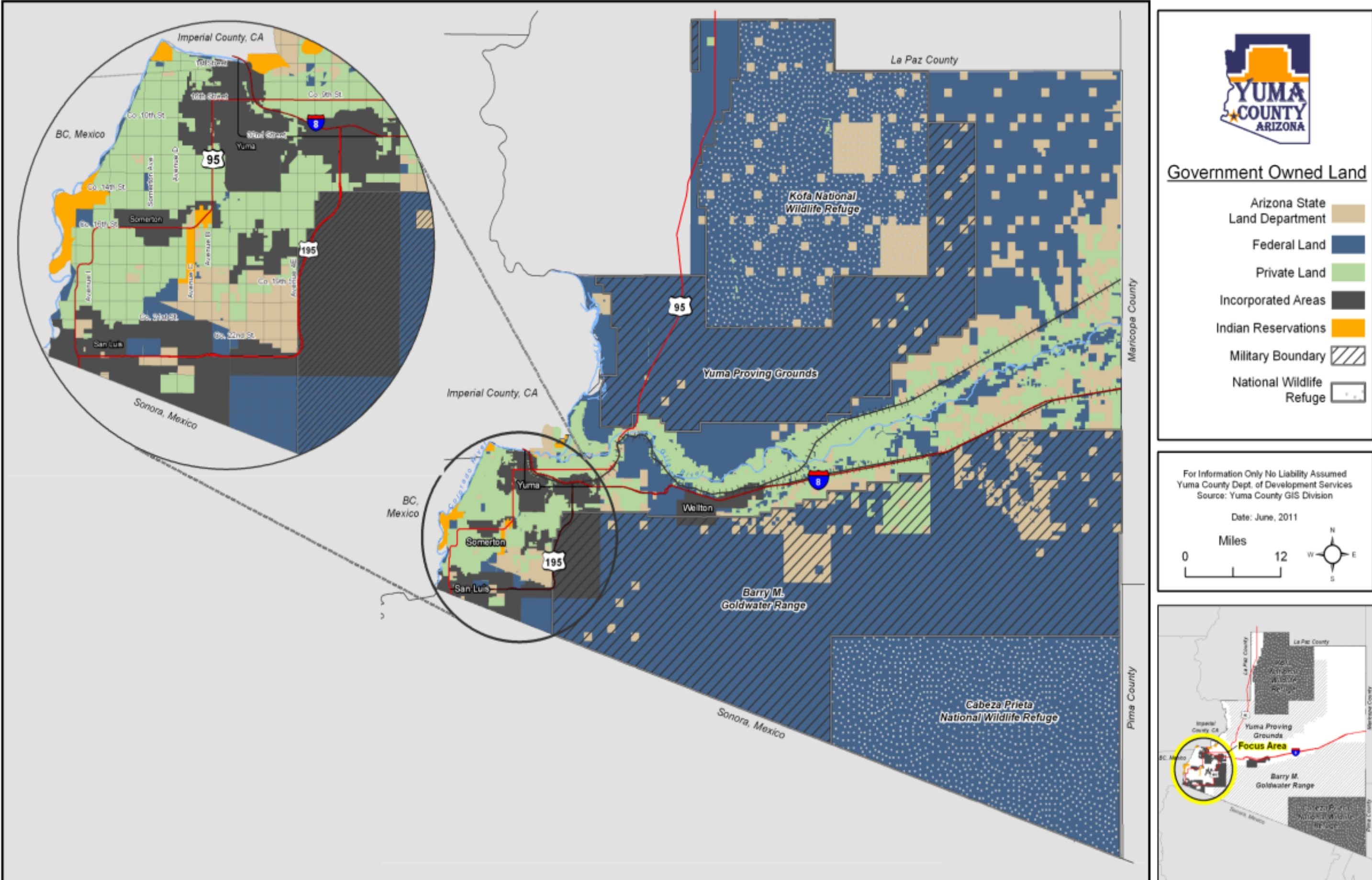
Having a greater effect on county development is the federal government, which owns approximately 80% of land in Yuma County. Most of this land is part of four entities with a specific mission and land use: Yuma Proving Ground, Barry M. Goldwater Range, Kofa and Cabeza Prieta National Wildlife Refuges. Almost all of the remaining 341,581 acres are managed by the Bureau of Land Management (BLM). The BLM's plan on how this land is to be used is contained in the *Yuma Field Office Approved Resource Management Plan* which was approved in January 2010.

Industrial and Commercial

It is important the county industrial and commercial needs are supported by appropriate land use designations. The existing industrial and commercial land uses reflect the county's strategic location in relation to the Interstate 8 (I-8) corridor, MCAS-Yuma, and Mexico. Over two-thirds of the land currently designated as Industrial is located in the western portion of the county, primarily along Highway 95, Area Service Highway, and the I-8 corridor. Immediately south of MCAS-Yuma, there is a large area designated Agriculture/Industrial primarily intended to allow continued agricultural uses, site built residences with noise attenuation, and aviation-compatible industrial uses subject to the demonstration and completion of the appropriate public infrastructure, public services and long term water allocation needed for development.

Existing commercial land uses reflect a combination of strip and cluster development. Most commercial establishments are located within the vicinity of residential areas and are adjacent to arterial roads and major intersections. An example is the large tracts of commercial land currently located along I-8 on the North and South Frontage Roads around Foothills Boulevard and Fortuna Road.

Land Use Element - Land Ownership



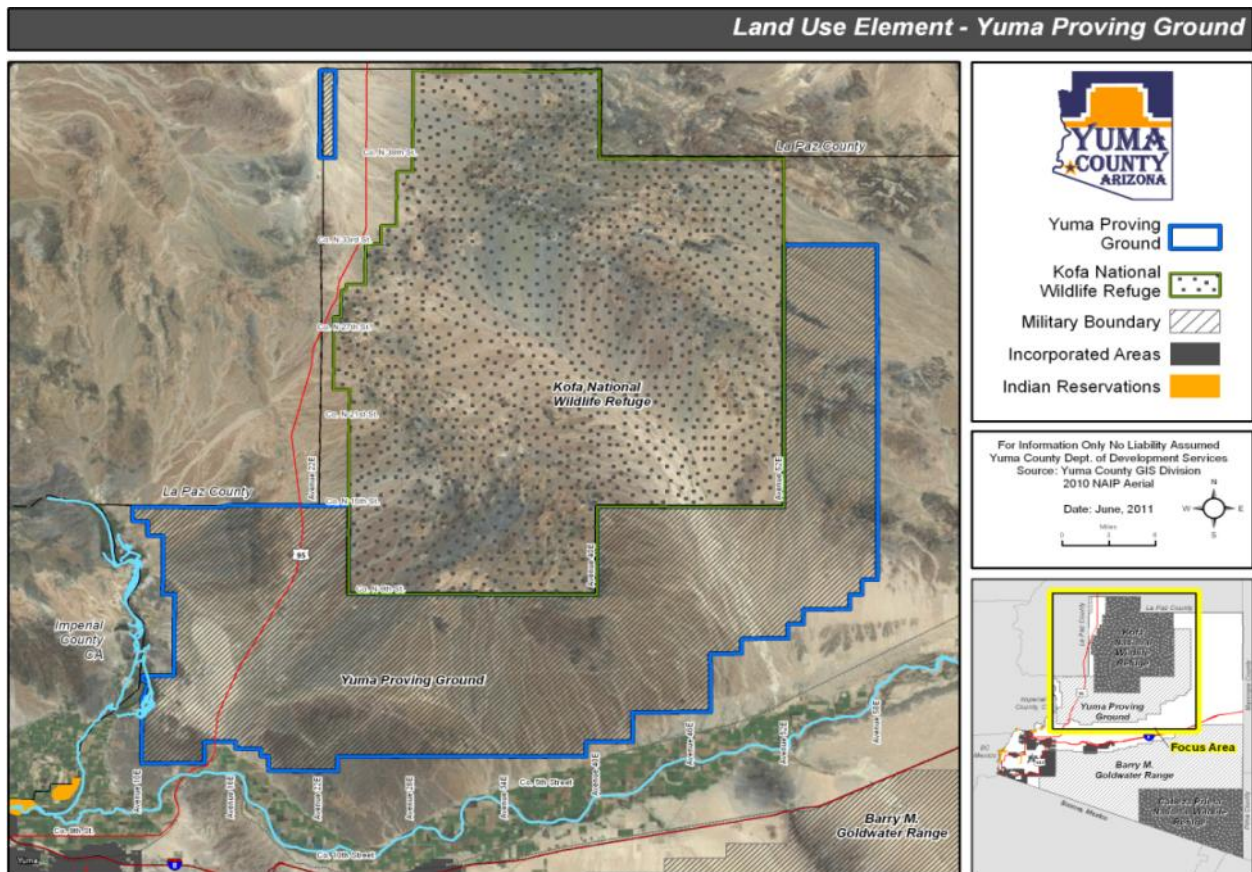
Map 1: Government Land in Eastern Yuma County

Yuma Proving Ground

Yuma Proving Ground (YPG) is a large test facility for the U.S. Army and is located in the northwest portion of Yuma County. YPG is one of the largest military installations in the world covering approximately 700 square miles of Yuma County as well as an additional 600 square miles in neighboring La Paz County. YPG provides a site for the Army to test things such as long range artillery, missile firing aircraft, cargo and personnel parachutes, direct fire weapons, unmanned aerial systems, and technologies to defeat roadside bombs. YPG also serves as a location for training with 9,000 to 10,000 soldiers and marines conducting training at YPG each year.

Yuma Proving Ground is a vital component of the Yuma County economy. YPG is the largest single employer in Yuma County employing approximately 3,000 civilian and military employees. Approximately 450 employees reside in housing located within YPG. Additionally, approximately 23,000 people visit YPG annually to conduct testing and training activities. The overall economic impact of YPG on the Yuma County economy is estimated to be about \$425 million annually.

In July 2009, General Motors opened a new \$120 million hot weather vehicle testing facility on a 2,400 acre site located within YPG as a replacement for a facility in Mesa, Arizona. In exchange for allowing General Motors to lease the site, the Army has gained access to the 40 miles of test track and roads that General Motors constructed at the site, enhancing the test capabilities of YPG. General Motors employs about 75 people at this site.



Map 2: Yuma Proving Ground

Marine Corps Air Station-Yuma

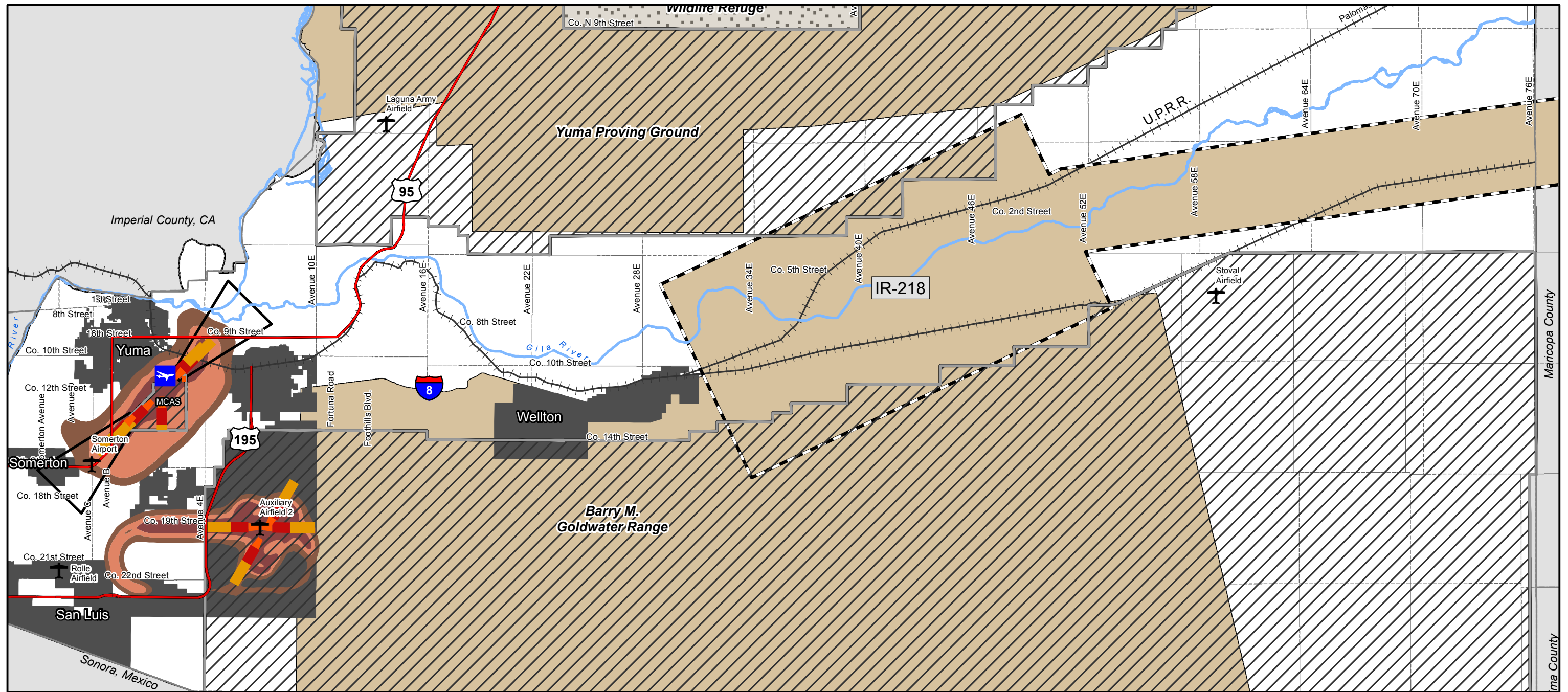
Marine Corps Air Station (MCAS)-Yuma covers 7.58 square miles within the City of Yuma. The site of MCAS was first used as an airfield in 1928. In 1943 it became an Army Air Base and after several more transfers of control it became a Marine Corps Air Station in 1959. The primary function of MCAS is to serve as home to Marine Aircraft Group-13 which is comprised of four squadrons of AV-8B Harriers, an aviation logistics squadron and is an aviation training installation for 80% of the Marine Corps aviation training. In 2010, 4,249 military personnel were stationed at MCAS, 6,777 family members of military personnel based at MCAS were present in Yuma County and 1,877 civilians were employed at MCAS. MCAS Yuma is the busiest airfield in the Marine Corps with approximately 211,000 airfield operations in 2010. The total economic impact of MCAS on the Yuma County economy was calculated to be \$485 million in 2010.³

The state legislature has adopted legislation governing land use in the vicinity of military installations because it recognizes the importance of military aviation to the state economy and how incompatible land uses in the vicinity of military airports endangers lives. The types of land uses allowed on land located within the defined noise zones and/or accident potential zones of MCAS and Auxiliary Field #2 (Aux-2), as referred to in A.R.S. §28-8461, have significant restrictions under A.R.S. §28-8481 in order to keep land uses in the vicinity of military airports compatible with the continued operations of these facilities. In these areas urban style residential development is prohibited and commercial and industrial development must be aviation compatible. These regulations are also designed to protect the safety of the public by keeping residences out of areas put at risk by airport operations. The June 15, 2005 crash of a bomb laden Marine AV-8B harrier jet into the backyard of a home located in Accident Potential Zone-1 illustrates the risk associated with these areas. These restrictions can be found in Article VII of the Yuma County Zoning Ordinance. Additionally, A.R.S. §28-8481 requires a major amendment for any change to the Comprehensive Plan that would increase residential density or allow for certain non-compatible land uses within any of the noise zones or accident potential zones.

It is the position of the Attorney General that pursuant to A.R.S. § 28-8481(F) and (P) and Attorney General Opinion No. I08-003, no new residential development within a high noise or accident potential zone is allowed unless the subject property had a building permit issued, had a residence constructed, or was approved for residential development under the terms and conditions of a development plan prior to December 31, 2004. Land that was zoned, but upon which one of the above criteria was not met prior to December 31, 2004, is not exempt from the requirements of A.R.S. § 28-8481 and thus Yuma County will not approve any new residential construction within these zones.

³Marine Corps Air Station Yuma 2010 Statistical Summary

Land Use Element - Marine Corps Air Station Yuma Regulatory Areas



Airfields

- Yuma International Airport
- Airfields
- Clear Zones
- APZ I
- APZ II
- High Noise or Accident Potential Zone

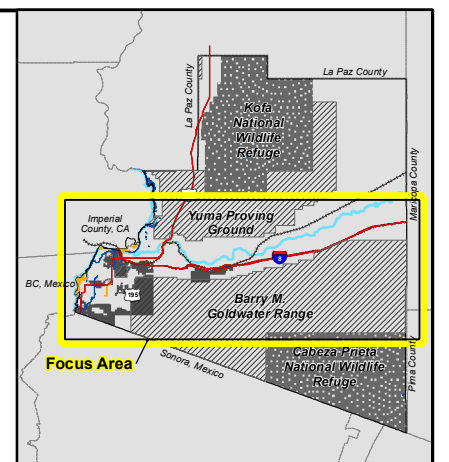
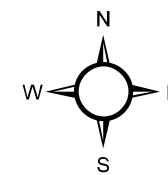
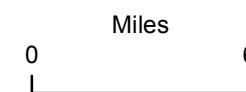
- Military Boundary
- Marine Corps Air Station Yuma
- Instrument Route 218

- 65 dB
- 70 dB
- 75 dB
- Incorporated Areas
- National Wildlife Refuge
- Restricted Airspace

*Single family residential development is restricted pursuant to the Comprehensive Plan, Land Use Element

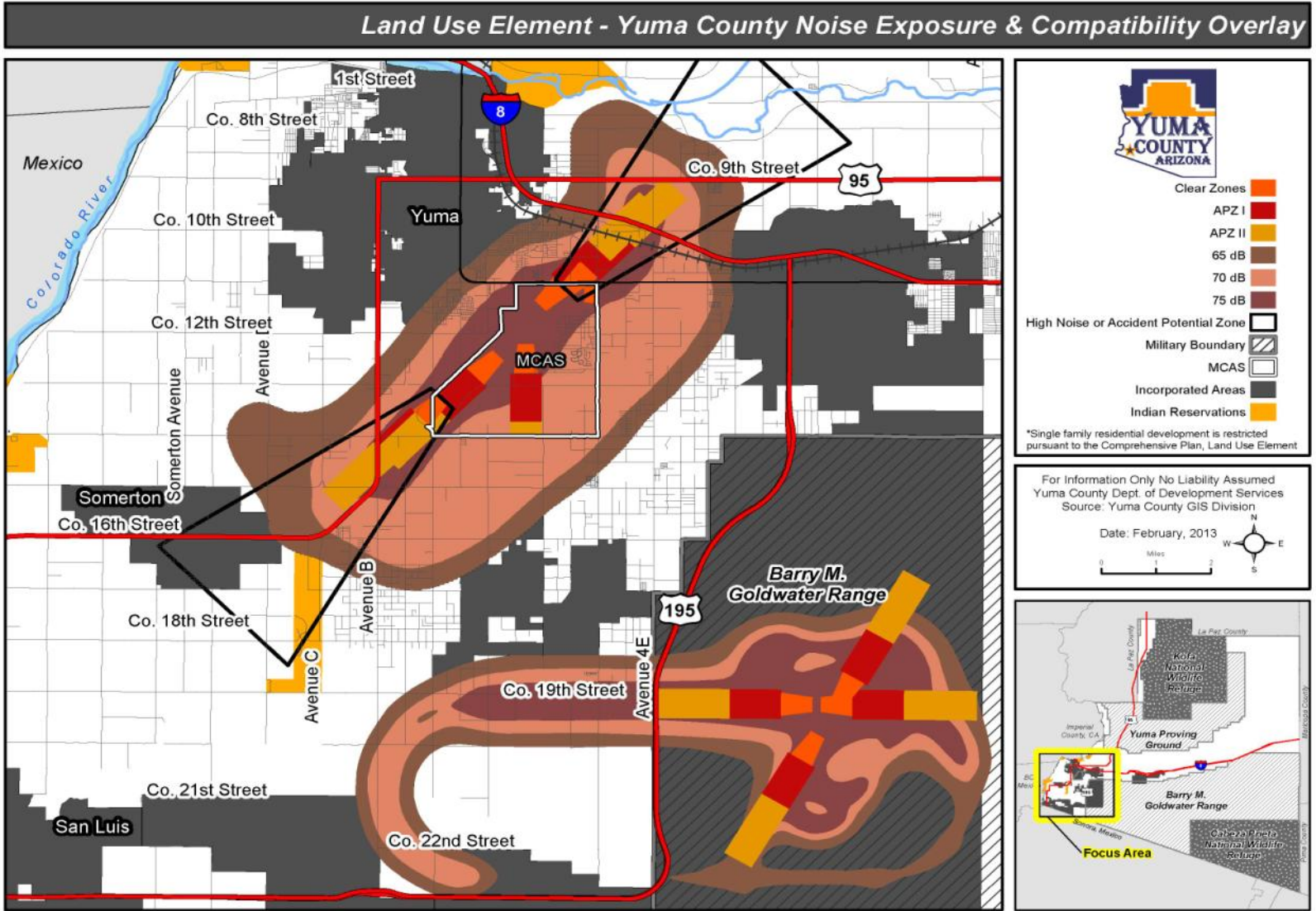
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Yuma County Dept. of Development Services
Source: Yuma County GIS Division

Date: February, 2013



Map 3: MCAS-Yuma Regulatory Areas

Map 3.1 Noise and Compatibility Overlay



Barry M. Goldwater Range

The Barry M. Goldwater Range (BMGR), established in 1941 spans 184,242,423 acres in Yuma, Maricopa and Pima Counties. It is the nation's second largest military reservation with 928,263 acres of it located in unincorporated Yuma County. The BMGR is split between the Marine Corps (the portion west of the Mohawk Mountains) and the Air Force (the portion east of the Mohawk Mountains). The BMGR's primary function is to provide a training location for aerial gunnery, rocketry, electronic warfare, tactical maneuvering and air support and an armament and high hazard testing area for other defense related purposes. There are two auxiliary airfields located within the Yuma County portion of the BMGR. Auxiliary Field #2, which is regularly used as a forward airfield for AV-8B, C-130 and helicopter training and Stoval Airfield, which is used by both fixed wing aircraft and helicopters on an intermittent basis.

The BMGR is a vital, unique and beneficial asset to Yuma County, the State of Arizona and the U.S. Military. Proximity to supporting military air bases, range land and airspace size, availability of supporting military airspace and varied terrain creates an asset that cannot realistically be reproduced anywhere else in the nation. Without the training opportunities provided by the nearby BMGR, the need for MCAS Yuma would be minimized. The BMGR has a statewide impact as all military installations with a flying mission are dependent on it. In the Legislative Environmental Impact Statement that accompanied the Congressional Bill that extended the timeframe for withdrawal of the public lands that comprise the BMGR for another 25 years, the Department of Defense stated the following about the importance of the BMGR: "*The BMGR has been one of the nation's most productive military reservations for training tactical aircrews since World War II.*"

⁴ Marine Corps Air Station Yuma 2010 Statistical Summary

Land Use Element - Barry M. Goldwater Range



Map 4: Barry M. Goldwater Range

Pima County

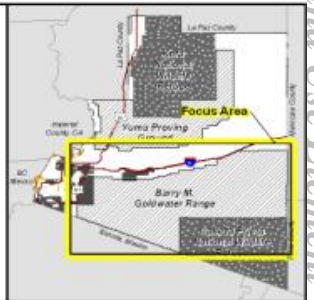
Maricopa County



-  Barry M. Goldwater Range
-  Incorporated Areas
-  Indian Reservations
-  National Wildlife Refuge

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 Source: Yuma County GIS Division

Date: June, 2011



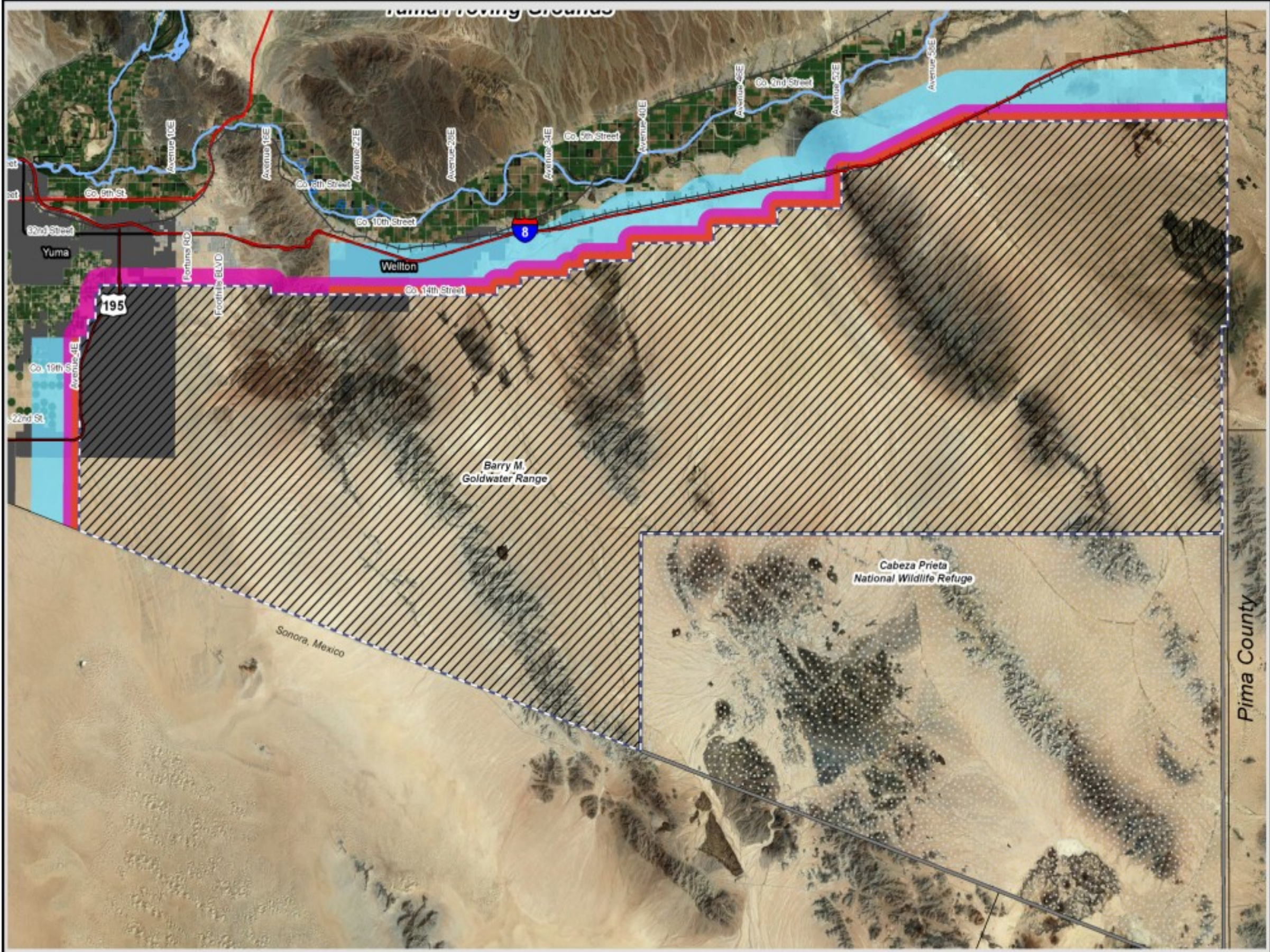
Land Use Element

Barry M. Goldwater Range Buffer Area Land Use Limitation

The Gila Bend Air Force Auxiliary Field/Barry M. Goldwater Range Joint Land Use Study was completed in February 2005 as part of a statewide compatibility project. The study was prepared to provide tools to address land use conflicts that might affect the ability of the base to conduct its mission and to ensure land use compatibility around active military reservations, as required under Title 28, Chapter 25, Article 7, of the Arizona Revised Statutes (ARS). In order to implement the findings of this study the following density and intensity guidelines are established:

- The applied use of land within ½ mile of the boundary of the BMGR that is east of the Gila Mountains will have residential density no greater than 5 acres per lot/parcel.
- The applied use of land within ½ mile of the boundary of the BMGR that is south of County 17th Street on the western boundary of the range will have residential density no greater than 5 acres per lot/parcel.
- The applied use of land from within ½ mile to 1 mile from the BMGR boundary that is east of the Gila Mountains will have residential density no greater than 2 acres per lot/parcel.
- The applied use of land from within ½ mile to 1 mile from the BMGR boundary that is south of County 17th Street on the western boundary of the range will have residential density no greater than 2 acres per lot/parcel.
- Properties being used for residential purposes up to 3 miles from the BMGR boundary that is east of the Gila Mountains will be required to file a Range/Military Ground Support Disclosure Statement.
- Properties being used for residential purposes up to 3 miles from the BMGR boundary that is south of County 17th Street on the western boundary of the range will be required to file a Range/Military Ground Support Disclosure Statement.
- The applied use of land within 1 mile of the BMGR along its western boundary beginning at County 14th running south to County 17th Street will have a residential density no greater than 2 acres per lot/parcel.
- The applied use of land within 1 mile of the BMGR along its northern boundary from Avenue 5¼ E to the Gila Mountains will have a residential density no greater than 2 acres per lot/parcel.
- Amendments to land use classifications up to 3 miles from the BMGR boundary will take into consideration the impacts of increasing density in regard to potential conflicts with the BMGR.
- Property access to roadways bordering the BMGR boundary (particularly County 14th Street in Yuma County) will be limited to reduce the opportunities for unauthorized access to the Range.
- Use of access roads to the BMGR will be restricted in order to discourage access to the BMGR by unauthorized personnel.

Land Use Element - Barry M. Goldwater Range Buffer Area Land Use Limitation



- Maximum Density of One Dwelling Unit per Five Acres
- Maximum Density of One Dwelling Unit per Two Acres
- Range/Military Ground Support Disclosure Statement Required
- Barry M. Goldwater Range
- National Wildlife Refuge
- Incorporated Areas

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 Source: Yuma County GIS Division

Date: June, 2011



Map 5: BMGR Buffer Area Limitation

Agricultural Land Use

Agriculture and related activities in terms of both employment and overall impact to the local economy are the largest sector of Yuma County’s economy. From the third quarter of 2009 to the second quarter of 2010, the agricultural sector of the economy was estimated to have employed 8,200 on a permanent basis and 20,200 at the seasonal peak in January of 2010 and has generated approximately \$3 billion dollars of economic activity. Agriculture in Yuma County also plays a unique and significant role nationally. Between October and April of every year over 90% of lettuce and other green vegetables consumed in the United States are grown in Yuma County.

Agriculture in Yuma County is made possible by water from the Colorado River with 154,870 acres being irrigated with water from the river. This water is delivered through a series of canals, siphons and pumping stations maintained and operated by six irrigations districts. All irrigation water is initially diverted from the Colorado River at Imperial Dam.

<i>Crop</i>	<i>Acres Harvested</i>
Fresh Market Vegetables	89,856
Lettuce	66,194
Hay	39,143
Spring Durum Wheat	34,852
Alfalfa	25,789
Cotton	18,197
Lemon	11,770
Broccoli	8,691
Sudan Grass	7,189
Cauliflower	3,887
Cantaloupe	2,913
Bermuda Grass Seed	2,555
Spinach	2,313
Watermelon	2,005
Alfalfa Seed	1,723
Tangelos	1,443
Winter Wheat	1,365
Sorghum	743
Oranges	492
Pima Cotton	351
Honeydew	298

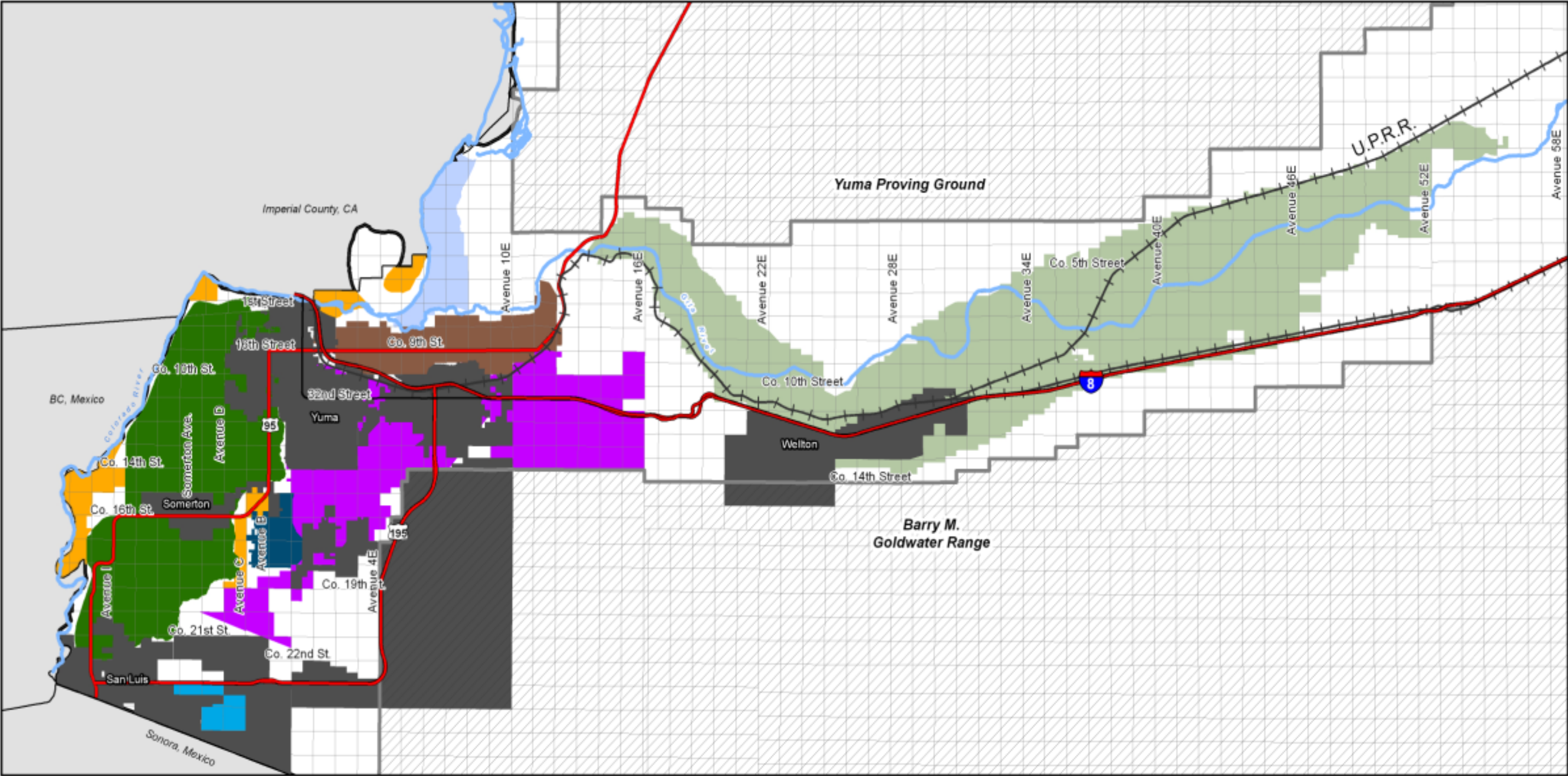
Table 5: Acres Harvested in Yuma County⁶

Domestic water for the City of Yuma and farmland in Yuma County can be divided into general categories based on location, types of crops that can be grown on it, soil types, United States Department of Agriculture (USDA) farmland classification and overall importance to the agricultural industry in the County. The most important of these is commonly know as “valley” farmland. Valley farmland is located in the historical flood plains of the Colorado and Gila Rivers, and as result, is some of the richest, most productive soil found in Arizona. Nearly all valley farmland has been rated by the USDA as prime farmland. Many of the most economically important crops such as lettuce, other vegetables, cotton and wheat are almost exclusively grown on valley farmland. Valley farmland is irreplaceable as very nearly all land with these characteristics is either being irrigated and farmed or has been developed for urban uses. It is because of this irreplaceable nature and the fact it supports a huge portion of the Yuma County economy that maintaining agricultural uses on prime valley farmland is one of the most basic and central goals of the Yuma County 2020 Comprehensive Plan.

The other type of farmland is commonly known as “the mesa”. The mesa is located on areas above the historical floodplains of the Colorado and Gila Rivers. Farmlands in these areas are typified by sandy soils that support a different set of crops than those found in the valley. The USDA classifies this farmland as “farmland of unique importance.” Some of the most commonly grown crops on the mesa include citrus, alfalfa and dates. While important, these crops tend to be of less economic value than those grown in the valley.

⁶US Department of Agriculture, 2007 Census of Agriculture

Land Use Element - Irrigation Districts



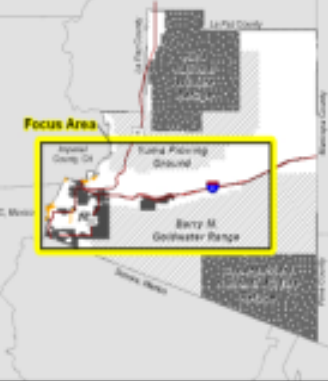
Irrigation Districts

- Hillander "C"
- North Gila Irrigation District
- Unit B Irrigation District
- Wellton-Mohawk Irrigation and Drainage District

- Yuma County Water Users Association
- Yuma Irrigation District
- Yuma Mesa Irrigation and Drainage District
- Incorporated Areas
- Military Boundary
- Reservations

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 Source: Yuma County GIS Division

Date: May, 2011



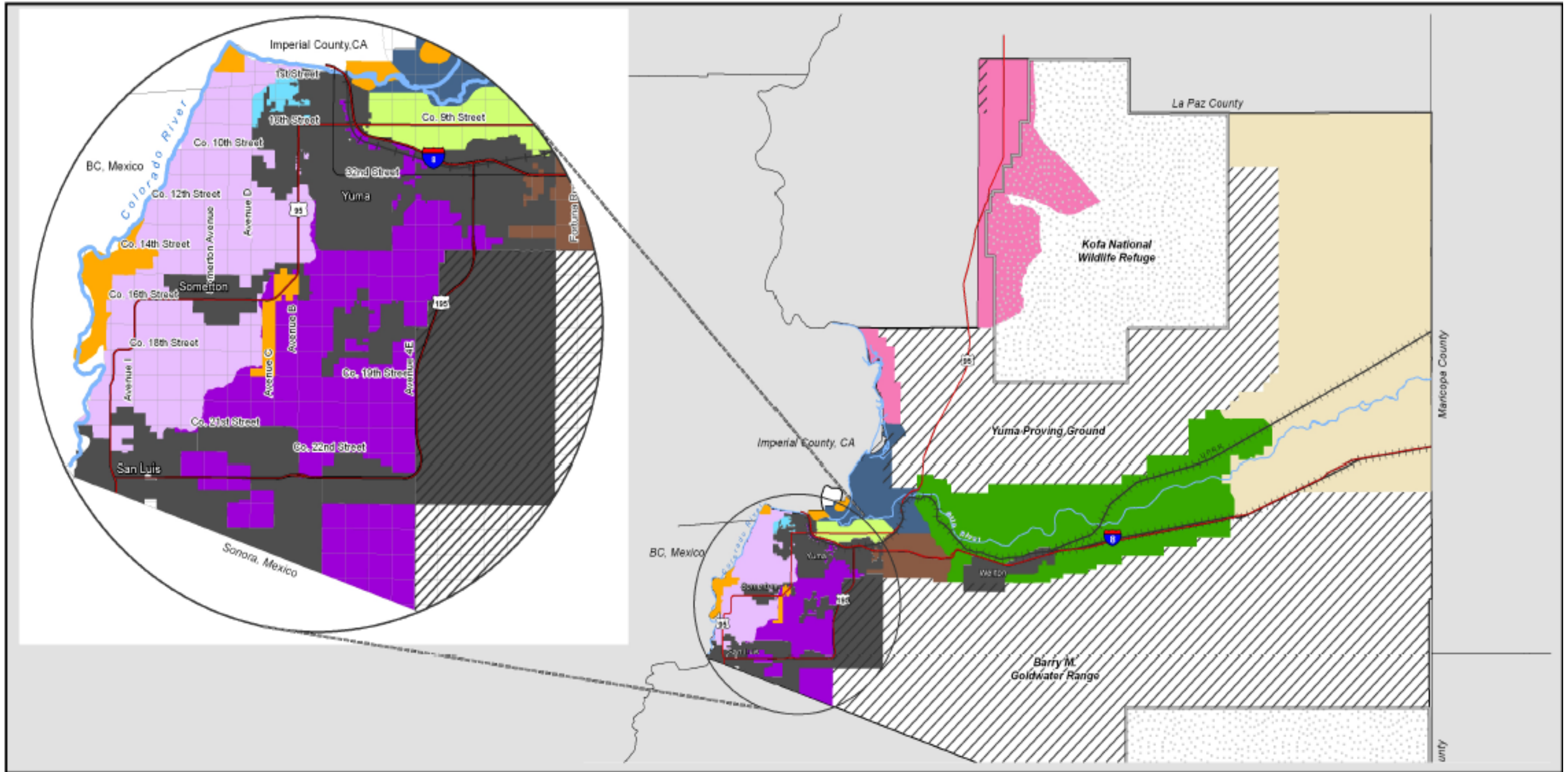
Map 6: Irrigation Districts

Designated Planning Areas

The county was divided into nine planning areas for analysis of county resources and growth trends. Additionally, as part of the Plan update, seven Citizen Advisory Group Studies were written to provide a base of information and an in-depth understanding of existing conditions and future development and infrastructure needs for each one of the planning areas.

These Planning Areas include the following:

- 1) North Gila
- 2) Yuma Mesa
- 3) Northwest Yuma
- 4) Gila Valley
- 5) Foothills
- 6) Yuma Valley
- 7) Martinez Lake
- 8) Dome Valley/Wellton
- 9) Dateland/East County



Planning Areas

- Dateland East County
- Dome Valley / Wellton
- Foothills
- Gila Valley
- Martinez Lake
- North Gila
- Northwest Yuma
- Yuma Mesa
- Yuma Valley
- Incorporated Areas
- Reservations
- Military Boundary
- National Wildlife Refuge

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 Source: Yuma County GIS Division



Map 7: Planning Areas in Yuma County

The North Gila Planning Area is comprised of the area roughly bounded by California to the west, Yuma Proving Ground and the Gila Mountains to the east, Levee Road to the south and Imperial Dam to the north. The planning area is almost exclusively located in the Colorado and Gila River valleys. The confluence of the Colorado and Gila Rivers is located along the southern boundary of the planning area. The North Gila Planning Area is a rural area that is predominately used for agricultural purposes with nonagricultural land being mountainous or riparian areas owned by various government entities.



Farmland in the North Gila Planning Area

Land designated as Agriculture/Rural Residential makes up 47.8% of the planning area. This represents mostly the portion of the planning area that is irrigated and actively farmed. Land with an Open Space and Recreational Resources designation makes up 40.8% of the planning area. Almost all of this is mountainous land in the Laguna and Gila Mountain ranges owned by the federal government. The North Gila Planning Area contains all of the North Gila Irrigation District and a small portion of the Yuma Irrigation District.

Farmland within the North Gila Planning Area tends to be of the highest quality found in Yuma County, all of it located off the mesa in the fertile river bottoms. Some of the more common crops that are grown in the planning area include lettuce, cotton, melons, wheat, safflower and many others.

The total population of the North Gila Planning Area is 1,038. Approximately 75% of the planning area's population lives in a quarter mile area bounded by Canyon Road, Avenue 9E, County 6th Street and Buckshot Road. The planning area has a very low overall population density with 15 persons per square mile over the 60.5 square miles that comprise the planning area. Excluding the area around Buckshot Road, the population density of the planning area is 3.73 people per square mile.



Housing in the North Gila Planning Area

North Gila Planning Area	
Total Housing Units ⁷	464
Occupied Housing Rate ⁷	83.6%
Manufactured Home Placement Permits Issued ⁸	36
Mobile Home Placement Permits Issued ⁸	3
Single Family Site Built Home Building Permits Issued ⁸	4

Table 6: Housing Units 2000 through 2010

Average Household Size⁷	
North Gila Planning Area	2.24
Yuma County	2.22
Arizona	2.24

Table 7: Average Household Size⁷

Between January 1, 2000 and December 31, 2010, 43 housing units were constructed or placed in the Planning Area. Of these, 84% were manufactured homes, 9% were single family site built homes and 7% were mobile homes. Mobile homes are defined as structures built on or prior to June 15, 1976 on a permanent chassis, but do not include recreational vehicles and factory built buildings.

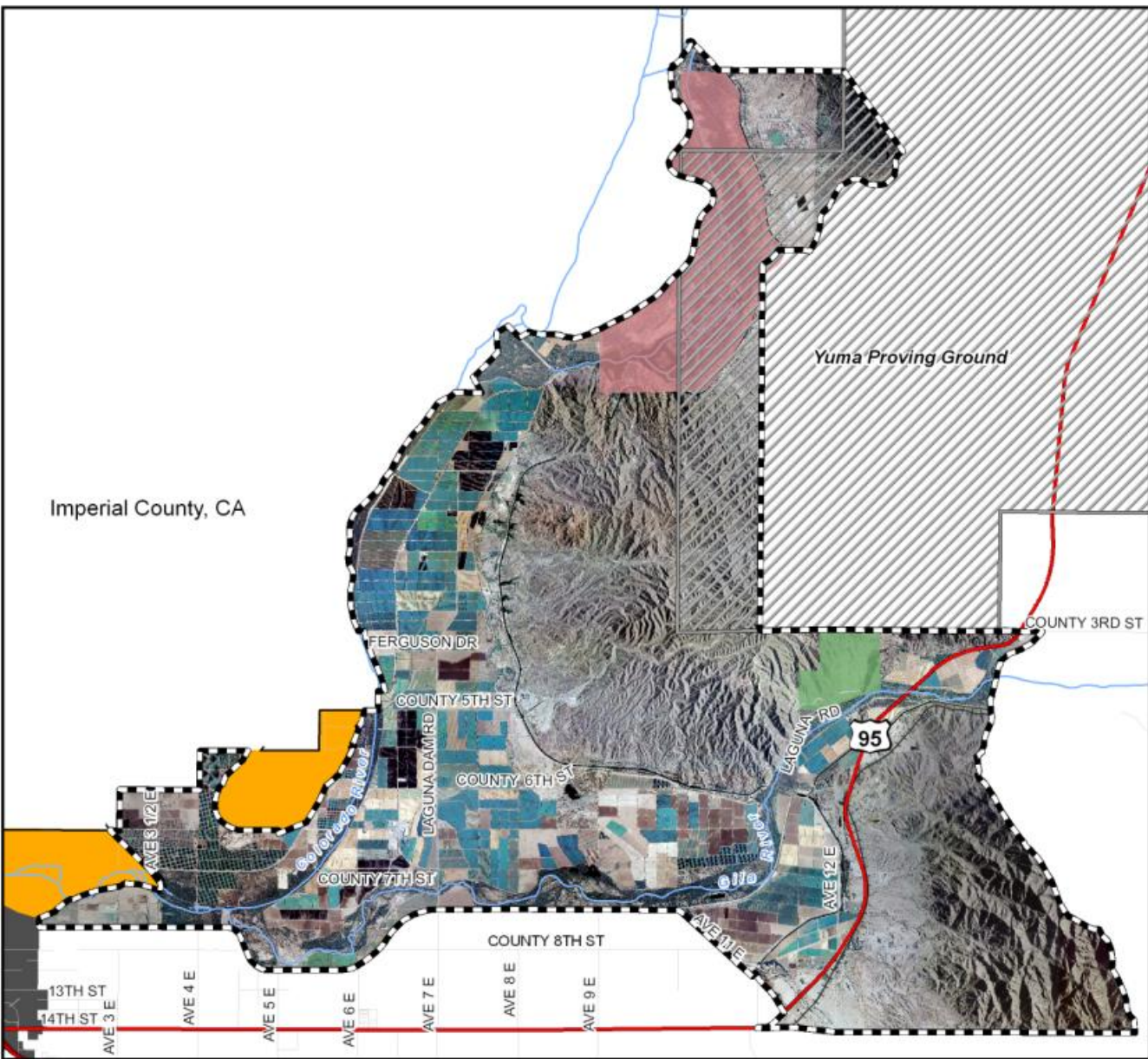
Nearly all building/placement permits were in two relatively concentrated areas, one bounded by Canyon Road, Avenue 9E, County 6th Street and Buckshot Road and the other in the vicinity of County 3rd Street and the Gila Gravity Main Canal.

⁷ 2010 U.S. Census

⁸ Yuma County Department of Development Services

Land Use Element - North Gila Planning Area

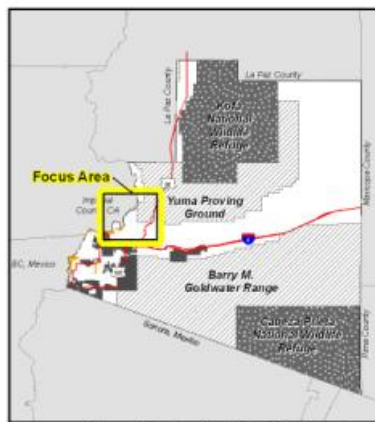
Map 8: North Gila Planning Area



- North Gila Planning Area
- Military Boundary
- Mitty Lake State Wildlife Area
- Adair Park
- Indian Reservations
- Incorporated Areas

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 2010 NAIP Aerial

Date: June, 2011



The Yuma Mesa Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the East Main Canal and a small portion of the City of Somerton to the west, the Barry M. Goldwater Range and City of Yuma to the east, the City of San Luis and Mexico to the south and Interstate 8 and MCAS-Yuma to the north. A portion of the Cocopah Reservation is located within the planning area; however, it's part of a sovereign nation and not under the land use planning jurisdiction of Yuma County.

The portion of the planning area located north of County 18th Street is almost entirely privately held land. Land use in this area is a mixture of agricultural uses, primarily citrus and alfalfa fields, rural scale parcels between two and five acres in size and residential development. Land south of County 18th Street to a line running parallel to and five miles north of the Mexican border is largely owned by the State of Arizona and much of it is leased for agricultural purposes or is open desert. There are very few residences in this part of the planning area. Land within five miles of the Mexican border is mostly federally owned, aside from a mix of privately owned land around the State prison and the Hillander "C" Irrigation District. All federal land in this area is open desert.

The total population of the Yuma Mesa Planning Area is 7,411. The planning area has a low population density of approximately 79 persons per square mile. All but 16 of the 7,411 residents of the planning area reside north of County 19th Street. Excluding the nearly uninhabited southern half of the planning area, the population density is 185.5 person per square mile.

MCAS-Yuma is directly adjacent to the planning area. Auxiliary Airfield #2 is located in the Barry M. Goldwater Range three miles east of the planning area. Both these military airfields are covered by the provisions of A.R.S. §28-8481. The types of land uses allowed for land located within the defined noise zones of facilities listed in A.R.S. §28-8481 have significant restrictions. These restriction can be found in Article VII of the Yuma County Zoning Ordinance. Additionally, A.R.S. §28-8481 requires a major amendment for any change to the Comprehensive Plan that would increase residential density or allow for certain non-compatible land uses within any of the defined noise zones.

The Yuma Mesa Planning area covers all or part of three irrigation districts. The Yuma Mesa Irrigation District, Unit B Irrigation District and Hillander "C" Irrigation District. The most common crops in the planning area are citrus and alfalfa. All farmland within the planning area is classified by the United States Department of Agriculture as "farmland of unique importance," which under federal law is defined as: "*land other than prime farmland that is used for production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods.*"



A Citrus Grove in the Yuma Mesa Planning Area

Yuma Mesa Planning Area	
Total Housing Units ⁹	2,701
Occupied Housing Rate ⁹	82.9%
Manufactured Home Placement Permits Issued ¹⁰	165
Mobile Home Placement Permits Issued ¹⁰	35
Single Family Site Built Home Building Permits Issued ¹⁰	620

Table 8: Housing Units 2000 through 2010

Average Household Size⁹	
Yuma Mesa Planning Area	2.74
Yuma County	2.22
Arizona	2.24

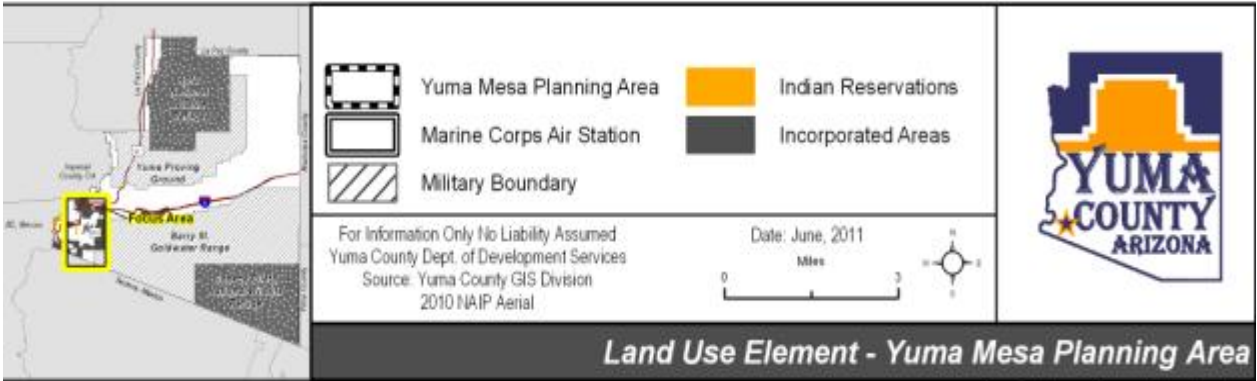
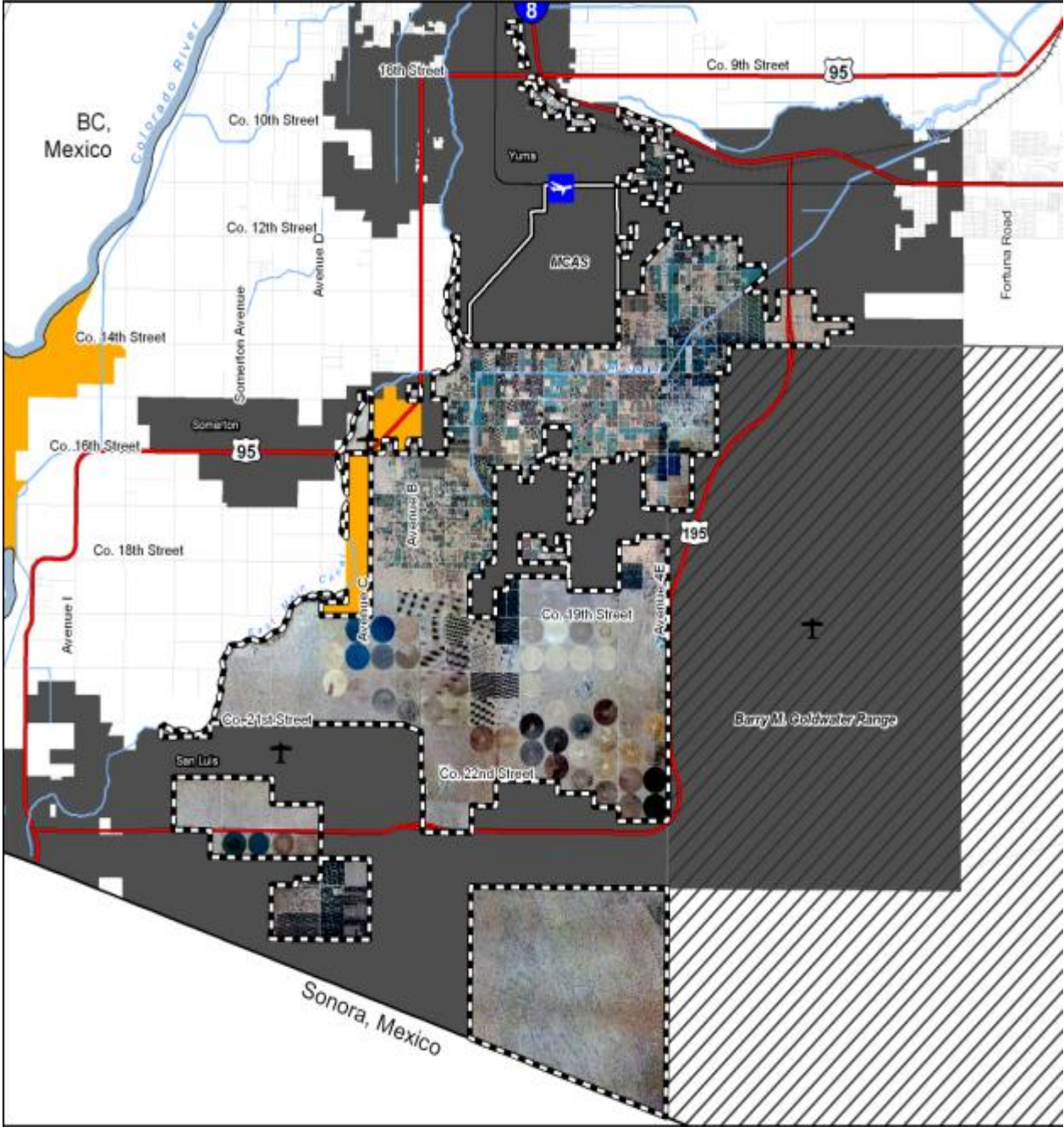
Table 9: Average Household Size⁹

Between January 1, 2000 and December 31, 2010, 819 housing units were constructed or placed in the planning area. Of these, 20% were manufactured homes, 76% were single family site built homes and 4% were mobile homes.

Residential development in the planning area has occurred almost exclusively at rural style densities. The majority of the housing units added to the planning area has been on parcels of at least two acres in size. There is a small number of older more dense subdivisions located in the planning area, but the character and development trend is clearly rural in nature.

⁹ 2010 U.S. Census

¹⁰ Yuma County Department of Development Services



Map 9: Yuma Mesa Planning Area

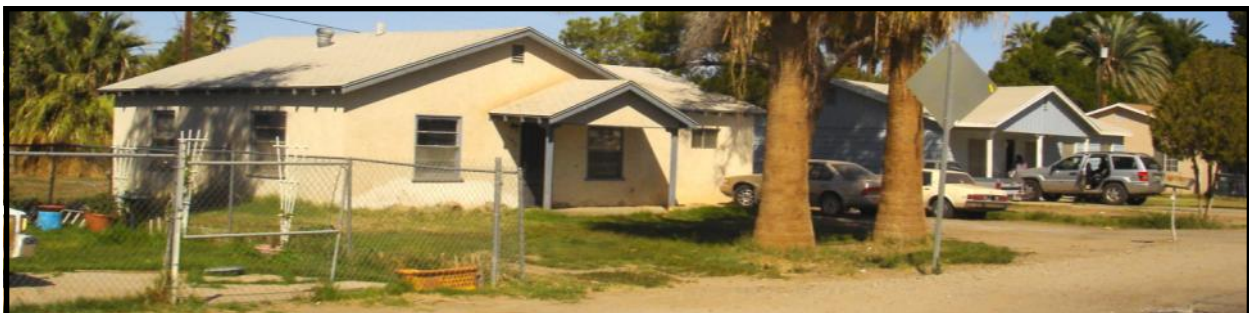
The Northwest Yuma Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by Avenue D to the west, the City of Yuma to the south and east, and the West Main Canal and 1st Street to the north. The Northwest Yuma Planning Area is almost entirely composed of older residential neighborhoods. Because the area has been nearly built out for quite some time, development in the planning area tends to occur as redevelopment or infill development. The planning area is located in the Yuma Valley close to the Colorado River. As such, extensive drainage systems and pumping are necessitated due to the high ground water that is found in much of the planning area. In December 2008, the Bureau of Reclamation reported the depth to groundwater at 12 feet or less in the majority of the planning area.

There are two areas within the Northwest Yuma Planning Area federally recognized by the U.S. Department of Housing and Urban Development (HUD) as a colonia. HUD defines colonias as *"rural communities and neighborhoods located within 150 miles of the U.S.-Mexican border that lack adequate infrastructure and frequently lack other basic services."* The planning area contains two colonias: Avenue B & C Colonia with a population of 2,928 and Donovan Estates with a population of 979.

The total population of the planning area is 9,649. The planning area has a relatively high population density of approximately 5,517.12 persons per square mile. Within the two federally recognized colonias, that population density is higher at 8,537.14 persons per square mile.

Major wastewater treatment issues exist in the Avenue B & C Colonia, an area which makes up a significant portion of the planning area. Individual septic systems function at optimal levels when there is a separation of ten feet from ground to water table. Yuma County's Environmental Programs Section has noted a number of failing septic systems in the area. There are also an unknown number of illegal cesspools in the area. Although the Colonia is within close proximity to the City of Yuma sewer treatment facility, less than five percent of the area is connected to the city's sewer system.

In recognition of the problem, the City of Yuma and Yuma County jointly applied in 1999 to the Border Environmental Cooperation Commission (BECC) for technical assistance funding to perform a study to determine the feasibility of a community wastewater system. The resulting proposed project is to construct a wastewater collection and conveyance system that will connect all existing homes within the Avenue B & C Colonia. In order make this project a reality community leaders in the Colonia have secured the required signatures to form an improvement district. On March 12, 2007 the Avenue B & C Colonia Improvement District No.07-09 was established. Construction on the project began June 2010 and is scheduled to be completed by September 2011.



Homes in the Northwest Yuma Planning Area

Northwest Yuma Planning Area	
Total Housing Units ¹¹	4,044
Occupied Housing Rate ¹²	75.9%
Multi Family Housing Unit Permits Issued ¹²	4
Manufactured Home Placement Permits Issued ¹²	158
Mobile Home Placement Permits Issued ¹²	81
Single Family Site Built Home Building Permits Issued ¹²	98

Table 10: Housing Units 2000 through 2010

Average Household Size¹¹	
Northwest Yuma Planning Area	2.39
Yuma County	2.22
Arizona	2.24

Table 11: Average Household Size¹¹

Between January 1, 2000 and December 31, 2010, 341 housing units were constructed or placed in the planning area. Of these, 46% were manufactured homes, 29% were single family site built homes, 24% were mobile homes and 1% were multi-family site built homes.

In the Northwest Yuma Planning Area 70% of housing units counted in the 2010 Census were non-site built units, meaning that they are manufactured homes and mobile homes. Residential development within the Northwest Yuma Planning Area has followed two distinct patterns between 2000 and 2010: Infill and replacement development on single scattered lots and the replacement of housing units within existing manufactured home parks.

¹¹ 2010 U.S. Census

¹² Yuma County Department of Development Services

Land Use Element - Northwest Yuma Planning Area



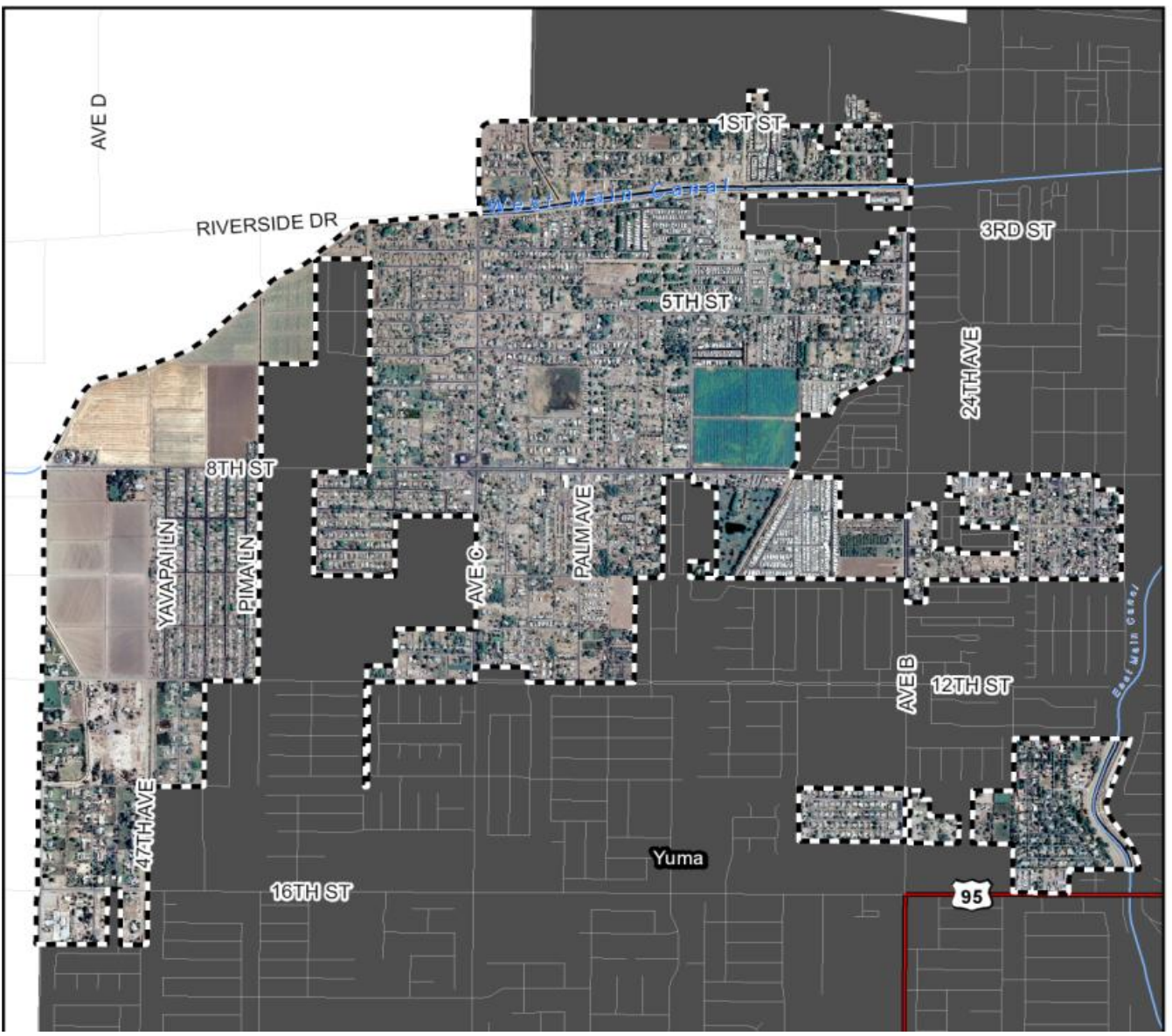
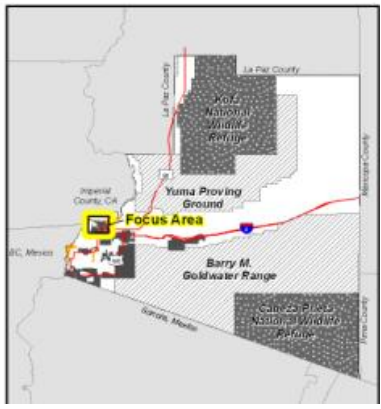
North Gila
Planning Area

Incorporated Areas

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Yuma County Dept. of Development Services
Source: Yuma County GIS Division
2010 NAIP Aerial

Date: June, 2011

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Map 10: Northwest Yuma Planning Area

The Gila Valley Planning Area is comprised of the area roughly bounded by Pacific Avenue to the west, Fortuna Wash to the east, Levee Road to the north and the City of Yuma to the south. The planning area is almost exclusively located in the Colorado and Gila River valleys. The confluence of the Colorado and Gila Rivers is located along the northern boundary of the planning area. Urbanized areas within the City of Yuma are located directly adjacent to the planning area to the west and south.



South Gila Valley Canal

The total population of the planning area according to the 2010 U.S. Census was 2,833.

Unlike the urbanized areas to the west and south of the planning area, the overwhelming majority of acreage within the planning area is used for agricultural production. Nearly all the population of the planning area is concentrated into five small distinct and noncontiguous areas. These five areas consist of manufactured home parks, platted subdivisions and wildcat subdivisions that all had their residential usage established decades ago.

Extensive drainage systems and pumping are utilized due to the high groundwater found in much of the planning area. In January 2009, the Bureau of Reclamation reported the depth to groundwater at eight feet or less in 1,509 acres of the planning area. Depth to groundwater fluctuates throughout the year as the amount of the irrigation water being applied changes with the different growing seasons. High ground water can complicate the installation of traditional septic systems and often necessitates the installation of alternative sewage disposal systems.



Urbanized Area Next to Farmland

Because MCAS-Yuma is located just south of the planning area it includes areas that are covered by the provisions of A.R.S. §28-8481. The types of land uses allowed for land located within the defined noise zones of facilities listed in A.R.S. §28-8481 have significant restrictions. In these areas, urban style residential development is prohibited and commercial and industrial development must be aviation compatible.

Gila Valley Planning Area	
Total Housing Units ¹³	988
Occupied Housing Rate ¹³	87.3%
Manufactured Home Placement Permits Issued ¹⁴	164
Mobile Home Placement Permits Issued ¹⁴	25
Single Family Site Built Home Building Permits Issued ¹⁴	14

Table 12: Housing Units 2000 through 2010

Average Household Size¹³	
Gila Valley Planning Area	2.87
Yuma County	2.22
Arizona	2.24

Table 13: Average Household Size¹³

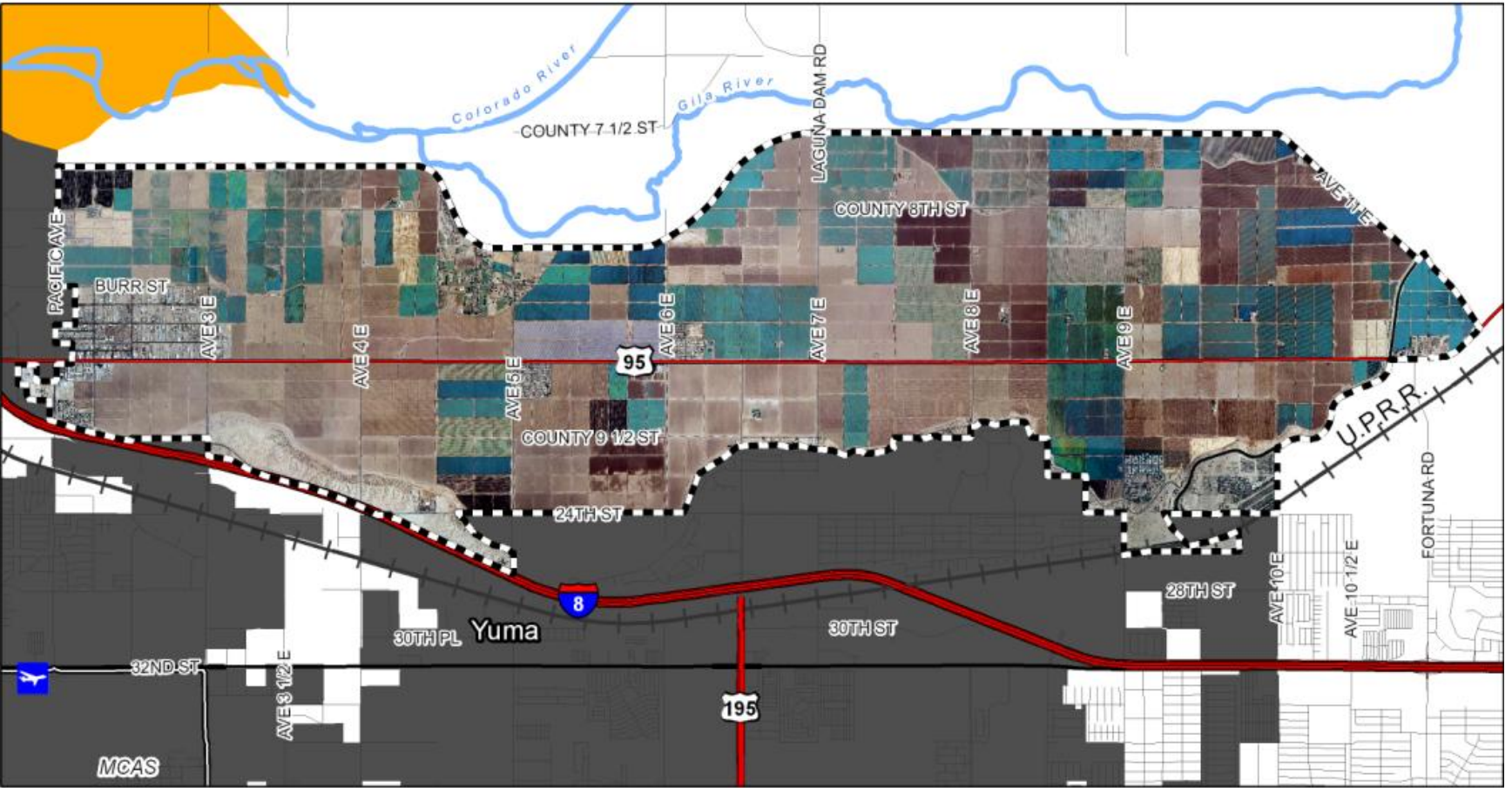
Between January 1, 2000 and December 31, 2010 Yuma County issued 203 building permits for residential housing units in the Gila Valley Planning Area. Of these, 189 permits were issued as placement permits for manufactured homes or mobile home (units manufactured prior to 1976) in four existing manufactured home parks.

Typically, between ten and fifteen permits for construction or placement of a housing unit are issued in the planning area each year. Nearly all the housing units added in the planning area are located in areas already developed for residential use in manufactured home parks, platted subdivisions or (preexisting wildcat subdivisions). Very few housing units were constructed or placed on land that was previously being farmed.

¹³ 2010 U.S. Census

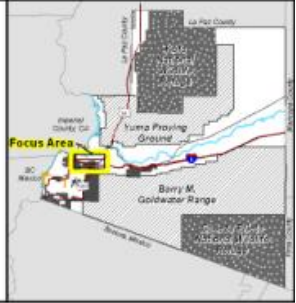
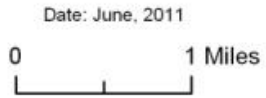
¹⁴ Yuma County Department of Development Services

Land Use Element - Gila Valley Planning Area



-  Gila Valley Planning Area
-  Marine Corps Air Station Yuma
-  Indian Reservations
-  Incorporated Areas

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 2010 NAIP Aerial



Map 11: Gila Valley Planning Area

The Foothills Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the City of Yuma to the west, the crest of the Gila Mountains to the east, the Barry M. Goldwater Range to the south and the Gila Gravity Main Canal and County 9th Street to the north. Fortuna Wash, which runs in a northeasterly direction, more or less bisects the planning area. Nearly all development within the planning area is west of Fortuna Wash. Land east of Fortuna Wash tends to be more rugged and less developed.

The Foothills Planning Area is an unincorporated community of 28,867 people located directly east of the City of Yuma. The planning area is the most urbanized area in unincorporated Yuma County. The area can be characterized as a bedroom community and by a large number of retirees and seasonal residents. The planning area also serves as a bedroom community for MCAS and YPG, one of the largest employers in Yuma County. Despite the fact that it is over a seventeen mile drive from the Foothills Planning Area to the Yuma Proving Ground, the Foothills is the closest area of residential development to YPG.

The housing stock in the planning area tends to be newer than that found in Yuma County and Arizona as whole. The large majority of housing units in the Foothills Planning Area were constructed after 1990. The home ownership rate in the planning area greatly exceeds that found in Yuma County and Arizona as a whole. However, due to the seasonal residency of a great part of the planning area residents, only 56% of homes are considered occupied, compared with 73.7% and 83.7%, respectively in Yuma County and Arizona as whole.

The State of Arizona owns a significant portion of undeveloped land in the Foothills Planning Area. There are 115 non-federally owned parcels that are larger than ten acres in the planning area. Of these, 18 parcels comprising 6,737 acres (58.7% by acreage) are owned by the State of Arizona. State trust lands are managed by the Arizona State Land Department which is mandated to achieve the highest and best use of the land in order to maximize revenues for the trust's beneficiaries. For state lands to be available an interested party must apply for a parcel to be put up for auction. If the State Land Department feels that an auction at that time is the best way to maximize revenue from that parcel, a public auction is then held. The most recent auction of state trust land in the Foothills Planning Area occurred in the spring of 2006 when 160 acres of state land at the intersection of Scottsdale Drive and 36th Street was auctioned. With ownership of the majority of remaining developable land in the planning area, the Arizona State Land Department will play a major role in the future of the area.



Foothills streetscape

Foothills Planning Area	
Total Housing Units ¹⁵	23,228
Occupied Housing Rate ¹⁵	56%
Manufactured Home Placement Permits Issues ¹⁶	2,056
Mobile Home Placement Permits Issues ¹⁶	66
Single Family Site Built Home Building Permits Issued ¹⁶	3,976

Table 14: Housing Units 2000 through 2010

Average Household Size¹⁵	
Foothills Planning Area	1.24
Yuma County	2.22
Arizona	2.24

Table 15: Average Household Size¹⁵

Between January 1, 2000 and December 31, 2010, 6,098 housing units were constructed or placed in the planning area. Of these, 34% were manufactured homes, 65% were single family site built homes and 1% were mobile homes.

The planning area is primarily a retirement and bedroom community. The planning area represents the center of residential growth in Yuma County. Since 2000, 78.5% of housing units that were constructed/placed in unincorporated Yuma County were done so in the Foothills Planning Area. The vast majority of this new development has occurred as new single family homes on small lots in newly platted subdivisions.

¹⁵ 2010 U.S. Census

¹⁶ Yuma County Department of Development Services

Land Use Element - Foothills Planning Area



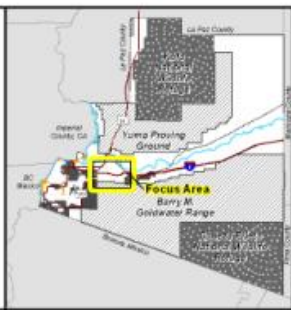
Map 12: Foothills Planning Area



Foothills Planning Area
 Incorporated Areas
 Barry M. Goldwater Range

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 2010 NAIP Aerial
 Date: June, 2011

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The Yuma Valley Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by Mexico to the west, the City of Yuma, Avenue D, the City of Somerton and the East Main Canal to the east, the City of San Luis to the south and California to the north. The planning area is located in the Yuma Valley close to the Colorado River. As such, extensive drainage systems and pumping are required due to the high ground water that is found in much of the planning area. In December 2008 the Bureau of Reclamation reported the depth to groundwater at twelve feet or less in the majority of the planning area. During periods of heavy irrigation groundwater can raise to within two feet of the surface in some areas of the planning area.

There are four areas within the Yuma Valley Planning Area federally recognized by the U.S. Department of Housing and Urban Development (HUD) as a colonia. HUD defines colonias as *"rural communities and neighborhoods located within 150 miles of the U.S.-Mexican border that lack adequate infrastructure and frequently lack other basic services."* The planning area's four colonias are: Gadsden with a population of 651, Padre Ranchitos with a population of 171, Drysdale Lane with a population of 261 and Wall Lane with a population of 258. Thirty-seven percent of the population of the planning area lives in areas designated by the federal government as a colonia.

The overwhelming majority of the Yuma Valley Planning Area is comprised of large acreage parcels that are actively being used for agricultural purposes. The residential population of the planning area is concentrated in six relatively small areas. About 37% of the population resides in one of the four colonias: In the vicinity of where the West Main Canal crosses County 8th Street, the intersection of County 14th Street and Avenue C or the intersection of County 13th Street and Avenue C. Each of these residential clusters contains about 200 to 1,000 people, the remaining 30% of the population lives in smaller residential clusters or on agricultural home sites. With the exception of parcels in Gadsden, Wall Lane and Padre Ranchitos areas, nearly all residential parcels in the planning area are at least one acre in size.

The Yuma County Water User's Association serves the irrigation needs of the Yuma Valley Planning Area which contains approximately 53,000 acres of irrigated land. This represents 33% of the total irrigated land in Yuma County. Farmland within the planning area tends to be of the highest quality found in Yuma County, all of it located off the mesa in the fertile river bottoms. Some of the more common crops that are grown in the planning area include lettuce, cotton, melons, wheat and safflower. The Yuma Valley is often referred to as the best lettuce growing farmland in the United States.



A residential area adjacent to agricultural production

Yuma Valley Planning Area	
Total Housing Units ¹⁷	1,504
Owner Occupancy Rate ¹⁷	77%
Manufactured Home Placement Permits Issued ¹⁸	45
Mobile Home Placement Permits Issued ¹⁸	18
Single Family Site Built Home Building Permits Issued ¹⁸	56

Table 16: Housing Units 2000 through 2010

Household Size¹⁷	
Yuma Valley Planning Area	2.53
Yuma County	2.22
Arizona	2.24

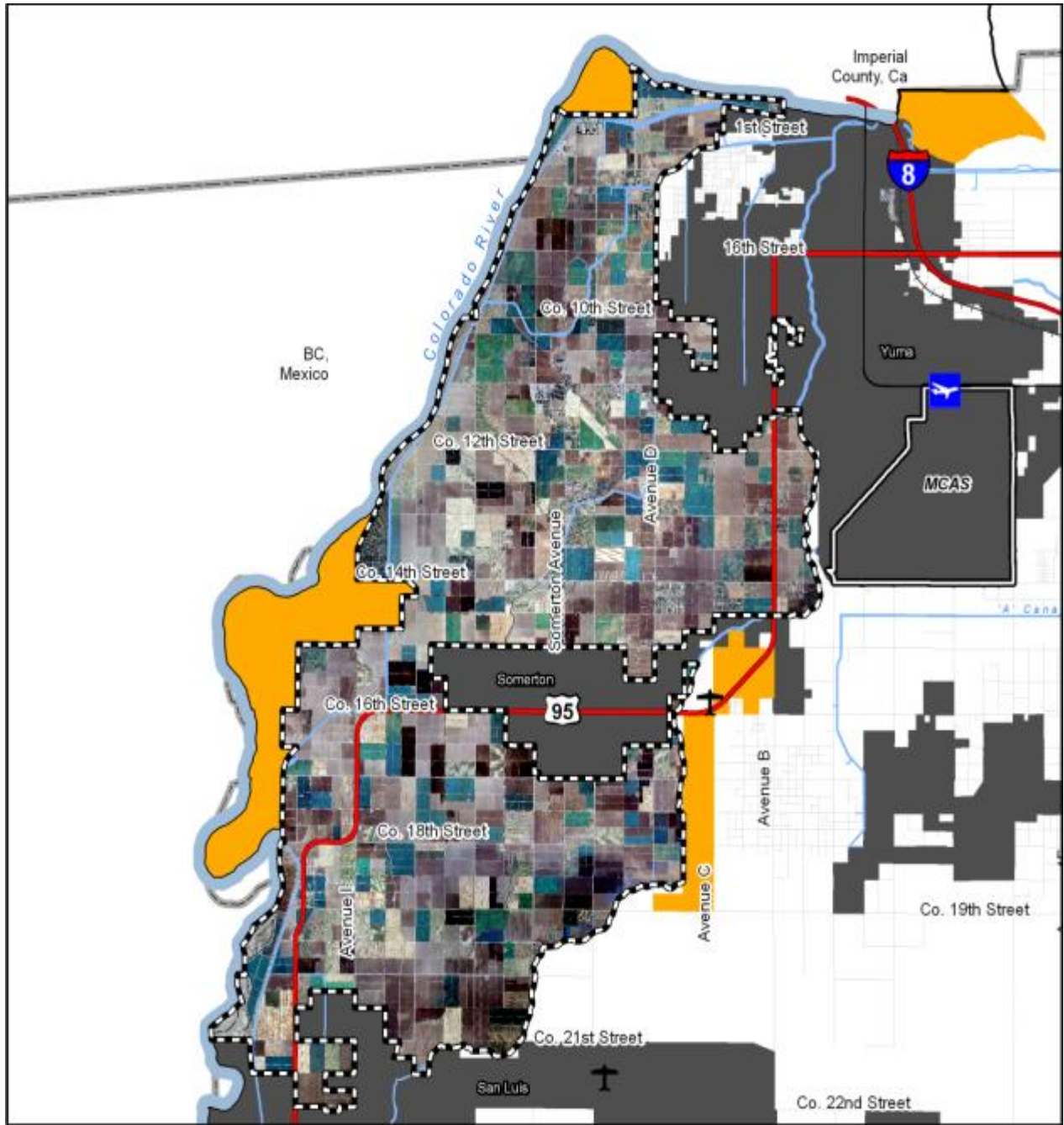
Table 17: Average Household Size¹⁷





Between January 1, 2000 and December 31, 2010, 119 housing units were constructed or placed in the planning area. Of these, 38% were manufactured homes, 47% were single family site built homes and 15% were mobile homes.

Nearly all building/placement permits were issued in locations spread throughout the planning area, primarily in the Gadsden, Wall Lane, Drysdale, Padre Ranchitos areas and in the vicinity of the intersection of County 14th Street and Avenue C. All these areas had been established as areas of residential development well before 2000. Between 2000 and 2010 no new areas of residential development were added in the Yuma Valley Planning Area.

¹⁷ 2010 U.S. Census

¹⁸ Yuma County Department of Development Services



-  Yuma Valley Planning Area
-  Marine Corps Air Station
-  Indian Reservations
-  Incorporated Areas

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 2010 NAIP Aerial

Date: June, 2011



Land Use Element - Yuma Valley Planning Area

Map 13: Yuma Valley Planning Area

The Martinez Lake Planning Area is composed of two geographically separate areas that can be roughly defined as the portion of Yuma County that is located north of Imperial Dam and west of Yuma Proving Ground and the Kofa National Wildlife Refuge. The topography of the southern portion of the planning area is dominated by the Colorado River and Martinez Lake which forms the western boundary of the planning area and the County. Development in this area centers around the Martinez Lake shoreline. The northern portion of the Martinez Lake Planning Area is a sliver of land located between the La Paz County line and the Kofa Mountains and the Kofa National Wildlife Refuge. There is almost no development within this part of the planning area

Of the 253 square miles that comprise the Martinez Lake Planning Area only 0.6% of the total area is under private ownership. The 5.5% of the planning area that is owned by the State of Arizona has been very important to the development of the area. 512 housing units were reported in the 2010 Census despite there only being 160 privately owned parcels. The vast majority of housing was constructed on land leased from the State.

The Martinez Lake Planning Area is surrounded on multiple sides by Yuma Proving Ground (YPG). Because of this, activities on YPG have the potential to have a major impact on the planning area. Yuma Proving Ground is the largest employer in Yuma County, employing approximately 3,000 civilian and military employees. In 2009, General Motors relocated its hot weather testing center from Mesa, Arizona to the Yuma Proving Ground. The new test complex which will be shared by the Army and General Motors is in close proximity to the planning area.



Martinez Lake

Martinez Lake Planning Area	
Total Housing Units ¹⁹	512
Occupied Housing Rate ¹⁹	61.5%
Manufactured Home Placement Permits Issued ²⁰	6
Mobile Home Placement Permits Issued ²⁰	0
Single Family Site Built Home Building Permits Issued ²⁰	24

Table 18: Housing Units 2000 through 2010

Household Size¹⁹	
Martinez Lake Planning Area	2.54
Yuma County	2.22
Arizona	2.24

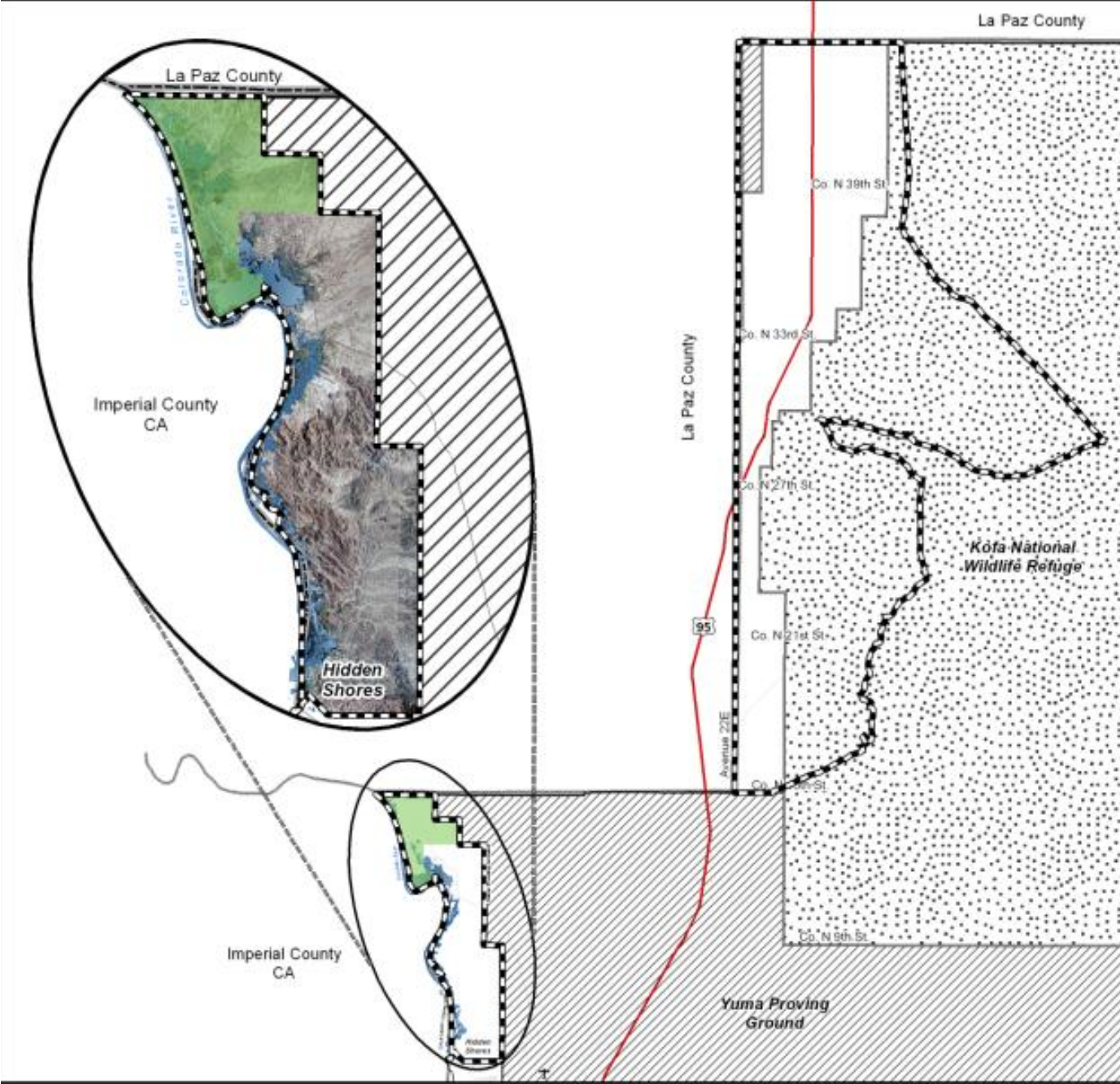
Table 19: Average Household Size¹⁹




Between January 1, 2000 and December 31, 2010, 30 housing units were constructed or placed in the planning area. Of these, 20% were manufactured homes and 80% were single family site built homes.

The nature of housing in the Martinez Lake Planning Area is clearly of a different nature than found elsewhere in the County. It is an area dominated by vacation homes. In the planning area 51.5% of all housing units are classified as vacation homes. This is a much higher rate than that in the County or State as whole where 15.7% and 6.5% of housing units are classified as vacation homes. Of the 161 privately owned parcels 61%, of them are owned by individuals reporting a California address to the Yuma County Assessor’s office.

¹⁹ 2010 U.S. Census

²⁰ Yuma County Department of Development Services



-  Martinez Lake Planning Area
-  Imperial Wildlife Refuge
-  Military Boundary
-  National Wildlife Refuge

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 2010 NAIP Aerial

Date: June, 2011
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Land Use Element - Martinez Lake Planning Area

Map 14: Martinez Lake Planning Area

The Dome Valley/Wellton Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the crest of the Gila Mountains to the west, the Barry M. Goldwater Range to the south, the crest of the Mohawk Mountains to the east and Yuma Proving Ground to the north. The Gila River runs from east to west bisecting the planning area. The valley through which the Gila River flows contains irrigated, prime farmland and is extensively used for agriculture. The mesa rises abruptly above the Gila River Valley and is a flat area drained by washes. The majority of residential development has occurred on the “mesa.” The Town of Wellton is located in the southwest corner of the planning area. Located in the northwest corner of the planning area, the Muggins Mountains Wilderness Area covers 12 square miles. This area is managed by the Bureau of Land Management in a manner that minimizes as much as possible human impact on the land.

Water supplied by Wellton-Mohawk Irrigation and Drainage District irrigates over 62,000 acres in the Dome Valley/Wellton Planning Area. The resulting agricultural activity is the dominant land use and economic activity of the area. In terms of acreage and value of the harvest, lettuce is the most significant crop in the Dome Valley/Wellton Planning Area. The production of lettuce, occurring between November and March, has become the dominant economic activity of the Dome Valley/Wellton Planning Area. Between November and March, 30% of the lettuce consumed in the United States is grown in the Dome Valley/Wellton Planning Area. Additionally, most of the nation's supply of registered Bermuda grass seed is grown in the Dome Valley/Wellton Planning Area.



Farmland in Dome Valley with the Muggins Mountains in the background

Land Use Element

Approximately 62,000 acres of the Dome Valley/Wellton Planning Area is contained within the Wellton-Mohawk Irrigation and Drainage District (WMIDD), a state chartered municipal corporation that is charged with operating irrigation and power infrastructure within its boundaries. In August 2002, the WMIDD was designated as a Rural Planning Area (RPA) by the Yuma County Board of Supervisors. The RPA is notified by the county of development project applications in the RPA boundaries or within one mile of the RPA boundary. Any recommendation then made by the RPA is forwarded to the Board of Supervisors. In 2008, the WMIDD completed acquiring 86 square miles of land (21.4% of the planning area) from the Bureau of Reclamation as authorized by the Wellton-Mohawk Title Transfer Act. Approximately 18,000 acres contain irrigation and drainage systems and rights-of-way. Approximately 10,600 acres are within the Gila River Flood Channel. A further 17,764 acres were acquired and comprised of land for rights-of-way, flood control or farm unit development. Much of this land is developable and is being marketed by the WMIDD. This represents a significant pool of developable land.

The Dome Valley/Wellton Planning Area contains 31 platted subdivisions. Combined there are 2,222 lots contained within these subdivisions. The 2010 Census reported a combined population of 2,915. 26.4% of the total population of the planning area lives in platted subdivisions. Further, the Census reported 435 housing units within these subdivisions. Yuma County records show that an additional 388 housing units have been added since 2000, which means that of 2,222 lots contained within platted subdivision, 83% are vacant lots. Nearly all these subdivisions were platted several decades ago when County regulations did not require infrastructure improvements to be made prior to recording a final plat. As a result, many but not all of these subdivisions have little to no physical infrastructure for improved roads, water and sewer systems, etc. or, in a few cases clearly established legal access. These deficiencies cause these subdivisions to either not develop or develop at an extremely slow pace. However, some development in these deficient subdivisions does occur, creating pockets of residential development in areas that lack the necessary infrastructure. Finding a way to deal with these deficient subdivisions is one of the major challenges facing the planning area over the next decade.



Tacna, an unincorporated community within the Dome Valley/Wellton Planning Area

Dome Valley/Wellton Planning Area	
Total Housing Units ²¹	1,498
Occupied Housing Rate ²¹	74.4%
Manufactured Home Placement Permits Issued ²²	124
Mobile Home Placement Permits Issued ²²	25
Single Family Site Built Home Building Permits Issued ²²	63

Table 20: Housing Units 2000 through 2010

Household Size²¹	
Dome Valley/Wellton Planning Area	1.95
Yuma County	2.22
Arizona	2.24

Table 21: Average Household Size²¹

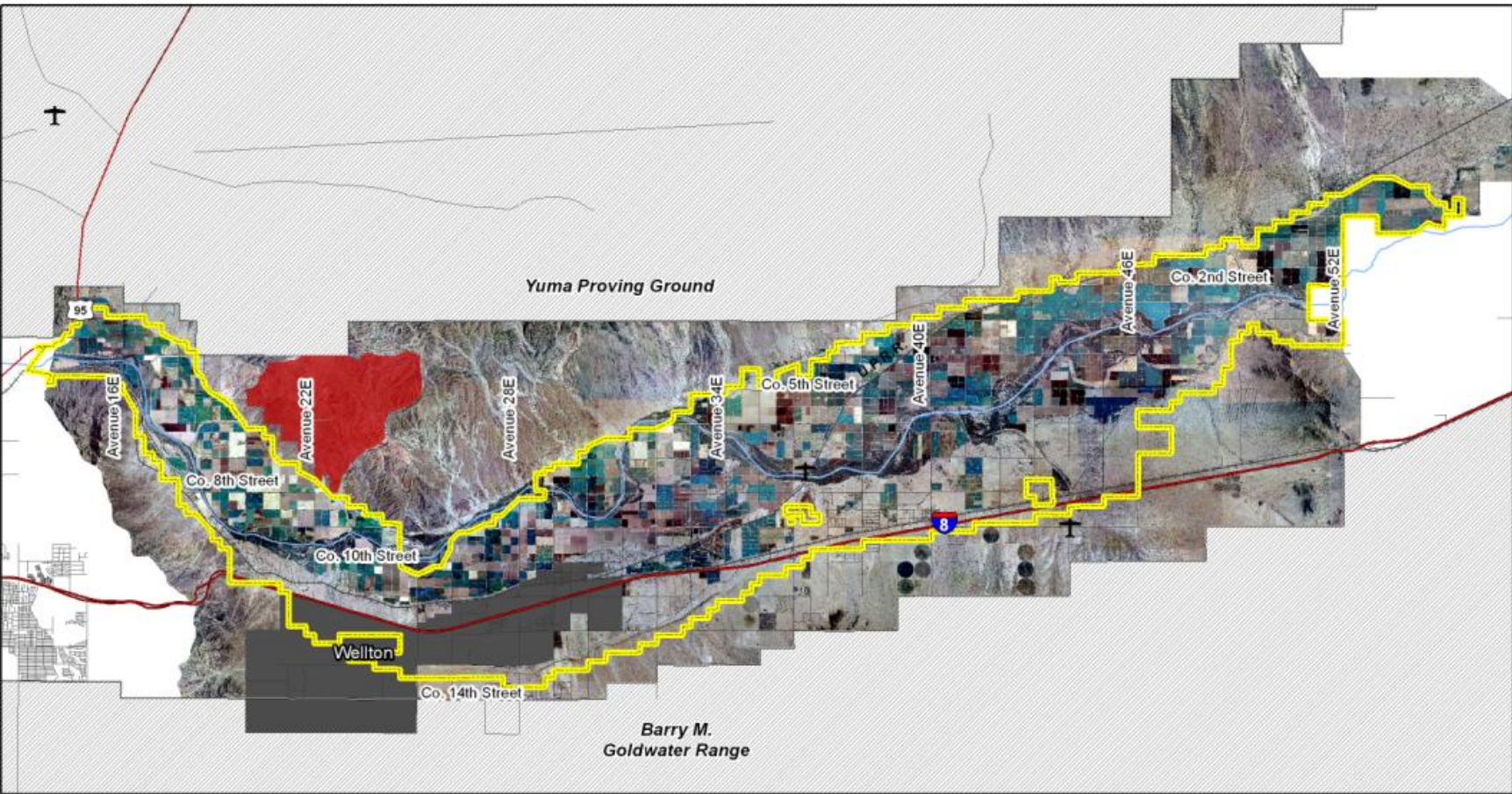
Between January 1, 2000 and December 31, 2010, 212 housing units were constructed or placed in the planning area. Of these, 58% were manufactured homes, 30% were single family site built homes and 12% were mobile homes.

The population of the planning area is largely concentrated in the western two-thirds of the planning area. Only about 9% of the population lives east of Tacna. The Gila River Valley, in which nearly all agricultural activity is located, is home to 42% of the planning area’s population. However, new residential growth has been occurring almost exclusively in areas located outside the Gila River Valley. Of the 388 new housing units added to the planning area since 2000, only five have been located in the Gila River Valley.

²¹ 2010 U.S. Census

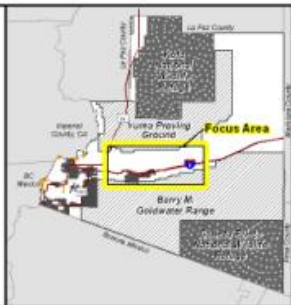
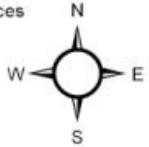
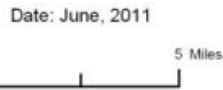
²² Yuma County Department of Development Services

Land Use Element - Dome Valley / Wellton Planning Area



-  Dome Valley Planning Area
-  Wellton-Mohawk Irrigation and Drainage District Rural Planning Area
-  Muggins Mountains Wilderness Area
-  Incorporated Areas
-  Military Boundary
-  Airfield

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 2010 NAIP Aerial



Map 15: Dome Valley/Wellton Planning Area

The Dateland/East County Planning Area is comprised of the unincorporated portion of Yuma County that is roughly bounded by the crest of the Mohawk Mountains and Yuma Proving Ground to the west, the Barry M. Goldwater Range to the south, Maricopa County to the east and La Paz County to the north. The Gila River runs from east to west bisecting the planning area. The Eagle Tail Mountains Wilderness Area covers 12 square miles. This area is managed by the Bureau of Land Management in a manner that minimizes as much as possible human impact on the land.

The planning area contains the unincorporated communities of Dateland and Hyder. These communities are characterized as being rural. Dateland is the largest community in the planning area and is located at the intersection of Avenue 64E and Interstate 8 (I-8) on the south side of the planning area. Dateland was established as a result of the farming and railroad transportation activities in the area. Existing development includes services and commercial activities, school district facilities, a community center and a residential district located northeast of the intersection of I-8 and Avenue 64E. On the south side of this interchange is an active gas station, restaurant and gift shop at which Greyhound and tour buses stop. Directly north of this area are several unimproved subdivisions that are mostly vacant with only a scattering of lots being actually developed. Further north in the Gila River Valley are many acres of fallow farmland.

Hyder is located south of Palomas Road along the Maricopa County line. Hyder was a railroad stop for the Southern Pacific Railroad near the Agua Caliente Mountains. Hyder was established by the U.S. Army Training Center in World War II. North of the railroad tracks are several labor camps consisting of mobile homes.

The Dateland/East County Planning Area contains 26 platted subdivisions. Combined there are 5,157 lots contained within these subdivisions. The 2010 Census reported a combined population of 815, of which 35.7% of the total population of the planning area live in a platted subdivision. Further, the Census reported 118 housing units within in these subdivisions which means that of 5,157 lots contained within platted subdivision, 96.9% are vacant lots. Nearly all these subdivision were platted several decades ago when County regulations did not require infrastructure improvements to be made prior to the recording of a final plat. As a result, many but not all of these subdivisions have little to no physical infrastructure, improved roads, water, sewer, etc. or in a few cases clearly established legal access. These deficiencies caused these subdivisions to either not develop or develop at an extremely slow pace. However, some development in these deficient subdivisions does occur creating pockets of residential development in areas that lack the necessary infrastructure. Finding a way to deal with these deficient subdivisions is one of the major challenges facing the planning area over the next decade.



Dateland

Dateland/East County Planning Area	
Total Housing Units ²³	486
Owner Occupancy Rate ²³	56.1.%
Manufactured Home Placement Permits Issued ²⁴	70
Mobile Home Placement Permits Issued ²⁴	26
Single Family Site Built Home Building Permits Issued ²⁴	6

Table 22: Housing Units 2000 through 2010

Household Size²³	
Dateland/East County Planning Area	1.68
Yuma County	2.22
Arizona	2.24

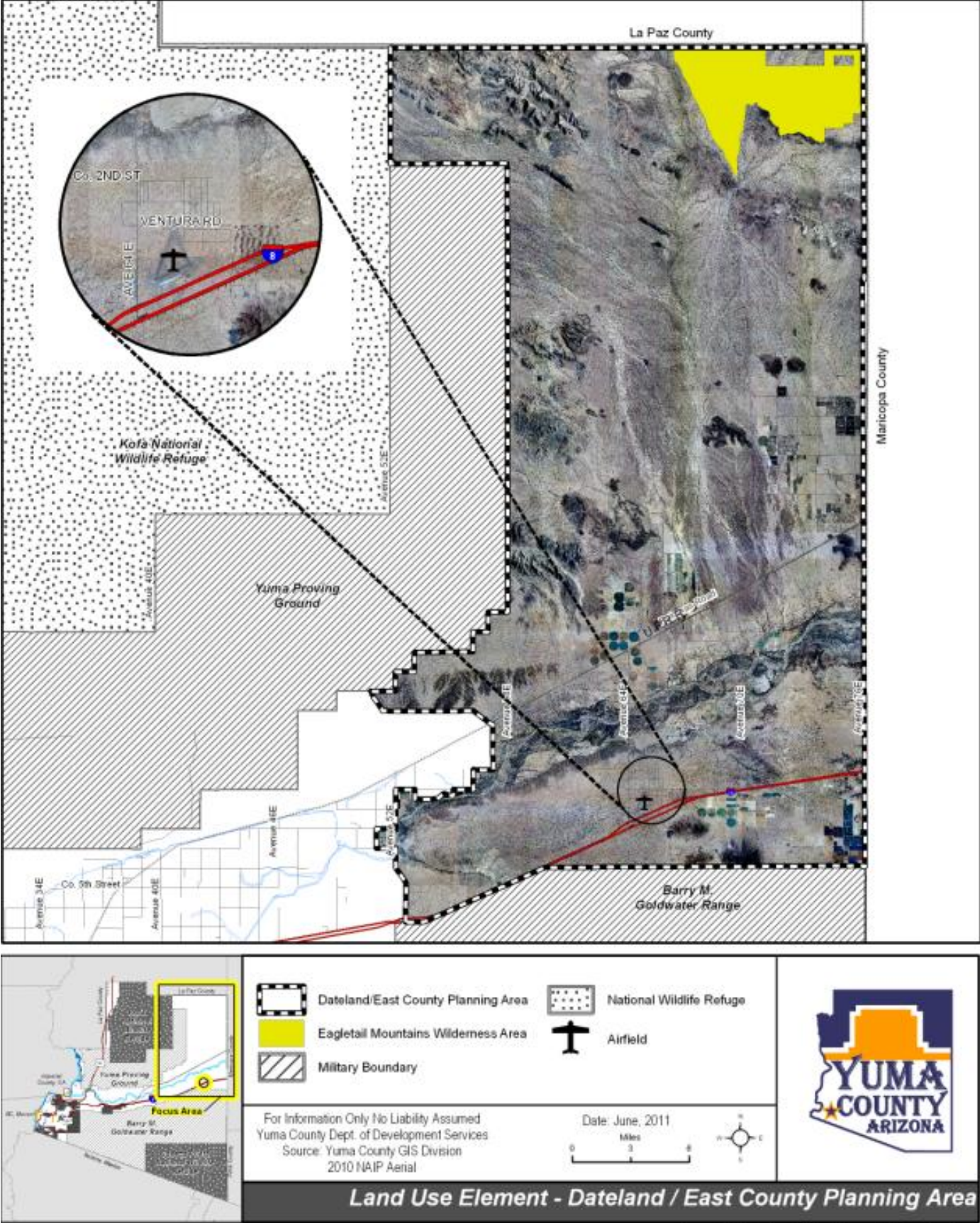
Table 23: Average Household Size¹

Between January 1, 2000 and December 31, 2010, 102 housing units were constructed or placed in the planning area. Of these, 69% were manufactured homes, 6% were single family site built homes and 25% were mobile homes.

The unincorporated community, which is roughly located at the intersection of Avenue 64E and Interstate 8, contains 41% of the planning area population and is the location of the area’s school and businesses. The balance of the planning area’s population is scattered through the southern two-thirds of the planning area. However, new residential growth has been mostly occurring in the immediate vicinity of Dateland. Of the 162 new housing units added to the planning area since 2000, the majority have been located in the immediate vicinity of Dateland.

²³ 2010 U.S. Census

²⁴ Yuma County Department of Development Services



Map 16: Dateland/East County Planning Area

3.2 Land Use Designations




In order to implement the goals, objectives and polices of the *Yuma County 2020 Comprehensive Plan*, 21 land use designations have been established. Each land use designation contains the allowed uses and densities that are desired on land with that designation. All lands under the planning jurisdiction of Yuma County have been assigned a land use designation. Any land coming under the land use planning jurisdiction subsequent to the adoption of the Yuma County 2020 Comprehensive Plan will be assigned a land use designation of Agriculture/Rural Preservation.




A.R.S. § 11-829(A) requires that: “*All zoning and rezoning ordinances, regulations or specific plans adopted under this article shall be consistent with and conform to the adopted county plan.*” In order to comply with this provision of state law and to further implement the goals, objectives and polices of the *Yuma County 2020 Comprehensive Plan*, all proposed rezonings will be checked against the Plan to determine if the proposed zoning district conforms with the land use designation of the parcel in question. A.R.S. § 11-829(A) states that: “*A rezoning ordinance conforms with the county plan if it proposes land uses, densities or intensities within the range of identified uses, densities and intensities of the county plan.*” In order for a rezoning to proceed and be heard by the Planning and Zoning Commission and then Board of Supervisors it must be determined to be in conformance with the Plan. For proposed rezonings that do not conform to the Comprehensive Plan, an amendment to the land use map to change the land use designation must be approved before the rezoning can be heard.

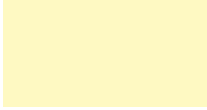



A county island is an area of unincorporated land which is completely surrounded by a city or town. County islands are created when a city or town annexes land into their corporate boundaries but excludes certain areas. Those excluded areas that remain under county jurisdiction are referred to as county islands. In accordance with **A.R.S § 11-831. Additional requirements for certain lands**; A. The rezoning or subdivision plat of any unincorporated area completely surrounded by a city or town shall use as a guideline the adopted general plan and standards as set forth in the subdivision and zoning ordinances of such city or town after the effective date of this section. B. The board or commission, before taking any action on a rezoning or subdivision plat in an area as set forth in subsection A, may require the affected city or town to supply information to allow the county to meet the guideline. If an affected city or town objects to any such proposed action the board or commission shall set forth in the minutes of the meeting specific reasons why in its opinion the guideline is actually being followed or why it is not practicable to follow the guideline of the general plan.

A property’s land use designation does not impact existing uses of a property, the owner’s right to its continued use or repairs or alterations of said uses. These things are governed by the *Yuma County Zoning Ordinance*. A property may be used in any manner allowed by the Zoning Ordinance including approved Special Use Permits and non-conforming uses regardless of the use designation. There are numerous zoning districts that predate the first adopted Comprehensive Plan and as a result, have zoning districts that do not match their land use designation. Mandatory conformity to the Comprehensive Plan is only triggered when a property’s zoning district is changed.







The following pages describe the different land use designations that have countywide applicability. There are a total of 21 land use designations in Yuma County described by name, color schematic, allowed uses, densities and intensity of use.



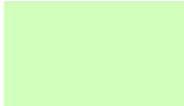


<p><i>Land Use Designation</i> <i>(Abbreviation and Symbol)</i></p>	<p><i>Description, Allowed Uses and Densities</i></p>
<p>Agriculture/Rural Preservation (A-RP) </p>	<ul style="list-style-type: none"> • A designation that supports resource preservation districts with emphasis on protecting and preserving agricultural related resources and continued agricultural use and limiting development in rural areas that lack the basic infrastructure to support even limited low density residential development. • Land principally devoted to agricultural production. • Areas lacking access to the infrastructure necessary to support development. • Minimum parcel size of 40 acres.
<p>Agriculture/Rural Residential (A-RR) </p>	<ul style="list-style-type: none"> • A designation that supports resource conservation districts and reserves with emphasis on preserving farm communities and character. • Recognizing land with potential to be divided into rural lots that are compatible with continued agricultural use on surrounding parcels. • Acknowledge residential character and allow for division into rural lots. • Minimum parcel size of 10 acres.
<p>Agriculture/Rural Development (A-RD) </p>	<ul style="list-style-type: none"> • A designation that supports resource conservation districts and reserves with emphasis on preserving farm communities and character and to allow for residential development in areas that are only compatible with a very low density style of residential development. • Recognizing land with potential to be divided into rural lots that are compatible with continued agricultural use on surrounding parcels. • Acknowledge residential character and encourage division into rural lots. • Minimum parcel size of 5 acres.

<p>Rural Density Residential (R-RD)</p> 	<ul style="list-style-type: none"> • A designation that supports residential uses and densities that are rural in nature. This designation allows for residential development that is compatible with surrounding agricultural uses and other areas and uses that are incompatible with urban style residential development. Allows for residential development in conjunction with continued agricultural uses and the keeping of a limited number of horses and farm animals. Allows for residential development in areas that have insufficient infrastructure to support residential development at a greater density. The large parcel size required under the Rural Density Residential designation allows for a single parcel to contain both a septic tank and a well. Residential development can take the form of site-built homes or manufactured homes. • 1 dwelling unit per 2 acres to 1 dwelling unit per 10 acres (minimum 2 acre parcels).
<p>Ranchette Residential (R-R)</p> 	<ul style="list-style-type: none"> • A designation that supports residential uses and densities that have a mix of both semi-urban and rural characteristics. The intent of this designation is to create a style of development that can serve as a transition between agricultural and rural residential uses and a more urban style of development. Allows for all zoning districts with a minimum size that allows for having both a well and on-site sewage treatment, and allows for the keeping of large farm animals. Residential development can take the form of site-built homes or manufactured homes. • 1 dwelling unit per acre to 1 dwelling unit per 5 acres (minimum 1 acre parcels).
<p>Estate Density Residential (R-ED)</p> 	<ul style="list-style-type: none"> • A designation that supports residential uses and densities that have a mix of both urban and rural characteristics. The intent of this designation is to create a style of development that can serve as a transition between agricultural and rural residential uses and a more urban style of development. Allows for the keeping of a limited number of horses and farm animals on appropriately sized parcels. Residential development can take the form of site-built homes or manufactured homes. • 2 dwelling units per acre to 1 dwelling unit per 5 acres (minimum ½ acre parcels).

<p>Suburban Density Residential (R-SD)</p> 	<ul style="list-style-type: none"> • A designation that supports residential uses and densities that have a mix of both urban and rural characteristics. The intent of this designation is to create a style of development that can serve as a transition between agricultural and rural residential uses and a more urban style of development. Allows for the keeping of a limited number of horses and farm animals on appropriately sized parcels. Residential development can take the form of site-built homes or manufactured homes. • 3 dwelling units per acre to 1 dwelling unit per 2 acres (minimum 1/3 acre parcels).
<p>Low Density Residential (R-LD)</p> 	<ul style="list-style-type: none"> • A designation that supports residential uses and densities that are urban in nature. Low Density Residential allows the lowest residential density of urban style residential development. It is primarily characterized by neighborhoods of detached single family homes that can be either site-built or manufactured homes. • 1 to 6 dwelling units per acre.
<p>Medium Density Residential (R-MD)</p> 	<ul style="list-style-type: none"> • A designation that supports residential uses and densities that are urban in nature. Medium Density Residential allows a density that falls between that found in neighborhoods with detached single family homes and the most dense forms of residential developments such as apartment complexes. It is primarily characterized by neighborhoods of detached single family homes on small lots, attached single family homes, duplexes, triplexes, condos and/or manufactured home parks. Allows for dwelling units to be manufactured, site-built or recreational vehicles. • 4 to 12 dwelling units per acre.
<p>Urban Density Residential (R-HD)</p> 	<ul style="list-style-type: none"> • A designation that supports residential uses and densities that are urban in nature. Urban Density Residential allows the highest possible density of residential development. It is primarily characterized by multi-family dwelling units and recreational vehicle parks. Allows for dwelling units to be manufactured, site-built or recreational vehicles. • 10 to 18 dwelling units per acre.

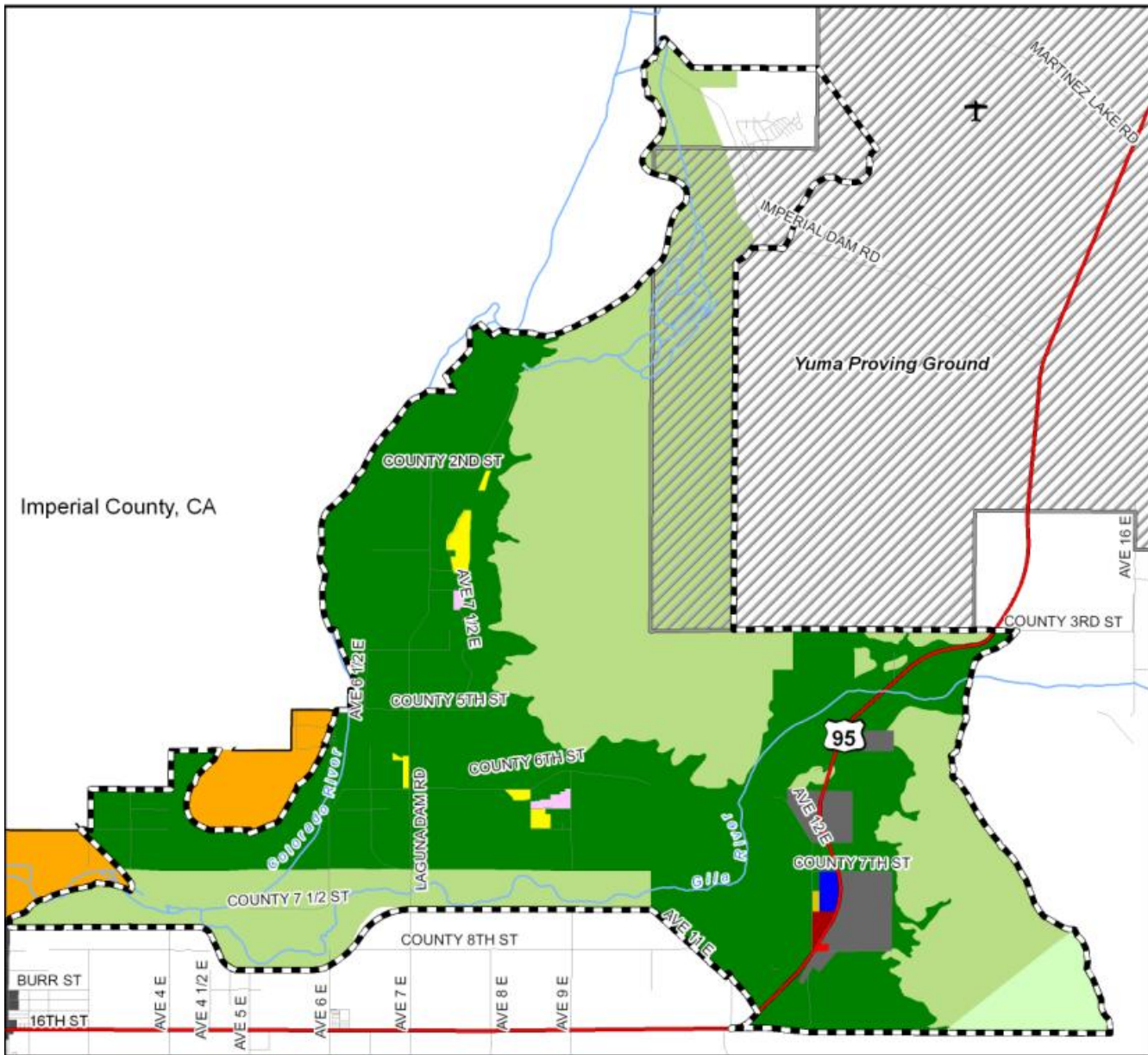
Land Use Element

<p>Mixed Use Residential (R-MU)</p> 	<ul style="list-style-type: none"> • A designation that supports mixed use areas: Recreational vehicles, manufactured homes, site built and local commercial: • Areas with more than one primary use category; • Encourages neighborhood oriented commercial; • Recognizes need for caretaker and institutional facilities. • Limited local commercial uses; • Mixed uses are those which rightfully fall into two or more classifications. By using mixed-use classifications, the aggregations of adjacent parcels have more flexibility.
<p>Retirement Community/Planned Unit Development (R-RC)/(PUD)</p> 	<ul style="list-style-type: none"> • A designation that supports land, subdivision and facilities exclusively committed to providing the services associated with meeting the increasing demands oriented towards retirees or retirement communities: • Second dwelling units; • Mixed uses and nodes to support needed residential and light commercial services; • Assisted living; • Planned communities.
<p>Agriculture/Industrial (A-I)</p> 	<ul style="list-style-type: none"> • A designation that supports continued agricultural uses. • Site-built residences with noise attenuation subject to the zoning densities in effect prior to September 12, 1996. • Aviation-compatible industrial uses subject to the demonstration and completion of the appropriate public infrastructure, public services and long term water allocation needed for development.
<p>Industrial (I)</p> 	<ul style="list-style-type: none"> • A designation that supports industrial uses with related offices.
<p>Business Park (BP)</p> 	<ul style="list-style-type: none"> • A designation that allows for developments that may mix light industrial, general commercial, retail and/or office uses, preferably in a high visual quality, business park or campus-type setting. Types of development allowed under this designation include: • Light industrial uses and related offices; • Commercial outlets or combination enterprises.
<p>Local Commercial (C-LC)</p> 	<ul style="list-style-type: none"> • A designation that promotes and preserves convenient neighborhood commercial areas which contain retail, service and office establishments that meet the daily needs of nearby neighborhoods. Examples of this include the following: • Small retail stores; • Office uses; • Shopping and restaurant-type activities.

<p>Regional Commercial (C-RC)</p> 	<ul style="list-style-type: none"> • A designation that allows for the full range of regional commercial activity. This designation is intended for large scale commercial enterprises that have region wide rather than a neighborhood customer base. Examples of this include the following: • Big box retail chains and other large retail stores; • High density business/office, wholesale trade, retail activities and commercial services; • Commercial building with a footprint larger than one acre.
<p>Open Space & Recreational Resources (OS/RR)</p> 	<ul style="list-style-type: none"> • A designation that supports undeveloped areas providing visual and psychological relief from man-made development. • Resort commercial development (such as but not necessarily limited to the following): • Resorts, hotels, theme parks, tennis or golf resorts or camps, water parks and slides, conference centers, golf courses, exotic animal parks, parks, zoos or amphitheatres; • Areas available for public visitation and recreation with or without developed facilities and associated businesses such as dude ranches, off-road vehicle parks or trails, horse riding academies, horse stables and campgrounds; • Very low density residential (5 acre homesites); • Continued agricultural use.
<p>Sensitive Areas & Resource Lands (SA-RL)</p> 	<ul style="list-style-type: none"> • A designation that supports areas that provide for opportunities for environmental conservation, maintenance and enhancement of ecological, aesthetic and/or cultural value: • Shall not be developed; Only publically owned land; • Wildlife, fishing and hunting areas; • Naturally hazardous areas.
<p>Transportation, Communications, & Utilities (TCU)</p> 	<ul style="list-style-type: none"> • A designation that allows utility administrative and operational sites which serve the community or public need, and to protect these sites from encroaching incompatible uses.
<p>Public/Quasi-Public (P-QP)</p> 	<ul style="list-style-type: none"> • A designation that supports publicly owned and operated facilities or those devoted to public use by governmental and quasi-public or non-profit entities including schools, churches, hospitals, military installations, government buildings, etc.

Land Use Element - North Gila Land Use Designations

Map 16: Land Use Designation, North Gila Planning Area



YUMA COUNTY ARIZONA

Landuse

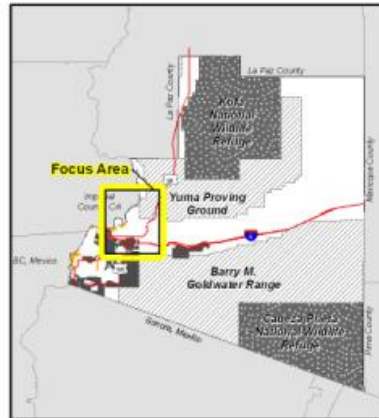
- North Gila Planning Area
- Agricultural / Rural Residential
- Business Park
- Industrial
- Local Commercial
- Regional Commercial
- Low Density Residential
- Rural Density Residential / Planned Unit Development
- Retirement Community
- Open Space & Recreational Resources
- Sensitive Areas & Resource Lands
- Indian Reservations
- Incorporated Areas
- Airfield

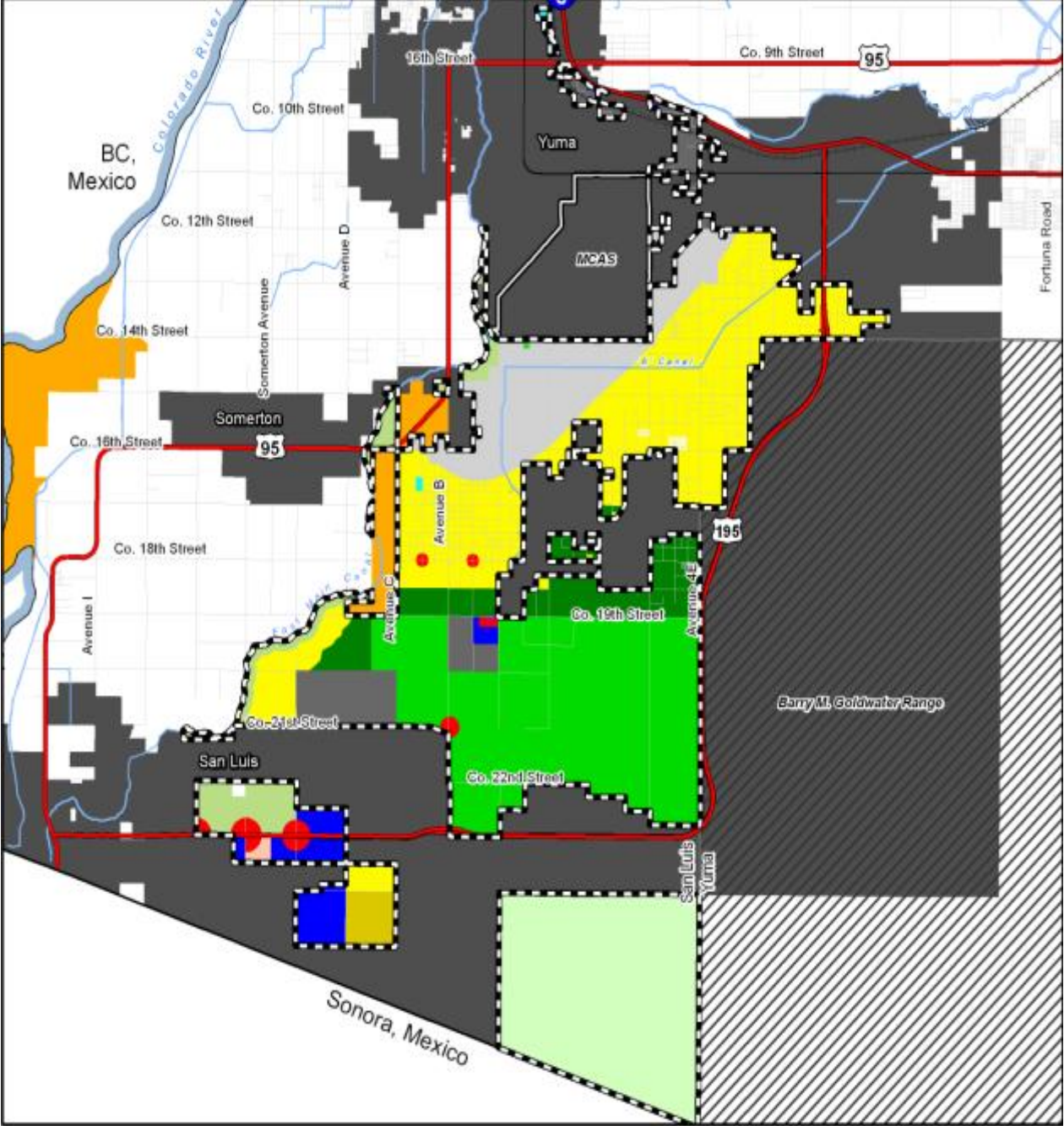
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	Yuma Mesa Planning Area		Mixed Use Residential		Marine Corps Air Station Yuma
	Agricultural / Rural Preservation		Low Density Residential		Indian Reservations
	Agricultural / Rural Development		Rural Density Residential		Military Boundary
	Agricultural / Rural Residential		Suburban Density Residential		Incorporated Areas
	Agriculture/Industrial		Urban Density Residential		
	Industrial		Open Space & Recreational Resources		
	Business Park		Sensitive Areas & Resource Lands		
	Local Commercial		Public/Open Public		

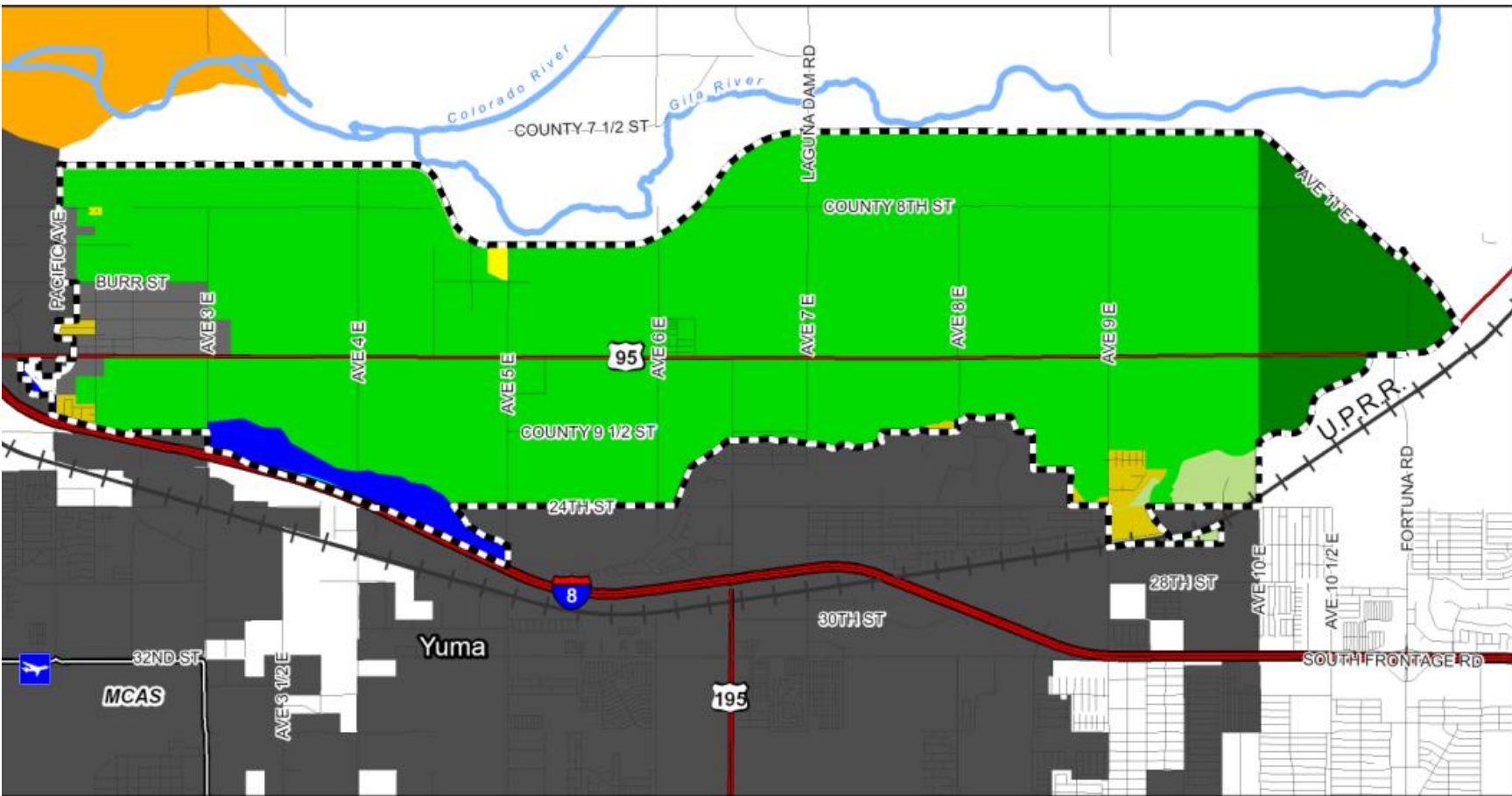
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 Source: Yuma County GIS Division

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Map 17: Yuma Mesa Planning Area Land Use Designations

Land Use Element - Gila Valley Land Use Designations



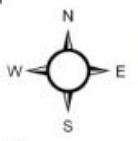
Map 19: Land Use Designation, Gila Valley Planning Area

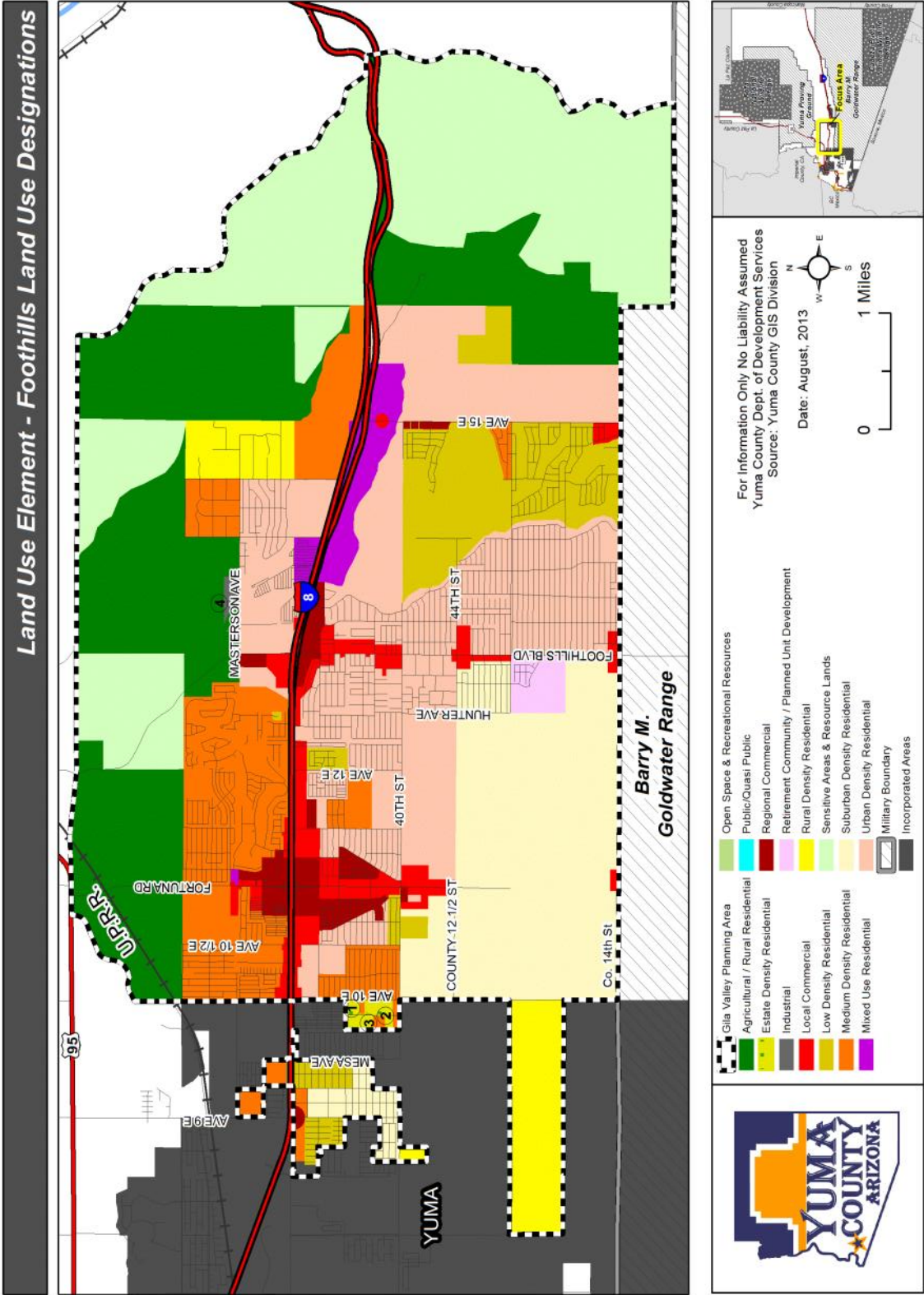


- Gila Valley Planning Area
- Agricultural / Rural Residential
- Agricultural / Rural Preservation
- Industrial
- Business Park
- Low Density Residential
- Rural Density Residential
- Urban Density Residential
- Estate Density Residential
- Open Space & Recreational Resources
- Public/Quasi Public
- Incorporated Areas
- Marine Corps Air Station Yuma
- Indian Reservations

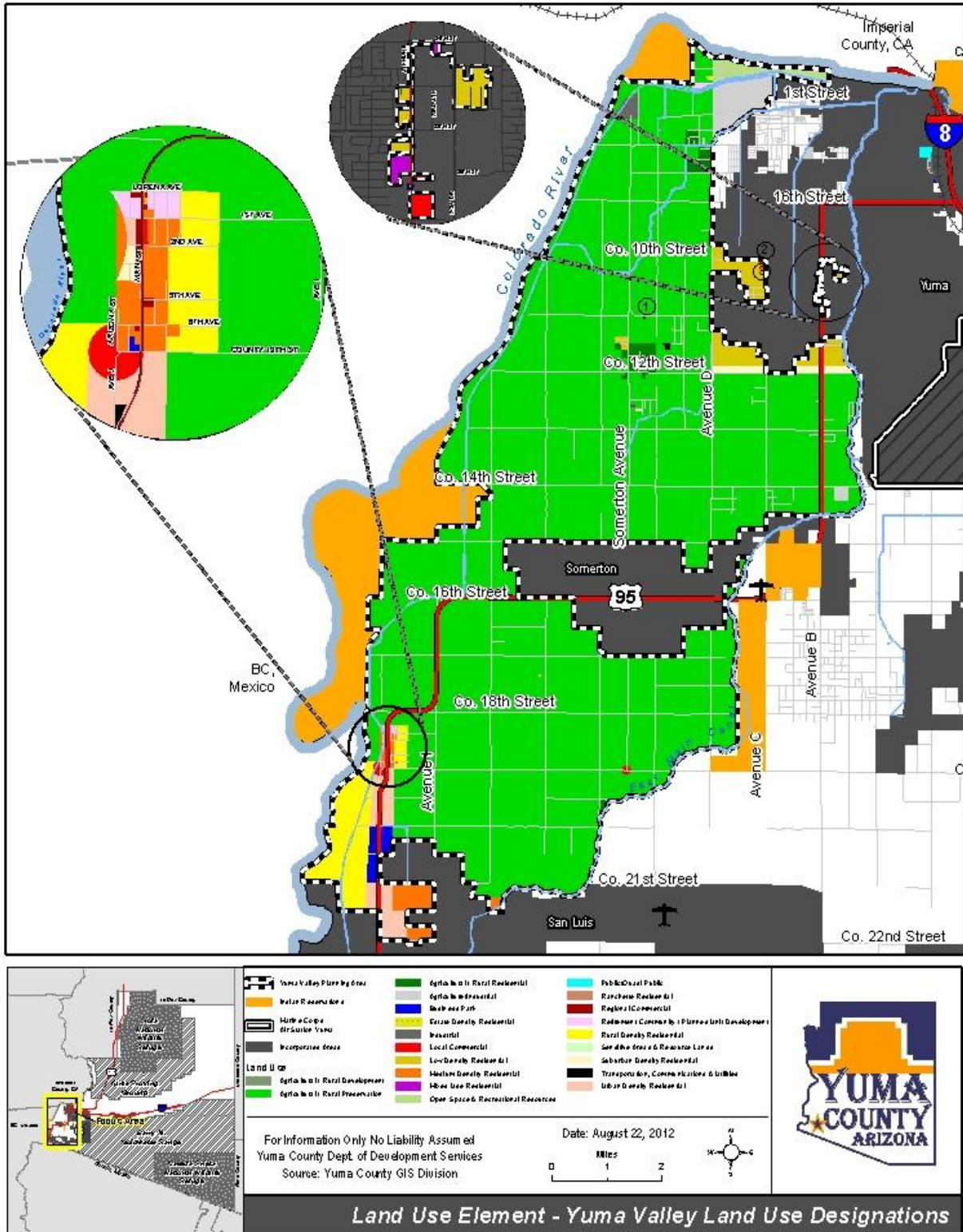
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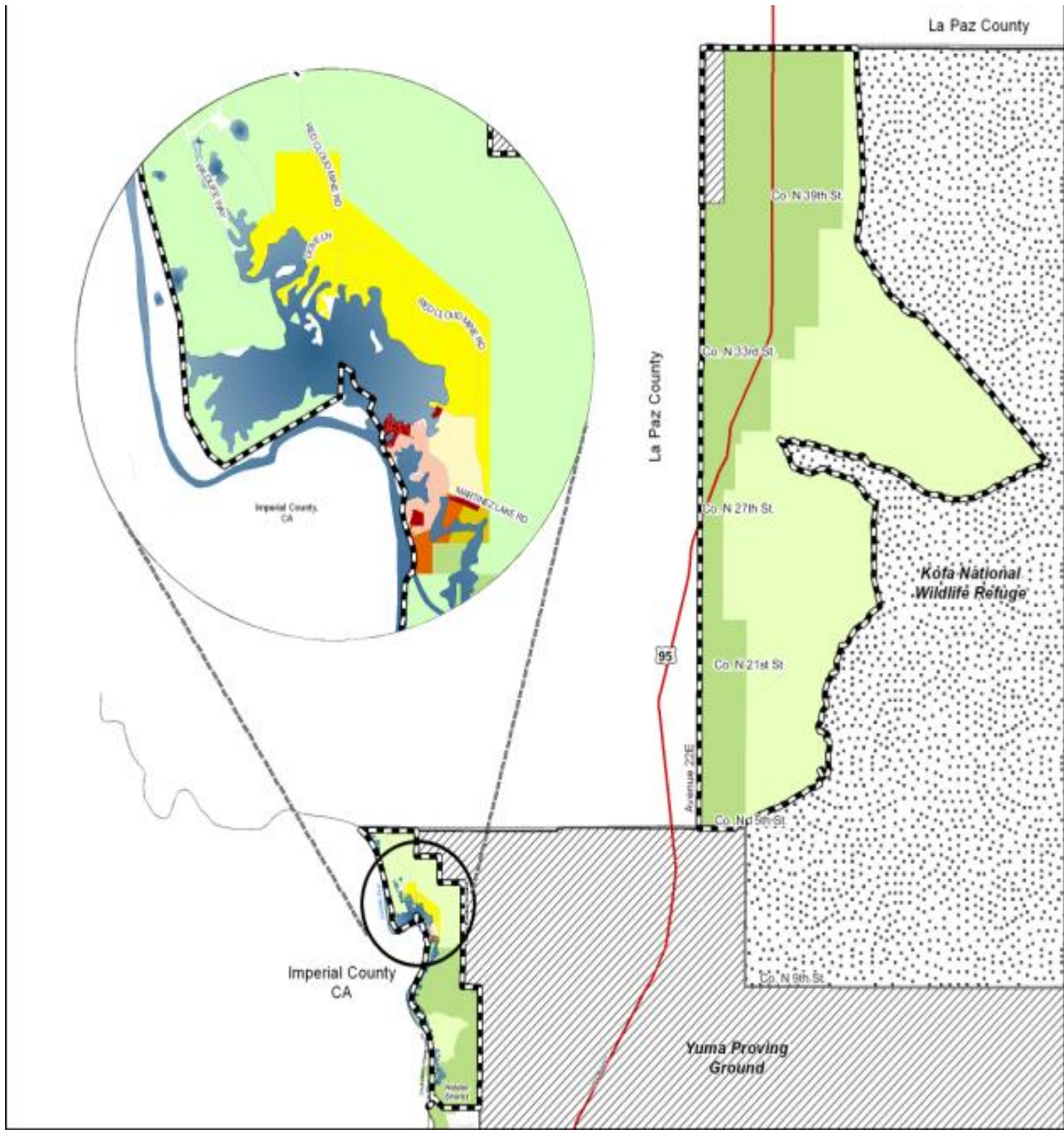




Map 20: Land Use Designation, Foothills Planning Area



Map 21: Land Use Designation Yuma Valley Planning Area



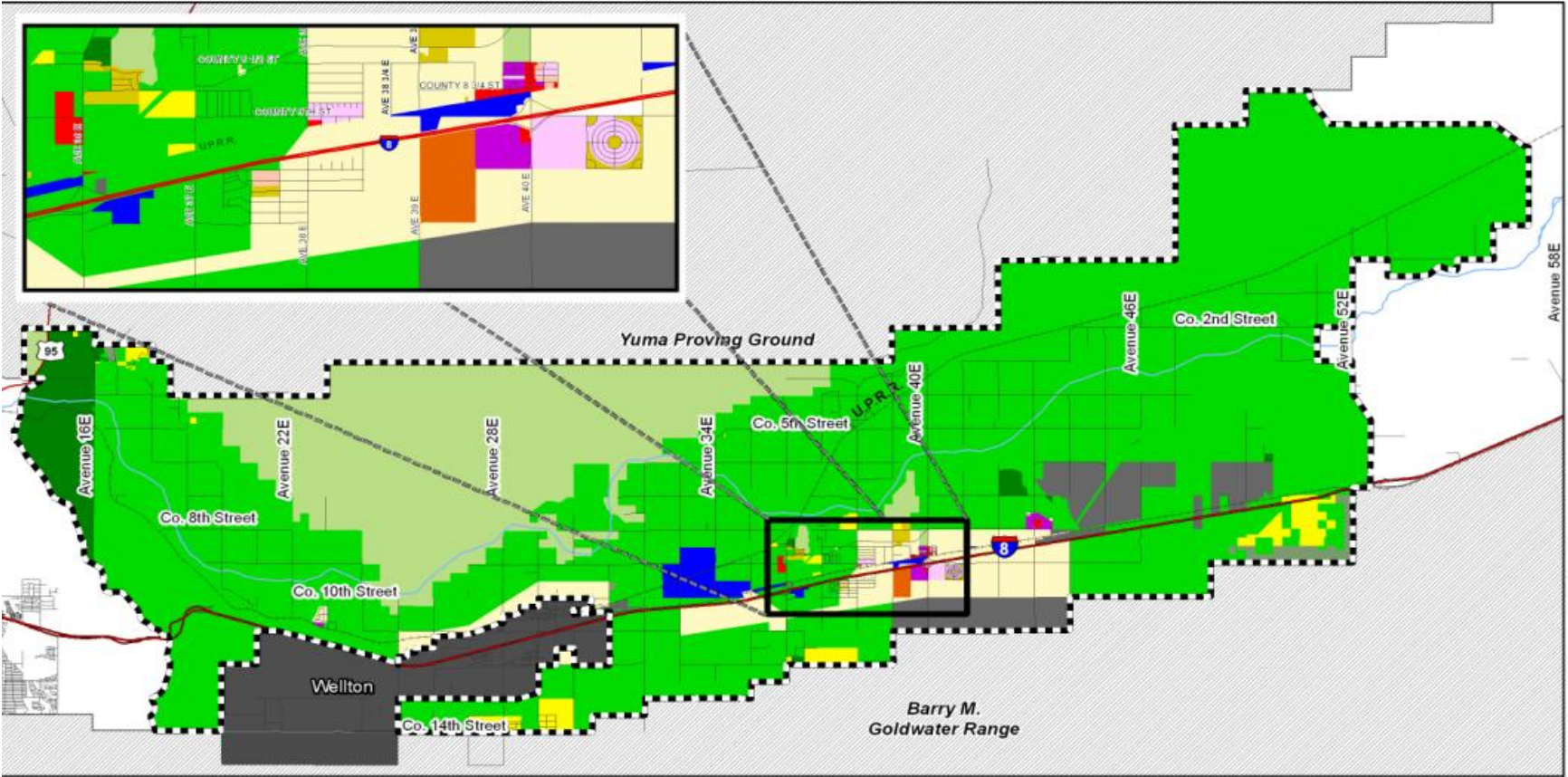
	<ul style="list-style-type: none"> Martinez Lake Planning Area Regional Commercial Low Density Residential Medium Density Residential Rural Density Residential 	<ul style="list-style-type: none"> Sensitive Areas & Resource Lands Suburban Density Residential Urban Density Residential Open Space & Recreational Resources Military Boundary National Wildlife Refuge 	
	<p>For Information Only No Liability Assumed Yuma County Dept. of Development Services Source: Yuma County GIS Division</p>		

Land Use Element - Martinez Lake Land Use Designations

Map 22: Land Use Designation, Martinez Lake Planning Area

Land Use Element - Dome Valley/Wellton Land Use Designations

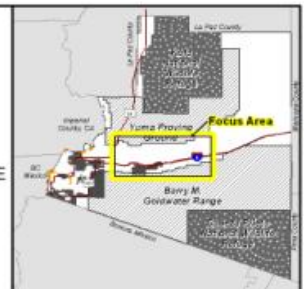
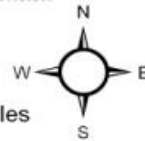
Map 23: Land Use Designation, Dome Valley/Wellton Planning Area

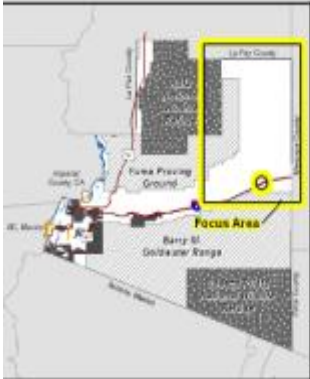
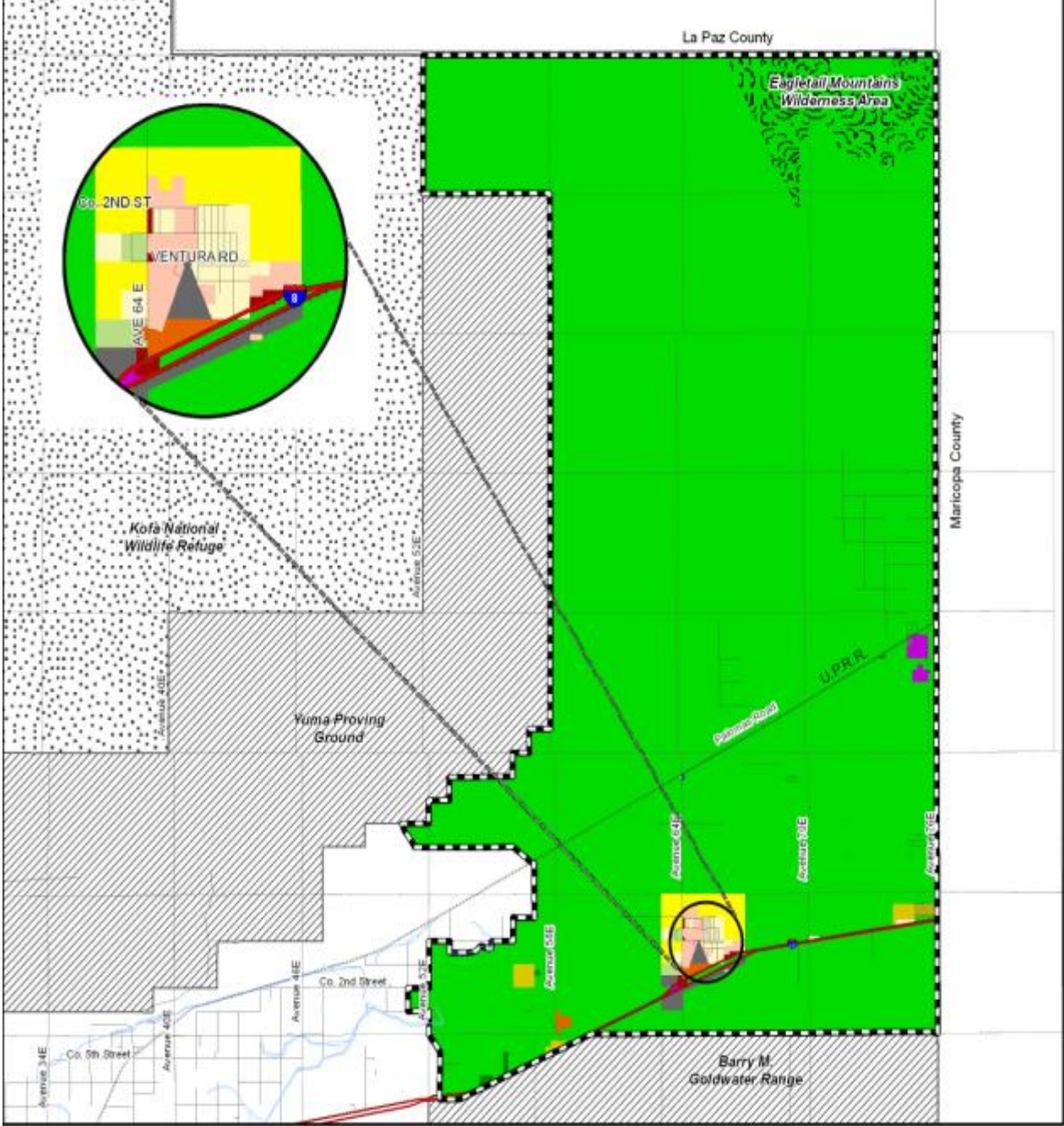


- | | |
|-----------------------------------|---|
| North Gila Planning Area | Medium Density Residential |
| Agricultural / Rural Development | Mixed Use Residential |
| Agricultural / Rural Preservation | Open Space & Recreational Resources |
| Agricultural / Rural Residential | Retirement Community / Planned Unit Development |
| Business Park | Rural Density Residential |
| Industrial | Sensitive Areas & Resource Lands |
| Local Commercial | Suburban Density Residential |
| Low Density Residential | Urban Density Residential |
| | Military Boundary |
| | Incorporated Areas |

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Date: June, 2011





- Dateland/East County Planning Area
- Agricultural / Rural Residential
- Agricultural / Rural Preservation
- Industrial
- Business Park
- Regional Commercial
- Mixed Use Residential
- Low Density Residential
- Medium Density Residential
- Rural Density Residential
- Suburban Density Residential
- Urban Density Residential
- Open Space & Recreational Resources
- Military Boundary
- National Wildlife Refuge

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Land Use Element - Dateland /East County Land Use Designations

Map 24 Land Use Designation, Dateland/East County Planning Area

3.3 Amendment Process and Criteria

Definition of a Major Amendment

A major amendment is an amendment to the Yuma County 2020 Comprehensive Plan that represents a substantial alteration of the county's land use mixture or balance as established in the Plan's land use element for that area of the county. A major amendment shall be required for any proposed project that is a substantial change to the goals, objectives and policies of the Comprehensive Plan, the intent or direction of the Comprehensive Plan or represents a substantial alteration of the county's land use mixture and balance established by the Comprehensive Plan. The following criteria determines whether a proposed amendment to the Comprehensive Plan is a major amendment.

Slope

Any proposed amendment on lands with 2/3 or more of the parcel net land area on a 12% slope is a major amendment.

Traffic Capacity

A proposed amendment is a major amendment if it would create a Level of Service (see below) of D, E or F on existing road or roads that will service the proposed amendment area. If such road is already rated at a D, E or F Level of Service, that proposed amendment is a major amendment if it further decreases the Level of Service (i.e. from D to E, D to F or from E to F)

A. Level of Service:

Level of Service (LOS) is the term used to describe the degree of traffic congestion on a roadway. The various Levels of Service which range from A to F are generally defined as follows:

- Level of Service A represents free flow.
- Level of Service B is in the range of stable flow but the presence of other users in the traffic stream begins to be noticeable.
- Level of Service C is in the range of stable flow but marks the beginning of the range in which the operation of individual users becomes significantly affected by others.
- Level of Service D represents high density but stable flow. Speed and freedom to maneuver are severely restricted and the driver or pedestrian experiences a generally poor level of comfort and convenience.
- Level of Service E represents operating conditions at or near the capacity level. All speeds are reduced to a low but relatively uniform value.
- Level of Service F is used to define forced or breakdown of flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point.

B. Deriving Level of Service:

The proposed Level of Service is derived by applying traffic count and capacity data into the following formula:

$$\frac{\text{24 Hour Quarterly Traffic Count Report} + \text{Proposed Traffic Count Increase}}{\text{Road Segment Capacities (Vehicles per Day)}} \times 100\%$$

The resultant figure will fall within one of the following Level of Service categories:

- LOS A:** 0.0 to 0.5
- LOS B:** 0.51 to .63
- LOS C:** 0.64 to 0.76
- LOS D:** 0.77 to .88
- LOS E:** 0.89 to 1.0
- LOS F:** Greater than 1.0

C. Road Segment Capacities:

Road Type	2 Lane	4 Lane	6 Lane
Interstate		80,000	120,000
Principal Arterial		36,000	54,000
Minor Arterial		32,400	
Rural Major Collector		29,160	
Rural Minor Collector	13,120		
Urban Collector	14,580		
Local	10,800		

Infrastructure Service Area Boundaries

Any proposed amendment that would trigger a change in infrastructure service area boundaries pursuant to A.R.S. §11-826 is a major amendment. Permissive until a plan is prepared and regulations determined for said boundaries by the Planning and Zoning Commission and adopted by the Board of Supervisors through resolution.

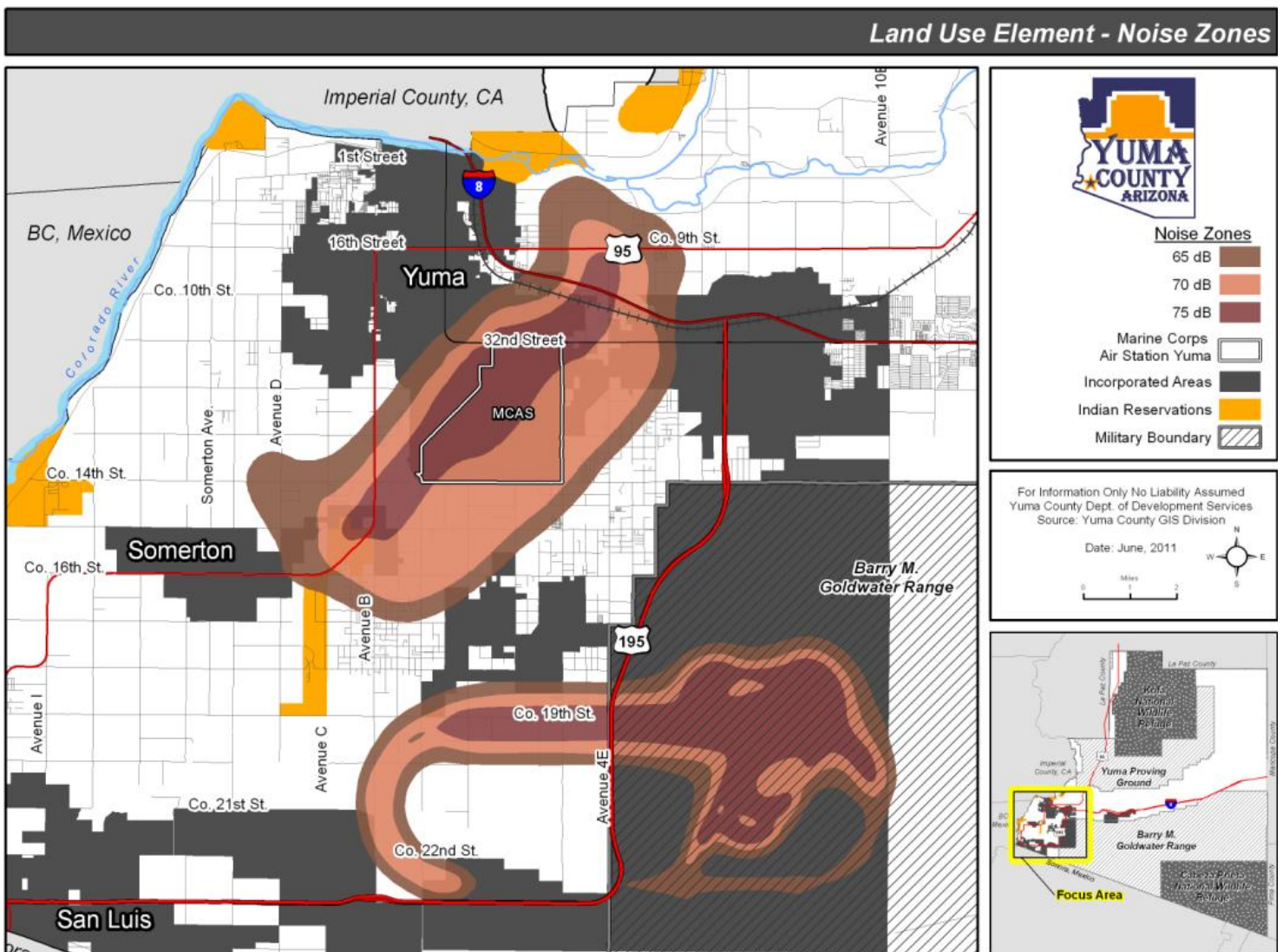
Water Resources

Any proposed amendment that would trigger inconsistency with the Yuma County 208 Water Quality Management Plan (Yuma County 208 Plan). The following actions are required to be consistent with the Yuma County 208 Plan:

- Build or expand a wastewater facility that discharges to surface water.
- Provide a grant or loan through the Water Infrastructure Finance Authority (WIFA).
- Build or expand a wastewater treatment facility or disposal system with combined flows over 24,000 gallons per day (gpd) or some facilities with flows between 3,000–24,000 gpd.

Yuma County Noise Exposure and Compatibility Overlay

Any proposed amendment that would trigger an increase in residential density or any other incompatible land uses and/or densities within the designated 65, 70 or 75 DNL (Day Night Level - average sound level over a 24 hour period) noise contours, as demonstrated in the Yuma County Noise Exposure and Compatibility Overlay Map. In accordance with A.R.S §28-8481, a proposed amendment that is located adjacent to Marine Corps Air Station Yuma/Yuma International Airport (MCAS-Yuma/YIA) or Auxiliary Airfield No. 2 (AUX-2) is a major amendment.



Major Change in Land Use Designation

A major amendment is required if a proposed amendment meets any of the following additional criteria:

- Loss of more than 10 acres of agricultural land
- Potential increase of 157 or more dwellings than would be permitted under the existing land use designation
- Increase of more than 8 acres of commercial space
- Increase of more than 20 acres of industrial space
- Loss of any land designated as Sensitive Areas and Resource Lands
- Loss of any land designated Open Space and Recreational Resource Lands

Major Amendment Process and Timeline

<p>Application Intake <i>January 1 to June 15</i></p>	<p>The deadline for submitting major amendment applications will be June 15th. Initial staff review will take place, maps will be generated and analysis will begin.</p>
<p>Planning and Zoning Commission Releases For Comment - July</p>	<p>The Commission will officially release the major amendments for a 60 day period for public comment. (Any change to the amendment after this date restarts the process the following year.)</p>
<p>Public Information and Participation Process <i>60 Days</i></p>	<p>The public release by Commission action of the major amendments is the beginning of the Public Information and Participation Process (PIPP). As part of the PIPP at least one neighborhood meeting will be held for each major amendment. The PIPP will last for a minimum of 60 days.</p>
<p>Staff Report</p>	<p>A staff report is prepared by incorporating feedback which is gathered during the PIPP.</p>
<p>Legal Notice <i>15 to 30 days prior to P&Z Meeting</i></p>	<p>This requirement will be met by placing a display ad in the <i>Yuma Sun</i> newspaper. This ad will represent legal notice.</p>
<p>Special Planning and Zoning Commission Meeting <i>Must occur at least 75 days after the P&Z commission releases the amendments for comment)</i></p>	<p>A special session of the Planning and Zoning Commission will be held at which all major amendment applications will be heard.</p>
<p>Legal Notice <i>15 to 30 days prior to Board of Supervisors Meeting</i></p>	<p>This requirement will be met by placing a display ad in the <i>Yuma Sun</i> newspaper. This ad will represent legal notice.</p>
<p>Special Board of Supervisors Hearing <i>Prior to December 31 of the year the application was submitted</i></p>	<p>A special session of the Board of Supervisors will be held at which all major amendments will be heard. The meeting will take place no later than December 31st of the year in which the applications were submitted. As per A.R.S. §11-824(C) passage of a major amendment requires an affirmative vote of two-thirds of the members of the board.</p>
<p>Effective Date <i>30 days after Board of Supervisors Approval</i></p>	<p>An approved major amendment does not take effect until 30 days after its approval. During this 30 day period it may be subject to a referendum as provided for in A.R.S. §11-824(C).</p>

Definition of Minor Amendment

A minor amendment is any amendment that does not meet the criteria to be defined as a major amendment. A minor amendment may be heard in conjunction with a concurrent rezoning application.

Minor Amendment Process and Timeline

<p>Application Intake <i>Continuously</i></p>	<p>Applications for minor amendments are accepted on a continuous basis. An application for a rezoning that is dependent on approval of a minor amendment may be filed and heard jointly with a minor amendment.</p>
<p>Staff Report</p>	<p>A staff report containing analysis of the case and a staff recommendation will be prepared.</p>
<p>Legal Notice <i>15 to 30 days prior to P&Z Meeting</i></p>	<p>This requirement will be met by placing an ad in the <i>Yuma Sun</i> newspaper.</p>
<p>Planning and Zoning Commission Meeting <i>6 to 8 weeks after application acceptance</i></p>	<p>A minor amendment will be scheduled for the earliest regularly scheduled Planning and Zoning Commission meeting that has available space on the agenda, allows for all required notification requirements to be met and completion of a staff report. A minor amendment will be heard by the Planning and Zoning Commission approximately 6 to 8 weeks after it is accepted.</p>
<p>Legal Notice <i>15 to 30 days prior to Board of Supervisors' Meeting</i></p>	<p>This requirement will be met by placing an ad in the <i>Yuma Sun</i> newspaper.</p>
<p>Board of Supervisors' Hearing <i>6 to 8 weeks after the Planning and Zoning Commission Meeting</i></p>	<p>A minor amendment will be scheduled for a Board of Supervisors hearing after the Planning and Zoning Commission meeting. A minor amendment takes effect immediately upon approval by the Board of Supervisors.</p>

Criteria for Amending the Land Use Designation Maps

Changing circumstances can lead to a need and/or desire to make changes to the land use element and the maps which are associated with it. For this reason the land use designation maps contained within the Yuma County 2020 Comprehensive Plan can be altered through the major or minor amendment process.

When an amendment to change a land use designation map is submitted, it is judged on criteria contained in the *Yuma County 2020 Comprehensive Plan* to determine if the proposed change is an improvement to the land use pattern of the planning area and helps achieve or not run contrary to the goals and objectives of the Comprehensive Plan. In order for a proposed amendment to be presented to the Planning and Zoning Commission with a staff recommendation of approval a proposed amendment must comply with all established criteria.

The following criteria are countywide criteria and apply to all portions of unincorporated Yuma County. They represent six overall policies on which consensus has been reached at a regional level.

- Coordinated and Compatible Planning
- Concentrated and Urban Development
- Military and General Aviation Preservation
- Valley Agricultural Preservation
- Industrial and Commercial Development
- Rural Development and Lifestyle Preservation
- Conservation of fish and wildlife populations, habitats, and associated recreation opportunities.

These six overall policies are shared by the cities of San Luis, Somerton, Yuma, the Town of Wellton and Yuma County and are reflected in the jointly developed and adopted *Yuma Regional Development Plan*.

The nine planning areas that comprise unincorporated Yuma County are extremely diverse. They range from an urbanized area that is comparable in size and scope to a mid-sized city, areas of intense and bountiful agricultural production, remote desert outposts, areas of two to five acre ranchettes, retirement communities and a community that is mostly composed of vacation homes. No single set of criteria could cover all land use needs, issues and desires of such a diverse group of areas. It is for this reason that the unincorporated portions of Yuma County are divided into nine planning areas. Each planning area represents a portion of unincorporated Yuma County that has common land use patterns and issues.

For each planning area a Citizen Advisory Group composed of planning area residents came to a consensus on what the land use pattern of the planning area should be established for, in addition to the countywide criteria, for future land use changes in that planning area. These planning area specific criteria will be used in conjunction with the countywide criteria in developing recommendations for proposed changes in land use designations. They are contained in the following subsection of this element.

North Gila Planning Area Policies and Priorities

- NG.1:** Any future residential development needs to occur in a manner that is compatible with existing agricultural land use in the planning area and is consistent with the rural nature of existing residential development.
- NG.2:** No additional development should be allowed that would use County 6th Street east of Laguna Dam Road until County 6th Street is upgraded to provide safe and adequate access for both current and future uses.
- NG.3:** Prevent residential encroachment on existing industrial uses, particularly sand and gravel mining operations and provide for the expansion of such uses (sand and gravel mining operations) in the future.
- NG.4:** The Gila Gravity Main Canal which runs through the planning area is of vital importance to Yuma County as it provides water for agricultural and residential use for a large portion of the County. In order to protect this vital resource an adequate buffer should be established between the Gila Gravity Main Canal and any future development.
- NG.5:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.
- NG.6:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- NG.7:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Yuma Mesa Planning Area Policies and Priorities

- YM.1:** Retention of the planning area’s rural character and agriculture activity.
- YM.2:** In order to maintain the current agricultural compatible rural style of development and provide protection for military, land use designations that support lots two to five acres in size should be maintained.
- YM.3:** Commercial or industrial development should be limited in scope and compatible with the rural residential nature of the planning area.
- YM.4:** Consider water resource availability in all land use decisions and development proposals.
- YM.5:** Coordinate availability of irrigation water for residential and agriculture parcels with more than one acre in size.
- YM.6:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.
- YM.7:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- YM.8:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Northwest Yuma Planning Area Policies and Priorities

- NWY.1:** All new development should be consistent with the existing character of the planning area.
- NWY.2:** Expansion of commercial and mixed use activities along 8th Street between Avenue C and the Thacker Lateral Canal is desirable.
- NWY.3:** Economic development should be a key consideration when any decision regarding land use is made.
- NWY.4:** Restrict development along 5th Street to no more than one dwelling unit per acre.
- NWY.5:** Areas in the Avenue B&C Colonia that are currently designated Medium Density Residential would be more appropriately designated Low Density Residential.
- NWY.6:** Encourage appropriate buffers to mitigate conflicting land uses including between aggregate mining and residential land use.
- NWY.7:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- NWY.8:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Gila Valley Planning Area Policies and Priorities

- GV.1:** Properties along 8th Street, east of Pacific Avenue, should be kept agriculture or semi-rural so that future land uses are compatible with the surrounding environment.
- GV.2:** Limit commercial development to the Pacific Avenue commercial corridor between 8th Street and Interstate 8. The transition of some land currently designated as industrial to commercial is acceptable.
- GV.3:** Land use designations should support existing residential densities, but not encourage expansion into areas and/or land currently being used for agricultural purposes.
- GV.4:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.
- GV.5:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- GV.6:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Foothills Planning Area Policies and Priorities

- F.1:** Expansion of commercial development beyond Fortuna Road, Foothills Boulevard and Frontage Road corridors.
- F.2:** Encourage the development of small business by providing an adequate supply of land classified for small scale commercial usage.
- F.3:** New residential development should be of a density that is compatible with the existing density of development in the Foothills area.
- F.4:** New residential development should occur in a manner that enhances park and recreation opportunities.
- F.5:** Future residential development should not cause the quality of life of Foothills residents to decline.
- F.6:** Residential development should not outpace the development of infrastructure to support it.
- F.7:** A lower density of residential development in the Foothills is desired.
- F.8:** The impact on water supply and sewage treatment systems will be specifically analyzed and taken into account when considering any future land use designation change.
- F.9:** Certain state and federal lands, particularly in the immediate vicinity of the Gila Mountains, should be preserved as open space.
- F.10:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.
- F.11:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- F.12:** Consideration given to the preservation of the BMGR.
- F.13:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Yuma Valley Planning Area Policies and Priorities

- YV.1:** Areas in which rural style residential development has already occurred, such as in the Drysdale or Wall Lane areas, will be supported by land use designations that do not significantly expand or intensify existing residential usages.
- YV.2:** No change in land use designation shall be supported unless it is demonstrated that the infrastructure needed to support any future development that would result for the new land use designation will be in place.
- YV.3:** Commercial and/or industrial corridors along transportation corridors are supported with particular emphases on Highway 95 running through Gadsden.
- YV.4:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.
- YV.5:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- YV.6:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Martinez Lake Planning Area Policies and Priorities

- ML.1:** During the process to approve new development in the Martinez Lake area, Yuma County will require developers to assure that adequate sewer service or another acceptable alternative means of wastewater treatment is provided, will ensure that there is sufficient capacity to adequately serve the new development and the additional load will not degrade service to existing residents.
- ML.2:** Low-lying marshy areas along Martinez Lake should be left in a natural state.
- ML.3:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.
- ML.4:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- ML.5:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Dome Valley/Wellton Planning Area Policies and Priorities

- DVW.1:** Limited, planned residential growth and development in the area is supported. However, the preservation of the traditional local agricultural industry and feed lots, as well as the enhancement of its productivity, is critical. New residential and Industrial growth should not encroach on existing agricultural activities in a manner to create a detrimental impact to either use.
- DVW.2:** Industrial growth should be encouraged to take place in a manner that is complimentary with surrounding land use and infrastructure.
- DVW.3:** Clustering of industrial development will be encouraged in order to take advantage of economies of scale and reduce the demand for new infrastructure improvements.
- DVW.4:** Lands contiguous to the Gila, Mohawk or Muggins Mountains shall be considered for preservation of open space if the land in question is owned by a government agency or the private land owner consents to such a designation.
- DVW.5:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.
- DVW.6:** Pursuant to state law, preserve currently identified aggregates sufficient for future development.
- DVW.7:** Provide protection along the BMGR boundary with limited residential development.
- DVW.8:** Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Dateland/East County Planning Area Policies and Priorities

- DEC.1:** Economic development will be a key consideration when considering any future change in land use designations.
- DEC.2:** Promote the construction of solar or wind power plants.
- DEC.3:** New residential development should occur in proximity to existing residential development.
- DEC.4:** Land use designation should promote viable levels of agricultural production and encourage the development of an aquaculture industry.
- DEC.5:** Encourage appropriate buffers to mitigate conflicting land uses, including between aggregate mining and residential land use.

DEC.6: Pursuant to state law, preserve currently identified aggregates sufficient for future development.

DEC.7: Encourage the conservation and enhancement of open space and sensitive wildlife habitats.

Section Four—Open Space Element

4.1 Introduction

There are many ways that open space can be defined, but the following definition of open space is the one used in the *Yuma County 2020 Comprehensive Plan*. Open space is defined as *any publicly owned and publicly accessible space or area characterized by great natural scenic beauty or whose existing openness, natural condition or present state of use, if retained, would maintain or enhance the conservation of natural or scenic resources.*

Arizona Revised Statutes §11-821(D)(1) requires that an open space element contained in a comprehensive plan have the following components: A comprehensive inventory of open space areas, recreational resources and designation of access points to open space areas and resources; an analysis of forecasted needs, policies for managing and protecting open space areas and resources and implementation strategies to acquire open space areas and further establish recreational resources; and policies and implementation strategies designed to promote a regional system of integrated open space and recreational resources and a consideration of any existing regional open space plan.

A rich variety of open spaces exists within Yuma County. Only a very small portion of the County is urbanized and over 91% of the unincorporated Yuma County is publicly owned. Much of the federally owned land and a small portion of state owned land in Yuma County is specifically designated and managed as open space areas. A comprehensive inventory of these designated open space areas as required under ARS §11-821(D)(1)(a) is contained in this element. Maps showing the location of publicly owned land and designated open space can be found on pages four (4) and five (5) of this element. These designated open space areas are managed by a diverse array of federal and state agencies including the U.S. Fish and Wildlife Service, the Bureau of Land Management, the Bureau of Reclamation, the Arizona Game and Fish Department (AGFD) and the Arizona State Land Department (ASLD).



Open space near the Gila Mountains

Open Space Element

The federal government is the largest land owner in unincorporated Yuma County. Most of the federal lands are administered by four agencies that cover large areas with varying degrees of public access which range from closed to limited access. These four agencies have diverse missions and are: the Yuma Proving Ground (YPG), Barry M. Goldwater Range (BMGR), Kofa National Wildlife Refuge and Cabeza Prieta National Wildlife Refuge. Nearly all of the remaining 341,581 acres is managed by the Bureau of Land Management (BLM). The portion of federally owned land managed by the BLM is particularly important to Yuma County residents. The BLM administers large portions of the open space near urbanized areas including mountainous and riparian areas that are valued by County residents for multiple uses. The BLM's plan on how this land is to be managed is set forth in the Yuma Field Office Approved Resource Management Plan (RMP) which was completed in January 2010.

The purpose of the RMP is to establish management directions for the balanced uses of land under the management of the BLM including: rangeland, wildlife, wilderness, recreation, cultural resources and other natural, scenic, scientific and historical values. This RMP consolidated previous plans and guides the overall management of activities as well as the use and protection of BLM managed lands. The RMP is the framework for future planning and decision making on BLM managed lands.

The Arizona State Land Department (ASLD) manages a significant amount of land in the form of State Trust Land scattered throughout the County including many parcels close to or in key urban, mountainous or riparian areas. In total, the ASLD manages 317 square miles of unincorporated Yuma County. This total does not include the approximately 305 square miles of State Trust Land that is located within the boundaries of Kofa National Wildlife Refuge, YPG and the BMGR and are managed as part of these entities. State Trust Land is managed in a much different way than nearly all other forms of land owned by the government.

State Trust Lands are managed by the ASLD under mandate from the Arizona Constitution to achieve the highest and best use of the land in order to maximize revenues to the trust's beneficiaries, which include the public schools, prisons and other public entities. Management of State Trust Land differs from lands under the management of the Bureau of Land Management as State Trust Lands are managed solely for the benefit of the trust beneficiaries, as opposed to being managed for the benefit of and use by the public.

All recreational users of State Trust Land, except licensed hunters and fishermen who are actively pursuing game or fish in-season, are required to obtain a recreational use permit from the ASLD. A recreational use permit grants limited privileges to use State Trust Land for some recreation such as hiking, horseback riding, picnics, bicycling, photography, camping, sightseeing and bird watching. Camping is restricted to no more than fourteen days per year. Off-highway vehicular travel on State Trust Land is not permitted without proper licensing. Lands leased for agriculture, mining, commercial or military purposes are not open to recreational use. Other State Trust Lands may be closed to some or all recreational uses due to hazardous conditions or dust abatement in coordination with the Arizona Game and Fish Department or based on certain state, county or local laws or ordinances.

Open Space Element

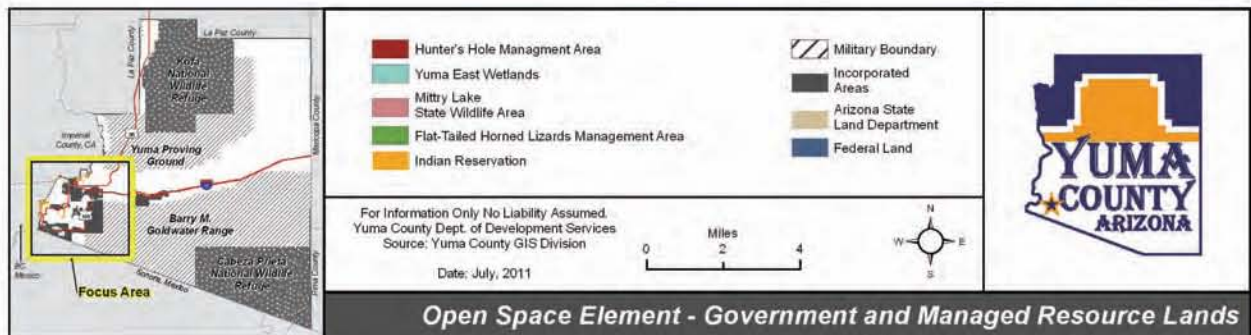
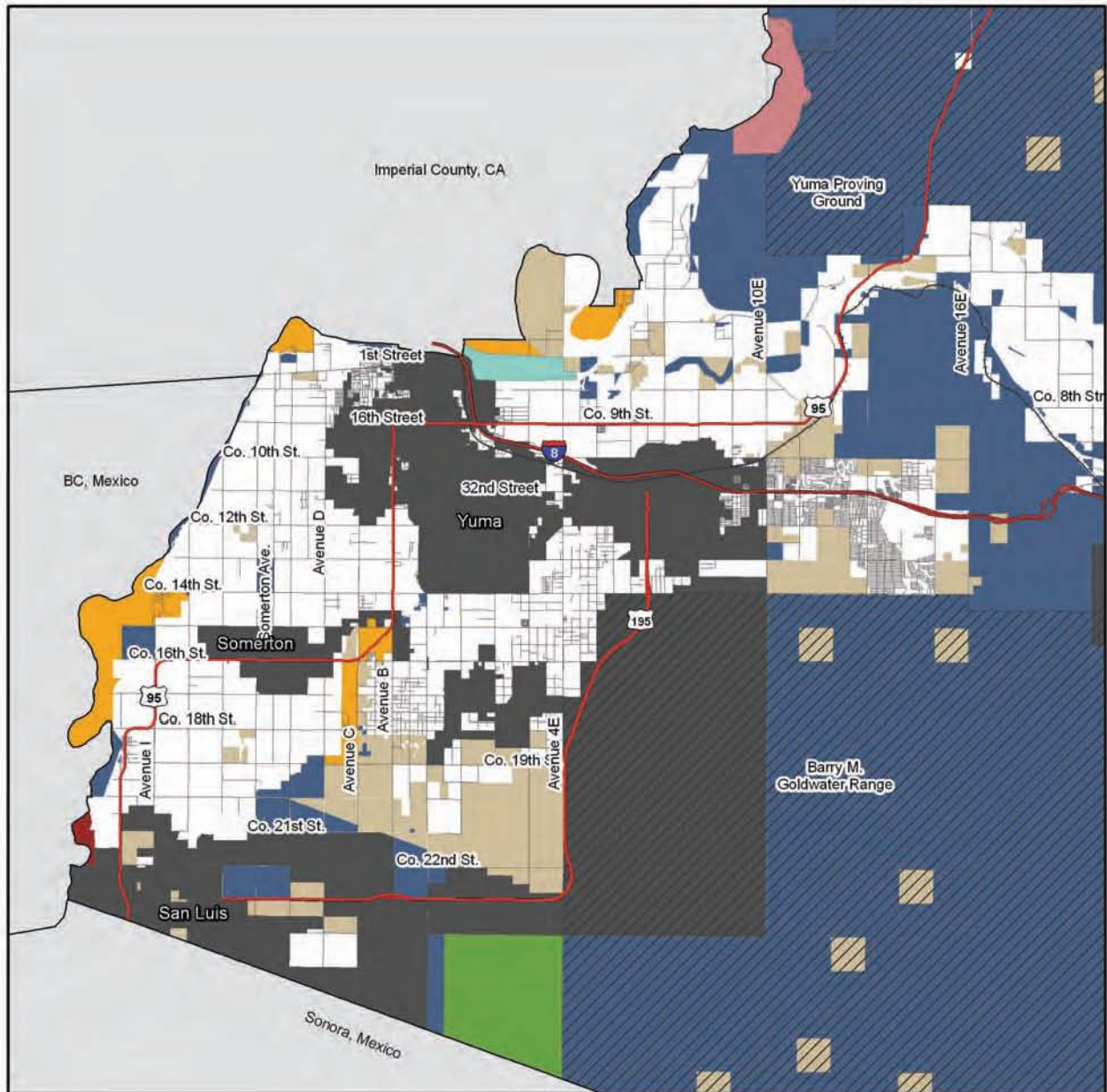
Important economic activities that occur on State Trust Lands and other lands found in Yuma County are hunting and fishing. It is hard overstate the importance of both hunting and fishing to Yuma County's economy. Based data from a 2002 report from the Arizona Game and Fish Department, hunting and fishing expenditures in Yuma County for the year 2001 were 34.2 million dollars. The total multiplier effect of these activities was estimated at 42.0 million dollars.¹

During the public outreach process that led to the development of the *Yuma County 2020 Comprehensive Plan*, Yuma County residents identified several areas of publicly owned open space where current patterns of usage were causing a degradation of the health, safety and welfare of nearby residents and land owners. The Open Space Element identifies these areas of concern and how residents would like to see these issues addressed and are located under Section 4.3 of this Element.

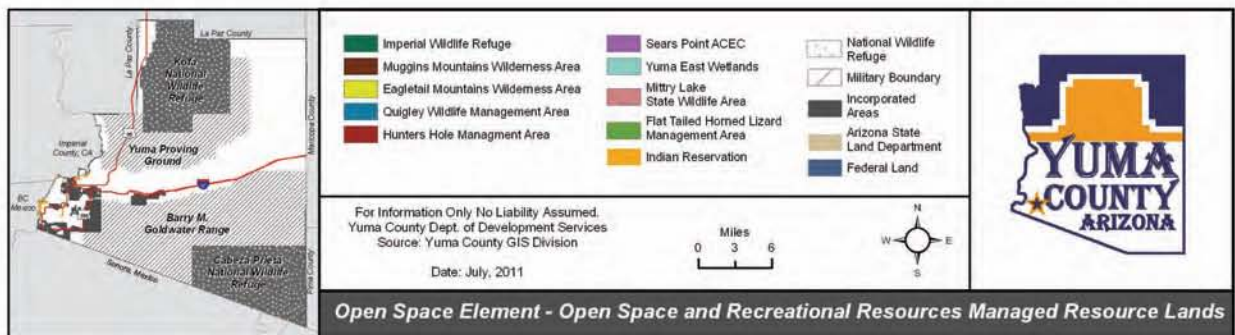
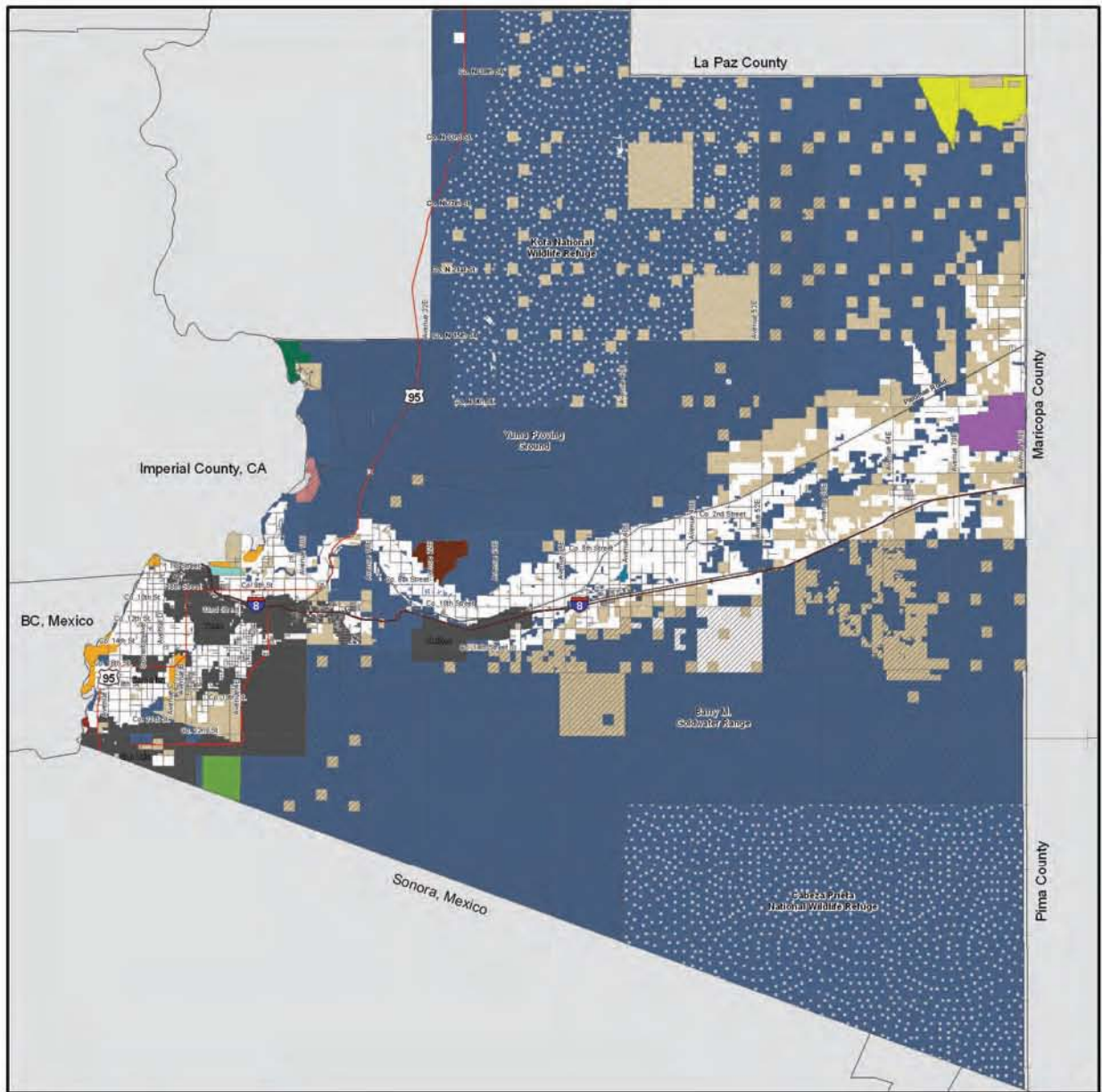
The Open Space Policies and Priorities contained within the *Yuma County 2020 Comprehensive Plan* are derived from comments and feedback from residents across the County. They represent the policy positions and priorities of Yuma County regarding open space within unincorporated Yuma County. All official actions taken by Yuma County regarding open space should be in harmony with these policies and priorities. Furthermore, when other agencies request Yuma County's comment or recommendation on any open space management policy or project, Yuma County's response will reflect as much as possible these policies and priorities.

Open Space Actions are the specific actions that Yuma County will take to advance the adopted Open Space Policies and Priorities.

¹ p. 10, *The Economic Importance of Fishing and Hunting*, a study prepared by Jonathan Silberman, PhD., Arizona State University, 2002 for the Arizona Game and Fish Department.



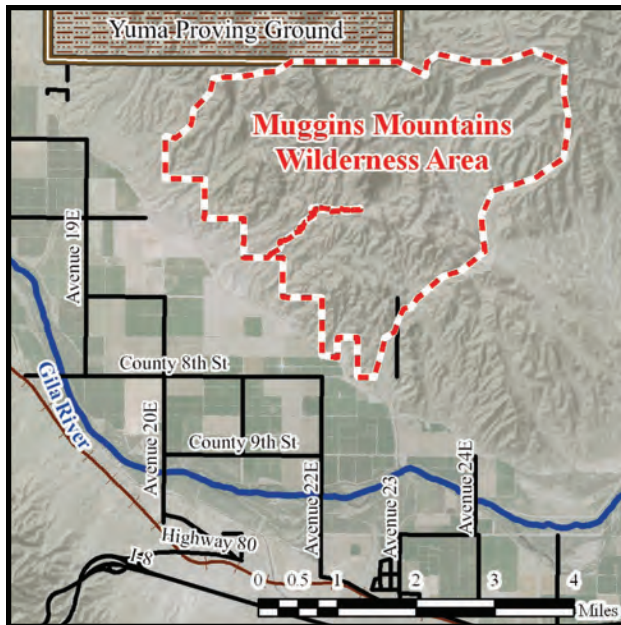
Map 1: Government and Managed Resource Lands (Western Yuma County)



Map 2: Open Space and Recreational Resources Managed Resource Lands

4.2 Open Space Inventory

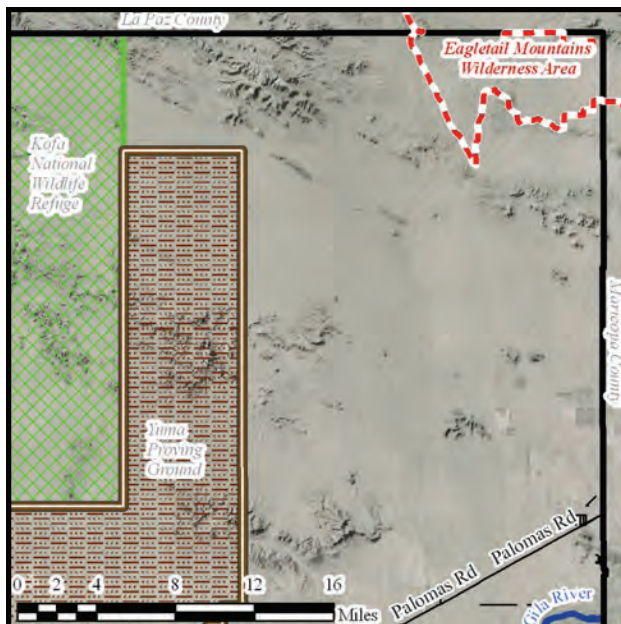
The Muggins Mountains Wilderness Area and the Eagletail Mountains Wilderness Area, established by an act of Congress, are federal lands managed by the Bureau of Land Management. The Wilderness Act of September 3, 1964, defines wilderness areas as: “... an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable (2) has outstanding opportunities for solitude or a primitive and unconfined types of recreation....”. Recreation such as backpacking, day hiking, sightseeing, photography and rock climbing are permitted within the wilderness areas.



Muggins Mountains Wilderness Area



Muggins Mountains Wilderness Area



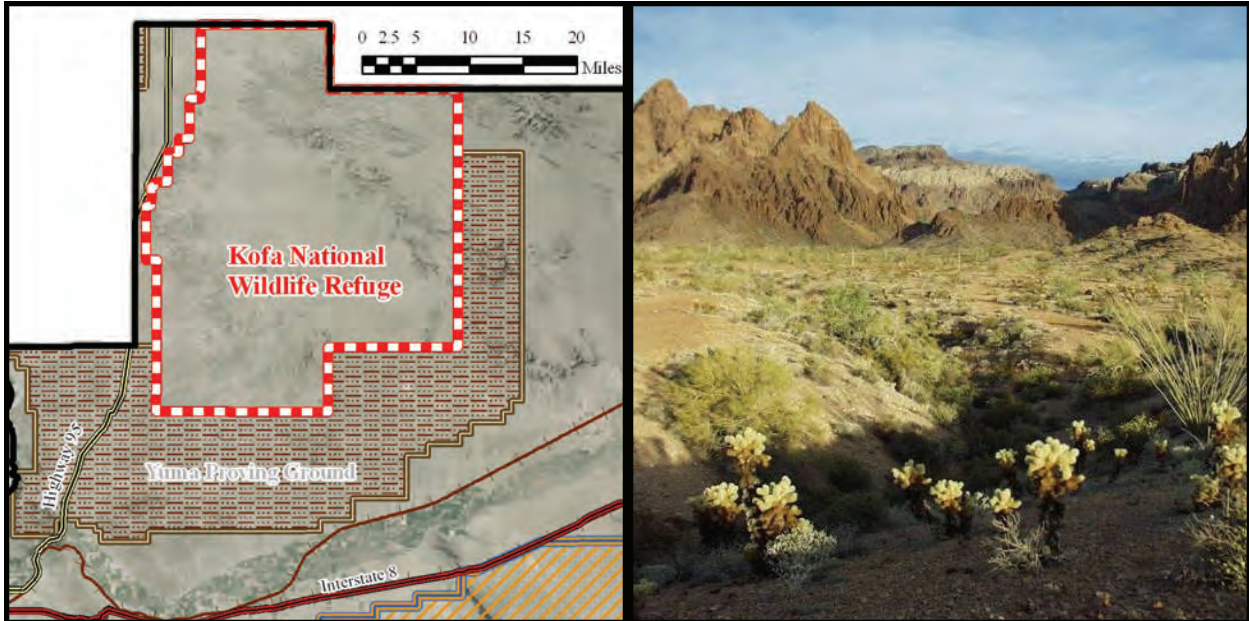
Eagletail Mountains Wilderness Area



Eagletail Mountains Wilderness Area

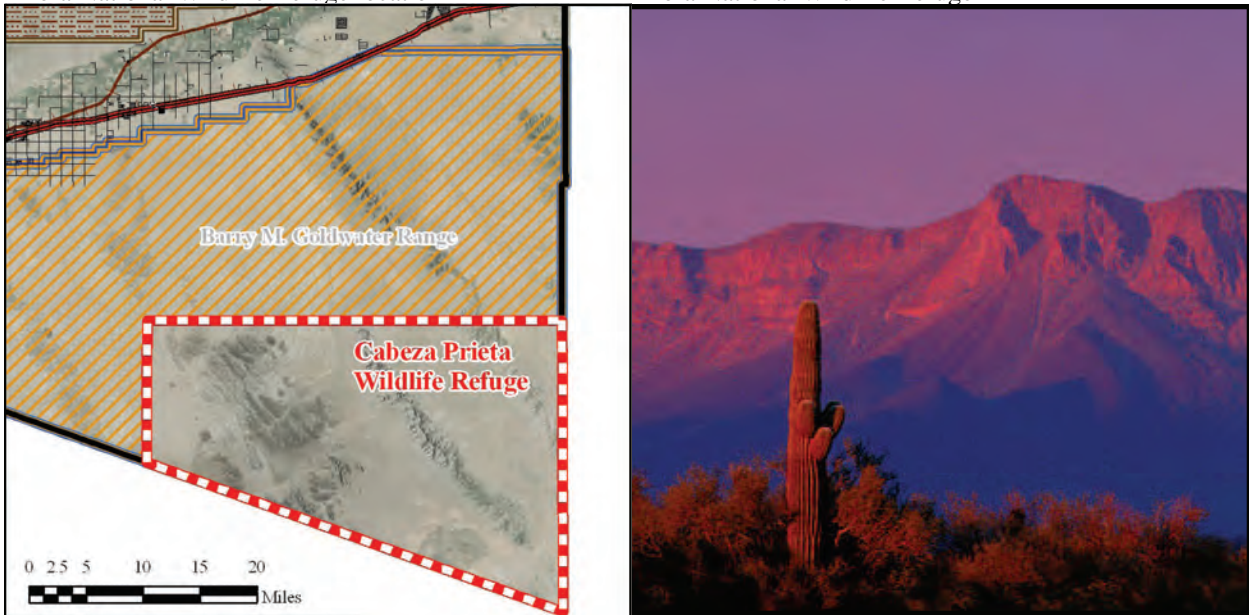
Open Space Element

The Kofa National Wildlife Refuge was established in 1939. The refuge encompasses 665,400 acres of pristine desert that is home to the desert bighorn sheep and the California fan palm, the only native palm trees in Arizona which are tucked away in narrow, rugged canyons on the refuge. Hiking, sightseeing, photography and nature observation are permitted in all areas of the refuge except on patented mining claims and other private in-holdings.



Kofa National Wildlife Refuge location

Kofa National Wildlife Refuge²



Cabeza Prieta National Wildlife Refuge Location

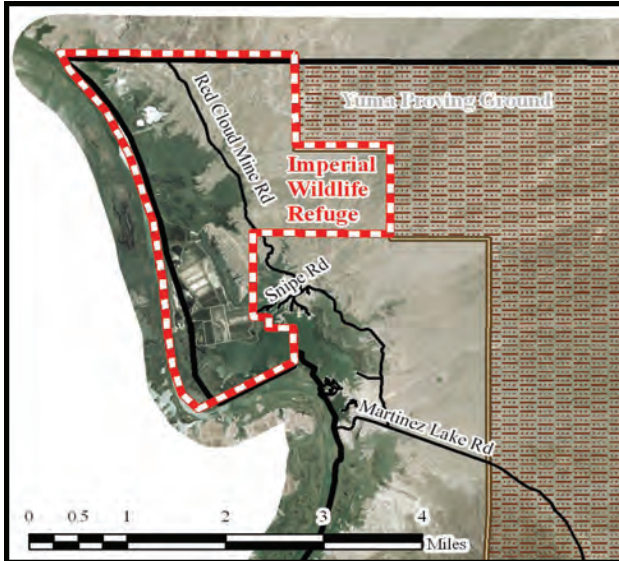
Cabeza Prieta Wildlife Refuge²

The Cabeza Prieta National Wildlife Refuge encompasses 860,010 acres across Yuma and Pima Counties. The refuge offers plentiful hiking, photography, wildlife observation and primitive camping. Before entering the refuge a valid Refuge Entry Permit must be obtained and a Military Hold Harmless Agreement signed. El Camino Del Diablo, a historic route linking the northern frontier of Mexico and of California, crosses the refuge.

²Photo courtesy of the United State Fish and Wildlife Service

Open Space Element

The Imperial National Wildlife Refuge protects wildlife habitat along the lower Colorado River in Arizona and California including the last unchannelized section before the river enters Mexico. Meers Point, located within the refuge has shaded tables, toilets and a boat launch. The refuge has a visitors center that is open from November through March.

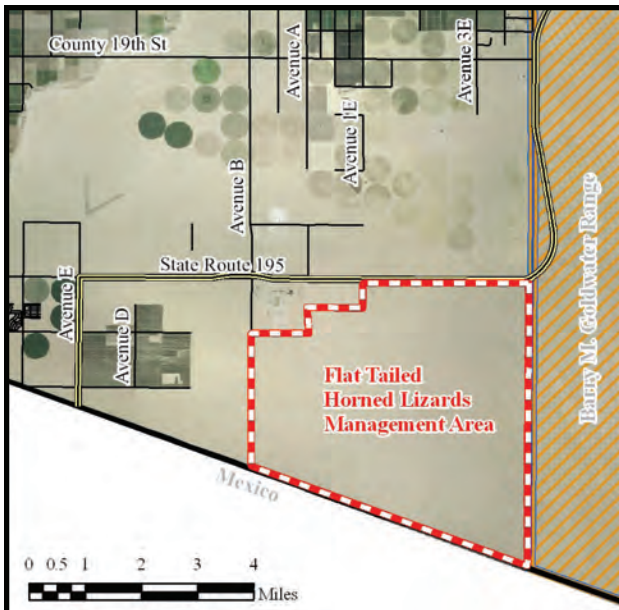


Imperial National Wildlife Refuge Location



Imperial National Wildlife Refuge

The flat-tailed horned lizard was proposed for listing as a threatened species by the U. S. Fish and Wildlife Service in 1993. In response, the Flat-tailed Horned Lizard Rangewide Management Strategy was prepared. The Rangewide Management Strategy called for the establishment of the Yuma Desert Flat-tailed Horned Lizard Management Area. The Yuma Desert Flat-tailed Horned Lizard Management Area was established on federal land in southwestern Yuma County. The majority of the management area is located on the BMGR; however, 8,875 acres of Bureau of Reclamation land adjacent to the BMGR are included in the management area.



Flat-tailed Horned Lizard Management Area



A Flat-tailed Horned Lizard³

³Photo courtesy of the United State Fish and Wildlife Service

Open Space Element

The most significant aspect of the Yuma Desert Flat-tailed Horned Lizard Management Area is that federal policy requires that land in the management area will remain federally owned and undeveloped.⁴

Most of Mittry Lake Wildlife Area is within the floodplain of the Colorado River. In 1971, the U.S. Department of Interior gave the Arizona Game and Fish Department administrative authority over 3,575 acres of land and water at the lake for the management of fish and wildlife including migratory birds. Management emphasis is to optimize the wildlife habitat potential for present and future generations for public hunting and other wildlife-oriented recreation. The management emphasis is based on the 1971 lease and cooperative agreement which allows for the establishment of a public shooting area, waterfowl resting ground and provisions to improve conditions for the propagation of fish.



Mittry Lake State Wildlife Area



Mittry Lake State Wildlife Area

The Quigley Wildlife Area is a 612-acre property located within the Gila River floodplain managed by the Arizona Game and Fish Department. The goals for management of the Quigley Wildlife Area are to: restore and manage riparian habitats; maintain and enhance habitat suitability for waterfowl, shorebirds and other riparian associated wildlife; restore, enhance and manage habitats required by sensitive species; encourage compatible consumptive and non-consumptive uses and educational activities including development of "watchable wildlife" opportunities; and maintain and enhance fisheries and fishing opportunities.

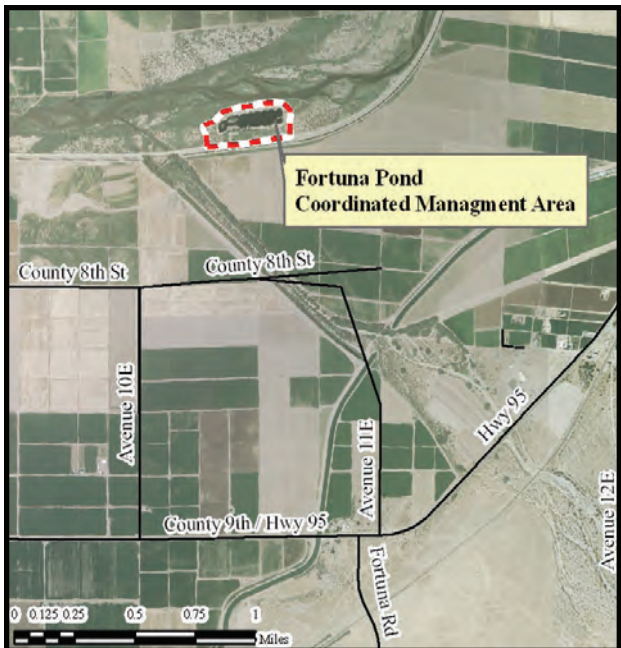
⁴Flat-tailed Horned Lizard Interagency Coordinating Committee. "Flat-tailed Horned Lizard Rangewide Management Strategy" May 2003



Quigley Wildlife Management Area

Quigley Pond

The Fortuna Pond Coordinated Management Area serves as mitigation for fishing opportunities lost on the lower Colorado River. The 30-acre Fortuna Pond is cooperatively managed by the BLM, AGFD and the Bureau of Reclamation. The BLM monitors visitor use and associated resource damage at Fortuna Pond to determine the need for recreational facilities such as garbage cans, restrooms and/or a volunteer host site. The AGFD stocks Fortuna Pond with rainbow trout and channel catfish.

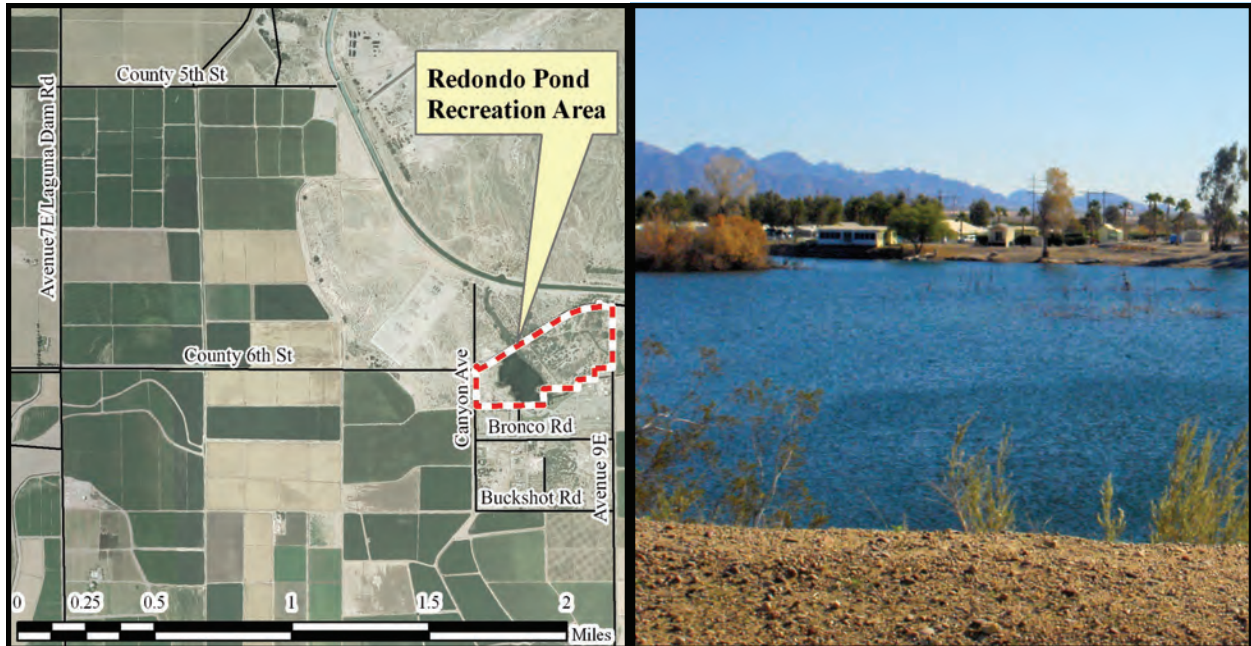


Fortuna Pond Coordinated Management Area

Fortuna Pond

Open Space Element

The Redondo Pond Recreation Area located on federal land is a joint project of Arizona Game and Fish Department's Region IV (Yuma) and the Bureau of Land Management's Yuma Sector. Redondo Pond was formed when groundwater filled an old gravel pit. AGFD and BLM recently completed improvements that included a parking area, providing disability access and construction of the fishing pier. In the summer Redondo Pond is stocked with channel catfish and in the winters it is stocked with rainbow trout.



Redondo Pond Recreation Area

Redondo Pond

Open Space Element

The Hunter's Hole Restoration project along the Colorado River is intended to revitalize the native habitat and reduce the number of illegal crossings and associated crime occurring across the international boundary with Mexico. An international and multi-agency cooperative venture focused on enhancing a 1,000 acre area under the auspices of the Yuma Crossing National Heritage Area (YCNHA) and the Mexican government has been established. The YCNHA is spearheading the effort, and through funding from a private foundation, is proceeding with consensus building, design and preliminary cost estimates.



Hunter's Hole Management Area

Hunter's Hole

Aerial photograph of Hunter's Hole Management Area looking north-northwest. Photo courtesy of the Bureau of Reclamation, cir. 2007.



Gila Mountains

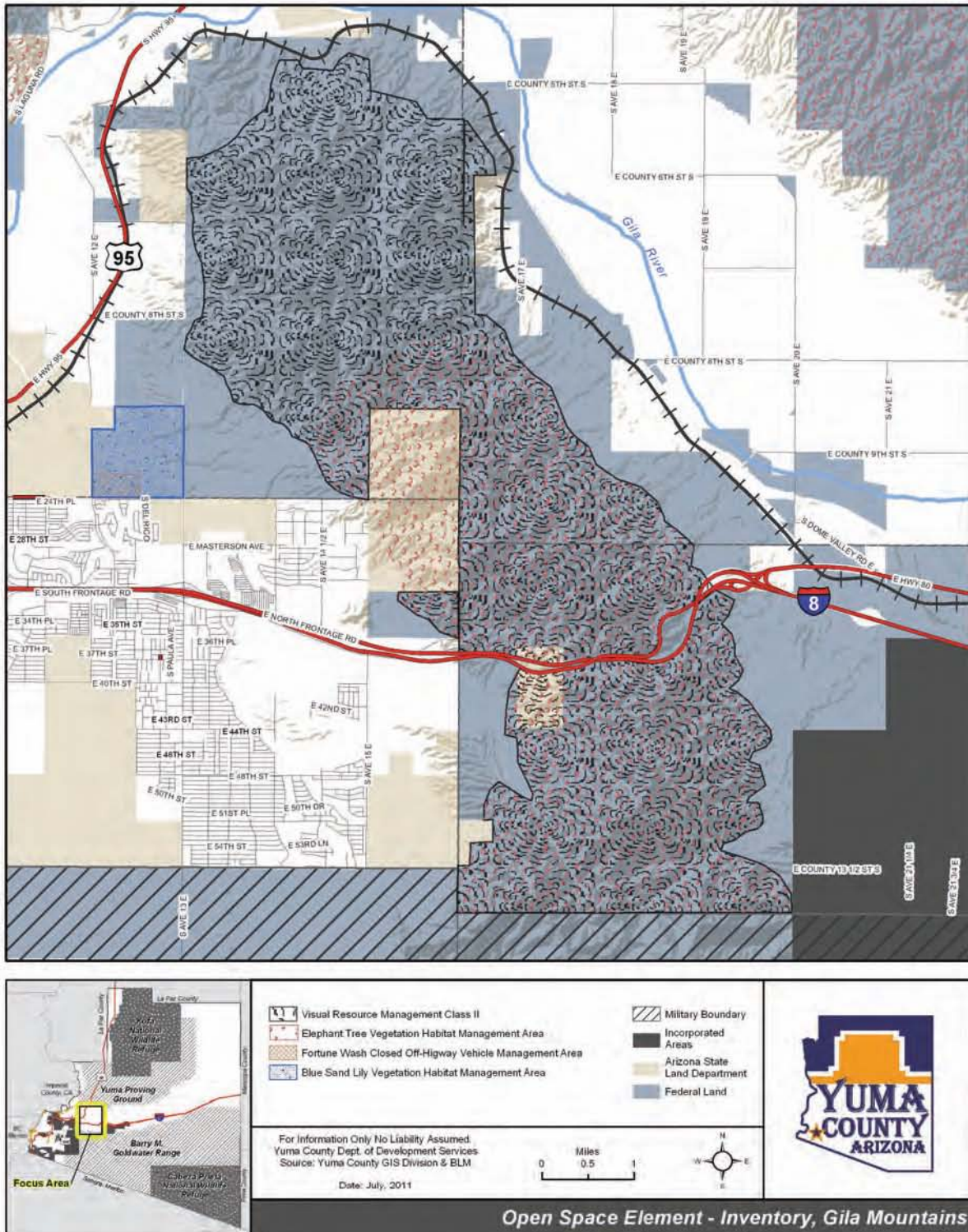
The Gila Mountains have been identified by Yuma County residents as a key open space asset and recreational resource. County residents strongly desire the Gila Mountains to be preserved as open space and for the area to remain open to recreational use. The Arizona State Land Department and private owners own a small portion of the Gila Mountains, but the overwhelming majority of the Gila Mountains is owned by the federal government. The Gila Mountains south of County 14th Street are in the Barry M. Goldwater Range; north of County 14th Street the majority of the Gila Mountains are managed by the Bureau of Land Management. The BLM's plans and policies regarding the land it controls in the Gila Mountains are contained in the Bureau of Land Management's Yuma Field Office Approved Resources Management Plan. The BLM's recreational management goal for the Gila Mountains is to ensure that legal public access, wildlife habitat and cultural resources of the area are not compromised by encroaching urban development and increasing recreational demands. Other specific management policies relating to the Gila Mountains are summarized as follows and are mapped on page 14.

The BLM manages the visual impact of any potential development of land it controls by classifying it into one of four classes that detail what landscape-appropriate mitigation measures are necessary if and when development is permitted to occur. Nearly all of the Gila Mountains under BLM management are classified as visual resource management class II. Class II lands are managed to retain the existing character of the landscape. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape. Solar or wind generating facilities are not allowed on land classified as visual resource management class II.

The BLM has designated two areas in and around the Gila Mountains as vegetation habitat management areas (VHA). The 10,000 acre Elephant Tree VHA protects a proposed priority plant species, *bursera microphylla* (elephant tree), a shrub found in the Sonoran Desert on mountains. The population in the Gila Mountains is one of the most well represented stands in the U.S. The 500 acre Blue Sand Lily VHA protects *triteleopsis palmeri*, a flowering plant listed as a sensitive species. This rare plant grows from bulbets and only flowers in wet years. The Blue Sand Lily VHA is located on stabilized sand dunes on the Gila River Mesa and is the northernmost known population in the United States. Within the Blue Sand Lily VHA, the BLM has closed 100 acres to off highway vehicle use. BLM policies for managing VHAs include the following policies: minimization of BLM-authorized ground-disturbing activities in VHAs to protect focal plant species-populations; land use authorizations for activities such as mineral extraction and livestock grazing would generally not be approved; avoiding to the extent possible, new transportation rights-of-way within VHAs; and appropriate mitigation when avoidance is not possible.

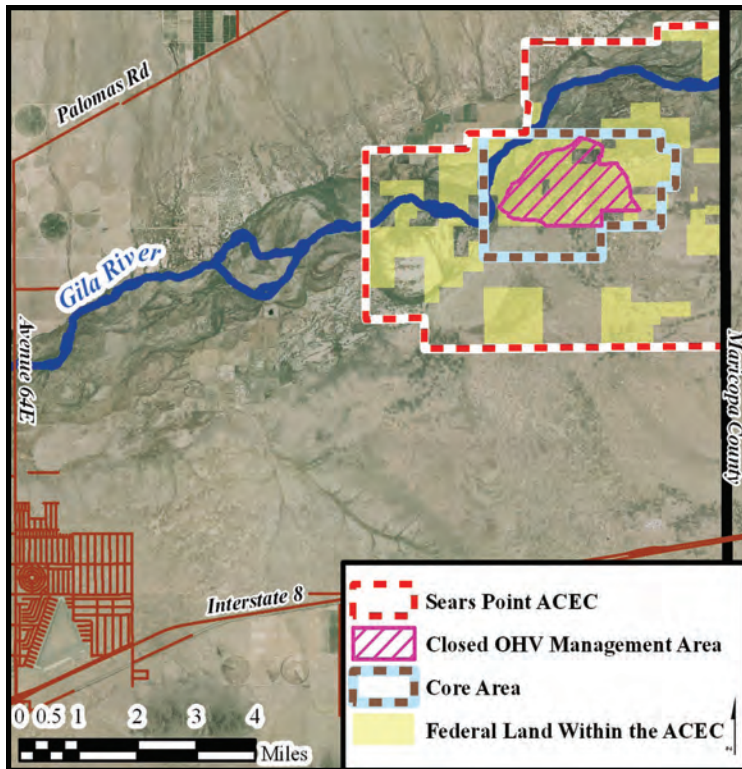


The Gila Mountains



Map 3: Managed or Federally Owned Land in the Gila Mountains

Open Space Element



Sears Point Area of Critical Environmental Concern

Areas of Critical Environmental Concern (ACEC) are areas designated by the BLM for special management attention in order to protect the area and prevent irreparable damage to resources or natural systems. Areas qualifying for consideration as ACEC must have substantial significance and value including qualities of more than local significance and special worth, consequence, meaning, distinctiveness or cause for concern. The values for which ACEC are designated are considered the highest and best use for those lands and protection of those values would take precedence over multiple uses.

The Sears Point Area of Critical Environmental Concern, designated in the Bureau of Land Management's Yuma Field Office Approved Resources Management Plan, includes extensive petroglyph displays, prominent basalt mesas, historic trail corridors, and important riparian vegetation including a mesquite bosque. The Sears Point ACEC covers a total of 28,500 acres in Yuma and Maricopa Counties, with 3,700 acres in Yuma County designated as a core area. Within the core area, only day uses are permitted and 1,400 acres are closed to off-road vehicle use. Not all land in the Sears Point ACEC is federally owned. The BLM desires to acquire from willing sellers those non-federal lands within the Sears Point ACEC boundary. BLM policies and regulations for the Sears Point ACEC are only enforceable on federally owned land.

The BLM's long term plans for the Sears Point ACEC include the eventual construction of a visitor host site and interpretive exhibit panels at the central mesas and the main point of access, establishment of a parking area in an appropriate location and safe and legal access from Interstate 8. Additionally, the BLM plans to develop a Sears Point ACEC plan in coordination with interested partners that includes additional management prescriptions for balancing increased public visitation with protection of natural and cultural resources.



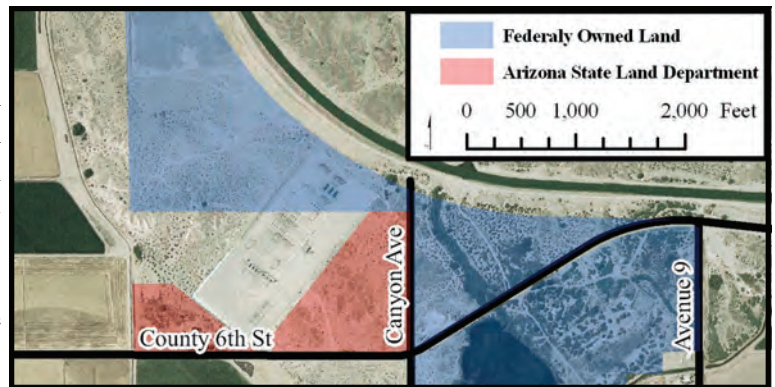
A Petroglyph at Sears Point

4.3 Areas of Concern

During the public outreach process that led to the development of the *Yuma County 2020 Comprehensive Plan*, Yuma County residents identified several areas of publicly owned open space where current patterns of usage were causing a degradation of the health, safety and welfare of nearby residents and land owners. In order to ensure that these specific sites are used by the general public in a manner that does not adversely impact nearby residents and land owners, Yuma County will work with the relevant federal and state agencies to devise a plan/strategy to address the specific areas of concern outlined in this section.

County 6th Street and Avenue 9E

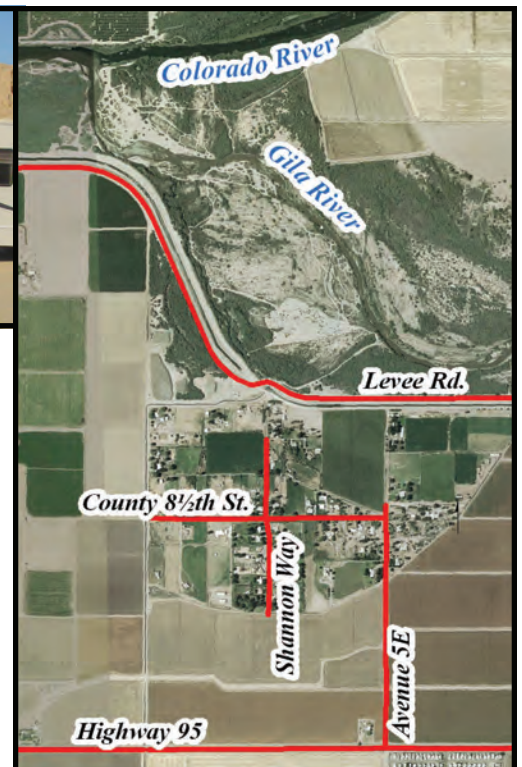
Public lands, both federal and state owned land, in the vicinity of County 6th Street and Avenue 9E have become a popular location for dry land camping. No facilities or specific plans exist to support camping in this area. Large and increasing numbers of campers have created issues with trash, sewage disposal and traffic.



Public lands in the vicinity of County 6th Street and Avenue 9E



Dry land camping along County 6th Street



Public lands in the vicinity of the Colorado and Gila River confluence

4.4 Open Space Policies and Priorities

- OSPP.1:** Land use designation maps contained within the Land Use Element should more accurately reflect actual allowed uses. Land use designations for publicly owned open space shall be the land use designation category with allowed uses that most closely matches the adopted management plan for a particular parcel of publicly owned land.
- OSPP.2:** Yuma County will work to preserve mountainous areas such as the Gila, Mohawk, Laguna and Muggins Mountains and riparian areas along the Colorado and Gila Rivers as the open space areas most valued by Yuma County residents.
- OSPP.3:** Yuma County will work to maintain and when possible enhance access to publicly owned open space in mountainous and riparian areas.
- OSPP.4:** Yuma County supports the eradication of invasive species from and the restoration of riparian areas.
- OSPP.5:** Yuma County supports the further coordination between various management plans that exist for publicly owned open space in Yuma County and the Comprehensive Plan.
- OSPP.6:** Open space should be managed in a manner to ensure that its recreational use does not negatively impact nearby landowners and residents.
- OSPP.7:** The portion of the Mohawk Mountains located outside the Barry M. Goldwater Range should be kept open to recreational use by the general public.
- OSPP.8:** Yuma County supports the Hunter's Hole Restoration project along the Colorado River which is intended to restore native habitat along the river in the Hunter's Hole area and to help reduce the number of illegal crossings and associated crime occurring across the international boundary with Mexico by clearing out heavy undergrowth of invasive species that can provide cover for illegal activity to take place in.
- OSPP.9:** Yuma County supports the continued use by authorized users of authorized recreational trails and areas within the Barry M. Goldwater Range.



Mohawk Mountains

4.5 Open Space Actions

- OSA.1:** Yuma County will continually monitor all land management plans that cover state and federal land within Yuma County to ensure that the *Yuma County 2020 Comprehensive Plan* remains in synchronization with these plans.
- OSA.2:** Yuma County will work with the various governmental agencies that manage open space within Yuma County to ensure that any revision to an open space management plan brings it more into alignment with the desires of County residents.
- OSA.3:** Yuma County will work with relevant agencies and local residents to identify open space where illegal dumping is a problem and then find the most effective way to have those areas cleaned up.
- OSA.4:** Yuma County will work with the relevant federal and state agencies to devise a plan/strategy to address the specific areas of concern in regards to the management of publicly owned open space where current patterns of usage are causing a degradation of the health, safety and welfare of nearby residents and land owners as identified in the *Yuma County 2020 Comprehensive Plan*.
- OSA.5:** Yuma County will work with the relevant federal and state agencies to devise a detailed recreational plan for government land south of County 19th Street that will separate appropriate areas for off-road vehicle recreation, equestrian and hiking uses.
- OSA.6:** Yuma County will encourage and work with all relevant parties to establish a publicly accessible boat washing facility in order to prevent the spread of invasive species, most notably zebra mussels, into the Colorado River.
- OSA.7:** Yuma County will encourage and work with all relevant parties to create and install kiosks displaying information about recreational facilities, areas, opportunities and regulations at the entrances to public lands that have a high recreational use and have experienced problems with improper usage, littering, etc., in the past.
- OSA.8:** Yuma County will work to maintain, and when possible, enhance public hunting access to open space, recreational and sensitive area resource lands.
- OSA.9:** Yuma County will work, when possible, to conserve connections to all parks, trails, open spaces, or sensitive areas as defined in the *Yuma County 2020 Comprehensive Plan*



Fortuna Pond

Section Five—Recreational Resources Element

5.1 Introduction

Recreational resources are different from open space preservation and resources namely in scale, though that is not always the case. Additionally, whereas open space is typically the lack of development and is always found outside recreational resources, opportunities sometimes involve highly developed parcels of land and can also be found indoors. Recreation, whether in its passive or active form, is essential to the maintenance of the human body in a physical, emotional, educational and spiritual sense. Therefore, it is essential that Yuma County commit to a high priority in the maintenance of existing recreational facilities and for the development of new ones as time passes and as Yuma County continues to grow in population. History shows the County has done just that, but future plans need to be laid via this planning document to help ensure high quality recreational opportunities and facilities for all the citizens of Yuma County.

Examples of recreational resources are parks, open space areas and trails, as well as golf courses, swimming pools, aquatic centers and more specialized examples such as archery and gun ranges. Of course, the types of activities that can be conducted at these locations is lengthy, ranging from the simple and traditional picnic areas to more modern and sophisticated facilities such as equestrian centers, race tracks and boating and fishing areas. For the most part, open space facilities in Yuma County are addressed in the Open Space Element of this Plan, but some of the above listed recreational activities can and do take place in traditional parks, too.

This element of the *Yuma County 2020 Comprehensive Plan* will be organized in the following manner: 1) Introduction, 2) Delineation of Parks, 3) Trails, 4) Yuma County Parks and Open Space and Trail Master Plan, 5) Analysis of Recreational Needs, 6) Citizen Advisory Group Recommendations, 7) Proximity of Parks to People, 8) Recreational Resources Policies and Priorities and 9) Recreational Resources Actions. They are presented on the following pages.



Mohawk Mountains

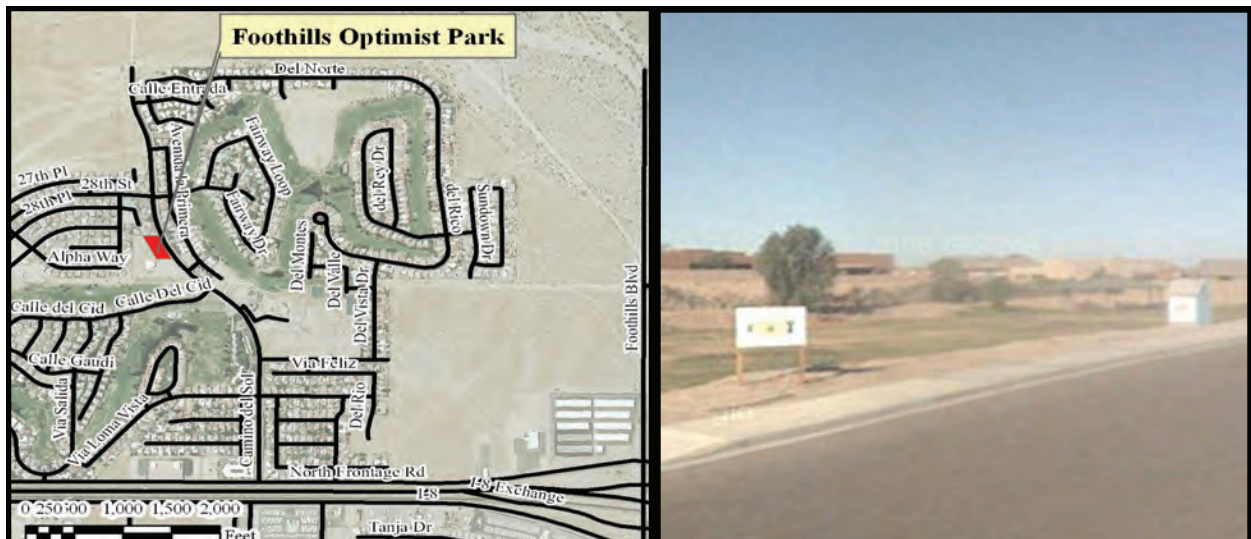
5.2 Delineation of Parks

The *Yuma County Parks and Open Space and Trail Master Plan* which was adopted by the Yuma County Board of Supervisors in March 2006, breaks parks into five (5) categories:

1. Pocket Parks
2. Neighborhood Parks
3. Community Parks
4. Regional and Conservation Parks
5. Special Use Parks

Pocket Parks

Pocket parks range in size from 2,500 square feet to two acres. This type of park is not recommended unless park space is significantly lacking in an existing developed area. This is because these small spaces have a tendency to create additional administrative and maintenance difficulties for the County unless maintained by a private entity. On the other hand these small specialized facilities can effectively serve a concentrated or limited user group. Desirable site location characteristics include neighborhoods in close proximity to apartment complexes, townhouse development or housing for the elderly where a population ranging from 500 to 2,500 persons can be adequately served. A pocket park in Yuma County is the Foothills Optimist Park located in the Foothills on the west of Camino del Sol near the Mesa Del Sol Golf Course consisting of one (1) acre.



Foothills Optimist Park Location

Foothills Optimist Park

Foothills Optimist Park is a small local park located in a retention basin that is about one acre in size. It contains a small turf area and a ramada with picnic tables. This park is made possible through efforts of the Optimist Club. It is the only developed park and recreation facility located in the Foothills area

Neighborhood Parks

Neighborhood parks range in size from two (2) to ten (10) acres and are programmed for areas of intense recreational activities such as field games, court games, crafts, playground apparatus, skating and picnicking. Desirable characteristics include relatively flat, well-drained sites suited for intense development. Neighborhood parks should be easily accessible to surrounding neighborhoods and within safe and accessible walking and biking distance. These neighborhood parks should serve a population ranging from 2,000 to 10,000 citizens.

Currently there are two existing neighborhood parks used mainly as recreational parks in unincorporated Yuma County: 1) the Gadsden Park located in Gadsden between Arizona Street and South Highway U.S. 95 consisting of eight (8) acres, and 2) the Kiwanis Park located in Tacna north of Kansas Avenue and east of Avenue 40E consisting of approximately ten (10) acres.

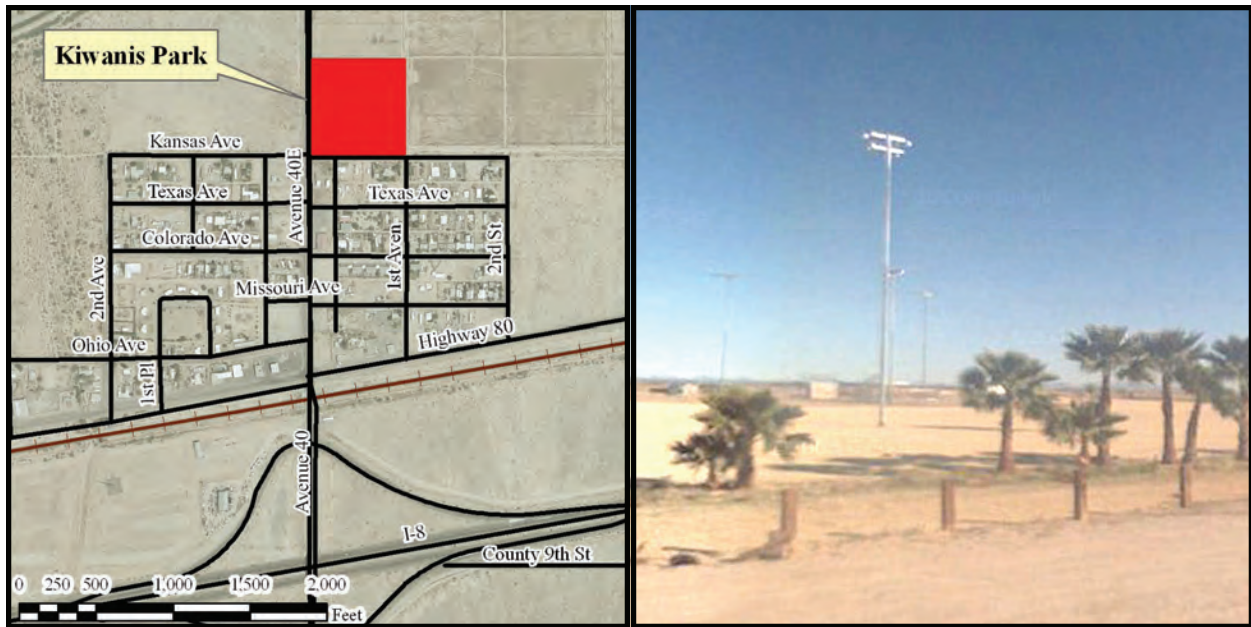


Gadsden Park Location

Gadsden Park

The Gadsden Park is maintained and operated by the Gadsden Community Development Board and the Gadsden School District through an intergovernmental agreement with Yuma County. Gadsden Park contains ball fields, picnic ramadas and playground equipment. In 2009 a grant from the Arizona Department of Housing paid for the construction of a full-sized basketball court at Gadsden Park.

Neighborhood Parks (continued)



Kiwanis Park Location

Kiwanis Park

Kiwanis Park is approximately a ten-acre park located on the north side of Tacna. The park contains ball fields, picnic ramadas and a playground. The park is located on land owned by Yuma County and maintained by the Wellton-Mohawk Valley Kiwanis Club.

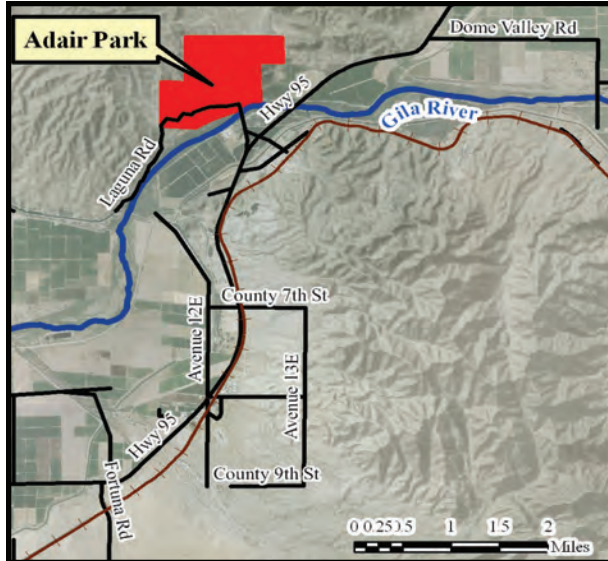
Community Parks

Community parks range in size from ten (10) to twenty-five (25) acres. These larger sites should, if possible, consist of areas exhibiting diverse environmental quality and may include areas suited for intense recreational facilities. Community parks may be areas noted for their natural qualities for outdoor recreation or may be a combination of both active and passive pursuits. Community parks may also include natural features such as water bodies.

There is one potential community category park in Yuma County, the Riebe Retention Basin, located northwest of the City of Yuma north of County 8th Street and at the end of Riebe Avenue consisting of ten (10) acres. It functions as a retention basin, but has a potential recreational component to it when dry.

Regional and Conservation Parks

Regional and conservation parks are more than likely to be managed by or in conjunction with another lead agency or organization and range from twenty-five (25) to 1,000 acres. These parks are generally large parks that provide a wide variety of recreational opportunities and facilities to serve 50,000 or more people. They may also be reserved for conservation and natural resource management. These parks are primarily natural, developed for recreational activities or a combination of both depending upon the needs of the population.



Adair Park Location



Adair Park

The only park in Yuma County of this type, Adair Park, consisting of 660 acres, has nine rifle, pistol and archery ranges. There is also a baseball diamond, radio-control model airplane strip, picnic areas and camping sites available. Though owned by Yuma County, Adair Park is operated by a concessionaire.

Special Use Parks

Special use parks may include single purpose recreational activities, such as golf courses, gun ranges, skate parks and historic areas that preserve and maintain buildings, or sites and objects of archeological significance. The service area, desirable size and population served will depend on the type of special uses, user characteristics and facility standard requirements. These parks may be classified as another type of park, also.

5.3 Trails

Open lands, historic trails, cultural sites, canals, rail lines, drainage ways and municipal trails when linked together can create a setting that is perfect for a county-wide trail system. The County is in a unique position to establish a trail system that will be a point of pride for future generations.

Such an opportunity exists with the potential linking of natural and cultural resources located within Yuma County: 1) the Juan Bautista de Anza Trail, 2) the Butterfield Trail, and 3) the El Camino del Diablo Trail.

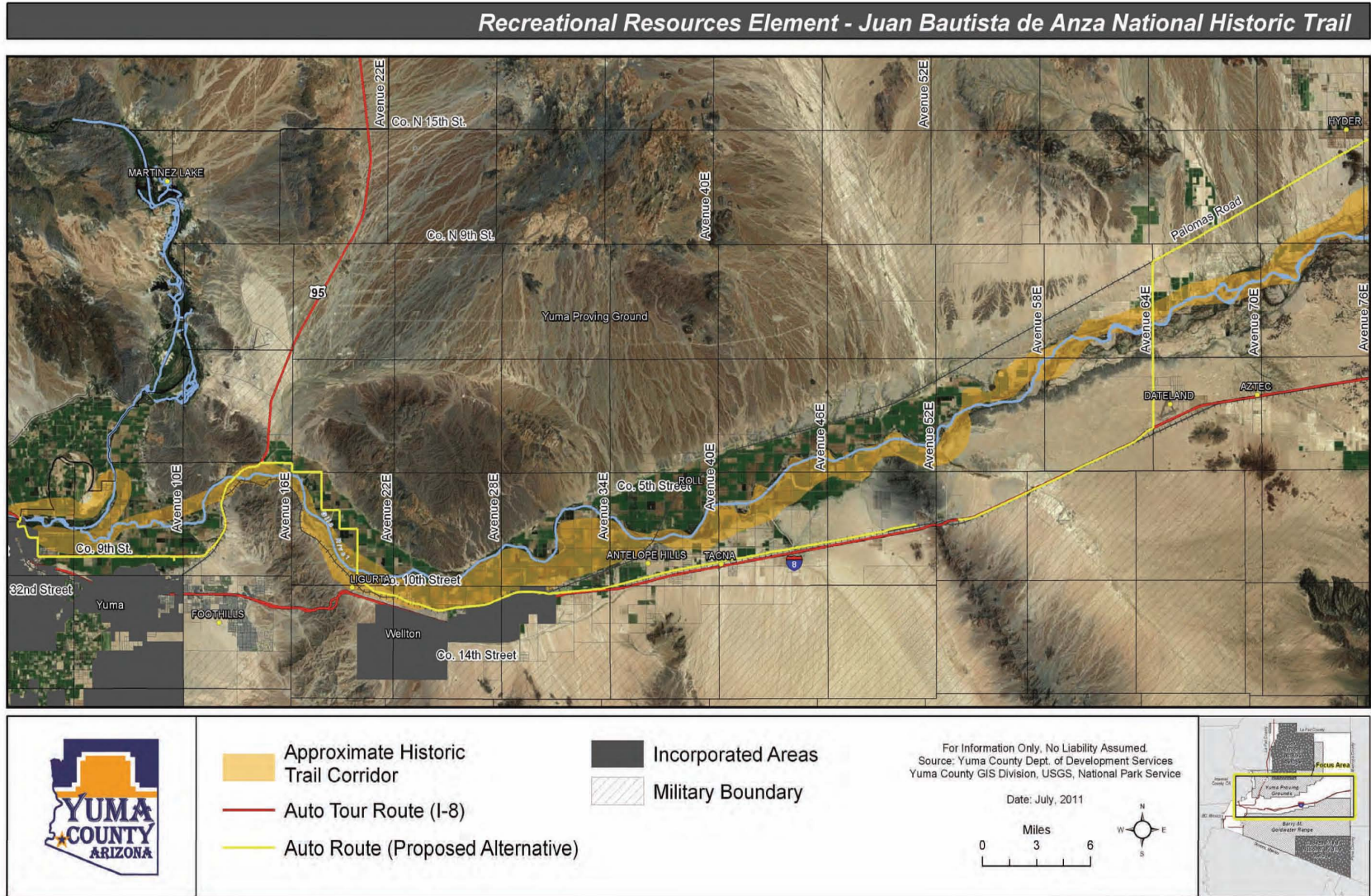
Important items to remember in the formation and usability of any trail are the following: 1) providing trailhead access to partnered resource areas, 2) connecting to existing and future trail systems as may be provided with the Cities of Yuma, Somerton, San Luis and the Town of Wellton, and 3) updating the Zoning Ordinance and development standards to provide for trails within developments which connect to an overall trail system. These were identified in the 2006 *Yuma County Parks and Open Space and Trail Master Plan*.

Juan Bautista de Anza National Historic Trail

In 1990, Congress established the Juan Bautista de Anza National Historic Trail, a 1,210-mile historic route from Nogales, Arizona, to San Francisco, California, running east-west through Yuma County. The trail commemorates the story of the 1775-1776 Spanish Expedition whose members, consisting of some 30 families, founded and established San Francisco. They also established a mission in the Yuma area, the first attempted European settlement in the area.

Congress established the Juan Bautista de Anza National Historic Trail not only to commemorate the significance of Anza's colonizing expedition to San Francisco Bay, but also to provide outdoor recreational opportunities. The ultimate goal is to create a recreational trail to provide a multiuse, non-motorized, off-road, continuous trail from Nogales to San Francisco. The National Park Service is tasked with forming partnerships with nonprofit support groups to develop a unified, continuous trail and to promote public awareness of its history and to contribute to economic vitality along the route by linking historic sites along a marketed tourist route. Federal components and high potential segments will be key elements of this route. These segments will be linked with trails which parallel the historic route to provide the potential for a continuous recreational and commemorative trail. If linking routes meet the criteria, they can be certified as recreational components of the Juan Bautista de Anza National Historic Trail.¹

¹*Juan Bautista de Anza National Historic Trail Comprehensive Management and Use Plan*. National Park Service. 1996.



Map 1: Juan Bautista de Anza National Historic Trail

Recreational Resources Element

A five mile segment of trail along the Yuma Canal in the City of Yuma is pending certification as part of the Juan Bautista de Anza National Historic Trail. The National Park Service (NPS) is working with the City of Yuma and the Yuma Crossing Natural Heritage Area on a plan for more trails along the Colorado River. In January 2010, 2.5 miles of trails in the Yuma East Wetlands just east of the Ocean-to-Ocean Bridge were eligible for certification as components of the Juan Bautista de Anza National Historic Trail.

In addition to the multiuse, non-motorized and off-road trail component of the trail, National Historic trails can contain an auto route. An auto route is a route that is designated and marked along existing roads and as closely as possible parallels the historic trail corridor. With the cooperation and assistance of road-managing agencies, auto route signs are intended to be placed along federal, state and county roads at appropriate road junctions (consistent with the sign regulations of the managing highway department). Signs will indicate "Historic Route" or "Auto Route" as appropriate. As a general rule, the NPS will help fund the initial auto route signs, but states will be encouraged to manufacture, install, maintain and replace the auto route markers according to the specifications of their respective highway departments.²

The Butterfield Trail is the trail that was used from 1857 to 1861 by stagecoaches to transport mail from St. Louis to San Francisco. Fort Yuma was used as a terminal between Tucson to the east and Los Angeles to the west and as expected, the trail makes its way in an east-west orientation across Yuma County.

The El Camino Del Diablo Trail, literally, the highway of the devil, was used for centuries as a route tracing a south to north orientation across Yuma County as a part of a longer trail from present day Caborca, Sonora, Mexico to Yuma, Arizona. It was named as such because of the high risk of attack and because of the extreme physical demands travelers would typically encounter along its route. It was used though because it was a much shorter route than going the way of Tucson and Gila Bend, Arizona, before traveling on to Yuma. According to historical accounts, the trail is appropriately named.



Members of the Quechan tribe help to protect the Anza expedition's men, women and children during their Colorado River crossing on November 30, 1775, on Anza's way eventually to San Francisco. Graphic by Wade Cox.

²*Juan Bautista de Anza National Historic Trail Comprehensive Management and Use Plan*. National Park Service. 1996.

Recreational Resources Element

Three photos depicting scenes found along El Camino Del Diablo Trail as it runs through Yuma County.

Photos used courtesy of Monty Stansbury.



5.4 Yuma County Parks and Open Space and Trail Master Plan

On March 20, 2006, the Yuma County Board of Supervisors adopted the *Yuma County Parks and Open Space and Trail Master Plan*. The creation and adoption of a parks master plan was the first act of the parks department which was reestablished in 2004. The intent of the *Yuma County Parks and Open Space and Trail Master Plan* is to define the park, recreation, and trail and open space needs of the residents of unincorporated Yuma County. In November 2005 the Yuma County Parks Department commissioned a survey of Yuma County citizens to determine support, use and need for parks, open space and trails. Responses to this survey were used to create the *Yuma County Parks and Open Space and Trail Master Plan*. Action points listed from that survey regarding parks are presented below.

Parks

- Establish a funding system
 - Capital funds for land acquisitions and construction
 - Operating funds for staffing, operations and maintenance
- Refurbish existing parks to current codes, safety requirements and community need.
- Acquire land and construct two multi-use community parks in the:
 - Foothills Planning Area
 - Gadsden Vicinity
- Acquire additional lands around Adair Park in the Laguna Mountains to create a regional park. The McPhaul Bridge should be included in this park.
- Require neighborhood parks and trails in all new developments that are developer constructed and maintained by a homeowners association.
- Fill neighborhood park needs with parcel acquisition and new park construction

5.5 Analysis of Recreational Needs

The next two pages contain tables that delineate the approximate number of acres in Yuma County that are in parks, wildlife refuges, wilderness areas, management areas and other assorted recreational areas. As can be seen, Yuma County contains many varied recreational resources.

The National Recreation and Park Association (NRPA) standards suggest that from 6.25 to 10.50 acres of park land should be provided for every 1,000 residents. Using the current 2010 U.S. Census population base of 195,751 permanent residents and a seasonal population of 284,000 persons, the county would require approximately 1,225 to 2,980 acres of park land.

Since 1980, the average growth of the entire county population per decade through 2010 is 30.8%. Extrapolations are always difficult because of the number of variables that may come into play over a ten year period of time. In this case, the largest variables likely at play with making a population projection for the year 2020 is the downturn in the overall health of the U.S. and Arizona economies versus the fact that the first baby-boomers officially have started to retire as of January 1, 2011, and Yuma County has a lot of retirees. It is impossible to know for sure which will dominate as the decade of 2010 to 2020 plays out, but population growth can be expected to continue. If a 31% countywide population growth is anticipated between 2010 to 2020, then using the previously stated NRPA standards of 6.25 to 10.50 acres of park land that should be provided for every 1,000 residents, Yuma County would need between 1,600 (6.25 acres per 1,000 population) and 2,688 (10.5 acres per 1,000 population) acres of park land. A 2010 population of 195,751 times .31 (31%) equals an additional 60,683 residents, thus a projected population of 256,434 residents in Yuma County by 2020.

As can be seen from Table 1, the amount of parks only lands is below the standard as suggested by the NRPA for even the year 2010. However, Yuma County is unique in that it also contains many recreational features and areas not available in other places of the United States, such as national wildlife refuges and wildlife areas. These ease the deficient amount in the parks category. Granted, these lands are not parks per se, but nonetheless offer recreational opportunities to Yuma County residents.

As can be seen from Table 2, the County contains over one-million acres of recreational and wildlife viewing opportunities. Even by taking the higher suggested standard of the NRPA of 10.5 acres per 1,000 residents for the 2020 projection year, when considering all of these acreages Yuma County exceeds the suggested amount by over 400 times.

All these calculations do not even take into consideration the park and recreational opportunities provided by the Cities of San Luis, Somerton, Yuma and the Town of Wellton ranging from standard parks to specialized recreational facilities such as aquatic centers, skateboard parks, and golf courses, both private and public. Public recreational opportunities are not mutually exclusive, meaning that Yuma County residents can freely access city parks and residents of cities and towns located in Yuma County can use parks and recreational facilities located in the unincorporated area of Yuma County.

Table 1: Yuma County Parks and Park Acreage			
<u>Park/Retention Basin/Name:</u>	<u>Location:</u>	<u>Size (in acres):</u>	<u>Category/Type:</u>
Foothills Optimist Community Park	El Camino del Sol in Mesa del Sol	1	Pocket
18th Street Retention Basin	18th Street	5	Neighborhood
Gadsden Park	Gadsden	8	Neighborhood
Kiwanis Tacna Park	North side of Tacna	9.4	Neighborhood
Adair Range	Confluence of U.S. Highway 95 & Gila River	660	Regional or Conservation (Also, could be considered a Special Use-type of park.)
Total Acreage		683.4	

Yuma County operated a Parks Department until it was disbanded in 1982. It was re-established by action of the Yuma County Board of Supervisors in 1997. It is still a portion of the Public Works Department, but budget cuts over time have reduced its size. Today, it mainly manages the following parks in Yuma County: 1) Gadsden Park, 2) Foothills Optimist Park, 3) Kiwanis Tacna Park, 4) Adair Range, and 5) the BMX Track located on the east side of Pacific Avenue and slightly north of 32nd Street in the City of Yuma.

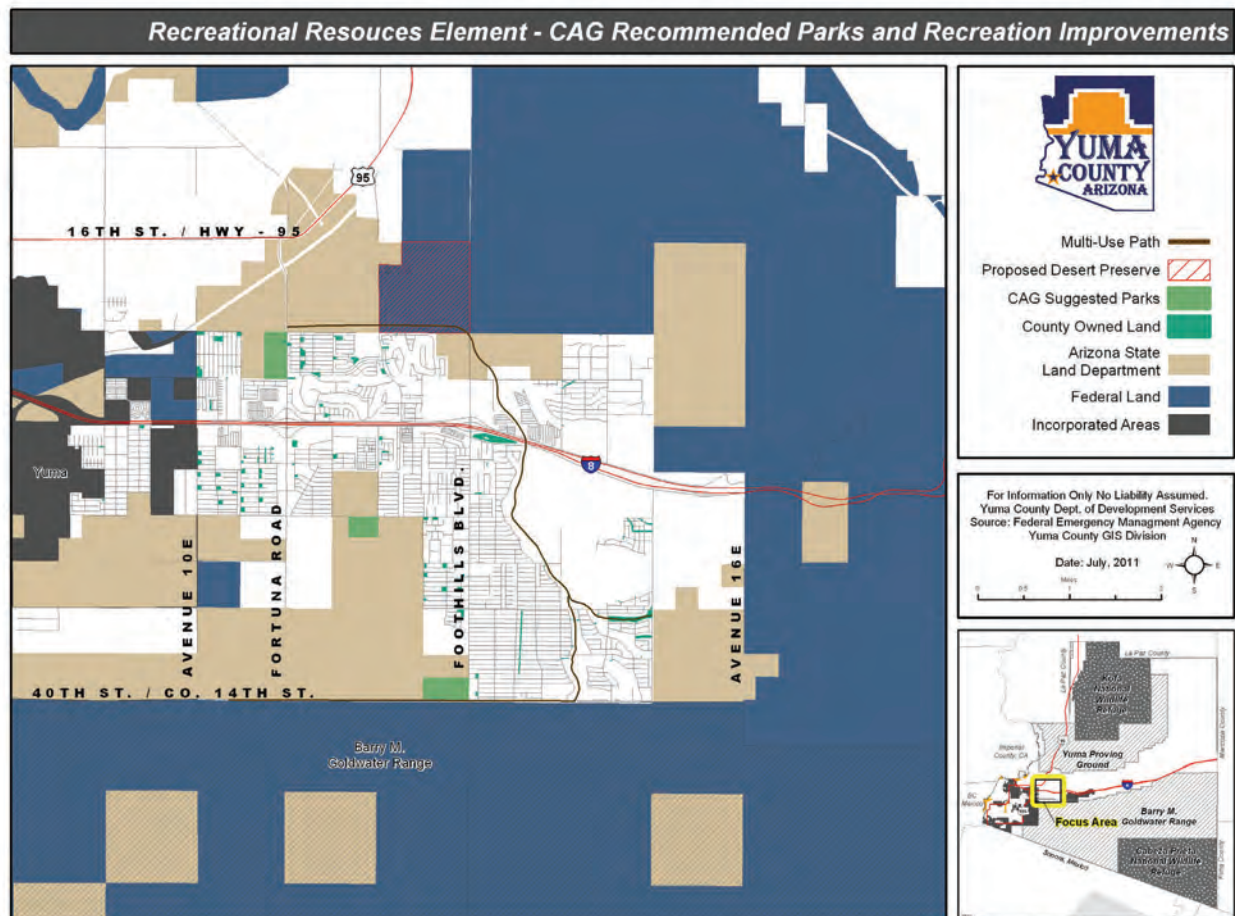
The final analysis is that more traditional parks and recreational opportunities are needed and will be needed in the future, but the open space and recreational diversity of Yuma County compliments and offsets this deficiency for the time being.

Table 2: Open Space, Wilderness, Wildlife Refuge and Recreational Management Areas in Yuma County

<u>Name of Entity:</u>	<u>Size (in acres):</u>	<u>Jurisdiction:</u>
Kofa National Wildlife Refuge and Wilderness Area	562,159	U.S. Fish & Wildlife Service (USFWS)
Cabeza Prieta National Wildlife Refuge	455,256	USFWS
Yuma Desert Management Area	31,700	Bureau of Land Management (BLM)
Eagletail Mountains Wilderness Area	24,580	BLM
Muggins Mountains Wilderness Area	7674	BLM
Imperial National Wildlife Refuge	4089	USFWS
Sears Point ACEC (core)	3700	BLM
Mittry Lake Wildlife Area	3575	Arizona Game & Fish Department (AGFD) and BLM
Yuma East Wetlands Restoration	1392	Bureau of Reclamation and Corps of Engineers
Quigley Wildlife Management Area (Quigley Ponds)	612	AGFD
Hunters Hole Management Area	435	BLM and Yuma Crossing National Heritage Area
Redondo Pond Recreation Area	68	BLM and AGFD
Fortuna Pond Management Area	30	BLM, AGFD, & Bureau of Reclamation
Total Acreage:	1,095,270	

5.6 Citizen Advisory Group Recommendations

Between 2007 and 2010, Citizen Advisory Groups (CAG) composed of area residents for each planning area within Yuma County reviewed the Comprehensive Plan and made recommendations on updating it to reflect the concerns of area residents regarding open space and recreational resource issues. This process began with a town hall style meeting. Each CAG then identified a list of issues regarding open space and recreational resources they considered critical to their planning area. The county shall work towards addressing the issues whenever possible. The issues are presented under the Recreational Resources Policies and Priorities and Recreational Resources Actions portion of this Element.



Map 2: Foothills Planning Area Citizen Advisory Group Recommended Parks and Recreation Improvements

5.7 Proximity of Parks to People

An important land use planning issue is the proximity of parks to people. For people to be able to realistically use and enjoy parks and other recreational facilities, they must be relatively near to one another.

Figure 1 shows, in pie-chart form, the percentage of people within certain distances to parks and the percentage of people within three (3) miles of a park, respectively. Maps 3 and 4 show in graphical form the distance of the populous to community, neighborhood or regional parks and pocket parks.

In the future more needs to be done to ensure that parks are available to the public at reasonable distances, for example, at no more than three miles. Maps 5 and 6 depict County owned parcels that mainly function as storm water retention basins, but at times double as small de-facto recreational spaces.

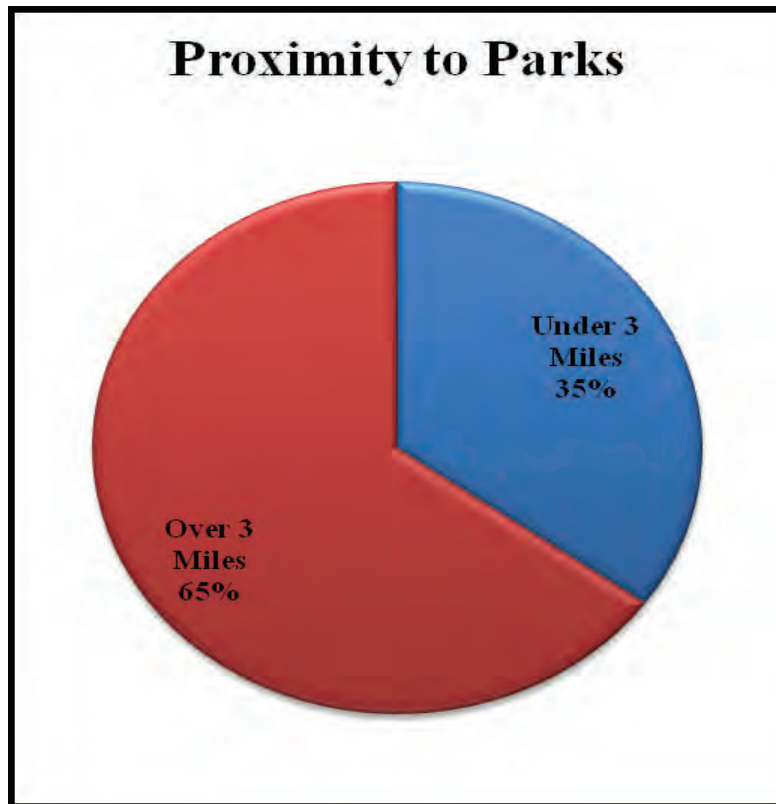
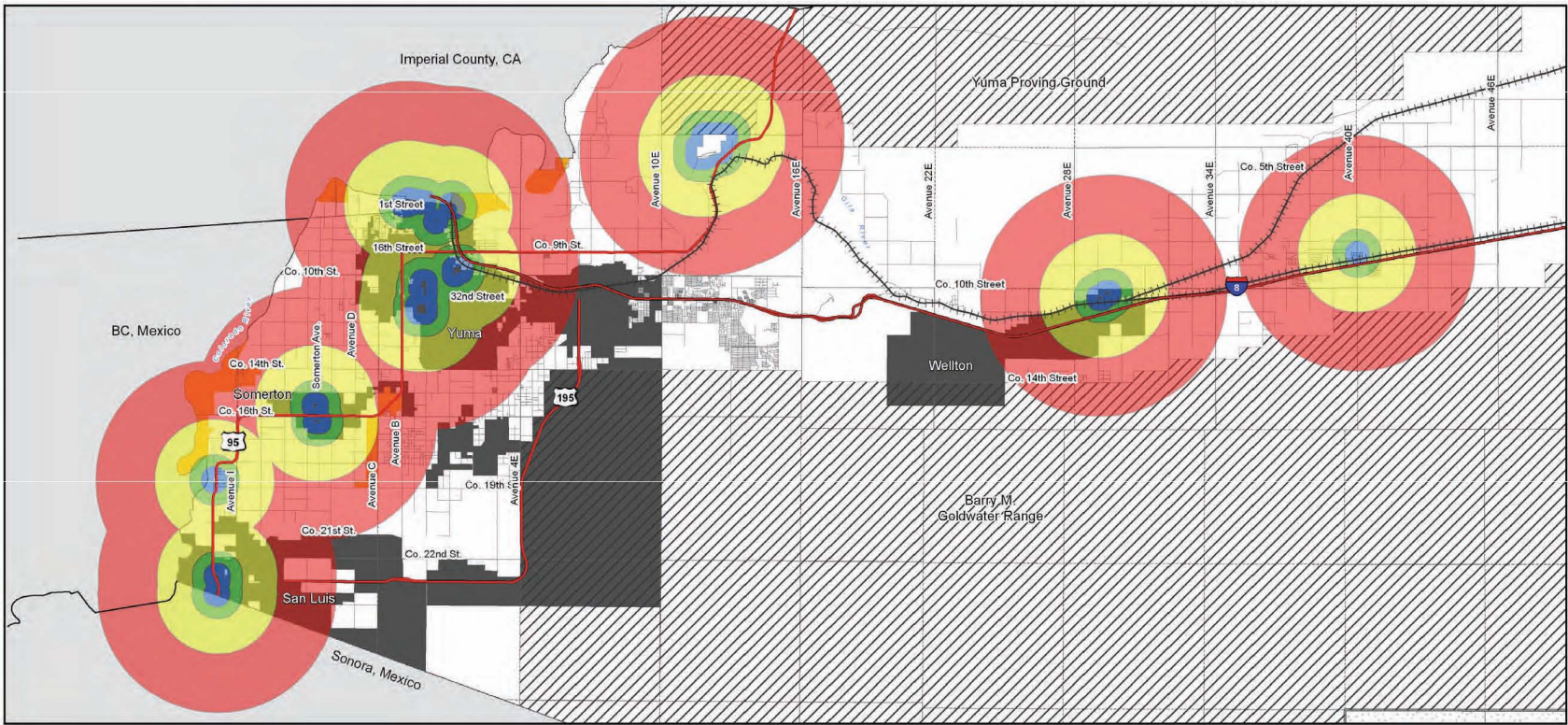


Figure 1: Proximity to Parks

Recreational Resources Element - Proximity to Existing Community, Neighborhood Parks or Regional Park



	Distance from the Nearest Community or Neighborhood Park		Indian Reservations 
	 1/2 Mile	 2 1/2 Miles	
 1 Mile	 5 Miles	Incorporated Areas 	

For Information Only No Liability Assumed.
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division

Date: July, 2011

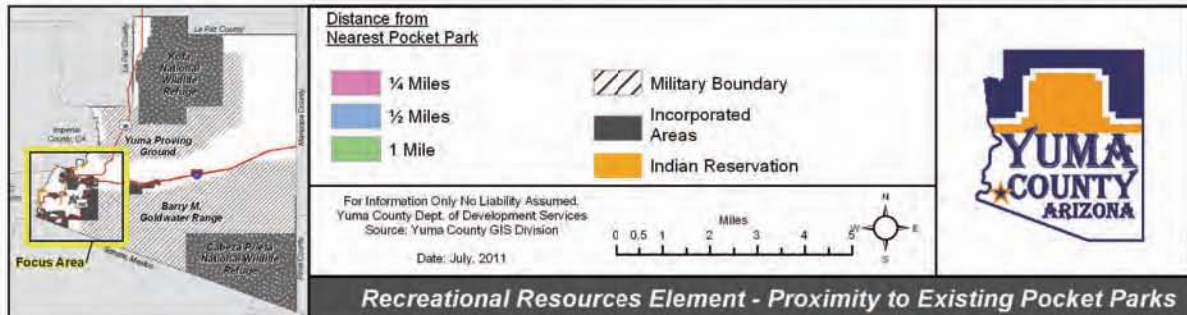
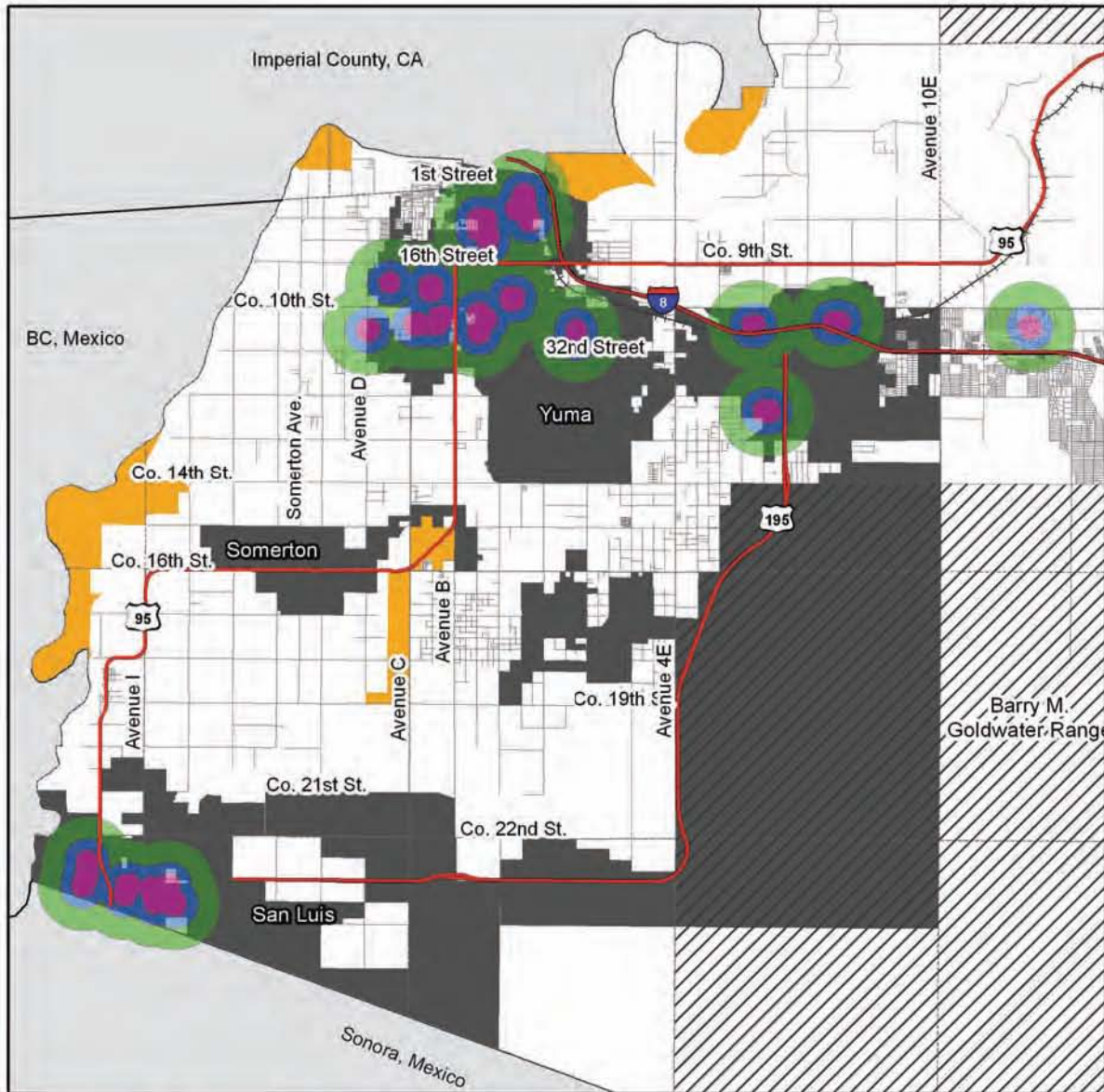
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Map 3: Proximity to Existing Community, Neighborhood Parks and Regional Park

Recreational Resources Element



Map 4: Proximity to Pocket Parks

5.8 Recreational Resources Policies and Priorities

- RRPP.1:** Reduce the percentage of the population of unincorporated Yuma County that lives more than five miles away from a developed park.
- RRPP.2:** Where practicable and desirable and when a funding mechanism for construction and operations has been established, utilize retention basins in new residential developments as neighborhood parks
- RRPP.3:** Adopt polices and regulations that encourage the development of parks and recreational facilities.
- RRPP.4:** Yuma County will promote parks by permitting flexibility and providing bonus density in design standards for residential development.
- RRP.5:** New residential development should occur in a manner that enhances parks and recreation opportunities.
- RRPP.6:** Yuma County will work at partnering with Marine Corps Air Station-Yuma, Bureau of Reclamation, Bureau of Land Management, Arizona State Land Department, Cocopah Indian Nation, irrigation districts, school districts and other governmental entities in promoting the maintenance of existing parks and the establishment of new parks.
- RRPP.7:** Using the 2006 Yuma County Parks, Open Space and Trail Master Plan as a starting point, continue to identify and plan for desired park, recreational facility and trail improvements.
- RRPP.8:** Yuma County will work to identify ideal locations for parks, recreational facilities and trails.
- RRPP.9:** Encourage and work with all relevant parties to complete specific parks and recreational projects that have been suggested by and identified as highly desirable by Yuma County citizens.
- RRPP.10:** Yuma County will prepare a study of parks and recreation facility needs for the Foothills Planning Area.
- RRPP.11:** The Foothills Parks and Recreation Study will identify the need for athletic fields, passive parks playgrounds, dog parks and community facilities in the Foothills Planning Area.
- RRPP.12:** The Foothills Parks and Recreation Study will identify potential funding options for potential parks and recreational facility enhancement in the Foothills area which will include the identification of potential funding sources for identified parks and facilities.

5.8 Recreational Resources Policies and Priorities: (continued)

- RRPP.13:** Develop a partnership between Yuma County and Hyder Elementary School District No.16 to develop a community park at Dateland School.
- RRPP.14:** Yuma County will encourage and work with all relevant parties to restore a portion of the Gila River and include along with this restoration recreational facilities such as trails and ramadas.
- RRPP.15:** The need for additional boat docking, storage and trailer parking will be considered when any changes are made to a land use designation or zoning district at Martinez Lake.
- RRPP.16:** Yuma County will work with community leaders to facilitate the creation of parks in the Yuma Valley.
- RRPP.17:** Partner with local schools including Arizona Western College in developing recreational resources at school sites that could be used by the entire community.
- RRPP.18:** Work with the Marine Corps Air Station to keep the authorized recreational trails on the Barry M. Goldwater Range open to the general public in such a way as to protect the natural environment.
- RRPP.19:** Keep the northern Mohawk Mountains open.
- RRPP.20:** Develop impact fees on new development as a method of financing the construction of new parks, other recreational resources and for preserving open space.
- RRPP.21:** Work with local Native American nations to better identify culturally sensitive lands.
- RRPP.22:** Protect culturally sensitive historical sites.
- RRPP.23:** Enhance stewardship of historical artifacts and develop incentives (tax breaks) for preservation.
- RRPP.24:** Amend the Subdivision Regulations to require the establishment of parks with new development and create a mechanism that would provide for their upkeep.
- RRPP.25:** Develop a means to discourage inappropriate ATV usage.
- RRPP.26:** Examine the possibility of working with the Yuma Union High School District to develop joint use recreational facilities at the potential new high school on Fortuna Road.

5.8 Recreational Resources Policies and Priorities: (continued)

- RRPP.27:** Designate areas within or near the Drysdale area to a land use designation that would promote the development of green areas (parks).
- RRPP.28:** Designate government owned property along the Colorado River Open Space and Recreational Resources or as Sensitive Areas and Resource Lands.

5.9 Recreational Resources Actions

- RRA.1:** Identify all county owned land that has potential to be developed into a park.
- RRA.2:** Establish methodologies that will allow and encourage dedication of land for parks and recreational resources.
- RRA.3:** Yuma County will review future residential development plans for potential park sites.
- RRA.4:** Establish subdivision standards for open space in large residential developments. Establish requirements for improvement and maintenance.
- RRA.5:** Coordinate open space conservation and recreational resource efforts within all county departments, municipalities, other counties, state and federal agencies, private organizations and individuals.
- RRA.6:** Identify and map publicly owned land suitable for parks and recreation development.
- RRA.7:** Identify and map right of way corridors suitable for construction of multi-use paths.
- RRA.8:** Enhance park and recreational facilities in the Dateland/East County Planning Area.
- RRA.9:** Improve recreational boating facilities at Martinez Lake.
- RRA.10:** Yuma County will work with local residents, other governmental entities and non-profit organizations to identify possible funding sources and grants to improve and expand publicly accessible boat launch facilities at Martinez Lake.
- RRA.11:** Yuma County will encourage and work with all relevant parties to establish a publicly accessible boat washing facility in order to prevent the spread of invasive species into the Colorado River.
- RRA.12:** Yuma County will encourage and work with all relevant parties to improve existing boat ramps to make them usable at all water levels at Martinez Lake.
- RRA.13:** Yuma County will encourage and work with all relevant parties to maintain and upgrade the Meers Point boating and recreational area.
- RRA.14:** Yuma County will encourage and work with all relevant parties to create and install a kiosk displaying information about recreational facilities, opportunities and regulations in a prominent public place.
- RRA.15:** Yuma County will encourage and work with all relevant parties to construct a waterfront picnic area.

5.9 Recreational Resources Actions: (continued)

RRA.16: Yuma County will develop a detailed recreational plan for government land south of County 19th Street. This would include separate and appropriate areas for off road vehicle recreational, equestrian and hiking uses.

RRA.17: Yuma County will construct trails for walking, biking and hiking as opportunities arise in the Dome Valley/Wellton area.

Section Six—Circulation Element

6.1 Introduction

This section presents the Circulation Element of the Yuma County Comprehensive Plan. This element supersedes the previous circulation element affecting the unincorporated area of Yuma County. The Circulation Element is defined as a compilation of objectives, policies, actions, maps and programs to guide the future development of the various modes of transportation. Specifically, this element shows the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals and other local public utilities and facilities associated with the Land Use Element of the Comprehensive Plan. An efficient, integrated transportation system is essential to maintain the quality of life and facilitate the economic growth of Yuma County.

Yuma County, to a great extent, is an agricultural region. Other industries that help support the region's economy are tourism and government. It is noteworthy that the vast majority of jobs are concentrated in incorporated areas like the cities of Yuma, San Luis, Somerton and the Town of Wellton. The Marine Corps Air Station-Yuma (MCAS) and Yuma Proving Ground (YPG) also provide economic stability by employing more than 8,000 people. Another major employer located in the City of Yuma is the Yuma Regional Medical Center, employing over 2,000, thus making the City of Yuma an important transportation point.

Yuma County has also enjoyed an influx of seasonal residents for decades. Visitors from throughout the United States and Canada call Yuma County their second home. Another important inflow is the seasonal agricultural workers. All of these place a transportation demand on Yuma County's roadway system.

Roadways, railways and airways provide multiple services to the communities and citizens of Yuma County. This manifests the importance of the Circulation Element as it contains summaries of other agencies' plans and fully detailed maps of Yuma County showing the present condition and future roadway needs.

This element is organized in the following manner: 1) Introduction, 2) Transportation Authority and Current Plans, 3) Presentation of Roadway Network, 4) Presentation of Railway Network, 5) Presentation of Aviation Network, 6) Visual Corridors, 7) Circulation Policies and Priorities, and 8) Circulation Actions. In summary, the Circulation Element provides an overview of existing plans and studies then compares their objectives, policies, goals and programs at both the state and regional levels. It also identifies thoroughfares within the local governmental unit by function. Key issues and concerns originating from public participation are then addressed. Attention is then given to future transportation projects and visual corridors.



The Gila Mountains, photo credit to <http://www.travelpod.com/travel-blog-entries>

Transportation in Context

The vehicular transportation system in Yuma County is comprised of 1431.24 lane miles of paved and 1500 of unpaved roads that are maintained by Yuma County and the Arizona Department of Transportation (ADOT) as shown in Table 1 below. Railways are also an important component of the transportation system with 199.57 track miles. This includes main tracks, yard tracks, inactive mainline tracks for future use and inactive yard tracks. As for aviation, Yuma County is the home to the Yuma International Airport which is a shared-use airport with Marine Corps Air Station-Yuma.

Table 1: Yuma County Transportation Context		
	LANE MILES 2000-2010	LANE MILES 2010-2020
Arizona Department of Transportation (ADOT)	807	853 ⁽¹⁾
Yuma County (paved)	500	578.24 ⁽²⁾
Yuma County (Unpaved)	1500	1500 ⁽²⁾
Averaged Paved Road Life	30 years	
Averaged Household Vehicle Trips Per Day	10 trips	
Average Vehicle Trip Length	8.7 miles	

Table 1: Yuma County Transportation Context



Interstate 8 looking southeast., photo credits to <http://www.aaroads.com>

(1) Information obtained from ADOT

6.2 Transportation Authority

Yuma County is a main partner in the Yuma Metropolitan Planning Organization (YMPO), which represents all incorporated jurisdictions within Yuma County for the purpose of planning the expenditure of federal and state transportation funds. The primary goal of YMPO, as stated in the 2011-2033 Regional Transportation Plan, is to “provide the continual development of a complete, dependable, efficient, safe, aesthetic and economical transportation system, bearing in mind that our quality of life is paramount and that transportation needs must recognize the specific demands of government and businesses, including those of urban areas, rural and agricultural interests and military operations.”

The County has no legal obligation to incorporate plans developed and adopted by the YMPO Executive Committee into the *Yuma County 2020 Comprehensive Plan*. Further, YMPO is advisory to the County with regard to road construction and planning. This responsibility, in combination with the vested countywide authority and representation, makes the County a proponent of YMPO and its plans.

Existing Plans

2011—2015 Five-Year Transportation Facilities Construction Program:

Prepared by: ADOT, 2010

Scope: The Arizona Department of Transportation (ADOT) is mandated by state law to be responsible for constructing and maintaining all interstate and state highways in Arizona and providing financial assistance to public airports for airport development projects. Fulfilling this responsibility includes extensive public participation and sophisticated technical evaluation known as the Priority Programming Process. The process culminates in the Five-Year Transportation Facilities Construction Program for highways and airports. This publication identifies programs and projects programmed for State fiscal years 2011 through 2015 (see Table 4).

Elements: Financial Summary of All Programs, Summary of Dollars by County and Summary by Resources, Highways Programs, Highways Subprograms, Summary of Dollars by Freeways, MAG Area, Regional Transportation Plan Freeway Program, System wide.

2010—2033 Regional Transportation Plan (RTP):

Prepared by: Ayres Associates Inc. in association with Makineh Professional Services in April, 2010.

Scope: The 2010-2033 Regional Transportation Plan is a multi-modal plan with the premise that it serves people efficiently, affordably and safely. In addition to the traditional roadway improvements, this plan identifies investments in public transportation, bicycling and walking to promote health, environmental quality and mobility for those who do not have access to cars or those who choose to use other modes.

Existing Plans (Continued)

Elements: Travel and Socio-Economic Characteristics, Public Participation, Roadway, Transit, Non-Motorized Transportation, Safety, Airport, Rail/Port/International Border.

2009 Yuma International Airport Master Plan Update:

Prepared by: Ricondo & Associates, Inc. in Association with Geodetix and Nicklaus Engineering.

Scope: The 2009 Yuma International Airport Master Plan Update describes the analyses and assessments conducted during the preparation of the Airport Master Plan and provides the results of those efforts. It includes discussion of the previous Master Plan Update, a brief history of the Airport and a general discussion of the goals underlying the current Airport Master Plan. The chapters of this report provide an inventory of Airport facilities, document the aviation demand forecasts, discuss the demand/capacity analyses and facility requirements, presents the alternatives considered and the resulting Airport Development Plan⁽¹⁾(ADP), defines an implementation plan and financing plan for the recommended ADP and presents an overview of potential environmental effects associated with the recommended ADP.

Elements: Airport Inventory, Aviation Demand Forecast, Demand/Capacity Analyses and Facility Requirements, Alternatives and Airport Development Plan, Financial Plan and Environmental Overview.

FY2012—FY2016 Capital Improvement Plan:

Prepared: Department of Development Services Budget Review Team

Scope: The Yuma County Capital Improvement Plan (CIP) is a five-year schedule of public physical improvements to the county’s infrastructure. The CIP sets forth proposed expenditures for systematically constructing, upgrading, expanding, remodeling and replacing of “public improvements” within the foreseeable five-year future. The CIP will establish a schedule for each project identified according to its priority and funding resources available. Because the CIP identifies where County facility improvements will be done, where County facilities will be expanded and where County dollars will be spent, it is more than a schedule of expenditures. It is a statement of budgetary policy and a planning document.

Sections: Highway Projects, Public Facilities, Storm water Control, Housing Projects, Law Enforcement, General Government (Information Technology Services) and Community Development Projects.

(1) The Airport Development Plan is form by the preferred development options and alternatives presented in chapter 5.6 of the Yuma International Airport Master Plan Update.

6.3 Roadway Network

Thoroughfares are the community's mobility life line. Not only do they allow people to commute to the places where they live, work, recreate, shop and worship, but they also link them to other communities. They allow services to reach their destinations and allow for the movement of goods to places of distribution. From 2000 to 2010, Yuma County's population has grown 22.32%. Consequently, Yuma County must plan for new rural roads and the expansion and improvement of existing roads that connect to major traffic generators and facilitate the movement of people and goods in a safe and effective manner.

In the 2010 Comprehensive Plan, Yuma County residents indicated that traffic was the number one quality of life issue. According to the Plan, transportation was and is one of the most critical factors affecting the day-to-day lives of county residents. This statement was supported by information obtained from selected traffic volume data collection sites throughout the county illustrating the increased volume on existing roadway systems from 1991 through 2009 (Table 2). Since then new vehicle traffic counts have been conducted in the same locations as they were held in 2000. At some points the trend was the same, while in others traffic was reduced. This is the result of enhancements to the road network and public transportation implementation.

Location	1991	2000	2009	% Change
Avenue 64E North of I-8 (Dateland)	420	550	512	-7%
Avenue 29E North of I-8 (Town of Wellton)	1,210	1,863	2,765	48%
Fortuna Road South of Frontage Rd (Foothills)	6,950	11,903	12,570	5.6%
County 19th Street East of U.S. Hwy. 95 (Gadsden)	2,650	7,533	5,399	-28%

Table 2: Percent changed in selected Yuma County traffic counts.

The need to satisfy the increasing vehicular traffic during the planning period of 2010-2020 is present. The capacity and level of service of the existing road network is and must be constantly evaluated and improved. The promotion of transportation alternatives and adaptation to existing ones should be encouraged.

The Citizen Advisory Groups (CAGs) made recommendations on transportation improvement projects for their respective planning areas. The recommendations include maintenance of existing roads, improving roads to a reliable all weather standard, the periodic grading of primitive roads employing dust control measures, increasing safety at roads with proper signage, improving the lighting on busy corners, strengthening the rural transportation system, constructing new roads to current Yuma County roadway standards and resolving road flooding.

(1) Yuma Metropolitan Planning Organization

Circulation Element

Yuma County's roadway system has to provide support for various transportation modes and at the same time satisfy land use needs. Yuma County maintains approximately 2,078 lane miles of roadways within its unincorporated area. These roads provide access to parcels and serve as major thoroughfares between urban areas and other counties.

The linkage between the internal transportation network (county and cities) and the external transportation network (state and federal) has to be efficient and effective. In order for the Circulation Element to be consistent with regional and local general plans the implementation of goals, objectives and policies needs to be adopted. This element incorporates recommendations from the YMPO 2010-2033 Regional Transportation Plan.

Level of service (LOS) is a standard measure of traffic service along a roadway or intersection that determines the effectiveness of the elements of the transportation infrastructure. It categorizes traffic flow with corresponding safe driving conditions. This concept also applies to transit. LOS standards use letters from A through F (Table 3) with A being the best and F being the worst.

TABLE 3: LEVEL OF SERVICE	
LOS	DESCRIPTION
A	Free Flow; virtually no delay
B	In the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable.
C	Still in the range of stable flow, but marks the beginning of the range in which the operation of individual users becomes significantly affected by others.
D	High-density but still stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience.
E	Represents operating conditions at or near the capacity level. All speeds are reduced to a low but relatively uniform value.
F	Traffic stream is defined as forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point.

Table 3: Level of Service

Yuma County will strive to maintain a LOS of D or better on all roadways. When measuring LOS, Yuma county shall use the criteria established by the Highway Capacity Manual⁽¹⁾.

(1) Highway Capacity Manual is published and updated by the United States' Transportation Research Board

Robert A. Vaughn Expressway/SR195 Level of Service

The Robert A. Vaughn Expressway/State Route 195 was opened to traffic September 4, 2009. The Arizona Department of Transportation (ADOT), in conjunction with the Federal Highway Administration (FHWA) and the Yuma Metropolitan Planning Organization (YMPO) identified the need to provide a direct transportation route between the then future commercial international Port of Entry (POE) near San Luis, Arizona and Interstate 8 (I-8). YMPO anticipated by 2015 that more than 1,500 commercial vehicles per day (vpd) would be using the existing POE. In addition, YMPO expects that the total vehicular traffic (passenger cars and commercial vehicles) at the existing POE may be as much as 50,000 vpd in 2015.

ADOT uses a threshold of 10,800 vpd for level of service (LOS) C on a two-lane rural-highway. According to ADOT and American Association of State Highway and Transportation Officials' (AADHTO) guidelines, traffic volumes in excess of 10,000 vpd warrant consideration of four or more traffic lanes to provide acceptable operation and maintenance at a LOS C. Based on the projected traffic volumes, a four-lane cross section is warranted for the entire extent of SR195 to maintain a Level of Service C⁽¹⁾.

Roadway Network Projects

The Circulation Element continues to build on the previous plans prepared by the YMPO. Several projects have been implemented since the completion of the 2001-2023 RTP. These projects addressed the continued growth of the area. The notable ones include:

- SR195 from Avenue E to 32nd Street
- 24th Street widening from Avenue 6E to Avenue 9E
- Avenue E widening San Luis POE II to SR195

Despite the current economic conditions, population and employment growth will continue, and it is important that improvements to the roadway system accommodate that growth at an acceptable level of service. Any existing or projected volume to capacity ratio that exceeds 0.85 indicates a capacity deficiency that was evaluated to identify potential improvements. An unacceptable level of service can be addressed in different ways including widening the subject street, widening a parallel street or constructing a new parallel street. Additionally, roadway segments that promote grid continuity and provide the backbone network in developing areas should be considered. All these factors were examined in developing the roadway element for the 2010-2033 RTP.

The need for transportation improvements in the roadway network needs to be supported from analysis of traffic volumes and levels of service based upon the levels of growth. This analysis needs to be based on the latest population, housing and employment values.

The different roadway projects are presented in the Roadway Network Project table shown in the next page, which is a compiled list extracted from YMPO's roadway element projects. YMPO's project list is presented in five-year periods from a revenue standpoint. Only the first five year period is typically described as programmed and the anticipated revenues are more reliable. Beyond the first five years the revenue is less predictable and priorities can change⁽¹⁾. See Map 1.

(1) 2033 Regional Transportation Plan

Table 4: Roadway Network Projects

Project	Location	Description	Agency
U.S. Highway 95 Widening	Avenue 9E to Aberdeen Road	Reconstruct Fortuna Wash Bridge and Fortuna Road intersection, widen roadway from two lanes to four lanes	ADOT
Interstate 8 Pavement Preservation	California State line to Fortuna Road	Pavement preservation project	ADOT
12 th Street-Phase 1	Avenue A to Avenue B	Making 12 th Street full connect between Avenue A and Avenue B by bridging the East Main Canal and constructing a new two lane road between 21 st Drive and 14 th Avenue	City of Yuma
16 th Street Widening	45 th Avenue to Avenue D	Reconstruction and expansion of road to four lanes	City of Yuma
16 th Street Widening	6 th Avenue to Arizona Avenue	Widen 16 th Street to a 7 lane cross-section, realign 7 th Avenue and 8 th Avenue to form a single intersection, provides for restricted access from minor side streets	City of Yuma
1 st Avenue Reconstruction	12 th to 16 th Street	Reconstruct 1 st Avenue from 12 th to 16 th Street	City of Yuma
1 st Street Reconstruction	Avenue B to Figueroa Street	Reconstruct with curb, gutter, sidewalk, landscaped median, storm drainage and streetlights	City of Yuma
24 th Street Widening	Avenue B to Avenue C	Reconstruction and widening to four lanes	City of Yuma
24 th Street Widening	Avenue C to Avenue D	Reconstruction and widening to six lanes	City of Yuma
32 nd Street Reconstruction	Avenue B to Avenue C	Reconstruction to current City of Yuma standards	City of Yuma
32 nd Street	Pacific Avenue & 32 nd Street	Add second dedicated eastbound left turn lane and convert existing left-turn lane to a through lane	City of Yuma
32 nd Street Mill & Replace	Catalina Drive to Avenue 3E	Mill ¾" of existing asphalt pavement and replace	City of Yuma
32 nd Street Expressway	Avenue 3E to Avenue 5E	Widen existing street to six lanes	City of Yuma
32 nd Street Widening	Avenue C to Avenue D	Reconstruction and widening to six lanes	City of Yuma
4 th Avenue Mill & Replace	Catalina Drive to 4 th Street	Mill 4" of existing asphalt pavement and replace	City of Yuma
8 th Avenue Widening	24 th Street to 32 nd Street	Reconstruction and expansion of road to four lanes, improvements to intersection geometry at Catalina Drive and signalization of Catalina Drive	City of Yuma
Arizona Avenue Reconstruction	32 nd Street to 40 th Street	Reconstruction to current City of Yuma standards	City of Yuma
Avenue 10E	32 nd Street to 40 th Street	Widening of existing portion of road to four lanes and construction of uncompleted segment	City of Yuma

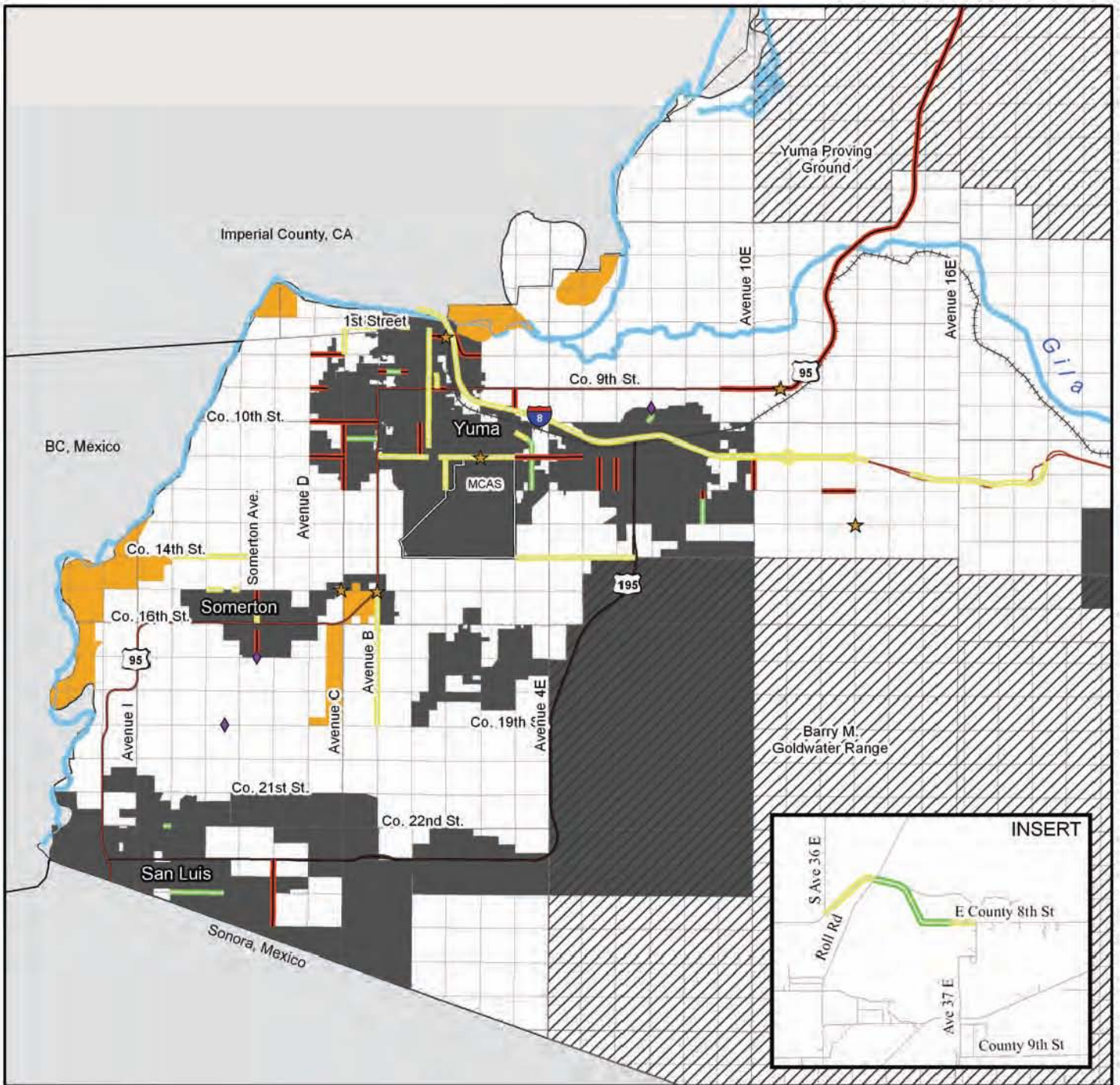
Circulation Element

Project	Location	Description	Agency
Avenue 3½E	Avenue 3E & 24 th Street to 40 th Street	Construct a six lane road along the B Canal connecting Avenue 3E to Avenue 3½E, the widening Avenue 3½E to six lanes south to 40 th Street	City of Yuma
Avenue 5½E Widening and Extension	32 nd Street to 40 th Street	Widening of existing portion of road to four lanes and construction of uncompleted segment	City of Yuma
Avenue 6E Widening	32 nd Street to 40 th Street	Widen existing street to five lanes	City of Yuma
Avenue 8½E Widening and Extension	32 nd Street to 48 th Street	Widening of existing road to four lanes and construction of uncompleted segments between 40 th Street and 48 th Street	City of Yuma
Avenue C Widening	24 th Street to 32 nd Street	Reconstruction and widening to four lanes	City of Yuma
Avenue C Widening	32 nd Street to 40 th Street	Reconstruction and widening to four lanes	City of Yuma
Giss Parkway Widening	4 th Avenue to Interstate 8	Reconstruction and widening to four lanes	City of Yuma
Giss Parkway Extension	Interstate 8 to Pacific Avenue	Full construction of Giss Parkway, four lanes from Interstate 8 to Pacific Avenue	City of Yuma
Avenue 7E Reconstruction and Extension	16 th Street to 24 th Street	Reconstruction of an existing portion of road to City of Yuma Standards, construction of uncompleted segments between 16 th Street and 24 th Street and construct a new crossing of the South Gila Valley Canal	City of Yuma/ Yuma County
Frontage Roads	Avenue 9E to Foothills Boulevard	Reconstruction to 2-lane road with a continuous left hand turn lane, curb and a 7 foot sidewalk on one side only, along with intersection improvements	City of Yuma/ Yuma County
Avenue C Reconstruction	8 th Street to 1 st Street	This roadway section consists of a 54 foot wide curb to curb traveled way with curb, gutter and sidewalks. There will be a central 14 foot left-turn lane with one 12 foot travel lane and one 8 foot shoulder on each side.	Yuma County
County 8 th Street Widening	Avenue C to Avenue D	Reconstruct the existing 2-lane roadway section to an urban five lane section with curbs, sidewalks and related drainage improvements	Yuma County
County 12 th Street Widening	Scottsdale Road and Foothills Boulevard	Staged widening of County 12 th Street (City 40 th Street) to a five lane urban roadway between Avenue 12E to Foothills Boulevard and three lanes between Scottsdale Avenue to Avenue 12E	Yuma County
County 8 th Street Extension	Avenue 36E to Avenue 37E	Extend the existing roadway around Antelope Hill between Avenue 37E to Mohawk Valley roadway (Avenue 36E Extension)	Yuma County
Bridge Replacement	County 19 th Street at the Main Drain	Bridge Replacement	Yuma County

Circulation Element

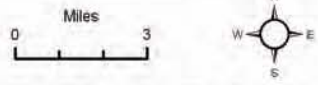
Project	Location	Description	Agency
Intersection Improvement	Foothills Boulevard and 48 th Street	Traffic signals may be considered at this intersection, improvements to retain the storm water on the existing Foothills Boulevard are recommended to retain the water in the parkway areas.	Yuma County
Intersection Improvement	County 15 th & Avenue C	Avenue C south of County 14 th Street curves and becomes County 15 th Street. A reduced speed limit is posted through this section. The roadway curve will be redesigned and rebuilt for a uniform speed limit.	Yuma County
Avenue E Widening	Mexican Border to S.R. 195	Widen existing two lane road to four lanes	City of San Luis
County 22 nd Street	9 th Avenue to 10 th Avenue	Construct a new two lane road	City of San Luis
County 24 th Street	10 th Avenue to Avenue F	Construct a new two lane road	City of San Luis
Intersection Improvement	Avenue B and County 15th Street	Intersection Improvements	City of Somerton
Somerton Avenue Widening	Fern Street to County 17th Street	Widen to four lanes	City of Somerton
Somerton Avenue Widening	Jefferson Street to County 15 th Street	Widen to four lanes	City of Somerton

Circulation Element



★ Intersection Improvements	▭ Marine Corps Air Station Yuma
◆ Bridge Replacement selection	▨ Military Boundary
— Road Improvements (No New Lanes)	■ Indian Reservations
— Road Improvements (Additional Lanes Added)	■ Incorporated Areas
— New Road	

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 Date: July, 2011



Circulation Element - Transportation Improvement

Map 1: Transportation Improvement

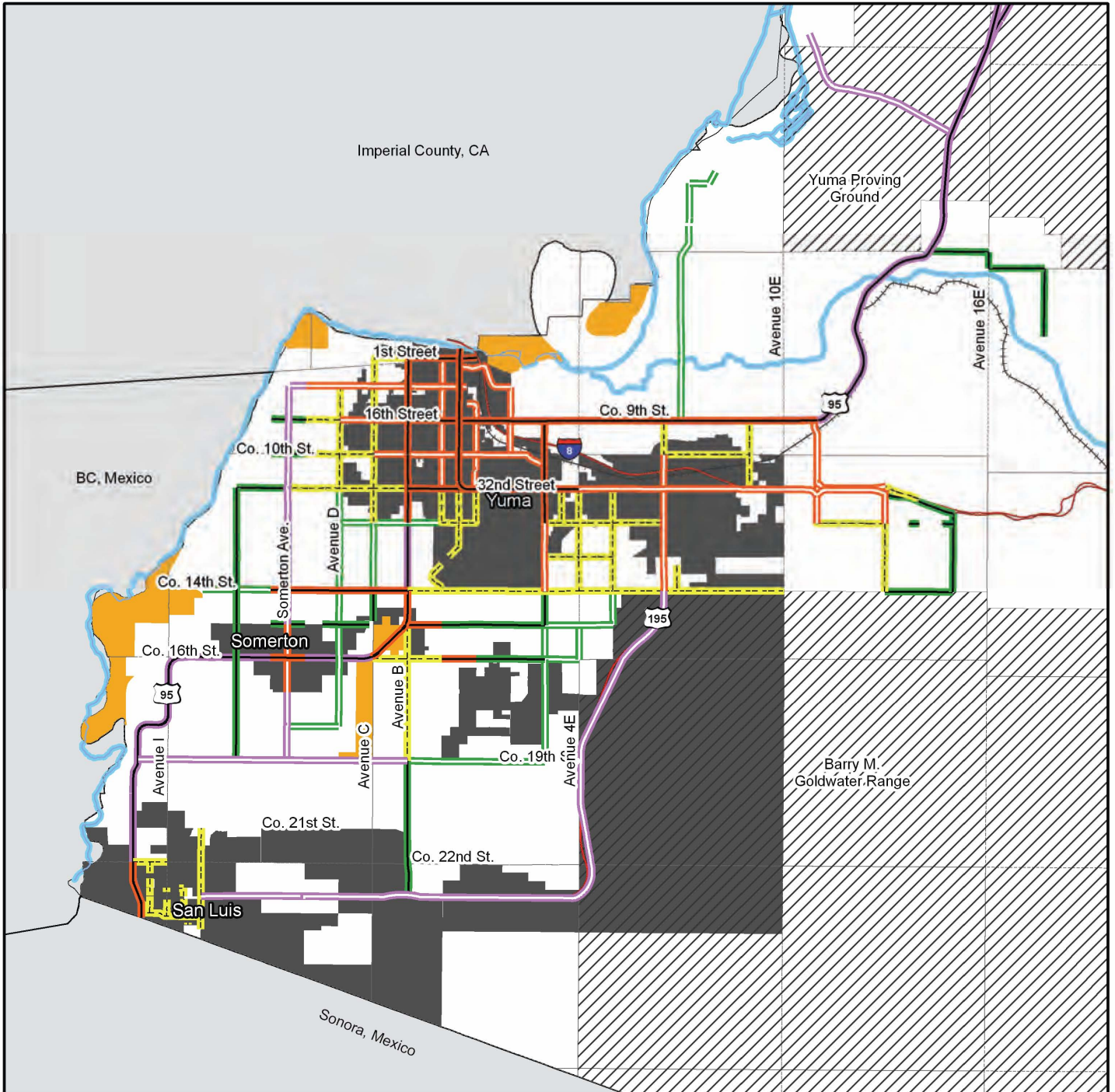
Functional Classifications

Functional classification defines the hierarchy of streets in a roadway system. The federal functional classification of roadways in Yuma County is shown below. These classifications are standardized nationwide by the Federal Highway Administration (FHA). In general, the interstate and arterials provide a high level of mobility for the traveling public with minimal allowance for access, while the collectors and local streets provide for residential and non-residential access. Individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network. Understanding the functionality of the road network is helpful when considering the location of future growth. Adequate access to the rest of the community should be a key consideration in the planning process for future growth. See map 2 and map 3.

Federal Functional Classifications

- **Urban Principal Arterial** - Routes which carry through traffic and most of the trips entering/leaving a Federally-designated Urban Area. They provide continuity for all rural arterials that intercept the urban boundary.
- **Rural Principal Arterial** - Corridor movement suitable for substantial statewide or interstate travel between larger population centers.
- **Urban Minor Arterial** - Within a Federally designated Urban Area these roads interconnect with and augment the urban principal arterial system. They distribute travel to geographic areas smaller than those of higher systems.
- **Rural Minor Arterial** - Link cities, large towns and other traffic generators that are capable of attracting travel over long distances. Integrates interstate and inter-county service. Have spacing consistent with population density so all developed areas are within a reasonable distance from the arterial system.
- **Urban Collectors** - Provide both land access and traffic circulation within urban residential neighborhoods and commercial and industrial areas in Federally designated Urban Areas. Route density is much higher than in rural areas.
- **Rural Major Collector** - Link nearby larger towns or cities, or with routes of higher classifications (serves more important intra-county travel corridors which could connect consolidated schools, shipping points, important agricultural areas, etc.).
- **Rural Minor Collector** - Spaced consistent with population density to accommodate local roads within reasonable distance of collector roads. Provides service to smaller communities. Links locally important traffic generators with the arterial system.

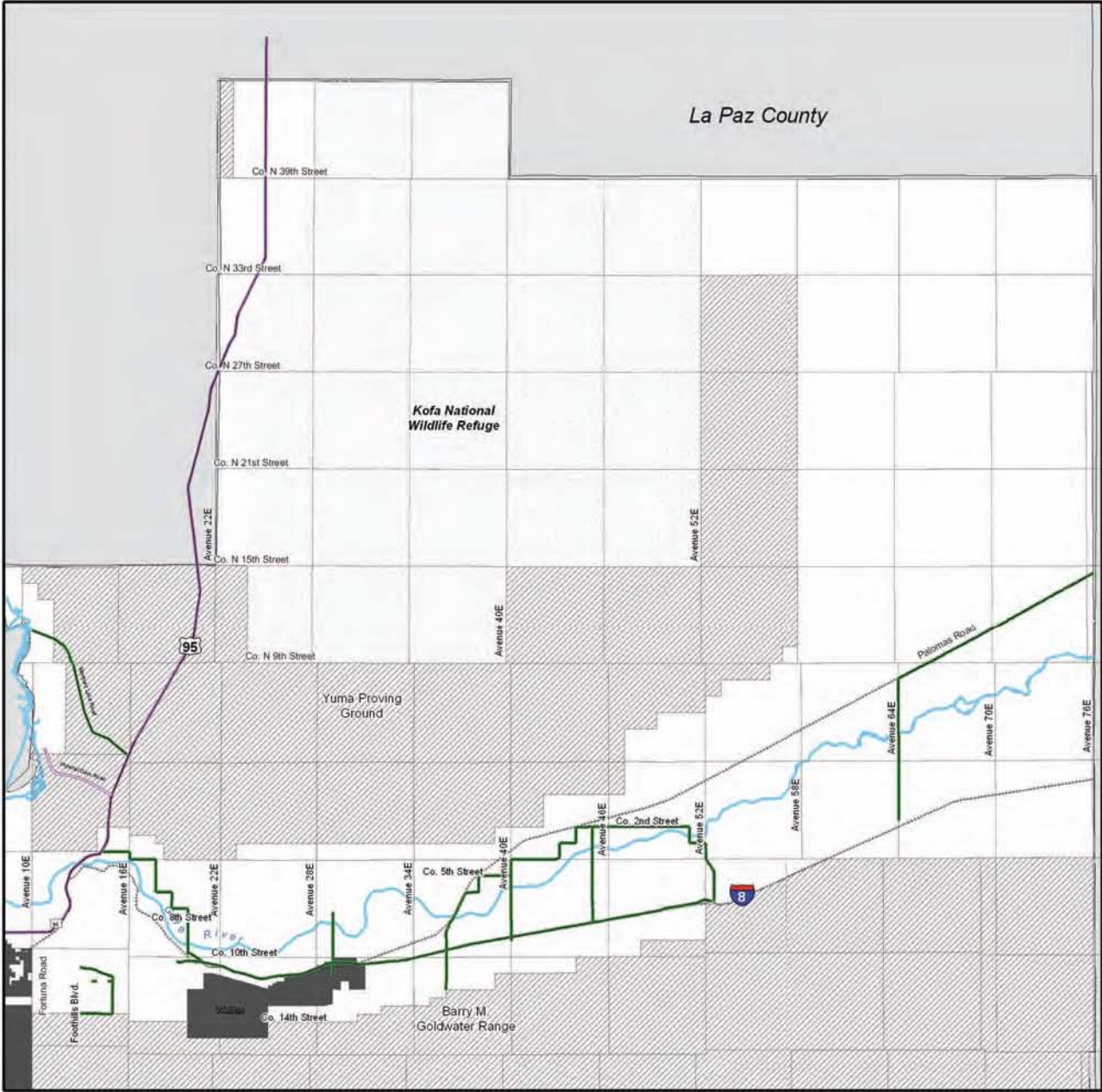
Circulation Element



<p>Focus Area</p>	<table border="0"> <tr> <td> Urban Principal Arterial</td> <td> Military Boundary</td> </tr> <tr> <td> Urban Minor Arterial</td> <td> Indian Reservations</td> </tr> <tr> <td> Rural Principal Arterial</td> <td> Incorporated Areas</td> </tr> <tr> <td> Rural Minor Arterial</td> <td></td> </tr> <tr> <td> Urban Collector</td> <td></td> </tr> <tr> <td> Rural Major Collector</td> <td></td> </tr> <tr> <td> Rural Minor Collector</td> <td></td> </tr> </table> <p>For Information Only No Liability Assumed Yuma County Dept. of Development Services Source: Yuma County GIS Division</p> <p>Date: June, 2011</p> <p>Miles 0 3 6</p>	Urban Principal Arterial	Military Boundary	Urban Minor Arterial	Indian Reservations	Rural Principal Arterial	Incorporated Areas	Rural Minor Arterial		Urban Collector		Rural Major Collector		Rural Minor Collector		
Urban Principal Arterial	Military Boundary															
Urban Minor Arterial	Indian Reservations															
Rural Principal Arterial	Incorporated Areas															
Rural Minor Arterial																
Urban Collector																
Rural Major Collector																
Rural Minor Collector																

Circulation Element - Roadway Network Map Yuma Valley Area

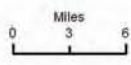
Map 2: Roadway Network Map - Yuma Valley Area



- Rural Principal Arterial
- Rural Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Military Boundary
- National Wildlife Refuge
- Incorporated Areas

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division

Date: July, 2011



Circulation Element - Roadway Network Map Northeast Area

Map 3: Roadway Network Map—Northeast Area

Public Transit History

Since 1999, the Yuma County Area Transit (YCAT) system has grown from a transit service offering only paratransit service to the current mix of demand-responsive and fixed-route service. *Paratransit* is a term used to define transit service that operates in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destination. It does not operate over a fixed route or a fixed schedule. Yuma County's paratransit is known as Dial-a-Ride.

Before 1999, only private transportation companies operated transit service in Yuma County, with taxis serving the urbanized areas and private van services providing transportation between San Luis and Yuma. The Saguaro Foundation began operating Dial-a-Ride funded by YMPO in February 1999. YCAT's fixed-route service began in 2000 with service between San Luis and Yuma. YCAT service between Yuma and Foothills was initiated in 2001, but the ridership was not considered high enough to justify the cost, and the system was shortened to terminate at Arizona Western College.

After financial and operating difficulties in 2003 nearly caused the fixed-route transit to shut down, the City of Yuma and a consortium of local groups contributed additional funding to the system. The YMPO selected a new operating contractor and the service began to grow, and an additional route to Wellton initiated service in January 2006. Both demand-response and fixed-route service is administered and funded by the YMPO. YMPO also owns all the vehicles for the fixed-route and demand-response service and leases the 14th Street and Atlantic Avenue maintenance facility.

Yuma County Intergovernmental Public Transportation Authority

YCIPTA is an Intergovernmental Public Transportation Authority (IPTA) that was formed on December 13, 2010 by the Yuma County Board of Supervisors under Resolution No. 10-52 to administer, plan, operate and maintain public transit services throughout Yuma County, including within the political jurisdictional boundaries of the cities of Yuma, San Luis, Somerton, the town of Wellton and the unincorporated Yuma County areas. Northern Arizona University is also a member of the IPTA. Recent legislation will allow the Arizona Western College (AWC) and the local tribal governments to join the authority.

Current Studies

Yuma County is the sponsor of a Transit Needs Study funded by ADOT that will be completed by December 2011. The study will review existing conditions and project future growth and economic conditions to make final recommendations for future transit services based on various levels of funding. In order to determine the best type of transit system available to county residents, a key component of the study is the review and development of service alternatives based on established transit goals and objectives. In addition, the study consultants will conduct a peer-city review to determine how transit services other communities with characteristics similar to those of the Yuma region. Funding will be a continued source of discussion related to transit, and the study results will identify funding sources and amounts.

6.4 Railway Network

The Union Pacific Railroad's (UPRR) Sunset Route was originally constructed between 1877-1887. The Sunset Route crosses Yuma County on its run from the Port of Los Angeles, California to El Paso, Texas and points beyond.

In 1926, work was completed on a rail link called the Wellton Branch between the Sunset Route at Wellton and Phoenix, Arizona in order to provide a direct link between Phoenix and points to the west. The Sunset Route main line passes to the south of Phoenix. In 1996, this track was closed between Roll in Yuma County and Arlington in Maricopa County because of low traffic volumes and high maintenance costs. Though out of service, these tracks remain in place and have not been officially abandoned by Union Pacific and are currently classified as inactive.

The Yuma Valley Railroad (YVR) line was originally built in 1914 by the U.S. Bureau of Reclamation along the newly built Colorado River Levee to help maintain and allow for emergency repair of the levee during times of high water. It was operated for nearly 20 years until flood control projects farther up river removed the need for this line for flood control purposes. In 1983 the Interstate Commerce Commission (ICC) approved the abandonment of the portion of the line south of the Yuma Desalting Plant. Prior to 2005, a three-car tourist train pulled by a vintage diesel engine operated on the 6.1-mile route between downtown Yuma and the Yuma Desalting Plant. In 2005 the Bureau of Reclamation declared the tracks inadequately maintained for passenger traffic. Furthermore, the U.S. Department of Homeland Security and the Arizona National Guard had begun to utilize the YVR right-of-way for border patrol and military operations, blocking the tracks south of the Yuma Desalting Plant. The track and rails remain in place as of 2011.

The McElhaney Cattle Company located near Roll, Arizona operates one of the ten largest cattle-feed facilities in the United States. The Union Pacific Railroad has granted McElhaney railroad right-of-way over six miles of the Wellton Branch from Wellton to McElhaney's cattle-feed facility located northeast of Wellton. Built in the 1950s, it houses over 130,000 head of cattle which consume over 11,000 carloads of grain per year. McElhaney Cattle Company operates one locomotive for switching to their grain silos. 100-car grain trains arrive and deliver twice a week, with McElhaney crews assuming operation responsibilities from Union Pacific crews at Wellton. See map 4.



Union Pacific. Photo credit: Yuma County, DDS, Community Planning

Union Pacific's Double Tracking Project

In 2007, there were approximately 49 trains per day on Yuma County's stretch of track, carrying a total annual load of about 168,000 carloads of freight. Certain portions of the Sunset Route have been double-tracked while preparations for double-tracking of the remaining sections has been completed. Currently, the double tracking project from Los Angeles, California to El Paso, Texas is 64% completed, but the section located in Yuma County will not be a priority over the next 10 to 20 years, as the single railroad track is sufficient to manage the actual train traffic. The Wellton section is doubled tracked. The doubling of the tracks in the remaining portions of Yuma County will be triggered by increased shipping and hauling demand as the national economy improves. Another important factor that will influence the reactivation of the doubling of the tracks is the potential rise of diesel fuel prices which will make shipping by rail more competitive than by semi-tractor trailer by road.

The last part of the track doubling project could be the crossing of the Colorado River. Union Pacific sees the permitting process as a five year task since it involves the crossing of waterways. A major public sector entity involved in this process would be the Army Corps of Engineers. The construction of a new bridge from UP's perspective also looks remote and involves several entities. Depending on the project's location, this could potentially involve tribal lands, the City of Yuma, Yuma County, Army Corps of Engineers and any agency related to historical landmarks. Yuma County residents will play an important key role in the decision for the location of a second bridge for the crossing of a second track.

Short Line from Mexico Project

In 2009, the plan to turn the bay of Punta Colonet in Baja California, Mexico into a deep water mega-container port was announced. The intent is for a port able to handle the next generation vessel and port operations from Asia due to the congestion at the ports of Los Angeles, Long Beach and Oakland. This demand also brought the need to plan for the movement of goods via roadways and tracks into the United States. One of the potential locations to connect into the United States' rail network considered was Yuma County.

The potential construction of a short line in Yuma County could represent a big impact in the community and development depending on its final location. However, Union Pacific has abandoned plans to participate in the construction of the short line coming from Mexico for the proposed port. The reasons mainly have to do with economics and logistics. The project has been placed on hold due to a reduction of the demand and movement of containers between Asia and the United States.

Another important factor according to Union Pacific is the expansion of the Panama Canal (the third set of Locks Project) which is a project proposed by the Panama Canal Authority (PCA) that will double the capacity of the Canal by 2014 allowing larger ships to transit and making the movement of goods coming from the west cheaper. Although the UPRR's decision of not to participate in the project means Yuma County will no longer be considered for the project because Union Pacific owns all existing rail lines in the area and does not allow another railroad to use their tracks, the reactivation of the project through a Metropolitan Planning Organization (MPO), municipality or the construction of a short line railway by a private company should not be discarded.

Rail Freight and Passenger

The Union Pacific Railroad (UPRR) and AMTRAK provide east-west rail freight and passenger service, respectively. Runways for the Marine Corps Air Station are also used by the Yuma International Airport, offering additional capacity as an air passenger and freight terminal. This strategic location and infrastructure gives Yuma the potential for continued economic growth and the ability to take full advantage of the North American Free Trade Agreement (NAFTA) including opportunities for an inland port.

The Union Pacific Railroad handles all freight rail operations in the Yuma area. Yuma is situated along the Union Pacific Railroad's primary east-west freight corridor known as the Sunset Route. The Sunset Route handles as many as 70 trains per day. This all-weather freight corridor links the Port of Los Angeles in California with the Port of Houston in Texas. These two ports are the two largest shipping volume, inter-modal, deepwater ports in the United States. The majority of imported and exported goods consumed or produced in the United States passes through these two ports.

Industrial growth along the US/Mexican border region has been influenced by NAFTA and has increased the amount of freight traffic along the border region. Current US/Mexican rail freight traffic in the west moves through the ports of entry at Nogales, Sonora and Mexicali, Baja California. Rail freight through the Port of Entry at Nogales, Sonora is primarily manufactured goods, cement, and copper concentrates from central Sonora. Additionally, intermodal container freight from the deepwater Port of Guaymas, Sonora is increasing as well. Freight rail trains from Guaymas along the Nogales branch of the Union Pacific Railroad has increased significantly since 1993.

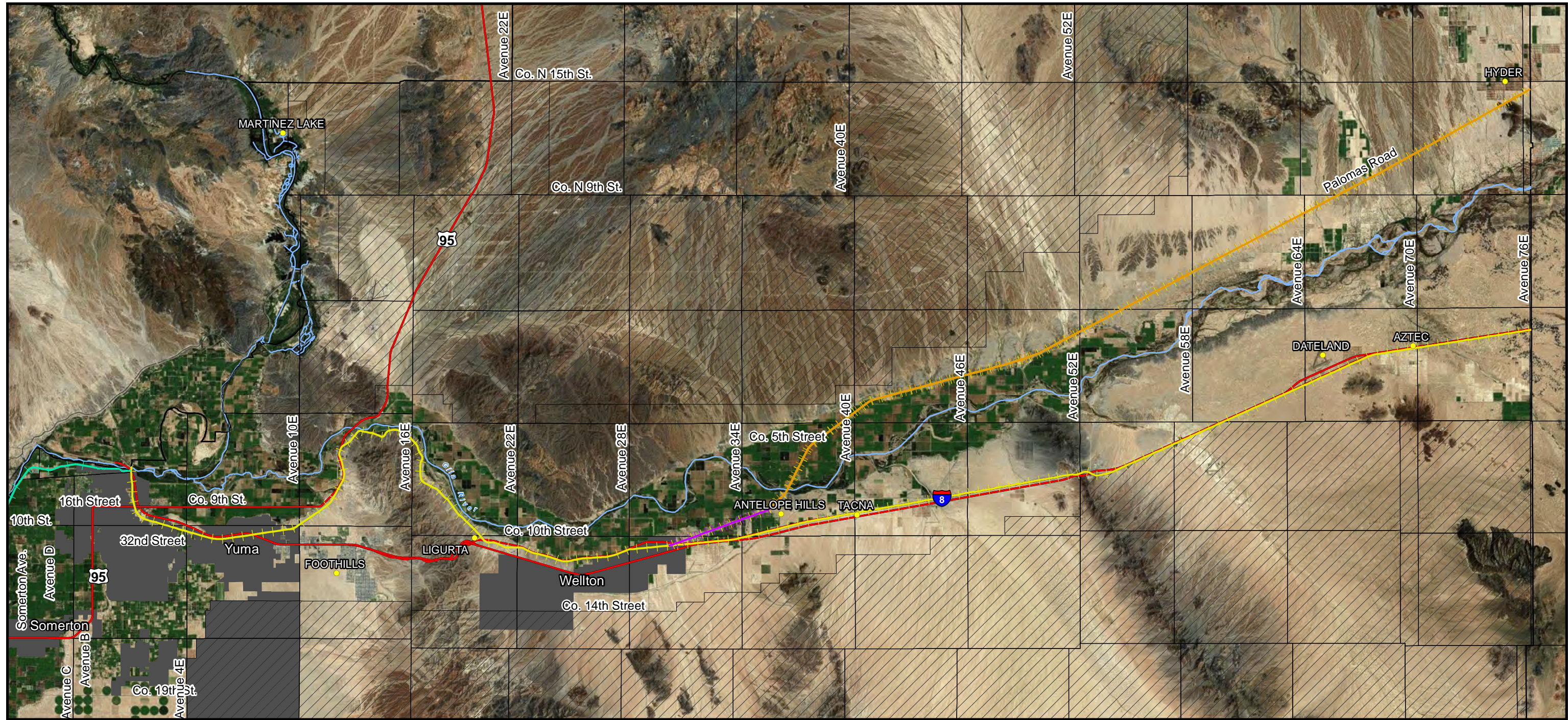
Freight along the United States/Mexico border near Yuma enters at the Port of San Luis, approximately 25 miles south of Yuma. Freight is exported and imported through the region primarily by truck. Food and electrical equipment imports have generally increased in recent years. Produce from northwest Sonora supplies much of the United States' market during the winter months. Additionally, produce is grown year-round in northwest Sonora and the Yuma Valley, and shipments continue year-round. Electrical equipment from the "maquiladoras"⁽¹⁾ in San Luis Rio Colorado, Sonora is shipped through the port of entry at San Luis.

AMTRAK operates three passenger trains in each direction that travel between Los Angeles, California and Orlando, Florida on a weekly basis. The trains stop in Yuma at the Amtrak station (281 Gila Street). There are no services provided at the station. Of the eight Arizona stations served by AMTRAK, Yuma was the seventh busiest in 2010, boarding or detraining an average of approximately ten passengers daily⁽²⁾.

¹A "maquiladora" is a Mexican Corporation which operates under a **maquila** program approved for it by the Mexican Secretariat of Commerce and Industrial Development (SECOFI).

²AMTRAK fact sheet, FY2010, State of Arizona

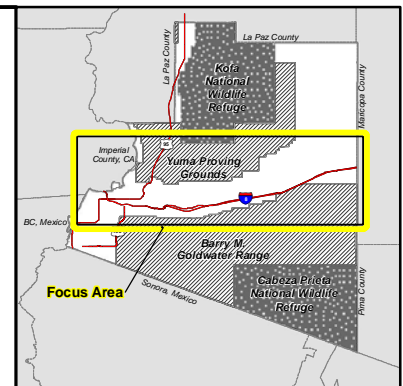
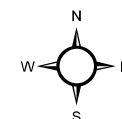
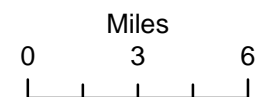
Circulation Element - Railway Network



- - - - - Union Pacific Sunset Route
- - - - - Yuma Valley Railroad Section
- - - - - McElhaney Cattle Company
- - - - - Wellton Branch (Inactive)
- Military Boundary
- Incorporated Areas

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 Source: Yuma County Dept. of Development Services
 Yuma County GIS Division

Date: July, 2011



6.5 Aviation Network

Yuma’s history of flight dates to 1911 when Robert Fowler took off from Yuma to set a world record for endurance and distance. Fowler entered a transcontinental air competition sponsored by William Randolph Hearst and landed in Yuma on October 25, 1911 as part of the transcontinental trip. Over 2,000 spectators watched the aircraft land. The next day he succeeded in setting a world record by reaching Florida.

Afterward, in 1925, the Yuma Chamber of Commerce (YCC) went to work to secure an airport for Yuma. Forty acres of land were acquired from the federal government. Afterwards, the Chamber’s Aviation Committee decided another 160 acres was needed to create a first-class landing field in Yuma. Another 640 acres of government land were leased to Yuma County with the support of a Yuma Aviation Bill signed on February 27, 1928. In June of that year, the military announced that a United States meteorological and aeronautical station would be constructed and would be manned by four army personnel, marking the first military presence at Yuma’s airport.

The outbreak of World War II transformed the civilian airport into the Yuma Army Airfield. Construction of facilities began on June 1, 1942 and was activated on December 15 of the same year. The base was closed on November 1, 1945. After the war, the airfield was turned over to the Department of the Interior as a headquarters for the Bureau of Land Reclamation.

On January 1, 1954, Yuma County Airport was reactivated by the United States Air Force’s Air Defense Command as a training facility. The Yuma County Airport was re-designated Yuma Air Force Base. Later on it was re-named as Vincent Air Force Base and transferred to the Navy on January 1, 1959. Finally, on July 20, 1962, the base designation was changed to its current designation as Marine Corps Air Station-Yuma (MCAS)⁽¹⁾.

MCAS-Yuma is currently the busiest air station in the Marine Corps, offering excellent year-round flying conditions and thousands of acres of open terrain for air-to-ground weapons ranges and associated restricted airspace for military flight operations.



Photo Credit: Lockheed Martin

(1) MCAS Yuma is currently programmed to become the Marine Corps’ initial operating base for the F-35B variant of the F-35 Lightning II Joint Strike Fighter.

Yuma International Airport

The Yuma International Airport is managed and operated by the Yuma County Airport Authority, Inc. (YCAA). Under Arizona Statutes, a state “Airport Authority” is an independent public agency and a non-profit organization. The YCAA leases the airport’s land from Yuma County on a fifty year lease that currently continues through December 2057.



Photo credit: www.holbrookelectric.com

The YCAA has two commercial passenger airlines: United Airlines through United Express, and US Airways through US Airway Express providing service to Los Angeles International Airport (LAX) and Phoenix Sky Harbor Airport (PHX)⁽¹⁾.

The Airport also has two fixed base operators (FBOs) that provide services to general areas (GA) of aircraft operators such as aircraft fueling, maintenance, storage, light aircraft maintenance, rental car arrangements and catering services. The FBOs currently operating at the Airport are Care Flight Aviation Center, and Million Air Jet Center. Additional aircraft storage hangars, including box hangars, T-hangars, and T-shades for rental and a complimentary wash rack are available for use by base aircraft owners⁽¹⁾.

Airstrips

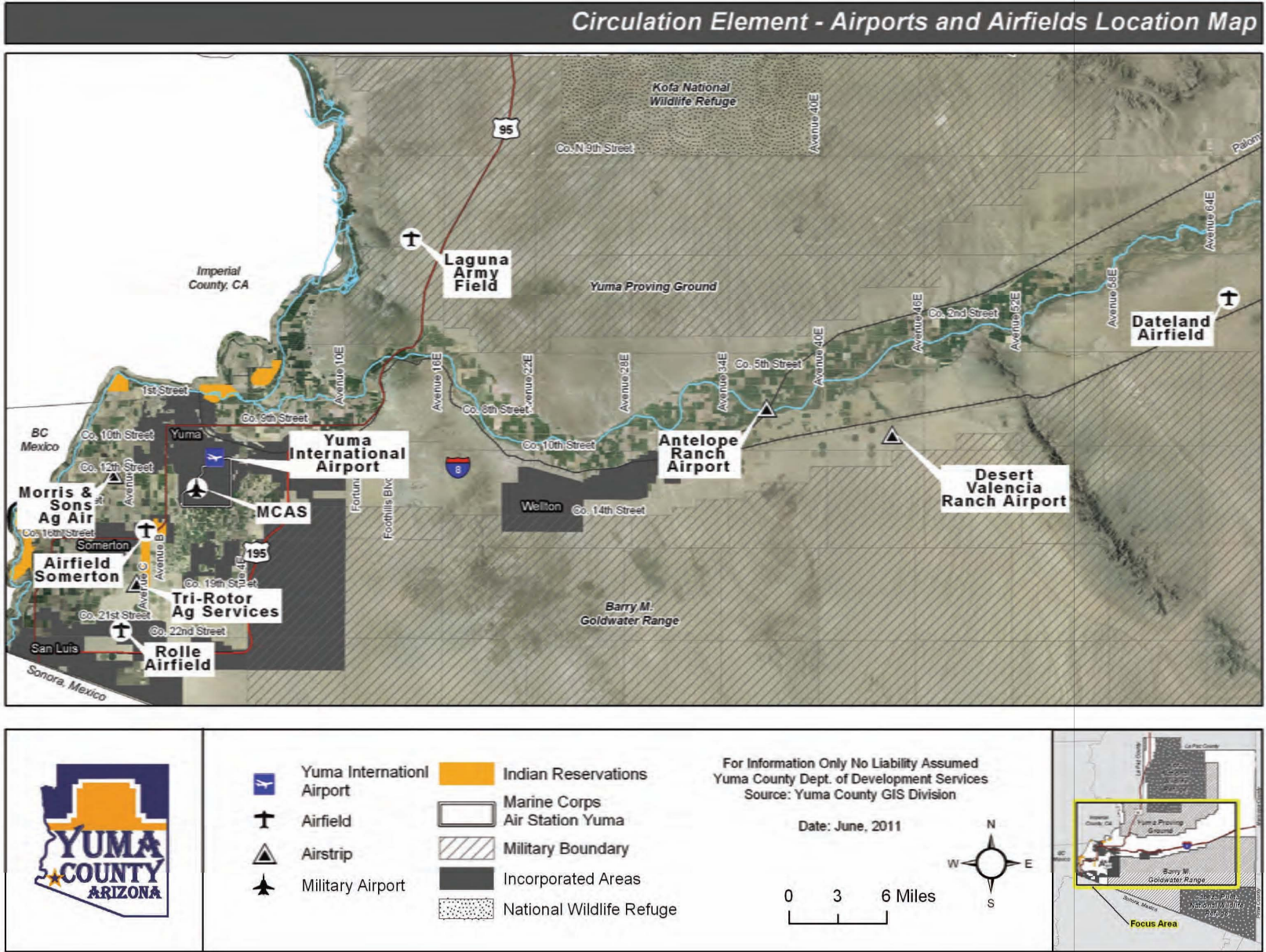
An airstrip or airfield is a kind of airport that consists only of a runway with perhaps fueling equipment. They are generally in remote locations and often used for agricultural purposes. Some airstrips and airfields in Yuma County are abandoned, but some of the active ones are used in a limited capacity privately or by the military. Table 6 below lists the airports and airfields in Yuma County.

Table 6: Airports and Airfields in Yuma County				
Name	Location	Aircraft Operations	Number of Runways	Use Ownership
MCAS/Yuma International Airport	<i>6 miles from Yuma Center</i>	211,236 (2010)	4	Military/Public
Rolle Airfield	<i>5 miles from San Luis</i>	3,050	1	Public
Somerton Airport	<i>3 miles from Somerton</i>	100	3	Private
Laguna Army Airfield	<i>Yuma Proving Ground</i>	Unknown	2	Military
Antelope Ranch Airport	<i>4 miles NE of Tacna</i>	Unknown	Unknown	Private
Desert Valencia Ranch Airport	<i>4 miles E of Tacna</i>	Unknown	Unknown	Private
Dateland Airfield	<i>Dateland</i>	Unknown	Unknown	Private
Auxiliary Airfield-2 (Aux-2)	<i>Barry M. Goldwater Range</i>	Unknown	1	Military Training Only
Morris and Sons AG Air	<i>6277 W County 12th Street, Yuma</i>	Unknown	1	Private
Tri-Rotor Ag Service	<i>18679 S. Avenue D, Yuma</i>	Unknown	1	Private

Table 6: Airports and Airfields in Yuma County

(1) www.yumainternationalairport.com

Map 5: Airports and Airfield Location Map



Airport Roadways

Interstate 8 is the east-west corridor from Yuma toward San Diego to the west and toward Phoenix to the northeast. The airport is located in the southern portion of the City of Yuma and is accessible via Highway 95 or Interstate 8 from the downtown area. The Airport is bordered by:

- East 32nd Street / Highway 80 / County 11th Street to the north
- Avenue 3E to the east
- County 14th Street to the south and
- various roads, including 4th Avenue, Avenue 1E (Arizona Avenue) and 40th Street

The on-Airport terminal loop roadway off 32nd Street and Pacific Avenue to the north of the passenger terminal connects the terminal curb-front, various parking areas and rental car facilities and serves as the link between the regional highway system and the terminal area.

Yuma International Airport Master Plan

The goal of an Airport Master Plan is to provide guidelines for future airport development that is financially, technically and environmentally feasible. The National Environmental Policy Act of 1969 and Federal Aviation Administration (FAA) Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, provides guidance on evaluating environmental impacts when implementing actions at public-use airports.

Three categories of environmental analysis and review relevant to airport development are outlined in NEPA. Projects proposed for implementation by an airport operator and subject to NEPA review are assessed based on their potential to cause significant environmental impacts. The three categories of environmental review are:

- **Categorical Exclusions** – Projects that are categorically excluded have been found to have no potential for significant environmental impacts under normal circumstances.
- **Actions Normally Requiring an Environmental Assessment (EA)** – Projects normally requiring an EA are those that have been found through experience to sometimes have significant environmental impacts.
- **Actions Normally Requiring an Environmental Impact Statement (EIS)** – Major actions that will significantly affect the environment must be assessed in an EIS. In addition, if an EA determines that a project will have significant impacts, the FAA will prepare an EIS to further investigate the project’s potential environmental impacts.

The major product of the master planning process is the Airport Layout Plan (ALP), which shows the existing and ultimate planned development through the planning horizon. Federal aviation regulations require that an airport operator submit environmental review documentation of the planned development for FAA review and approval if the airport operator plans to

Aircraft Noise

Aircraft noise originates from both the engines and the airframe of an aircraft, but the engines are by far the most significant source of aircraft noise. Although noise from propeller-driven aircraft (mostly commuter and general aviation aircraft) can be annoying, the primary source of disturbing noise from the airport is jet aircraft. Because none of the proposed Airport Development Plan (ADP) projects are airfield capacity projects, a detailed noise analysis was not completed as part of the Master Plan Update. The Department of Defense is currently in the process of preparing an EIS to evaluate the impacts of basing the Joint Strike Fighter aircraft at MCAS-Yuma. As part of that EIS a detailed noise analysis for MCAS-Yuma and the Airport will be completed.

Compatible Land Use

Federal agencies have adopted guidelines for compatible land uses and environmental sound levels in airport areas. Land use is normally determined by zoning codes such as residential, industrial or commercial. Based on extensive research on the effects of noise on people, noise levels that are incompatible with residential land uses may be compatible with industrial or commercial land uses. The FAA has identified land use compatibility guidelines relating types of land uses to aircraft noise levels. Arizona Revised Statutes (ARS) 28-8461 provides definition relating to airport zoning and regulations while ARS 28-8481 lists military airport operation compatibility, compliance procedures, and land use matrix.

Part 150 of the Federal Aviation Regulation , *Airport Noise Compatibility Planning*, sets forth compatibility guidelines for residential, public, commercial, manufacturing and recreational land uses. Land adjacent to the airport boundary is categorized as Airport Area Specific Plan commercial, industrial, business park or recreational/open space land use. The City of Yuma and Yuma County⁽¹⁾ have also identified and adopted a Runway Approach Departure Safety Area/Airport Industrial Overlay District (RADSA/AIOD) for the approaches to Runway 8-26. The Department of Defense has identified Clear Zones and Accident Potential Zones (APZ) as part of its Air Installation Compatible Use Zone (AICUZ) Study for MCAS Yuma.

No development proposed as part of the ADP would occur adjacent to any existing residential or noise sensitive areas. All proposed ADP projects would occur within the current Airport property, and no changes to the airfield would significantly affect the areas exposed to aircraft noise off airport property. Portions of the proposed taxiway parallel to Runway 3L-21R would traverse the APZ for the runway; however, taxiway development is considered compatible with an APZ. Therefore, implementation of the ADP projects would be consistent with planned land uses and is not anticipated to affect compatible land use.

Social Impacts

Aviation development affects not only the natural environment but also the human environment. Therefore, consideration of social impacts is required to determine the potential effects of airport development on the human environment. The types of impacts considered in this overview that could result from airport development include:

⁽¹⁾ City of Yuma and Yuma County, *Joint Land Use Plan, Land Use Element Amendment, City of Yuma General Plan, Yuma County Comprehensive Plan*, <http://www.yumacountyaz.gov>

- Disproportionately high and adverse human health or environmental effects on minority and low-income populations
- Disproportionate health and safety risks to children
- Relocation of residences and/or businesses
- Disruption of communities
- Alterations in traffic patterns that may permanently or temporarily restrict traditional community access
- Substantial loss in community tax base

All proposed ADP projects would be implemented on existing airport property and would not require the relocation of residences or businesses or cause community disruption. Because no residential areas are located adjacent to the areas where projects are proposed, no disproportionate effects are anticipated on minority and low-income populations or to health and safety risks for children.

Section 4(f) of the Department of Transportation Act of 1966 specifies that transportation projects cannot take land from public parks, historic sites or wildlife refuges without first determining that there is no reasonable and prudent alternative. Takings can include the physical acquisition of lands or significant noise or air pollution impacts to such lands so as to make the lands unsuitable for their desired use.

Preservation of prime farmland is a priority goal for the U.S. Department of Agriculture and the sponsors of projects with federal support are required to assess the projects' effects on prime farmland. The ADP projects would be implemented completely within the airport property boundary. Implementation of the ADP projects would not affect farmland.

Off-Airport Land Use and Zoning

Off-Airport land uses in the vicinity of the airport are predominantly residential, agricultural and commercial. The airport lies within the city limits of the City of Yuma and has planning areas within its immediate environs. The goal within the South Mesa Sub-Regional Planning Area is to preserve and promote agricultural lands and activities as well as low-density housing. Land use within the North Gila Valley and Yuma Valley Sub-Regional Planning Area is predominately agricultural.

6.6 Visual Corridors

Visual corridors are defined as historic, scenic, gateway or aesthetically pleasing routes that help define the character of Yuma County. A visual corridor can have a variety of characteristics, but primarily they provide vistas of mountains or show important cultural and historic resources. Visual routes also provide visitors their first lasting impression of Yuma and should leave travelers with an aesthetically pleasing experience.

Visual corridors promote putting restrictions on development of marginal lands and mountainous areas of the county in order to maintain rural character. Heavy industrial development should be discouraged and stricter sign regulations applied along these routes. The following is a list of road segments classified as visual corridors. Refer to the Visual Corridors map to see segments of these roads that are designated as visual corridors.

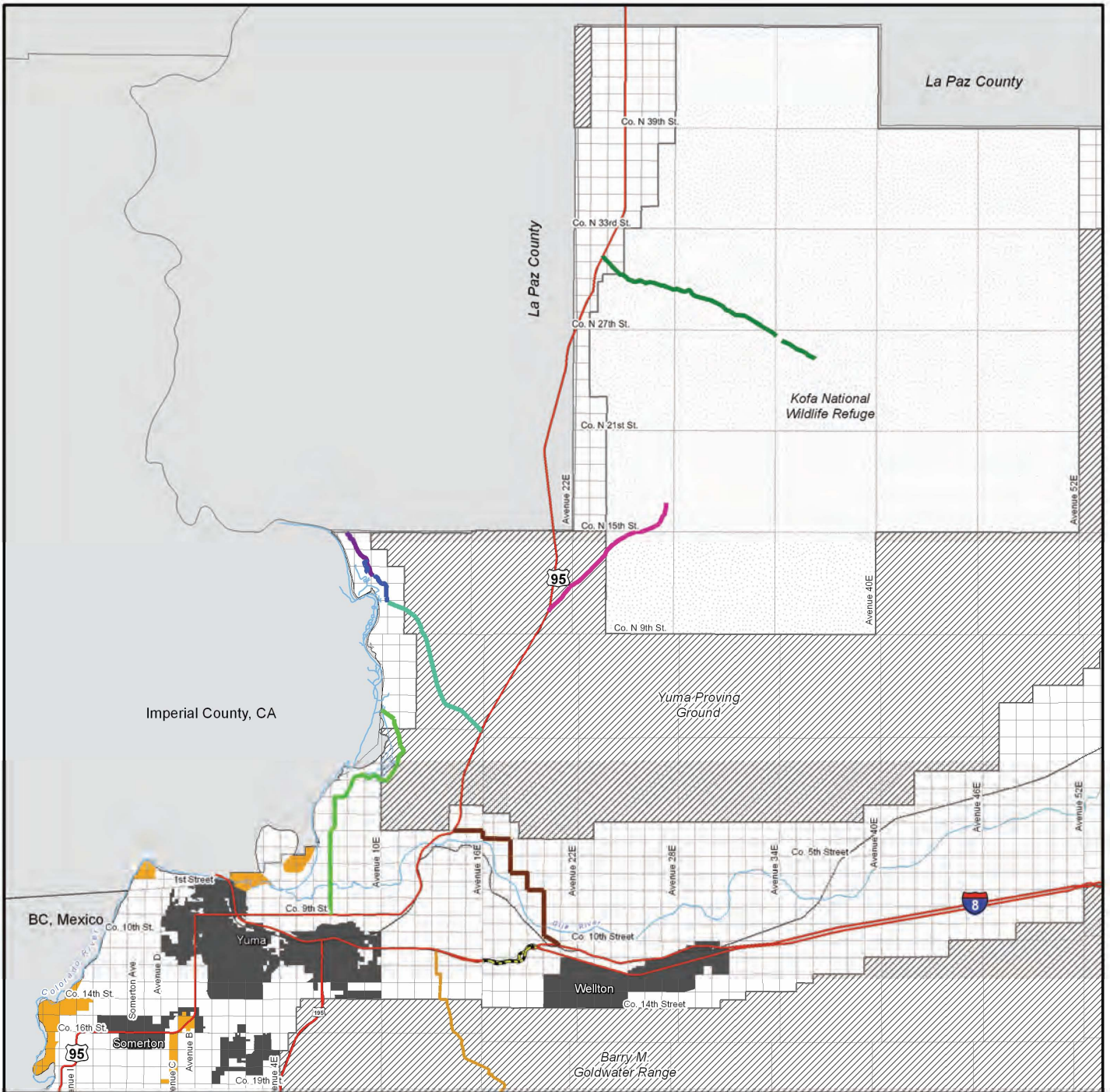
- U.S. Highway 95
- Dome Valley Road
- Telegraph Pass (I-8)
- Laguna Dam Road/Mittry Lake
- El Camino del Diablo
- Martinez Lake Road
- Wildlife Refuge Road
- Red Cloud Mine Road
- Castle Dome Mine Road
- King Valley Road
- Mohawk Pass (I-8)

The Yuma County Zoning Ordinance contains a Visual Corridor Overlay (VCOD) District which can be applied to ensure that lands adjacent or contiguous to Visual Corridors are developed in a manner that preserves, enhances and is in harmony with the natural scenic beauty and rural character viewed by travelers on the corridors. Further, the VCOD District is intended to mitigate potential adverse impacts on the Visual Corridors by adjacent or contiguous land uses. Ensuring the buffering and screening of uses will in turn contribute to and enhance trade, tourism, capital investment and the community's general welfare. Visual Corridor Development Standards are to be applied to areas identified as Visual Corridors in the adopted Comprehensive Plan.



Photo credit: Yuma county, DDS, Planning Section

Circulation Element



- | | | |
|--------------------------|-----------------------|--------------------------|
| Dome Valley Road | Red Cloud Mine Road | Indian Reservations |
| Telegraph Pass (I-8) | Castle Dome Mine Road | National Wildlife Refuge |
| Matinez Lake Road | King Valley Road | Military Boundary |
| Laguna Dam Rd/Mitry Lake | Interstate 8 | Incorporated Areas |
| El Camino del Diablo | HWY-95 | |
| Wildlife Refuge Road | | |

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 Date: June, 2011



Circulation Element - Visual Corridors

Map 6: Visual Corridors

6.7 Circulation Policies and Priorities

- CPP.1:** Yuma County will support those plans adopted by the YMPO Executive Committee as directed by Board Of Supervisors.
- CPP.2:** Yuma County will support the plans adopted by the Yuma County Airport Authority and Arizona Department of Transportation as directed by Yuma County Board of Supervisors
- CPP.3:** Yuma County will maintain a close working relationship with appropriate federal, state, military transportation and aviation management agencies in developing transportation plans.
- CPP.4:** Yuma County will encourage the coordination of public and private transportation programs and facilities that accommodate increased road traffic volumes and capacities.
- CPP.5:** Yuma County will give priority to those transportation projects commensurate with land use designations.
- CPP.6:** Yuma County will continue to require the private sector to bear its share of road improvement financing.
- CPP.7:** Yuma County will encourage new development to occur where existing transportation facilities are adequate or where necessary improvements will be made as part of the development project.
- CPP.8:** Yuma County will encourage efficient multi-modal and alternative modes of transportation based on regional needs that are coordinated with jurisdictional plans.
- CPP.9:** Yuma County will encourage the reduction of private automobile usage and promote the use of public or multi-modal transportation facilities.
- CPP.10:** Yuma County will advocate development of Recreational Vehicle and Manufactured Home Parks that reflect access to multi-modal or alternative transportation systems.
- CPP.11:** Yuma County will encourage road design, construction or reconstruction to better accommodate pedestrian and bicycle traffic.
- CPP.12:** Yuma County will promote Best Management Practices that reduce PM₁₀ and ozone emissions.
- CPP.13:** Yuma County will advance the use of all modes of travel that contribute to clean air and energy efficiency.
- CPP.14:** Yuma County will encourage traffic conditions at County road intersections with stable flows or better.
- CPP.15:** Yuma County will encourage methods of protecting and enhancing the scenic qualities of land uses within corridor boundaries which must be devised and carried out.
- CPP.16:** Yuma County should consider designating local scenic highway routes, where appropriate, throughout the County following State guidelines.
- CPP.17:** Yuma County will use standards for corridor protection parallel to those established by the State.

6.8 Circulation Actions

- CA.1:** Yuma County will require that the impact of proposed developments on the existing roadway system be evaluated prior to approval.
- CA.2:** Yuma County will recommend transportation projects that minimize conflicts between incompatible land uses.
- CA.3:** Yuma County will investigate alternative funding sources and obtain equitable fair share contributions from the development community.
- CA.4:** Yuma County will provide environmentally sensitive transportation systems and future roadway networks.
- CA.5:** Yuma County will design and construct new county roads to minimize the adverse impact on water quality, sensitive area and resource lands, natural drainage ways and aesthetics.
- CA.6:** Yuma County will adopt guidelines to protect and plan for designated visual corridors.
- CA.7:** Yuma County will reduce PM₁₀ and ozone emissions.
- CA.8:** Yuma County will assist unincorporated communities in improving their transportation systems.
- CA.9:** Yuma County will conduct an in-depth assessment of the rural transportation deficiencies in unincorporated communities.
- CA.10:** Yuma County will develop design standards which provide for visual corridors, multimodal, environmentally sustainable and improved rural transportation systems.
- CA.11:** Yuma County will enforce driveway access point restrictions and provide for traffic flow improvements.
- CA.12:** Yuma County will incorporate road network designs that discourage non-residential or non-local traffic away from residential areas.
- CA.13:** Yuma County will develop criteria to foster the use of shared parking.
- CA.14:** Yuma County will signalize intersections properly.
- CA.15:** Yuma County will preserve and safeguard scenic routes in the County

Section Seven—Environmental Element

County growth and development trends present challenges to environmental conservation. The increased use of natural resources, air and water pollution, loss of agriculturally productive lands and decline of open space are examples of development consequences. The impact of development must be balanced to ensure protection of our environment.

The provisions of this element apply countywide. *Growing Smarter Plus* does not require environmental impact statements beyond those already required. Although the environmental element is optional, it has been adopted by the Board and thereby recognized as important to the health, safety and welfare of the community.

This Environmental Element includes analysis, policies and strategies to address any anticipated effects of the plan's elements and new development called for by the plan on air and water quality and natural resources.

The environmental element is composed of eight sections:

- Legislative Requirement
- Purpose
- Environmental Plan
- CAG Recommendations
- Policies and Priorities
- Environmental Actions
- State and Federal Environmental Laws
- Soils Types

7.1 Legislative Requirement

Arizona Revised Statutes specifies that a Comprehensive Plan must have an Environmental Element to address related concerns. Requirements of ARS §11-804 (C)(3). are as follows:

An environmental planning element that contains analyses, policies and strategies to address anticipated effects, if any, of plan elements on air quality, water quality and natural resources associated with proposed development under the comprehensive plan. The policies and strategies to be developed under this element shall be designed to have countywide applicability and shall not require the production of an additional environmental impact statement or similar analysis beyond the requirements of state and federal law.

7.2 Purpose

The purpose of this Element is to assess and outline strategies to avoid, minimize and mitigate anticipated effects on environmental resources. Specific functions include:

- Ensure compliance with existing State and Federal Environmental Laws, Regulations, and Executive Orders.
- Recognize the ecological and social value of the natural resources within the county and their contribution to tourism, the economy, helping residents maintain a connection to the outdoors, preserving local traditions, and improving the overall quality of life for residents.
- Determine the extent to which development activities are required to comply with the goals, objectives and policies contained within the Plan.
- Promote the sustainable use and conservation of natural resources in the county for continued economic viability.

7.3 Environmental Plan

The Environmental Plan consists of five major categories including:

- Water Quality and Conservation
- Air Quality
- Noise and Light Pollution
- Solid Waste Disposal and Hazardous Materials
- Resources: Natural and Manmade
 - Agriculture
 - Silviculture
 - Cultural
 - Vegetation
 - Wildlife
 - Soils

7.3.a Water Quality and Conservation

The supply of water is a complex issue. Colorado River allocations, irrigation and drainage district water rights and the development of on-site wells are a few of these issues. Some areas of the county have ample water supplies while others experience deficiencies. Recognition of water resource availability and quality is a primary consideration in all land use decisions. Recognition is ensured through legislative mandates and the Major Amendment process to the Plan.

Water resources are discussed in detail in the water resources element of the 2020 Comprehensive Plan.

7.3.b 208 Plan

The Yuma County Water Quality Management Plan (Yuma 208 Plan) establishes strategies and processes to provide regional coordination for development of wastewater treatment facilities and efforts to protect water quality. The Yuma 208 Plan is essentially an agreement between Yuma County, entities operating wastewater utilities within the county, the Arizona Department of Environmental Quality (ADEQ) and the federal Environmental Protection Agency (EPA) about these strategies and processes. It is referred to as the Yuma 208 Plan because it fulfills water quality planning requirements established in Section 208 of the federal Clean Water Act. The purpose of this planning effort is to:

- Assure adequate wastewater facilities in Yuma County.
- Take advantage of economies of scale, treatment efficiencies, new and better treatment technology and conservation practices where possible.
- Identify and address water quality and wastewater issues.
- Improve effectiveness and efficiency of 208 Plan consistency reviews.

The planning effort is designed to encourage and assure the development and maintenance of sufficient, efficient, cost effective, reliable and sustainable wastewater treatment and disposal systems. The 208 Plan includes strategies that encourage the use of resource conservation practices and address water quality problems from sources other than wastewater treatment and disposal.

Several federal and state regulations require that proposed wastewater facilities must be consistent with the Yuma 208 Plan. Wastewater facilities must be in compliance with these regulations; therefore, approval of new or expanding wastewater facilities is contingent on ADEQ determining the proposal is consistent with the 208 Plan.

According to state and federal regulations, the following actions can only be approved if ADEQ determines that the proposal would be consistent with the Yuma 208 Plan (consistency review):

- Build or expand a wastewater facility that discharges to surface water.
- Provide a grant or loan through the Water Infrastructure Finance Authority (WIFA).
- Build or expand a wastewater treatment facility or disposal system with combined flows over 24,000 gallons per day (gpd) or some facilities with flows between 3,000–24,000 gpd.

Regulations do not require 208 consistency reviews for on-site wastewater systems (e.g., septic systems) under 3,000 gpd on-site systems if combined flows would be under 24,000 gpd, collections systems and reclaimed water systems.

Ordinances Need to Fully Implement the Yuma County Water Quality Management Plan

Although federal and state regulations mandate that permits must be consistent with the Yuma County Water Quality Management Plan (208 Plan) and that the plan must address several types of water quality concerns, existing regulations do not provide adequate authority to implement some aspects of this plan. Thus additional ordinances adopted by Yuma County are needed to fully implement the 208 Plan. The Yuma County 208 Plan identifies the following areas as needing the adoption of an ordinance.

Designated Management Agencies and Wastewater Management Utilities

Ordinances are needed to require a municipality to be approved as a designated management agency or for a privately-owned wastewater utility to be designated as a wastewater management utility (WMU) and require that they take on the responsibilities of a designated management agency or WMU outlined in this plan. Ordinances should indicate that these requirements must be met before approval of new or expanding wastewater facilities. Additional policies and procedures should be considered for coordinating approval of a WMU.

Rescinding Capacity Assurance

Currently, once wastewater treatment capacity assurance is given there is no way for such an assurance to be revoked. This has created problems when developments that have received capacity assurance fail to develop. Tying up allocated treatment capacity can force a treatment plant to operate below its capacity. Local legal authority and processes are needed for a municipality in Yuma County to rescind capacity assurance once given to a developer. State regulations require capacity assurance to be given; without clarification, the assurance is assumed by ADEQ to be an everlasting contract with the developer. There needs to be a mechanism to revoke such an assurance once it is evident that is not going to be used.

Wastewater Treatment Options Table

Additional local ordinances are needed requiring that on-site wastewater treatment facilities (e.g., septic systems and alternative systems with combined flows less than 24,000 gallons per day covered under APP General Permits and wastewater treatment collection systems) are consistent with the 208 Plan and the Wastewater Options Table that is contained within the 208 Plan.

Wastewater Master Plans

An ordinance is needed requiring development and adoption of wastewater master plans before approval of the new or expanding wastewater facilities when the wastewater entity would be functioning as a designated management agency or wastewater management utility. Wastewater master plans include details such as constructed capacity, operational flow, capacity assurance promised to developers, capacity assurance remaining, service area and planning area boundaries, sewer lines and collection systems.

Proposal Submission Requests

An ordinance is needed requiring wastewater treatment facility proposals to include additional information (e.g., such as the cost-effectiveness, resource conservation strategies, treatment efficiencies or economies of scale).

Impacts to Impaired Waters

An ordinance is needed requiring Yuma County to consider (during the permit review process) potential pollutant contributions to surface waters with total maximum daily loads (TMDL) or assessed by ADEQ as an “impaired” or “not attaining” standards, and contributions to an aquifer with wells that exceed Aquifer Water Quality Standards (e.g., nitrate standards or E. coli bacteria standards)

7.3.c Air Quality

Air pollution can cause human respiratory problems and a decrease in agricultural crop productivity. Increased levels of air pollution throughout the county result in health problems such as asthma, tuberculosis and valley fever. The principal sources of air pollutants are industrial releases, agricultural operations, crop burning, aircraft, ground transportation vehicles and proximity to the collective air basin adjacent to Mexico according to the Yuma Metropolitan Planning Organization (YMPO) regional transportation plan.

Point source air pollution is regulated by the United States Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ). A portion of Yuma County is currently designated as a non-attainment area, although a request for redesignation to attainment status was submitted to EPA on August 16, 2006 and is pending approval (Refer to Map 1).

A non-attainment area is a geographic area in which the level of air pollutant is higher than the level allowed by federal standards. A single geographic area may have acceptable levels of one criteria air pollutant but unacceptable levels of one or more other criteria air pollutants; thus, an area can be both attainment and non-attainment at the same time. If an area is in non-attainment, a plan would need to be developed to ensure compliance with the Clean Air Act.

The *Yuma PM-10 Non-attainment Area State Implementation Plan* (SIP) was utilized to reduce the amount of air pollution generated within the Yuma Metropolitan Air Pollution District (YMAPD) non-attainment area. A violation occurred in Yuma on August 18, 2002 caused by large thunderstorms that developed in Mexico with high winds that elevated concentrations of *PM-10* in Yuma County. This was the first violation in more than 10 years. The Yuma community and ADEQ developed a Natural Event Action Plan (NEAP) to prevent this and future natural events from causing the area to remain designated non-attainment.

Programs to require paved roads and parking lots in association with new development will address significant air quality concerns associated with particulate matter. Land use planning that encourages mixed use and planned development may result in fewer automobile trips which will reduce vehicle emissions. Circulation Element policies to encourage walking, bicycling and transit use also can result in lower automobile emissions.

7.3.d Noise Pollution

Noise is a source of pollution that can be a public health hazard. Its effects on humans and wildlife can include various physical and psychological impacts. Public complaints concerning noise levels have paralleled county growth. Residential areas, schools, libraries, hospitals, assisted living facilities and recreational areas are all noise sensitive. Implementation of noise control by isolation or suppression and shielding should be considered in planning for new developments.

7.3.e Light Pollution

Light pollution can be eliminated by conserving energy, reducing glare and light trespass. Light pollution obscures the stars in the night sky, disrupts ecosystems and has an adverse health effects. The method for best reducing light pollution depends on exactly what the problem is in any given instance. Possible solutions include:

- Improve light fixtures, so that they direct their light more accurately towards where it is needed
- Utilizing light sources of minimum intensity necessary to accomplish the light's purpose
- Turning lights off using a timer or occupancy sensor or manually when not needed

7.3.f Solid Waste Disposal

Solid waste is disposed at the Copper Mountain and South Yuma County Landfills. The county operates four solid waste transfer stations located in North Gila Valley, Wellton, Tacna and Dateland (Refer to Map 2). These sites only accept residential solid waste. Commercial and industrial solid waste disposal occurs through private providers. Local governments provide solid waste pickup within incorporated limits. There are several recycling businesses in operation, but currently there are no local government programs in place promoting the activity.

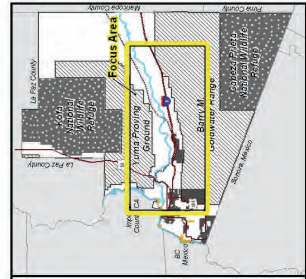
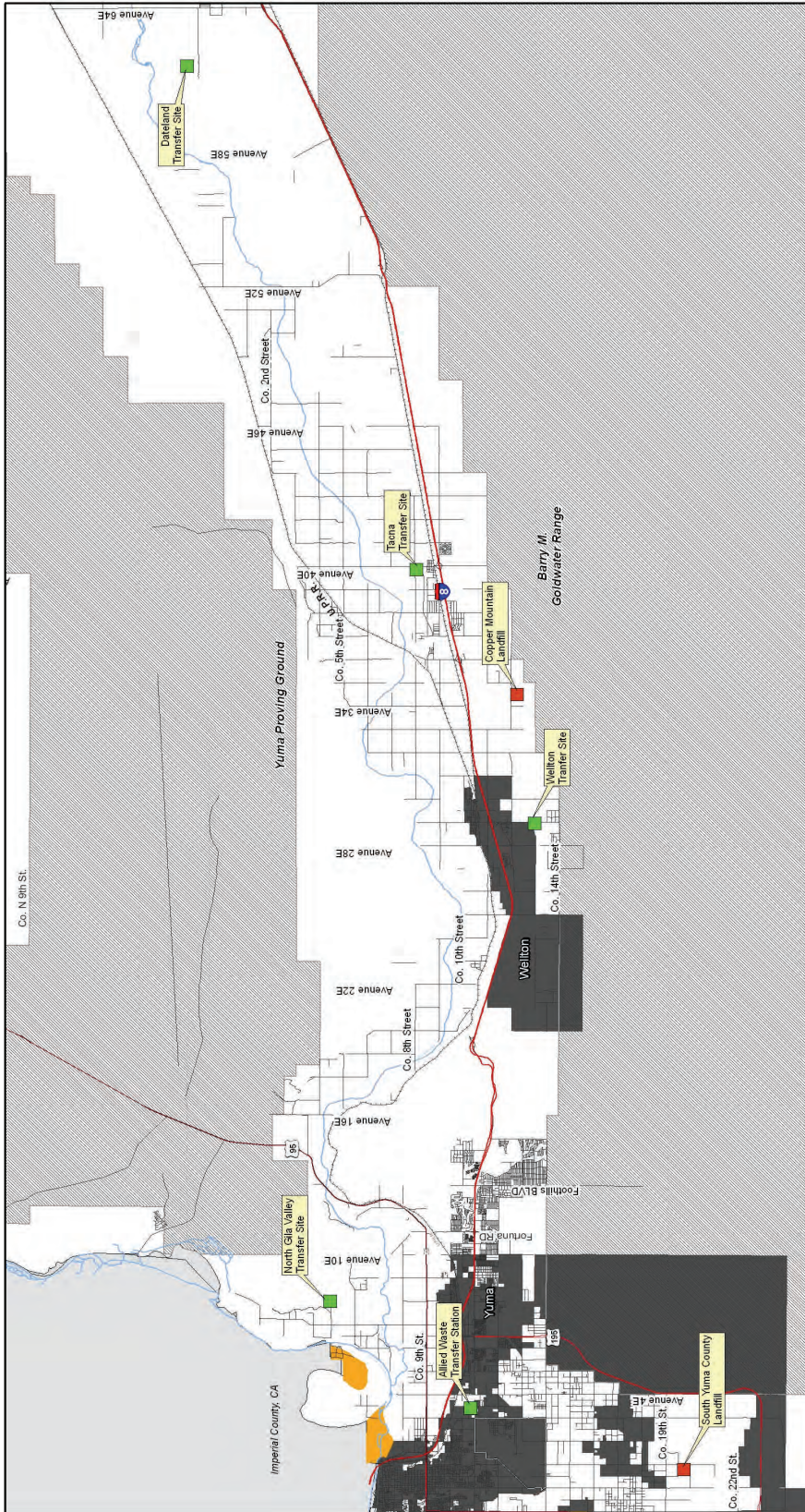
County Waste Management Issues:

- Need for additional waste transfer stations in the rural areas
- Desert Dumping Dilemma - illegal disposal of solid waste and sewage on public and private lands
- Transfer sites do not accept hazardous substances or refrigerants
- No facilities are available to accept medical wastes
- Financial operation costs for transfer sites, site safety and staffing
- Fiscal management and capacity of transfer stations
- Need for community clean up days
- Assure that landfills meet federal, state and local environmental laws
- Need for recycling programs

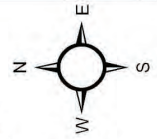
7.3.g Hazardous Materials

The existence of hazardous materials in facilities and in transport throughout Yuma County creates the potential for a catastrophic toxic release hazard to the population. The potential of a hazardous materials transportation incident that may require protection and/or evacuation of citizens at any location within Yuma County exists. Hazardous materials may enter and contaminate water supplies, irrigation and sewage systems necessitating the shutdown of such facilities until decontamination procedures can be implemented. Yuma County is in a high earthquake risk area. Any locally occurring earthquake of sufficient magnitude to cause structural damage could affect all fixed-site hazardous materials facilities resulting in multiple releases and catastrophic response problems.

Environmental Element - Landfills and Transfer Sites



For information only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division



Date: July, 2011



- Landfill
- Transfer Site
- Military Boundary
- Incorporated Areas
- Reservations



Map 2

Hazardous materials move in and through Yuma County by truck, rail and air. There are no areas restricted from hazardous cargo transportation for this reason any of the roadways criss-crossing the County may be considered a potential HAZMAT route.

The Local Emergency Planning Committee (LEPC) is responsible for the development and maintenance of the Hazardous Material Emergency Response and Recovery Plan in Yuma County. This plan provides guidance to local municipalities and the unincorporated areas in response to an incident/accident involving hazardous materials in general.

7.3.h Resources: Natural and Manmade

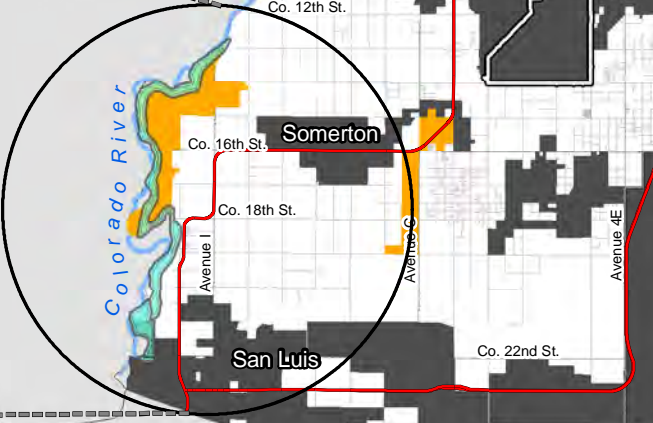
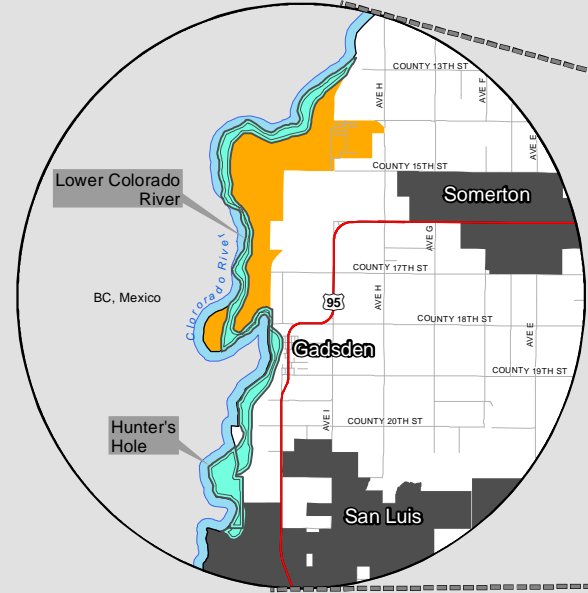
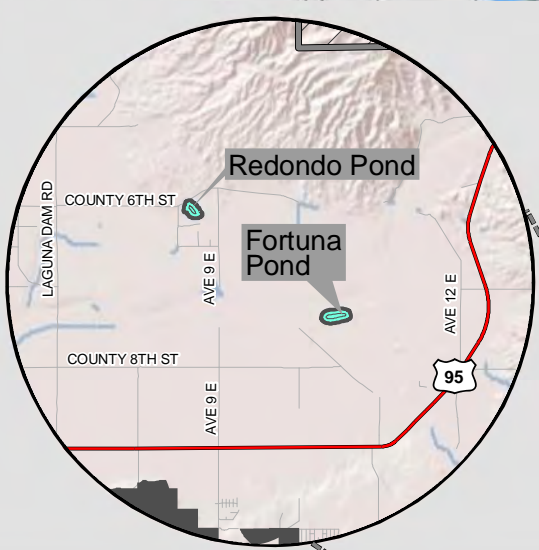
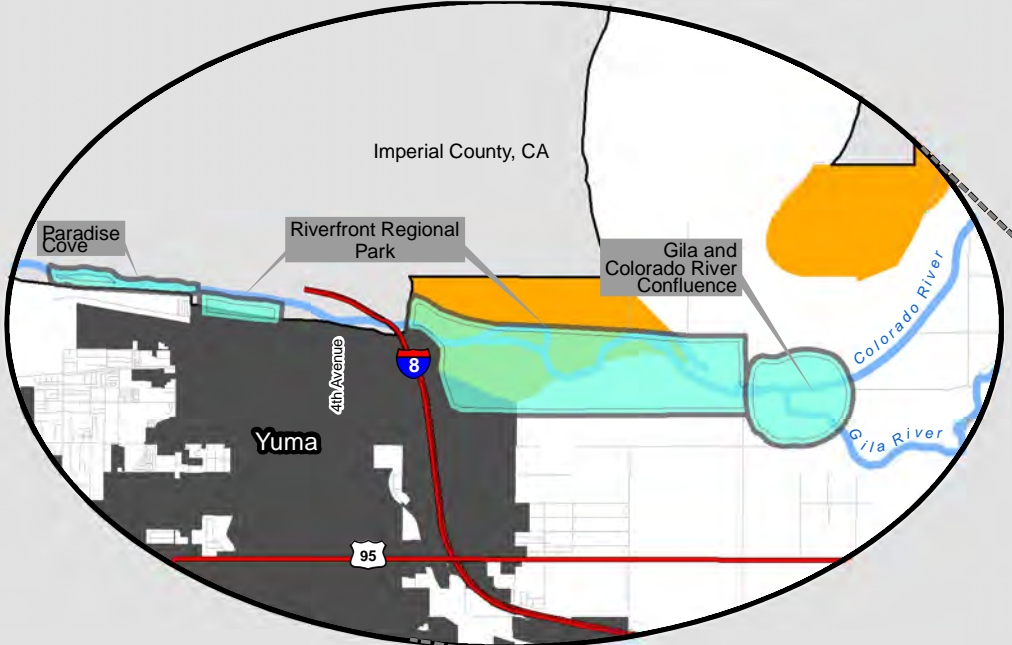
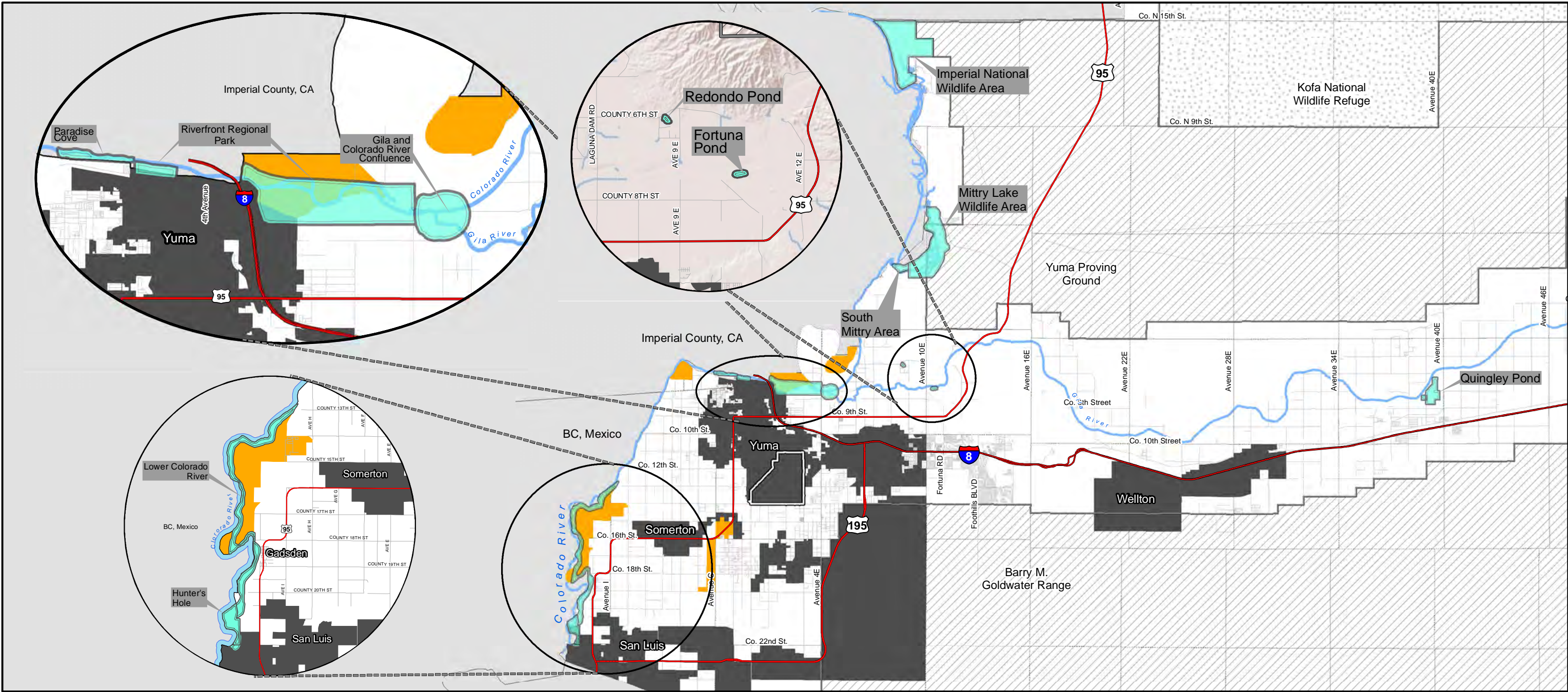
Natural resources such as land, water, soil, plants and animals affect the quality of life for both present and future generations.

Agricultural Resources - Each year agricultural land is converted into other uses. The continuing trend has significant environmental impacts on residents and wildlife. Core issues and protective measures are listed below:

1. Residue from agricultural chemicals may infiltrate into the aquifer supply and/or well water used by homeowners.
2. Development located adjacent to farms may be subject to fertilizers and pesticides that can cause respiratory ailments. A.R.S. §3-365 regulates application of pesticides close to developed or occupied areas. This law is enforced by Yuma County Public Health Services District.
3. Confined animal operations pose threats to water tables and air quality. The Arizona Department of Agriculture, ADEQ and EPA issue permits and monitor related issues for confined animal feeding operations.
4. Sheep and cattle grazing may conflict with wildlife, traffic, deplete vegetative cover, cause soil loss and result in watershed contamination. There are eight countywide State Land Department cattle grazing leases representing 35,007 permitted acres.
5. Loss of scenic or visual values from the reduction of farmlands is an issue.
6. Urbanization of land is reducing plant and wildlife habitat.

Silviculture Areas - Silviculture areas refer to lands dedicated to the growing and cultivation of trees, primarily areas adjacent to the Colorado and Gila River Corridors. These lands are riparian habitats and silviculture containing unique wildlife species. The riparian areas have been depleted through changes of the timing, magnitude and extent of natural water delivery, deforestation, invasive species, development, mining, and harvesting. The result is erosion, high sedimentation build-up and a decrease in water quality. There is a concerted effort by local governments, tribes, state and federal agencies to restore native habitats and wildlife populations along the river corridors to the Mexico border (Map 3) . Specific plans dealing with restoration are listed in Table 1.

Urbanization of the Sonora Desert and Colorado and Gila Rivers has affected the habitats and viability of many local species. Implementation of mitigation measures in response to urban development should take into account the effect on the natural environment.



- Habitat Restoration Areas
- Incorporated Areas
- U.S. Marine Corps
- Military Boundary
- National Wildlife Refuge
- Indian Reservation

For Information Only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division

Date: June, 2011

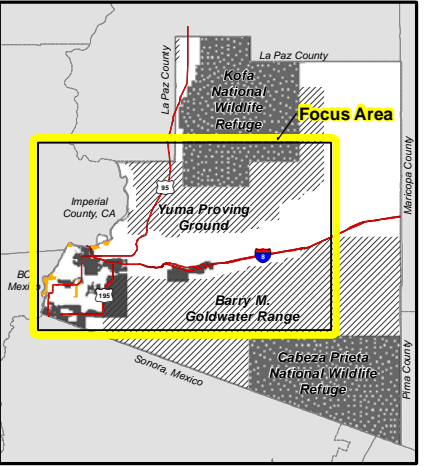
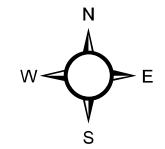


Table 1 Habitat Restoration Project Areas in Yuma County

Project Area	Acreage/Miles	Responsible Agency
Imperial National Wildlife Area	5,599 acres	U.S. Fish and Wildlife Service
Lower Colorado River (<i>Multi-Species Conservation Program</i>)	62 miles	Bureau of Reclamation (BOR) (Multi-Species Management Team)
Quigley Pond	240 acres	Arizona Game and Fish Department
Riverfront Regional Park (<i>East Wetlands, Riverfront Development and West Wetlands</i>)	7 miles (1,532 acres)	City of Yuma
Hunter's Hole	99.97 acres	Arizona Game and Fish Department
Cocopah West Reservation Plan (<i>Lower Colorado River</i>)	12 miles	Cocopah Indian Nation
Paradise Cove	68 miles	Bureau of Land Management (BLM)
Gila and Colorado River Confluence	29 acres	BLM
Fortuna Pond	25 acres	BOR, BLM, AGFD
Redondo Pond	5 acres	BLM, AGFD
Mittry Lake Wildlife Area	475 acres	BLM, AGFD, BOR
South Mittry Area	75 acres	BLM, AGFD, BOR

Cultural Resources - There are numerous culturally sensitive sites threatened by new development, vandalism, neglect and overuse. The five major contributing sources of ground disturbance in the county that damage cultural resources are urbanization, agriculture, deforestation, mining, road construction and reclamation projects. There is concerted interagency effort to preserve sites outside of the city of Yuma. Preservation efforts in the past have been through individuals, non-profit corporations, local government and individual state and federal agencies.

Yuma County has a rich history as an area of transportation crossroads, mining, agriculture and military development. These activities have left archeological and historical sites throughout the county. There are 60 historic properties listed on the National Park Service's National Register of Historic Properties. For example, El Camino del Diablo Trail was established as a National Byway and the Juan Bautista de Anza Trail and the Mormon Battalion Trail have been established as National Historic Trails and maintained by the National Park Service. These cultural and trail resources are also protected by the Arizona State Historic Preservation Office through their Stewardship Program.

The Yuma Chapter of the Arizona Historical Society also maintains a list of historically significant sites. These sites are related to engineering, agricultural and World War II desert training activities. They are also possible candidates for the National Register of Historic Properties. Management of legally protected cultural and historical resources has been largely a function of land ownership. The Bureau of Land Management (BLM), Bureau of Reclamation (BOR), Imperial National Wildlife Refuge, Kofa National Wildlife Refuge and Cabeza Prieta National Wildlife Refuge all maintain lists of archeologically and historically significant sites on the federal lands they control. These lists are confidential for protection of the integrity of the sites. The U.S. Army Yuma Proving Ground and the Barry M. Goldwater Range have conducted surveys of cultural resources on their properties and developed Historic and Archeological Resources Protection Plans. The degree of protection of cultural sites within the county are listed below:

- **Highest Protection:** Cultural resources on federally owned lands: BLM, BOR, U.S. Army; U.S. Marine Corps, and U.S. Fish and Wildlife Service have the highest protection of any lands. Arizona State Parks: Yuma Territorial Prison and Yuma Crossing.
- **Lower Protection:** Cultural resources on State Lands are less protected. The mission of the State Land Department is to dispose of lands for the "highest and best use" to gain revenue for the State Trust beneficiaries.
- **Little or No Protection:** Cultural resources on private lands are not protected by law except those that are currently on or candidates for the National Register of Historic Places.
- **Protection levels by local jurisdiction:** The County has never instituted cultural resource requirements in the Yuma County Comprehensive Plan or Zoning Ordinance. The City of Yuma is the only local government with a Historic Preservation Ordinance. The Ordinance covers the preservation of historical buildings within the corporate limits of the city. The cities of Somerton and San Luis have no preservation laws. Further, they do not consider cultural resources preservation in their development review process.

The County needs to be an advocate and work cooperatively in identifying, developing, and protecting the culturally significant sites in the County. The county could take a pro-active role in assisting individuals, non-profit historic preservation organizations and government agencies concerning the preservation efforts of Yuma County's historical treasures.

- **Natural Conditions and Mitigation Measures:** Natural conditions are constantly being influenced, changed or controlled by human intervention. In planning for development, impacts to and from natural causes should be considered. This section looks at the natural conditions that may affect new development.
- **Environmental Land Use Designations:** The County's diverse land ownership and environment has resulted in large tracts of lands with significant natural resource conservation value. Designated open space, wilderness, wildlife refuge, State land and special management areas all have limitations on use and public access. Map 4 illustrates areas designated wilderness, habitat management and ownership patterns of these areas.

Lands classified in the County as Open Space and Recreational Resources and Sensitive Areas and Resource Lands are listed in more detail in other elements of the Plan.

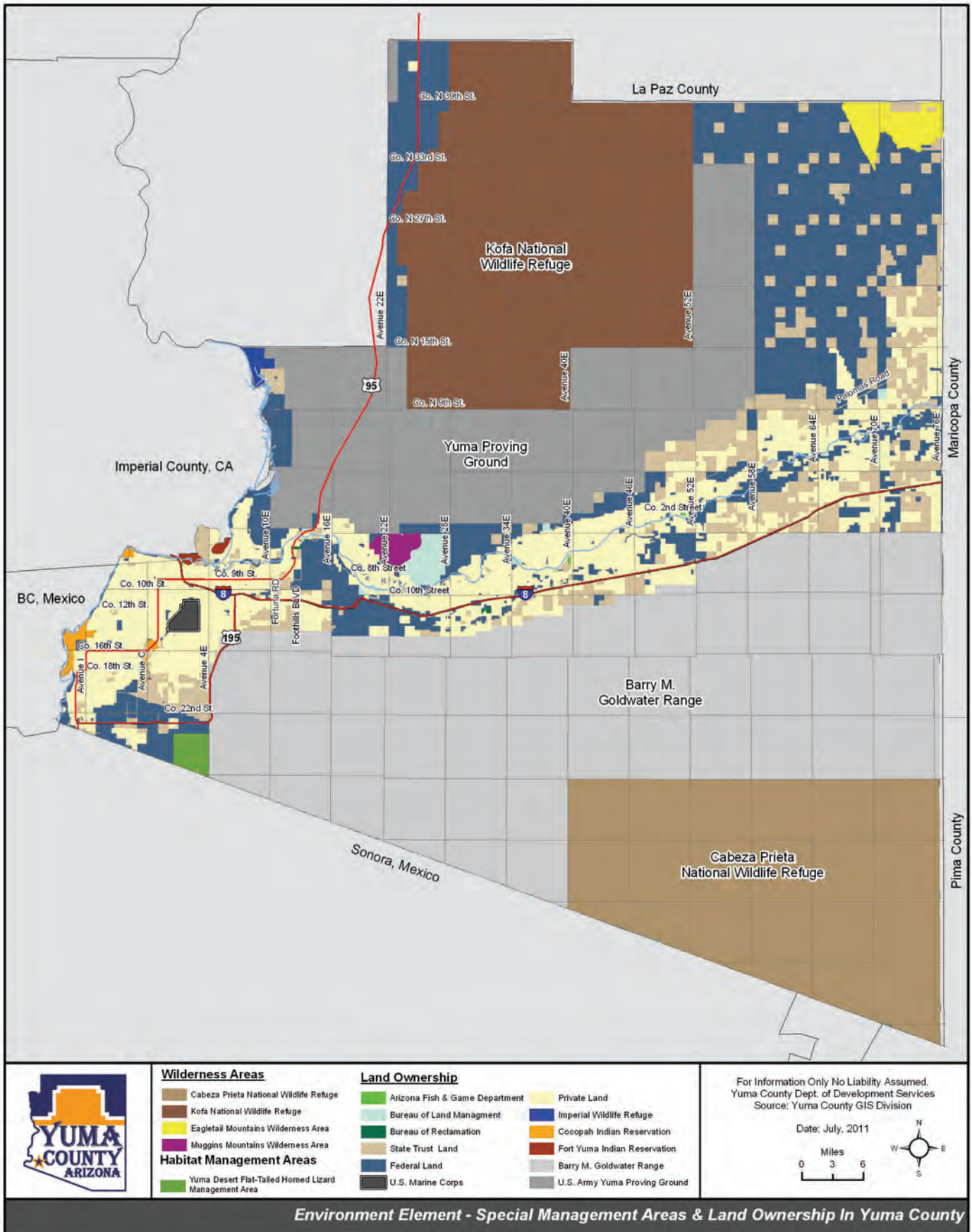
- **Geological Resources and Hazards:** Many geological features characterize the county. These include rugged mountains, sediment-filled basins, dissected and undissected alluvial slopes, river terraces, mesas, sand dunes and river valleys. Furthermore, are located within the region major fault lines including the San Andreas, Imperial, Cerro Prieto and Algodones faults.

The seismic hazard in the Yuma region is considered the greatest in Arizona. There is the potential for severe earthquake damage because the valleys are made of alluvial soils, have high water tables and are subsequently prone to liquefaction during seismic events. Significant damage to residential, commercial and industrial facilities could occur as a result of earthquakes measuring a magnitude of 5.0 or greater. Mitigation measures include adopting building standards from the 2003 Uniform Building Code and Earthquake Hazard Evaluation criteria.

Biological Resources:

Vegetation - Since the county is within the Sonoran Desert physiographic province, the county is home to a variety of unique Colorado River and Arizona Uplands plant communities. Continued development is diminishing the native Sonoran desert plants and wetland species and increasing the number of invasive weed species. Vegetation on the Endangered Species Act list contains only "Species of Concern" that include Dune Spurge, Gander's Cryptantha, Dune Sunflower and Sand Food. There are no plants listed as threatened and endangered (Table 2).

Arizona Native Plant Law (A.R.S. §3-901 *et. seq.*) protects and regulates the collection and salvaging of native plants and parts of plants including seeds and fruit located on state and federal lands. Private property owners are not affected by the law unless the plants are to be transported or sold. The demand for desert landscaping in new developments has resulted in the illegal harvesting of cacti causing loss of soils and habitat.



Map 4: Special Management Areas & Land Ownership in Yuma County

Noxious weeds have direct and indirect economic consequences. Weeds can affect agriculture, urban environment, fish and wildlife habitat, recreational values and can cause human health concerns. A noxious weed list prohibits transport of weed species without state or federal permits (A.R.S. §3-232, 7 United State Code 2803 and 2809). Currently, an invasive aquatic fern, Giant Salvinia, has invaded the Lower Colorado River. Efforts by a consortium of state and federal agencies to eradicate the plant are being made before severe economic and ecological problems occur.

Wildlife - The County is home to a diverse wildlife ranging from big game to reptiles and amphibians. The Endangered Species Act (ESA) lists candidate threatened and endangered species that are found in the county. Included on the list are the Pronghorn Sonoran Antelope, the Yuma Clapper Rail, the Southwestern Willow Flycatcher, the Razor Back Sucker and the Desert Tortoise. The Arizona Game and Fish Department Special Status Species list also documents species that are of "concern" but do not have official status as an Endangered Species (Table 2).

Wildlife and habitat management in the county is a cooperative effort. Arizona Revised Statutes Title 17 directs the responsibility for maintaining and managing the State's wildlife resources to the Arizona Game and Fish Commission and Department. Local organizations, farmers, irrigation districts, the Bureaus of Land Management and Reclamation, the Cocopah Indian Tribe, Marine Corps Air Station-Yuma, U.S. Army Yuma Proving Ground, city of Yuma and the U.S. Fish and Wildlife Service all contribute measures and resources to develop and implement associated management plans for natural resources conservation.

The Arizona Game and Fish Department has identified important habitat areas for the Flat-tailed Horned Lizard, Big Horn Sheep, Sonoran Pronghorn Antelope and Sonoran Desert Tortoise within the Barry M. Goldwater Range, U.S. Army Yuma Proving Ground and on other public and state-owned lands. Yuma County will coordinate when possible with the Arizona Game and Fish Department wildlife connectivity and movement.

Similar to the diminishing vegetative habitat, continued development also stresses wildlife habitat and displaces species. As a result, wildlife species are occurring more commonly in residential areas and subdivisions.

Soils - The U.S. Department of Natural Resource Conservation Service conducted soil surveys from 1972-1977 that identified 34 soil types in the County (see soils types Section 7.8). Soil types are an important factor in determining land use limitations and site suitability. Identifying soil conditions before development is important. Problems associated with unsuitable soil include infrastructure, foundations displacement and decomposition conditions.

Arizona Game and Fish Department
Special Status Species List for Yuma County

TAXON	SCIENTIFIC NAME	COMMON NAME
AMPHIBIAN	<i>Rana yavapaiensis</i>	Lowland Leopard Frog
BIRD	<i>Ardea alba</i>	Great Egret
BIRD	<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl
BIRD	<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western U.S. DPS)
BIRD	<i>Egretta thula</i>	Snowy Egret
BIRD	<i>Empidonax traillii extimus</i>	Southwestern Willow Flycatcher
BIRD	<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl
BIRD	<i>Haliaeetus leucocephalus</i>	Bald Eagle - Winter Population
BIRD	<i>Ixobrychus exilis</i>	Least Bittern
BIRD	<i>Lanius ludovicianus</i>	Loggerhead Shrike
BIRD	<i>Laterallus jamaicensis coturniculus</i>	California Black Rail
BIRD	<i>Rallus longirostris yumanensis</i>	Yuma Clapper Rail
FISH	<i>Xyrauchen texanus</i>	Razorback Sucker
MAMMAL	<i>Antilocapra americana sonoriensis</i>	Sonoran Pronghorn
MAMMAL	<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat
MAMMAL	<i>Euderma maculatum</i>	Spotted Bat
MAMMAL	<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat
MAMMAL	<i>Lasiurus xanthinus</i>	Western Yellow Bat
MAMMAL	<i>Leptonycteris curasoae yerbabuenae</i>	Lesser Long-nosed Bat
MAMMAL	<i>Macrotus californicus</i>	California Leaf-nosed Bat
MAMMAL	<i>Myotis yumanensis</i>	Yuma Myotis
MAMMAL	<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat
MAMMAL	<i>Sigmodon hispidus eremicus</i>	Yuma Hispid Cotton Rat
PLANT	<i>Allium parishii</i>	Parish Onion
PLANT	<i>Berberis harrisoniana</i>	Kofa Mt Barberry
PLANT	<i>Cryptantha ganderi</i>	Gander's Cryptantha
PLANT	<i>Echinocactus polycephalus</i> var. <i>polycephalus</i>	Clustered Barrel Cactus
PLANT	<i>Euphorbia platysperma</i>	Dune Spurge
PLANT	<i>Ferocactus cylindraceus</i>	Desert Barrel Cactus
PLANT	<i>Helianthus niveus</i> ssp. <i>tephrodes</i>	Dune Sunflower
PLANT	<i>Lophocereus schottii</i>	Senita
PLANT	<i>Opuntia echinocarpa</i>	Straw-top Cholla
PLANT	<i>Pholisma sonorae</i>	Sand Food
PLANT	<i>Rhus kearneyi</i>	Kearney Sumac

Table 2

Environmental Element

TAXON	SCIENTIFIC NAME	COMMON NAME
PLANT	Stephanomeria schottii	Schott Wire Lettuce
PLANT	Triteleiosis palmeri	Blue Sand Lily
PLANT	Washingtonia filifera	California Fan Palm
REPTILE	Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise
REPTILE	Heloderma suspectum cinctum	Banded Gila Monster
REPTILE	Lichanura trivirgata gracia	Desert Rosy Boa
REPTILE	Phrynosoma mcallii	Flat-tailed Horned Lizard
REPTILE	Sauromalus ater (Arizona Population)	Arizona Chuckwalla
REPTILE	Uma rufopunctata	Yuman Desert Fringe-toed Liz-

Table 2

7.4 CAG Recommendations

Citizen Advisory Groups (CAGs) were asked to identify the most important environmental issues of concern in the county.

The CAG participants developed the following recommendations for minimizing or mitigating the adverse impacts caused by the aforementioned environmental issues.

Hydrology (Water Quality)

- Collaborate with local, state and federal agencies on ecological concerns to protect watersheds.
- Coordinate with local water companies to ensure good residential water quality.

Hydrology (Water Quantity)

- Protect and monitor the water allocations for future growth in the county.
- Institute water conservation practices.

Agriculture (Loss of Prime and Unique Farmland)

- Plan to protect farmland from urban encroachment.
- Provide incentive programs for farmers to retain farmlands.

Air Quality

- Plan for monitoring and control of air pollution emissions.
- Enforce monitoring, maintenance and enforcement of EPA and ADEQ-Quality Division Best Management Practices countywide to reduce PM-10 emissions.

Hazardous Wastes and Disposal

- Provide for waste transfer sites for residents throughout the county.
- Plan and provide for affordable dumping of hazardous materials.
- Plan, develop programs and educate the public on recycling.
- Create community clean up days for specific areas.
- Create Programs to prevent illegal dumping

Supplemental Materials - For a more in-depth analysis and understanding of the Planning Areas, refer to the *Background Studies and CAG Reports* for each Planning Area. These documents were developed and published by the Planning Section of the Yuma County Department of Development Services. The documents are available on the Yuma County website.

7.5 Environmental Policies and Priorities

- EPP.1:** Encourage land uses and development designs that are compatible with environmentally sensitive areas such as parks, open space, floodplains, hillsides, habitat for sensitive plant and wildlife species, scenic areas, washes and unstable geologic and soil conditions.
- EPP.2:** Encourage low density land uses around federal and state owned lands.
- EPP.3:** Encourage the protection and preservation of existing habitat areas for threatened or endangered plant and wildlife species.
- EPP.4:** Encourage consideration of the natural environment during the review of new development projects including options for the preservation of the native vegetation, wildlife and washes.
- EPP.5:** Implement a solid waste program that advocates solid waste reduction, reuse and recycling.
- EPP.6:** Encourage nighttime lighting be kept to a minimum to maintain the dark sky.
- EPP.7:** Encourage the preservation of the scenic quality and vistas of all mountain ranges in the county.
- EPP.8:** Encourage development to retain washes in their natural state.
- EPP.9:** Encourage the enforcement of measures necessary to maintain and improve the existing national ambient air quality standards and the reduction of dust pollution.
- EPP.10:** Protect air quality during plan reviews for new industrial, commercial and residential projects in compliance with county, state and federal air quality plans and standards.
- EPP.11:** Encourage the paving of unpaved roads where dust pollution affects residents and the environment and is in violation of the state and federal air quality standards.
- EPP.12:** Discourage development and roads in severe erosion and landslide hazard areas.
- EPP.13:** Encourage the protection of cultural sites which meet national, state or local criteria for historic designation from destruction or harmful alteration.
- EPP.14:** Encourage the preservation of significant cultural and archaeological resources within all developments.
- EPP.15:** Encourage the coordination of noise and nuisance control programs and standards with local, state and federal agencies.
- EPP.16:** Consider noise impacts from roadways, rail corridors and industry for new residential development.
- EPP.17:** Involve the Airport Authority to minimize potential conflicts between residential development and airport operations.

7.6 Environmental Actions

- EA.1:** Work with existing recycling companies to determine the feasibility of a pilot recycling program.
- EA.2:** Work with the State Historic Preservation Office, Arizona Site Steward Program and Arizona Archeological Society to inventory and develop a program to manage cultural resources.
- EA.3:** Develop and/or maintain environmental overlay map(s) and information materials that identify natural floodplains, geological and soil risk areas.
- EA.4:** Develop a natural resource impact checklist to assess potential negative and positive impacts from development and recommend mitigation measures.
- EA.5:** Serve as a resource and liaison in supporting regional water resource and watershed planning.
- EA.6:** Create maps of major infrastructure for emergency response teams.
- EA.7:** Update the Yuma County Zoning Ordinance to regulate and promote sensible lighting that reduces light pollution in Yuma County.
- EA.8:** Modify illegal dumping laws to reduce violations and to increase penalties.
- EA.9:** Work with the Arizona Game and Fish Department to help identify, refine and implement wildlife linkages and other wildlife-friendly development measures, where feasible.

7.7 State and Federal Environmental Laws

Arizona State Laws:

Water Resources

- Chapter 7 Article 2 Determining Navigability A.R.S. §37-1121-1128,1129.16
- Chapter 1 Article 4 Public Nature and Use of Surface Water A.R.S. §45-141
- Chapter 1 Article 5 Appropriation of Water A.R.S. §45-151-166
- Chapter 1 Article 6 Rights to Water A.R.S. §45-171-175
- Chapter 1 Article 7 Water Rights Registration A.R.S. §45-181-190
- Chapter 1 Article 8 Reservoirs and Canals A.R.S. §45-201-206
- Chapter 1 Article 9 General Adjudication of Water Rights A.R.S. §45-251-264
- Chapter 2 Article 4 Groundwater Rights and Uses in General A.R.S. §45-453-455
- Chapter 2 Article 7 Groundwater Withdrawal Permits A.R.S. §45-511-528
- Chapter 7 Article 2 Colorado River Compact A.R.S. §45-1321
- Chapter 8 Article 1 Flood Control Cooperation by Counties, Cities, and Towns with Federal Government A.R.S. §45-1401-1403
- Chapter 8 Article 2 Special Laws Pertaining to Particular Municipalities A.R.S. §45-1422
- Chapter 8 Article 4 Alternative Assistance A.R.S. §45-1471-1473
- Chapter 10 Article 1 State Water and Power Plan A.R.S. §45-1701-1722
- Chapter 2 Articles 1-12 Water Quality Control A.R.S. §49-201-391

Agricultural Resources

- Chapter 1 Article 2 Agriculture Protection Act A.R.S. §3-111-113
- Chapter 2 Article 3 Fertilizer Materials A.R.S. §3-260-384
- Chapter 2 Article 5 Pesticides A.R.S. §3-340-356
- Chapter 2 Article 6 Pesticide Control A.R.S. §3-360-383
- Chapter 4 Article 7 Dairies and Dairying A.R.S. §3-600-634
- Chapter 11 Article 9 Beef Cattle Feed Lots A.R.S. §3-1451-1457
- Chapter 14 Article 1 Predatory Animals and Rodents A.R.S. §3-2400-2406
- Chapter 16 Article 1 Aquaculture A.R.S. §3-2900-2913

Air Quality

- Chapter 3 Article 3 County Air Pollution Control A.R.S. §49-471-593

Solid Waste Disposal

- Chapter 4 Articles 2-9 Solid Waste Management A.R.S. §49-701-881
- Chapter 6 Articles 1 & 2 Public Health Control A.R.S. §36-600-631

Hazardous Waste

- Chapter 5 Articles 1-4 Hazardous Waste Disposal A.R.S. §49-901-973

Noise Environment

- Chapter 25 Article 7 Planning and Zoning; Military Airport Operation Compatibility A.R.S. §28-8481
- Chapter 25 Article 7 Incorporation of Sound Attenuation Standards in Building codes A.R.S. §28-8482
- Chapter 25 Article 7 Airport Influence Areas; Notice A.R.S. §28-8485

Silvicultural Areas

- Chapter 2.1 Article 1 State Forester A.R.S. §37-621-623.02

Biological Resources

- Chapter 2-Article 1 Dangerous Plants, Pests and Diseases A.R.S. §3-200-218
- Chapter 4 Article 1 Restoration Projects A.R.S. §17-401-407
- Chapter 7-Article 1 Arizona Native Plant Law A.R.S. §3-900-934
- Chapter 1 Article 1 Definitions and Authority of State A.R.S. §17-101-105
- Chapter 1 Article 3 Powers and Duties A.R.S. §17-231-247
- Chapter 4 Article 1 Restoration Projects A.R.S. §17-401-407
- Chapter 4 Article 2 Fish Hatching and Fish Culture A.R.S. §17-421
- Chapter 4 Article 3 Wildlife Habitat Protection A.R.S. §17-451-458

Soils

- Chapter 6 Article 2 Division of Natural Resource Conservation A.R.S. §37-1011-1015
- Chapter 6 Article 4 Administration limitation of Powers A.R.S. §37-1055
- Chapter 6 Article 4 Cooperation by State Agencies A.R.S. §37-1057

Geological Hazards

- Chapter 1 Article 2 Mines and Mineral Resources A.R.S. § 27-129, 131 & 318
- Chapter 2 Articles 1-3 Emergency Management Planning and Community Right to Know Act A.R.S. § 26-300-352

Cultural Resources

- Chapter 3 Article 1 Arizona State Parks Board Heritage Fund A.R.S. §41-501-504
- Chapter 3 Article 1.1 Arizona State Parks Board A.R.S. §41-511-511.24
- Chapter 3 Article 1.2 Arizona Outdoor Recreation Coordinating Commission A.R.S. §41-511.25
- Chapter 3 Article 1.3 Establishment of Parkways and Historical and Scenic Roadways A.R.S. §41-511.26
- Chapter 4.1 Article 1 Arizona Historical Society A.R.S. §41-821-826
- Chapter 4.1 Article 4 Archeological Discoveries A.R.S. §41-841-847
- Chapter 4.2 Article 1 Historic Preservation General Provisions A.R.S. §41-861-866
- Chapter 4.3 Article 1 Neighborhood Preservation General Provisions A.R.S. §41-885-892

Environmental Land Use Designations

- Chapter 2 Articles 1-7 Administration of State and other Public Lands A.R.S. §37-100-1156

Federal Laws:

Water Resources

Clean Water Act (CWA), 33 U.S. Code §1251 et seq. (1977): The law provides for cooperation of the federal government with other federal, state and local entities to prepare comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries and improving the sanitary condition of surface and subsurface waters. The plans include the necessary improvements necessary to conserve waters for public water supplies, propagation of fish and aquatic life, recreational purposes and agricultural and industrial uses. The law was amended to provide for additional water quality programs, standards and procedures to govern allowable discharges, funding for construction grants or general program funding.

Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500): Law stipulates broad national objectives to restore and maintain the chemical, physical and biological integrity of the Nation's waters (33 U.S. Code). In addition, amendments expanded provisions related to pollutant discharges. These provisions include requirements that limitations be determined for point sources which are consistent with state water quality standards, procedures for state issuance of water quality standards, development of guidelines to identify and evaluate the extent of nonpoint source pollution, water quality inventory requirements and development of toxic and pretreatment standards (33 U.S.Code §1311-1313 and 33 U.S.C. §1315-1317).

Safe Drinking Water Act (SDWA), 42 U.S. Code 300f et seq. (1974): The Act directed the Environmental Protection Agency (EPA) to protect public health by regulating the nation's public drinking water supply systems. Amended in 1986 and 1996 the law requires actions to protect drinking water and its sources: rivers, reservoirs, springs and groundwater wells. It also authorized the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. It requires that the EPA, states and water systems work together to make sure that these standards are met.

Water Quality Act of 1987 (Public Law 100-4) provided most recent series of amendments to the original Clean Water Act. Some of the provisions included are: Requirement that States develop strategies for toxics cleanup in water where the application of "Best Available Technology (BAT) discharge standards is not sufficient to meet state water quality standards and support public health (33 U.S. Code); increase in the penalties for violations of section 404 permits (33 U.S. Code §1344).; provisions that additional state reporting requirements on water quality of lakes including methods to mitigate the harmful effects of high acidity (33 U.S. Code §1324); Establishment of a program for states to develop and implement, on a watershed basis, nonpoint source management and control programs (33 U.S.Code).

Wild and Scenic Rivers Act (Public Law 90-542) Oct. 2, 1968, 82 stat. 906 and as amended: The Act established a National Wild and Scenic Rivers System and prescribes the methods and standards through which additional rivers may be identified and added to the system.

Executive Order 11990, Protection of Wetlands, May 24,1977, 44 Federal Register 1955: Directs all agencies to lead and implement action to minimize the destruction, loss or degradation of wetlands according to the NEPA. The order covers aspects of federal actions or federally funded actions affecting wetlands, including land management, facilities development and licensing regulations. In carrying out any activities affecting wetlands, federal agencies or recipients of federal project funding must consider such factors as public health, safety and welfare, including such things as water supply and quality, recharge and discharge areas for ground water, pollution, etc.

Agriculture

Farmland Protection Policy Act, (FPPA) (Public Law No. 97-98) U.S. Code §4201(1996): The purpose of the law is to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. The Act also stipulates that federal programs be compatible with state, local and private efforts to protect farmland.

Air Quality

Clean Air Act (CAA), 84-159 (Air Pollution Control Act: July 1955), 42 U.S. Code §7401 et seq. (1970): The primary objective of the Clean Air Act is to establish National Ambient Air Quality Standards (NAAQS) for various pollutants from area, stationary and mobile sources to protect public health and the environment. To provide for the regulation of polluting emissions via state implementation plans. The amendments are designed to prevent significant deterioration in certain areas where air quality exceeds national standards, and to provide for improved air quality in areas which do not meet Federal standards ("nonattainment" areas").

Hazardous Materials & Waste Management

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 42 USC §9601 et seq.; as amended by Superfund Amendments and Reauthorization Act (SARA), (Public Law 99-499) October 17,1986: Established a comprehensive system to react to releases of hazardous substances, conduct assessments and to determine liability and compensation for those affected natural resources. Established the Superfund monies for remediation or removal actions for the release of hazardous substances causing damage and injury to, destruction of or loss of natural resource damages. Maintains the National Priorities List (NPL) characterization studies and other projects to address environmental concerns.

Resource Conservation and Recovery Act (RCRA), 42 U.S. Code §6901 et seq. (1976): The Act controls and regulates the generation, treatment, transportation, storage and disposal of solid and hazardous wastes. Provisions include the management, replacement and monitoring of underground storage tanks. The applicability of federal, state and local laws to solid waste management and recycling are found in the Act.

Oil Pollution Act, 1990, 33 U.S. Code §2702 to §2761: The Act strengthened the EPA's ability to prevent and respond to catastrophic oil spills. A trust fund financed by a tax on oil is available to clean up spills when the responsible party is incapable or unwilling to do so. It requires plans to be submitted on how storage facilities and vessels will respond to large discharges. It requires the development of Area Contingency Plans to prepare and plan for oil spill response on a regional scale.

Pollution Prevention Act 42 U.S. Code §13101 and §13102 et seq. (1990): The Act focuses on industry, government and public attention on reducing the amount of pollution through cost effective changes in production, operation and raw materials use. Pollution prevention includes other practices that increase efficiency in the use of energy, water or other natural resources and protect the natural resource base through conservation. Instituting practices include recycling, source reduction and sustainable agriculture.

Toxic Substances Control Act, 15 U.S. Code §2601 et seq. (1976): The Act authorized EPA to secure and track information on all new and existing chemical substances currently produced or imported into the United States and to control any of these substances determined to cause an unreasonable risk to public health or the environment.

Environmental Pesticide Control Act 1972 (7 US Code 136-136y, Public Law 92-516, October 21, 1972), 86 Stat 973) as amended: The Act established the EPA program for controlling the sale , distribution and application of pesticides and for penalties through an administrative registration process. The amendments authorized experimental use permits and provided for administrative review of registered pesticides and for penalties for violations. States were authorized to regulate the state or use of any pesticide within a state, provided the regulation does not permit any sale or use prohibited by the Act.

Cultural Resources

Antiquities Act of 1906 (Public Law 59-209): The Antiquities Act provides for the protection of archeological resources on federal lands through criminal sanctions against excavation, injury or destruction of archeological sites without permission.

Archeological and Historic Preservation Act (16 U.S. Code 469-469c), Public Law 86-523, approved June 27, 1960 (74 Stat 220) as amended by Public Law 93-291, approved May 24,1974, (88 Stat.174): to carry out policy established by the Historic Site Act, directed federal agencies to notify the Secretary of the Interior whenever they find a Federal or federally assisted, licensed or permitted project that may cause loss or destruction of significant scientific, prehistoric or archeologic data. The Act authorized use of appropriated, donated and/or transferred funds for the recovery, protection and preservation of such data.

Historic Sites, Buildings and Antiquities Act (16 U.S. Code 461-462,464-467), August 21,1935 (49 Stat. 666) known as the Historic Sites Act, as amended by Public Law 89-249, approved October 9, 1965, (79 Stat. 971): Established national policy to preserve historic sites and objects of national significance. It provided procedures for designation, acquisition, administration and protection of such sites. The National Historic and Natural landmarks are designated under authority of this Act.

National Historic Preservation Act of 1966 (Public Law 89-665 as amended by Public Law 94-422, Public Law 94-458, and Public Law 96-515): The National Historic Preservation Act is the basic federal mandate for managing and protecting historic properties. Section 106 require federal agencies to account for the effects of their actions on historic properties on public and private lands. It allows the public, the State Historic Preservation Officer and the President's Advisory Council on Historic Preservation to comment on federal undertakings before authorization. Section 110 requires agencies to systematically inventory all lands for historic properties and protect them for active management. The 1992 Amendments directs agencies to account for the effects of proposed activities on traditional cultural properties associated with Native Americans, ranching communities and other traditional lifeways. Code 36 of Federal Regulations 800 revised July 1999 requires consultation with Tribal Historic Preservation Officers in the determination of significant Traditional Cultural Places and the affects of federally funded actions upon them.

American Indian Religious Freedom Act of 1978 (Public Law 95-341): The American Indian Religious Freedom Act requires federal agencies and agencies receiving federally funds to consider the effect of their policies on Native American traditional beliefs.

Native American Graves Protection and Repatriation Act (Public Law 101-106): Establishes requirements for the treatment of Native American human remains and sacred or cultural objects found on federal land.

Archeological Resources Protection Act of 1979 (Public Law 95-96): The Act established detailed requirements for issuance of permits for any excavation for or removal of archeological resources from Federal or Indian lands. It also established civil and criminal penalties for the unauthorized excavation, removal or damage of any such resources; for any trafficking such resources removed from federal or Indian land in violation of any provision of federal law; and for interstate and foreign commerce in such resources acquired, transported or received in violation of any state or local law.

National Trails System Act (16 U.S. Code 1241-1249) Public Law 90-543, October 2, 1968, (82 Stat. 919): Provided for establishment of National Recreation and National Scenic trails. Public Law 95-625, approved November 10, 1978, (92 Stat. 3511) as amended created a new category of National Historic Trails to closely follow original routes of national historic significance. National Recreation Trails may be established by the Secretaries of Interior or Agriculture on land wholly or partly within their jurisdiction, with the consent of the involved state(s) and other managing agencies, if any. National Scenic and National Historic Trails may only be designated by an Act of Congress.

Cave Resources

The Federal Cave Resources Protection Act of 1988 (FCRPA) Public Law 100-691 (16 U.S.C.4301 et seq.; 102 Stat. 4546): established requirements for the management and protection of caves and their resources on federal lands, including allowing the land managing agencies to withhold the location of caves from the public, and requiring permits for any removal or collecting activities in caves on federal lands.

Geological Hazards

Colorado River Floodway Protection Act, (Public Law 99-450) Oct. 8, 1986 (100 Stat.1129): Established a Colorado River Floodway Area, within which prohibited all new federal funding or financial assistance for any purpose (except for listed exceptions), federal flood insurance for new construction or substantial improvements begun six months after enactment on existing structures, and granting of federal leases (unless the Secretary determines the purpose is consistent with the Act).

Biological Resources

National Environmental Policy Act of 1969 (NEPA) (Public Law 91-190),as amended: Requires that all federal agencies to prepare detailed environmental impact statements for every major federal actions significantly affecting the quality of the human environment. Public Law 94-83, August 9, 1975, 89 Stat 424. clarified the application of NEPA to the preparation of impact statements for projects implemented by states under a system of federal grants.

The Endangered Species Act, 7 U.S. Code §136; 16 U.S. Code §460 et seq.(1973): The Act provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found that are threatened or endangered with extinction. The act prohibits the taking of species listed as threatened or endangered, either directly or indirectly, through habitat loss or modification. The Department of Interior maintains the list of endangered and threatened species. This prohibition applies to all activities regardless of land ownership.

Sikes Act, (Public Law 86-797) Sept. 15, 1960 (16 U.S. Code 670 a-670o, 74 Stat. 1052): provides for cooperation by the Departments of the Interior and Department of Defense with State agencies in planning, development and maintenance of fish and wildlife resources on military reservations throughout the United States. Amended August 8, 1968, (P.L. 90-465, 82 Stat 661 authorizes a program for development of outdoor recreation facilities. Amended Public Law 99-561, approved October 27, 1986 (100 Stat. 3149) requires Secretary of each military department to use trained professionals to manage the wildlife and fishery resources under their jurisdiction and requires federal and state fish and wildlife agencies be given priority in management of fish and wildlife activities on military reservations.

Amended (Public Law 105-85) November 18, 1997 (11 Stat.2017, 2018, 2020, 2022): The Act authorized the preparation of an Integrated Natural Resources Management Plan (INRMP) to provide for sustainable use by the public of natural resources, to the extent when the use is not consistent with the needs of fish and wildlife resources.

Federal Noxious Weed Act (Public Law 93-629) (7 U.S. Code 2801 et. seq.; 88 Stat 2148), enacted January 3, 1975: established a Federal program to control the spread of noxious weeds. The law provides for the inspection, seizure and destruction of infested products and to quarantine areas to prevent the spread of weeds. Law provides for authorization of cooperation of federal, state and local agencies, farmers associations and private individuals in measures to control, eradicate or prevent or retard the spread of weeds.

Migratory Bird Treaty Act, (Public Law 86-732) (1960): The Act is an international treaty that prohibits the taking of any migratory bird without permit or authorization. This prohibition applies to all activities regardless of land ownership.

Fish and Wildlife Coordination Act, 16 U.S. Code 661-667e, March 10,1934, as amended 1946,1958,1978, and 1995: The purpose of the Act is for the development and implementation of conservation plans and programs, protection and management for non-game fish and wildlife, including migratory non-game birds.

Executive Order 13112, Invasive Species, February 3, 1999: The Act requires all agencies to take action to prevent the introduction of invasive species, detect and control invasive species populations, monitor invasive species, provide for restoration of native species, conduct research on invasive species, develop technologies to prevent the introduction of invasive species and promote public education.

Bald Eagle Protection Act of 1940, (16 U.S. Code 668-668d, 54 Stat.250) as amended June 8, 1940, as amended by Public Law 86-70 (73 Stat 143) June 25, 1959; Public Law 87-884 (76 Stat. 1346) October 24, 1962; P.L. 92-535 86-1064) October 23, 1972; and Public Law 95-616 (92 Stat. 3114) November 8, 1978: This law provides for the protection of the bald eagle (the national emblem) and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds. The 1972 amendments increased penalties for violating provisions of the Act or regulations issued pursuant thereto and strengthened other enforcement measures. Rewards are provided for information leading to arrest and conviction for violation of the Act.

The 1982 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. A 1994 Memorandum(59 F.R. 22953, April 29, 1994) from President William J. Clinton to the heads of executive agencies and departments sets out policy concerning collection and distribution of eagle feathers for Native American religious purposes.

Wild Horses and Burros

Wild Free-Roaming Horses and Burros Act of 1971, Public Law 92-195, as amended by P.L. 94-579 (1978): This act protects wild free roaming horses and burros, directing the BLM and Forest Service to manage such animals on public lands under their jurisdiction.

Environmental Land Use Designations

Wilderness Act Public Law 88-577 (16 USC 1131-1136) §1133, approved September 3, 1964. The Act established a national wilderness preservation system to preserve federally owned lands designated by Congress as "wilderness areas" to protect, preserve and manage its natural conditions so that present and future generations may benefit.

Human Impacts

Freedom of Information Act 5 U.S. Code 552; 88 Stat. §1561 provides for any member of the public, American citizen and non-citizen alike to obtain records created and maintained by all agencies of the executive branch of the United States. Access to paper documents, tapes, films and other materials created by the agency as a part of its official responsibilities.

Electronic Freedom of Information Act 5 U.S. Code §231, 110 Stat 2422, October 2, 1996: Provided for the expansion of the FOI act to include a record of electronically created documents and information, including computer databases, electronic documents, word processing documents and e-mail.

Executive Order 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations: The goal of environmental justice is to promote fair treatment and equal protection of all people, regardless of their race, culture and/or income status so that they can live in a safe, healthy and clean communities.

Emergency Planning and Community Right to Know Act (EPCRA) 42 U.S. Code §11001 et seq. (1986): The law was designated to help local communities protect public health, safety and the environment from chemical hazards. The Toxic Release Inventory (TRI) is mandated by a provision of the EPCRA, which requires specified industries to report releases of more than 650 chemicals and chemical categories to air, land and water. The purpose is to give citizens information about chemicals being used, processed, manufactured or released from facilities in their communities. The act was amended in 1999 to include mining industry.

Occupational Safety and Health Act 29 U.S. §Code 651 et seq. (1970): The Act was to ensure worker and workplace safety. To make sure that employers provide workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress or unsanitary conditions. The Act created the National Institute for Occupational Safety and Health (NIOSH) that established standards for workplace safety.

Civil Rights Act of 1964, Title VII, 42 US Code Sec. 2000e Public Law 88-352 as amended. The law provides that no person on the basis of race, color , or national origin shall be excluded from participation, denied program benefits or subjected to discrimination.

7.8 Soils Types, Acreage & Shrink-Swell Potential

Shrink-Swell Potential: The shrinking of soil when dry and the swelling when wet (Soil Conservation Service).

Soil Type	Acreage	Shrink-Swell Potential
Antho sandy loam	16,990	Low
Antho fine sandy loam	4,105	Low
Carrizo very gravelly sand	43,177	Low
Cheroni-Rock outcrop complex	16,845	Low
Dateland loamy fine sand	12,491	Low
Dateland fine sandy loam	7,037	Low
Gachado very gravelly loam	8,496	Low - Moderate
Gadsden clay	21,326	High
Gilman loam	1,213	Low
Glenbar silty clay loam	14,938	Moderate
Harqua-Tremont complex	115,695	Low - Moderate
Holtville clay	25,060	Low - High
Indio silt loam	76,051	Low
Indio silt loam, saline	10,149	Low
Indio silt loam, strongly saline	5,722	Low
Indio-Lagunita-Ripley Complex	54,577	Low
Kofa clay	9,016	Low - High
Lagunita loamy sand	10,551	Low
Lagunita silt loam	2,228	Low
Laposa-Rock outcrop 15- 75% slopes	101,914	Low
Ligurta-Cristobal complex 2-6 % slopes	201,384	Low-Moderate
Pits, barrow	1,079	Low
Pits, gravel	149	Low
Ripley silt loam	14,285	Low
Rositas sand	53,135	Low
Rositas-Ligurta complex 2-6 % slopes	18,244	Low
Salorthids, nearly level	2,434	Low
Superstition sand	42,440	Low
Superstition complex	2,433	Low-High
Torrithents-Torrifluvents complex 1-50 % slopes	26,717	Variable Low-High
Tremant-Rositas complex	52,581	Low-Moderate
Vint loamy fine sand	5,714	Low
Wellton loamy fine sand	16,542	Low
Wellton-Dateland-Rositas complex	7,802	Low

Source:

Soil Survey of Yuma-Wellton Area, December 1980. United States Department of Agriculture Soil Conservation Service.

Section Eight—Water Resources Element

8.1 Introduction

Yuma County is located in one of the most arid regions of the United States. The most populated portions of the county receive on average less than three inches of rain annually. Despite this, Yuma County is home to over 200,000 people and a \$3 billion agricultural sector operating on over 195,000 acres and is one of the most productive and important in the nation. Maintaining adequate water resources and access to them is fundamental to the continuing viability and prosperity of Yuma County.

Recognizing the importance of adequate water resources Arizona Revised Statutes §11-804(B) (3) mandates that a county’s comprehensive plan address:

- The known legally and physically available surface water, groundwater and effluent supplies
- The demand for water that will result from future growth projected in the county plan, added to existing uses
- An analysis of how the demand for water that will result from future growth projected in the comprehensive plan will be served by the water supplies

The Water Resources Element of the Yuma County 2020 Comprehensive Plan will address these issues. This element is comprised of six Sections:

- Surface Water
- Groundwater
- Community Water Systems
- Water Adequacy
- Water Resources Policies and Priorities
- Water Resources Actions
-

The surface water section examines the surface water resources that are available in Yuma County. The Colorado River is by far the most important water resource and the only surface water resource of note in Yuma County. 72% of total county residents and more than half of residents in the unincorporated portions have their drinking water originate from the Colorado River. The agricultural sector upon which the area’s economy is built is almost exclusively irrigated with water coming from the Colorado River. The U.S. Bureau of Reclamation is the agency charged with managing the Colorado River and how water coming from it may be used. The Water Resources element details who, where and how Colorado River water can be used. If future growth occurs in the apportioned locations, existing entitlements to Colorado River water should be able to support future growth in Yuma County for the foreseeable future.

The community water system section details the community water systems that exist in Yuma County, where they obtain their water from, what population they serve and the issues facing them. The U.S. Environmental Protection Agency (EPA) defines a community water system as a public water system that serves at least fifteen service connections used by year-round residents or regularly serves at least 25 year-round residents. In Yuma County there are 33 community water systems, eight publicly owned and 25 privately owned. The EPA estimates

that combined these systems serve approximately 181,000 people, which represents approximately 89% of the estimated population of Yuma County.

The water adequacy section details the state and county policies that are designed to ensure that all newly platted subdivisions have an adequate supply of safe drinking water. This section also lists all the platted subdivisions within unincorporated Yuma County that the Arizona Department of Water Resources determined to have an inadequate supply of water.

The water resources policies and priorities section contains the policy positions and priorities of Yuma County regarding water resources within unincorporated Yuma County. The water policies and priorities contained within the Yuma County 2020 Comprehensive Plan are derived from comments and feedback from residents from across the county, comments from stakeholders, and from the requirements of Arizona Revised Statutes §11-804(B)(3). All official actions taken by Yuma County regarding water resources should be in harmony with these policies and priorities. Further, when other agencies request Yuma County's comment or recommendation on any water related policy or project, Yuma County's response will reflect as much as possible these policies and priorities. Yuma County will support the applications of grants, projects and policy changes that will further advance these policies and priorities.

The water resources actions section contains the specific actions that Yuma County will take to advance the adopted water resources policies and priorities.



Colorado River

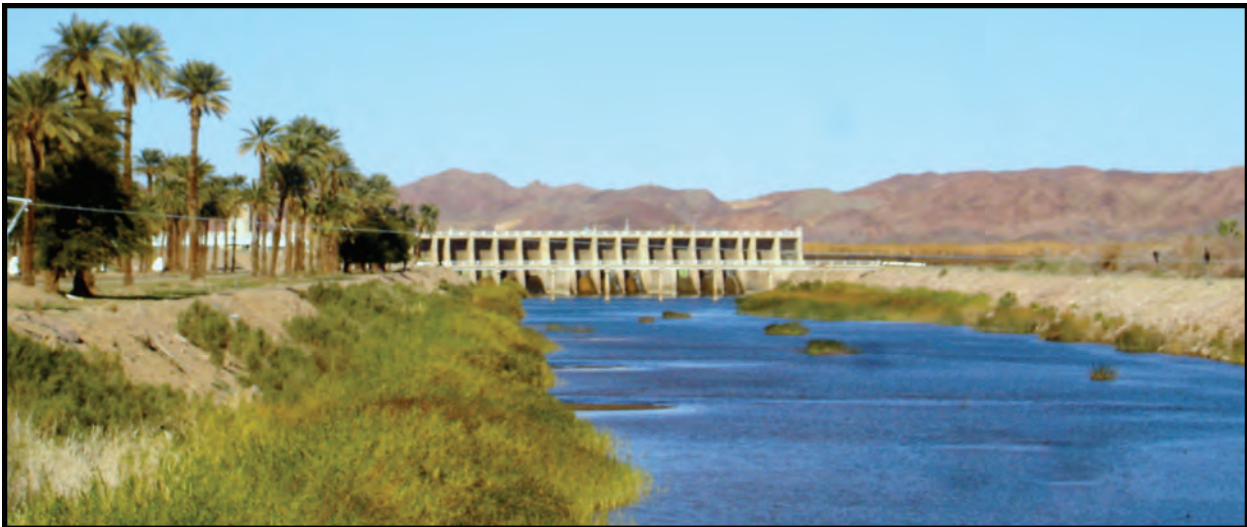
8.2 Surface Waters

The Colorado River is the greatest asset that Yuma County possesses. For the six irrigation districts and various other entities that also have Colorado River water allocations, the cumulative allocation for Yuma County is over 923,000 acre feet per year. Yuma County was one of the first areas to begin using Colorado River water and for this reason Yuma County's entitlements are among the most senior, and therefore, the most secure of all those along the river.

Nearly all Colorado River water used in Yuma County is diverted at Imperial Dam into a network of approximately 226 miles of canals. These canals are operated by six irrigation and drainage districts. In addition to their primary function of providing irrigation, water for municipal and industrial use is supplied to a number of municipalities and private water systems through this system of canals.

The Gila River enters Yuma County from the east and flows westward until it joins with the Colorado River in the vicinity of the City of Yuma. Prior to the completion of Gillespie and Painted Rock Dams in the first half of the twentieth century, the Gila River was a perennial stream within Yuma County. It is now an ephemeral stream. Water only flows in response to the discharge of agricultural drainage, a heavy precipitation event or if water is released from Painted Rock Dam. Depending on these events, flow in the Gila River can range from non-existent to quite extensive.

There are a great number of washes, both named and unnamed, in Yuma County. These are ephemeral streams that only have running water in them after a significant rain event. Their contribution to the available surface water resources in Yuma County is negligible. The potential hazard posed by washes is not negligible; heavy rains can flash flood within them and pose a risk to life and property.



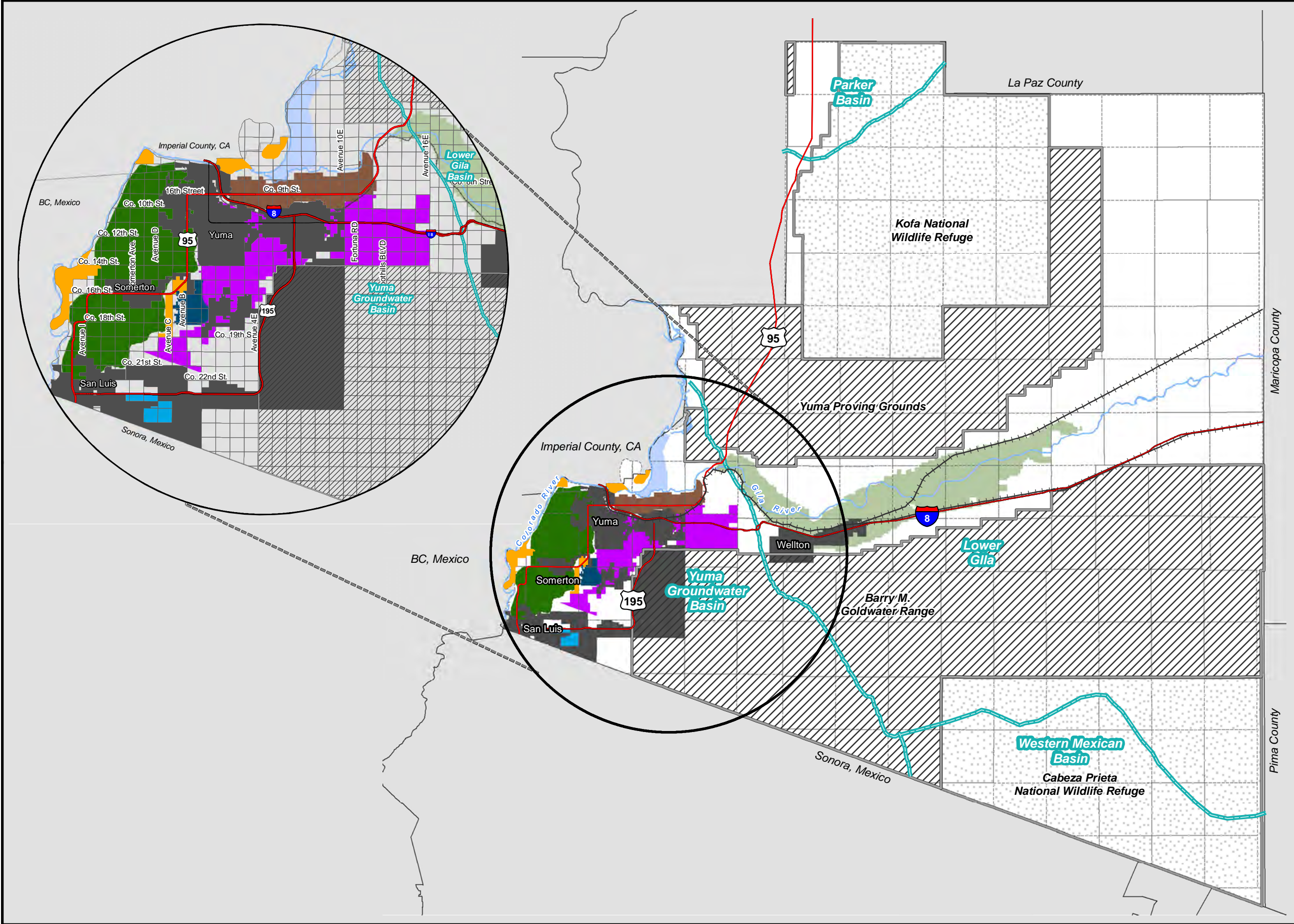
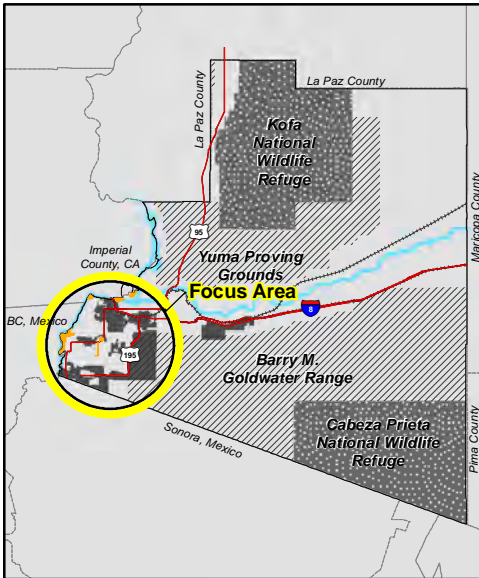
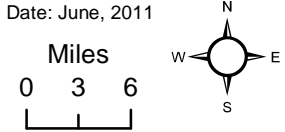
Imperial Dam

Water Resources Elements - Surface Waters



- Groundwater Basing Boundary
- Indian Reservations
- Military Boundary
- Incorporated Areas
- National Wildlife Refuge
- Hillander "C"
- North Gila Irrigation District
- Unit B Irrigation District
- Wellton-Mohawk Irrigation And Drainage District
- Yuma County Water Users Association
- Yuma Irrigation District
- Yuma Mesa Irrigation And Drainage District

For Information Only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division & ADWR



Map 1: Surface Water

Colorado River

How it is used and who can use water from the Colorado River is governed by what is known as the “Law of the River.” The Law of the River is a collection of compacts, federal laws, court decisions and decrees, contracts and regulatory guidelines that determine how and who can use Colorado River water. Because Yuma County is so dependent on Colorado River water, an understanding of the Law of the River and how it relates to Yuma County is key to understanding water resource allocation and distribution in Yuma County.

The most important function of the Law of the River is that it portions out water from the river to specific entities and then assigns a priority to these entitlements based on when they were initially established. Entitlements are contracts between the holder and the Secretary of the Interior acting through the Bureau of Reclamation. All combined the entitlement holders in Yuma County hold an entitlement of 923,091 acre feet per year. Yuma County entitlements tend to be high in priority, with 99% being a first, second or third priority entitlement. The bulk of entitlements held in Arizona outside of Yuma County are classified as fourth priority or lower. Were a water shortage to become so severe that not all Colorado River entitlements would be able to be filled, any potential shortage would be borne by the lowest priority entitlements. With continued sound stewardship water resources should be both sufficient and secure for decades to come.

In 2009, the Bureau of Reclamation reported that combined consumptive use of 649,754 acre feet, meaning that water users in Yuma County used approximately 70% of the 923,091 acre feet per year of Colorado River water that they were entitled to use. For both physical and legal reasons, the acreage that is irrigated by Colorado River water is unlikely to expand in the future. Unless there is a shift to agriculture practices and crops that consume a great deal more water than what currently exists, the largest user of Colorado River water in Yuma County, the agricultural sector, is unlikely to use significantly more water in the future. Potentially much of the unused entitlements in Yuma County could be used to support non-agricultural development.

Approximately 87.4% of entitlements in Yuma County are held by five irrigation and drainage districts. These districts were set up to make productive use out of the river water that was made deliverable by the Bureau of Reclamation’s completion of the Yuma and Gila Projects. The Yuma and Gila Projects were federal projects in the first half of the twentieth century that built the dams, canals, pumping plants and drains that makes up the irrigation infrastructure of Yuma County. The primary function of these districts is to provide water for agricultural uses. Each entitlement that is held by an irrigation district generally sets aside a portion of water for municipal and industrial use; Table 1 on page 8 lists the portions of the irrigation districts’ entitlements that are set aside for municipal and industrial purposes.

The municipal and industrial portion of an irrigation district’s entitlement may only be used within that district’s boundaries and at the discretion of that district’s governing board. Usually municipal and industrial water is treated and distributed by a community water system which can be privately or publically owned. Community water systems either have their own entitlement to Colorado River water such as the City of Yuma, or they purchase a portion of entitlement holder’s municipal and industrial allocation. Far West Water and Sewer, which supplies water to approximately 30,000 people in the Foothills area purchases approximately 5,000 acre feet of river water a year from the Yuma Mesa Irrigation and Drainage District. Six community water systems obtain their water by purchasing it from an irrigation district.

Municipal and industrial (M&I) entitlements are what support non-agricultural uses of water. Between M&I entitlements held by the irrigation districts, municipalities and other entities such as Marine Corps Air Station Yuma and YPG, there is a total of 100,824 acre feet per year of Colorado River water that is entitled to be used for municipal and industrial use in Yuma County. In 2009 Bureau of Reclamation records show that of this allocation of 100,824 acre feet, there was a consumptive use of 24,100 acre feet of water for municipal and industrial uses. This means that only approximately 24% of water entitled to be used for municipal and industrial in Yuma County was used in 2009 (see Table 2 on page 7). The overall M&I entitlement in Yuma County should be sufficient to accommodate growth for decades to come. However, there is no overall M&I entitlement for Yuma County. Almost every M&I entitlement has a specific geographic boundary in which the water can be used and there are large portions of Yuma County that are not within the boundaries of an entity that holds an M&I entitlement to Colorado River water. Therefore, in order for the existing M&I entitlements to be able support all future growth, this growth must occur in the areas

Municipal and Industrial Entitlements	
Entitlement Holder	Acre Feet
City of Yuma	50,000
Yuma County Water Users' Assoc.	14,701
Wellton-Mohawk Irrig. & Drain. Dist.	12,500
Yuma Mesa Irrig. & Drain Dist.	10,000
Yuma Irrigation District	5,000
Department of Navy, MCAS	3,000
North Gila Valley Irrigation District	2,500
Yuma Proving Ground	1,129
City of Somerton	750
Bureau of Reclamation	490
Desert Lawn Memorial Park Assoc.	360
Desert Lawn Memorial Park	200
City of Yuma (cemetery)	60
Fisher's Landing Water & Sewer	53
Kammann, Inc.	48
City of Yuma (Smucker Park)	33
Total	100,824

Table 1: Yuma County Municipal & Industrial Entitlements¹ that have the necessary water rights to support it.

The City of Yuma has set up agreements with the holders of various of irrigation water entitlements to convert agricultural use entitlements to municipal and industrial entitlements as agricultural land develops. The primary participant in this type of transfer is the Yuma County Water User’s Association. The City of Yuma and the Yuma County Water Users’ Association have agreed on a water rights conversion ratio of 5.83 acre feet per year for each acre of land that transitioned from agriculture to another type of land use. The City of Yuma currently holds water conversions of 19,000 acre feet a year in addition to its 50,000 acre-feet a year entitlement to Colorado River water.²

The other factor that must be considered when contemplating the location of future growth is the infrastructure needed to deliver water from the Colorado River to any water treatment plant. Currently nearly all water treatment plants that make use of Colorado River water in Yuma County do not directly withdraw water from the river, but rather through the system of irrigational canals. These canals were constructed to support agricultural uses, and therefore agricultural uses take priority when it comes to the finite quantity of water that can be delivered through these canals. Even if an existing M&I entitlement is sufficient to serve an area, this is no guarantee that there is sufficient capacity within existing canals to deliver water to a treatment plant.

1 U.S. Bureau of Reclamation.
 2 Public Services Element Draft City of Yuma 2012 General Plan

Water Resources Element

Entity	Entitlement Priority - In Acre Feet per Year					2009 Consumptive Use in A.F.
	<i>1st</i>	<i>2nd & 3rd</i>	<i>4th</i>	<i>5th or 6th</i>	<i>Total</i>	
Wellton-Mohawk Irrigation and Drainage District		278,000			278,000	262,227
Yuma County Water Users' Association	254,200				254,200	225,181
Yuma Mesa Irrigation and Drainage District		141,519			141,519	71,510
Yuma Irrigation District		67,278			67,278	36,648
North Gila Valley Irrigation District	24,500	41,203			65,703	12,224
City of Yuma	1,478	48,522			50,000	15,407
Imperial National Wildlife Refuge		28,000			28,000	912
Cocopah Indian Reservation	8,821		2,026		10,847	4,039
Gila Monster Farms, Inc.	780	6,285	1,435	656	9,156	4,518
Yuma Auxiliary Project (Unit B)	6,800				6,800	13,467
Others		905	2,403		3,308	NA
MCAS Yuma		3,000			3,000	1,578
APS - Yucca Power Plant				1,500	1,500	330
Yuma Proving Ground		1,129			1,129	873
University of Arizona Extension		1,088			1,088	597
City of Somerton			750		750	0
Desert Lawn Memorial Park		200	360		560	90
Yuma Union High School		200			200	113
Fisher's Landing Water and Sewer Works			53		53	40
Total	296,579	617,329	7,027	2,156	923,091	649,754

Table 2: Colorado River Entitlements and 2009 Consumptive Use²

² U.S. Bureau of Reclamation.

8.3 Groundwater

The overwhelming majority of Yuma County and all of its inhabited areas are contained either in the Yuma or Lower Gila Groundwater Basins. The Lower Gila Basin encompasses most of the County east of the Gila Mountains. According to the Arizona Department of Water Resources, well yields in this basin are generally greater than 1,000 gallons per minute, and the natural recharge rate for the entire basin is estimated to be from 9,000 to 88,000 acre feet a year. The Yuma Basin comprises most of the County west of the Gila Mountains. Well yields in this basin are generally greater than 2,000 gallons per minute, and the natural recharge rate for the entire basin is estimated at 213,000 acre feet a year.³

Depending on the location of a well there are a number of potential issues regarding groundwater quality that could potentially cause a well to produce water that is not up to drinking water standards without additional treatment. In eastern Yuma County the main issue is excessive amounts of fluoride and/or arsenic from natural occurring mineral sources. In the Wellton-Mohawk Valley the maximum limit for total dissolved solids is often exceeded due to the salts carried into the water table from irrigation water. Some wells west of the Gila Mountains have exceeded the maximum allowed amount of volatile and semi-volatile organic compounds which likely come from both urban and agricultural uses. Map 2 shows the locations of wells where the Arizona Department of Water Resources (ADWR) has recorded an exceedance of drinking water standards for at least one contaminate.

Historically the availability of groundwater has not been an impediment to development in Yuma County. Most development and agriculture in Yuma County makes use of surface water and not groundwater. Between 1973 and 2008, nineteen subdivisions were platted in unincorporated Yuma County despite the ADWR determining that they had an inadequate water supply. Nor has the ADWR designated any of Yuma County as an active management area in which groundwater rights are quantified and regulated. ADWR defines active management areas as areas with heavy reliance on mined groundwater, i.e. groundwater which is not naturally replenished once withdrawn.

The rules for well placement in Yuma County are largely written by the Arizona Department of Water Resources and enforced by the Yuma County Environmental Programs Division. There are two specifically defined locations in Yuma County where the Bureau of Reclamation has created additional regulations and restrictions on how groundwater can be used.

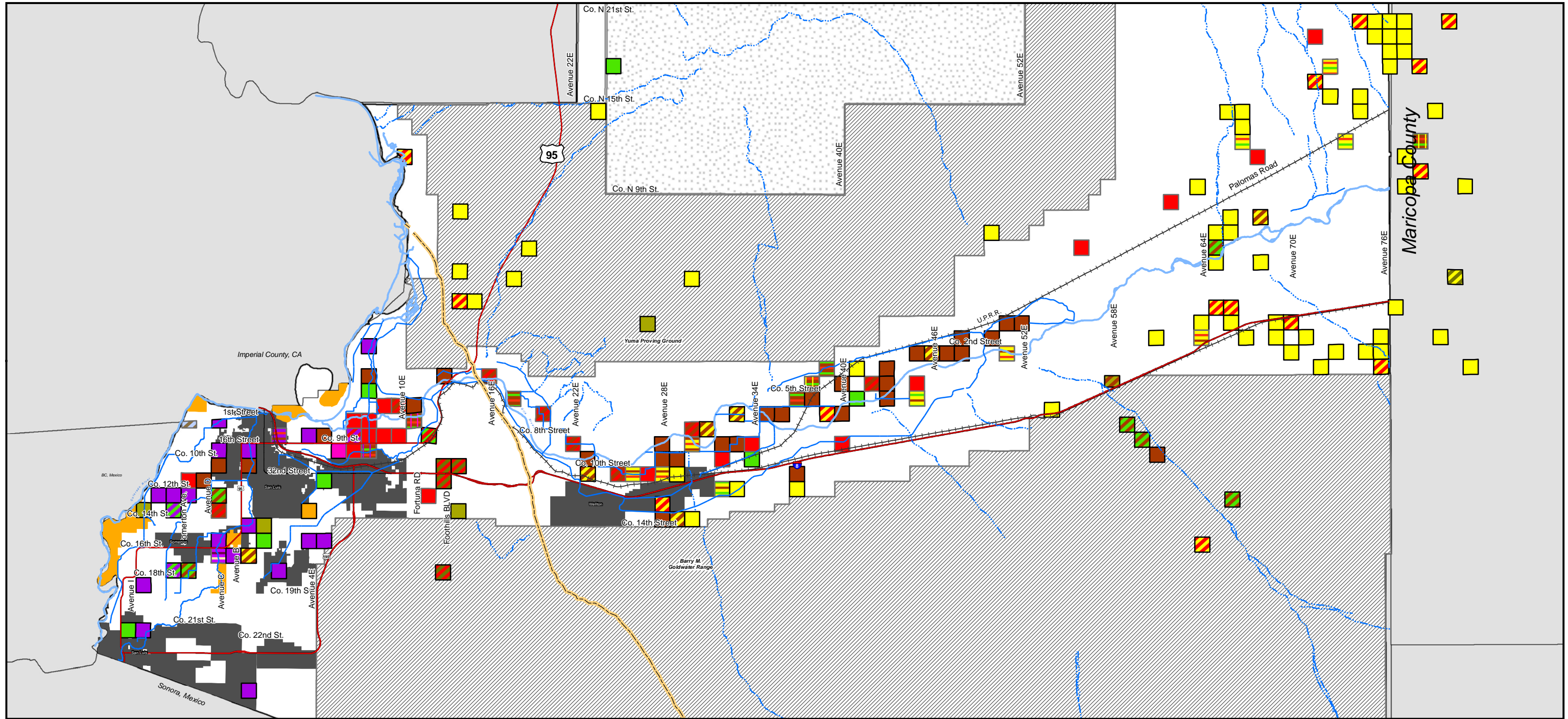
The ADWR classifies all wells within Yuma County as either exempt or non-exempt. Regulations differ depending on the type of well. An exempt well has a maximum pump capacity of 35 gallons per minute. Typical uses include non-irrigation purposes, non-commercial irrigation of less than two acres of land and watering stock. Most exempt wells are used for residences and are more than adequate for household use.

A Notice of Intention to Drill form (NOI) must be filed with the Arizona Department of Water Resources for all wells drilled in Yuma County. If the well is intended for non-domestic purposes, as defined in Title 45-454, or it will be used for domestic purposes and the size of the property upon which the well will be constructed exceeds five acres the NOI shall be filed with the Director of Water Resources.

³ Arizona Department of Water Resources. "Arizona Water Atlas, Volume 7, Lower Colorado River Planning Area." November 2009

If the well is intended for domestic purposes, as defined in Title 45-454, and the size of the property upon which the well will be constructed is less than 5 acres, the NOI and site plan must be submitted to the Yuma County Environmental Programs Division to ensure compliance with well placement and septic tank requirements. State law requires a 100 foot separation between a well and any septic tank or sewer system and that a parcel containing both a well and an onsite sewage treatment system is at least one acre in size.

Water Resources Element - Groundwater Quality



Arsenic (As)	As, F	F, TDS	As, F, NO3	As, NO3, TDS, Org
Fluoride (F)	As, F	F, Pb	As, TDS, Org	AS, NO3, TDS, Thallium
TDS (Total Dissolved Solids)	As, NO3	TDS, Pb	As, NO3, TDS	As, Beryllium, F, Pb, NO3, TDS
Volatile, Semi Volatile Compounds (Org)	As, Pb	NO3, TDS	F, NO3, TDS	Groundwater Basin Boundary
Nitrate (NO3)	As, TDS	NO3, Org	Org, Sb, Be	Major Washes
Lead (Pb)	As, Org	Be, Cd	As, F, NO3, TDS	Major Canals
Cadmium (Cd)	F, TDS	As, F, TDS	As, F, NO3, TDS	Rivers

For Information Only No Liability Assumed
Yuma County Dept. of Development Services
Source: Yuma County GIS Division

Date: July, 2011

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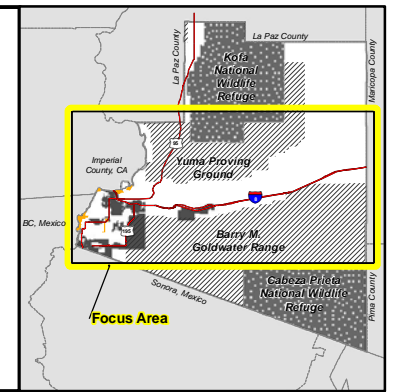


Figure 13: Irrigation Districts

8.3.a Depth to Groundwater

Depth to groundwater is an important issue in many parts of Yuma County. The water table in the Yuma, Gila and Wellton-Mohawk Valleys is naturally high due to the influence of local rivers. Map 3 and 4 highlight the areas in which high groundwater is a concern. The river valleys are where the best farmland is located and as a result a large amount of irrigation water is used in these areas which causes an already high water table to rise further. Without the active management of groundwater levels there would be areas in which groundwater would breach the surface. Even with active groundwater elements there are areas in Yuma County where during certain times of the year the water table comes within a few feet of the surface.

West of the Gila Mountains groundwater levels are managed through the Bureau of Reclamation's Yuma Area Water Management System. This system is comprised of 97 groundwater pumping facilities, 57 observation wells and 13 drainage canals. In the Wellton-Mohawk Valley this task is performed by the Wellton-Mohawk Irrigation and Drainage District. These systems of pumps and drains are used to extract and to discharge excess groundwater through a network of drainage canals in order to prevent damage to buildings, foundations, crops, roads and septic systems.

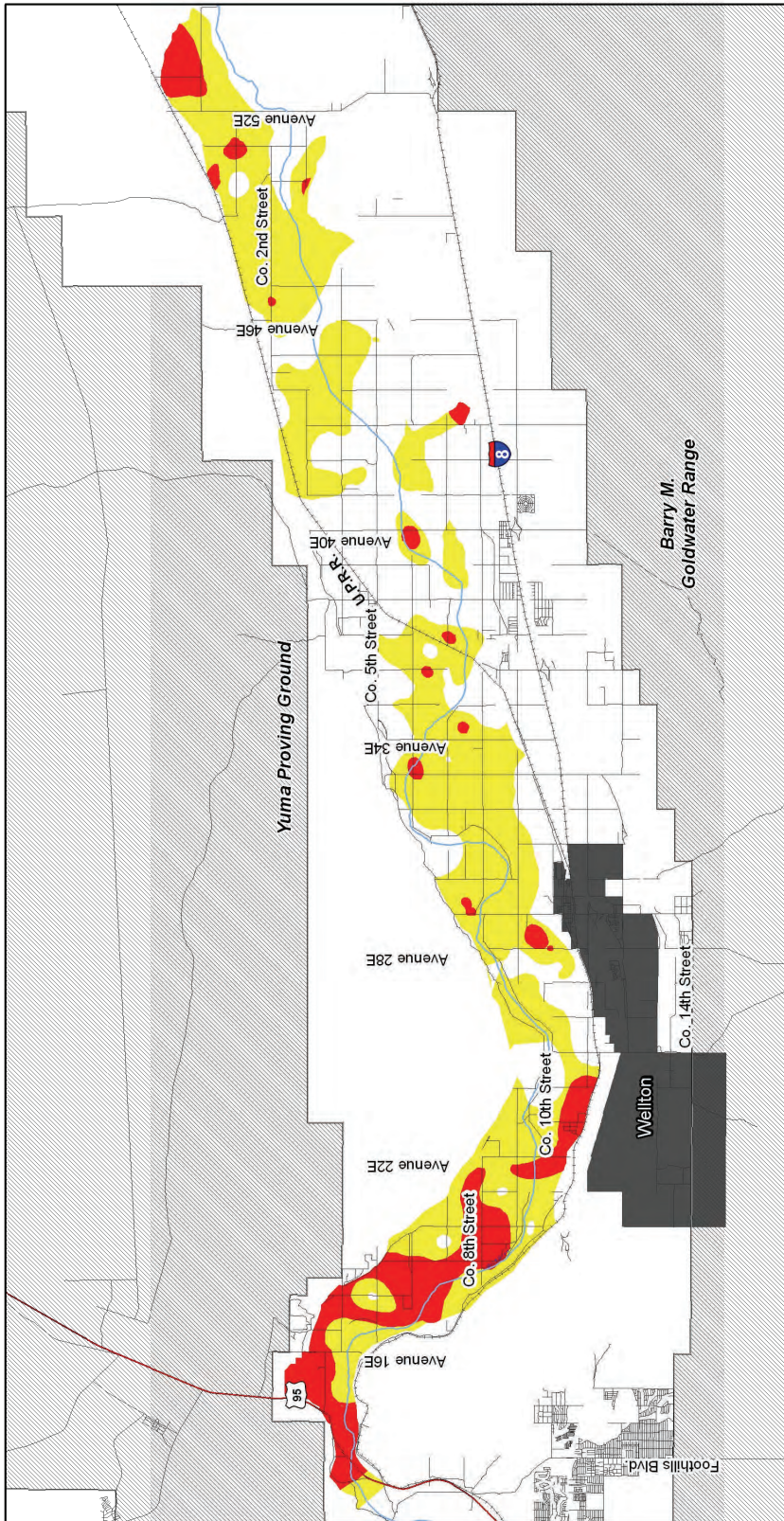
Because depth to groundwater is such an important issue in the Yuma, Gila and Wellton-Mohawk Valleys, the Yuma area Office of the Bureau of Reclamation closely tracks groundwater levels in these areas. Using data from drainage and observation wells, the Bureau of Reclamation publishes monthly maps showing the depth to groundwater in the Yuma, Gila and Wellton-Mohawk Valleys. These maps can be found on the webpage of the Yuma Area Office of the Bureau of Reclamation, http://www.usbr.gov/lc/yuma/programs/YAWMS/GROUNDWATER_maps.cfm

The maps on the following two pages is a composite of the Bureau of Reclamation's monthly depth to groundwater maps. Depth to groundwater in the valleys can vary greatly month to month largely driven by seasonal patterns in irrigation. Each month's depth to groundwater map is unique. Because of this a full understanding of groundwater cannot be gained by examining a single month's groundwater map. The maps depict the areas with a depth to groundwater of 0 feet to 5 feet and areas with a depth to groundwater of 6 feet to 9 feet measured between 2009 and 2011. Map 4 depicts the highest measured groundwater level for a given point between 2005 and 2010, thus mapping all areas where some time over the past five years groundwater levels were recorded at least for one month to be a level that could potentially be problematic.



Drainage Well Discharging into a Drain

Water Element - Groundwater 2009 through 2010



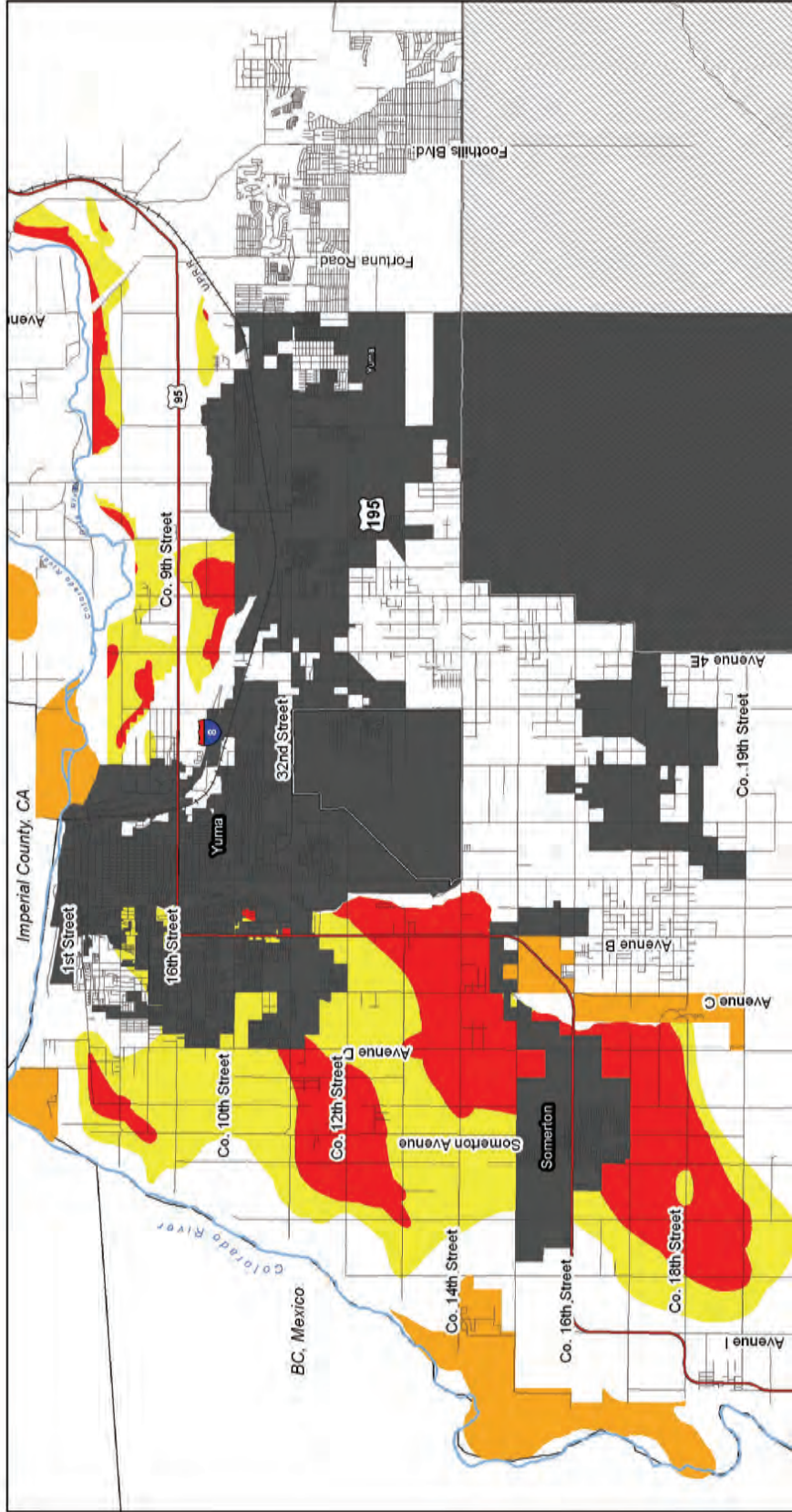
Shallowest Groundwater Measurement 2009 through 2010

- 0' to 6'
- 8' to 10'
- Military Boundary
- Incorporated Areas

For Information Only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division
 Date: August, 2011

Map 3: Depth to Groundwater 2009 through 2010

Water Element - Groundwater 2005 through 2010



For Information Only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division

Date: August, 2011

Shallowest Groundwater Measurement 2005 through 2010

- 0' to 5'
- 6' to 9'
- Incorporated Areas

Military Boundary

- Military Boundary
- Indian Reservations

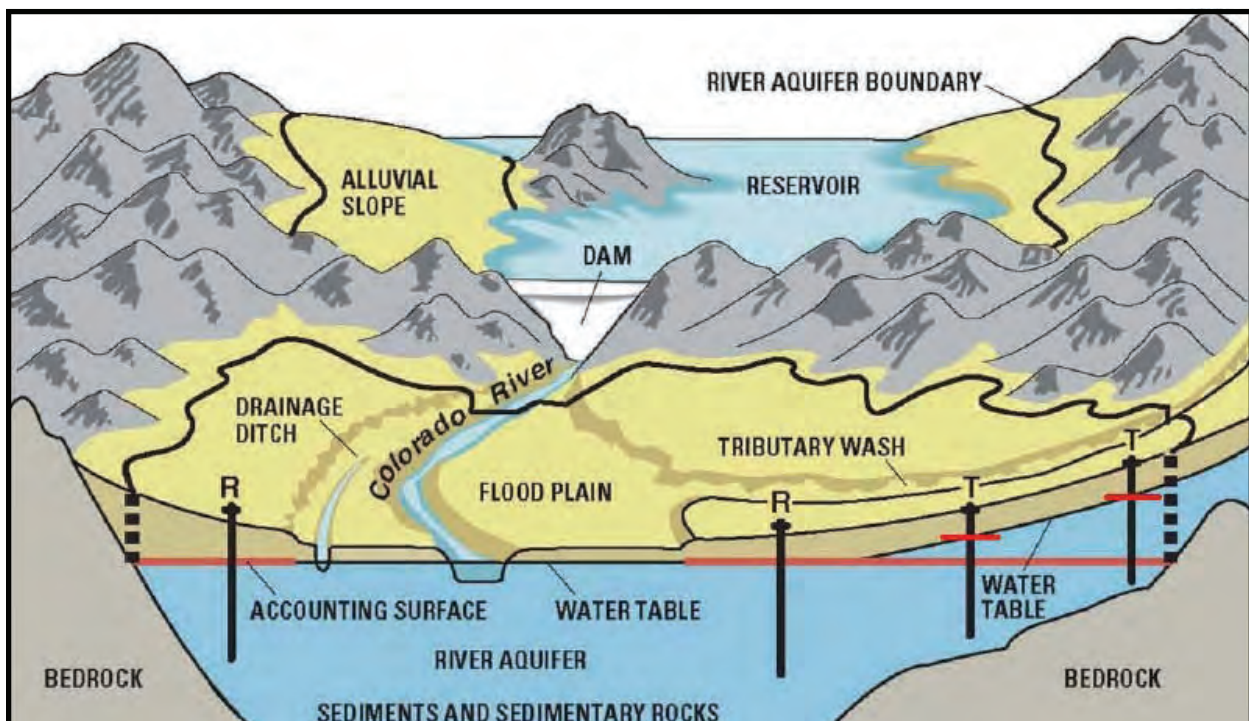


Map 4: Depth to Groundwater 2005 through 2010

8.3.b Colorado River Aquifer

In some areas located near the Colorado River, water pumped from a well is replaced by water from the Colorado River. In many cases the owners of these wells do not hold entitlements to Colorado River water. The Bureau of Reclamation estimates that in the lower Colorado River basin wells pumping Colorado River water without an entitlement consume 9,000 to 15,000 acre feet of water a year. In order to ensure the long-term sustainability of the lower Colorado River and to protect the water rights of Colorado River water entitlement holders, the Bureau of Reclamation has developed a river aquifer/accounting surface methodology to identify areas in which wells are pumping Colorado River water. The river aquifer is divided into two classifications: the floodplain where all water being pumped is presumed to be Colorado River and the accounting surface where wells are capable of withdrawing Colorado River water. Wells in the accounting surface are assumed to be withdrawing river water if their static water elevation is at or below the accounting surface elevation.⁶

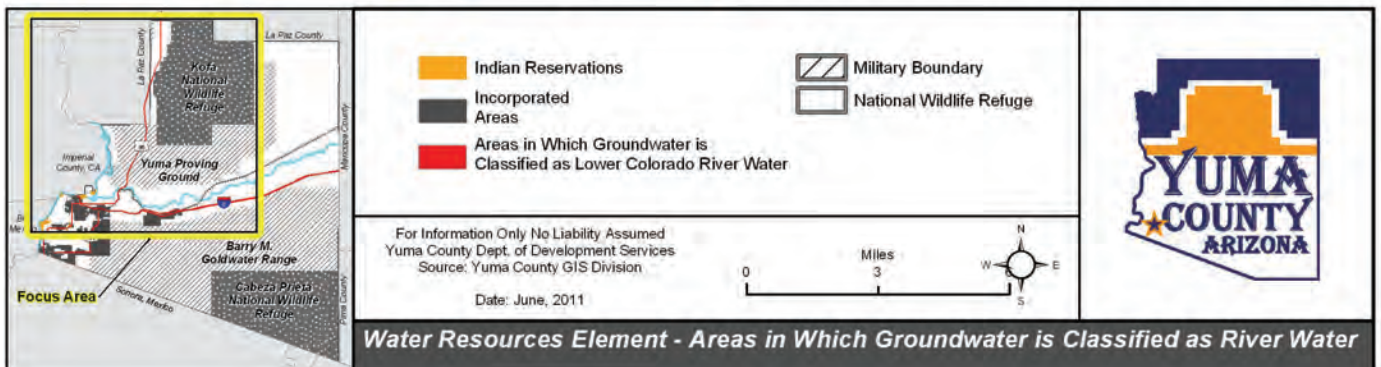
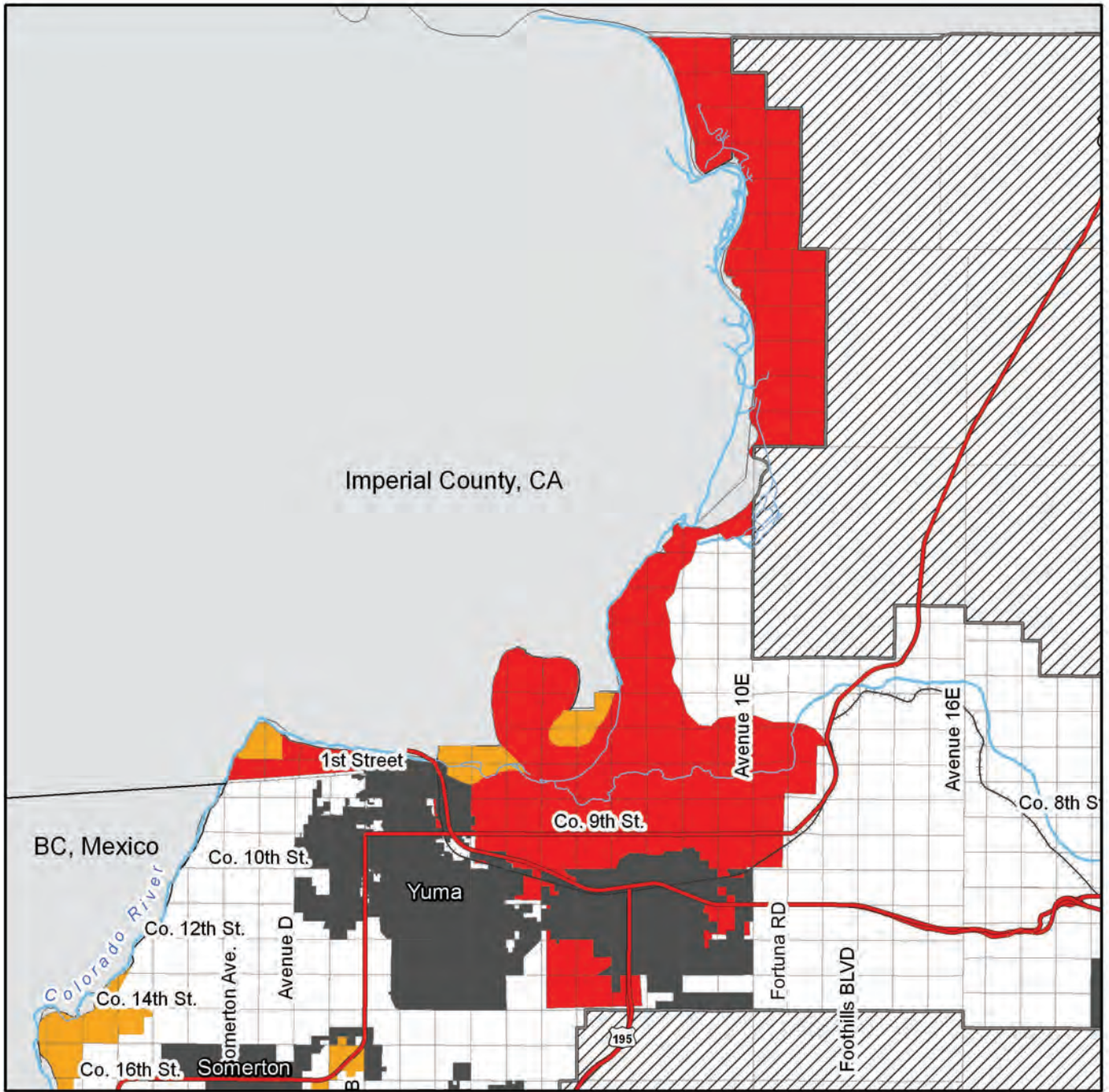
In much of southern Yuma County, groundwater flows underground across the southern international boundary (where the Colorado River crosses completely into Mexico, just west of San Luis) or under the Colorado River south of the northern international border (the point where the river first starts to form the international boundary). This ground water cannot be used to satisfy delivery obligations to Mexico under the Mexican Treaty. Therefore wells in this area are exempt from restrictions on pumping Colorado River water. Map 4 shows the areas where the pumping of groundwater is restricted due to its classification as Colorado River water.



Schematic diagram showing the river aquifer and accounting surface (red line) of the lower Colorado River. Wells labeled “R” have a static water-level elevation equal to or below the accounting surface and are presumed to yield water that will be replaced by water from the river. Wells labeled “T” have a static water-level elevation above the accounting surface and therefore presumed to not be pumping river water. (Modified from Wilson and Owen-Joyce, 1994)⁶

⁶ Thayer, Ruth. “Regulating the Use of Colorado River Water Without an Entitlement.” U.S. Bureau Reclamation.

A.R.S. §45-596.01, which takes effect as soon as the Bureau of Reclamation finalizes its rules regarding pumping groundwater from the Colorado River aquifer, is intended to implement these restrictions on pumping Colorado River water. It requires a person who files a notice of intention to drill a well that will pump Colorado River water to include proof that they have the legal right to use Colorado River water with either an entitlement to use river water or a written agreement with an entity such as an irrigation district to use a portion of their entitlement. Map 5 shows the areas in Yuma County where this applies. A.R.S. §45-596.01 does not apply if the proposed well has a maximum capacity of less than thirty-five gallons per minute and will be used for the supply, service and activities of households and private residences, including the application of water to less than two acres of land to produce plants or parts of plants for sale or human consumption or for use as feed for livestock, range livestock or poultry.



Map 5: Areas in Which Groundwater is Classified as Lower Colorado River Water⁷

⁷43 CFR Part 415. Regulating the Use of Lower Colorado River Water Without an Entitlement; Proposed Rule

8.3.c Minute No. 242

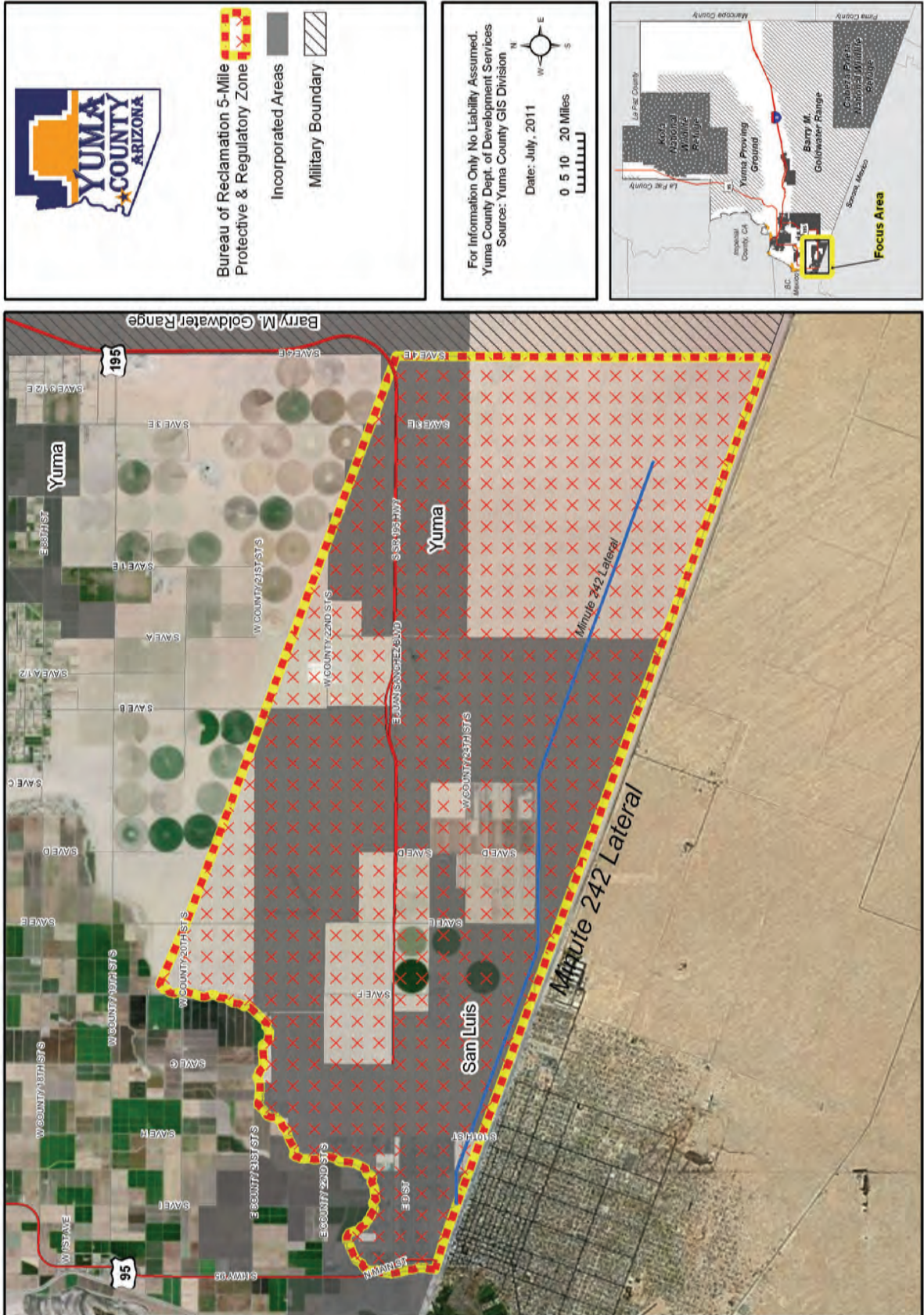
The Mexican Water Treaty of 1944 guaranteed an annual volume of Colorado River waters to Mexico of 1,500,000 acre-feet (1,850,234,000 cubic meters). Minute No. 242 (Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River) is an agreement signed between the United States and Mexico in 1973 which required the approximately 1,360,000 acre-feet delivered to Mexico upstream of Morelos Dam have an average salinity of no more than 115 p.p.m. \pm 30 p.p.m. U.S. count (121 p.p.m. \pm 30 p.p.m. Mexican count) over the annual average salinity of Colorado River waters which arrive at Imperial Dam. Additionally, it guarantees Mexico the delivery of 140,000 cubic feet of water where the Colorado River crosses entirely into Mexico just west of San Luis. Minute No. 242 also limits the quantity of water allowed to be pumped within five miles of the Arizona-Sonora boundary to 160,000 acre feet annually. A similar restriction exists on the Mexican side of the border.

To meet the obligations of Minute No. 242, the Bureau of Reclamation (BoR) established the Five Mile Protective and Regulatory Zone (see Map 6) and Protective and Regulatory Pumping Unit. The protective and regulatory zone was established to ensure that no more groundwater than is allowed under Minute No. 242 is pumped from the area. To this end, the Bureau of Reclamation acquired 23,500 acres of land in this area, representing the majority of land in the Five Mile Protective and Regulatory Zone. These actions limit any potential development in the area.

In order to take advantage of irrigation drainage water flowing under the Yuma Mesa and to ensure that the required deliveries of water are made to Mexico, the Bureau of Reclamation constructed the 242 Well Field. The 242 Well Field is a series of 21 wells located near the international border that pump approximately 125,000 acre feet of groundwater into the 242 lateral for delivery to Mexico every year.⁸

⁸ U.S. Bureau of Reclamation

Water Resources Element - Minute No. 242



Map 6: Bureau of Reclamation 5-Mile Protective & Regulatory Zone

8.4 Community Water Systems

The U.S. Environmental Protection Agency (EPA) defines a community water system as *a public water system that serves at least fifteen service connections used by year-round residents or regularly serves at least 25 year-round residents*. In Yuma County there are 33 community water systems (see Table 4 on page 23); eight publicly owned and 25 privately owned. The EPA estimates that combined these systems serve approximately 181,000 people, which represents approximately 89% of the estimated population of Yuma County. The remaining 11% obtain their drinking water from private wells or from water systems too small to be classified as a community water system. Nine community water systems which are either primarily or only supplied with surface water, serve approximately 146,000 people, about 72% of the estimated total population of Yuma County.

Of the 33 community water systems, 25 of them are small, serving populations of less than 1,000; of these 20 serve a population smaller than 500. Most of these serve a single entity such as a recreational vehicle park or a single subdivision. Smaller community water systems, often the only feasible way of providing drinking water to a particular development, are the cause of some of the most challenging issues regarding drinking water in unincorporated Yuma County. Because they have such a small customer base, many of these smaller community water systems have difficulty obtaining the capital needed to make improvements that are needed to maintain and improve reliability and water quality.

The reliability and quality of water coming from various small community water systems, particularly those relying on groundwater, was identified as a key issue by members of the public during the process that gathered the information used to draft the Yuma County 2020 Comprehensive Plan. Typically the types of improvements needed to address these issues can only be financed through a combination of grants and low-interest loans from the Arizona Water Infrastructure Finance Authority, an entity set up by the State of Arizona to help address these types of issues. The difficulty of funding improvements to small community water systems is the reason that creation of new small community water systems should be avoided, if it all possible.



A Small Community Water System in Unincorporated Yuma County

Water Resources Element

<i>System</i>	<i>Source</i>	<i>2009 Acre-Foot Consumptive Use</i>	<i>Population Served</i>
Yuma, City of	Surface Water	18,818	103,264
Far West Water Co.	YMIDD & Groundwater	YMIDD-5,168.55 Pumped-799.46	32,425
San Luis, City of	Groundwater	3,531.00	15,000
Somerton, City of	Groundwater	1,412.20	11,242
USMC-Air Station-Main	Surface Water	772.7	6,234
AZ. Dept of Corrections-Yuma	Groundwater	No Data	2,850
Wellton, Town of	WMIDD	314	2,025
US Army YPG - Main	Groundwater & Surface Water	673 - Surface Water	1,500
Sierra Pacific Mobile	Groundwater	8	816
Orange Grove Water Co.	Groundwater	101.94	800
Gadsden Water Company	Groundwater	14	756
Hidden Shores RV	Surface Water	43	512
Tierra Mesa Estates Water	Groundwater	172	468
Fishers Landing Inc	Surface Water & Groundwater	3.71	402
El Prado Water Company	Groundwater	35.35	400
Orange Grove Elementary School	Groundwater	No Data	400
Antelope Union High School District	WMIDD	No Data	380
Valley Vista Water Co.	Groundwater	62	300
Mohawk Utility Co.	WMIDD	WMIDD-40.56 Pumped 3.76	250

Table 4: Community Water Systems in Yuma County (Continued on Next Page) ⁹

⁹ Data obtained from the Arizona Department of Environmental Quality and the Arizona Corporation Commission

<i>System</i>	<i>Source</i>	<i>2009 Acre-Foot Consumptive Use</i>	<i>Population Served</i>
Tacna Water Co.	WMIDD	50	240
Laguna MHP	Groundwater	No Data	235
Green Acres Water Co.	Groundwater	41.32	210
Antelope Water Co.	WMIDD	54.31	200
Mohawk Valley School District	WMIDD	No Data	200
Dateland Elementary School	Groundwater	No Data	200
Shepard Water Co.	Groundwater	42.08	200
Dateland Public Service	Groundwater	41.57	125
Sun Leisure Estates Utility Co.	Groundwater	14	116
Sun-Set Mobile Trailer	Groundwater	1	100
River Ranch RV Park	Groundwater	No Data	100
G & L Mobile Park	Groundwater	102	90
Lucky Park Del Sol	Groundwater	No Data	90
Jones Co-op Water	Groundwater	9	84
Arizona West MH	Groundwater	No Data	66
Lemon Tree Trailer Park	Groundwater	11.4	60
Rancheros Bonitos	Groundwater	No Data	60
Dateland Water L.L.C.	Groundwater	3.31	40
Wellton-Mohawk Irrigation and Drainage District	WMIDD	No Data	36

Table 4: Community Water Systems in Yuma County ¹⁰

¹⁰ Data obtained from the Arizona Department of Environmental Quality and the Arizona Corporation Commission

8.5 Water Adequacy

The Arizona Department of Water Resource (ADWR) Adequate Water Supply program was created in 1973 as a consumer protection program. As a result of this legislation developers of subdivisions are required to obtain a determination from ADWR concerning the quantity and quality of water available before the Arizona Department of Real Estate will allow any lot sales. If the application for a Water Adequacy Report successfully demonstrates that water of sufficient quality will be physically, legally and continuously available for the next 100 years, then the Arizona Department of Water Resources will determine the water supply to be adequate. The exact requirements for determination of adequacy can be found in Title 12, Chapter 15, Article 7 of the Arizona Administrative Code. If the water supply is determined to be inadequate, the developer may still sell lots, but the inadequate determination must be disclosed to potential buyers in the public report approved by Arizona Department of Real Estate and in all promotional materials. If a provider with a Designation of Adequate Water Supply will serve the proposed subdivision, then the developer only has to provide a written commitment of service from the designated provider.¹¹

In 2007 the legislature passed Senate Bill 1575 which, among other things, provides clear authority for cities, towns and counties to adopt an ordinance requiring new subdivisions to obtain a determination of an adequate 100-year water supply from the Arizona Department of Water Resources in order to obtain final plat approval from the local platting authority. On July 7, 2008 the Yuma County Board of Supervisors made use of this newly granted authority and added Section 4.31—Water Adequacy to the Yuma County Subdivision Regulations. This section requires as of August 10, 2008 that all subdivisions being platted in Yuma County obtain a determination of water adequacy from the Arizona Department of Water Resources prior to a final plat being issued. This requirement applies to all of Yuma County and not just the unincorporated portions of the County.¹¹

Between 1973, when the Adequate Water Supply program was started, and August of 2008, a total of 19 subdivisions that were platted in unincorporated Yuma County were given a determination of inadequate water supply by the Arizona Department of Water Resources (see Table 6 on page 26). The most common reason for a finding of inadequacy was insufficient data meaning that the applicant chose not to submit necessary information or the available hydrologic data was insufficient to make a determination. Seven subdivisions were found to have an inadequate supply of water because the source of water identified did not meet drinking water quality standards, and the applicant failed to demonstrate provisions to bring this water up to standards.

Nearly all subdivisions that were determined to have inadequate water supply were platted as dry lot subdivisions, which means that individual homeowners are responsible for drilling their own wells and for the quality of water produced by these wells.

¹¹ Arizona Department of Water Resources.

Water Resources Element

Subdivision Name	Location			No. of Lots	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination	Date	Water Provider at Time of Application
	Township	Range	Section					
Arletta Estates	9 South	19 West	14	8	Inadequate	C	02/05/75	Dry Lot Subdivision
Caballo Farms	6 South	15 West	31	60	Inadequate	C	05/19/75	Dry Lot Subdivision
Crystal Sands	7 South	13 West	12, 13	15	Inadequate	C	07/01/74	Dry Lot Subdivision
New Tacna Townsite	8 South	17 West	25	10	Inadequate	C	01/15/87	Tacna Water Company
Orange Grove Ranch Estates	9 South	18 West	3	122	Inadequate	C	01/15/75	Dry Lot Subdivision
Rio Salado Ranches 1 & 2	6 South	11 West	24, 25	116	Inadequate	D	03/14/74	Dry Lot Subdivision
4E Industrial Park	9 South	23 West	13	15	Inadequate	A	09/26/2007	Dry Lot Subdivision
Blaisdell	8 South	21 West	21	10	Inadequate	C	02/26/1975	Dry Lot Subdivision
Calli Maya Development	9 South	22 West	22	10	Inadequate	A	09/26/2007	Dry Lot Subdivision
Citrus Business Park	9 South	23 West	13	7	Inadequate	A	08/28/2006	Dry Lot Subdivision
Citrus Business Park Unit 2	9 South	23 West	13	27	Inadequate	A	06/09/2008	Dry Lot Subdivision
Desert Foothills Estates #7	9 South	21 West	10	61	Inadequate	C	09/28/1994	Far West Water Company
Heritage Park	9 South	22 West	18	39	Inadequate	A	01/17/2007	Dry Lot Subdivision
Premier Storage Condominiums	9 South	23 West	12	519	Inadequate	A	10/18/2007	Dry Lot Subdivision
Rancho Bonitos Co-op Park	9 South	22 West	30	121	Inadequate	B	02/15/1987	Ranchos Bonitos Water Co.
Sandy Ranch Subdivision	9 South	22 West	18	34	Inadequate	A	09/27/2007	Dry Lot Subdivision
Sierra Sands, Phase 2	9 South	22 West	31	8	Inadequate	A	09/14/2007	Dry Lot Subdivision
Tuscan Ranch	9 South	23 West	36	36	Inadequate	A	01/29/2007	Dry Lot Subdivision
Yuma Vineyards	9 South	23 West	36	9	Inadequate	A	08/31/2006	Dry Lot Subdivision

Table 5: Subdivisions in Unincorporated Yuma County for which ADWR has Determined the Water Supply to be Inadequate¹²

Reason for Inadequacy Determination

- A:** Insufficient data (applicant chose not to submit necessary information, and/or available hydrologic data insufficient to make determination)
- B:** Legal (applicant failed to demonstrate a legal right to use the water or failed to demonstrate the provider's legal authority to serve the subdivision)
- C:** Water quality
- D:** ADWR unable to locate records showing why an inadequacy determination was made

¹² Arizona Department of Water Resources. "Arizona Water Atlas, Volume 7, Lower Colorado River Planning Area." November 2009

8.6 Water Resources Policies and Priorities

- WRP.1:** No new development or policy should degrade the water resources of existing water users and development.
- WRP.2:** Maintaining Yuma County’s existing allocations of Colorado River water is a top priority.
- WRP.3:** Yuma County’s existing entitlement to Colorado River water must be maintained.
- WRP.4:** All Yuma County residents should have access to high quality and reliably accessible drinking water.
- WRP.5:** It is preferable for new residential developments to be served with water obtained from existing municipal and industrial portions of Colorado River water entitlements.
- WRP.6:** Improvements to community water systems to improve the quality and taste of drinking water and to improve the reliability of systems should be constructed.
- WRP.7:** Land use adjacent to and in the immediate vicinity of major canals that supply irrigation and drinking water should not imperil the quality of water in these canals.
- WRP.8:** Small community water systems that rely on groundwater are the least desired way to supply drinking water; new systems should not be constructed and existing ones should be linked up with larger systems whenever it feasible.

8.7 Water Resources Actions

- WRA.1:** Yuma County will continue to prohibit the platting of any new subdivision that has not first obtained a determination of an adequate water supply from the Arizona Department of Water Resources or obtained written commitment of water service from a city, town or private water company that has been designated by the Arizona Department of Water Resources as having an adequate supply of water.
- WRA.2:** Yuma County will work to continue to identify community water systems that need capital improvements to improve the quality of water that they deliver, and will then work to get these needed projects funded through programs such as the Water Infrastructure Finance Authority’s Drinking Water State Revolving fund or any other applicable program.

Section Nine—Safety Element

9.1 Introduction

Both natural- and human-caused disasters pose risks to the health and property of Yuma County residents. The best way to understand and prepare for future disasters is to understand what and where disasters have occurred in the past and where one is most likely to occur again in the future. The simplest way to reduce or avoid impact from a disaster is to avoid being where the disaster strikes. For this reason the Safety Element contains a detailed set of maps that detail the areas in Yuma County most at risk from a variety of disasters and where disasters have occurred in the past. The specific types of disasters that the Safety Element examines are flooding, earthquakes, storms, wildfires and airport-related hazards.

Yuma County recognizes 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 county and its residents. For this reason numerous detailed plans, policies, and ordinances regarding hazards to public safety have been adopted by Yuma County. These documents include the *Yuma County Multi-Jurisdictional Hazard Mitigation Plan 2010*, *Yuma County Wildland Urban Interface Community Wildfire Protection Plan*, *Floodplain Regulations for Yuma County* and *Article VII—Airport District of the Yuma County Zoning Ordinance*. The intent of the Safety Element is to bring the most important goals, policies and objectives of these documents into one place to allow them be considered in a comprehensive manner together and with all the goals, policies and objectives contained within the Yuma County 2020 Comprehensive Plan.

Because distance and availability from existing public safety infrastructure needs to be a consideration in any future development, maps depicting this are included in the Safety Element. By including a clear set of maps depicting all this in the Safety Element, it helps ensure that such considerations are taken into account in all future development decisions. The Safety Element also identifies an area of the county where increased train traffic combined with limited railroad crossings makes access by emergency vehicles less reliable.

Public participation was the single-most vital element in the creation of the 2020 Yuma County Comprehensive Plan. Multiple public meetings were held by Planning staff at locations all across the County at which the Safety Element and public safety in general were discussed. At these meeting both long and short term issues regarding public safety that residents felt needed to be addressed were gathered. The concerns of residents brought up at these meetings are reflected in the policies and planned actions that are set forth in this element.

The safety policies and priorities section contains the policy positions and priorities of Yuma County regarding public safety within unincorporated Yuma County. The safety policies and priorities contained within Section 9.8 are derived from comments and feedback from residents from across the County, comments from stakeholders and from detailed plans, policies and ordinances regarding hazards to public safety. All official actions taken by Yuma County regarding public safety should be in harmony with these policies and priorities. Further, when other agencies request Yuma County’s comments or recommendations on policy or projects that could impact public safety, Yuma County’s response will reflect as much as possible these

policies and priorities. Yuma County will support the applications of grants projects and policy changes that will further advance these policies and priorities.

The safety actions section (Section 9.9) contains the specific actions that Yuma County makes in an effort to advance the adopted safety element's policies and priorities.

9.2 Flooding

Flooding or flood-related events are the primary hazard impacting Yuma County. Damaging floods in Yuma County can be primarily categorized as either riverine or local area flows.

Areas that have inadequate drainage can be subject to localized shallow flooding and ponding caused by local area flows. Typically this type of flooding occurs when locally heavy rainfall occurs in a developed area that has no or insufficient drainage infrastructure. With no effective means to be conveyed to a natural drainage way or drain, water may pond in locally low lying areas, potentially causing damage to homes, businesses or infrastructure. In a number of older neighborhoods this type of flooding can impede access to the neighborhood. Identifying areas that are troubled by this type of flooding is one of the duties of the Yuma County Flood Control District. Identification of proposed remedies for areas troubled by localized flooding can be found in the most current version of the Yuma County Flood Control District Annual Assessment Report. The Comprehensive Plan and all other activities should support the goals and projects contained within this document.

Riverine flooding occurs along the established watercourses within the area. The two primary regional watercourses are the Gila and Colorado Rivers. There are also numerous other ephemeral washes draining into either the Colorado or Gila Rivers. Extensive networks of dams and flood control structures upstream of Yuma County usually limit flooding events on the Colorado and Gila Rivers. Prior to construction of these dams, flooding on both rivers occurred seasonally. However, extreme tropical storm remnants, heavy winter storms or early spring rains coupled with snowmelt and full reservoirs can still cause damaging floods along the Colorado and Gila Rivers. The following are examples of recent flooding events that had significant impact on Yuma County.

In 1983, exceedingly large amounts of runoff caused by rapidly melting snow from record snowfalls and late rains resulted in an unusually high volume of melt off which required the upper basin reservoirs to release unprecedented volumes of water into the lower Colorado River system. The releases caused the Colorado River to flood low-lying areas, caused erosion of river banks and caused surface ponding due to groundwater seepage. Septic tank systems and water treatment systems were also damaged. Damage in Yuma County was estimated at \$13 million.

In the winter of 1993, heavy rain fell over most of northern, central and southeastern Arizona causing water to begin spilling over the Painted Rock Dam just upstream from Yuma County on the Gila River. Downstream flows damaged crops and property on both sides of the Gila River. About 20,000 acres of farmland were flooded and huge losses were sustained in the lettuce crop and water flooded roads and closed bridges. Some 3,500 residents were evacuated from this area. All Gila River crossings were closed at one time or another during the flood. According to the *United States Army Corp of Engineers Flood Damages Report 21*, Yuma County had in excess of \$130 million in public infrastructure, agricultural, private property, economic and environmental damages.

Floodplain Regulations for Yuma County

There are specific areas in Yuma County that have a high risk of damage from flood. Therefore, the Yuma County Flood Control District has adopted the *Floodplain Regulations for Yuma County* in order to:

- Protect human life and health
- Minimize expenditure of public money for costly flood control projects
- Minimize damage to public facilities and utilities such as water, sewer and gas mains; electric, telephone and television lines; and streets and bridges located in areas of special flood hazard
- Maintain eligibility for State and Federal disaster relief

The *Floodplain Regulations for Yuma County* require that a Floodplain Use Permit be obtained before any new construction, development, substantial improvement, manufactured home placement or prefabricated building placement begins within any Special Flood Hazard Areas that have been classified by the Federal Emergency Management Agency (FEMA) and shown on a Flood Insurance Rate Map as A, AO, A1-30, AR, A99, AH, or V (refer to Map 1 on page 6). In all Special Flood Hazard Areas, development shall comply with the standards and regulations set forth in A.R.S. §48-3601 et. seq. and the National Flood Insurance Program (44 CFR Part 59, 60, 65, & 70) and Section 5.0 of the *Floodplain Regulations for Yuma County*.









<p>Zone D</p> 	<p>Areas in which flood hazards are undetermined, but possible.</p>
<p>Zone X-Shaded</p> 	<p>Areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.</p>
<p>Zone X-Unshaded</p> 	<p>Areas determined to be outside the 0.2% annual chance floodplain.</p>
<p>Zone X-Protected by Levee</p> 	<p>Area protected from 1% annual chance flood by levee.</p>
<p>Zone A</p> 	<p>Areas subject to inundation by the 1% annual chance flood. No depths or base flood elevations are shown within these zones.</p>
<p>Zone AE</p> 	<p>Areas subject to the 1% annual chance flood where Base Flood Elevations are determined.</p>
<p>Zone AH</p> 	<p>Areas subject to the 1% annual chance flood with flood depths of 1 to 3 feet (usually areas of ponding) and where Base Flood Elevations are determined.</p>
<p>Zone AO</p> 	<p>Areas subject to the 1% annual chance flood with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain) and where average depths are determined. For areas of alluvial fan flooding, velocities are also determined.</p>

Table 1: FEMA Flood Zone Definitions

Safety Elements - Flood Zones



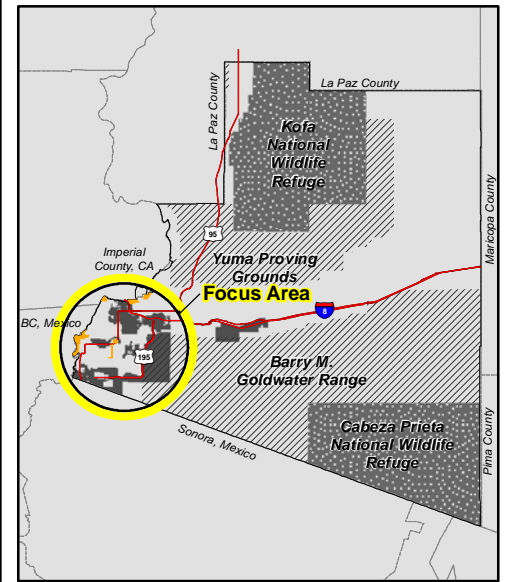
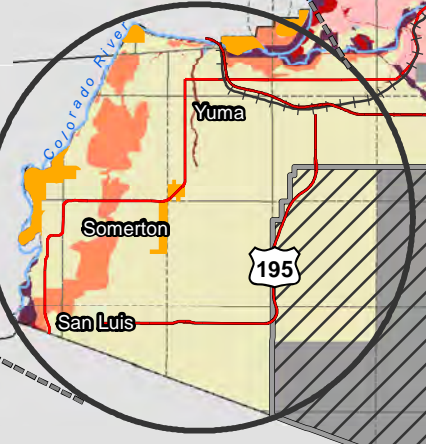
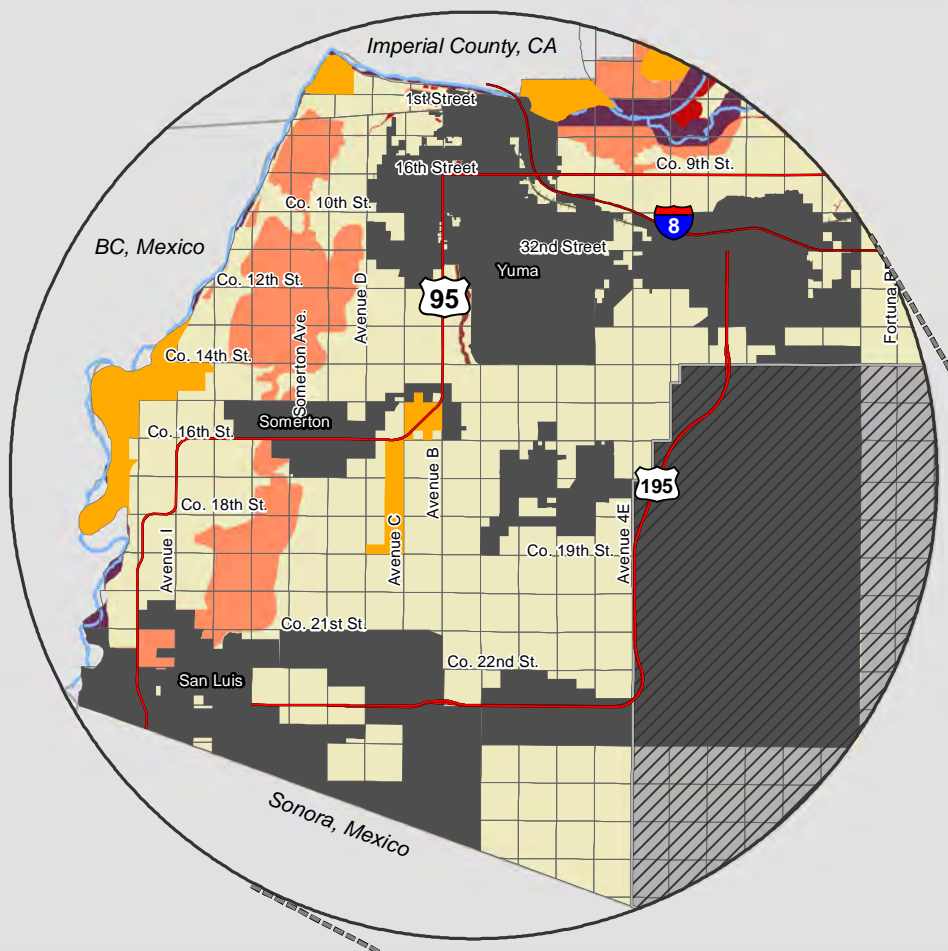
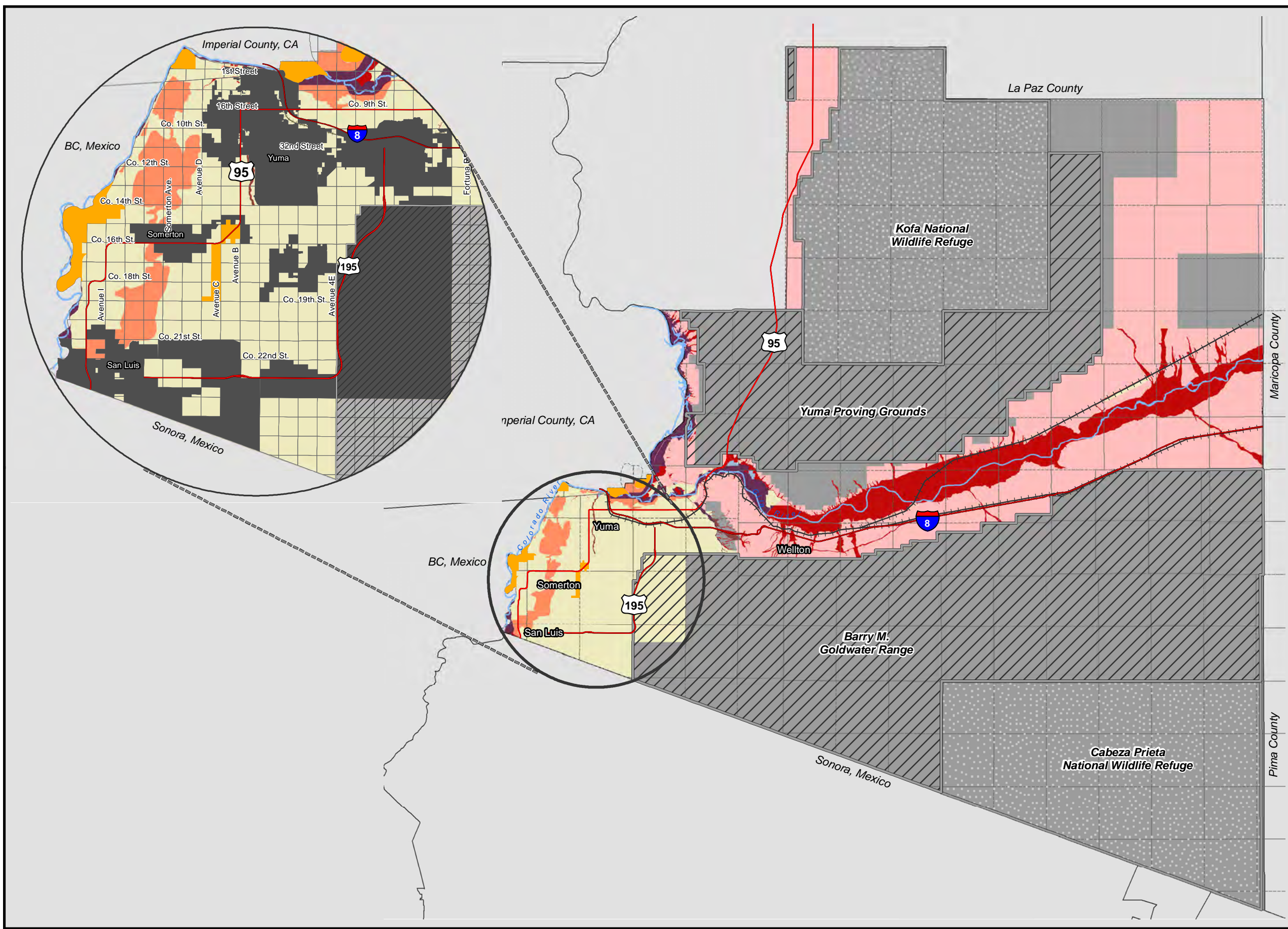
Flood Zones

- X Shaded
- A
- AE
- AH
- AO
- D
- X Unshaded
- X Protected By Levee
- Military Boundary
- Incorporated Areas
- Indian Reservations
- National Wildlife Refuge

For Information Only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division & Federal Emergency Management Agency

Date: June, 2011

Miles
 0 3 6



9.3 Earthquakes

The seismic hazard for the Yuma region is considered the highest in Arizona. Yuma County is located in relatively close proximity to several major geologic fault zones with historic seismic activity which are located to the west of Yuma County in Imperial County, California and in Mexico. These faults include the Imperial Fault (28 miles), Cerro Prieto Fault (45 miles), San Andreas Fault (65 miles) and San Jacinto Fault (65 miles). The stretch of the San Andreas Fault nearest Yuma has not ruptured in over 300 years and is considered a likely area to experience an earthquake of a magnitude of 8.0 or higher. An earthquake of that magnitude could cause catastrophic damage to the area.¹

Since 1973, these faults have produced over 5,000 earthquakes with an epicenter located within 250 kilometers of Yuma County (Map 2). The vast majority of these quakes were minor and only detectible with a seismograph. Only seven earthquakes had their epicenter within Yuma County and all of them extremely minor. However, there have been several earthquakes during the last 150 years that have caused damage within Yuma County due to ground shaking, and there is a reasonable probability that this will occur again. Table 2 shows some of the earthquakes that were most notably felt in Yuma County. Potential damage from ground shaking during an earthquake increases from east to west across Yuma County.

Liquefaction occurs when an earthquake causes ground shaking in an area that has shallow ground water and sandy soils. Liquefaction caused by an earthquake has a greater potential to cause widespread damage in Yuma County than does ground shaking. Liquefaction is the process wherein soils transform into a liquid state due to ground shaking from an earthquake. When the ground liquefies, sandy materials saturated with water can behave like a liquid instead of like solid ground. The ground may sink or even pull apart and sand boils or sand "volcanoes" can appear. In Yuma County, conditions such as sandy soils and high ground water are found in the Yuma and Gila Valleys, and put these areas at risk for liquefaction in the event of a strong enough earthquake. Map 3 depicts the areas deemed to be a high risk of liquefaction in Yuma County. After an earthquake in 1852, more than 100 mud volcanoes were found two weeks after the quakes in Yuma County. The volcanoes were still emitting steam and gases with the major one erupting every 10 to 15 minutes and throwing mud 60 to 70 feet in the air.²

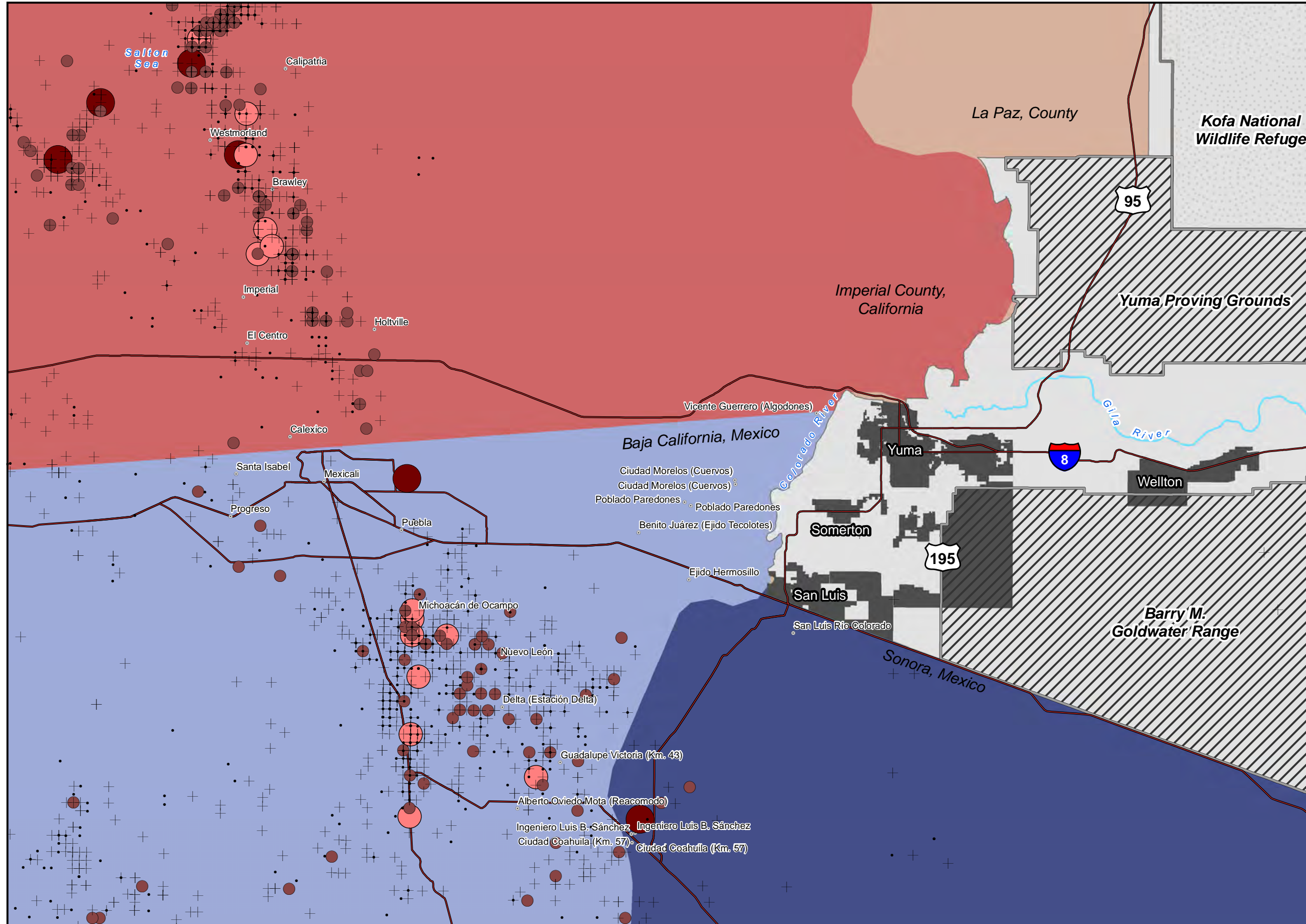

Liquefaction is especially damaging to in-ground infrastructure such as buried utilities and irrigation and drainage canals. An earthquake in 1940 that had its epicenter in Imperial County caused significant liquefaction to occur in the southern portion of the Yuma Valley. In Somerton, roads were buckled and bridges dislodged. Twenty flumes received heavy damage, as did bridges and culverts in the area. Canal banks shattered under the quake's force. Geysers of sand spewed from the cracks in the ground up to six feet in the air. The earthquake damaged sections of the levee railroad grade near Gadsden, four water services lines were broken and the irrigation system was badly damaged.

¹ Arizona Division of Emergency Management "State of Arizona Multi-Hazard Mitigation Plan" November 2007

² DuBois, Susan M & Ann W. Smith "Earthquakes Causing Damage in Arizona." *Bureau of Geology and Mineral Technology*. September 1980.

³ U.S. Bureau of Reclamation. "Yuma and Yuma Auxiliary Project History"

Safety Element - Earthquakes in the Yuma Vicinity 1973-2010

Magnitude

- Less than 3 ·
- 3 to 3.99 +
- 4 to 4.99 ●
- 5 to 5.99 ○
- 6 to 6.99 ●
- More than 7 ✱

Military Boundary ▨

National Wildlife Refuge ▩

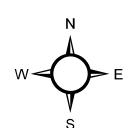
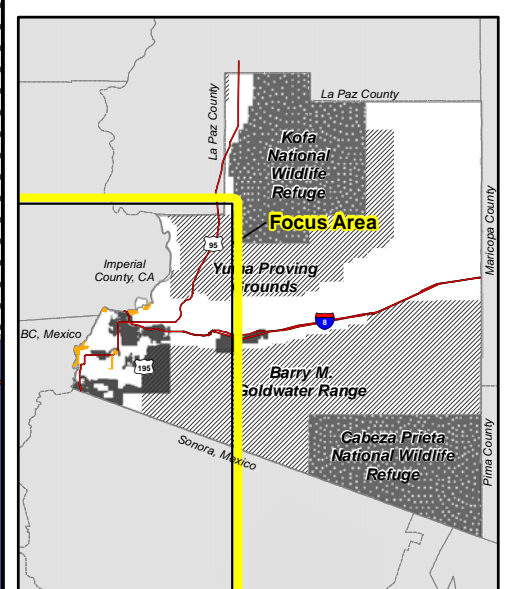
Incorporated Areas ■

Yuma County □

For Information Only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division & U.S.G.S

Date: June, 2011

Miles
 0 6

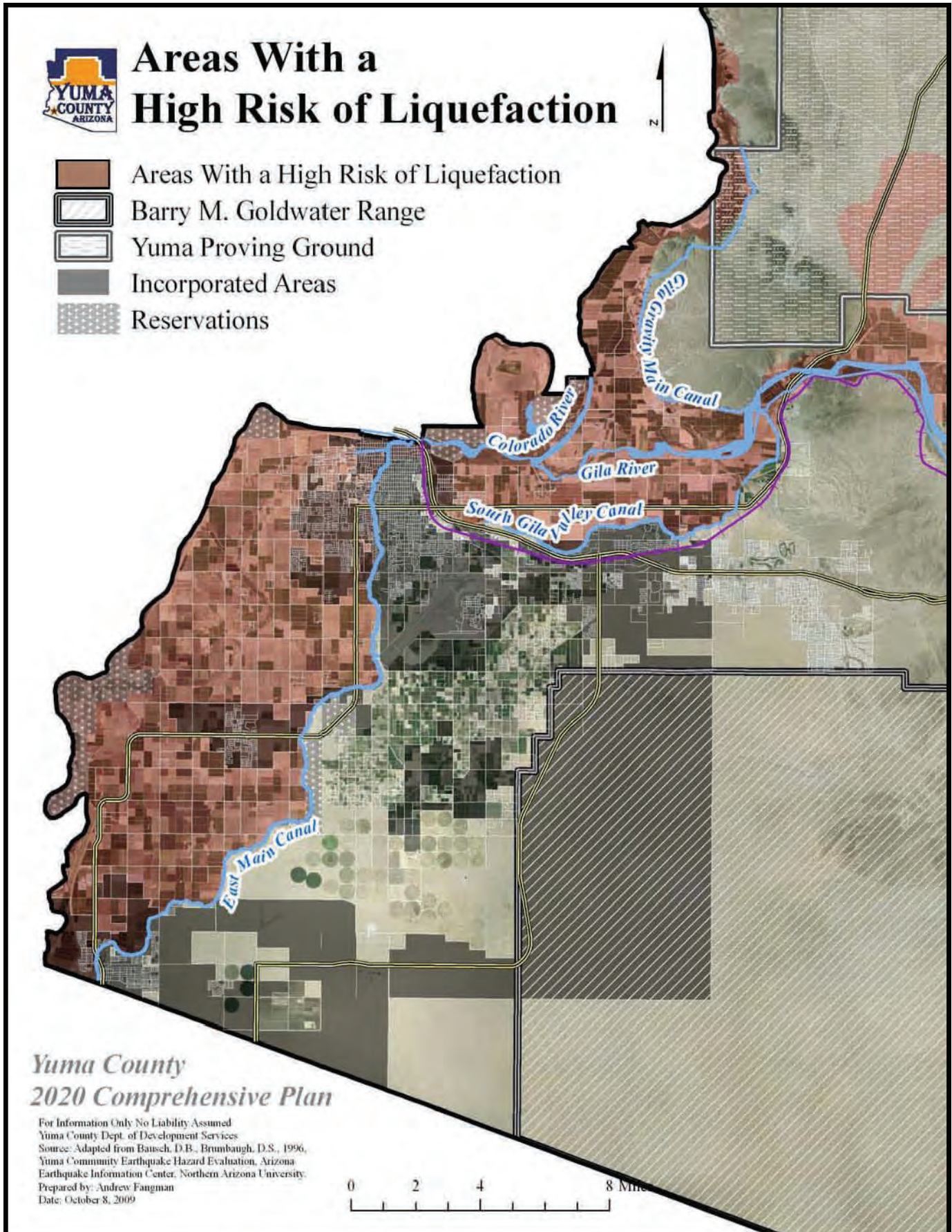



Safety Element

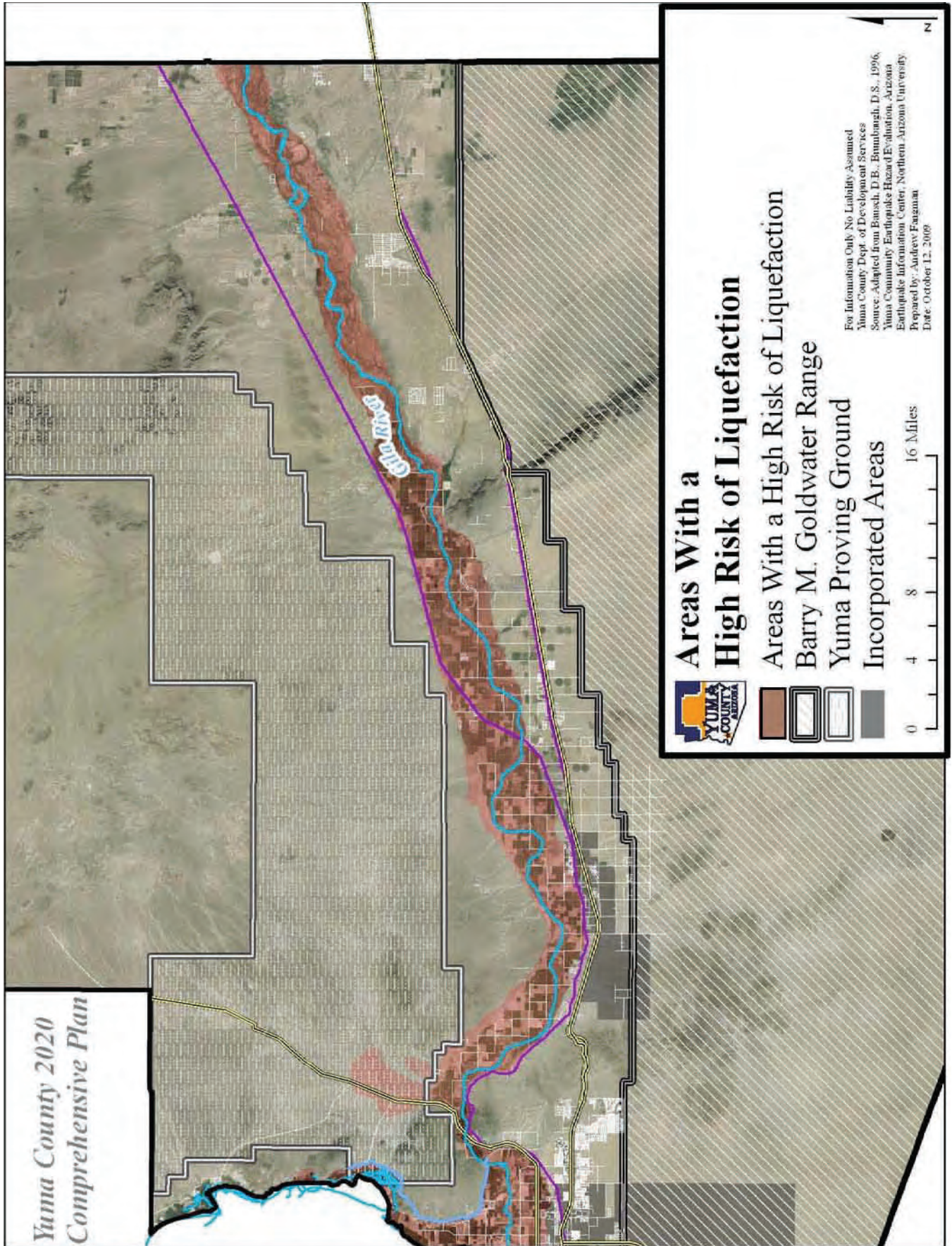
Date	Location	Intensity	Effects on Yuma County
November 30, 1852	20 to 30 miles southwest of Yuma	IX-XI	In the central area more than 100 mud volcanoes were found more than two weeks after the quakes. The volcanoes were still emitting steam and gases with the major one erupting every 10 to 15 minutes and throwing mud 60 to 70 feet in the air. The shock was violent at Fort Yuma. Much fissuring occurred in the Yuma area. In some places the Colorado River sank two feet and the riverbank caved in at many locations ⁴
July 30, 1891	Lerdo, Mexico	IX-X	Large fissures opened up along the Colorado River in Mexico. In Yuma people rushed into the streets, some walls were cracked, and small objects were moved about. ⁴
May 19, 1940	Imperial County, CA	X	Many sand boils were observed near Gadsden. Geysers spouting water several meters high also were reported. Canals, drainage channels, flumes and bridges were damaged near Gadsden. In Somerton roads were buckled and bridges dislodged. Four water services lines were broken and the irrigation system was badly damaged ⁴
October 15, 1979	Near Brawley, CA	IX	Minor damage in Yuma ⁴
June 9, 1980	South of Mexicali, Mexico	IX	Knocked groceries off the shelves in stores in Yuma ⁴
February 9, 2008	12 Southeast of Mexicali	VI	Damaged the Gandolfo Annex in downtown Yuma ⁴
April 4, 2010	39 Miles South-Southeast of Calexico, Co	IX	Second strongest earthquake with an epicenter in Baja California ever measured. Felt strongly in Yuma County. Numerous buildings, mostly in southern Yuma County reported some damage. Caused power outages effecting approximately 4,900 customers in Yuma County ⁴

Table 2: Significant Earthquakes that Had an Impact in the Yuma Area⁴

4. DuBois, Susan M & Ann W. Smith "Earthquakes Causing Damage in Arizona." *Bureau of Geology and Mineral Technology. September 1980.*
http://www.azgs.state.az.us/Hazards_ocr/earthquakes/Summary%20of%20Earthquakes%20Causing%20Damage%20in%20AZ.pdf



Map 3: Areas With a High Risk of Liquefaction: Western Yuma County



Map 4: Areas With a High Risk of Liquefaction: Eastern Yuma County

9.4 Storms



Power pole that has been broken by a thunderstorm

Yuma County is subject to three different types of storms that can pose a risk to life and property: Summer monsoons, winter rains and tropical storm remnants. These storm types vary by time of year they occur, frequency and the kind and severity of damage done by them.

The most frequent type of storms that occur in Yuma are those associated with the annual monsoon season which runs from July to September. Monsoon season occurs when the

primary wind flow into Yuma County shifts from the west or northwest to the south or southeast. With this shift, winds blowing into Yuma County originate from over the Pacific Ocean and the Gulf of California, and as a result carry a great deal of moisture into the area. This moisture fuels frequent compact, swift-moving and powerful thunderstorms with winds of up to 80 miles per hour and rainfall rates exceeding an inch per hour. These storms are capable of unleashing violent flash floods, thousands of lightning strikes, crop-damaging hail and walls of blowing dust that can extend thousands of feet into the air and can lower visibility to just a few feet.⁵

Storms during the winter months tend to be much larger in area and longer in duration than monsoon storms; however, they are of a much lower intensity, particularly in regards to wind speed. Damage from these storms typically results from flooding. The storm that struck Yuma County on January 21, 2010, one the largest winter storms to ever strike the County, well illustrates the risks posed by this type of storm. This storm dropped nearly 2½ inches of rain causing wide-spread flooding of low spots, and closing numerous roads and schools. The City of Yuma received a Presidential Emergency Declaration to help pay for an estimated \$300,000 in damages to roads, retention basins, parks and other public infrastructure. The National Climatic Data Center estimated property damage from this storm at \$400,000. This storm was one of three winter storms to cause more than \$10,000 in damage from 2005 through 2010 as illustrated in Table 3 on Page 14.

⁵ NOAA/National Weather Service. "The North American Monsoon. Reports to the Nation on our Changing Planet." August 2004

The most potentially destructive type of storm that can hit Yuma County are tropical storms or remnants of a tropical storm or a hurricane. The northern end of the Gulf of California is located 40 to 50 miles south of the southern border of Yuma County. Under the right set of circumstances a hurricane coming ashore on the northern coast of the Gulf of California can reach Yuma County at tropical storm strength, as was the case in 1997 with Hurricane Nora, which hit with winds over 73 miles an hour.

More commonly, hurricanes or tropical storms come ashore on the northern coast of the Gulf of California and then reach Yuma County as remnants of tropical storms. These remnants, however, remain powerful storms, capable of producing more rainfall in 24 hours than is typically seen in a year. Strong winds are also part of these storms. The fact that these storms cover a much larger area than the typical thunderstorm increases the amount of damage that they can cause. The potential for widespread damage is well illustrated by the damage caused by the remnants of Hurricane Nora in 1997 where crop damage across Yuma County was estimated at \$200 million. Table 4 on page 15 lists the six times in recorded history that Yuma County was significantly impacted by a tropical storm, hurricane or its remnants. While this type of storm is the most destructive to threaten Yuma County, they are a rare occurrence.

An additional hazard that storms pose to Yuma County is that they can make access to certain inhabited areas of the county during and immediately after heavy rainfall events difficult. In some subdivisions developed prior to Yuma County adopting subdivision regulations and in many wild-cat subdivisions, access to homes are via unmaintained and unpaved roads. Many of these roads never included any provisions for drainage, or if they did, a lack of or inadequate informal maintenance rendered any provisions for drainage ineffective.

As a result, access to all or parts of these subdivisions can be impeded by significant amounts of standing water and mud during and after heavy rainfall events. Often, only high clearance four wheel drive vehicles have full access. This problem is amplified in areas of heavy clay soils where water percolates into the soil at a very slow rate, where areas of standing water can last for days. This thick clay soil forms a thick mud that can make passage for many vehicles difficult. The issue of lack of all-weather access to certain existing subdivisions and other residential areas and how this issue might be dealt with is covered in greater detail in the Circulation Element.



An unpaved and unmaintained street after a heavy rainfall

Date	Description	Reported
April 23, 2005	Winds associated with thunderstorms damaged roofs and carports. Power was knocked out in parts of the Yuma Foothills area. Small hail was also reported with these thunderstorms.	\$ 20,000.00
July 29, 2005	Power poles down at Avenue 45E and County 5th Street.	\$ 25,000.00
July 31, 2005	About 34 power poles down near County 13th Street leaving 1,000 customers without power.	\$ 50,000.00
August 1, 2005	Power poles knocked down in Dome Valley.	\$ 10,000.00
August 4, 2005	Trees and 30 utility power poles were blown down by storm winds.	\$ 50,000.00
August 6, 2006	Car windows broken by hail at Martinez Lake.	\$ 10,000.00
August 9, 2006	Power lines down and some equipment damaged by strong winds at YPG.	\$ 20,000.00
September 6, 2006	A roof was damaged by very strong winds and heavy rain washed out some dirt roads at YPG. Small hail was also reported.	\$ 20,000.00
September 2, 2007	Numerous trees and as many as 11 power poles reported down due to strong winds with peak gusts up to 84 mph. 600 people were left without power. Condos in the 100 block of West 27th Place had considerable roof damage with ceilings collapsing onto living rooms and dining rooms.	\$ 1,500,000.00
November 30, 2007	About 1,000 APS customers were left without power after heavy rains triggered fires to equipment on 15 power poles.	\$ 15,000.00
March 2, 2008	Peak wind gust measured at 46 mph at the airport in Yuma. Winds also damaged a roof of a bank	\$ 20,000.00
July 20, 2008	Heavy rain caused some damage to a thrift store in Yuma. Several businesses at Southgate Mall reported damage due to standing water. A new daily rainfall record 0.74 inches was set.	\$ 100,000.00
August 29, 2008	Trees were uprooted and a semi-trailer was turned over. A peak gust of 57 mph was measured. About 1,000 APS customers were left without power due to these thunderstorm winds.	\$ 150,000.00
September 10, 2008	Somerton police reported power lines down due to very strong winds from thunderstorms. At the peak of the storm, between 2,500 and 3,000 APS customers were without power.	\$ 150,000.00
September 11, 2008	Two power poles downed by strong winds at Avenue A and 3rd street in Yuma.	\$ 10,000.00
July 18, 2009	Thunderstorm winds created a huge dust storm that affected much of the Yuma area with near zero visibility. Wind speeds were estimated to be over 60 mph with considerable damage to property. At least one home was damaged with trees and power lines downed by strong winds.	\$ 100,000.00
July 24, 2009	Several power poles were downed due to strong thunderstorm winds.	\$ 20,000.00
September 5, 2009	Heavy rain hit Tacna with one inch in 30 minutes. Minor street flooding was reported in town and Avenue 16E in the Dome Valley was washed out. At least one business in Wellton was damaged by flooding. The official amount at the Yuma airport was 1.62 inches. Power outage reported by Wellton Irrigation District lasted about 4 hours. Trees were uprooted and power poles were damaged. Lightning struck a home near highway 95 and Avenue 5E, resulting in a fire.	\$ 70,000.00
October 27, 2009	Winds increased during the late afternoon hours and caused a power outage to the area of San Luis and Somerton. The outage initially affected 16,000 customers in southern Yuma County.	\$ 10,000.00
December 7, 2009	Strong winds resulted in power outages and minor structural damage in Yuma.	\$ 30,000.00
January 21, 2010	Four semi-trucks overturned on Interstate Highway 8 at milepost 42 and milepost 67 due to high winds. Flooded streets and low spots. Numerous reports of large trees blown down in Yuma.	\$ 400,000.00

Table 3: Thunderstorms from 2005 to 2010 for which property damage was reported⁶

⁶ National Climatic Data Center

Date	Storm	Effects on Yuma County
September 30, 1921	Unnamed Storm	Tropical storm crossed the Baja peninsula southwest of Yuma and moved up the Colorado River Valley. Several stations along the Colorado River reported an excess of three inches of rain including 3.65 inches at Yuma.
August 28, 1951	Unnamed Storm	A hurricane came ashore on the Baja peninsula southwest of Yuma. An excess of 5.00 inches of rain fell in southwest Arizona.
September 2, 1967	Hurricane Katrina	Hurricane Katrina comes up the Gulf of California and comes ashore south of Yuma. Over 2.00 inches of rain fell in southwest Arizona with lesser amounts elsewhere.
October 7, 1972	Hurricane Joanne	Tropical Storm Joanne (earlier a hurricane) moved across the Baja peninsula and came ashore in western Mexico south of Ajo. It was the first “documented” time that a tropical storm reached Arizona with its cyclonic circulation intact. Heavy rains fell over much of the area with 2.21 inches falling in Yuma.
September 10, 1976	Hurricane Kathleen	After downgraded to tropical storm status, Kathleen lashed Yuma with sustained winds exceeding 50 mph and gusts as high as 76 mph. One man was killed as a 75 foot palm tree crashed onto his mobile home. This tropical storm inflicted over \$2 million in damages in Yuma and dropped half of the annual rainfall in one hour.
August 18, 1977	Hurricane Doreen	Severe flooding occurred in Yuma County. A weather station in the Yuma Valley recorded more than 7 inches of rain
September 25, 1997	Hurricane Nora	Yuma County was hit with the remnants of Hurricane Nora with 3.59 inches of rainfall recorded at the Yuma International Airport. The average “annual” rainfall in Yuma is 3.17 inches. The center of the storm passed directly over Yuma with wind gusts as high as 54 mph. Significant problems including downed trees, loss of electrical power, restricted access for emergency crews and severe flooding problems and wind damage were reported. In Somerton damage to mobile homes and flooding was reported. About 12,000 people lost power in Yuma. An estimated \$150 to \$200 million in damage was sustained throughout Yuma County due mainly to flooding crops. About \$30 to \$40 million of the damage was to lemon trees.

Table 4: Tropical Storms and Hurricanes that Significantly Impacted Yuma County⁷

⁷ National Weather Service. “Top Arizona Hurricane/Tropical Storm Events.”

9.5 Wildfires

Wildfires can be human-caused through acts such as arson or campfires, or can be caused by natural events such as lightning. If not promptly controlled wildfires may develop into an emergency. Even small fires can threaten lives and resources and destroy improved properties. The indirect effects of wildfires can also be catastrophic. In addition to stripping the land of vegetation and personal property, large, intense fires can harm the soil and waterways. Soil exposed to intense heat may temporarily lose its capability to absorb moisture and support life. Exposed soils can then erode quickly and be transported to nearby rivers, harming aquatic life, increasing flood risks and degrading water quality.⁸

Wildfire hazards within Yuma County are typically limited to the Colorado and Gila River floodplains and the more densely vegetated areas adjacent to some of the larger washes. Fires burning through the heavily vegetated floodplain areas can be very difficult to fight, especially in areas where water is not readily available. Areas where development has occurred directly adjacent to these vegetated floodplains, such as Martinez Lake, have the greatest risk of danger to lives and properties from wildfires in Yuma County.

Map 8 displays the location and size of wildfires larger than one acre that occurred between 1980 and 2009. This map also depicts the areas of Yuma County that are heavily vegetated based on the United States Geological Survey Gap Analysis Program which, in a detailed manner, classifies and maps vegetation coverage. The areas depicted on this map as heavily vegetated are areas in which dense types of vegetation is prominent. As this map clearly illustrates there is a very strong coloration between these areas of heavy vegetation and the location of wildfires. For any development to occur in or directly adjacent to these heavily vegetated areas the mitigation of the risk posed by wildfires must be considered.



August 2009 Wildfire in the Martinez Lake Area⁸

The Sonoran desert vegetation typically found in Yuma County is less dense than in other areas of the state. This sparse vegetation, combined with relative density of urban areas, makes wildfire risk within the County relatively low when compared to the more densely forested areas of the state. However \$5,685,793 has been expended through the Arizona Division of Emergency Management on responding to 19 declared wildfire events that included Yuma County between April of 1973 and September 2010.⁹

⁸ Yuma County Wildland Urban Interface Community Wildfire Protection Plan

⁹ Yuma County Multi-Jurisdictional Hazard Mitigation Plan



Map 5: Martinez Lake/Fisher's Landing



Map 6: Hidden Shores Village



Map 7: Riverfront RV Park

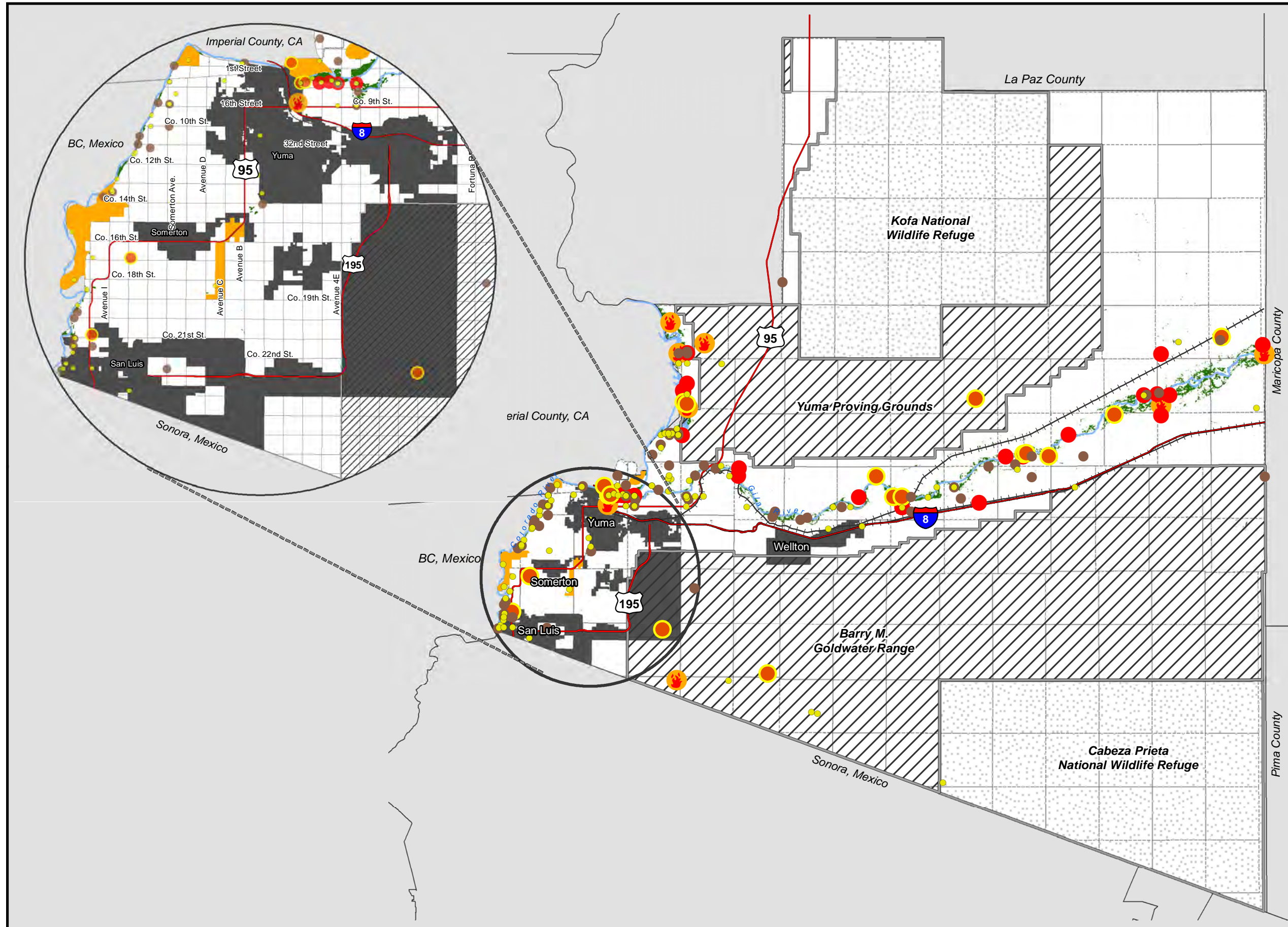
In September of 2010, the Yuma County Board of Supervisors adopted the Yuma County Community Wildfire Protection Plan (CWPP). The CWPP provides a comprehensive, scientifically-based analysis of wildfire related hazards and risks in areas where structures and other human development meet with undeveloped wildland (wildland urban interface). Three communities in Yuma County were identified as being within the wildland urban interface: Martinez Lake/Fisher's Landing, Hidden Shores Village and Riverfront RV Park. The CWPP also makes very specific recommendations on the risk from wildfires that can be mitigated in these areas. All new development in these areas should only occur in a manner that is consistent with these recommendations. Existing development should be encouraged to adopt as many of these recommendations as practical.

The Martinez Lake/Fisher's Landing area was rated as the residential area in Yuma County with the highest risk of damage from wildfires. This is due to the abundance of easily burnable fuels in the steep banked riparian areas lends itself to fast rates of spread and flame lengths greater than 11 feet. One of the largest local fires in recent memory occurred in the area in August 2009 when 70 acres burned and many structures were threatened.¹⁰

The risk from wildfires at Hidden Shores Village is rated as moderate. Vegetation has been cleared all the way around the park as well as between the permanent structures. While the vegetation has been cleared around the Village, there are house boats and fishing boats docked close to the riparian vegetation. A fire spreading from the riparian vegetation to the boats, and as a result into the community, poses the largest threat to Hidden Shores. The other major risk factor is the distance from continuously manned fire stations.¹⁰

The risk from wildfires at Riverfront RV Park is also rated as moderate. There is little vegetation within the Riverfront RV Park itself, but the riparian vegetation surrounding the park is dense and prone to burning. Evacuation is the largest issue as there is only one ingress/egress. Soft soil and dense vegetation impedes the ability of apparatus to operate outside of the park.¹⁰

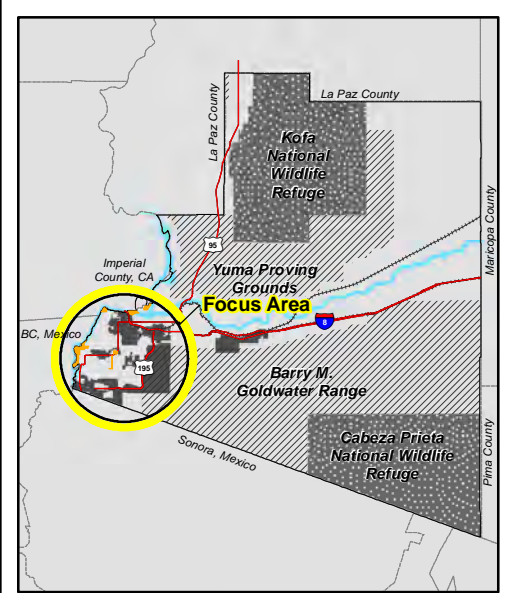
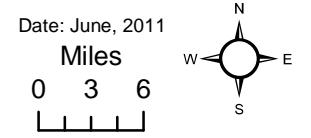
¹⁰ Yuma County Wildland Urban Interface Community Wildfire Protection Plan



Wildfires

- 1 to 5 Acres ●
- 5 to 50 Acres ●
- 50 to 100 Acres ●
- 100 to 500 Acres ●
- Over 500 Acres ●
- Heavily Vegetated Area ■
- Indian Reservations ■
- Military Boundary
- Incorporated Areas
- National Wildlife Refuge

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division & Federal Emergency Management Agency



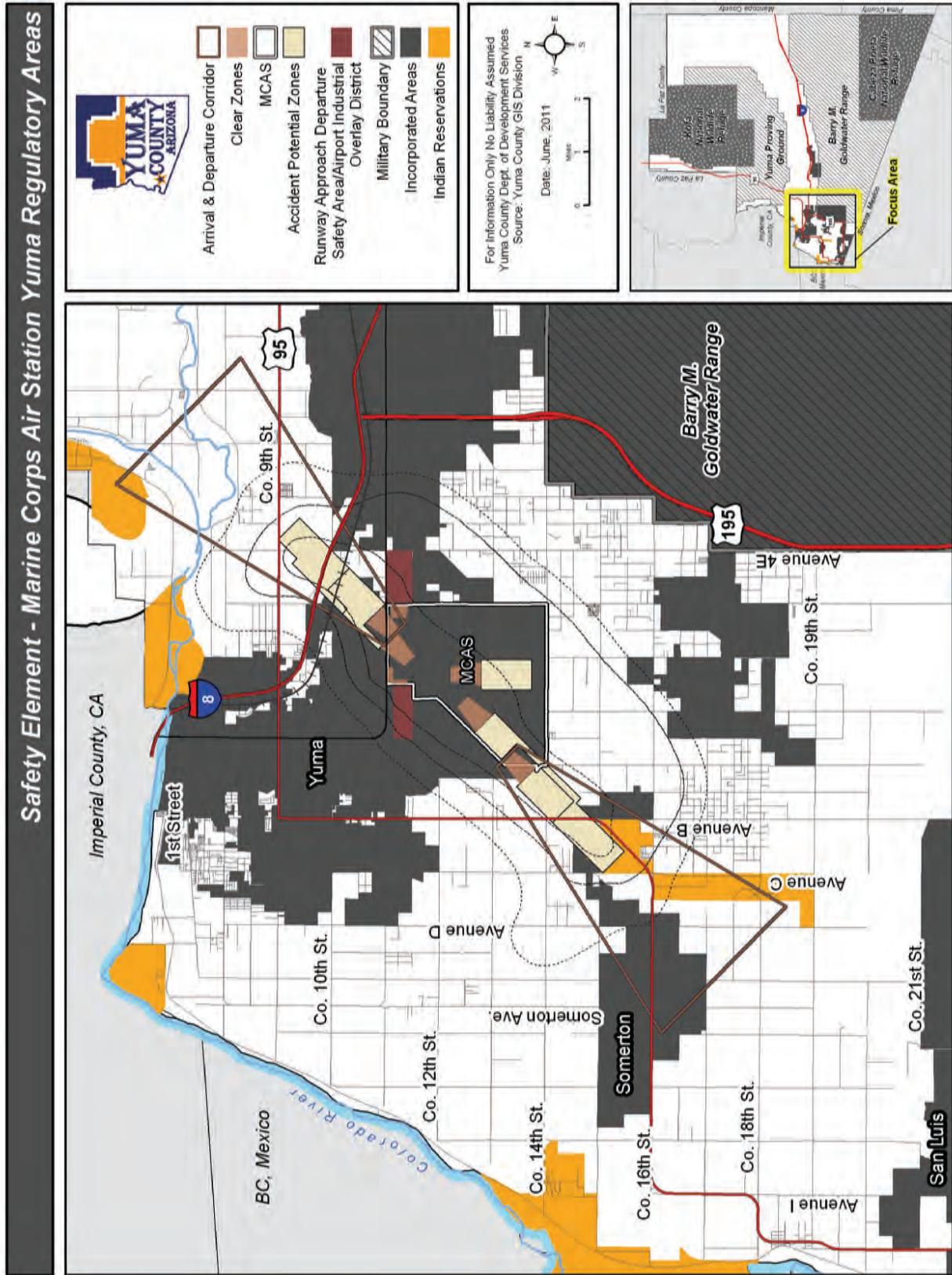
9.6 Aviation Safety

Aviation is a major industry in Yuma County and is centered around the Marine Corps Air Station-Yuma/Yuma International Airport. Marine Corps Air Station-Yuma (MCAS-Yuma) supports 80 percent of the Marine Corps' aviation training making it the busiest air station in the Marine Corps. In 2009 the Marine Corps reported 186,899 airfield operations at MCAS-Yuma. Yuma International Airport shares runways with MCAS-Yuma and serves both scheduled passenger service and general aviation. In 2009 there were 8,250 passenger aircraft and 36,887 general aviation operations. The large number of aviation operations being conducted out of MCAS-Yuma/Yuma International Airport increases the risk of plane crashes that could jeopardize the safety and property of Yuma County residents.

Since 1990 the National Transportation Safety Board has recorded 21 crashes of civil aircraft in Yuma County. Additionally there have been at least sixteen crashes of military aircraft in the same period of time in Yuma County. If these crashes occur over inhabited areas they can pose a significant risk to public safety. The most spectacular example of the danger the aircraft can pose to people and property on the ground occurred on June 15, 2005 when a Marine Corps AV-8B Harrier carrying four 500-pound bombs and 300 rounds of 25-millimeter ammunition crashed into the backyard of a home just north of MCAS-Yuma. Fortunately, damages were limited to structural damage to two homes and there were no serious injuries. In the immediate aftermath of the crash approximately 1,300 homes were evacuated.

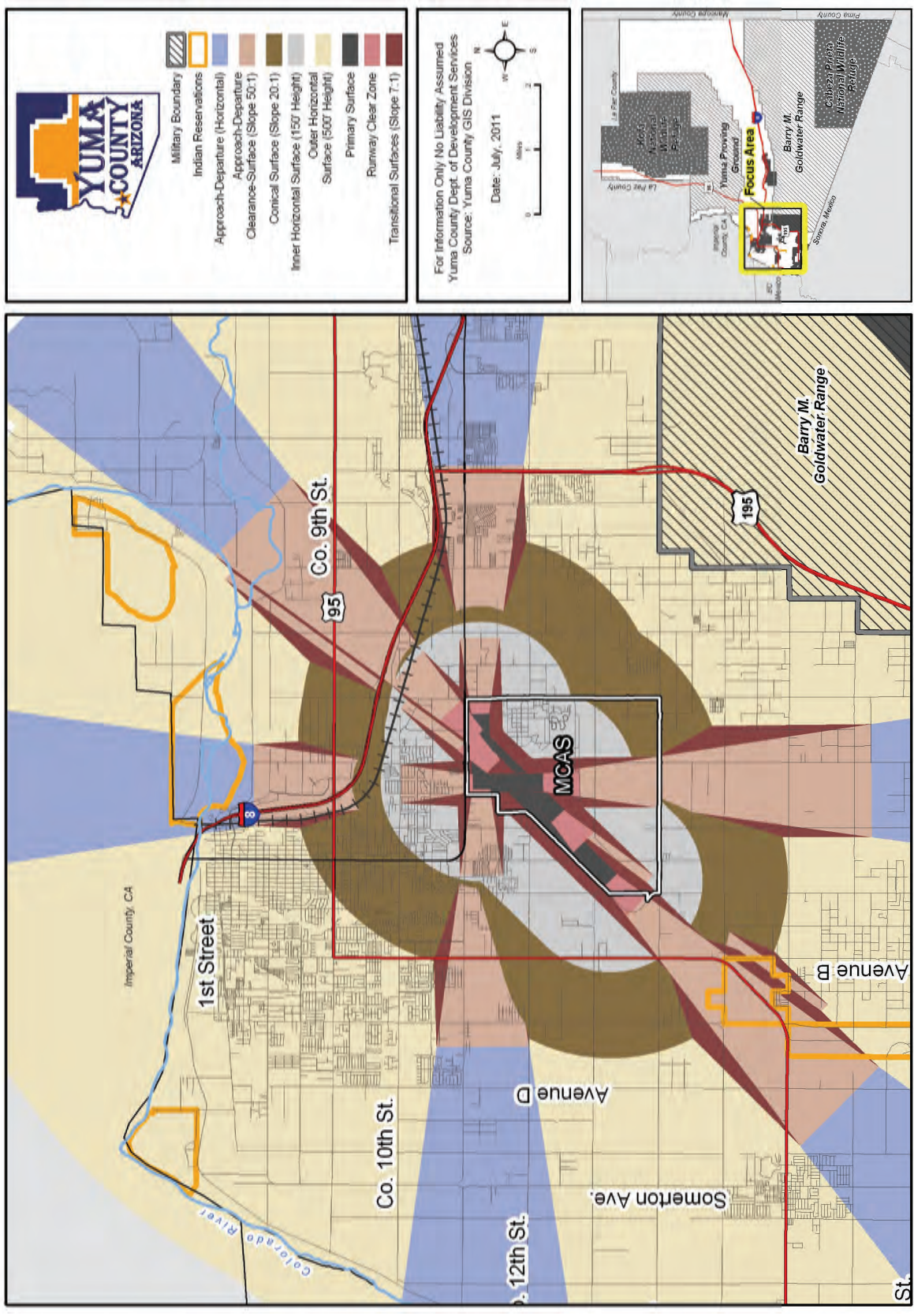
The avoidance of incidents such as the one that occurred in June 2005 is why both the State of Arizona and Yuma County have adopted regulations that limit the type of development that can occur in areas near MCAS Yuma/Yuma International Airport that have a high risk of an aircraft crash. Different areas have different risks of damage from an aircraft crash. Article VII of the Yuma County Zoning Ordinance and Title 28, Chapter 25 of the Arizona Revised Statutes define, map and restrict how land may be used in these areas. Map 9 shows these areas.

Placement of structures in the wrong location can also pose a serious risk to aircraft. The risk is most acute near the end of runways where aircraft are at very low altitude as they begin their climb or end their descent. A tall structure constructed in these areas could create a significant hazard to aircraft. To address this risk, restrictions have been placed on the height of structures near MCAS Yuma/Yuma International Airport. Map 10 depicts these restrictions. No new structures are allowed within runway clear zones. In other areas the maximum height of structures is determined by a slope formula based on distance from the nearest runway. Some areas have a simple maximum height. It should be noted that when the maximum height of these areas conflict with that allowed by a location's zoning district, the more restrictive standard applies.



Map 9: Airport Noise & Accident Potential Zones

Safety Element - Airport Runway Approach Clearance Map



Map 10: Airport Runway Approach Clearance Map

9.7 Law Enforcement and Emergency Services

Law enforcement in unincorporated Yuma County is provided by the Patrol Bureau of the Yuma County Sheriff's Office. The Sheriff's Office has five substations throughout Yuma County. Six squads patrol the portion of the County west of Araby Road. Deputies assigned to the Foothills substation patrol Yuma County east of Araby Road to Telegraph Pass. Deputies assigned to the Wellton substation patrol Yuma County east of Telegraph Pass. Water Safety Deputies patrol the Martinez Lake area and the Colorado River from the southern end of Yuma County to the northern border of Yuma County at the La Paz County line. The Criminal Investigations unit responds to all major crimes and investigates commercial and residential burglaries in the unincorporated areas of the County. Map 11 depicts the distance to the nearest Sheriff's Office facility for unincorporated Yuma County.

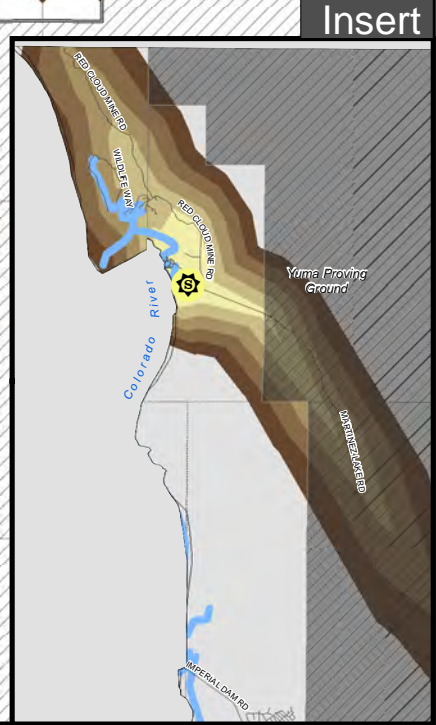
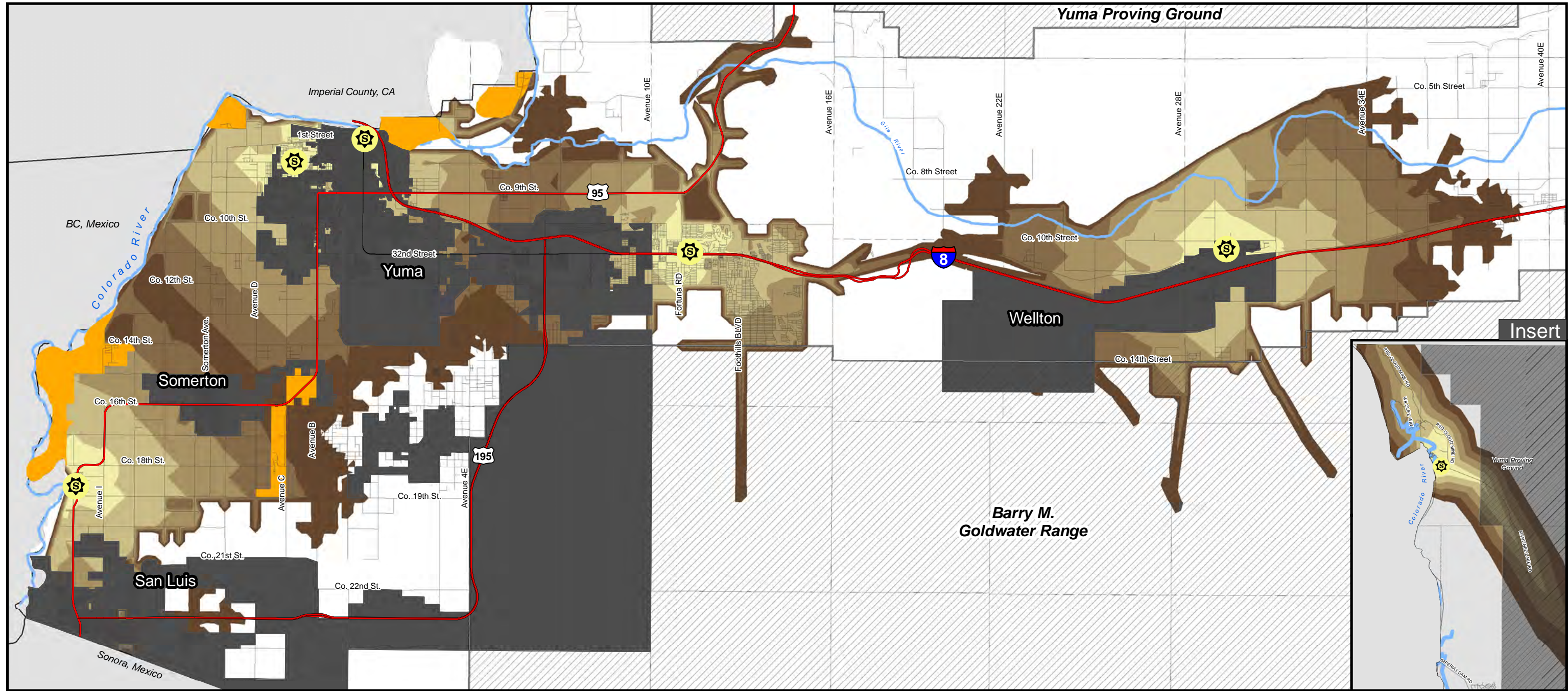
West of the Gila Mountains, fire/emergency medical services for unincorporated Yuma County are provided by the Rural/Metro Corporation and are funded by property owners and businesses through annual subscription fees paid directly to Rural/Metro. Rural/Metro has seven stations, all located west of the Gila Mountains, that respond to emergency calls in unincorporated Yuma County. Map 12 depicts the distance to the nearest Rural/Metro station for unincorporated Yuma County west of the Gila Mountains.



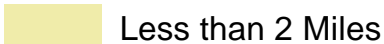

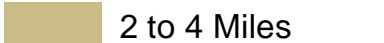

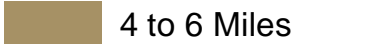
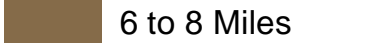
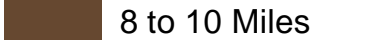
East of the Gila Mountains the Tacna Fire Department is the primary fire fighting agency for unincorporated Yuma County. The Tacna Fire Department is a volunteer fire department with a station located in the Tacna community on Avenue 40E. Ambulance service east of the Gila Mountains is provided by Tri-Valley Ambulance Service, Inc. which has a station located in the town of Wellton. Map 12 depicts the distance to the Tacna Fire Department and Tri-Valley Ambulance stations for unincorporated Yuma County east of the Gila Mountains.

In addition to the Rural/Metro and the Tacna Fire Department the municipalities and entities listed below have their own fire department or have significant fire fighting resources:

- City of Yuma
- City of San Luis
- Town of Wellton
- City of Somerton/Cocopah Reservation
- Bureau of Land Management
- Arizona State Land Department
- Marine Corps Air Station Yuma
- Yuma Proving Ground
- Imperial Wildlife Refuge

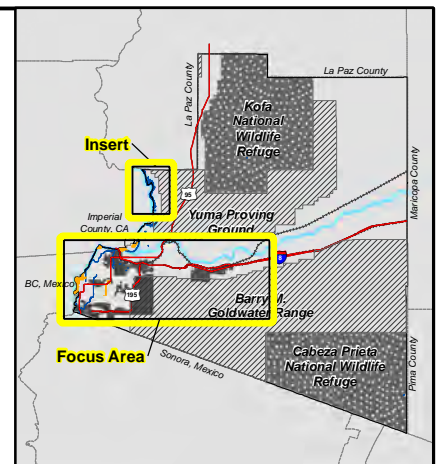
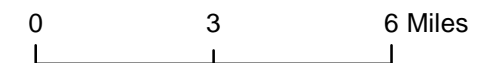
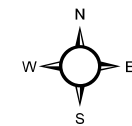
Safety Element - Law Enforcement



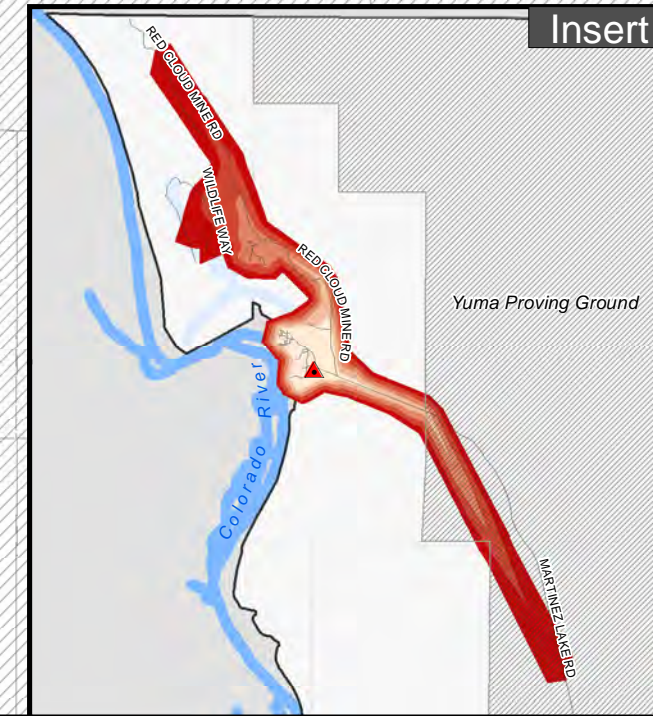
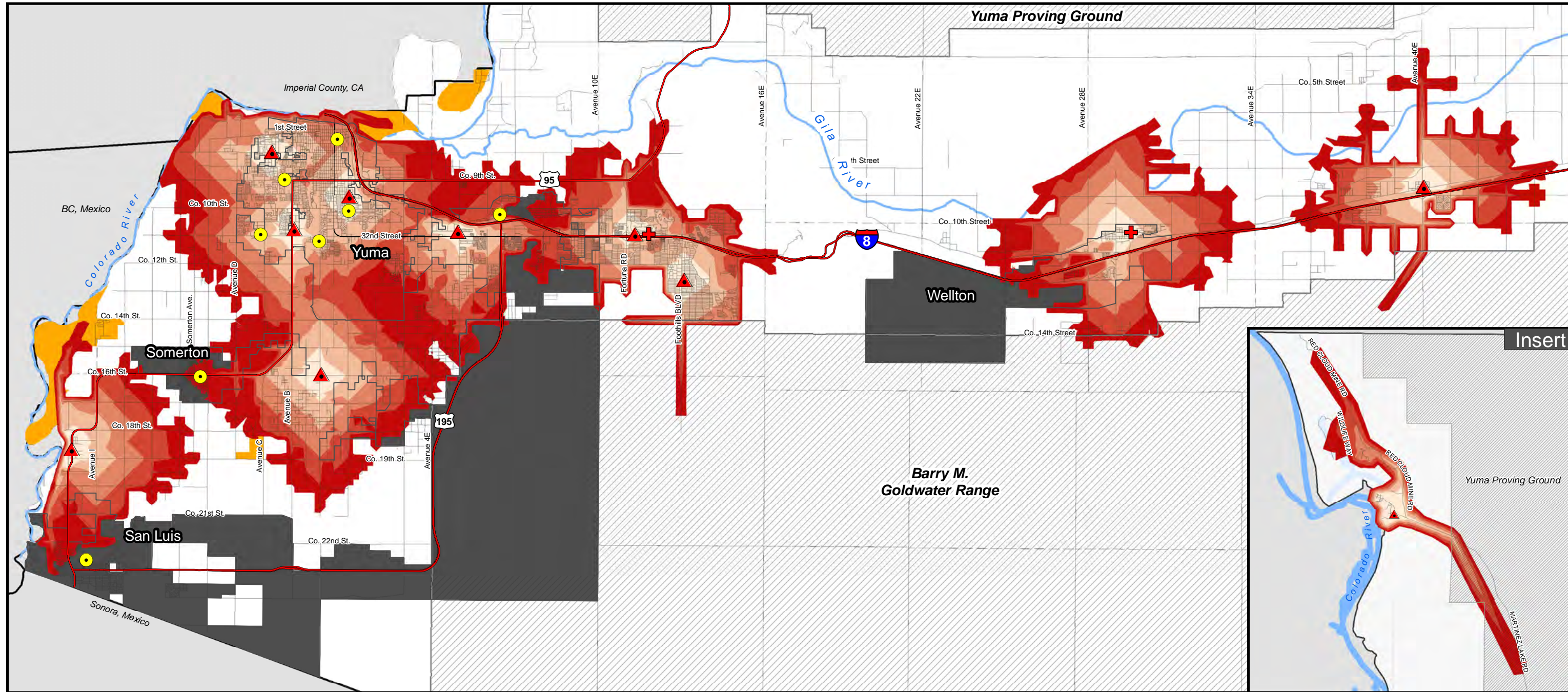
-  Sheriffs Station
-  Military Boundary
-  Less than 2 Miles
-  Incorporated Areas
-  2 to 4 Miles
-  Indian Reservations
-  4 to 6 Miles
-  6 to 8 Miles
-  8 to 10 Miles

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division

Date: July, 2011



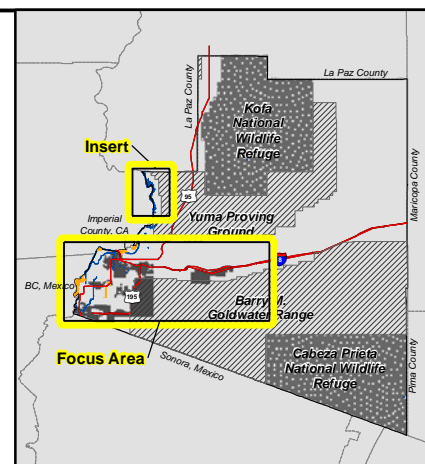
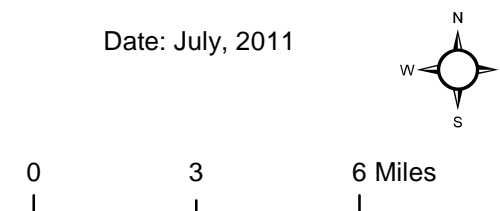
Safety Element - Fire/EMS Services



- | | | | | |
|---|---|------------------|---|---------------------|
| ▲ | Fire/EMS Station Serving Unincorporated Yuma County | Less than 1 Mile | ■ | Incorporated Areas |
| ● | Other Fire Stations | 1 to 2 Miles | ▨ | Military Boundary |
| + | EMS Station Serving Unincorporated Yuma County | 2 to 3 Miles | ■ | Indian Reservations |
| | | 3 to 4 Miles | | |
| | | 4 to 5 Miles | | |

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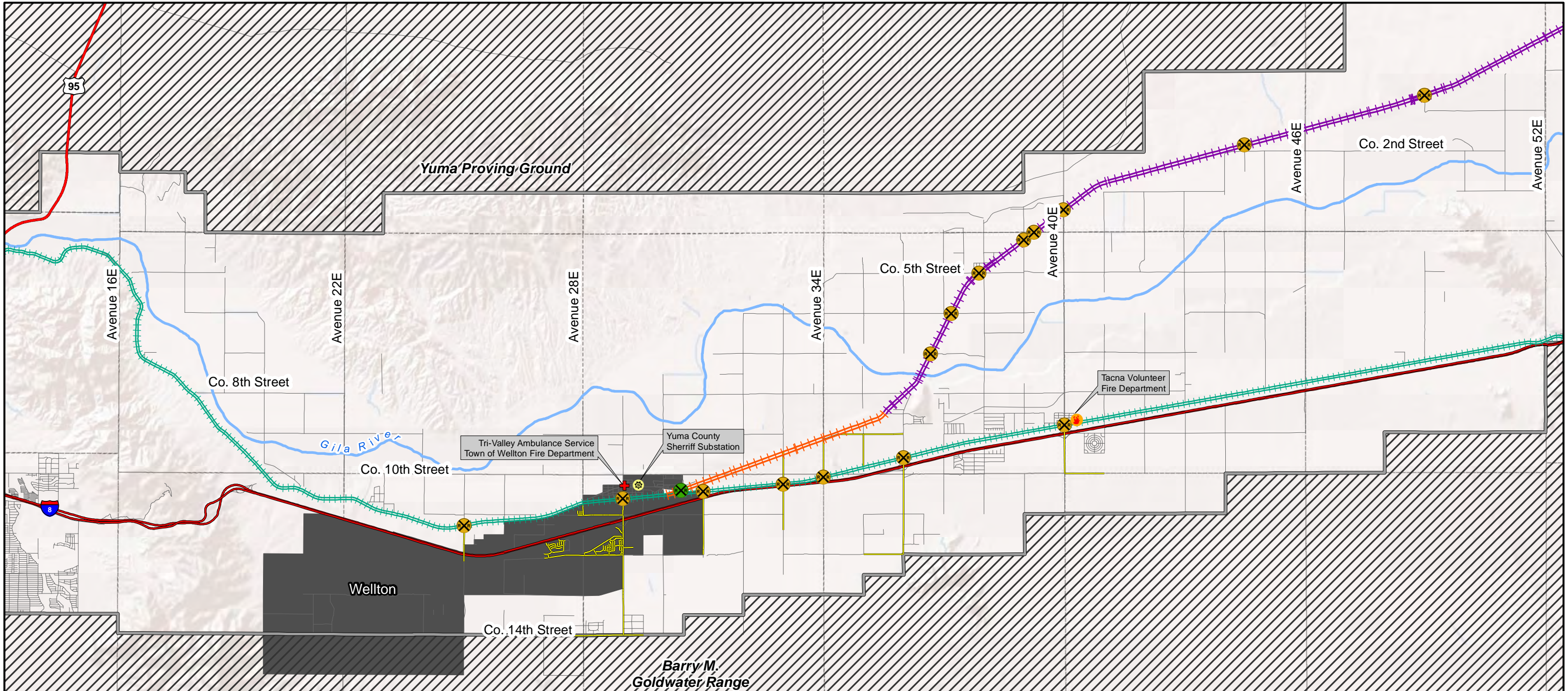


Railroad Crossings

An area of Yuma County where accessibility by emergency vehicles is a growing concern is the area located between the Gila and Mohawk Mountains and south of the Union Pacific Railroad tracks. There are seven railroad crossings in this area; six of them at grade. All emergency services in this area are located north of the railroad tracks. Two major trends in this area have been residential growth south of the railroad tracks, particularly in the Town of Wellton, and increasing train traffic, averaging around 49 trains a day in 2010. This could potentially double as Union Pacific completes its double-tracking project in Yuma County.

Concerns for this area are rooted in the fact that any emergency vehicle responding to a call south of the railroad track, with the only grade-separated crossing located at Avenue 33E, is very likely to have to cross an at grade railroad crossing. The chances of these crossings being blocked by a train have increased and will increase even further once the second track is completed allowing for 80 to 100 trains a day. Rail crossings are widely spaced in this area; usually there is a couple of miles between them with the only connection between these crossings being on unpaved roads. Therefore, if one crossing is blocked, the only alternative to waiting out the train is a several mile detour with much of it over unpaved roads. This could potentially pose a danger to public safety, particularly in times of bad weather. The increasing population and train traffic in this area increases the risk posed by this uncertain access. Area residents identified this as an important concern during the drafting of the Plan. To address this issue planning should begin for the construction of additional grade separated crossings or create paved connections of roads with crossings on the south side of the railroad tracks.

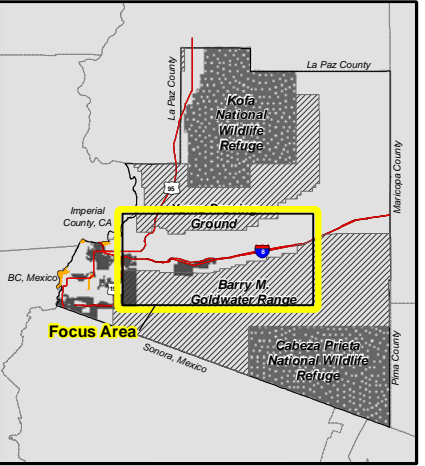
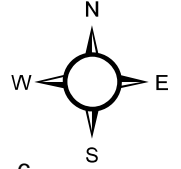
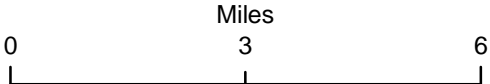
Safety Element - Railroad Crossings



- Grade Separated Crossing
- At Grade Railroad Crossing
- McElhaneey Cattle Company
- Wellton Brach (Inactive)
- Union Pacific Sunset Route
- PavedRoadsSouthRR
- Military Boundary
- Incorporated Areas

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 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division

Date: July, 2011



9.8 Safety Policies and Priorities

- SPP.1:** Promote disaster-resistant future development.
- SPP.2:** Increase public understanding, support and involvement in hazard mitigation and emergency response.
- SPP.3:** Increase Local capacity and commitment to become less vulnerable to hazards.
- SPP.4:** Improve hazard mitigation coordination and communication with federal, state, local and tribal governments.
- SPP.5:** Reduce level of human loss and damage and losses to existing and future critical facilities/infrastructure and other community assets due to floods.
- SPP.6:** Decrease vulnerability of community assets, especially critical facilities, located in the 100-year floodplain.
- SPP.7:** Reduce levels of human loss and damage and losses to existing and future critical facilities/infrastructure and other community assets due to wildland fires.
- SPP.8:** Reduce levels of human loss and damage and losses to existing and future critical facilities/infrastructure and other community assets due to earthquake.
- SPP.9:** Reduce levels of human loss and damage and losses to existing and future critical facilities/infrastructure and other community assets due to transportation incidents.
- SPP.10:** Reduce levels of human loss and damage and losses to existing and future critical facilities/infrastructure and other community assets due to other natural/ human caused hazards.
- SPP.11:** All inhabited areas should be able to be accessed in as direct manner as possible by emergency vehicles in all weather and have the signage and addressing needed to direct emergency vehicles.
- SPP.12:** Reduce the long distances to the nearest health and emergency services for the those living in Dateland and far Eastern Yuma County.
- SPP.13:** Promote effective animal control in all areas of the County.

9.9 Safety Actions

- SA.1:** Update, develop and support general plans, ordinances and codes in accordance with state and federal regulations to limit development in hazard areas or build to standards that will prevent or reduce damage.
- SA.2:** Adopt and support local, state and federal codes that protect assets and new development in hazard areas.
- SA.3:** Educate the public to increase awareness of hazards and opportunities for mitigation actions.
- SA.4:** Promote partnerships among the federal, state, counties, local and tribal governments to identify, prioritize and implement mitigation actions.
- SA.5:** Monitor and publicize the effectiveness of mitigation actions implemented community wide.
- SA.6:** Improve existing capabilities to warn the public of emergency situations.
- SA.7:** Develop mitigation programs to enhance the safety of the residents of each community during an emergency.
- SA.8:** Continue commitment to research, development and training of stakeholders in new technologies and hazard mitigation techniques.
- SA.9:** Establish and maintain closer working relationships with federal, state, local and tribal governments and agencies.
- SA.10:** Implement policies, procedures and regulations which reduce the exposure to flood hazards.
- SA.11:** Maintain coordination with state and federal flood-related agencies.
- SA.12:** Maintain compliance with the National Flood Insurance Program (NFIP) requirements.
- SA.13:** Develop a comprehensive approach to reducing the level of damage and losses due to wildland fires.
- SA.14:** Improve local, state, federal and tribal coordination and support existing efforts to mitigate wildland fire hazards.
- SA.15:** Educate the public about wildland fire dangers and mitigation measures.

9.9 Safety Actions (continued)

- SA.16:** Develop a comprehensive approach to reducing the level of damage and losses due to earthquakes.
- SA.17:** Adopt and support local, state and federal codes that protect assets and new development in earthquake hazard areas.
- SA.18:** Coordinate with rail, aviation, waterways, highway stakeholders, military, tribal, federal, state, county and local transportation agencies to develop transportation incident mitigation cooperatives and agreements.
- SA.19:** Adopt and support local, state and federal codes to protect life, property and natural resources from natural/ human caused hazards.
- SA.20:** Construction of additional grade separated rail crossings to provide better emergency vehicle access to the area between the Gila and Mohawk Mountains south of the railroad tracks.
- SA.21:** Identify, map and list hazardous material storage facilities.
- SA.22:** Enhance efforts to recruit and train local resident as volunteer firefighters and emergency medical technicians, particularly in eastern Yuma County.
- SA.23:** Increase animal control in areas such as Dateland and the South Mesa where area residents have identified feral dogs as a growing problem.
- SA.24:** Work to bring a mobile medical clinic to the Dateland area on a regular basis as currently the nearest medical facility is in Wellton.
- SA.25:** Thin overly-dense vegetation along riparian ecosystems, particularly when within 30 feet of buildings or structures.
- SA.26:** Use the existing fire district in the Martinez Lake area as a mechanism to better equip the fire station located there.
- SA.27:** Amend the Zoning Ordinance to prohibit the storage of combustible materials in areas that have been cleared as fuel breaks.

Section Ten—Energy Element

10.1 Introduction

The function and operation of public and private institutions, businesses and homes in Yuma County and the nation as a whole are dependent upon a sufficient supply of affordable energy. Yuma County is dedicated to promoting sound energy policies.

Yuma County community members and businesses are aware of the need to promote sustainable use of energy throughout their daily lives. Increasing costs of energy coupled with environmental concerns related to pollution and consumption of natural resources affirm this awareness. Yuma County officials, employees and business owners are aware of the need to become more efficient consumers of energy through effective building techniques and use of alternative energy sources. The effort to be more efficient consumers of energy requires a collaborative effort between all Yuma County community members to reduce demand and increase efficient energy use within Yuma County. Alternative energy resources can be promoted to assist Yuma County to achieve efficient energy consumption.

Yuma County recognizes the need for energy efficiency. The Energy Efficiency and Conservation Block Grant (EECBG) Program, funded for the first time under the American Recovery and Reinvestment Act of 2009, authorized in Title V, Subtitle E of the Energy Independence and Security Act of 2007 (EISA) and signed into Public Law (PL 110-140) on December 19, 2007, provides funds to units of local and state government, Indian tribes, and territories to develop and implement projects to improve energy efficiency and reduce energy use and fossil fuel emissions in their communities. The Program is administered by the Office of Weatherization and Intergovernmental Programs (WIP) in the Office of Energy Efficiency and Renewable Energy (EERE) of the U.S. Department of Energy (DOE). The Yuma County Board of Supervisors has received funds from this program which have been utilized to perform an energy audit on all County buildings to increase energy efficiency of these buildings.

Public participation was the single-most vital element in the creation of the 2020 Yuma County Comprehensive Plan. Multiple public meetings were held by Planning staff at locations all across the County at which the Energy Element was discussed. At these meeting issues regarding energy that residents felt needed to be addressed were gathered. The concerns of residents brought up at these meetings are reflected in the policies and planned actions that are set forth in this element.

The energy policies and priorities section contains the policy positions and priorities of Yuma County regarding energy efficiency within unincorporated Yuma County. The policies and priorities contained within Section 10.5 are derived from comments and feedback from residents from across the County, comments from stakeholders, and from detailed plans, policies and ordinances regarding energy Yuma County will support the applications of grants, projects and policy changes that will further advance these policies and priorities.

10.2 Existing Conditions

Energy availability and consumption in Yuma County is crucial for the operation and daily lives of Yuma County and its community members. This is especially apparent in the summer months when temperatures can exceed 120 degrees.

A typical home in Yuma County has an average annual use of 11,397 kilowatt-hours (kWh) of electricity. Annually from 2005 to 2010 Yuma County population growth averaged 1.5% annually. During this same time electricity usage grew at a rate of 2.3% annually. As the demand for electricity continues to increase, production must increase along with reliable infrastructure to deliver power to Yuma County consumers.

Energy Generation in Yuma County

Arizona Public Service's (APS) Yucca Generating Station located in Yuma County provides an abundance of energy for Yuma County. The natural gas fueled Yucca Power Plant consists of six combustion turbine units that produce nearly 243 megawatts; the Yucca Power Plant also includes a 75 megawatt steam turbine and a 20 megawatt combustion turbine.

Power is also delivered to Yuma County from the Palo Verde Nuclear Generating Station located in Maricopa County. The Palo Verde Nuclear Plant has been the largest power producer of any kind in the United States since 1992, producing more than 4,000 megawatts of electricity annually. Palo Verde uses treated effluent from several municipalities to meet its cooling water needs, unlike other nuclear plants in the United States which sit atop a body of water. Power is delivered to Yuma County via the Hassayampa to North Gila 500kV transmission line.



Power Transmission Facilities in Yuma County

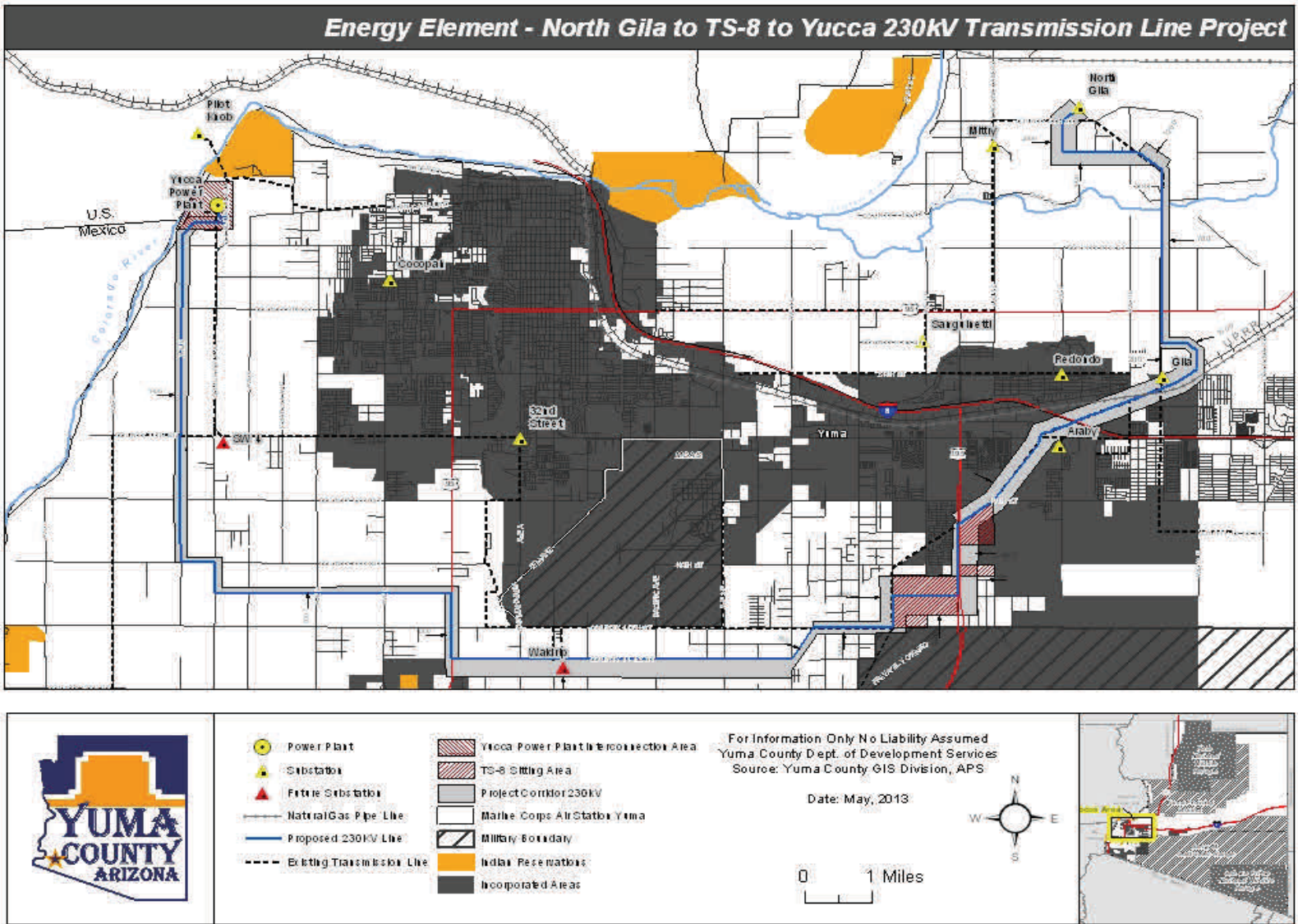
The Hassayampa to North Gila 500 kV transmission line delivers power from the Palo Verde Nuclear Generating Station in Maricopa County. This high voltage power line runs west from the power plant, supplying power to residents of eastern Yuma County, and then connects to the North Gila sub-station maintained by APS. From the North Gila sub-station power is then delivered throughout the grid via a system of 69 kV transmission lines.

A similar 69 kV transmission line from the Yucca Power plant in western Yuma County supplies power to County residents. Numerous transmission lines are located on arterial streets and other suitable areas throughout the County. Numerous electrical substations are located throughout Yuma County which act to reduce the voltage of power transmission lines for connection to the local power distribution system to homes and businesses.

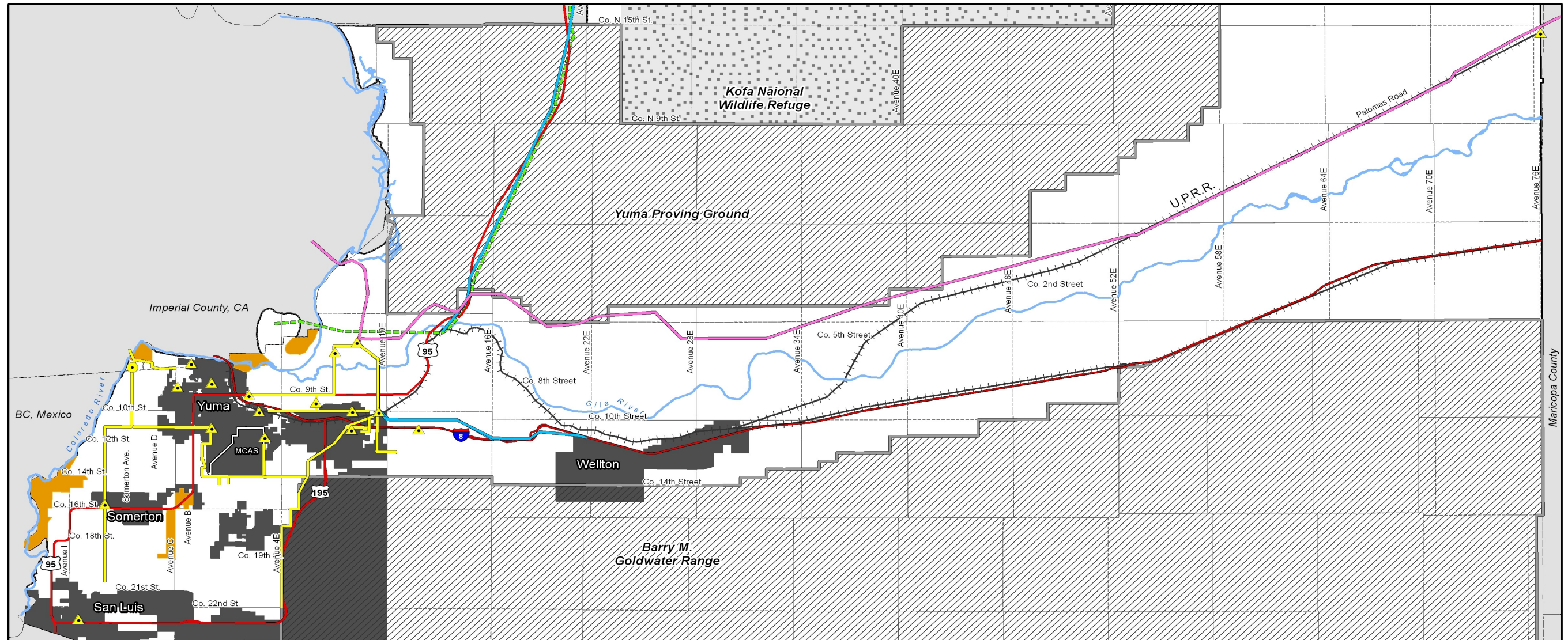
As Yuma County grows and the demand for power increases, utility providers must both improve existing and construct new infrastructure. Yuma County is dedicated to working with utility companies to mitigate any negative impacts this infrastructure could have on the local environment and its residents, while allowing expansion to serve residents' needs. The placement of electric power lines (115 kV and above) is decided through a state regulatory process that includes public input. Yuma County provides input into this process for facilities within the county. The Power Plant and Transmission Line Siting Committee makes recommendations on placement of the power lines to the Arizona Corporation Commission. The Commission has final approval of power line routes.



The North Gila to TS-8 to Yucca 230 KV transmission line project map depicts the future Arizona Public Service (APS) 230kv Electric Transmission Corridor that was approved by the Arizona Corporation Commission on February 2, 2012. The first phase of this future transmission line extends from the existing North Gila substation to the future TS-8 substation and is currently planned to be constructed by 2015. The second phase of the project will extend from the TS-8 substation to the existing Yucca Power Plant. The construction timeframe for this segment is currently unknown, but is at least 10 years in the future. Additional information about this project can be accessed at APS's website.



Energy Element - Yuma Area Transmission Plans

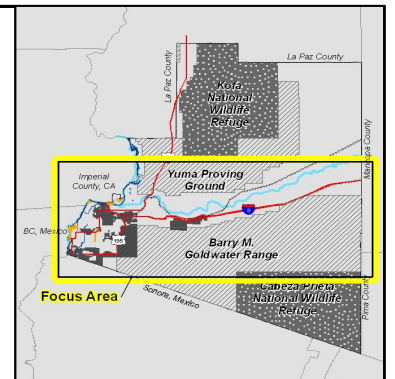
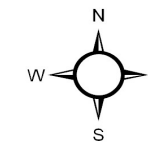
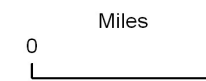


Utilities

- Substation
- Power Plant
- 69kV Transmission Line
- 115kV Transmission Line
- 161 kV Transmission Line
- Natural Gas
- Incorporated Areas
- Military Boundary
- Marine Corps Air Station Yuma
- Indian Reservations
- National Wildlife Refuge

For Information Only No Liability Assumed
 Yuma County Dept. of Development Services
 Source: Yuma County GIS Division

Date: June, 2011



Figures 0:

10.3 Energy Conservation and Efficiency

Virtually all the energy used in Yuma County in 2010 came from nonrenewable sources. Yuma County can mitigate potential negative impacts of traditional energy sources by supporting preservation of agriculture lands, effective land use planning patterns, alternative energy sources and supporting emerging energy technologies. The practices outlined in this section will help Yuma County become more energy efficient.

Sustainable Building

Sustainable building or “green” building involves implementing various practices that minimize the depletion of natural resources, water and energy consumption and construction waste. Sustainable building practices are healthier for the occupants and the environment. When properly utilized they conserve energy and water and limit environmental impacts.

The US Department of Energy’s Energy Savers Handbook states that in a typical 2,000 sq. ft. home, 40% of the annual energy bill can be attributed to heating and cooling costs. New and existing homes can be upgraded and made 20-25% more energy efficient by taking steps such as increasing insulation and sealing the building envelope to reduce air infiltration, provide shading for windows from direct exposure to sun, adding dual pane windows and replacing inefficient heating, ventilation and air conditioning (HVAC) systems. In addition to these steps, additional ways to make a home or business more energy efficient are listed below:

- Getting an energy audit of your home or business.
- Using energy efficient lighting and utilizing natural lighting.
- Weatherizing and sealing any air leakage.
- Providing shading with window sunscreens and architectural elements such as recesses, overhangs, patios and awnings.
- Upgrading to programmable thermostats.
- Installing and maintaining low water landscaping.
- Utilizing energy efficient appliances.
- Insulating hot water heater tank and pipes.
- Replacing inefficient doors and windows using Low-E and dual and triple pane windows on south and west exposures to reduce heat loss and gain.
- Replacing appliances and HVAC with more energy efficient systems when replacement is necessary.

10.4 Alternative Renewable Energy Sources

Energy-efficient improvements to buildings, appliances, equipment and construction will assist Yuma County to reduce energy consumption and increase efficiency. However, as technologies are perfected, a shift to renewable energy sources will play a crucial role in energy consumption. Renewable energy is energy which comes from natural resources such as sunlight, wind, and geothermal heat which are naturally replenished. Yuma County will provide support for the development of renewable energy sources which are in harmony with existing development and land use patterns throughout the County. These alternatives will be necessary to meet current and future needs and to lessen the region's dependence on non-renewable energy sources. Some of the renewable technologies listed below may be more suitable to the climate and geography of Yuma County. Ultimately the development of these alternative and renewable energy sources will depend on their availability, cost and public support.

Renewable Energy Sources:

Biomass: Any plant-derived organic matter. Biomass available for energy on a sustainable basis includes herbaceous and woody energy crops, agricultural food and feed crops, agricultural crop wastes and residues, wood wastes and residues, aquatic plants and other waste materials including some municipal wastes. Biomass is a very heterogeneous and chemically complex renewable resource.

Geothermal Energy: As used at electric power plants, hot water or steam extracted from geothermal reservoirs in the Earth's crust that supplies to steam turbines at electric power plants that drive generators to produce electricity.

Hydrogen Power: The use of moving water to drive a turbine generator to generate electricity.

Solar Energy: The radiant energy of the sun which can be converted into other forms of energy, such as heat or electricity.

Wind energy: Energy present in wind motion that can be converted to mechanical energy for driving pumps, mills and electric power generators. Wind pushes against sails, vanes, or blades radiating from a central rotating shaft.

10.5 Energy Policies and Priorities

- EPP.1:** Support the provision of adequate energy for the future while protecting the natural environment and resources.
- EPP.2:** Maintain cooperative working relationships with energy stakeholders in Yuma County.
- EPP.3:** Increase public understanding, support and involvement regarding energy issues.
- EPP.4:** Promote the energy efficiency in Yuma County.
- EPP.5:** Promote reduction of energy demand through community planning.
- EPP.6:** Support growth of renewable energy in Yuma County.
- EPP.7:** Increase local knowledge and commitment to become more energy efficient through sustainable building practices.

10.6 Energy Actions

- EA.1:** Work with utility providers through the planning process to identify appropriate locations and buffering for future energy generation and transmission projects.
- EA.2** Keep current information and review development proposals from utility providers to ensure an understanding of where facilities may be and to keep citizens and businesses informed.
- EA.3** Work closely with utility providers during planning and evaluation of development plans to assess cumulative, county-wide impacts on energy availability and reliability.
- EA.4** Yuma County will set an example by improving energy efficiency and use of renewable sources in County facilities and equipment when economically feasible.
- EA.5** Yuma County shall replace electrical equipment with more energy efficient equipment (appliances, HVAC, lighting) when necessary and when economically feasible.
- EA.6:** Promote energy efficient construction and effective land use patterns.
- EA.7:** Create informational brochures for distribution to contractors and homeowners for rooftop solar panels and water heaters.
- EA.8:** Create information packets and outreach programs to educate Yuma County residents on energy efficiency in the home and office.
- EA.9:** Provide energy conservation information on the Yuma County website with links to energy providers.
- EA.10:** Assess current plans and identify potential locations for renewable energy projects.
- EA.11:** Promote tree planting as a way to reduce summer cooling loads in homes and buildings.

Section Eleven—Housing Element

The Housing Element describes existing and projected housing market conditions in Yuma County, and the County’s approach to addressing housing conditions. Existing and projected housing market conditions are categorized by variety, quality and affordability. As consumer preferences and expectations related to housing type, size, quality and affordability also contribute to housing conditions, socio-economic conditions are also described. Existing and projected socio-economic and housing market conditions are more fully discussed in the June 2012 *Housing Needs Assessment*, which serves as the basis for this Housing Element.

11.1 Housing Variety

Housing variety is defined as the types of units that comprise the housing market and includes site-built single-family and multi-family units, and manufactured housing and mobile home units. A variety of housing types provide choices for both owners and renters.

In 2010, countywide 45,050 (49%) of the housing stock consisted of single-family units, 31,144 (34%) were manufactured housing units or mobile homes, 11% were multi-family units, and 3% were Boats, RVs and similar units. From 2000 to 2010, more than three quarters (77%) of the units added to the Yuma County housing stock were single-family, while one of five (18%) were manufactured housing and one in 25 (4%) were multi-family. In unincorporated Yuma County 63% of the added housing stock was single-family and 37% was manufactured; no new multi-family housing units were developed outside of incorporated areas.

Countywide in 2010, 71% (49,606) of households were owners and 29% (20,683) were renters. Eight of ten (31,345) single-family units were owner-occupied. Renters were just as likely to occupy single-family units (8,074) as multi-family units (8,272); 3,920 renters occupy manufactured housing units. Owner occupancy is also directly related to the number of bedrooms in a housing unit. Zero bedroom (efficiency) units are 2% (1,290 units) of the housing stock and are 64% renter occupied, while five bedroom units are 1% (895 units) of the housing stock and 85% are owner-occupied. Two- and three-bedroom units are the largest proportion of the housing stock - forty percent (28,167) of occupied housing units are three bedroom units, and another quarter (11,762) are two bedroom units.

Households with higher incomes are more likely to occupy single-family housing. Forty-two percent of owners with annual incomes below \$20,000 occupy single-family units compared to 75% of owners with annual incomes \$75,000 or more. Among renters 27% with annual incomes below \$20,000 rent single-family units compared to 65% of renters with annual incomes \$75,000 or more.

More than half (55%) of households occupying single-family unit structures are cost burdened or pay more than 30% of household income for housing, compared to about one-third (37%) of households occupying manufactured housing or 5+ unit structures. Housing cost burden among occupants of single-family housing is generally higher where the single-family housing stock is both newer and more prevalent.

Due to a current over--supply of housing brought on by the economic recession and mid-decade real estate bubble it is anticipated that new housing production will be minimal until the current excess supply is absorbed. Most housing economists agree that 2012 marks the half-way point through a 10-year adjustment and that by 2017, a more traditional rate of housing starts will resume.

Demographic shifts will dictate the types of housing that will be in demand as new housing production resumes. Of significance in Yuma County are longer life spans leading to a growing elderly population, the large number of young people who will enter adulthood and form new households, and a shift towards smaller families. Research conducted by the National Association of Realtors Smart Growth Program indicates that the aging population and younger households with fewer children generally want smaller lots, affordable homes, and easy access to community amenities and employment. Given demographic shifts, the demand for single-family homes on small lots is anticipated to increase, as is the demand for rental housing. Lower-density zoning may not accommodate this demand.

11.2 Housing Quality

Housing quality encompasses a range of issues that are central to quality of life, including housing safety, design and appearance, maintenance, energy efficiency, individual health, and community safety and livability. The age of the housing stock and overcrowding are the primary measures of housing quality.

Older housing units may be less energy efficient, resulting in higher utility costs for occupants. In addition, some materials, such as lead (in units built prior to 1978) and asbestos may represent health hazards to unit occupants. As of 2010, 35% of Yuma County housing units (30,651) were built prior to 1980, including 9,955 units in the unincorporated County.

Fifty-four percent of pre-1980 housing units (16,591) are owner occupied, thirty percent (9,190) are renter occupied, and sixteen percent are vacant (4,870). While the number of owners occupying older housing units is higher due to the higher homeownership rate, proportionately renters are more likely to occupy pre-1980 units – 44% of renters occupy older units compared to 30% of owners.

One of the challenges is ensuring both owners and landlords, particularly those of lower incomes, are able to maintain the older housing stock. Housing quality concerns can multiply when the older housing stock is renter-occupied. Rental property owners are generally seeking financial benefit through income generation, increased property value (appreciation), and depreciation (a tax benefit). All or some of these factors play a role in rental housing maintenance and older rental housing may offer few of these benefits.

Many older single-family and manufactured housing units provide affordable housing opportunities for lower income households. The County is working to preserve the existing housing stock through housing rehabilitation programs for owner-occupants. County policies that promote energy-efficient and sustainable construction materials also contribute to long-term quality housing stock. Expanding housing rehabilitation assistance opportunities to rental property owners may contribute to both housing quality and housing affordability.

11.3 Vacancy and Occupancy

Vacant and unattended residential properties can attract crime, cause blight, and pose a threat to public safety. Generally, a large volume of vacant housing indicates over-supply, yet vacant units are also common where there are large numbers of seasonal residents. According to the US Census Bureau, in 2010 one of five (19% or 16,433 units) Yuma County units were vacant, and 61% of vacant units (9,960) were held for seasonal use. Nearly two thirds (64% or 6,422 units) of vacant and seasonal units were located in unincorporated Yuma County. Among non-seasonal vacancies, 28% (1,887) were for rent, 14% (912) were for sale, 18% (1,187) were rented or sold but not yet occupied, and 38% (2,487) were held for “other” uses. Given the current over-supply of units and the economic recession, many “other” units may be in the foreclosure process.

11.4 Household Characteristics and Tenure

There is a direct relationship between income and tenure, and age and tenure. As income and age increase so does the rate of homeownership. Countywide, the homeownership rate increases from 52% for households with incomes below \$20,000 to 86% for households with incomes above \$75,000. Households with the greatest likelihood of two full-time wage earners also have higher incomes and are usually headed by a person between age 25 and 64. Countywide, with the exception of Wellton the homeownership rate increases steadily by age category from 21% of households headed by a person age 24 or younger to 87% of households headed by a person age 75 or older. Homeownership rates are higher among lower income households in the unincorporated County where a larger proportion of the population is also older – 70% of the lowest income households own.

Household composition and family type also influence the choice of tenure. In 2010, nearly six of ten (57%) Yuma County households consisted of a married couple family and married couple families have the highest homeownership rate (80%) of any family type. Comparatively, one of five (19%) households consisted of a single-parent family and single-parent households have the lowest homeownership rate of any family type – 53%.

Countywide, homeownership is most common (80%) among 2-person households and least common among 1-person (62%) and 3-person (61%) households. Tenure by household size varies significantly by jurisdiction. Larger households are more likely to purchase in jurisdictions with lower housing prices.

The homeownership and rental markets are intricately related and the inter-relationship plays out over time. During a time of economic expansion, renters often seek to purchase a home before prices rise; the increased demand results in increased purchase prices. As more renters choose to buy and prices increase, rental vacancy rates increase and rents go down. As rental property owners have difficulty renting units, some sell and selling prices go down as the supply of for-sale units increases. The reverse is true in a time of economic contraction. As demand for rental housing increases, vacancy rates decrease and rents go up. As rents go up, purchasing a home becomes more attractive again and the cycle restarts.

It is a widely-held belief that homeowners contribute significantly to community stability through their financial investment. Consequently, areas with high homeownership rates have been considered less vulnerable to displacement from gentrification and rising housing prices. Yet the recent economic recession, fueled in part by the housing finance crisis gives pause to this ideal and makes more clear the essential nature of affordable rental opportunities to community stability.

Renting provides for mobility among the workforce and an opportunity for potential purchasers to learn more about a neighborhood or community before making an investment. Renting also provides stable housing opportunities for households who do not desire to or cannot afford to purchase a home.

11.5 Housing Affordability

The industry standard for housing affordability is paying not more than 30% of gross household income for housing costs, although the standard among owners is often higher (40% to 50%) due to mortgage qualifying criteria that allow for a greater proportion of income expended for housing costs. These households are considered cost burdened.

The standard measures of housing affordability do not however measure choice or necessity; they simply measure the proportion of renters paying more than 30% of their income and owners paying more than 40% or 50% of their income for housing costs. Households may make choices such as living in more costly housing, overcrowded conditions, distressed neighborhoods, or poor quality housing, and sometimes far from employment. Households that make these choices may very well have affordability issues that are not measured by the industry standard, yet these choices influence housing demand.

11.5.a Rental Affordability

Simply defined, rental affordability measures the relationship between income and rent. The median rent in 2010 was \$708/month requiring an annual household income of \$28,320 or \$13.62/hour for a full-time employee. Countywide, median monthly rents increased 39% from 2000 and rental affordability declined 16% between 2000 and 2010. An annual increase of \$8,000 in household income from 2000 to 2010 was needed to afford the median rent.

According to HUD, the number of cost burdened renters in Yuma County increased 89% from 4,976 in 2000 to 9,421 in 2010. Increases in cost burden were seen at all income levels, with the rate of cost burden increasing at a higher rate among middle and higher-income renters. Increasing rates of cost burden among higher income households is in part attributable to the increased volume of and the cost of renting single-family units. More than half of households occupying single-family structures are cost burdened, compared to about one-third of households occupying manufactured housing or multi-family structures with five or more units.

While cost burden increased at a higher rate among middle- and higher-income renters, the rate of cost burden remains low in comparison to lower-income renters. Where nine of ten renters with incomes below \$20,000 are cost burdened, one of twenty with incomes above \$50,000 are cost burdened.

11.5.b 2010 Rental Unit Need

Housing unit need results when population grows or there is a mismatch between household income and housing costs. Based on 2010 US Census data there is an estimated existing gap of 2,395 affordable rental units, including 1,894 for households with incomes less than \$10,000/year and 501 for households with incomes between \$10,000 and \$19,999; affordable rents, including utilities, for these households would be \$250/month or less and \$250/month to \$500/month respectively. In the unincorporated County there is an estimated existing gap of 301 affordable rental units, including 160 units for households with incomes less than \$10,000/year and 141 units for households with incomes between \$10,000 and \$19,999.

The existing supply of rental housing affordable to lower-income households is not sufficient to address the need for such units. There are 1,977 multi-family units restricted for occupancy by households earning less than 60% of the County median income, including 433 units for elderly or disabled persons and 1,544 for families. Additional affordable rental housing units would address this need.

11.6 Homeownership and Home Purchase Affordability

Homeownership affordability is also defined by the relationship between income and rent. Between 2000 and 2010, purchase prices increased 38% (\$30,600), and home purchase affordability declined 4%, not accounting for mid-decade housing-boom price increases. Purchasing the median priced Yuma County unit in 2010 required annual household income of \$31,400 or \$15.10/hour for a full-time employee, up \$7,100 from \$24,300 or \$11.68/hour for a full-time employee in 2000.

The collapse in stock prices and the plunge in short-term interest rates earlier in the 2000s made housing an attractive alternative investment; households saw an option to increase their rates of return at a higher rate than was possible through stocks and cash. Falling house prices have reversed this effect in the last several years. Many homeowners who purchased or refinanced

during the housing boom are faced with declining property values, inadequate income to pay higher housing costs associated with interest rate resets, and fewer borrowing options. Many of these households are among the newly cost-burdened and recently foreclosed.

The number of owners paying more than 50% of household income for housing increased 63% from 2,828 households in 2000 to 4,605 or 9% of owners in 2010. The higher mid-decade cost of housing meant more purchasers required financing and the percentage of homes without mortgages declined from 46% in 2000 to 30% in 2010.

Based on typical mortgage assumptions and average housing prices, extremely low- and low-income households cannot afford to buy an adequately sized home without housing cost burden. Moderate-income and middle-income households are generally able to afford moderately-priced units; the private sector addresses home purchase demand for this economic segment of the population.

Households who are still renting are likely doing so either by choice or because other factors limit their ability to purchase. Two factors limiting home purchase are interest rates and the types of financing available. While interest rates remain at some of the lowest levels in history, access to credit has constricted. Many homeowners and potential purchasers are not able to take advantage of low interest rates because of poor credit, a weak job market and tight mortgage credit. Between 2005 and 2011, loan volume in Yuma County decreased 70% from 11,567 loans to 3,619 loans.

11.7 Housing Needs of Specific Populations

Certain segments of the population may have more difficulty in finding decent affordable housing because of their special needs and circumstances. These segments include the workforce, elderly households, and households headed by or including a disabled person.

11.7.a The Workforce

Yuma County's economy is strongly based on agriculture, tourism, and the military, which often have higher proportions of lower paying jobs. The County has planned for preserving land uses for two important economic sectors – agriculture and defense facilities. Just as preserving land use is essential to long-term economic sustainability, so is access to a variety of quality and affordable housing options for the workforce, including agriculture and military personnel.

According to the Bureau of Labor Statistics, the top five occupations accounted for 65% of Yuma County employment, and three of the County's top five occupations have annual median wages below \$20,000 – farming, sales and related, and food preparation and serving. Yuma County's 2010 median rent (\$708) and purchase price (\$112,000) are generally affordable to workforce households with two full-time wage earners, regardless of household size. Yet, three of five primary occupations with one earner or 1.5 earners at the median wage are challenged to

afford the median rent and purchase price; many of these workers are also eligible for housing assistance programs based on HUD's definitions of very-low, low and moderate-income.

Approximately 35% (660 units) of the rental unit need for extremely low income households is among the employed population. Additional rental units with varying bedroom sizes and monthly rents averaging \$510 or less would benefit current and future employees in primary occupations, especially those without dual incomes. Purchase assistance and housing counseling and education could provide homeownership opportunities for employees in primary occupations.

In some communities, farm workers are one segment of the low-income population that is seeking quality affordable housing. In other communities, farming is the primary industry, with its own set of requirements that further complicate the effort to provide housing. Chronic under-employment, seasonal employment, and stagnating wages among farm workers put this population at a disadvantage over other low-wage workers. The reality of almost every farm worker housing project is the complexity of financing that involves a web of partners and various layers of subsidies.

Depending on rank, military personnel may also earn lower wages. Junior enlisted personnel are the segment of the military population most likely to have difficulty affording housing since the minimum wage for an enlisted person is \$16,794 per year at the lowest rank (with less than two years experience). According to the City of Yuma, of the approximately 4,000 military personnel working at MCAS Yuma, the great majority- about 3,500 - are enlisted and approximately 1,550 enlisted families live off the base. Like farm workers, military families compete with other low-income households for housing.

While adequate income to rent, purchase and maintain quality housing is essential to economic and community sustainability, the ability of working households to find appropriate employment close to quality affordable housing plays a role in attracting and retaining a qualified and diverse employment base. Communities that lack diverse yet stable employment opportunities are challenged to sustain or grow.

Regionally, there is an imbalance between employment availability and housing availability. Three quarters of the employed population in San Luis and Somerton work outside of their jurisdiction and most must travel more than 30 minutes to work. The City of Yuma is the net importer of these employees. Employees who work in one community and live in another have higher transportation costs and less disposable income for the basic goods and services provided by local businesses. This negatively impacts employees' quality of life, local businesses and sales tax revenues.

11.7.b Special Populations

In addition to the workforce, community input suggests that two populations have unmet housing needs – the elderly and persons with development and/or physical disabilities, including those with severe mental illness.

Many elderly persons need assistance with finance, home maintenance and repairs, accessibility improvements, and routine activities. Rates of housing cost burden are high among the lowest income elderly households (age 65 and older) – nine of ten elderly renters and seven of ten elderly owners with incomes below 30% of the AMI are cost burdened. Of the estimated 2010 affordable rental unit gap for extremely low income households, approximately 25% (475 units) may be attributed to need among elderly renter households.

The US Census Bureau defines disability as: “A long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business.” Persons with severe mental illness are included in HUD housing need data for disabled households.

There are an estimated 7,615 householders with disabilities in Yuma County. Thirty percent (2,280) have incomes below 50% of the median income and an additional 16% (1,205) have incomes between 50% and 80% of the median income. According to HUD, seven of ten disabled renters and six of ten disabled owners with incomes below 50% of the AMI have some housing problem.

Persons with developmental and physical disabilities have layered, complex needs that demand broad strategies and resources to be effectively addressed. The unemployment rate for persons with disabilities is nearly double that for persons without disabilities and many have unrealized potential that results from inadequate economic and social supports. Housing problems among disabled households indicate need for both housing rehabilitation and additional housing options such as congregate living and permanent supportive rental housing. Supportive housing is a successful, cost-effective combination of affordable housing with services that helps people live more stable, productive lives. As much as 40% of the estimated 2010 rental unit need (760 units) for extremely low-income households may be attributed to households with disabilities.

11.8 Future Housing Needs

The following projections assume that the proportion of population will remain stable across jurisdictions and that income and tenure will continue the trend experienced between 2000 and 2010. Two growth scenarios were developed for the *Housing Needs Assessment* - a slow growth scenario assuming 4.8% population growth, based on pre-2000 growth patterns, and a moderate growth scenario assuming 8.5% population growth based on slow growth until 2015 and growth at the 2000 to 2010 growth rate from 2015 through 2020. In the slow growth scenario, the population will grow by 9,505 to 206,477 and households will grow by 3,263 to

73,552. In the moderate growth scenario, population will grow by 16,719 to 213,691 and households will grow by 5,883 to 76,122.

By 2020, the greatest increase in households will be among higher income households or those with incomes above \$50,000. Assuming additional units are added to the stock, middle-income and higher-income households will have sufficient rental and ownership choices provided by the private sector.

Households living on fixed incomes and employed in low-wage jobs will continue to be a part of the socio-economic make-up of the County. In 2020 an estimated 38% or 25,289 households will qualify for housing programs assistance, including 4,506 in the unincorporated County. Countywide, an estimated 12,191 households will be very low income by HUD standards; these households are the most likely to need housing rehabilitation, rental assistance or subsidized rental units.

With growth in households comes the need for additional housing units. Assuming reasonable vacancy rates, under the slow growth scenario, an additional 3,991 housing units will be needed in Yuma County by 2020, including 1,254 in the unincorporated County. Under the moderate growth scenario, an additional 7,021 housing units will be needed in Yuma County by 2020, including 2,561 in the unincorporated County.

11.9 Governmental Barriers to Adequate Affordable Housing

While the provision of housing is predominantly a private sector, market-driven activity, all levels of government – federal, state and local – play a role in facilitating housing production and preservation. The primary role of local government is planning and process, while the primary role of state and federal government is to provide financial resources.

Zoning and other land use regulations at the local level may inhibit the provision of a variety of affordable housing options, yet land use regulations do not exclusively increase costs and barriers. Reasonable regulations contribute to the health and safety of residents and most regulations were created for the public good and to maintain a high standard of development. Regulations are excessive only when they artificially elevate housing prices without an equal increase in health and safety benefits. Based on HUD’s Regulatory Barriers to Affordable Housing Development Questionnaire, the majority of County policies and processes do not detract from affordable housing development, yet the County does not have specific policies and processes that promote affordable housing development.

11.10 Resources and Delivery System

Yuma County and its private and nonprofit partners have a range of funding sources available to implement housing policies and actions. These resources include State, Federal and private sources, such as the Federal Home Loan Bank System and other private sources. Exploring additional funding opportunities will be essential to promoting and implementing affordable housing programs and policies.

Most programs require a mix of skills and experience to meet housing needs and produce or rehabilitate units. The private, nonprofit and public sectors each have unique skills, expertise and resources and the complexity of many housing needs lends itself to partnerships among organizations and sectors with complementary strengths.

The role of the private sector is to profitably fill demand for housing and skilled developers successfully assemble the human and financial resources to address housing demand. There are also private sector developers that specialize in affordable housing development, primarily the development of Low Income Housing Tax Credit Rental properties. Appropriate incentives to participate in affordable housing development are needed for the private sector to expand its role to address unmet housing needs in Yuma County.

There are twelve nonprofit organizations active in the housing market in Yuma County. These organizations provide a variety of housing-related services including: financial services – grants, loans, and counseling; development of land and buildings; and services combined with housing, such as self-help homeownership, supportive housing, and services for special needs populations. Many organizations provide more than one service.

Two Yuma County Departments have capacity and experience implementing housing programs. The Yuma County Development Services Department has primary responsibility to ensure that development is done safely and in the best interests of the community. The Development Services Department has expertise in the development process and housing rehabilitation programs, and experience with federal and state funding programs. The Housing Department manages Housing Choice Voucher and Public Housing programs and has expertise in affordable rental housing development and management.

While housing policies and actions are generally jurisdictional, housing markets are regional. The jurisdictions together developed the Yuma County Regional Development Plan (YCRDP), which represents one opportunity to cooperatively address housing quality, variety and affordability throughout the County. In addition to County Departments and the YCRDP, local jurisdictions have taken steps to address housing quality, variety and affordability. The incorporated communities of San Luis, Somerton and Yuma have included housing elements in their General Plans. Common goals and objectives of incorporated communities include: maintaining and enhancing the quality of existing housing; encouraging a variety of housing types to meet all socioeconomic segments of the population; focusing on high quality and sustainable development; and working closely with the private and nonprofit sectors to address the needs of low- and moderate-income households.

11.11 Housing Policies and Priorities

HPP.1: Provide an adequate housing supply with a balanced inventory of dwelling types and densities to meet the needs of present and future residents of Yuma County at all economic levels.

HPP.2: Preserve and expand the supply of a variety of quality housing units.

HPP.3: Maintain cooperative working relationships with affordable housing stakeholders in Yuma County.

11.12 Housing Actions

The following actions fall into five broad and inter-related categories:

1. Planning, Zoning and Development Standards
2. Financial Resources
3. Infill and Neighborhood/Small Area Revitalization
4. Community-based Programs
5. Management Practices

HA.1: Planning, Zoning and Development Standards

HA.1.1: Evaluate the feasibility of an incentive policy for affordable housing to promote development of affordable housing units for households with incomes below 80% of the area median income as adjusted annually by the US Department of Housing and Urban Development. Affordable housing development provisions could include density bonuses and flexible design standards such as minimum open space ratios, minimum site areas, and parking incentives.

HA.1.2: Encourage affordable housing development by:

- a. Including housing affordability discussions in meetings with developers and during planning and evaluation of development plans.
- b. Encouraging partnerships among planned developments and nonprofit organizations to develop housing for rent or sale to households earning less than the area median income and compatible with the planned development; and among property owners and private or nonprofit developers to encourage investment in the development, redevelopment, rehabilitation and adaptive reuse of land and buildings.
- c. Creating affordable housing informational brochures for distribution to developers.
- d. Incorporating housing affordability into the development review checklist.

- HA.1.3: Encourage residential uses near employment centers and services to increase the jobs-housing balance by zoning or rezoning underutilized commercial property to residential or mixed-use zoning, and low-density residential to higher- or mixed density residential.
- HA.1.4: When updating or amending land use plans evaluate the potential impact rezoning may have on existing businesses as well as future economic development and job creation potential.
- HA.1.5: Review land use policies to incorporate the needs and preferences of a changing demographic, including seniors, couples without children and people living alone; and that adequate areas are designated for multi-family and manufactured housing to meet expected demand among households at various income levels, including very-low and low-income households.
- HA.1.6: Through stakeholder interviews identify and map parcels that may have room for residential development that includes affordable housing units. Include surplus parcels, undeveloped or underdeveloped portions of actively-used sites, commercial and recreational property and low-density uses in areas suited for higher densities and all income levels.
- HA.1.7: Promote energy efficient construction.

HA.2: Financial Resources

- HA.2.1: Systematically review federal, state and private funding availability for a variety of affordable housing programs and projects. Pursue funding for specific activities.
- HA.2.2: Support applications from third parties for state and federal housing resources through letters of support, matching funds, land donation, coordination, and/or project / grant management services.
- HA.2.3: Link economic development incentives with housing for employees or link affordable housing development with economic development incentives.

HA.3: Infill and Neighborhood/Small Area Revitalization

- HA.3.1: Identify distressed neighborhoods or small areas with little private investment and explore the creation of a redevelopment district or revitalization area. Involve neighborhood residents in the planning process and develop action plans to meet identified needs including social and community services, infrastructure, transportation, economic development, law enforcement and affordable housing.
- HA.3.2: Develop infill incentives as a method to promote the production or rehabilitation of affordable housing close to existing infrastructure, shopping and services. Include density and zoning incentives and fee waivers.

HA.4: Community-based Programs

- HA.4.1: Continue the owner-occupied housing rehabilitation program. Apply for CDBG and/or State Housing Funds to rehabilitate housing units occupied by low- and moderate-income households. Promote energy conservation through participation in home weatherization and energy audit programs. Secure housing rehabilitation assistance through deeds of trust and promissory notes to provide future funding for housing activities.
- HA.4.2: Work with nonprofit agencies and employers to create and match housing assistance benefits.
- HA.4.3: Conduct an assessment of housing quality and ownership conditions in areas where at least one-half of the housing stock was built prior to 1980.
- HA.4.4: Support programs and organizations that provide:
 - a. Housing counseling and education and financial assistance programs for households entering the home purchase market or experiencing housing affordability concerns, and foreclosure prevention programs.
 - b. Short-term assistance to households that may be displaced as a result of foreclosure, eviction or job loss.
- HA.4.5: Participate in home maintenance and repair clinics to assist property owners in making their own repairs.
- HA.4.6: Sponsor tenant and landlord training on rights and responsibilities of each party and fair housing law.
- HA.4.7: Support transitional housing, temporary shelter; and permanent supportive housing to increase housing options for people with special needs, including the elderly, homeless, victims of domestic violence, handicapped, mentally ill and disabled. Support may include funding source recommendations, letters of support, or grant funding priority.
- HA.4.8: Provide support to nonprofit organizations to develop a mechanism to acquire and rehabilitate property for sale or lease to households earning less than the area median income. Support could include program design or financing such as CDBG or pursuit of other resources.

HA.5: Management Practices

- HA.5.1: Maintain the organizational structure to finance, construct or manage housing for households earning less than the area median income or for other target populations.
- HA.5.2: Incorporate housing quality, variety and affordability discussions into regional planning forums.

- HA.5.3: Keep current market data and information to inform citizens, businesses and developers of current housing conditions, and to ensure that policies, programs and projects are appropriately targeted.
- HA.5.4: Examine how zoning provisions, building codes, and land use updates impact the development of affordable housing and the cost of production of all units, not just affordable units.
- HA.5.5: Maintain a one-stop shop for developers and other organizations interested in affordable housing production, rehabilitation or related services.
- HA.5.6: Develop a public input process for all key programs, projects and policies. Periodically assemble agencies and organizations, including government, nonprofit and private, that are essential to moving forward with affordable housing policies and strategies. Focus discussions on market conditions and relevant programs, policies and incentives to address each. Utilize input when considering and recommending policies and strategies.
- HA.5.7: Prior to developing new or expanding existing affordable housing programs or resources, assess organizational capacity to successfully deliver each.
- HA.5.8: Create shared administration and expertise across units of government wherein each jurisdiction expands the capacity to deliver specific types of programs or projects and through inter-governmental cooperation assists other units of government.
- HA.5.9: Map the location of Section 8 voucher holders and identify common characteristics of selected geographic areas and housing types.
- HA.5.10: Develop a portfolio of projects and programs to build on-going support for affordable housing activities. Include photos, describe appearance, design, and impact on individuals, neighbors and neighboring properties, employers, sales tax revenues, traffic reduction, and other visual/statistical data.

Section Twelve—Cost of Development

12.1 Introduction

There are costs when local jurisdictions provide new or expanded public facilities to new development. This cost is rising at a pace that exceeds local government revenue generating capabilities. The increasing cost of maintaining existing infrastructure, combined with declining public support for taxation, is forcing jurisdictions to seek funding alternatives. Development agreements and development fees shift some of the burden of paying for new or expanded facilities from public entities to private developers. Providing adequate infrastructure is increasingly important as the county grows. It is prudent to implement a plan to provide necessary public services to developing areas without placing a financial burden upon county government and existing residents. A basic premise of this Element is to provide background information recognizing the direct link between the build-out of land and the costs of providing infrastructure to new developments. This Element considers how new development should pay a 'fair share' for the increase it creates in county infrastructure costs.

12.2 Overview

The State Legislature has authorized local agencies to collect development fees from new development projects. Different methods in assessing development fees have been implemented around the State. The fees range from \$0 to as high as \$8,570 per single family dwelling. The average fee is \$3,000. The majority of these fees must be paid in addition to any building, grading, encroachment or permit fees at the time a building or manufactured home placement permit is issued.

Various names given to development fees include:

- Impact fees
- Cost of Development fees
- Pro Rata fees
- Development Impact fees

Types of public facilities for which the fees are imposed include:

- Transportation expansion (but not for maintenance of existing roads)
- Water and sewer line improvements
- Police and fire services
- Park/open space acquisition
- Library funding
- Trash/sanitation services

Water and sewer projects capture the greatest portion of assessed development fees. Other beneficiaries in descending order are: streets, parks, libraries, fire and police departments and sanitation.

12.3 Growing Smarter and Growing Smarter Plus

The Cost of Development Element is optional for Yuma County. The Element is mandatory for counties having a population of more than two hundred thousand persons. Specific provisions contained in *Growing Smarter Plus* include:

Arizona Revised Statute, Title 11

- **Chapter 6 - County Plan and Zoning Article 2:**
 - §11-821. County plan; definitions
 - 4. A cost of development element that identifies policies and strategies that the county will use to require development to pay its fair share toward the cost of additional public facility needs generated by new development, with appropriate exceptions when in the public interest. This element shall include
 - (a) A component that identifies various mechanisms that are allowed by law and that can be used to fund and finance additional public services necessary to serve the development, including bonding, special taxing districts, development fees, in lieu fees and facility construction, dedications and privatization.
 - (b) A component that identifies policies to ensure that any mechanisms that are adopted by the county under this element result in a beneficial use to the development, bear a reasonable relationship to the burden imposed on the county to provide additional necessary public facilities to the development and otherwise are imposed according to law.

- **Chapter 8 - Development Fees; Article 1:**
 - §11-1101. Development agreements
 - A. A county, by resolution or ordinance, may enter into development agreements relating to property located outside the incorporated area of a city or town.
 - §11-1102. County development fees
 - A. If a county has adopted a capital improvements plan, the county may assess development fees within the covered planning area in order to offset the capital cost for water, sewer, streets, parks and public safety facilities determined by the plan to be necessary for public services provided by the county to a development in the planning area.

12.4 Assumptions

Several assumptions serve as the basis to include a Cost of Development Element in the Plan. Currently, the cost of providing services and infrastructure to new development is transferred to the county/taxpayer by default because the county has no defined policy to create a financial obligation on the developer to provide infrastructure and services. As a consequence, the county must provide services and infrastructure as a matter of public health, safety and welfare. Additional assumptions include:

Cost of Development Element–Financing Mechanisms

- There is no mechanism to project and assign cost for the density and intensity of development under the Land Use Element of the Plan.
- Public participation indicates a deficiency in public infrastructure, particularly roads.
- A rational and legal nexus must be established between the imposition of fees and the public goods and services that will be provided.
- New development may locate outside of the jurisdiction if the private sector determines the county has not established a clear methodology for projecting and assigning development agreements and development fees.

12.5 Infrastructure Financing Mechanisms

Statutes permit several finance mechanisms to fund new infrastructure, facilities and equipment. Mechanisms available to the county for funding expansion of physical infrastructure and services have binding restrictions on the county and developer and include:

- Development Agreements
- Development Fees/Impact Fees
- Special Districts
- Community Facilities Districts
- Revenue Bonds
- Primary and Secondary Property Taxes
- Sales Tax
- Specialty Industry Tax (e.g. Hotel Bed Tax)
- Excise Tax
- User Fees
- Planned Unit Development (PUD)

The two preferred means of financing infrastructure and “fair share” payments with new development are development agreements and development fees.

Development Agreements - Development agreements are authorized by A.R.S. §11-1101. A development agreement specifies the obligations of the governmental and the private developer. The responsibility for financing public infrastructure and services is clearly defined within the agreement. The criteria by which the county may enter into an agreement, exact performance criteria and objectives for all parties are contained in A.R.S. §11-1101.

Development Fees/Impact Fees - Development fees are authorized by A.R.S. §11-1102. Generally, impact fees are charges levied against new development in order to generate revenue for capital improvements to serve new development. They are controversial due to their financial impact on the home builder or contractor. They are charged at the time the building permit is issued.

Cost of Development Element–Implementation

Development fees are scheduled charges to new development to generate revenue for the construction or expansion of capital facilities located outside the boundaries of the new development (off-site) that benefit the contributing development. As currently applied, development fees cannot be used for operation, maintenance, repair, alteration or replacement of capital facilities. The fees are assessed and dedicated for the provision of water and sewer systems, roads, parks, libraries, police and fire facilities, general government administrative buildings, emergency medical facilities, hospitals, schools and even solid-waste facilities.

The county can collect development fees to pay for the expansion of public facility capital improvements and public services (streets, water, sewer, parks and public safety facilities) through the building permit process. These need to be specifically identified or covered by the county's Comprehensive Plan and/or Capital Improvements Plan. These plans specify the level of service for each new facility which is to be the subject of a development fee. The standards apply equally to new and existing development.

12.6 Implementation

Development fees assessed in the county would provide a means of fairly assessing the costs of providing capital facilities to the new development. However, development fees pose several issues: legal, economic, technical, administrative, policy and financing. Furthermore, to develop and administer a program that meets ethical and legal standards requires a substantial commitment of time and energy and must be carefully designed and properly documented.

Due to the statutory requirements and the need to be fair, setting development fees is a complex issue. Development fees must reflect proportional costs, rational nexus criteria and development credits. These calculations are neither simple nor straightforward. Due to the number of variables, an expert should assess such a fee to insure validity. The use of a consultant to create and document fee calculations is appropriate.

A critical component to development fees is a needs assessment as stipulated in A.R.S. §11-1102. Public participation indicates assessing development fees for roads is the greatest need in the county. Nonetheless, if a development fee were assessed, the geographic attributes of the county permits the use of differing designated service areas.

Implementation of any development agreement or development fee is subject to adoption by the Board of Supervisors. The prospective ordinance should set forth specific administrative authority and program parameters. The ordinance(s) must be consistent with applicable legislation. Important legal criteria include:

- Capital facilities financed with development fees must be a consequence of new development rather than arising from existing development.
- Development fees imposed on new development may be no more than a proportionate share of local government's cost of the new capital facilities needed to serve new development.

Cost of Development Element-Into The Future

- Development fee revenue must be managed and expended at such a time and in such a location the development paying the fee will receive a substantial benefit from the capital facility.
- Development fees are imposed only for those types of public facility capital improvements and services specifically identified in or covered by the Yuma County 2020 Comprehensive Plan or county Capital Improvements Plan.

12.7 Into the Future

The Yuma County 2020 Comprehensive Plan period is relatively short. Ideally planning should encompass a 25 to 50 year period of time and it is imperative to maintain perspective relative to development agreements and development fees. With projected growth and development, the need for adequate public infrastructure and services will steadily increase. Consequently, the Cost of Development Element will serve as a foundation for a development agreement and development fee program that will extend past the 2020 planning period.

Section Thirteen—Public Participation

Public Information/Public Participation Program (PI/PP) - This is a program that supplements the public participation requirements of *Growing Smarter Plus*. This program guides efforts to educate and involve citizens in long range planning processes.

13.1 Introduction

On October 19, 1998, the Board of Supervisors adopted the *Yuma County 2010 Comprehensive Plan Public Information/Public Participation Program (PI/PP)*. This represents the county's commitment to involving residents and stakeholders in long range planning efforts. The PI/PP created opportunities for meaningful citizen participation and was an essential component to the development of *Yuma County 2010 Comprehensive Plan*.

Providing county residents with the necessary information to influence future planning decisions requires their continued and increased participation. Therefore, it is necessary to identify how the community will be informed and participate in future additions or modifications to The Plan. The purpose of this public participation element is three-fold:

- Identify key components and continued development of the PI/PP.
- Consider techniques to involve citizens in the review of the Plan that exceeds minimum levels of participation mandated by the State.
- Outline the process and public notification procedures in the review of any minor or major amendment to the Plan.

13.2 Regulatory Compliance

Planning for public participation is authorized through legislative mandates and the *Growing Smarter Act*. The PI/PP procedures contained in this element are in compliance with Arizona Revised Statutes.

Arizona Revised Statutes, Title 11

Chapter 6 - County Planning and Zoning; Article 1:

§11-806. Powers and duties; comprehensive plan

D.1. The Board of Supervisors shall adopt written procedures to provide effective, early and continuous public participation in the development and major amendment of comprehensive plans from all geographic, ethnic and economic areas of the county. The procedures shall provide for: (a) The broad dissemination of proposals and alternatives

(b) The opportunity for written comments (c) Public hearings after effective notice (d) Open discussions, communication programs and information services, and (e) Consideration of public comments.

Arizona Revised Statutes, Title 11

Chapter 6 - County Planning and Zoning; Article 2:

§11-824. Adoption and amendment of county plan by board of supervisors; expiration and re-adoption. A. The board of supervisors may adopt the county comprehensive plan as a whole or by successive actions adopt separate parts of the plan. The adoption or re-adoption of the comprehensive plan or any amendment to the plan shall be by resolution of the board. C. The adoption or re-adoption of, or a major amendment to, the county comprehensive plan shall be approved by the affirmative vote of at least two-thirds of the members of the board. All major amendments proposed for adoption to the comprehensive plan by the board shall be presented at a single public hearing during the calendar year the proposal is made. The adoption or re-adoption of a county plan, and any major amendment to a county plan, shall not be enacted as an emergency measure and is subject to referendum as provided by Article IV, Part 1, Section 1, Subsection (8), Constitution of Arizona, and Title 19, Chapter 1, Article 4.

13.3 PI/PP

The PI/PP is designed to meet and exceed State requirements for citizen participation. It is divided into five categories. The categories overlap and work in conjunction with each other to produce a comprehensive and effective program.

1) Composition and Maintenance of a Core Contact List:

The core contact list includes interested parties, both special interest and general public. These parties are socially responsible and dedicated agencies and/or individuals whose role is more active than the general public's due to their special interest in the Plan and the community. Core contacts receive notice of public gatherings, bulletins, surveys and other miscellaneous items.

Outside of public agencies, **Citizens Advisory Groups (CAGs)** compose the majority of the core contacts. CAGs are made up of county citizens with varied areas of interest who serve as direct links to the Plan. Multiple CAGs exist for different areas of the county. A list of members is maintained.

2) Public Gatherings:

Public participation gatherings go beyond the mandatory public hearings and include open houses, stakeholder meetings and presentations to organizations

Public Participation

throughout the county and region. The purpose of the extended public gatherings is to develop working relationships, establish lines of communication, increase education on the planning process, fulfill the community's will to design its own future and foster a means for understanding and implementing the Plan. Notification, location and time of public gatherings encourage attendance, participation and provide for accommodations of special needs.

3) Media:

Development and implementation of the Plan utilizes a variety of media sources to publicize and obtain a broad-base of notification and participation. Both the media and the utilization of digital media platforms are used as information distribution and gathering tools and are critical in sustaining participation. Media outlets and digital media tools utilized for distribution of media kits, press releases, news conferences, Public Service Announcements, public notices and hearings include:

- Newspapers and Regional Print Media
- Vision 2020 Newsletter
- Radio
- Web page www.yumacountyaz.gov/INDEX.aspx?page=221
- Television
- Area Event Calendars and Bulletins
- Facebook www.facebook.com/#!/yumacountyaz
- Twitter account twitter.com/YumaCountyAZ

The provisions of Spanish language materials and an interpreter are evaluated on a case by case basis and provisions to accommodate all requests are made.

4) Public Comment Retrieval:

Public comment is needed to insure all interested parties and citizens of the county are well represented. Public comment includes suggestions, points of view, support, opposition and constructive comments regarding The Plan and the planning process. Public comment retrieval utilizes formal and informal means to draw information from individuals and agencies. Comments are received and documented through commentary, writing, telephone, e-mail, and social media postings. Documentable forms of retrieval used include:

- Email - contact.dds@yumacountyaz.gov
- Surveys and mailings
- Outreach Programs
- Fax - (928) 817-5157
- Public Hearings
- Facebook page at <https://www.facebook.com/#!/yumacountyaz>
- Twitter account at: <https://twitter.com/YumaCountyAZ>

5) Public Outreach:

Public outreach encompasses community education and information distribution to foster public support and encourage a sense of community. Outreach programs utilize all facets of the PI/PP and focus on educating the public. Some outreach activities that can be conducted include, but are not limited to, radio shows, television, digital announcements on Facebook, Twitter or the Yuma County Webpage, and workshops simulating land use development.

13.4 Strategies to Strengthen the PI/PP

Continuing education programs are critical. Sustaining multiple opportunities for the public to become involved in the development of the Plan and the planning process is equally important. For future planning activities the county needs to continue to identify and pursue other ways to increase public knowledge, participation and means to identify citizen issues.

Community Planning Collaboration - Citizens are involved in individual zoning and Yuma County Comprehensive Plan amendments through contact with the Planning Section. The Section oversees public information and education elements appropriate for collaboration. The Planning Staff is involved in the day to day role of administrating, interpreting and enforcing the changes brought about through implementation of the Plan.

Citizen Review Process - In compliance with Arizona Revised Statutes, Title 11, Chapter 6, the county provides guidelines for citizen review that notifies, informs and provides an opportunity for the public to comment prior to public hearing for zoning ordinance applications.

CAGs - CAGs have proven to be effective core contacts. Continued interaction, development and support of CAG's are important. CAG participants considered to display community leadership skills and a comprehensive and objective understanding of planning are considered key citizen planners. Future CAG programs need to continue to involve and mentor citizen planners.

Bi-Annual Update - Conducting workshops and open houses to ensure all interested individuals and groups in the community are actively involved in the bi-annual update and maintenance of the Plan elements is necessary.

Media Support Program - The Media Support Program needs to remain active after adoption of the Plan. Specific program features for each of the media to be utilized depend on the status of the Plan at any given time, access to media, staffing and available funding. Extending communications to core contacts and public agencies will remain a priority.

Digital Media Outreach - The inclusion and/or progression of digital forums and social media tools offers an excellent opportunity to directly and inexpensively connect with citizens of Yuma County and the public at large. The Planning Section will ensure all outreach activities including, but not limited to, land use amendments, Plan amendments and updates are promoted using both digital forums and social media tools such as the Yuma County Webpage, Facebook, and Twitter.

13.5 Amendment Process

An amendment to the Yuma County 2020 Comprehensive Plan may be initiated by: The Board of Supervisors, Planning and Zoning Commission or a private property owner. An application, narrative statement of the proposal and filing fee are required. Amendments to The Plan typically include the following:

- The incorporation of new elements as required by statute
- The re-adoption of the entire Comprehensive Plan every ten years.
- Revisions or updates to the text and/or maps of any existing element.

The Land Use Element is further categorized into two types of amendments: Minor Amendments and Major Amendments. Definitions, procedures and public hearing dates for minor and major amendments are outlined in the Land Use Element of the Yuma County 2020 Comprehensive Plan.

Public Hearings - For all amendments to the Plan, one public hearing will be held by the Planning and Zoning Commission. A second public hearing will be held by the Board of Supervisors prior to action being taken on the proposed amendment.

Major Amendments to the *Yuma County 2020 Comprehensive Plan* inclusive of the City/County Joint Land Use Plan thereof would be accomplished through a single standardized public hearing process. The Comprehensive Plan major amendment process would include a staff recommendation, Planning Commission recommendation and Board determination. Amendments to the City/County Joint Land Use Plan on parcels that fall under the jurisdiction of Yuma County will be heard under the same procedure as major amendments to the Yuma County 2020 Comprehensive Plan. All major amendments proposed for adoption to the Comprehensive Plan by the Board of Supervisors shall be presented at a single public hearing during the calendar year the proposal was made in accordance with A.R.S. §11-822 and §11-824. The deadline to submit Major Amendments is June 15th.

Notification - For all Yuma County 2020 Comprehensive Plan amendments, notification of the public hearings will be provided in accordance with State Law in the following manner:

- A.R.S. §11-822. Before recommending the plan or any part, amendment, extension or addition to the board of supervisors, the commission shall hold at least one public hearing thereon, after giving at least fifteen days notice thereof by one publication in a newspaper of general circulation in the county seat. In addition, the notice shall be published in a newspaper of general circulation in the area to be affected, or adjacent thereto, if the area affected is other than the county seat.

Public Participation

In addition to the above state notification requirement, the county and/or applicant will utilize techniques to disseminate the information to a larger audience. The techniques encouraged are listed below and are dependent on the type and significance of the proposed amendment.

- Mirror requirements outlined in A.R.S. §11-829 (C). Amendment of ordinance or change of zoning district boundaries; definition.
- The information regarding the amendment and scheduled public hearing be posted on the Department of Development Services Internet web-site and county television Channel (77) at least fifteen (15) days prior to the meeting.
- Provide opportunities for official comment through implementing Media Support Program, CAG and Outreach components of the PI/PP.
- Distribute proposals to a variety of stakeholders, organizations and individuals listed on the Core Contacts and Contact Agencies lists for initial review and comment prior to the first public hearing.
- Place copies of the proposed amendments on display at the County Administration building, Department of Development Services, Library Branches and Web Page.

As these are not state requirements, the failure of the county or applicant to perform any of the following actions or failure of the property owner to receive said notice to will not invalidate the amendment process.

Planning and Zoning Commission Action - Following the first public hearing, Planning and Zoning Commission forwards a recommendation to the Board of Supervisors. The report will be in writing and include the recommendations for approval or disapproval and a brief summary of the reasons for said recommendations. The Land Use Element of the Yuma County 2020 Comprehensive Plan contains the differences between the Minor and Major Amendment processes.

Board of Supervisor Action - Upon receipt of the Commission's recommendation, the Board of Supervisors will hold a second public hearing. Notice of the time and place of the hearing will be provided in accordance with State law. Following the public hearing, the adoption or re-adoption of the Plan or any amendment will be by resolution. The adoption, re-adoption, or approval of a major amendment will require an affirmative vote of at least two-thirds (2/3) of the members of Board.

Adoption and Ratification of the Yuma County 2020 Comprehensive Plan
The adoption or re-adoption of the Plan or any amendment shall be by resolution of the Board. Statutorily:

- A.R.S §11-824. Adoption and amendment of county plan by board of supervisors; expiration and re-adoption A county comprehensive plan, with any amendments, is effective for up to ten years from the date the plan was initially adopted or until the plan is re-adopted or a new plan is adopted pursuant to this subsection and becomes effective. On or before the tenth anniversary of the plan's most recent adoption the board shall either readopt the existing plan for an additional term of up to ten years or shall adopt a new county plan as provided by this article.

Section Fourteen—Regional Coordination

Regional Coordination - Cooperative and productive interaction with agencies and organizations whose decisions and actions impact the health, safety and welfare of Yuma County residents.

14.1 Introduction

The purpose of the *Regional Coordination Element* is to outline strategies that strengthen county interaction among agencies and organizations. Yuma County's size, strategic location, dynamic regional economy, transportation network, agricultural land base and natural resource systems make coordination essential. These complex regional issues, trends and conditions extend beyond political boundaries.

Defining the county's role in the regional planning process is imperative. A regional perspective helps various agencies and organizations develop problem solving skills and new methods of cooperation to work together effectively. Establishing regional strategies to coordinate planning decisions and provide for the projected needs and stated goals of communities is fundamental to growth management.

Regional Coordination Basics:

- Determine the role of other organizations and political and administrative agencies in defining and promoting regional coordination.
- Address broad-based land use and transportation issues.
- Recognize the importance of maintaining a high level of interest and involvement by all agencies that have jurisdiction over a particular area in the county.
- Identify means to prioritize, evaluate and address regional issues and problems.

14.2 Regulatory Compliance

Growing Smarter Plus legislation provides general requirements for addressing issues of regional importance in comprehensive plans. State statutes mandate a regional approach when planning for the use of state trust lands, water resources, open space, recreational and environmental resources.

Arizona Revised Statutes, Title 11

Chapter 6 - County Planning and Zoning; Article 1:

§11-806. Powers and duties; comprehensive plan D(2). Consult with, advise and provide an opportunity for official comment by public officials and agencies, municipalities, school districts, associations of governments, public land management agencies, other appropriate government jurisdictions, public utility companies, civic, educational, professional and other organizations, property owners and citizens generally to secure the maximum coordination of plans and to indicate properly located sites for all public purposes on the plan.

Chapter 6 - County Planning and Zoning; Article 2:

§11-821. County plan; definitions

F. The policies and strategies to be developed under these elements shall be designed to have regional applicability.

14.3 Promote Regional Coordination

Programs exist that promote the concept and benefits of regional coordination. However, it is necessary for the county to recognize the need to assess projects on a regional basis. As regional issues are defined, the fundamental components to assess projects are outlined as follows:

Regional Coordination Components:

- **Identification** - Identify all public agencies and organizations, internal and external to the county, whose plans have bearing on regional and future development or the health, safety and welfare of residents.
- **Communication** - Establish communications with all appropriate agencies and organizations. Communicate the intent of the Yuma County 2020 Comprehensive Plan and Regional Coordination Element.
- **Collaboration** - Recognize specific goals, objectives and policies of mutual interest. Emphasize regional issues with applicability to the various agencies and organizations. Develop consensus with other agencies and organizations relative to a course of action for involvement and accountability.
- **Meetings** - Conduct workshops and/or strategy meetings that allow interested agencies and organizations to convene and discuss regional issues, program goals, responsibilities and level of participation.
- **Implementation** - Determine the specific methods and strategies to support regional coordination. Assign responsibilities to the participating agencies and/or organizations for actual implementation and assessment.

14.4 The Regional Community

The county is comprised of many unique and isolated communities. However, because of continually changing socioeconomic factors, these communities need to share resources and become more integrated in order to sustain livability. Cooperation provides a forum to integrate common goals and establish a responsible regional community. The results of working collaboratively and sharing experiences to common regional challenges allow all concerned to benefit. The key participants and components of this regional coordination effort acting as a network of responsibility are shown in Figure 1 on page 3.

Figure 1 The Regional Community

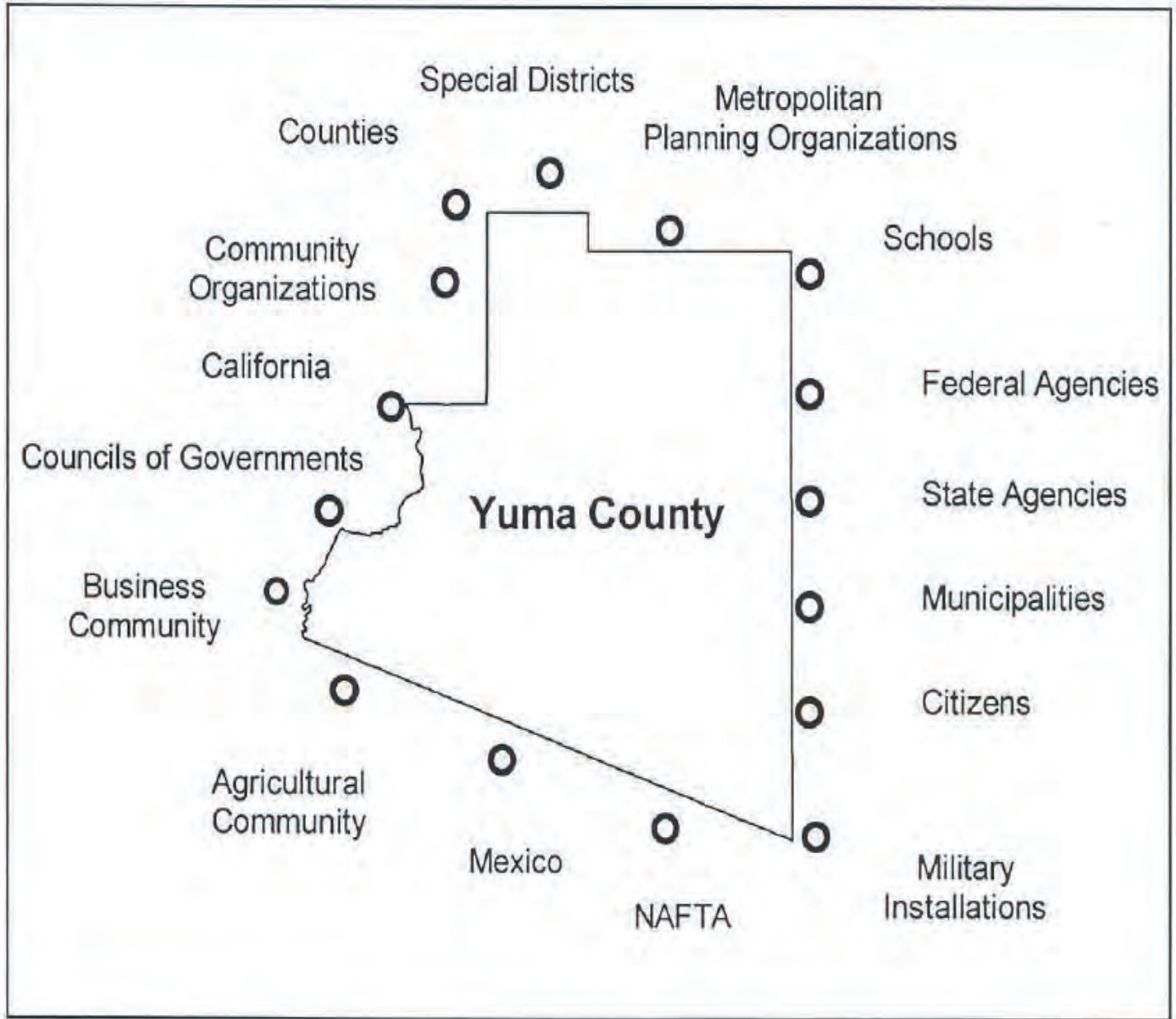


Figure 1 The Regional Community

14.5 Yuma Regional Development Plan

Policies to Achieve a Multi-Jurisdictional Vision for 2020

The Yuma Regional Development Plan (YRDP) represents the combined efforts of the Cities of San Luis, Somerton, Yuma, the Town of Wellton, Yuma County, Marine Corps Air Station (MCAS), and the U.S. Army Yuma Proving Ground (YPG) to achieve the following:

- A common set of land use development policies for the future economic growth and development of lands within the incorporated and unincorporated areas in Yuma County.
- A foundation for the compatibility of land use activities in the vicinity of the following military facilities and ancillary airfields: Marine Corps Air Station–Yuma/Yuma International Airport (MCAS/YIA), the Barry M. Goldwater Range (BMGR), and U.S. Army Yuma Proving Ground (YPG).
- A means to promote and preserve the primary economic assets of the area: Agriculture, Military and Tourism.

These entities have committed to work together to achieve the YRDP objectives as the Yuma Regional Development Group.

The YRDP is built on the previous planning efforts of the area agencies, including the Yuma County Comprehensive Plan, the General Plans for Somerton, San Luis, Wellton and Yuma, the City/County Joint Land Use Plan, and the Joint Land Use Study for the Barry M. Goldwater Range.

The YRDP is comprised of a set of goals and objectives to guide elected officials, commissions, boards and staff in their discussions and deliberations on development opportunities and zoning actions. The goals and objectives identify various types of land use activities (e.g., residential, commercial, industrial) and the corresponding general regional development philosophies that preserve the agriculture, military, and tourism industries.

This planning document focuses on six overall policies:

- Coordinated and Compatible Planning
- Concentrated Urban Development
- Military and General Aviation Preservation
- Valley Agricultural Protection
- Industrial and Commercial Development
- Rural Development and Lifestyle Preservation

The incorporated jurisdictions and Yuma County desire to pursue the mutual objectives and goals of the YRDP, committing their resources toward the furthering of their adopted General and Comprehensive Plan goals and objectives. Continued cooperation between the jurisdictions will provide the best opportunities to achieve common long-term results.

The participating entities may use different methods and processes to accomplish the objectives, but the overall purpose of the Plan is to have a common means of reaching the shared development visions and objectives represented.

Coordinated and Compatible Planning

Goal: The incorporated communities of San Luis, Somerton, Wellton and Yuma and the unincorporated areas of Yuma County have common land use development policies for future economic growth and development.

Objectives. Each Jurisdiction will:

- Recognize the shared boundaries of the General and Comprehensive Plans of the respective cities, towns and county and the Joint Land Use Study of the BMGR.
- Ensure compatible land uses between adjacent entities and along military boundaries.
- Provide notification to all cities, towns and counties, and military installations regarding annexations, plan amendments, rezonings and subdivisions.
- Participate in joint meetings among the entities for the coordination of relevant development issues.
- Continue to adopt similar and comparable building codes.
- Coordinate with other local, state, and federal agencies with natural resource management responsibilities.

Concentrated Urban Development

Goal: Urban development is concentrated within areas currently provided or planned to receive all of the following urban services:

- Water and wastewater distribution systems
- Surface transportation and circulation systems
- Schools, parks/open space, and recreation facilities
- Fire and police protection and refuse collection services

Objectives

- Promote the most efficient use of land and reduce the cost of infrastructure, encourage urban development that utilizes in-fill parcels or land that is currently served by water, sewer and improved roadways.
- Consider a variety of regulatory, incentive and program strategies to encourage smart growth development, including amending land use codes.
- Promote urban development that is served by roads, water, sanitary sewer and storm drainage, schools and other urban services.
- Promote urban development that includes sustainable development that takes advantage of energy-saving technologies and construction alternatives.
- Concentrate urban facilities and services within existing urbanized areas to make it a desirable place to live and work, to increase the opportunities for walking and biking within the community, to more efficiently use existing infrastructure capacity and to reduce the long-term costs of infrastructure maintenance.

Regional Coordination

- Promote development standards for urban areas that emphasize ways to allow maximum permitted densities and uses of urban land.
- Encourage the municipalities and the county to work with neighborhood groups, local business organizations, public service providers and other stakeholders on annexation-related activities to best meet the needs of area residents and land owners.
- Promote local commercial development in unincorporated urban areas to serve the needs of the surrounding population
- Encourage new urban development to locate in areas where services and public facilities exist or can easily be extended thereby resulting in cost effective development and reduced utility costs.
- Encourage urban development that utilizes the following principles:
 - Utilizing a mix of land uses
 - Taking advantage of compact building design
 - Creating a range of housing opportunities and choices
 - Creating walkable neighborhoods
 - Fostering distinctive, attractive communities with a strong sense of place
 - Preserving open space, natural beauty, and critical environmental areas
 - Protect valley farmland from encroachment
 - Strengthening and directing development towards existing communities
 - Providing a variety of transportation choices
 - Making development decisions predictable, fair, and cost effective
 - Encouraging community and stakeholder collaboration in development decisions

Military and General Aviation Preservation

Goal: Compatible land use activities are maintained and promoted in the vicinity of the region's military and general aviation facilities.

Objectives

- Develop and maintain a land use pattern that protects installation operations and minimizes incompatible development in the vicinity of the Marine Corps Air Station-Yuma, Yuma Proving Ground, Barry M. Goldwater Range, and ancillary facilities.
- Promote compatible land use activities in the vicinity of General Aviation facilities of Yuma County including Yuma International Airport, Rolle Airfield, Somerton Airport, and other general aviation facilities developed in the future.
- Recognize the goals and objectives of the master plans for each military and general aviation installation in order to promote preservation and discourage encroachment.
- Encourage compatible redevelopment of conflicting land uses in the vicinity of military and general aviation facilities and ranges.
- Prevent future land use compatibility issues that negatively impact the military or encroach upon the facilities and the ranges.
- Identify potential aviation assets (private airfields) within each entity's respective planning documents.
- Require that applicable military disclosure statements are recorded against properties.

Agriculture Protection

Goal: Land uses, policies and implementation measures support and protect agriculture.

Objectives

- Identify the valley agricultural lands in Yuma County.
- Develop an urban pattern that minimizes encroachment on the valley agricultural lands in Yuma County.
- Establish buffer or transition areas consisting of appropriate land uses between agricultural and urban areas.
- Develop policies to address potential conflicts between residential neighborhoods that adjoin agricultural operations through:
 - Use of design (neighborhood layout, retention basins and/or walls, buffers and landscaping) to minimize conflicts.
 - Disclosure statements recorded against individual properties.
 - Encourage school districts to locate future school sites that do not create conflicts with agricultural operations.
 - Recognize agricultural lands and related food safety issues..

Commercial and Industrial Development

Goal: Commercial and Industrial Development locations are promoted through land use plans, policies and implementation measures.

Objectives

- Propose commercial nodes or centers to minimize congestion along major highways and roads.
- Explore opportunities to incorporate existing strip developments with commercial nodes.
- Encourage the growth and significance of the industrial component of the economy that provides stable, year-round employment through the establishment of individual city or county incentive programs for those industries that demonstrate sustained employment.
- Promote “mixed use” areas between commercial and residential land uses.
- Locate industrial uses in areas where municipal services exist or are planned to be constructed within an approved capital improvement plan and which have convenient access to major transportation systems, such as airports, railway lines, commercial ports of entry, and highways.
- Locate business and industrial activities along major road corridors to act as a buffer for lower intensity land uses.
- Promote the development, reuse, redevelopment, and infill of commercial nodes through incentive programs.
- Promote compatible industrial development within the vicinity of military facilities.
- Support international trade and logistics opportunities in Yuma County.
- Support the development of general aviation and freight services at Rolle Field that are compatible with MCAS operations.

Rural Development and Lifestyle Preservation

Goal: Rural development occurs in areas with lower levels of infrastructure and public services.

Objectives

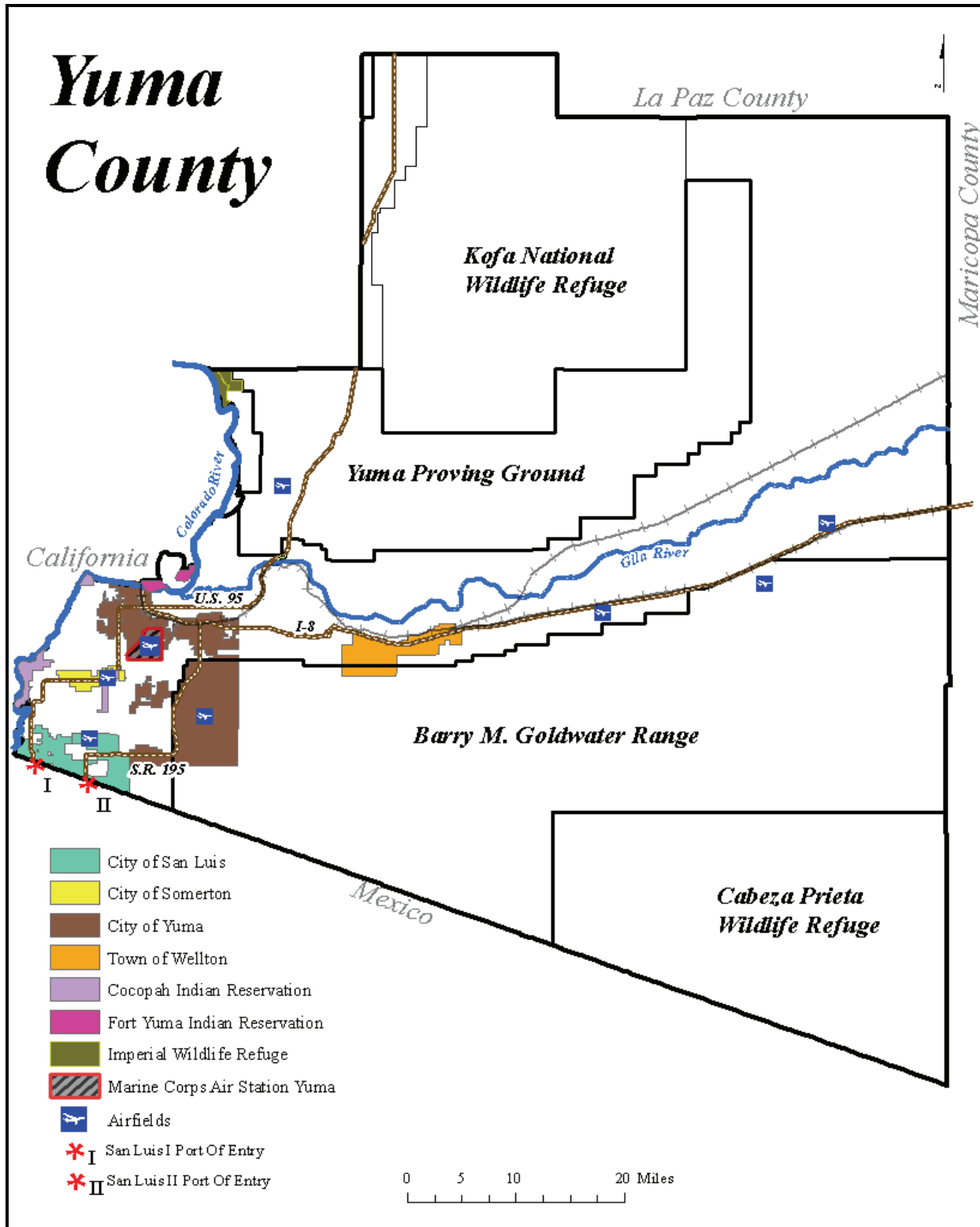
- Rural and semi-rural lifestyles are accommodated through rural density development on lands having lower agricultural productivity than valley agricultural lands.
- Rural residential development is supportable in areas where non-urban densities are planned and urban infrastructure is not planned.
- Industrial development in rural areas shall include the provision of public infrastructure and services.
- Rural development in the vicinity of the military installations will be compatible with operations.
- Promote the implementation of wildlife-friendly planning where appropriate to help conserve local fish and wildlife populations, habitats, and associated recreational opportunities.
- Preserve open space, valley farmland, natural beauty, and critical environment areas.
- Support renewable energy and other industrial developments that are located and designed to minimize the impact to wildlife populations, their habitats, and associated recreation opportunities.

Tourism

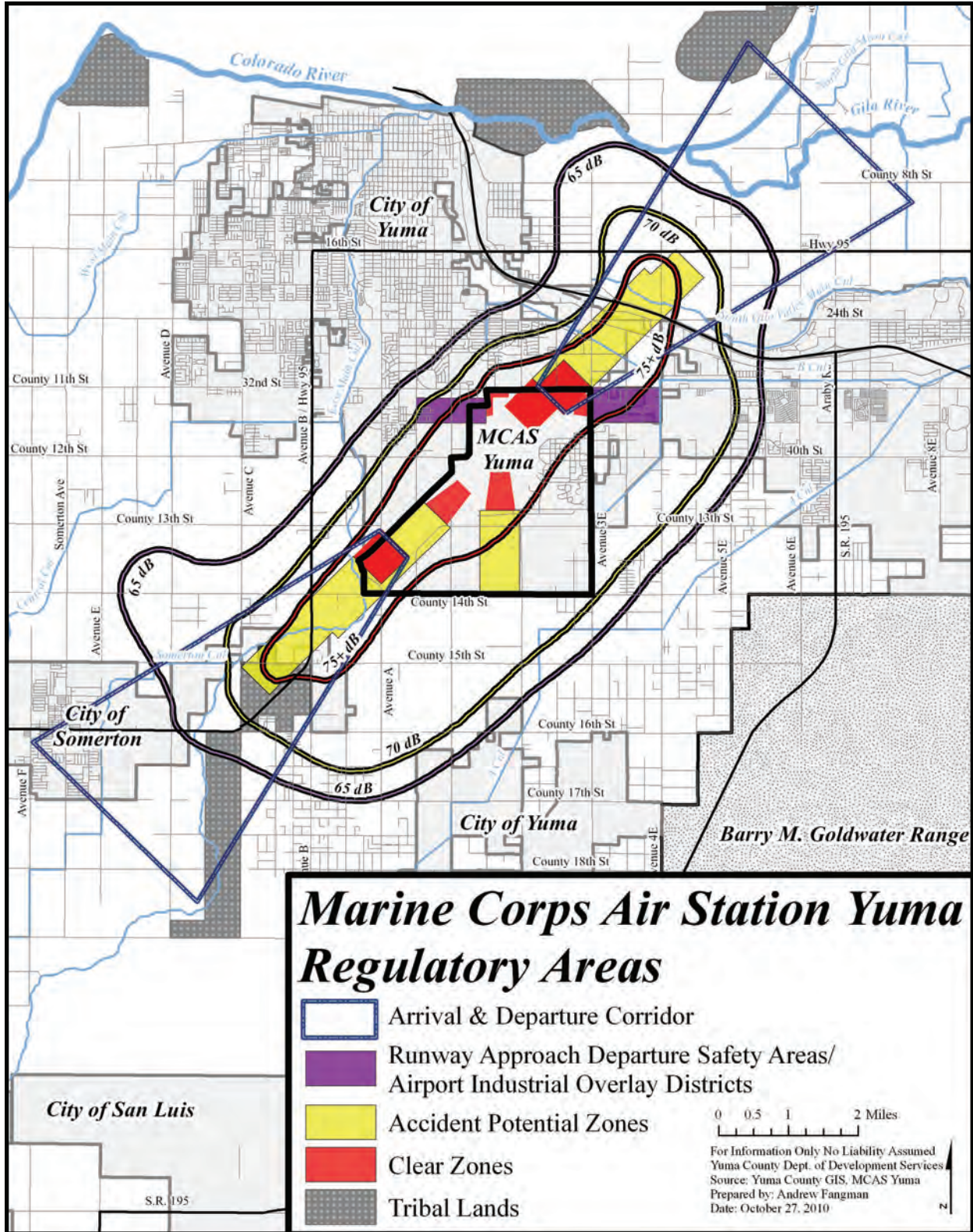
Goal: Regional tourism activities are expanded and the relationships among agriculture, tourism, the economy, and natural resources are supported.

Objectives

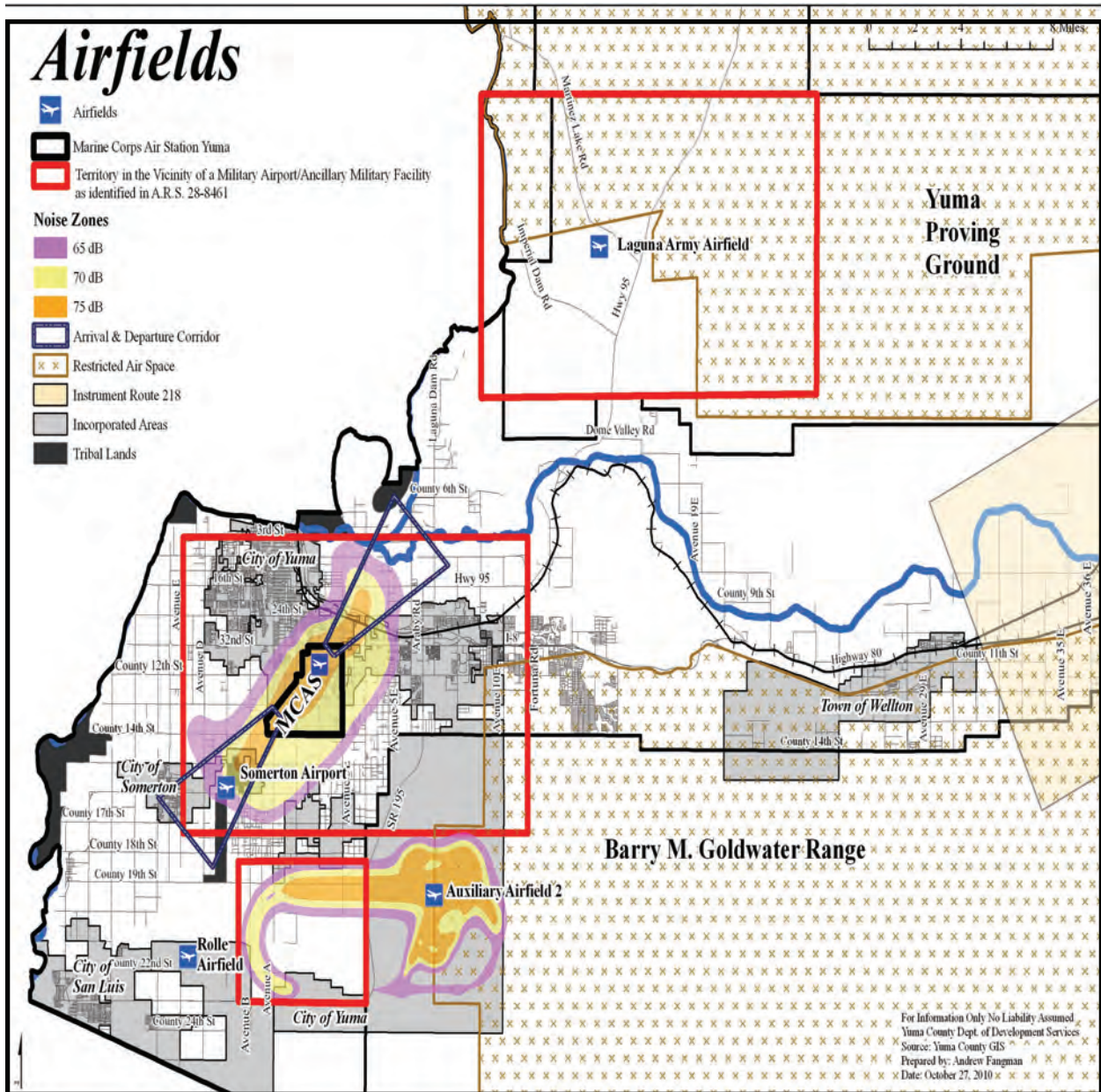
- Promote public and commercial recreational opportunities along and on the Colorado River.
- Promote agricultural tourism opportunities that are compatible with agricultural operations.
- Preserve open spaces and areas where outdoor recreational activities occur.
- Develop connectivity of regional parks and open spaces where practical.
- Support grant applications that seek to improve regional parks or open spaces.
- Ensure that camping/recreational vehicle parks are developed with appropriate infrastructure improvements.
- Promote various special events and festivals that encourage unique interests and tourism opportunities.
- Recognize and support fish and wildlife populations and habitats and associated angling, hunting, and wildlife-watching recreation opportunities.



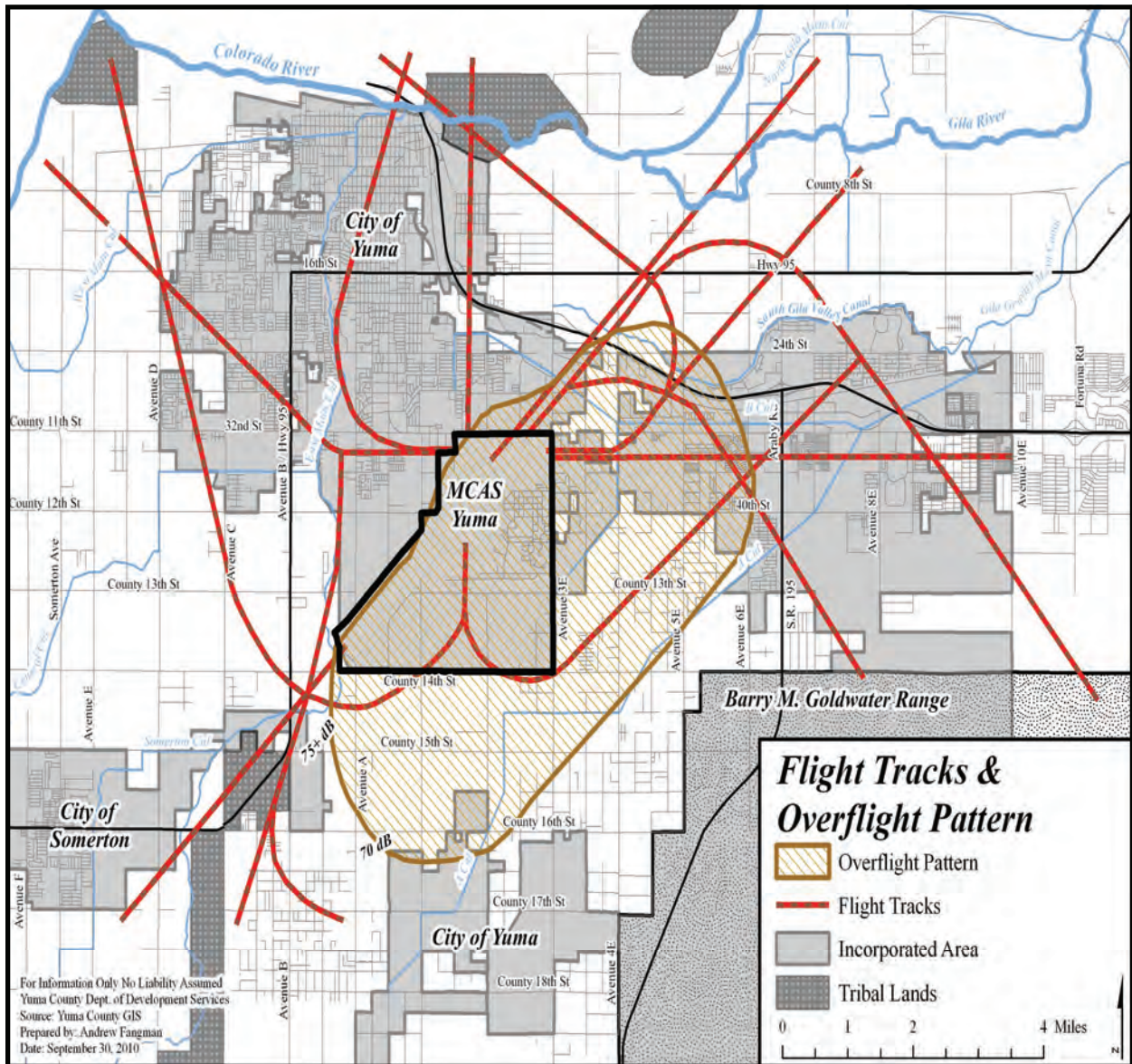
Map 1: Yuma Regional Development Plan



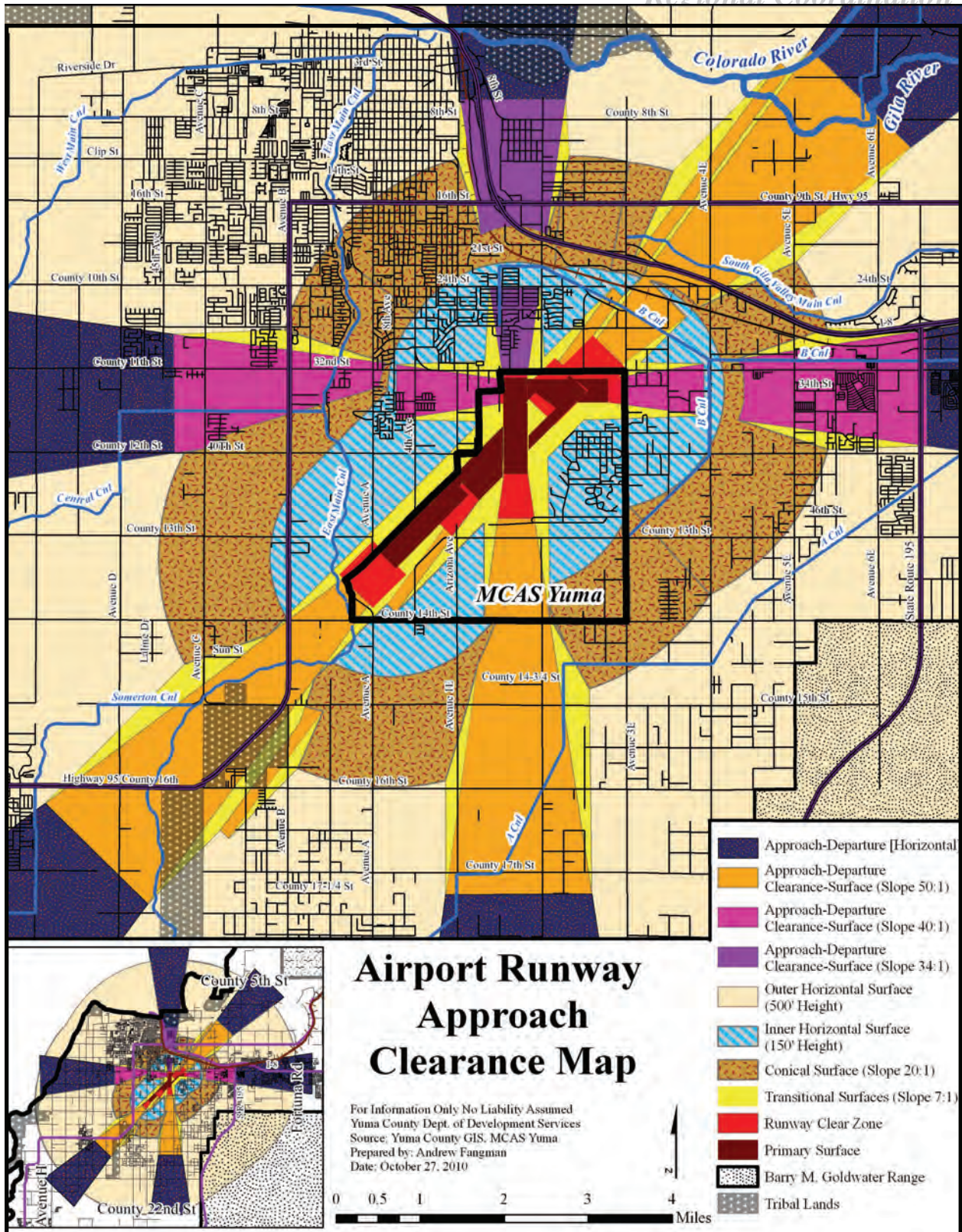
Map 2: Marine Corps Air Station-Yuma Regulatory Areas



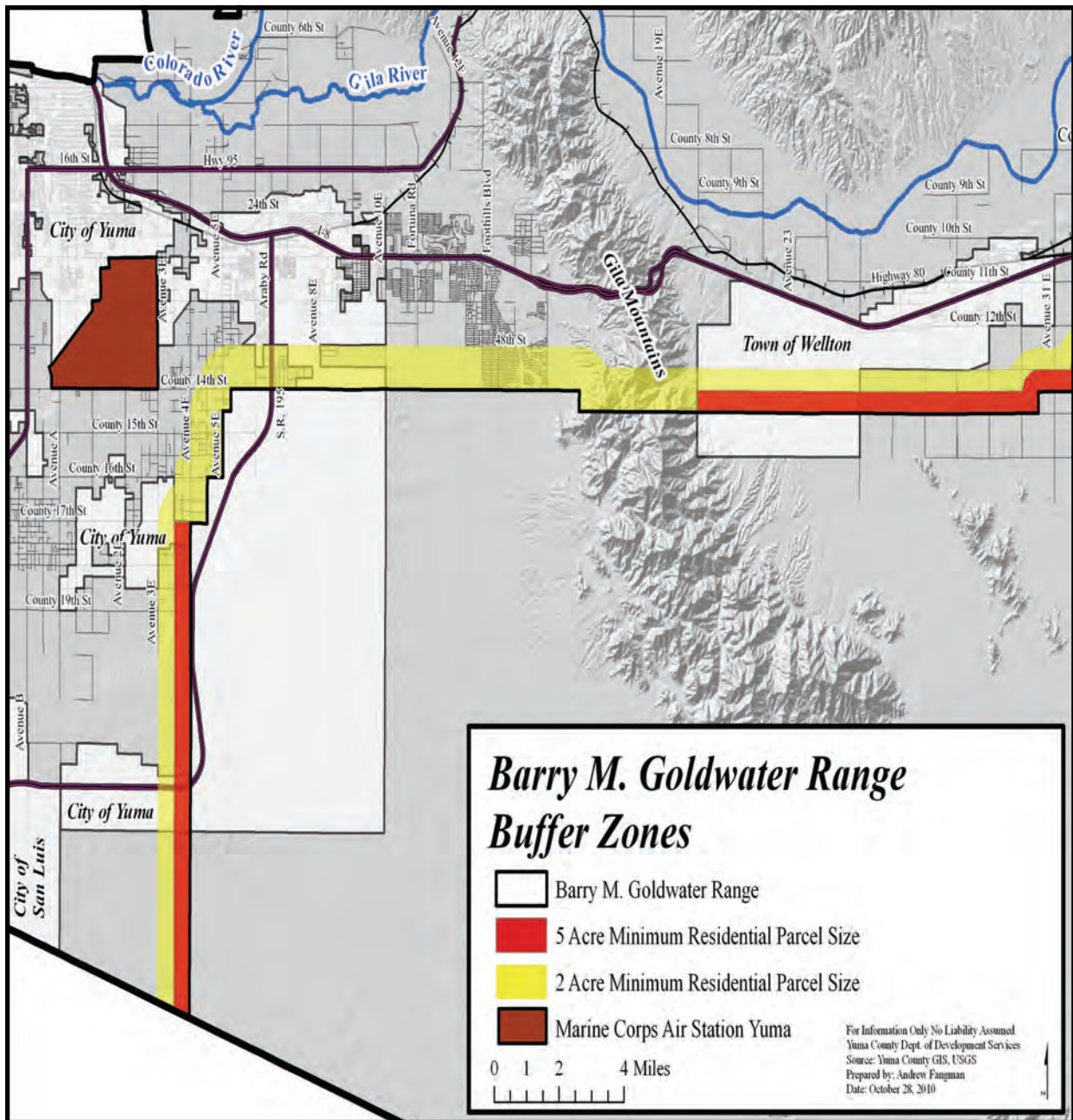
Map 3: Airfields



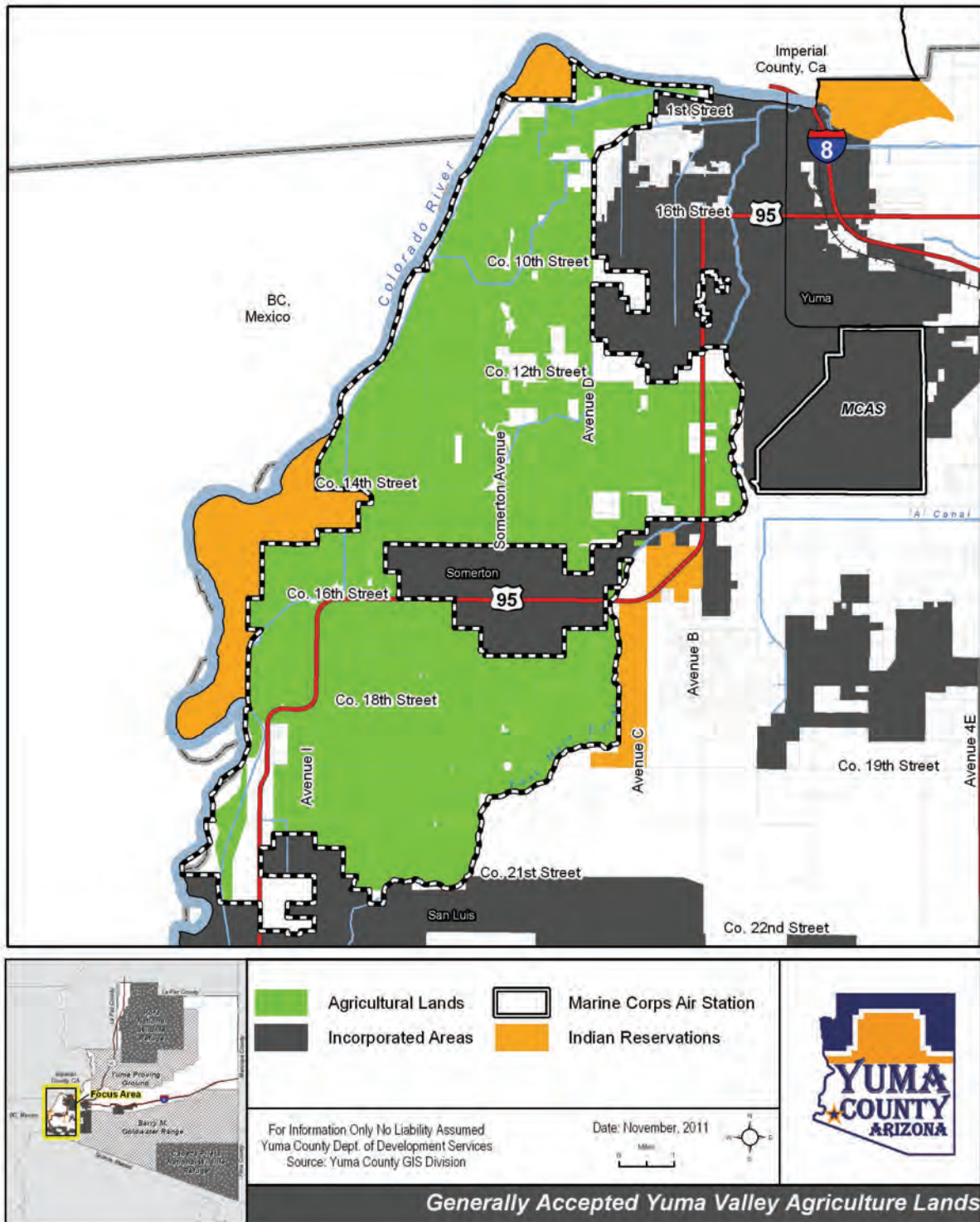
Map 4: Flight Tracks & Overflight Pattern



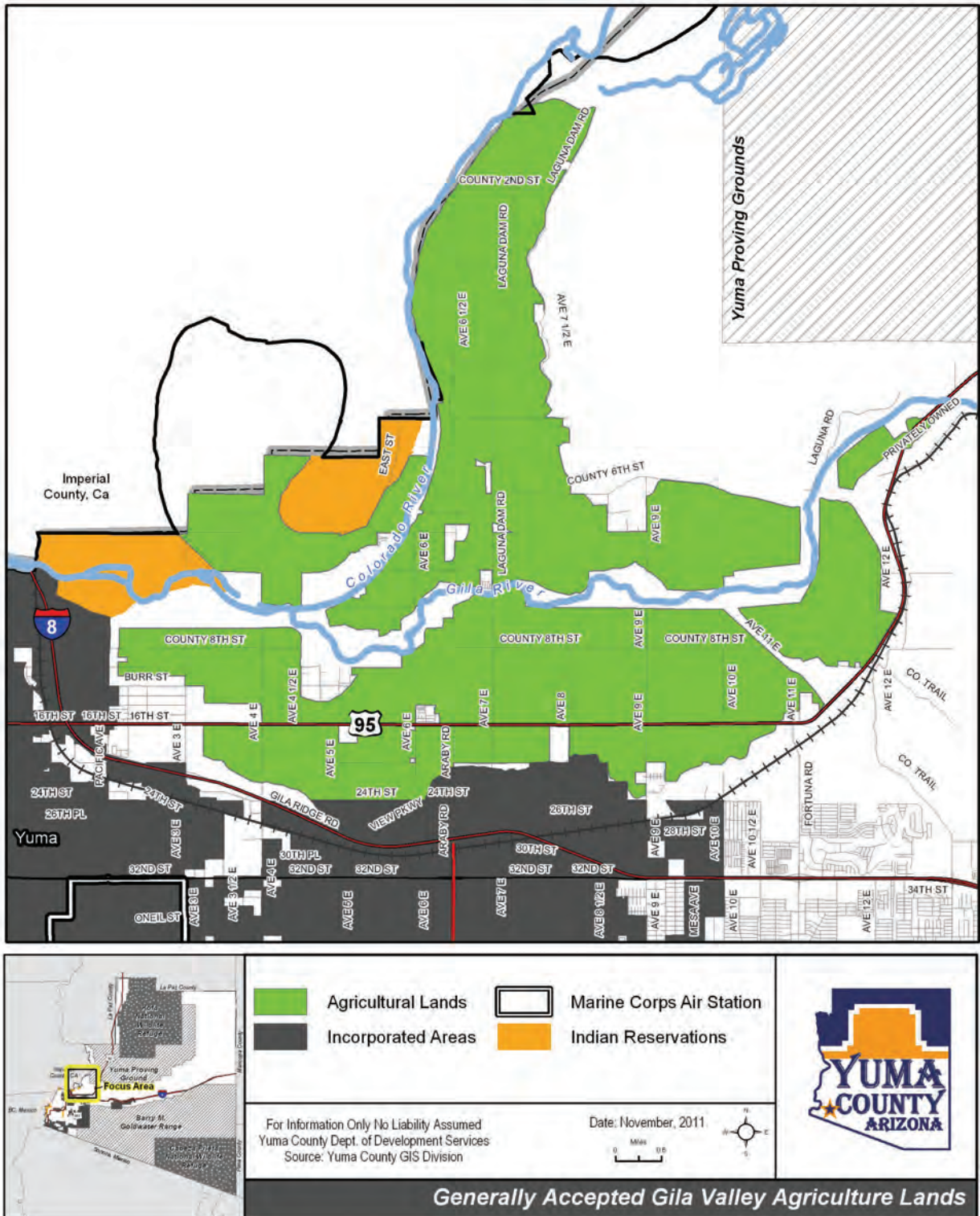
Map 5: Airport Runway Approach Clearance Map



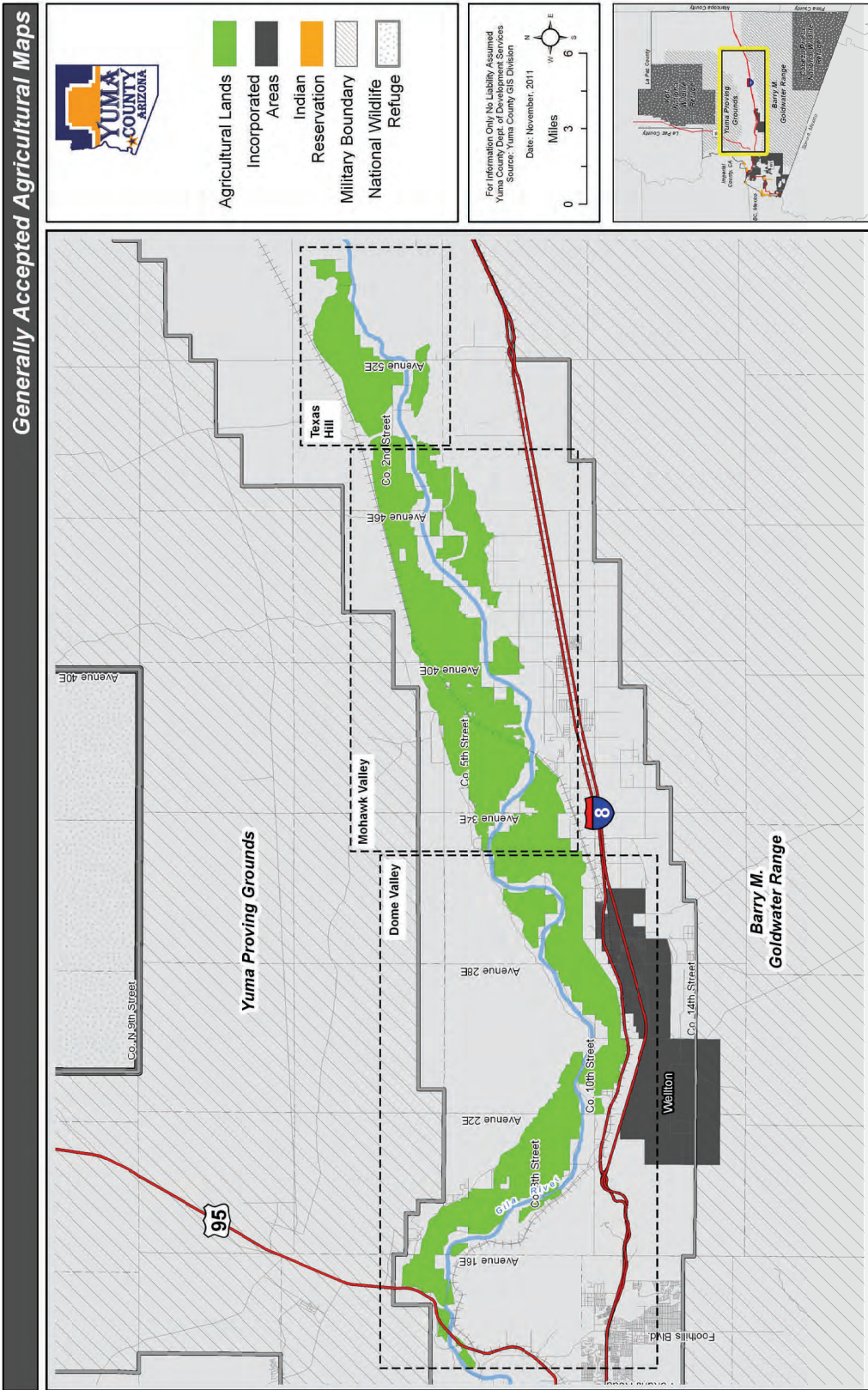
Map 6: Barry M. Goldwater Range Buffer Zones



Map 7: Yuma Valley Agriculture Lands



Map 8: Gila Valley Agricultural Lands



Map 9: Dome Valley and Mohawk Valley Agricultural Land

APPENDIX

15.1 Development Evaluation Checklist

The Development Evaluation Checklist is a tool to determine the impact of a development project on land use, environmental, social and welfare conditions. The checklist is adopted from the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations and tailored toward the county. It will assist in case report analysis for rezoning and special use permit applications. It will also comply with legal requirements of *Growing Smarter Plus*.

The checklist identifies important resources to consider when reviewing a development proposal. Supporting documentation should provide background information on the level of impact anticipated to these resources.

The checklist categorizes the following Impact Categories:

- Conformance to Existing Plan
- Land Use Compatibility
- Natural Resources
- Public Infrastructure
- Natural Environmental Conditions
- Manmade Environmental Conditions
- Health, Safety and Welfare

Development Evaluation Checklist

Case No.: _____ Owner/Agent: _____

Current Zoning: _____ Proposed Zoning: _____ Acreage: _____

IMPACT CATEGORY I. CONFORMANCE TO EXISTING PLANS		YES	NO	SCORE
1	The proposal is consistent with the Yuma County 2010 Comprehensive Plan, Joint Land Use Plan (JLUP), area plans, and other applicable county, state, or regional plans.	25	0	
2	The proposed project reduces open space or rural preservation areas identified in the Yuma County 2010 Comprehensive Plan.	0	10	
3	The proposed use is consistent and compatible with overlay zoning districts applicable to the subject parcel such as the Airport District, Gila Mountain, or Visual Corridor overlay zones.	10	0	

IMPACT CATEGORY II. LAND USE COMPATIBILITY				
4	The proposed use is the same or similar to the uses in the surrounding vicinity.	25	0	
5	The proposed density is the same or similar to the existing density in the surrounding vicinity.	25	0	
6	The location of the project is appropriate considering proximity to existing transportation, shopping, services and employment.	25	0	

IMPACT CATEGORY III. NATURAL RESOURCES				
7	The project, or a part of the project is located within the 100-year floodplain or floodway.	0	10	
8	The subject parcel is located in an area of known high groundwater or a surface water source is present	0	5	
9	The project will result in the loss of prime and/or unique farmland.	0	15	

IMPACT CATEGORY IV. PUBLIC INFRASTRUCTURE				
10	Adequate improvements to the existing transportation system are proposed (i.e., intersection improvements, road widening, turn lanes, etc.) to accommodate the anticipated increase in traffic, or the development will not result in an increase in traffic.	15	0	

		YES	NO	SCORE
11	Any public right-of-way necessary to accommodate the development has been or is proposed to be dedicated.	5	0	
12	A traffic impact study is either not required, or if required has been completed indicating the conclusions and recommendations for improvements.	5	0	
13	A public or private water system, or an on-site water source, will adequately serve the proposed development	5	0	

IMPACT CATEGORY V.

NATURAL ENVIRONMENTAL CONDITIONS

14	The project site contains endangered or threatened animal or plant species, or contains ecologically sensitive land.	0	5	
15	The project site contains earthquake fault lines, fissures, cracks, sinkholes, craters, or is within an earthquake liquefaction area.	0	5	
16	Soils within the project area are stable and suitable for the proposed development.	5	0	
17	There are visual indications of previous slides, slumps or other soil problems (cracked walls and foundations, tilted trees or fences, settling, flooding, etc.) in the project area.	0	5	
18	The site contains slopes of 12% or greater.	0	5	

IMPACT CATEGORY VI.

MANMADE ENVIRONMENTAL CONDITIONS

19	The site contains fossils, artifacts, relics, monuments, or structures of archaeological or cultural significance.	0	5	
20	Given the existing noise and estimated future noise levels of the area, the site is appropriate for the proposed activities and facilities.	5	0	
21	The project will increase PM10 (particulate matter 10 microns or less diameter) or other air pollution levels in the vicinity.	0	5	
22	The proposed project will release emissions such as nitrates, sulfates, or organic carbons into the air, which may reasonable be anticipated to causes or contribute to regional haze or impairment of visibility.	0	15	

IMPACT CATEGORY VII.

HEALTH, SAFETY, AND WELFARE

23	Physical access to the site is traversable by a two-wheel drive passenger motor vehicle.	15	0	
24	Access to or within the site is via a non-paved surface (which increases the amount of particulates such as soot or dust in the air).	0	10	
25	Response time for emergency vehicles (Rural/Metro ambulance and fire) is 6 minutes or less, and 10 minutes or less for law enforcement (Sheriff's Dept.).	10	0	

		YES	NO	SCORE
26	A legal public right of vehicular ingress and egress exists to and from the parcel.	10	0	
27	The proposed land use is an allowed use according to the Yuma County Zoning Ordinance Airport District Land Use Matrix.	10	0	
28	Elementary, middle, and high schools serving the subject property will be able to accommodate any projected enrollment increases within existing capacities.	10	0	
TOTAL SCORE				
MAXIMUM POSSIBLE SCORE				

HIGH SCORE

Total score is 275 to 300.

A score falling in this category represents a proposal that likely should be **approved**.

The proposal is likely to be in compliance with adopted land use plans, policies, and objectives, has good access, and is compatible with surrounding development.

MODERATE SCORE

Total score is 250 to 274.

A score falling in this category represents a proposal that likely contains some redeeming qualities but is lacking in one or more areas.

Proposals within this score range typically should be more carefully considered.

LOW SCORE

Total score is 249 or less

A score falling in this category represents a proposal that likely should be **denied**.

The proposal likely does not comply with several adopted land use policies, goals, or objectives, may not have physical or legal access, or may not be compatible with surrounding development.

Prepared by: _____ Date: _____

15.2 Core Contact List

Name	Company	Phone
Sherril Lee	Arizona Department of Commerce	602-771-1100
Susan Craig	Arizona Department of Water Resources	602-771-8603
Tom Horne	Arizona State Attorney General	602-542-5025
Gordon Taylor	AZ State Land Dept.	
Megan Reid	Arizona Historical Society	928-782-1841 (W) 928-782-0680 (F)
Bruce Fenske Gerry Ramirez Isabell Garcia Michael Jones Alvin Stump	Arizona Department Of Transportation (ADOT)	928-317-2100 (W) 928-317-2107 (F)
Pike Smith Scott Kerns Andrea Berezna	Arizona Public Service (APS)	928-336-9843
Bill Knowles	AZ Game & Fish Dept.	928-342-0091(W)
Robert Pickels	Yuma County Administrator/Clerk of the Board (BOS)	928-373-1010
Arturo Lopez Mirella Zahn	Bureau of Land Management (BLM)	928-317-3200 (W) 928-371-3250 (F)
Ken Rosevear	Chamber of Commerce	928-782-2567
Josie Camacho	Chicanos Por La Causa	928-343-9825
Bill Lee	City of Somerton	928-627-8866
Carmen Juarez	City of Somerton	928-627-8866
Ralph Velez	City of San Luis	928-341-85-20
Sharon Williams	City of San Luis Planning	928-341-8520
Laurie Lineberry	City of Yuma	928-373-5175
Paul Soto	Cocopah Indian Tribe	928-627-2102
Maria Hernandez	Comite de Bienestar	928-627-8559 ext. 13
Tom Tyree	County School Superintendent	928-363-1006
Gary McCauley	El Paso Natural Gas	928-345-1606
Jack McArthur	City of Yuma Fire Battalion Chief	928-373-4850
Iris Collard	Foothills Library	928-342-1640
	Foothills Bicycle Club	
Bill Broyels	Friends of Cabeza Prieta	520-292-1487

Core Contact List (continued)

Name	Company	Phone
Julie Engel	Greater Yuma Economic Development Council	928-782-7774
Armando Villa	Imperial County Planning	760-482-4236
Kevin Kelley	Imperial Irrigation District	760-339-9477 (W) 760-339-9417 (F)
Scott Bernhart	La Paz County Planning	520-669-6115
Joy Rich c/o Suzanne Gray	Maricopa County Planning	602-506-33-1
Sandra Hogarth	Martinez Lake Home Owners Assoc.	329-4807
Hank Atha	Pima County Planning	520-740-8401
Jerry Geier	City of Yuma Police Chief	928-373-4656
Keeny Escalanti, Sr.	Quechan Indian Tribe	760-572-0213
Doug Bowman	Qwest	928-783-5879
Sandy Bahr	Sierra Club – Grand Canyon Chapter	602-253-8633
Jim Adler	Society of Military Eng.	928-726-8453
Rick Rohrick	Southwest Gas	928-341-2610 (W)
Bobby Gutierrez Javier Mendez	Time Warner Cable	928-783-4441 or 928-782-9853
Scott Rust Shelly Ward Steve Smarik	United States Department of Agriculture (USDA)	928-341-1680
Michael L. Martin	United States Postal Service (USPS)	928-343-9416
Paula Backs	United States Marine Corps Air Station (US MCAS)	928-269-2272
Jo Penunuri	Western Area Power Administration	602-605-2525
Charlene Fitzgerald	Yuma Metropolitan Planning Organization (YMPO)	928-783-8911
Paul Patane	Yuma Metropolitan Planning Organization (YMPO)	928-783-8911
Ken Motta	Yuma Association. Of Realtors	928-782-1628
William Beck	Yuma County Public Works	928-341-2500
Roger Patterson	Yuma County Engineer	928-817-5000
Monty Stansbury	Yuma County Development Services	928-817-5000
Craig Sellers	Yuma County Flood Control District	928-817-5000
Kevin Tunnell	Yuma County Public Affairs	928-329-2154
Paul Melcher	Yuma County Planning Director	928-817-5000
Maggie Castro	Yuma County Planning	928-817-5000
Edward Feheley	Yuma County Legal Counsel	928-817-4300

Core Contact List (continued)

Name	Company	Phone
Melissa Flores	Yuma Southwest Contractors Association	928-539-9035
Omar Penunuri	Yuma County Water Users Association (YCWUA)	928-627-8824 (W) 928-627-3075(F)
Tom Davis	Yuma County Water Users Association (YCWUA)	928-627-8824 (W) 928-627-3075(F)
Rex Green	Yuma Irrigation District	928-726-1047 (W)
Star Thieme	Yuma Mesa Irrigation District (YMID)	928-726-4353 (W)
Wade Noble	Yuma Mesa Irrigation District (YMID)	928-726-4353 (W)
Robert Klee	Antelope High School District	928-785-3344
Dale Ponder	Crane School District	928-373-3400
Mike Wicks	Crane School District	928-373-3400
Cindi Didway	Crane School District	928-373-4000
Ray Aguilera	Gadsden School District	928-627-2910
John Koury	Hyder Elementary School District #16	928-454-2242 (W) 928-454-2217 (F)
Christopher Mayners	Sentinel Elementary School	928-454-2474
Frances Murrietta	Somerton Library	928-627-2149
Jay Simonton	City of Yuma Utilities Director	928-373-4500
Rodney Rinehart	Town of Wellton	928-785-3348
George Fischback	US Army Yuma Proving Grounds	928-328-2933
Renee Ramos	US Customs and Border Patrol	928-341-6500
Amanda Aguirre	Western Arizona Area Health Education Center	928-726-8270
Elston Grubaugh	Wellton Mohawk Irrigation District	928-785-3351
Laura L. Noel	Wellton School District	928-785-3311
Carol Frinrock	Wellton Library	928-785-9575
Steve Duran	Yuma Main Library	928-782-1871
Liz Foster	Yuma County Farm Bureau	928-782-5338
Darwin Stiffler	Yuma School District 1	928-502-4303 (W)
Dave Hylland	Yuma Union High School District (YUHSD)	928-502-4600
Toni Badone	YUHSD Superintendent	928-726-1731 (W)
Gen Grosse	Yuma County Airport Authority	928-726-5882
Doug Beach	Yuma Valley Rod and Gun Club	928-581-2327

LAND USE CONFORMITY MATRIX

Yuma County 2020 Comprehensive Plan	Yuma County Zoning Designations																																																
Land Use Designations & Abbreviation	RA-40	RA-20	RA-10	RA-5	SR-4	SR-3	SR-2	SR-1	SSB-20	SSB-10	SSB-5	SSB-4	SSB-3	SSB-2	SSB-1	R-1-40	R-1-20	R-1-15	R-1-12	R-1-8	R-1-6	R-2	R-3	MHS-20	MHS-15	MHS-12	MHS-10	MHS-8	MHS-6	MHS-4.5	MHP	RVS	RVP	RC	C-1	C-2	LI (All)	HI (All)	II	PD	OS/RR	TCU	SA/RL	PF	VCO	AD			
Agriculture / Rural Preservation (40 acre parcels) - (A- RP)	X																																													X	X		
Agriculture / Rural Residential (10 acre parcels) - (A- RR)	X	X	X						X	X																																					X	X	
Agriculture / Rural Development (5 acre parcels) - (A- RD)	X	X	X	X					X	X	X																																		X	X	X	X	
Rural Density Residential (1 du/2 ac to 1 du/10 ac) - (R- RD)			X	X	X	X	X			X	X	X	X	X	X																																X	X	
Ranchette Residential (1 du/1 ac to 1 du/5 ac) (min. 1 acre parcels) - (R-R)				X	X	X	X	X			X	X	X	X	X																																X	X	
Estate Density Residential (2 du/1 ac to 1 du/5 ac)(min. 1/2 acre parcels) - (R-ED)				X	X	X	X	X			X	X	X	X	X	X	X	X	X						X	X																					X	X	
Suburban Density Residential (3 du/ac to 1 du/2 ac) (min 1/3 acres parcels) - (R- SD)							X	X							X	X	X	X	X						X	X																					X	X	
Low Density Residential (1-6 du/ac) - (R- LD)								X							X	X	X	X	X	X	X			X	X	X	X	X	X																		X	X	
Medium Density Residential (4-12 du/ac) - (R- MD)																				X	X	X						X																			X	X	
Urban Density Residential (10-18 du/ac) - (R-UD)																						X	X																								X	X	
Mixed Use Residential (1 acre maximum parcels) - (R- MU)																X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X													X	X
Retirement Community / Planned Unit Development - (R- RC)/(PUD)																				X	X	X	X				X	X	X	X	X	X	X	X	X													X	X
Agriculture/Industrial (A-I)	X	X	X	X																																											X	X	
Industrial (I)																																																X	X
Business Park (BP)																																																X	X
Local Commercial (C-LC)																																																X	X
Regional Commercial (C-RC)																																																X	X
Open Space & Recreational Resources (OS/RR)	X	X																																													X	X	
Sensitive Areas & Resource Lands (SA/RL)	X	X																																														X	X
Transportation, Communications & Utilities - (TCU)	X	X																																														X	X
Public/Quasi Public (P-QP)	X	X	X	X																																												X	X

Disclaimer: This matrix is to be used as a guideline in conjunction with the policies and priorities in this Plan to determine conformity with the Yuma County Zoning Ordinance

15.4 Glossary

Action - A statement prescribing a specific course of action to implement stated policies and priorities.

Adequate Public Facilities (APF) - Facilities and services (including water and sewer systems, fire protection, sheriff sub-stations, schools and roads) that are available and have the capacity to serve new development without reducing levels of service below established minimum standards.

Amendment - A formal revision, addition or suggested change made to an existing plan or statute (see **Minor** and **Major Amendment**).

Annexation - The incorporation of a land area into an existing community with a resulting change in the boundaries of that community.

Aquifer - A geologic unit that contains sufficient saturated permeable material to yield usable quantities of water to a well or spring

Area of Jurisdiction - All unincorporated areas of Yuma County.

Arizona Revised Statutes (A.R.S.) - The revision and codification of the laws of the State of Arizona of a general or public nature adopted and enacted into law as “Arizona Revised Statutes.”

Arterial - Street classification in which roads are designated as major carriers of traffic that usually have 4 to 6 traffic lanes. Access from private property is limited and controlled. Intersections are to other major roadway facilities and generally have traffic signals.

Best Management Practices (BMPs) - Management techniques verified by scientific research that are practical, economically feasible and effective in reducing PM₁₀ particulate emissions.

Board (BOS) - Refers to the Yuma County Board of Supervisors. Composed of five elected members, the BOS plans and provides for the future growth and improvement of its area of jurisdiction through the adoption and enforcement of regulations, ordinances and plans.

Board of Adjustments (BOA) - A quasi-judicial board which hears zoning administration appeals and requests for variances.

Buffer Zones - An area of land separating two distinct land uses that acts to reduce or mitigate the effects or nuisances of one land use or the other.

Build-Out - Having no remaining land; fully developed to the maximum density permitted by adopted plans and zoning.

Capital Improvement Program (CIP) - A schedule and budget for the purchase or expansion of future capital improvements (land, land improvements, buildings, equipment, utilities and group purchases) to be carried out over a specified period of time.

GLOSSARY

Circulation Element - A required element of the comprehensive plan addressing the general location and extent of existing and proposed freeways, arterial and collector streets, bicycle routes and any other modes of transportation as may be appropriate.

Citizens Advisory Group (CAG) - A component of the Public Information/Public Participation Program. CAGs are composed of voluntary citizens who provide input into the development of the *Yuma County 2020 Comprehensive Plan*.

Cluster; Cluster Development - A development approach in which building lots may be reduced in size and buildings sited closer together, usually in groups or clusters, provided that the total development density does not exceed that which could be constructed on the site under conventional zoning and subdivision regulations. The additional land that remains undeveloped is then preserved as open space and recreational resource lands.

Collector - Street classification in which roads are carriers of local traffic which funnel vehicles from local roads to major and prime arterials. Typically they have two traffic lanes and provide direct access to properties.

Community Development - A process that involves activities in each of the following categories: recreational opportunities and open space, industrial development, commercial development, comprehensive planning, housing, urban renewal and the modernization of local government. If combined in the right proportions these activities will insure the balanced physical and social development of a community.

Comprehensive Plan - A statement of development goals, objectives and policies which may include maps, charts, graphs and text which set forth standards for local growth and development under the provisions of A.R.S. Comprehensive Plans are developed to provide guidance that will bring about the coordinated physical development in accordance with present and future needs.

Community Water System - A water system which supplies drinking water to 25 or more of the same people year-round in their residences.

Compliance - The act of meeting all local, state and federal regulations.

Conservation Easement - An easement granting a right or interest in real property that is appropriate to retaining land or water areas predominately in their natural, scenic, open or wooded condition; retaining such areas as suitable habitat for fish, plants or wildlife; or maintaining existing land uses.

Contaminant - Anything found in water (including microorganisms, minerals, chemicals, radionuclides, etc.) which may be harmful to human health.

Cost of Development Element - An element of the comprehensive plan that proposes means for new development to pay a fair share towards infrastructure cost (see ***Impact Fee***).

GLOSSARY

Critical (or sensitive) Areas - Includes wetlands, sensitive fish and wildlife, recharge for groundwater aquifers, flood prone and geological hazardous areas (such as landslide areas, earthquake fault zones and steep slopes).

Cultural Resource - A site or structure which is part of the area's heritage and typifies a particular stage of human activity in the area. Includes archeological, historic buildings and undisturbed natural sites that have historic or prehistoric associations including those with paleontological (fossil) specimens.

Density (Residential and Population) - For residential development, density means the number of housing units per acre. For population, density means the number of people per square mile.

Density Bonus - The allocation of development rights that allow a parcel to accommodate additional square footage or additional residential units beyond the maximum for which the parcel is zoned or designated. The provision or preservation of an amenity at the same site or at another location is usually provided in exchange.

Design Standards - A standard contained in a land use regulation which relates to design of a subdivision, site plan or structure.

Developer - An individual, partnership or corporation (or agent thereof) that undertakes development activities covered within the scope of a comprehensive plan and associated ordinances.

Development Agreement - A legal agreement between two parties (generally, a jurisdiction and a developer) that states the conditions that each will meet for a development project. The agreement may specify conditions necessary when development of the property occurs including consistency with the comprehensive plan. Infrastructure provision is commonly the emphasis of a development agreement.

Development Corridors - Identified areas with defined boundaries where development is prioritized and/or encouraged to occur based on infrastructure capacities and associated cost.

Development Criteria - Factors that are used to evaluate the readiness or potential of a specific residential, commercial or industrial parcel of land to be developed as it relates to the goals stated in the comprehensive plan.

Easement - A grant of one or more of the property rights by the property owner to and/or for the use by the public, a corporation, or another person or entity.

Economic Development - The process in which local governments or community-based organizations engage to stimulate or maintain business activity and/or employment. The goal is to stimulate local employment opportunities in sectors that improve the community, using existing human, natural and institutional resources.

Effluent - The water that has been collected in a sanitary sewer for subsequent treatment in a facility that is regulated pursuant to A.R.S. Title 49, Chapter 2. Such water remains effluent until it acquires the characteristics of groundwater or surface water.

GLOSSARY

Environmental Assessment - The procedure for analyzing the impacts of some proposed action on a given environment and the documentation of the analysis.

Environmental Element - An element of the Comprehensive plan containing the analysis to address anticipated effects, if any, of plan elements on air quality and natural resources associated with future development.

Environmental Impact Statement (EIS) - A detailed statement describing and analyzing the significant environmental effects of a project and discussing ways to mitigate or avoid the effects.

Equestrian Trail - A path or route that provides for the use of horses.

Farmland of Statewide or Local Importance - Land that is used for the production of food, feed, fiber, forage or oilseed crops as determined by the appropriate state or local government agency.

Flood Hazard Area - A lowland or relatively flat area adjoining inland waters that is subject to a one percent or greater chance of flooding in any given year. Also known as the 100-year floodplain and identified within the Yuma County Flood Plain Protection Ordinance.

Floodplain - The channel of the relatively flat area adjoining the channel of a natural stream or river that has been or may be covered by floodwater.

Floodway - The channel of a natural stream or river and portions of the floodplain adjoining the channel which are reasonably required to carry and discharge the floodwater or flood flow of any natural stream or river.

Goals - Defines a long or short-term end toward which county programming or activities are ultimately directed. They are abstract, not fully measurable and broadly address a desired outcome that supports the Yuma County 2020 Comprehensive Plan purpose.

Grazing Allotment - An area of private, state or federal land where one or more operators graze their livestock. An Allotment may include one or more separate pastures; livestock numbers and seasons of use are specified for each allotment.

Greenbelt - An open area that may be cultivated or maintained in a natural state surrounding development or used as a buffer between land uses or to mark the edge of an urban or developed area.

Growth Management - The use of a wide range of techniques to influence the location, timing, type, character and rate of development desired by a community.

Groundwater - Water under the earth's surface, often confined to aquifers capable of supplying wells and springs.

Growing Smarter Plus - legislation enacted to address growth related issues and preserve open space throughout the state.

GLOSSARY

Habitat Management Plan - A written and officially approved plan for a specific geographic area which identifies wildlife habitat and related conservation and/or preservation strategies.

Historic Trail - A route, path or trail that is associated with some historic event or era.

Household - All persons living in a dwelling unit, whether or not they are related.

Impact Fee - A fee imposed on a development to help finance the cost of improvements or services.

Implementation Measure - An action, procedure or technique that carries out comprehensive plan policy.

Incentive Zoning - The granting by the approving authority of additional development capacity in exchange for the developer's provision of a public benefit or amenity.

Infill - Development of vacant parcels within areas that are already largely developed.

Infrastructure - The facilities and services needed to support land development.

Infrastructure Service Area Boundary - A boundary beyond which there are limitations or prescribed conditions on publicly financed extensions of water, sewer and street improvements.

Intergovernmental Agreement; Inter-local Agreement - A contractual agreement between Yuma County and another governmental entity.

Issue - Something of concern. A problem or challenge stemming from past and present growth and development activities, policies, lack of funding, combination thereof or other comprehensive planning factors.

Key Informational Resource Interviews (KIRI) - A research technique for obtaining perspectives, input and solutions on growth related issues from area and regional managers, agency heads, private industry professionals and other civic leaders considered stakeholders in the community.

Land Use Element - A required element of a comprehensive plan that recommends how lands within a county's jurisdiction should be utilized. Utilization includes land use designations or planning for specific uses.

Level of Service (LOS) - A standard used by government agencies to measure the quality or effectiveness of a service.

Liquefaction - A process by which water-saturated granular soils transform from a solid to a liquid state during strong ground shaking events.

Major Amendment - A major amendment is an amendment to the Yuma County 2020 Comprehensive Plan (Plan) that represents a substantial alteration of the county's land use mixture or balance as established in the Plan's land use element for that area of the county. A major amendment shall be required for any proposed project that is a substantial change to the goals, objectives and policies of the Comprehensive Plan, the intent or direction of the Comprehensive Plan or represents a substantial alteration of the county's land use mixture and balance established by the Comprehensive Plan.

Manmade Hazard - Unpredictable act caused by human intervention which poses a threat to the health, safety and welfare of county residents. Inclusive of transportation accidents, chemical spills, fires, explosions, civil unrest and nuclear incidents.

Manufactured Home - A dwelling unit manufactured after June 15, 1976 which is fabricated either in whole or in large sections at a factory.

Manufactured Housing - Factory built, single family structure that meets the HUD Code standards; National Manufactured Home Construction and Safety Standards Act, HUD (US Department of Housing and Development) Code.

Minor Amendment - Any amendment that does not meet the criteria to be defined as a major amendment. A minor amendment may be heard in conjunction with a concurrent rezoning application.

Mixed-use Development - Developments designed to compliment and integrate a variety of uses (e.g., housing, commercial and/or offices in the same structure(s) or within close proximity of each other). These developments are intended to reduce dependency on the automobile and enhance a sense of community.

Multi-modal Transportation - A transportation system that includes several types (modes) of conveyances such as automobiles, rail, bus, car pooling, walking and bicycle.

Municipality - An incorporated city or town.

Natural Conditions - The condition existing prior to development, modification or disturbance.

Natural Hazard - Source of weather or geologically related danger which have a history of periodic occurrences and present a known threat. Inclusive of hurricanes, earthquakes, monsoons, tornadoes, flood prone areas, natural wildfires and unstable slopes.

Nonconforming Use - A use or activity that was lawful prior to the adoption, revision or amendment of the zoning ordinance but that fails by reason of such adoption, revision or amendment to conform to the present requirements of the zoning district.

Non-Point Source - Pollution consisting of constituents such as sediment, nutrients and organic and toxic substances from diffuse sources, such as runoff from agricultural and urban land development and use.

GLOSSARY

Objectives - Statements which are specific, attainable, measurable and support a means of achieving a goal.

Open Space - As defined by A.R.S. Title 11, Chapter 7, Article 2 §11-935.01 "...any space or area characterized by great natural scenic beauty or whose existing openness, natural condition or present state of use, if retained, would maintain or enhance the conservation of natural or scenic resources, or the production of food and fiber."

As defined by the *Growing Smarter Commission*, "Land that is suitable for public protection from development by virtue of some quality that is public good. This could be food, fiber, recreation, natural hazard or some rare geological, cultural or biological feature."

As defined by A.R.S. Title 37, Chapter 2, Article 4.2. (3) "land that is generally free of land uses that would jeopardize the conservation and open space values of the land or development that would obstruct the scenic beauty of the land."

Open Space and Recreational Resource Element- An element of the Comprehensive Plan to address the identification, dedication and location of open space and recreational resources.

Open Space Site - A tract of land in or near residential subdivisions, apartment complexes, manufactured home and recreational vehicle parks to meet the local recreational needs and desires of the residents. Such tracts shall include play areas, small parks, natural desert or areas of unusual scenic beauty.

Ordinance - A law or regulation set forth and adopted by a governmental authority.

Overlay Zone - A zoning district that encompasses one or more underlying zones and that imposes additional requirements above that required by the underlying zoning.

Park - A highly developed parcel of land that includes a variety of active (i.e., baseball/softball diamonds, court sports, etc.) and passive (i.e., seating areas, walking paths, etc.) recreational areas.

Performance Indicator - A measure establishing progress toward achieving a desired goal. Tabulated and reported on an annual basis in order to monitor the effectiveness of the *Yuma County 2020 Comprehensive Plan*.

Performance Indicator Element -An element of the comprehensive plan that establishes indicators to periodically measure and assess the overall effectiveness of the Yuma County 2020 Comprehensive Plan.

Planning Area - Assigned areas of the county used to delineate the accumulation of baseline data to define the different conditions, needs and issues that exist immediate to geography, economy, demographics, ethnicity and regional perspectives.

GLOSSARY

Planning and Zoning Commission (P&Z Commission) - Consists of ten residents from the county; two from each of five Supervisory Districts. Appointed to a four year term and serves in the following capacity: (a) review matters related to growth; (b) make recommendations concerning land use to the Board of Supervisors; (c) review and make recommendations on the Yuma County Capital Improvement Program.

PM₁₀ – Particulate matter of 10 microns or less in diameter. A mix of solid particles and liquid droplets which are small enough to remain suspended in the air.

Public Information/Public Participation Program (PI/PP) - A program that supplements the public participation requirements of *Growing Smarter Plus* and the *Yuma County 2020 Comprehensive Plan*. The program guides efforts to educate and involve citizens in long range planning processes.

Policies and Priorities - An end toward which county activities are directed. Policies and priorities in the Comprehensive Plan are abstract, not fully measurable and broadly addresses an outcome identified in the Yuma County 2020 Comprehensive Plan. These Policies and priorities are dictated by Growing Smarter Legislation, staff and the citizens of Yuma County.

Point Source Pollution - Pollution that originates from an identifiable point.

Prime Agricultural Land - Land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed and other agricultural crops with minimum inputs. Prime farmland is land suitable for produce and melon crops located within the Yuma, Gila and Wellton Mohawk valleys.

Quality of Life - The personal perception of the physical, economic and emotional well-being that exists in a community or region.

Recreational Opportunity - Outdoor recreational activities which offer satisfaction in a particular physical or social setting. These activities are primarily hunting, fishing, wildlife viewing, photography, boating, biking, walking and camping.

Regional Coordination - Cooperative and productive interaction with agencies and organizations whose decisions and actions impact the health, safety and welfare of Yuma County residents.

Regulations - Guidelines for standardizing or promoting conformance.

Riparian Area - A geographically delineated area with distinct resource values that occurs within or adjacent to a natural perennial or intermittent stream channel or within or adjacent to a lake, pond or marsh bed maintained primarily by natural water sources.

Rural (unincorporated) - Land use and development which is characterized by low density residential. These areas typically receive limited public services.

Rural Conservation Development - A term describing the requirements of a rural cluster subdivision (see Cluster).

GLOSSARY

Rural Planning Area - See A.R.S. §11-806, (D)(3) “A boundary voluntarily created to aid the Planning Areas in providing a sound factual and policy basis for planning. Said boundary encourages development of non-regulatory incentives for compliance and accommodation of continuing traditional rural and agricultural enterprises.”

Safety Element - An element of the Comprehensive Plan that identifies and assesses the various natural and human threats and presents actions that can be used to minimize or mitigate their adverse impact to the residents and property.

Sensitive Receptors - Sensitive noise receptors of concern are generally identified as residences, schools, libraries, hospitals and recreation areas.

Services - The business of supplying a commodity (as electricity or gas) or service (as transportation) to any or all members of a community.

Silvaculture - Silviculture areas refers to lands adjacent to the Colorado and Gila River corridors. These lands are characterized by native riparian habitat types and wildlife species.

Species

Endangered: An animal or plant whose prospects of survival and reproduction are in immediate jeopardy.

Sensitive: A designation which is applied to species not yet officially listed but are under status review for proposed listing by the U.S. Fish and Wildlife Service.

Threatened: Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Sprawl - Low density, automobile-dependent development beyond the edge of service and employment areas.

Special Use Permit - A use permitted in a particular zoning district only upon showing that such use in a specified location will comply with all the conditions and standards for the location or operation of such use as specified in a zoning ordinance and authorized by the approving authority.

State Trust Lands (Trust Lands) - Any land that is owned or held in trust by the State of Arizona with proceeds from sales or leasing to be used primarily for state education.

Subdivision Regulations - An ordinance regulating the design and improvement of parcels that are split from the original parcel.

Sustainability - Community use of resources in a way that does not jeopardize the ability of future generations to live and prosper.

Threat Assessment - Identifying the scope, impact and mitigation of natural and manmade hazards to aid in planning for minimizing adverse effects.

Transfer of Development Rights (TDR) - Removal of the right to develop or build (usually described in number of dwelling units per acre) from one property (the sending area) and transfer of the right to a suitable property (the receiving area), in order to preserve open space, agriculture land and/or natural resources on the first property. Also known as the “purchase of development rights.”

Turbidity - The cloudy appearance of water caused by the presence of tiny particles.

Unique Farmland - Land other than Prime Farmland that is used for production of specific high-value food and fiber crops. It has the special combination of location, soil quality, growing season and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods.

Urban—Land development of higher density and intensity which is characterized by services of an urban nature (e.g., central water/sewer, paved road with curb and gutter).

Variance - A departure from any provision of the zoning requirements for a specific parcel without changing the zoning ordinance or the underlying zoning of the parcel. A variance usually is granted only upon demonstration of hardship based on the peculiarity of the property in relation to other properties in the same zoning district.

Viewshed - The landscape that can be directly seen under favorable atmospheric conditions from a viewpoint or along a transportation corridor.

Vision, Visioning - A process where a collaborative statement is developed by citizens, elected and appointed officials or interested parties for a particular community. This statement describes the ideas, desired direction and perceptions for how the community should utilize and focus its resources in terms of development.

Visual Corridor - Scenic, gateway or aesthetically pleasing routes that help define the character of Yuma County. A visual corridor can have a variety of characteristics but primarily provide vistas of nearby mountains or show important cultural resources or features.

Water Quality - The chemical, physical and biological characteristics of water with respect to its suitability for a particular use.

Water Resource Element - A required element of the Comprehensive Plan that addresses the availability of surface water, groundwater and effluent water supplies.

Watershed - A watershed is the entire region drained by a waterway that drains into a body of water.

Water Table - The upper limit of the soil or underlying rock material that is wholly saturated with water.

GLOSSARY

Well Protection Area - The area surrounding a drinking water well or well field which is protected to prevent contamination of the well(s).

Wetlands - Permanently wet or intermittently flooded areas where the watertable (fresh, saline or brackish) is at, near or above the soil surface for extended intervals; where hydric wet soil surface conditions are normally exhibited and where water depths do not exceed two meters.

Wilderness - An area formally designated by Congress as part of the National Wilderness Preservation System.

Withdrawal - An action that restricts the use of public lands.

Yuma Regional Development Plan - A common set of land use development policies for the future economic growth and development of lands within the incorporated and unincorporated areas in Yuma County.

Zoning - The delineation of districts and the establishment of regulations governing the use, placement, spacing and size of land and buildings.

Zoning District - Any portion of a county in which the same set of zoning regulations apply.

Zoning Ordinance - An ordinance adopted by the Board of Supervisors which contains zoning regulations together with necessary maps and/or descriptive data setting forth the precise boundaries of zoning districts within which the various zoning regulations are effective (see Ordinance).

Zoning Regulations - Provisions governing the use of land or buildings, or both; the height and location of buildings, the size of yards, courts and open space, the establishment of setback lines and such other matters as may otherwise be authorized within the enabling statutes and which the Board of Supervisors deems suitable and proper.

GLOSSARY

Glossary definitions were obtained from the following documents:

***The New Illustrated Book of Development Definitions*, Center for Urban Policy Research, 1993; Moskowitz & Lindbloom;**

***Principles and Practice of Urban Planning*, International City Manager's Association, 1968; Goodman & Freund;**

***Planning Local Economic Development*, Glossary, Sage Publications, 1994;**

***The Zoning Dictionary*, Lehman & Associates, 1999;**

***Drinking Water Glossary*, <http://www.water.epa.gov/drink/resources/glossary.cfm>;**

***Final Yuma District Resource Management Plan and Environmental Impact Statement*, Glossary, Bureau of Land Management, United States Department of Interior, 1985; and, *Soil Survey of Yuma-Wellton Area*, Glossary, United States Department of Agriculture, 1978**

Any terms not defined within this Glossary will be referred to and determined by the updated 2004 Arizona Department of Commerce Planning and Zoning Handbook.

15.5 Zoning Comparison Table

Comparison of Zoning

Appendix

2000 **2011**

Land Use Designation	Total Acres	Total Acres
RA-40 - Rural Area - 40 acre minimum parcels	659,929	704,051
RA-20 - Rural Area - 20 acre minimum parcels	330,766	253,045
RA-10 - Rural Area - 10 acre minimum parcels	28,198	54,399
RA-5 - Rural Area - 5 acre minimum parcels	1,697	2,092
SR-4 - Suburban Ranch - 4 acre minimum parcels	124	151
SR-3 - Suburban Ranch - 3 acre minimum parcels	126	179
SR-2 - Suburban Ranch - 2 acre minimum parcels	3,187	3,291
SR-1 - Suburban Ranch - 1 acre minimum parcels	2,212	2,295
SSB-20 - Suburban Site Built - 20 acre minimum parcels	-	0
SSB-10 - Suburban Site Built - 10 acre minimum parcels	-	0
SSB-5 - Suburban Site Built - 5 acre minimum parcels	65	390
SSB-4 - Suburban Site Built - 4 acre minimum parcels	0	106
SSB-3 - Suburban Site Built - 3 acre minimum parcels	3	57
SSB-2 - Suburban Site Built - 2 acre minimum parcels	562	2,273
SSB-1 - Suburban Site Built - 1 acre minimum parcels	11	132
R-1-40 - Low Density Residential - 40,000 sq. ft. minimum parcels	2,793	3,196
R-1-20 - Low Density Residential - 20,000 sq. ft. minimum parcels	624	648
R-1-15 - Low Density Residential - 15,000 sq. ft. minimum parcels	-	0
R-1-12 - Low Density Residential - 12,000 sq. ft. minimum parcels	149	316
R-1-8 - Low Density Residential - 8,000 sq. ft. minimum parcels	230	382
R-1-6 - Low Density Residential - 6,000 sq. ft. minimum parcels	1,583	1,326
R-2 - Medium Density Residential - 4,000 sq. ft. minimum parcels	285	418
R-3 - High Density Residential - 4,000 sq. ft. minimum parcels	120	88
MHS-20 - Manufactured Home Subdivision - 20,000 sq. ft. minimum parcels	218	293
MHS-15 - Manufactured Home Subdivision - 15,000 sq. ft. minimum parcels	-	0
MHS-12 - Manufactured Home Subdivision - 12,000 sq. ft. minimum parcels	-	1
MHS-10 - Manufactured Home Subdivision - 10,000 sq. ft. minimum parcels	340	310

Comparison of Zoning Continued

Appendix

Land Use Designation	2000 Total Acres	2011 Total Acres
MHS-8 - Manufactured Home Subdivision - 8,000 sq. ft. minimum parcels	-	.63
MHS-6 - Manufactured Home Subdivision - 6,000 sq. ft. minimum parcels	-	1
MHS-4.5 - Manufactured Home Subdivision - 4,500 sq. ft. minimum parcels	1,434	731
MHP - Manufactured Home Park - 3,200 sq. ft. minimum parcels	618	636
RVS - Recreational Vehicle Subdivision - 3,200 sq. ft. minimum parcels	3,189	4,209
RVP - Recreational Vehicle Park - 1,200 sq. ft. minimum parcels	1,238	1,170
RC - Residential Commercial	-	.28
C-1 - Local Commercial	627	514
C-2 - General Commercial	2,067	2,017
LI-8,000 - Light Industrial-8,000 square foot minimum	4,424	4,350
LI-20,000 - Light Industrial-20,000 square foot minimum	-	0
LI-1 - Light Industrial-1 acre minimum	-	7
LI-2 - Light Industrial-2 acre minimum	-	31
LI-5 - Light Industrial-5 acre minimum	-	25
HI-8,000 - Heavy Industrial-8,000 square foot minimum	6,410	8,897
HI-20,000 - Heavy Industrial-20,000 square foot minimum	-	0
HI-1 - Heavy Industrial-1 acre minimum	-	10
HI-2 - Heavy Industrial-2 acre minimum	-	2
HI-5 - Heavy Industrial-5 acre minimum	-	71
II - Intensive Industrial	0	162
PD - Planned Development	0	1,035
PF - Public Facilities	-	0
AD - Airport District	-	0
SA/RL - Sensitive Areas and Resource Land District	-	0
TCU - Transportation, Communications and Utilities District	-	7
VCO - Visual Corridor Overlay District	-	0
OS/RR - Open Space, Recreation and Resource Zoning District	-	0