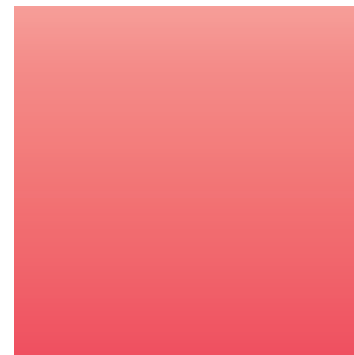


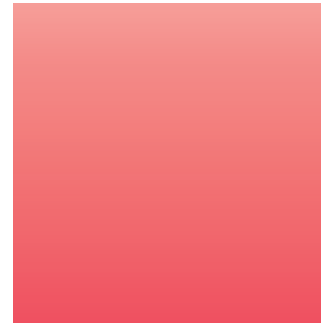
M A K E  
**MARANA**  
2040 • GENERAL PLAN



MAP ATLAS



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# MAP ATLAS

FEBRUARY, 2019

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HERITAGE  
RIVER PARK  
MARANA

# Introduction

**M A K E**

**MARANA**

2040 • GENERAL PLAN

## MAP ATLAS

From its humble roots as a farming community to one of the fastest growing municipalities in Arizona, Marana aims to be a forward-thinking community that provides opportunities for resident and local businesses to engage and prosper.



# GENERAL PLAN OVERVIEW

General plans are an important tool designed to help guide community growth and development. The plans are not legally binding, but the State of Arizona requires (Arizona Revised Statutes 9-461.05) all municipalities adopt a general plan and update it every ten years. The plan includes a list of compulsory elements that are integral to community growth, and may address other topics that are particularly relevant to the community. Table 1 lists the elements required by state law, and the optional elements that will be included in the Make Marana 2040 General Plan Update.

## Make Marana 2040 General Plan Update

### Themes

The Make Marana 2040 General Plan (the “General Plan” or “Plan”) addresses topics that are organized by three themes.

**Built Environment:** The physical features of Marana that create an attractive, efficient, and well-balanced community.

**People & Community:** The values and services that support a safe and thriving community for all residents.

**Resources & Sustainability:** The environmental conditions and practices that affect the community’s health and well-being.

### Documents

The Plan is presented as two documents that work in tandem to guide development in the Town of Marana’s municipal planning area (MPA), or area of planning influence. The documents and MPA are described below.

**Map Atlas.** The Map Atlas uses the most recently available data to establish the current planning context in Marana and the MPA. It is designed to give a snapshot of existing municipal conditions in a concise format. Each topical discussion is supplemented with quick facts, tables, figures, and maps for easy reference. The quick facts, in particular, are designed to help readers focus on key information and are highlighted in ‘call-out’ boxes.

**General Plan.** The General Plan builds on the data and information provided in the Map Atlas regarding existing conditions and presents the goals, policies, and implementation actions that will guide the future development of Marana. Two key components of the General Plan are the MPA, which delineates the area of Marana’s planning influence, and the Future Land Use Map (FLUM), which shows where specific types of existing and future land uses are supported in the MPA.

### Municipal Planning Area

A Municipal Planning Area typically encompasses a specific jurisdiction

and the unincorporated lands immediately surrounding it in order to capture all areas that may affect or be affected by growth in a given community.

MPAs are areas of influence where municipalities can more closely monitor development projects, coordinate actions with adjacent jurisdictions, and consider future annexations. Marana’s current MPA is adopted from the 2010 General Plan and covers 227.5 square miles, including unincorporated county lands adjacent to the Town and patches of unincorporated county lands within it. These “county islands” are under Pima County’s jurisdiction. The Marana MPA is shown on Figure 1.

# COMMUNITY SETTING

The Town of Marana is located in the heart of the Sun Corridor in the southern Arizona desert. The Sun Corridor is an approximately 80-mile-wide megaregion that stretches from Prescott Valley in central Arizona south to Nogales at the U.S.-Mexico border, with an expected population of over 12 million people by 2050. The megaregion is characterized by intrastate, interstate, and international commerce supported by road, rail, and air infrastructure.

Marana straddles 18 miles of I-10 immediately northwest of Tucson and 64 miles south of Phoenix, and includes land in both Pima County (121 sq. miles) and Pinal County (0.7 sq. miles) in the Avra Valley. Nearby

communities include Oro Valley, Casa Grande, Eloy, Sahuarita, and the Tohono O’odham Nation. Nogales is 60 miles to the southeast.

The environment has diverse elevations, characterized by desert flora scrublands cut by ephemeral washes and riparian tributaries of the Santa Cruz River, as well as mountain ranges with cactus, mesquite, and ironwood forests. Plant and animal life are abundant, and people have lived in the area for at least 13,000 years. Today, Marana offers its nearly 50,000 residents ample recreational and cultural opportunities in a booming economic corridor.

Table 1. Arizona Revised Statues Compliance

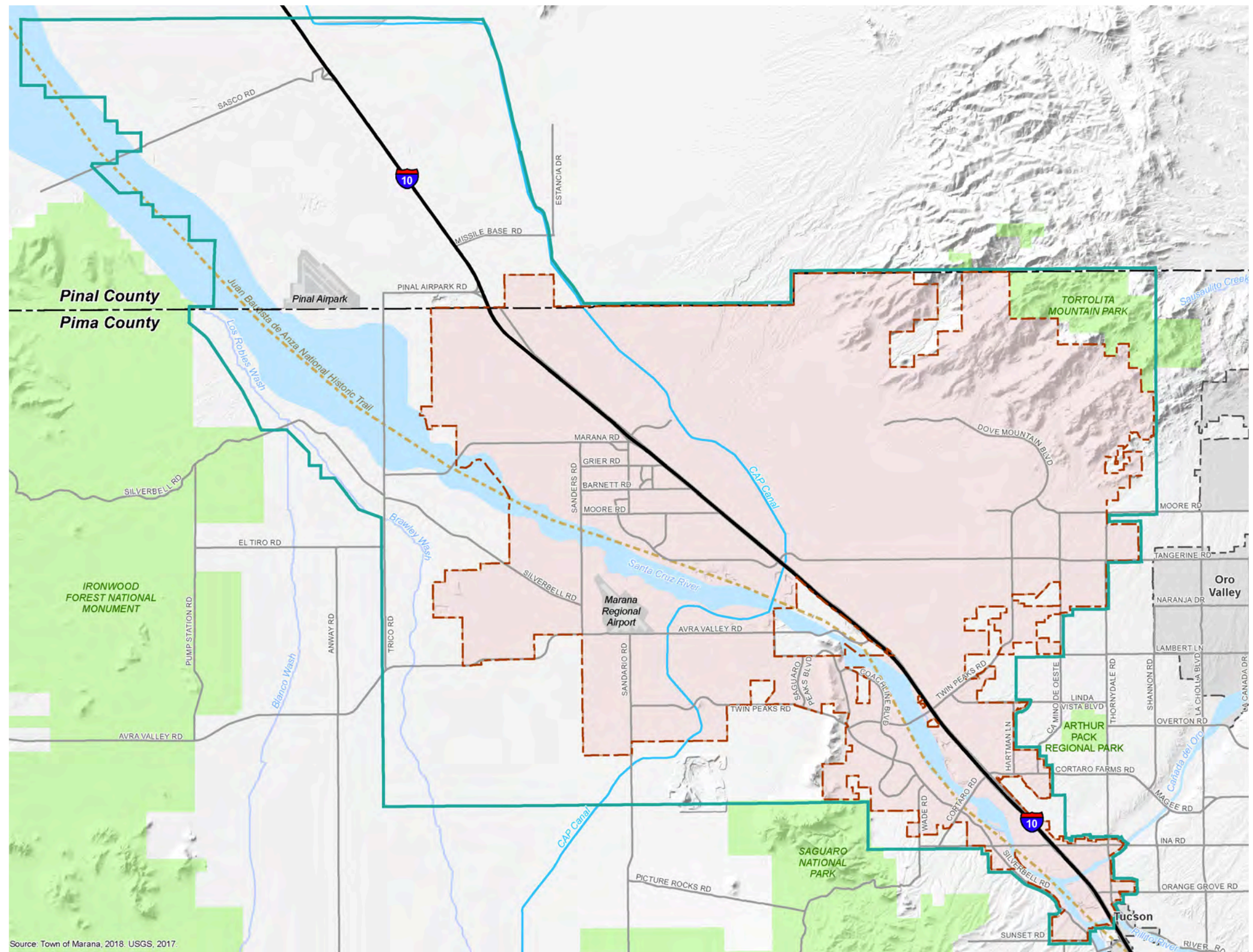
Theme	State Law Required Topic	Optional Topic		
Built Environment	<ul style="list-style-type: none"> <li>Land Use</li> <li>Growth</li> <li>Cost of Development</li> <li>Housing</li> <li>Public Services and Facilities</li> <li>Transportation</li> <li>Public Buildings</li> <li>Bicycling</li> </ul>			
	People & Community	<ul style="list-style-type: none"> <li>Public Safety</li> <li>Conservation, Rehabilitation, and Redevelopment</li> <li>Neighborhood Preservation and Revitalization</li> <li>Recreation</li> </ul>	<ul style="list-style-type: none"> <li>Economic Vitality</li> <li>Arts and Culture</li> </ul>	
		Resources & Sustainability	<ul style="list-style-type: none"> <li>Open Space</li> <li>Water Resources</li> <li>Environmental Planning</li> <li>Conservation</li> <li>Energy</li> </ul>	



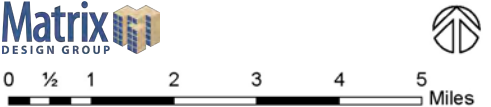


**MAKE**  
**MARANA**  
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Figure 1  
**Planning Area**



- Legend**
- Marana Planning Area
  - Marana Town Limits
  - County Boundary
  - Other City/Town
  - Interstate
  - Major Road
  - CAP Canal
  - River or Wash
  - Juan Bautista de Anza National Historic Trail
  - Regional Park
  - Airport



The Town of Marana provides this map information "As Is" at the request of the user with the understanding that it is not guaranteed to be accurate, correct or complete and conclusions drawn from such information are the responsibility of the user. In no event shall The Town of Marana become liable to users of these data, or any other party, for any loss or direct, indirect, special, incidental, or consequential damages, including but not limited to time, money, or goodwill, arising from the use or modification of the data.

Map Revised: 2/6/2019

Source: Town of Marana, 2018. USGS, 2017.



# HISTORY

## Prehistoric Period

Marana has a rich cultural history dating back at least 13,000 years. The first peoples known to have lived in the region were Paleoindian hunter-gatherers who consumed the wild plants and big game that inhabited the area from 11,000 to 7,500 B.C. The discovery of Paleoindian artifacts in and around Marana has placed the Town's heritage at the forefront of archaeologists' understanding of how and when people first arrived in Arizona.

Later groups were less transitory and established more permanent settlement with one of the oldest agricultural irrigation canal systems in North America in Tucson that date to approximately 1200 B.C. As farming techniques were developed and access to domesticated plants increased, these early agricultural period people started growing corn, squash, and beans.



Tourists study ancient mortar holes used by the Hohokam civilization to grind mesquite beans from A.D. 300-1450

Photo: [www.maranaaz.gov/news](http://www.maranaaz.gov/news)

The Hohokam are considered the earliest intensive farmers in the region, and their traditions dominated south-central Arizona from A.D. 300 to 1450. Hohokam sites in the region show evidence of terracing of the bajadas (foothills) for the production of food, beverages, soap, and fiber, as well as complex canal systems for irrigating a number of crops grown in the lowlands, including cotton. The Hohokam are best known for their large villages with ball courts, platform mounds, plazas, and petroglyphs. Hohokam sites have been discovered throughout Marana's Town limits.

Although the Hohokam disappear from the archaeological record, it is widely accepted they are the direct ancestors of the Piman speaking groups who lived here when the Spanish arrived and after whom Pima cotton would be named. The Tohono O'odham peoples, whose reservation is southwest of Marana, are descendents of the Hohokam people.

## Spanish Period

The Apache Indians and European explorers both arrived in the Avra Valley in the 1600s, marking the beginning of the historic period with conflict and strife.

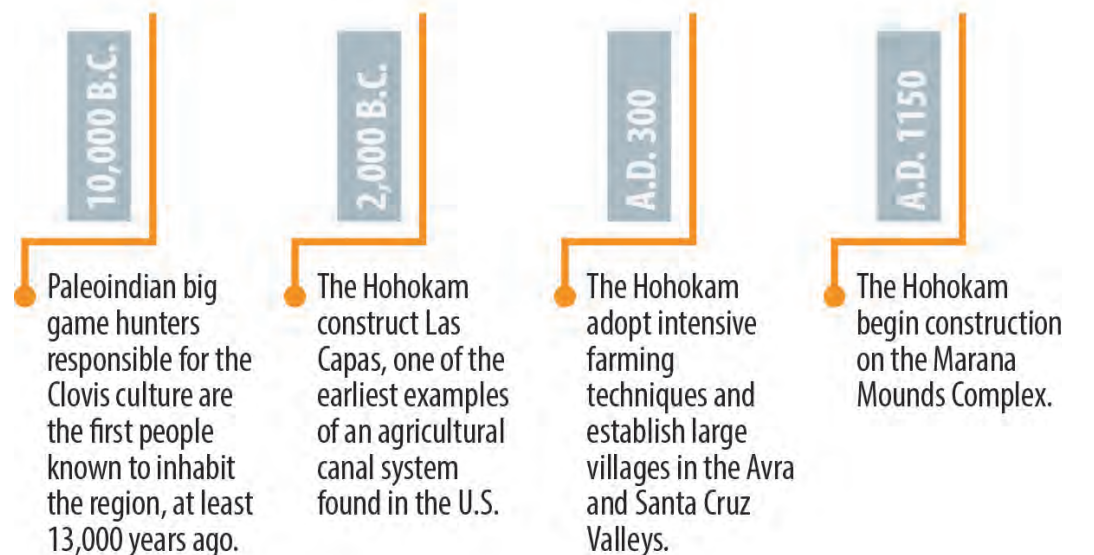
The O'odham made contact in earnest with the Spanish travelers in the late 17th and early 18th century, and in 1694, Jesuit priest Father Eusebio Francisco Kino was among the first to visit the Marana locale. A missionary working for the Spanish crown and the Roman Catholic Church, Kino and the Spanish military soon brought much of what is now the Sonoran Desert region under Colonial rule, including the Avra and Santa Cruz Valleys. Through Kino, the first European maps of the region were created. Spanish missionaries also brought new farming techniques to the area, as well as seed for winter crops, such as Sonoran white wheat, peas, lentils, and garbanzo beans. Kino is also remembered for driving herds of Criollo-Corriente cattle, Churro sheep, and Spanish Barb horses to mission communities, and teaching Native Americans how to raise domesticated animals. His productive rancherias cross what is now northern Sonora, Mexico, and southern Arizona, setting the foundation for modern Spanish style ranching.

The captain of the Spanish presidio in Sonora, Mexico, Juan Bautista de Anza, led an expedition along the Santa Cruz River to California in late 1775. The expedition engaged around 300 individuals, including soldiers and their families, cowboys, translators, guides, priests, and cattle herders. The expedition originated in Mexico and ultimately ended in San Francisco. The party stopped on a flat called Llano del Azotado near Pointer Mountain in southern Marana after traveling

through Puerto del Azotado—known today as Rattlesnake Pass—near Silverbell Road.

The route Anza and his group took has been designated the "Juan Bautista de Anza National Historic Trail." A 17-mile segment of the historic trail passes through Marana along the Santa Cruz River. The trail provides walking, hiking, and cycling opportunities and includes nearly 100 historical sites.

## A Timeline of Significant Events in Marana





Also present at the time of the arrival of the Spanish were the Yoeme (Yaqui). These people are known for their skills in horticulture and small-scale farming techniques. The Yoemem came from many parts of the Arizona Territory and Sonora, Mexico looking for work. The Yoeme people today are still residents of Southern Arizona and in the 1920s, helped construct the large canals from the present day Ina Road to the farms in Marana.

### Mexican Period

In 1810, the people of Mexico went to war to win independence from

Spain, and in 1821, jurisdiction over what is now Marana passed to the new Republic of Mexico. Marana remained part of the Mexican state of Sonora until 1854. The Treaty of Guadalupe Hidalgo was signed on February 2, 1848, which ended the Mexican-American War and gave the United States undisputed control of Texas. Mexico also sold the United States lands comprising present day California, Nevada, and Utah, as well as portions of what would become Arizona, Colorado, New Mexico, and Wyoming. Even after the treaty and subsequent land purchases, all of Arizona south of the Gila River belonged to Mexico.

### Territorial Period

In 1854, the United States purchased the remaining portions of New Mexico and Arizona for \$10 million dollars as part of the Gadsden Purchase. For the price of about 33 cents an acre, the United States successfully acquired a transcontinental corridor for the Southern Pacific Railroad. Mexican nationals fleeing a violent civil war quickly settled in the expanded U.S. territory, and several established large farms and ranches in the Marana area. Further settlement was encouraged by the Homestead Act of 1862, and one of Arizona's first and most prominent ranching

families patented their holdings in present-day Marana in 1896. Remnants of the Aguirre family homestead are preserved at Crossroads at Silverbell District Park. Miners also called the Marana area home during Arizona's territorial period. Prospectors arrived looking for gold, and while the precious metal was not found in the state, high grade copper ore was discovered and extracted from the Silver Bell Mountains.

On April 15, 1862, the westernmost fatal battle of the Civil War took place northwest of Marana in the Picacho Mountains. The struggle between Union and Confederate

soldiers occurred when Union troops were sent from Yuma to reclaim territory near Tucson and engaged a patrol of 10 Confederate troops at the Picacho Pass Butterfield Station. The conflict lasted around 90 minutes and resulted in the Union retaking the disputed territory. Picacho Peak State Park sponsors a reenactment of the Battle of Picacho Pass every March and has erected permanent monuments on the west side of I-10 at the base of the mountains.

1600-1799



**1694.** Santa Cruz Valley brought under the rule of Spain by Father Eusebio Francisco Kino.

**1775.** Juan Bautista de Anza leads an expedition from Mexico to California, making his way along the Santa Cruz River.

1800-1849



**1810.** The people of Mexico win their independence from Spain. The region is now controlled by the Republic of Mexico.

**1848.** Treaty of Guadalupe Hidalgo is signed, giving the U.S. control over Texas. Portions of Arizona were sold to the States as well, although the Marana region remained under Mexican control.

1850-1899



**1854.** The U.S. purchases 29,640 square miles of land south of the Gila River in present-day Arizona and New Mexico as part of the Gadsden Purchase. The Marana region becomes part of the United States.

**1862.** The Civil War Battle of Picacho Pass occurs at the Picacho Pass Butterfield Stage Station.

**1890.** The name Marana first appears on a flag station along the Southern Pacific Railroad.

1900-1949



**1910.** Yoeme (Yaqui) settlers arrive in Marana.

**1912.** Arizona becomes a state

**1920's-40's.** An influx of settlers arrive in Marana to grow cotton, wheat, barley, alfalfa, and citrus.

**1939.** Arizona, a western film, is filmed in Marana.

1950-1999



**1977.** Marana is incorporated with 1,500 residents and 10-square miles of land holdings.

**1999.** Residents elect the first Mayor of Marana.

**1999.** The Avra Valley Airport (later renamed Marana Regional Airport) is purchased by Marana from Pima County.

2000-2009



**2005.** The Marana Municipal Complex opens, housing most municipal departments.

**2009.** Ritz-Carlton, Dove Mountain opens with a golf course designed by Jack Nicklaus.

2010-2019



**2016.** Marana reaches its current size of 122 square miles with 40,221 residents.

**2017.** Marana establishes the Marana Film Office.

**2018.** The dedicated Marana Police Facility opens in November at the Marana Municipal Complex Campus.

**2018.** The Marana Wastewater Treatment Plant opens in July.



The man at the top of the maze—l'ittoi-the O'odham deity—depicts birth. By following the black pattern, beginning at the top, the figure goes through the maze encountering many turns and changes, as in life. Throughout the journey, one acquires knowledge, strength, and understanding. Nearing the end of the maze, one retreats to a small corner of the pattern before reaching the dark center of death and eternal life. Here one repents, cleanses and reflects back on all the wisdom gained. Finally, pure and in harmony with the world, death and eternal life are accepted.



Pima (Akimel O'odham) man-in-the-maze plaque. C. 1910. Perry Merrell Williams Coll. (781). Photo courtesy Arizona State Museum, University of Arizona. Photographer, Janelle Weakly.

### Tohono O'odham Nation

The ancestors of contemporary Tohono O'odham were living in the Avra Valley and south to Sonora, Mexico when the Spanish missionaries arrived in the 17th Century. The Gadsden Purchase and subsequent re-drawing of the U.S.-Mexico border effectively bisected their traditional homelands and ultimately placed the indigenous farmers and ranchers in conflict with incoming settlers who sought land and water. The rising tensions between the Tohono O'odham, territorial settlers, Mexican militia, and Apache Indians who raided groups on both sides

of the border motivated President Grant to establish what would become the Tohono O'odham Nation. Following three executive orders (1874-1916) and ancillary land acquisitions, the reservation now encompasses over 2.8 million acres and is the second largest Native American land holding in the United States (Navajo Nation is the largest). The Tohono O'odham Nation is administered as 11 separate districts, which are represented as 11 feathers on the national flag, and has 34,000 enrolled members. However, the majority of tribal members live off the reservation, including in and around Marana.

### Early Marana

The name Marana first appeared as a "flag station" on a Southern Pacific Railroad map in 1890. The name comes from the Spanish word, "maraña," that means "dense brush, a tangle, or a thicket," and was given to the area due to the thick patches of mesquite along the rail line. The settlement was originally called Postvale, after the Michigan immigrant Edwin R. Post and did not take on the name Marana until the 1920s.

Land along the Santa Cruz River was developed as an irrigation and landholdings company to induce others to grow cotton as part of the war effort during World War I. This effort represented a revitalization of Marana's agricultural heritage and specifically the production of cotton that had been the heart of the region's economy since the Hohokam had lived in the area. People continued to

move to Marana to grow cotton throughout the 1920s, cementing the crop among the Five C's that supported Arizona's early economy (copper, cattle, cotton, citrus, and climate). Production diversified in the 1940s following the Depression and improved land management strategies, with wheat, barley, alfalfa, and citrus growing in economic importance. Although the largest industries in the area are health care services, manufacturing, and construction, the community's deep roots in farming and ranching are still apparent in Marana's landscapes.

Movie filming started in Marana in 1939 and continues today. The film industry developed alongside the hospitality industry. Homesteads dating back to the 1800s were converted to high-end guest ranches beginning with Saguaro Vista in 1936. Saguaro Vista is now Mira Vista and continues to be operational today.

In 1942, the federal government bought three and one-half square miles of the old Aguirre Ranch and began constructing an air base and several emergency landing fields in the area. From 1942 to 1945, the Army Air Training Base (known today as Pinal Airpark) was one of the largest pilot-training centers in the United States, and the skies above Marana were used to train some 10,000 aviators.

The war also led to the development of a number of auxiliary airfields including the Marana Auxiliary Army Airfield #2, which served as a "landing mat" for the nearby Army Air Training Base. After changing ownership a number of times throughout the years, the Town took control of the airport in 1999 renaming the facility the Marana Regional Airport. More information regarding the Town's aviation facilities can be found in Chapter 2, Built Environment.



Cotton fields in Marana



Actor and stuntman D.C. Warren



Army Training Base during WWII

Photos: [maranaheritage.org](http://maranaheritage.org)



Development in and around the airfields, initially driven by World War II preparation and training, ultimately served Marana well. Military needs resulted in improvements to the road between Tucson and Casa Grande and the installation of electrical lines, which reached Marana in 1945. Although Marana would remain a rural community, circulation within the immediate area and access to both Tucson and Phoenix improved substantially by the end of the war.

Regional improvements continued and, in 1961, Arizona Department of Transportation and the federal government demolished Marana's historic downtown area in order to widen Interstate 10. Since the Southern Pacific Railroad track lay to the east, the interstate route was added to the west side of Highway 84 (old Casa Grande Highway). The Mercantile shopping center, in the historic downtown, was a casualty

of this progress, and the high school and any remaining businesses were relocated. Although sections of the old highway are still used as a frontage road, there is a notable absence of historic buildings and related infrastructure in Marana's current downtown area.

### Incorporation and Annexation

In 1977, water was so important to the community's leaders that they incorporated all 10-square miles comprising Marana in order to guarantee water rights for current and future residents. The 1,500 townspeople elected their first Town council that same year, and the community continued to grow through implementation of its annexation policy.

The Town originally incorporated 6,577 acres, and an additional 71,237 acres has been annexed

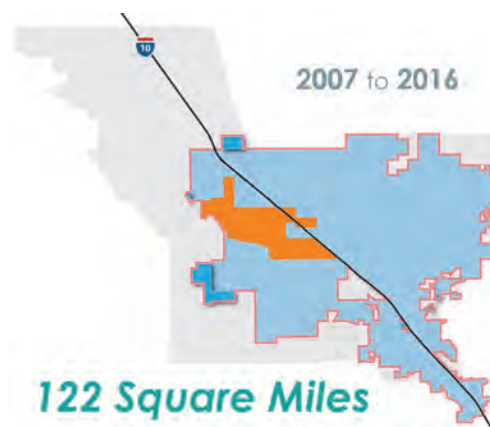
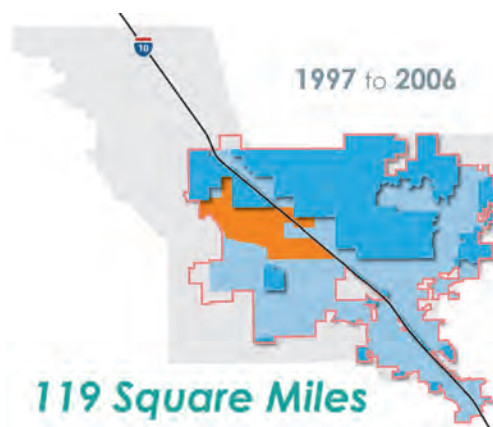
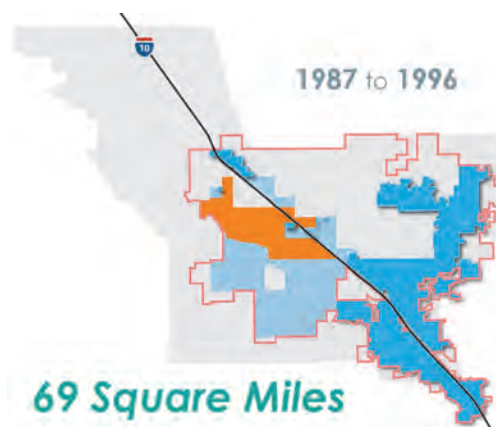
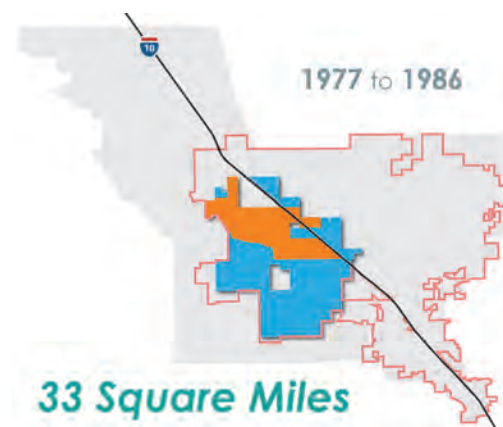
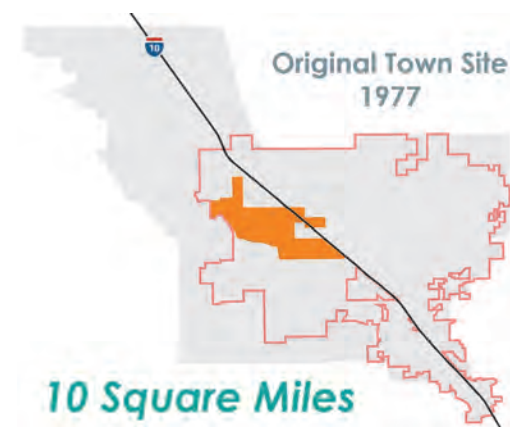
over the last 40 years. Three of the most significant annexations were completed in 1992, 1993, and 2002. In January 1992, Marana annexed 2,335 acres of land at the foot of the Tortolita Mountains where the Ritz-Carlton Dove Mountain resort and thousands of custom homes were built. Both the resort and residences have become major economic assets for the community. The following year, the Town annexed two square miles in southern Marana that is today a commercial hub. This area includes several major retail outlets, such as Costco Wholesale, Target, The Home Depot, and Lowe's Home Improvement. These retailers provide Marana a major source of tax revenue that helps sustain future growth. Marana also annexed 22,721 acres of Arizona State Trust land in March 2002. This acreage comprises the Tortolita Alluvial Fan, which in turn constitutes the majority of Marana's land area with future development potential.

The Town is still actively committed to its annexation policy and acquired additional lands as recently as 2016. Nevertheless, county islands persist in the Marana MPA. County islands arise when property owners do not wish to be annexed at the same time as their neighbors, despite benefits such as water and sewer services and police, fire, and other emergency services. Marana will likely continue to incorporate county islands as opportunities arise.

Developable areas of the Town of Marana are converting from agriculture to municipal water users. The number of local farms has declined as lands have been converted to housing, but agricultural uses are still present in the Town today. The Cortaro Water Users' Association provides water for irrigation purposes to over 12,000 acres of agricultural land in northern Marana and near Cortaro Road.

The association was formed in 1946 to manage the water supply and delivery system for landowners in the area.

The Town of Marana Water Department is responsible for the potable water users throughout most of the community. While Tucson Water serves the developed areas in the south and northeast, Marana Water will be serving most of the new developable lands converted from agriculture. The Town is continuously searching for and acquiring water resources to support new development. Marana Water also has membership in the Central Arizona Groundwater Replenishment District which will assist in replenishing water supplies used by future development. Maintaining the ability to own and deliver sufficient water supplies will prove crucial as the community continues to grow and the demand for water increases.





# CONTEMPORARY MARANA

Today, Marana has a council-manager form of government with an appointed Town manager who is responsible for implementing municipal policy and administering Town operations. The mayor serves on the Town council and is elected at-large for a four-year term. Similarly, council members serve four-year staggered terms. The council fixes the duties and compensation of Town officials and employees and enacts ordinances and resolutions relating to services, taxes, appropriating and borrowing moneys, licensing and regulating businesses and trades, and other municipal actions. The council also makes decisions related to land use in conformance with the General



Plan via resolutions and ordinances and with input from the Town department.

Similarly integral to the Town's governance and successful developments is the Marana Town Code. The Code not only establishes government positions and their roles and responsibilities, but also includes the Land Development Code with subdivision and zoning ordinances that ensure orderly growth well into the future. Recommendations to the Town council regarding changes in land use, zoning regulations, individual zoning and development applications, and general plan amendments are made by the Marana Planning Commission, a seven-member advisory board. The Board of Adjustment is a quasi-judicial entity made up of seven citizens appointed by the Town council. The Marana Board of Adjustment hears and decides zoning appeals and considers requests for zoning variances.

In 2011, the council established the Marana Citizens' Forum as a new model for engaging residents and municipal partners in community development. The purpose of the Forum is to bring residents, business owners, and partners together to study and address multi-disciplinary issues facing the community. There are 32 delegates, including Regional Partner Representatives from the Marana Health Center, the Marana Chamber of Commerce,

Northwest Fire District, and Marana Unified School District, as well as At-Large Citizen Delegates and Town Council Appointed Delegates. Each delegate is appointed for their unique viewpoint and expertise in order to develop and present broad recommendations to the Town council for future assessment.

Marana gains additional support in planning for development as a member of Pima Association of Governments (PAG). The association supports regional planning efforts focused on mobility, sustainability, and livability for all member jurisdictions. It is governed by a regional council composed of the Pima County representative to the Arizona State Transportation Board and either the chief elected official or a designee from each member jurisdiction (Pima County, City of Tucson, City of South Tucson, Town of Marana, Town of Oro Valley, Town of Sahuarita, the Tohono O'odham Nation, and Pascua Yaqui Tribe).

Pima Association of Governments is the designated metropolitan planning organization (MPO) and transportation management association (TMA) for Pima County. As such, PAG implements a regional planning process called the Overall Work Program that is compliant with federal regulations. The purpose of the work program is to plan for the greater regional transportation network, a seamless multimodal



Marana Municipal Complex; Marana Town Council; Marana Citizens' Forum

network for the citizens of Pima County that complements state and federal systems.

Marana unquestionably benefits from its location along major trade routes and effective connectivity. A major transcontinental highway spanning almost 2,500 miles connects the Town to the East and West Coasts, while the railroad transports goods to and from the Atlantic Seaboard and manufacturing centers in Mexico. The Town is also close to international transoceanic markets, with the deep-water harbor in Guaymas, Mexico slightly closer than San Diego, California.

As a consequence, the Town has a strong local economy, high median income, and an educated workforce. Marana further boasts

a multilayered heritage and a high quality of life. Amenities include a number of regional, district, and community parks, a multitude of neighborhood parks, and Natural and Cultural Resource Parks like the Marana River Heritage Park and the El Rio Preserve. Marana also has significant open space, trails and Town-sponsored sports and music programs, tourism and recreation programs, opportunities to engage with both prehistoric and contemporary arts, special events, and private entertainment venues.

As Marana continues to grow, it aims to be a forward-thinking community that provides opportunities for residents and local businesses to engage and prosper.





# Built Environment

**M A K E**  
**MARANA**  
2040 • GENERAL PLAN

## MAP ATLAS

Marana's strategic development paves the way for continued growth. Neighborhoods, local businesses, gathering places, parks, and schools all coalesce to instill a sense of place through the built environment.



## 2010 GENERAL PLAN LAND USE

The 2010 Future Land Use Map (FLUM), within the current General Plan's Land Use Element, guides the built environment by illustrating the type and location of permitted land uses. The land use types are described through the Future Land Use Categories. The 2010 FLUM represents the collective vision of Town leaders and residents and will continue to guide development decisions until the Make Marana 2040 General Plan is ratified.

The Town has adopted seven general plans since its incorporation, the most recent of which was in 2010. The Make Marana 2040 General Plan is an update to the Marana 2010 General Plan and, as such, builds on key aspects of it. As a Town grows and matures, it is natural for its community vision to evolve as well. Understanding the vision of the Marana 2010 General Plan will help make informed decisions with regards to growth in the future.

The 2010 FLUM (Figure 2) shows where the different types of land uses are currently permitted. Any discrepancies between the 2010 FLUM and current conditions highlight aspects of the community vision not yet achieved, and so informs the development of the 2040 Future Land Use Map. The Make Marana 2040 General Plan will update the 2010 FLUM and Future Land Use categories. Table 2 shows the percent allocation of each permitted use in the 2010 FLUM and lists all the land use categories that were included in

the 2010 General Plan for Marana's MPA. A description of some of the more prominent designations follows.

### Residential

Residential designations account for more than 50% of the land area in the 2010 FLUM. The largest of the residential land use categories was Rural Density Residential, primarily located north of Tangerine Road. Other land use designations include Low Density Residential, Medium Density Residential, and High Density Residential.

### Commercial

The Commercial land use designation made up just 3.8% of the MPA. This is relatively low, with 7% representing a more standard figure. The Master Plan Area designation additionally allows for commercial development. Most commercially designated land is generally located along the I-10 corridor to capitalize on the access provided by the interstate. Commercial development supports residents' needs including clothing and food. This type of development can also attract shoppers from other municipalities increasing the Town's sales tax revenue.

### Industrial

Industrial was the second largest designation in the 2010 Plan and made up 18% of the planning

area. However, many of these areas are still undeveloped. The industrial designation provides for a mix of light and heavy industrial uses, employment centers, offices, research and development facilities, and mining infrastructure. Industrial uses surround Pinal Airpark and Marana Regional Airport and also exist along the I-10 corridor.

### Master Plan Area

This land use designation represents 15% of the planning area and characterizes lands set aside for, or currently zoned as, a Specific Plan zoning district. The purpose of the designation is to allow flexibility in site planning and design to accommodate innovative mixed-use developments of various intensities, including low to high density residential development, different scales of commercial development, industrial and employment related uses, and a significant amount of open space and natural areas.

### Parks / Open Space

The Parks / Open Space designation denotes areas of both active and passive recreation and includes parks, trails, and natural areas. Areas with this designation are located intermittently throughout the Town and include Tortolita Mountain Park. Master Plan Areas also include appropriately scaled parks and open spaces in their design.

### Airport

The airport designation identifies the operating areas of the Marana Regional Airport (AVQ) and Pinal Airpark (MZJ). Areas surrounding AVQ and the airpark are also included in this designation and support future industrial and commercial land uses, as well as a range of employment, office, and hospitality uses. These airports are further discussed later in this chapter.

### Special Planning Areas

In addition to land use designations, the 2010 General Plan identifies two special planning areas within the MPA with particular economic and environmental importance: Tangerine Road and the Avra Valley Eastern Connection.

#### Tangerine Road Special Planning Area

This special planning area is located along the major east-west thoroughfare, Tangerine Road. Although the area has some development constraints due to the Tortolita Alluvial Fan, it is expected to be a major economic corridor in Marana.

#### The Avra Valley Eastern Connection

The Avra Valley Eastern Connection special planning area was first identified in Marana's Draft Habitat Conservation Plan as constituting an opportunity to establish wildlife

corridors connecting the Tortolita and Tucson Mountains. This connection was included in the 2010 General Plan as a special planning area. Since then the Town has, with assistance with the Regional Transportation Authority (RTA), implemented wildlife connections along Camino de Manana Road and Tangerine Road as well as completed a study of Twin Peaks Road over the Tucson Mountains. In addition, the Town has designated the old Arizona Department of Transportation borrow pit as the El Rio Wildlife Preserve and is working on planting native species and removing invasive species. This area will also include ponds in the future for shore birds and various other wildlife. Wildlife connectivity enhancements will continue in this area.

At this location the Town will seek development alternatives that can minimize the impacts for future infrastructure. The Town will work with the environmental community, private developers, Pima County, and the RTA to investigate alternative designs and financial funding opportunities to address this contradiction. When planning infrastructure in this area, careful consideration will need to be given to the placement and design to limit impacts to wildlife.



**MAKE**  
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Figure 2  
2010 General  
Plan Land Use

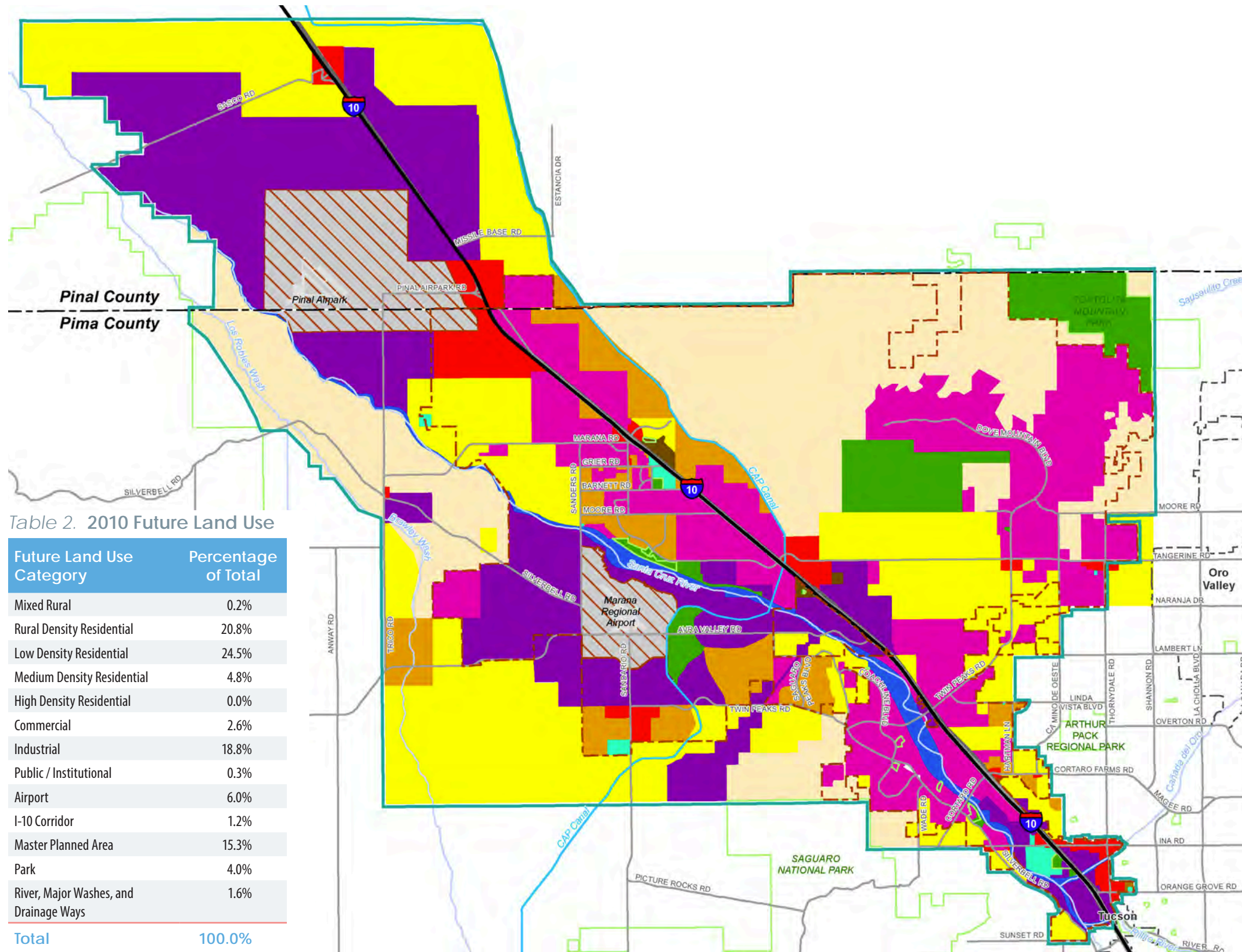


Table 2. 2010 Future Land Use

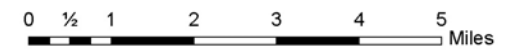
Future Land Use Category	Percentage of Total
Mixed Rural	0.2%
Rural Density Residential	20.8%
Low Density Residential	24.5%
Medium Density Residential	4.8%
High Density Residential	0.0%
Commercial	2.6%
Industrial	18.8%
Public / Institutional	0.3%
Airport	6.0%
I-10 Corridor	1.2%
Master Planned Area	15.3%
Park	4.0%
River, Major Washes, and Drainage Ways	1.6%
<b>Total</b>	<b>100.0%</b>

Source: Town of Marana

**Legend**

- 2010 Future Land Use**
- Mixed Rural
  - Rural Density Residential
  - Low Density Residential
  - Medium Density Residential
  - High Density Residential
  - Commercial
  - Industrial
  - Public/Institutional
  - Airport
  - I-10 Corridor
  - Master Planned Area
  - Parks/Open Space
  - River, Major Washes, and Drainage Ways

- Marana Planning Area
- Marana Town Limits
- County Boundary
- Other City/Town
- Interstate
- Major Road
- CAP Canal
- River or Wash
- Regional Park



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Map Revised: 2/18/2019



# ZONING

Zoning is a land management tool for implementing the FLUM and strategically organizing land uses to ensure orderly and compatible growth.

Marana’s existing zoning will serve as a baseline for development of the land use element in the Make Marana 2040 General Plan. As one of the primary tools for implementing general plans, municipalities enact zoning laws to promote and serve public health, safety, and general welfare. To achieve this end, zoning ordinances typically regulate the nature and location of land use, building heights, occupancy standards, and other physical characteristics of the built environment.

Marana’s Land Development Code defines the zoning districts and regulations for all property within the Town’s incorporated limits. The code divided the Town into five zones until 1993 when it was expanded to include 28 zones. Table 3 lists Marana’s current zoning districts, and Figure 3 shows where they are located. The Town does not have a dedicated Parks and Open Space zoning district. However, parks and open spaces are permitted, and in some instances required, in the majority of zoning districts.

The Town is currently in the process of updating its Land Development Code in tandem with the General Plan. This allows for zoning districts to be aligned with land use categories and policies in a cohesive manner.

## Agricultural

The agricultural district accounts for 30% of land zoned within the Town. The majority of land zoned Agricultural is east of I-10 and north of Tangerine Road.

## Residential

Marana has 16 residential zoning districts that provide for residential development of varying density within the Town. Zones A, B, and C are among the Town’s original zones that provide for residential development. Residential districts added after 1993 include a number in their name, specifying minimum lot size.

Residential categories account for 30% of zoned land in the Town. Prominent areas with residential zoning are located south of Tangerine Road, and west of I-10 at Twin Peaks Road and Moore Road.

## Commercial

The Town has four districts to provide for commercial development: Commercial (office), Neighborhood Commercial, Village Commercial, and Mixed-Use zone. They each provide for appropriately scaled commercial uses based on surrounding development. In total, commercial designations account for less than 1% of zoned land in Marana. While representation of commercial zoning districts is small, commercial uses are permitted in some capacity within other zoning districts including A, B, C, E, and F.

## Industrial

There are two districts that provide for industrial development within the Town—Heavy Industry and Light Industrial. These designations account for 3% of zoned land in the Town and are mostly located near Ina Road and the Marana Regional Airport.

## Specific Plan

The Specific Plan zoning district accounts for 27% of all zoned land in the Town and directly corresponds with the master planned area land use designation. This zone provides the regulatory framework for the development of master planned communities within Marana. This district is unique in that it allows for a wide variety of uses including residential, commercial, open space, parks, and trails. Examples of specific plans in Marana are Dove Mountain, Gladden Farms II, and Continental Ranch.

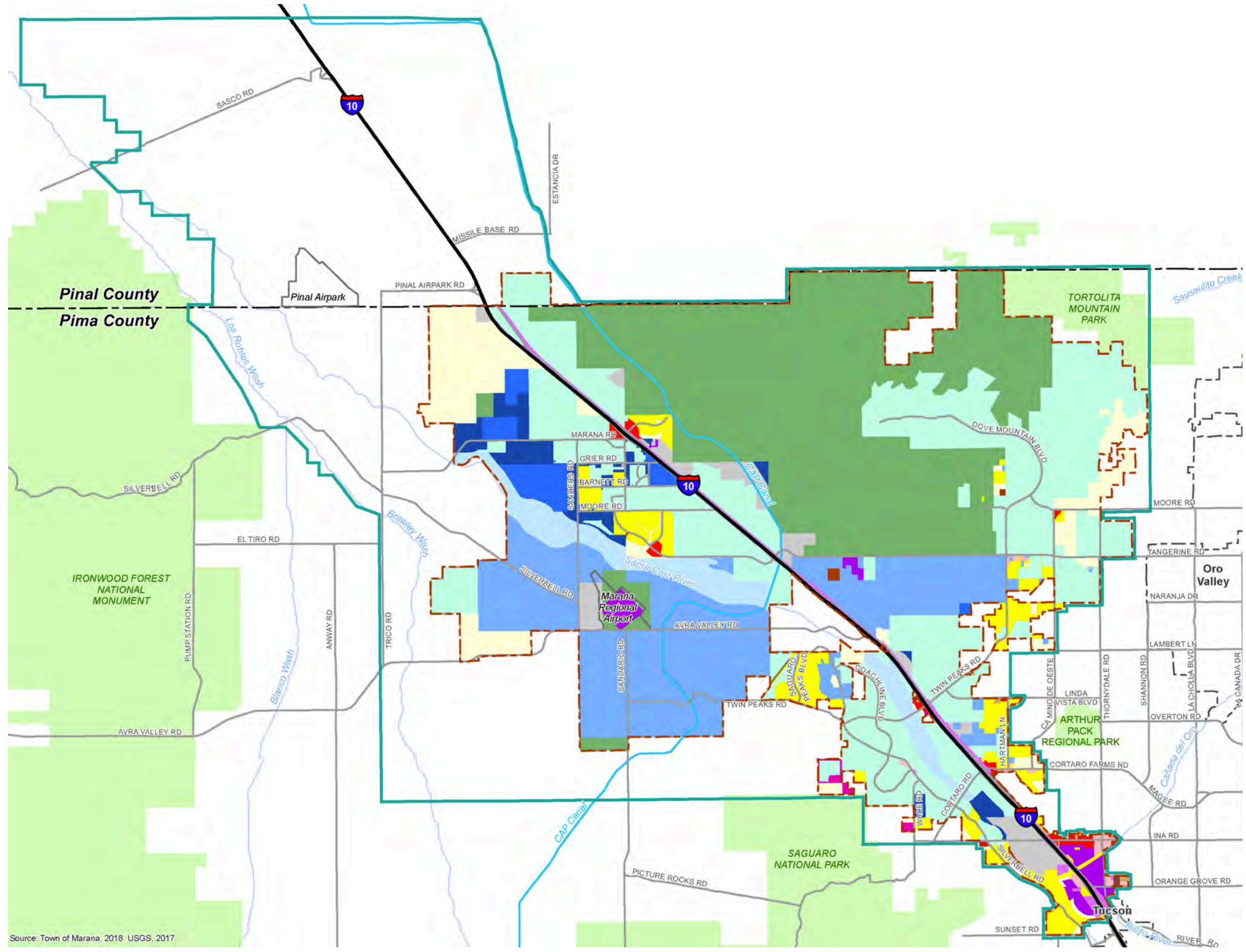
Table 3. Marana Zoning

Abbr.	Zoning District	Acreage	Percentage of Total	Abbr.	Zoning District	Acreage	Percentage of Total
A	Small Lot Zone	1,762	2.3%	R-6	Single Family Residential	1,590	2.0%
B	Medium Lot Zone	1,283	1.7%	R-3.5	Single Family Residential	43	<0.1%
C	Large Lot Zone	12,765	17.4%	MR-1	Multi-Family (High Density)	21	<0.1%
D	Designated Floodplain Zone	2,908	3.7%	MR-2	Multi-Family (Med/High Density)	5	<0.1%
E	Transportation Corridor Zone	1,886	2.4%	MH	Manufactured Housing	17	<0.1%
F	Specific Plan	21,728	27.9%	CO	Commercial (Office)	8	<0.1%
AG	Agricultural	23,688	30.4%	VC	Village Commercial	358	0.5%
RD-180	Rural Development	1,320	1.7%	NC	Neighborhood Commercial	226	0.3%
R-144	Single Family Residential	3,658	4.7%	MU-1	Mixed Use	50	<0.1%
R-80	Single Family Residential	45	<0.1	LI	Light Industrial	1,563	2.0%
R-36	Single Family Residential	1,347	1.7%	HI	Heavy Industry	774	1.0%
R-16	Single Family Residential	57	<0.1	RR	Resort & Recreation	115	0.2%
R-10	Single Family Residential	15	<0.1	RV	Recreational Vehicle	19	<0.1%
R-8	Single Family Residential	419	0.5%				
R-7	Single Family Residential	205	0.3%	<b>Total</b>		<b>77,873</b>	<b>-</b>

Source: Town of Marana

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Figure 3  
Zoning



**Legend**

**Zoning**

- A - Small Lot Zone
- B - Medium Lot Zone
- C - Large Lot Zone
- D - Designated Floodplain Zone
- E - Transportation Corridor Zone
- F - Specific Plan
- AG - Agricultural
- RD-180, R-144, R-80 - Rural Development
- R-3.5, 6, 7, 8, 10, 16, 36 - Single Family Residential
- MR-2 - Multi-Family (Med/High Density)
- MR-1 - Multi-Family (High Density)
- MH - Manufactured Housing
- RV - Recreational Vehicle
- NC - Neighborhood Commercial
- VC - Village Commercial
- RR - Recreational Resort
- CO - Commercial (Office)
- MU-1 - Mixed Use Zone
- HI - Heavy Industry
- LI - Light Industrial

   Marana Planning Area  
   Marana Town Limits  
   County Boundary  
   Other City/Town  
 Interstate  
 Major Road  
 CAP Canal  
 River or Wash  
   Airport  
 Regional Park

**Matrix**  
DESIGN GROUP

0 1/4 1 2 3 4 5 Miles

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Map Revised: 2/19/2019

Source: Town of Marana, 2018. USGS, 2017.



## EXISTING LAND USE



Aerial view of Gladden Farms



Cotton fields in Marana



Tucson Premium Outlets

Existing land use is a term used to describe how property is currently being utilized. Existing land use in the Town of Marana MPA is shown in Table 4 and graphically illustrated on Figure 4. The Town can be primarily characterized as vacant. 56% of all land within the MPA is characterized as vacant or undeveloped. Other low intensity land uses account for an additional 24% of the MPA and include agricultural land, open space, Interstate 10, rivers, major washes, and drainage basins. The remaining 20% of land in the MPA is considered developed. Most of the developed land in the Town is in the form of single-family residential. As such, there is a noticeable lack of commercial development. With Marana's large land area and percentage of vacant land, there is the opportunity for growth and development in the future.

### Vacant

Vacant land is the most prevalent land use in the Town, accounting for 81,994.4 acres or 56% of the MPA.

### Agriculture

Agriculture is the second largest land use in Marana today, comprising 15.5% of the total MPA. The majority of agricultural land in the Town is located west of I-10, near the Santa Cruz River.

### Residential

Residential land uses account for 8% of the total MPA. The majority of residential development is single-family residential with 11,840 acres. Multi-family residential accounts for 110.7 acres, less than 0.1% of the MPA. Residential land uses are clustered throughout the planning area. Areas with a predominance of residential uses are west of I-10 along Silverbell Road and Moore Road. Residential development east of I-10 is primarily located along Dove Mountain Boulevard.

### Commercial

Commercial land uses in Marana account for 0.9% of the MPA. Commercial development is scattered throughout the MPA, mostly near existing residential development. The largest cluster of commercial development is located in the Town's southern area, along Ina Road and Orange Grove Road.

### Industrial

Industrial land uses account for 2.6% of the Marana MPA. The majority of industrial development is located west of I-10 and south of Tangerine Road. These developments take advantage of the interstate for their operations.

Table 4. Existing Land Use

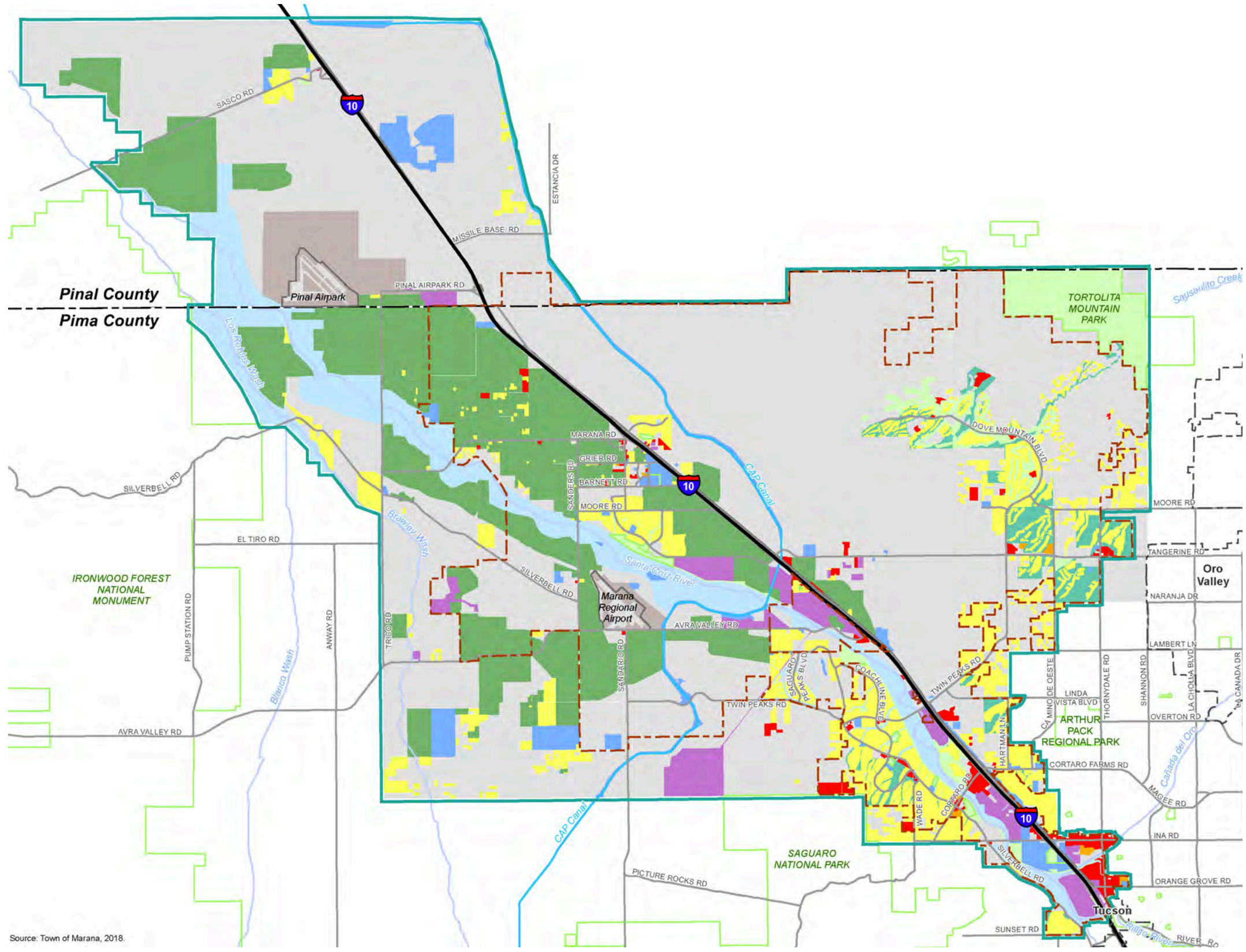
Land Use	Acreage	Percentage of Total
Agricultural	22,586.6	15.5%
Residential Single Family	11,840.0	8.1%
Residential Multi-Family	110.7	<0.1%
Commercial	1,348.8	0.9%
Airport	3,706.2	2.5%
Industrial	3,766.4	2.6%
Public/Institutional	3,476.7	2.4%
Open Space	2,093.0	1.4%
Parks and Recreation	4,488.8	3.1%
Rivers, Major Washes and Drainage Basins	8,651.6	5.9%
Vacant/Undeveloped	81,994.4	56.2%
I-10	1,731.7	1.2%
<b>Total</b>	<b>145,795</b>	<b>-</b>

Source: Town of Marana



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Figure 4  
**Existing Land Use**



- Legend**
- Existing Land Use**
- Agricultural
  - Residential Single Family
  - Residential Multi Family
  - Commercial
  - Airport
  - Industrial
  - Public/Institutional
  - Open Space
  - Parks and Recreation
  - Rivers, Major Washes, and Drainage Basins
  - Vacant/Undeveloped
  - I-10

- Marana Planning Area
- Marana Town Limits
- County Boundary
- Other City/Town
- Interstate
- Major Road
- CAP Canal
- River or Wash
- Airport
- Regional Park

**Matrix**  
DESIGN GROUP

0 1/4 1 2 3 4 5 Miles

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Map Revised: 2/6/2019

Source: Town of Marana, 2018.

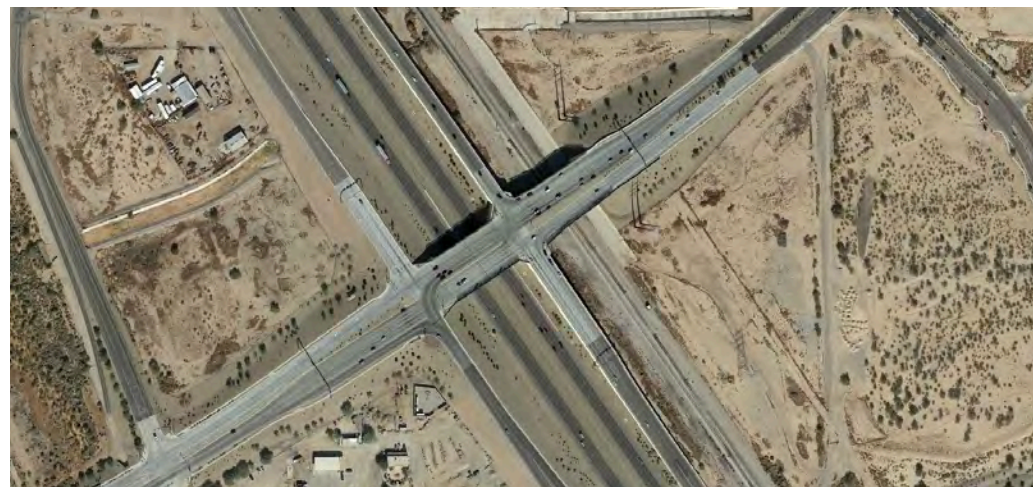


# CIRCULATION

A well-functioning transportation network is essential for any community. The network helps support economic growth through the movement of goods and services, as well as growth of social capital through the movement of people. An ideal transportation network contains multimodal (i.e., automobile, public transit, bike, and pedestrian) infrastructure that supports connectivity within and between communities, is considerate of the pedestrian realm with shaded sidewalks and other walking areas, and includes bike facilities. Transportation networks have direct consequences on local economies. They provide access to work and employment opportunities, increase interaction among residents, create pedestrian areas where a sense of community can be established, and generate or provide access to recreational opportunities that can lead to increased tourism dollars and quality of life.

## Roadways

Roadways are designed for two primary functions—access and mobility. The functions of a roadway influence design, as well as the type of land uses that can be supported nearby. The circulation system in Marana is depicted on Figure 5 and includes freeways, arterials, collectors, and local roads.



Twin Peaks Interchange at Interstate 10. Photo: Google Earth

## Freeways

Freeways are designed to maximize mobility and support the most traffic at the highest speeds. The Interstate 10 freeway travels 18 miles through the Town.

## Arterials

Arterial roads are the main corridors within a community that support high traffic volumes. As such, they generally provide limited access to

adjacent development. Improved arterials in Marana include Dove Mountain Boulevard, Tangerine Road, Twin Peaks Road, Ina Road, Thornydale Road, Silverbell Road, and Cortaro Road. Other roads such as Marana Road, Sanders Road, and Adonis Road may exist as two-lane rural roads at this time but will ultimately be upgraded to an arterial road design in the future as development occurs.

## Collectors

Collector streets are used to collect vehicles traveling from local roads and distribute them to roads with higher volumes of traffic and rates of mobility. Collectors typically balance the need for access to adjacent properties and the mobility of through traffic. These roads are wider and allow higher travel speeds than local roads. Examples of collectors in Marana include Moore Road, Coachline Boulevard, Aerie Drive, Costco Drive, Continental Reserve Loop, Gladden Farms Drive, and Lon Adams Road.

## Local Roads

Local roads prioritize access to nearby properties, businesses, and residences over mobility. As such, traffic generated from nearby land uses is generally light, and speed limits are low. Local roads are designed to discourage cut-through traffic and truck traffic.

## Public Transit

Public transportation in Marana (Figure 6) is provided by the Regional Transit Authority (RTA), which funds and operates Sun Tran as part of an integrated regional system. Within Marana, there is one Sun Tran bus route (16) that connects to Downtown Tucson; three Sun Tran express bus routes (102X, 104X, and 204X) that provide express service to the University of Arizona, Downtown Tucson, and Tucson International Airport and nearby Raytheon; as well as four Sun Shuttle routes (410, 411, 412, and 413) that provide service throughout Marana and connect to major employment centers such as the Marana Municipal Complex, the Marana Unified School District Offices, Marana Health Center, and the Tucson Premium Outlets.

## Rail

The Union Pacific Railroad's (UPRR) Sunset Route parallels I-10 as it transects the Town. The line passes through Marana on its way to major terminals in Phoenix and Tucson. As such, there are limited opportunities for industry-serving spurs and sidings within Marana. Currently, there are grade-separated crossings at Orange Grove Road, Twin Peaks Road, and Ina Road. Future grade-separated crossings are planned for Cortaro Farms Road, Tangerine Road, and Marana Road.

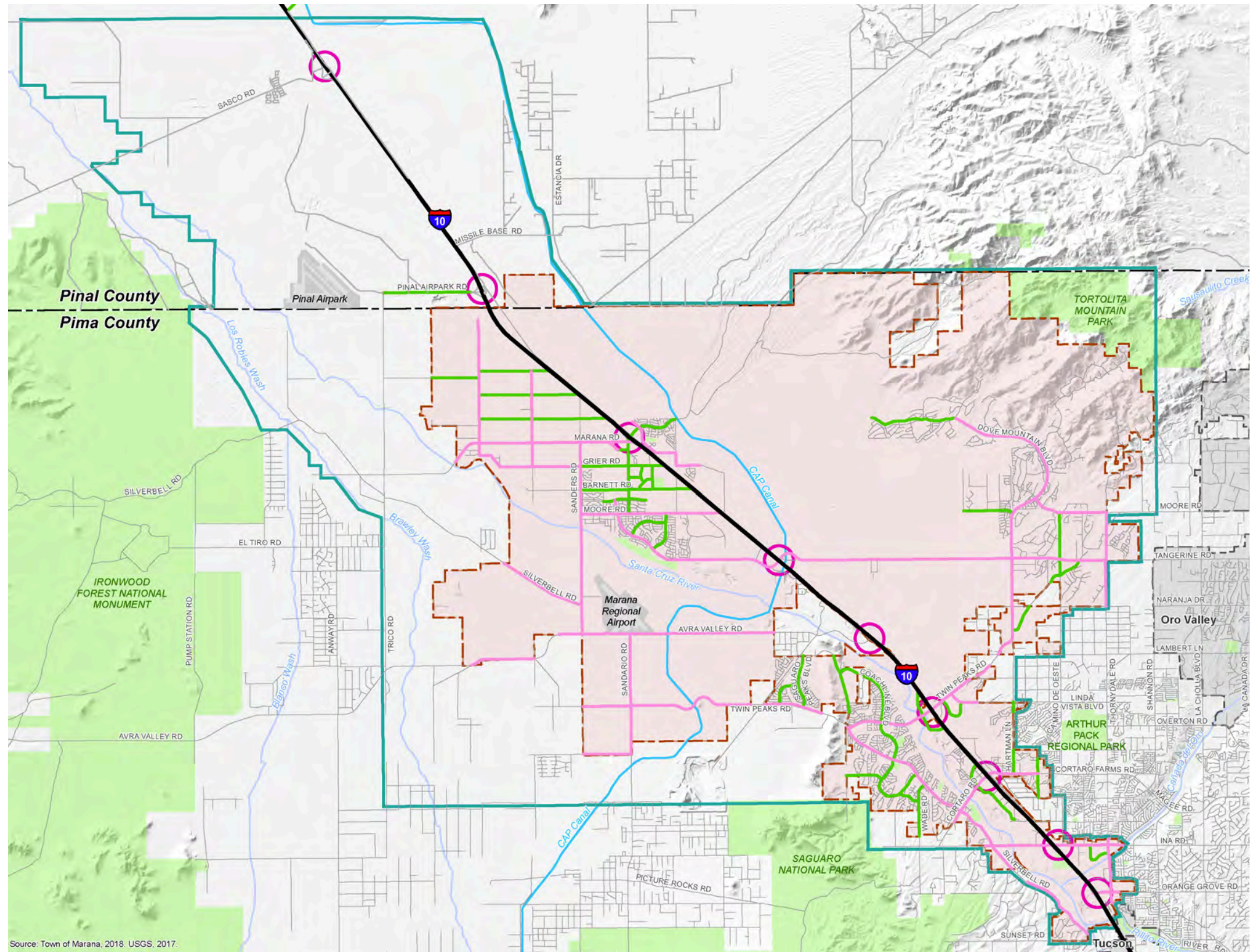
## Bike / Ped

Marana updated its Parks, Recreation, Trails and Open Space Master Plan in 2016. Paved paths and unpaved trails support non-motorized transportation in Marana and contribute to the health and social capital of the community. As shown in Figure 7, there are 113.5 miles of paths and trails within the Town. The Town negotiates with developers to include trails in the designs of master planned communities. The combination of privately- and publicly-maintained trails form an integrated network for non-motorized transportation. Which include scattered on-street bicycle lanes and paved shoulders throughout Marana. However, bicycle and pedestrian movement is ultimately restricted by I-10. Dedicated bike lanes that meet Town engineering standards are located along Silverbell Road, Twin Peaks Road, Cortaro Farms Road, Ina Road, Tangerine Road, Tangerine Farms Road, Lon Adams Road in Gladden Farms, and Dove Mountain Boulevard. Bike lanes are generally not provided along residential streets due to the lower traffic volumes and reduced travel speeds.



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Figure 5  
**Circulation**



- Legend**
- Existing I-10 Interchange
  - Road Class**
  - Interstate
  - Arterial
  - Collector
  - Local Roads
  - Marana Planning Area
  - Marana Town Limits
  - County Boundary
  - Other City/Town
  - Interstate
  - CAP Canal
  - River or Wash
  - Airport
  - Regional Park

**Matrix**  
DESIGN GROUP

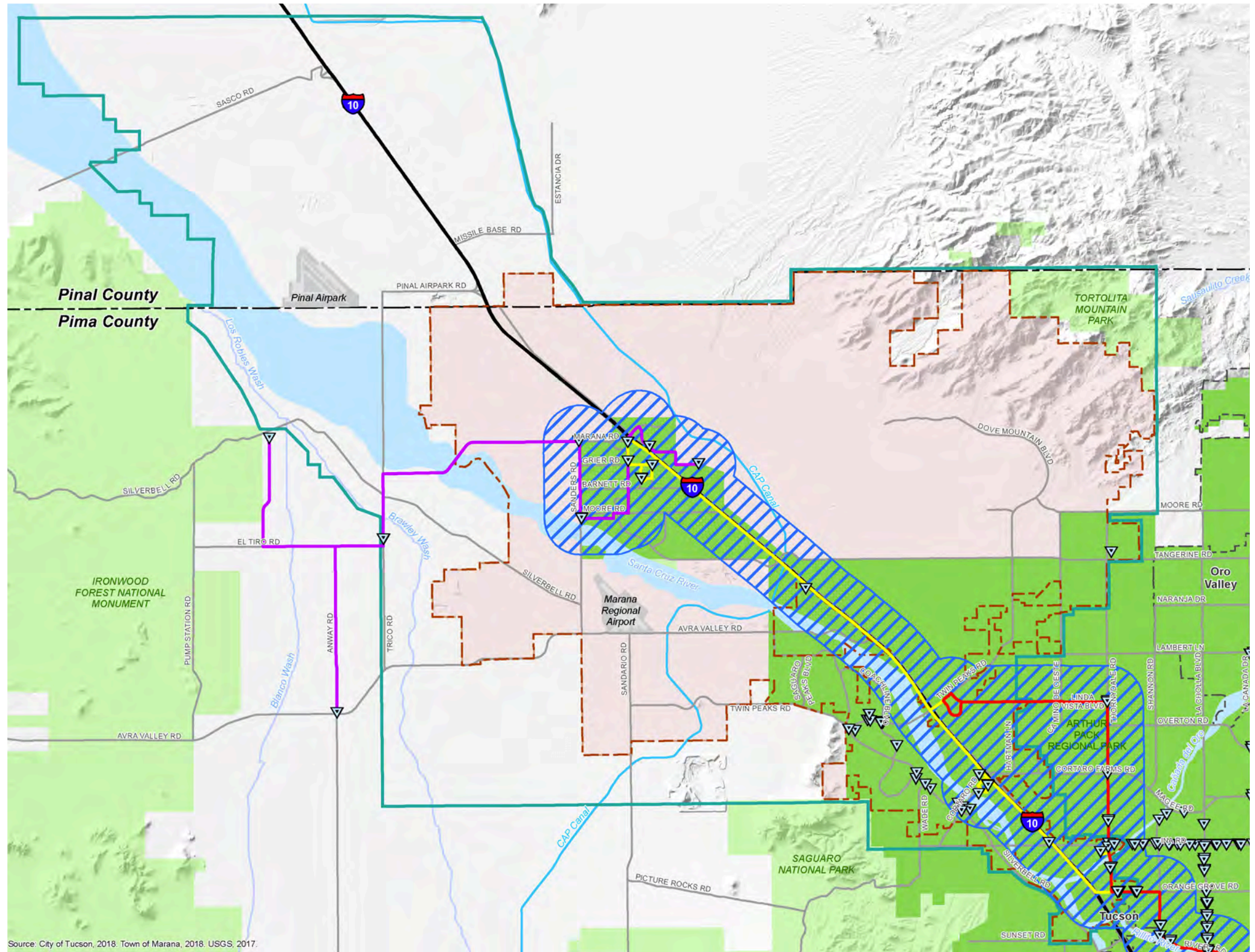
0 1/4 1 2 3 4 5 Miles

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Map Revised: 2/18/2019

Source: Town of Marana, 2018; USGS, 2017.





Source: City of Tucson, 2018. Town of Marana, 2018. USGS, 2017.

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Figure 6  
Transit

- Legend**
- ▽ Sun Tran Bus Stops
  - Sun Shuttle Marana Routes**
  - 410 Anway/Trico
  - 412 Thornydale/River
  - 413 Marana/I-10
  - ▨ Sun Shuttle Complementary ADA Service
  - ▨ Sun Shuttle Premium Optional Service

- ▭ Marana Planning Area
- ▭ Marana Town Limits
- ▭ County Boundary
- ▭ Other City/Town
- Interstate
- Major Road
- CAP Canal
- River or Wash
- Airport
- Regional Park

**Matrix** DESIGN GROUP

0 1/2 1 2 3 4 5 Miles

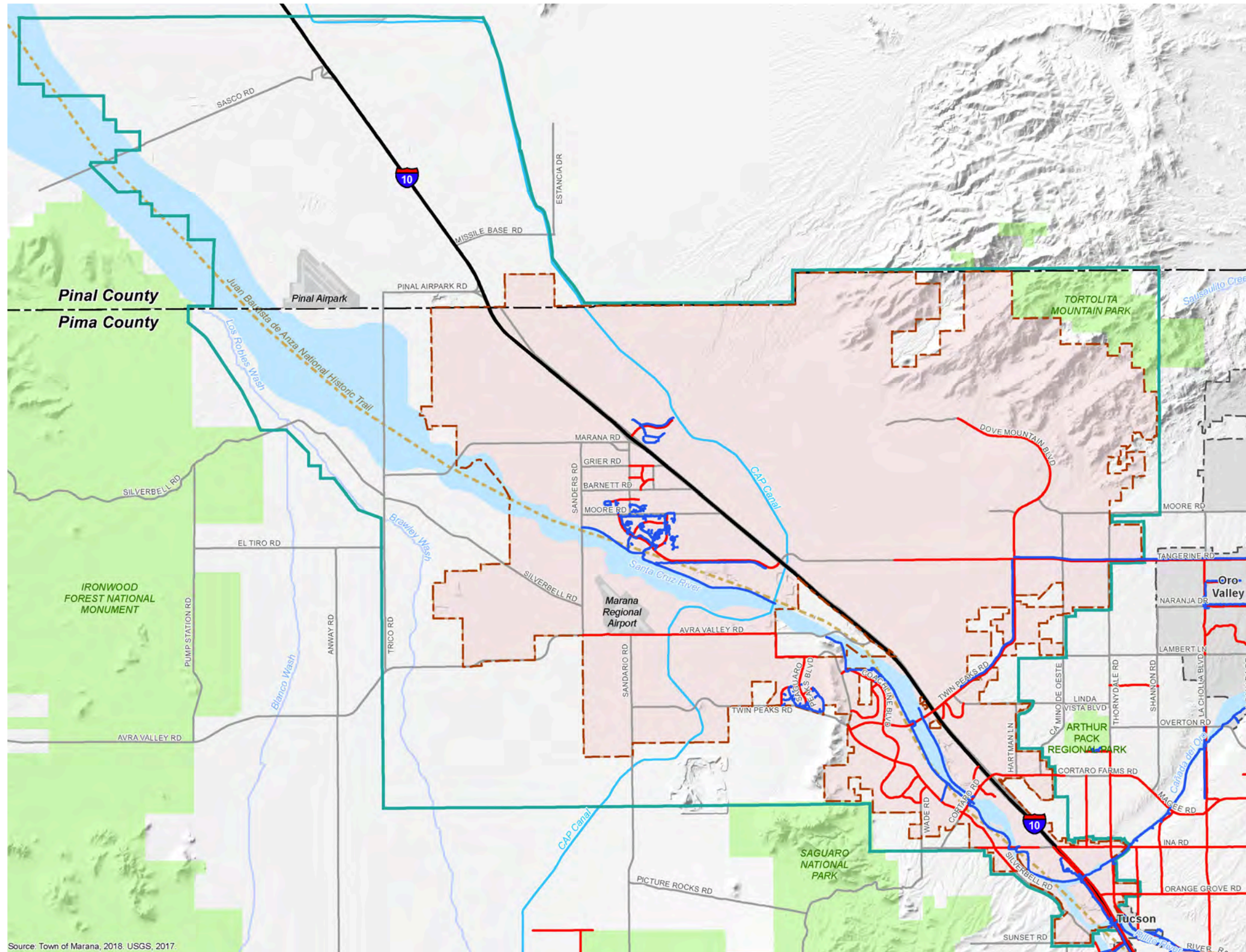
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Map Revised: 2/18/2019



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Figure 7  
**Bikeways**

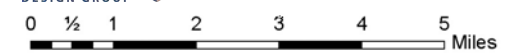


**Legend**

**Bikeways**

- Bike Route with Striped Shoulder
- Shared-use Path
- Marana Planning Area
- Marana Town Limits
- County Boundary
- Other City/Town
- Interstate
- Major Road
- CAP Canal
- River or Wash
- Juan Bautista de Anza National Historic Trail
- Regional Park
- Airport

**Matrix**  
DESIGN GROUP



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Map Revised: 2/18/2019

Source: Town of Marana, 2018; USGS, 2017.



# HOUSING



Photo: Gladden Farms

This section analyzes the housing stock within the Town, looking at topics including housing occupancy and tenure, median household income, household size, and affordability. It is estimated that the Town had 15,747 housing units in 2016, of which 13,591 were single-family, detached homes. The dominance of single-family detached homes is consistent with many communities throughout the county.

## Housing Occupancy and Tenure

Of the 15,747 housing units in Marana, 14,518 (92.2%) are occupied, and 1,229 (7.8%) are vacant. The vacancy rates are lower than in other municipalities of comparable size, including Oro Valley (12.7%) and Tucson (11.4%).

Housing tenure indicates whether housing units are owner-occupied or renter-occupied. Most privately-owned homes are purchased with a mortgage, which has a major

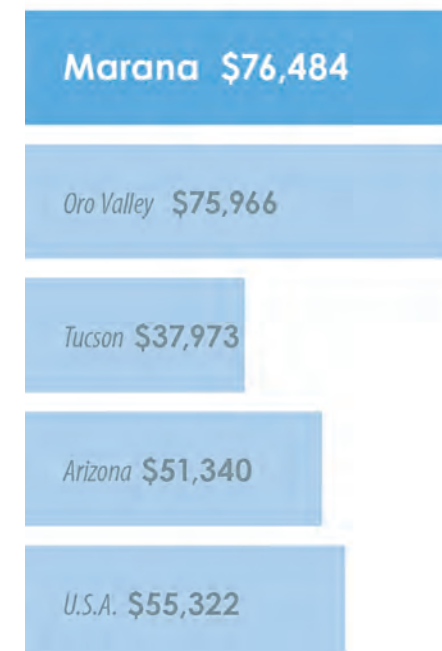
impact on the local economy and affects worker mobility. In general, mortgages result in a long-term commitment to an area, with homeowners establishing deep connections to a location in terms of raising their family, building a career, choosing schools, and establishing businesses. Home ownership also typically constitutes the largest collateral asset of most families and is a good way to allocate savings.

Monthly housing costs are similar for owners and renters in Marana. In 2016, the median monthly owner costs for housing units with a mortgage was \$1,556, compared to the median gross rent of \$1,215. 74% of the homes in Marana are considered owner-occupied, while 26% are renter-occupied. High rates of home ownership could be due to similar costs of owning and renting, or the high median household income in Marana, which is \$76,484.

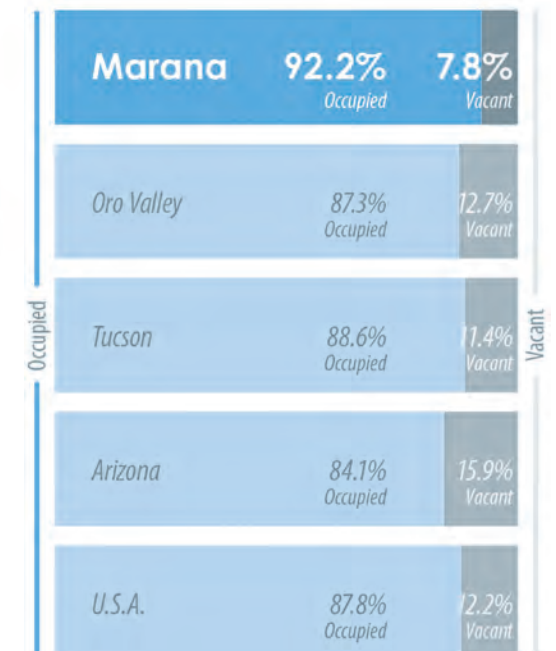
### QUICK FACT:

The Median Household Income in Marana is greater than that of Oro Valley, yet residents on average pay less for housing. This demonstrates Marana as both a desirable and economical place to live in the Tucson region.

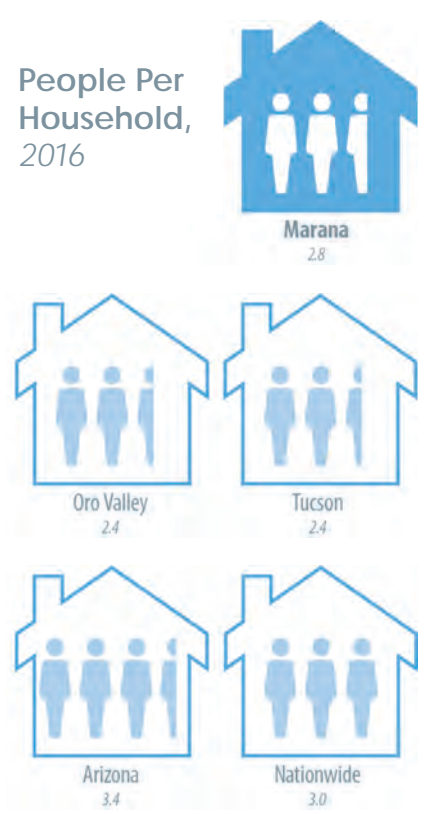
### Median Household Income, 2016



### Occupancy Status, 2016

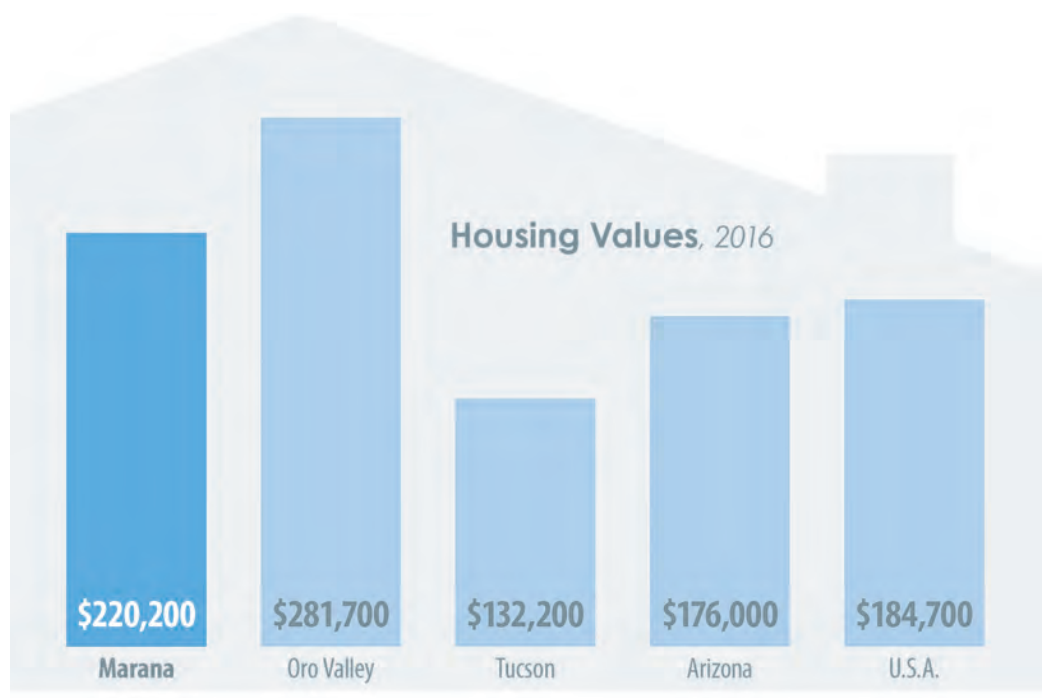




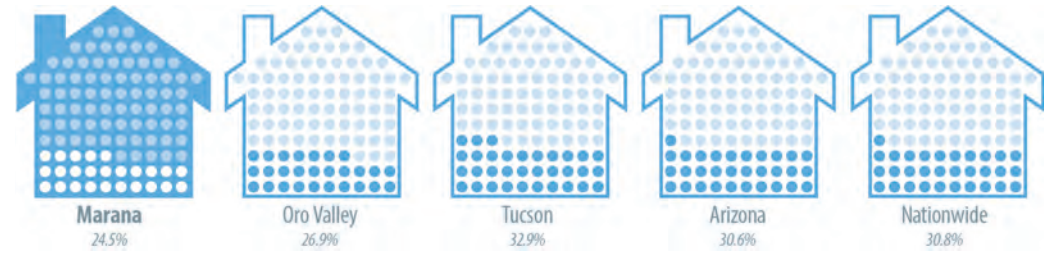


### Household Size

Household size refers to the average number of people per household (PPH) in a community. In 2016, the average PPH in Marana was 2.8, similar to the national average of 3.0 and slightly above Oro Valley and Tucson's average of 2.4. Household size impacts household income, housing requirements, and living expenses. It also affects the housing types that should be available in a community. Larger families are naturally going to require more living space, while single individuals may not have the same housing requirements.



### Cost-Burdened Households, 2016



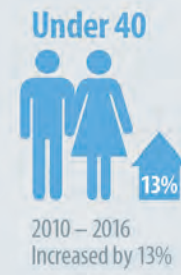
### Housing Affordability

Housing affordability is determined by a number of factors, including housing values and the percentage of income that the average worker is willing to spend on housing. Home values in Marana are higher than those in Tucson, as well as national and statewide averages, but below those of Oro Valley. While higher home values are conventionally seen as a positive index of wealth for a community, studies have shown that affordability within a community decreases as home prices increase. This occurs when

there is a disparity between the rate at which housing prices and household incomes rise.

Homeowners are generally considered cost burdened if they spend more than 30% of their income on housing. The U.S. Census Bureau's American Community Survey (ACS) figures from 2016 show that 75.4% of the homeowners in Marana spend less than 30% of their income on housing. Residents are considered very cost burdened if they spend 35% or more of their

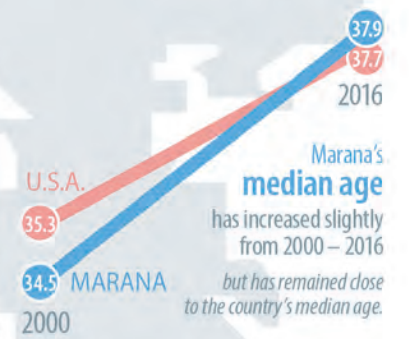
The Young Adult population (20-24) is the fastest growing age cohort in Marana. From 2010 to 2016, it grew by **41.5%**



The largest population groups in Marana are 35 – 39 years old and under 5 years of age. This indicates **young families** are settling in town.

Marana's population is projected to increase **46.8%** by 2040

### Population and Age Projections



income on housing costs. Only 18% of homeowners in Marana are considered very cost burdened, which is lower than the national average of 23.3%.

High home values can cause individuals to look elsewhere for affordable housing, often in nearby communities. This can lead to longer commute times for work, greater transportation costs for individuals, more traffic congestion in both the bedroom and work communities, sprawl, and an overall degradation

of the quality of life for residents. As such, the imbalance of where jobs are located and where affordable housing is located is unfavorable for both working families and the local community.



# GROWTH TRENDS



Photo: The Ritz-Carlton Residences, Dove Mountain; <https://theresidencesdovemountain.com/>

Since Marana’s incorporation in 1977, the Town has grown steadily in terms of both geographic size and population. The Town initially incorporated with 10 square miles and a population of 1,512 residents. After 40 years, it has grown to 122 square miles and 40,221 residents. Marana grew as a rural residential and agricultural community with a reliable water source for ranching and growing crops. With the exception of 2010, residential growth within Marana has primarily been in the form of single-family homes, and all of the 788 building permits issued in 2017 were for single family homes. Understanding growth

trends is important because it can help determine where infrastructure expansion and additional public facilities are needed.

## Specific Plans

As mentioned previously in this chapter, Specific Plans in Marana are the equivalent of planned unit developments (PUDs) or master planned communities. Specific Plans are planned communities that include groupings of complimentary land uses, such as residential units, parks and open space, and commercial uses, within one contained development or

subdivision. Specific Plans allow for a level of flexibility in development that often cannot be achieved under the Town’s adopted zoning codes. While more flexible than conventional zoning districts, each Specific Plan is still guided by regulations and standards for land use, density, site planning, infrastructure, circulation, landscaping, and architectural design. Table 5 summarizes the 41 adopted Specific Plans in Marana, the largest of which is Dove Mountain. This Specific Plan was adopted in 2000 and encompasses 5,567.9 acres in northeastern Marana.

Table 5. Marana Specific Plan

Specific Plan Name	Total Acres
Anway Farms	70.1
Barrios de Marana	38.9
Casa Sevilla	32.2
Cascada	801.2
Cascada North	635.4
Continental Ranch	2,257.6
DeAnza	120.5
Dove Mountain	5,934.3
Gladden Farms II	560.6
Las Pilas	96.2
Lazy K Bar Ranch	159.1
Linda Vista Village	148.9
Mandarina	270.0
Marana Main Street	27.6
Marana Regional Landfill	588.0
Marana Spectrum	169.6
Marana Towne Center	412.7
Pima Farms	728.2
Pima Farms North	109.1
Rancho Marana	887.3
Rancho Palomitas	68.3

Specific Plan Name	Total Acres
Riverside at Silverbell	14.7
Saguaro Ranch	507.6
Saguaro Bloom	217.3
Sanders Grove	808.8
Silverbell Gateway	91.6
Sky Ranch	491.8
Tangerine Commerce Park	457.7
Tangerine Crossing	300.5
Tangerine Ridge	115.7
Tangerine Thornydale	58.0
Tapestry	397.2
The Estate Lots at Tortolita Preserve	72.7
The Preserve at Twin Peaks	99.2
The Shops at Tangerine	269.6
The Villages of Tortolita	1,641.8
Tortolita Shadows	209.3
Tortolita Vistas	228.0
Twin Peaks Oasis	36.7
Twin Peaks Vista	25.7
UpTown at Marana	191.1
<b>Total</b>	<b>20,351.0</b>

Source: Town of Marana



**Growth Areas**

Much of the growth in Marana has been situated along I-10 near the southern end of Town. Well-established areas in Marana include Ina Road and Cortaro Road. Most growth within Marana is expected to be in the form of Specific Plans. While 42 Specific Plans have been adopted in the Town, many of them have yet to begin construction.



Marana Residential Building Permits, 2010-2017

**Northwest Marana**

The northwest area has been identified as the primary growth area for the Town. The 2010 General Plan targeted this area for Marana’s future downtown. To date, the downtown area is home to the Marana Municipal Complex, the Marana Police Station, the Marana Main Health Center, and the Northwest Fire District Station #36. Northwest Marana is also home to the Single Central Business District, which the Town Council authorized in 2008. Development of the Single Central Business District is an economic development strategy aimed at supporting existing businesses in the area and promoting new private sector development.

**Ina Road**

Development around Ina Road is a mixture of residential subdivisions, commercial facilities, and industrial sites. Ted Walker Park and the Mike Jacobs Sports Park are located west of I-10, as is the Pima County Tres Rios Water Reclamation Facility (WRF). Future growth near Ina Road will primarily be in the form of infill development and the completion of existing developments.

**Cortaro Road**

Just north of Ina Road, Cortaro Road includes a commercial center that serves as one of the retail trade and food services hubs of the community. This area is home to the Arizona Pavilions Shopping Center, Peppertree Ranch Business Park, and a number of restaurants and hotels. Businesses in the area are primarily located west of I-10 and capitalize on the access that the interstate provides, as well as serving Continental Ranch/Reserve and others in the area. Residential development and neighborhood-scaled retail is also located east of I-10.



Municipal Complex in Northwest Marana; Photo: Kelly, Wright & Associates, PC



Ina Road; Photo: PSOMAS



Cortaro Road; Photo: Google



# AVIATION FACILITIES

Airports are key economic drivers for a community because they provide local businesses with access to national and global markets. They help attract and retain businesses and thus foster job growth and economic prosperity in an area. According to Arizona Department of Transportation (ADOT), the aviation industry accounts for 408,625 jobs in Arizona and has an economic impact of nearly \$58 billion statewide. While aviation facilities provide significant economic benefits to a region, they also greatly impact surrounding land use. The Make Marana 2040 General Plan will provide a land use plan compatible with the Marana Regional Airport, Pinal Airpark, and Silverbell Army Heliport.

As new businesses are developed in Marana, and as tourism and special event attendance increases, a certain percentage of those new activities will utilize airport services. Businesses such as The Ritz-Carlton at Dove Mountain, whose patrons are more likely to arrive in large corporate jets than by automobile, place a greater demand on airports than do other businesses. The aviation market is expected to expand as the airport grows in popularity as a destination for regional flight schools and aviation patrons who need to access special services such as aircraft restoration and maintenance.

## Marana Regional Airport

Marana Regional Airport (AVQ) was built during World War II by the U.S. Army as an auxiliary airfield to Pinal Airpark. The airport was formerly known as Avra Valley Airport and also Marana auxiliary No.2. In 1968, a businessman from Tucson leased the airport from the Bureau of Land Management and reopened it to personal and public use. Pima County acquired fee simple interest in the facility in 1982, the airport was purchased by the Town and renamed the Marana Regional Airport in 1999. The Town has retained ownership and maintenance responsibilities since that time.

The airport is a general aviation airport and serves as a reliever for Tucson International Airport. There are 260 aircraft based at the facility and an estimated 80,000 takeoffs and landings annually. The airport contains two runways. The primary runway (12-30) is 6,901 feet long, while the crosswind runway (3-21) is

3,892 feet long. The facility supports personal and business / corporate transportation, flight instruction and training, air ambulance services, law enforcement, skydiving, and various special events, including air shows.

### Future Activity

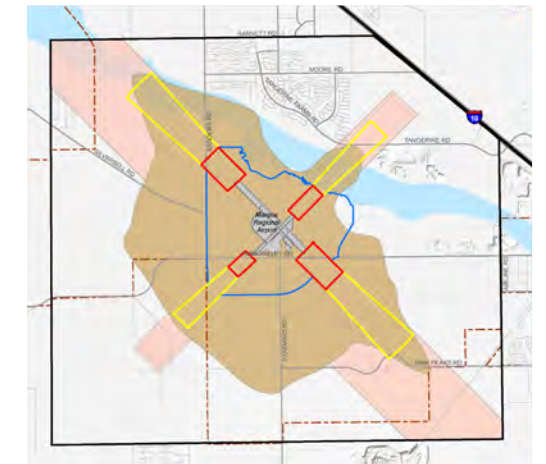
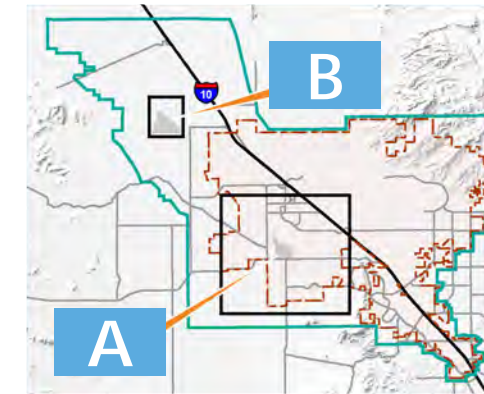
Forecasts of aviation activity serve as guidelines for the implementation of airport improvement programs. Activity projections are based on recent growth rates, area demographics, and industry trends. Table 6 shows the projected future activity at the Marana Regional Airport outlined in the 2017 Airport Master Plan.

Table 6. Marana Regional Airport Projected Operations

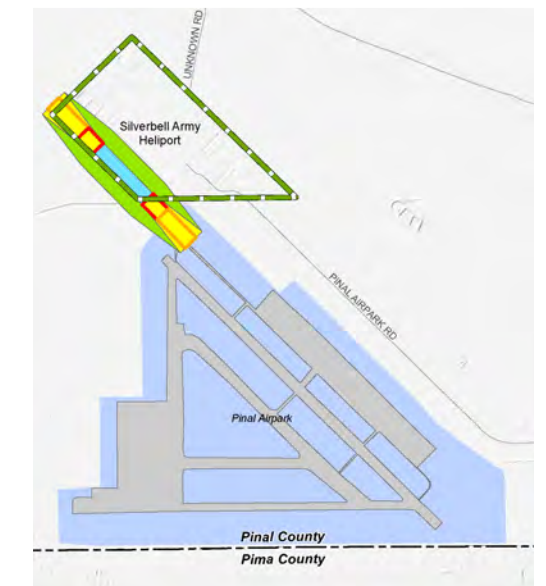
Air Operation	2015	2020	2025	2030	2035
Itinerant Operations	28,000	36,604	39,514	42,270	45,023
Local Operations	32,000	42,968	46,385	49,623	52,854
Military and Commercial Operations	20,000	15,000	15,000	15,000	15,000
<b>Total Annual Operations</b>	<b>80,000</b>	<b>94,572</b>	<b>100,899</b>	<b>106,893</b>	<b>112,877</b>
Total Based Aircraft	260	284	303	321	339

Source: Marana Regional Airport Master Plan, 2016

## Marana Aviation Facilities



A Marana Regional Airport



B Pinal Airpark and Silverbell Army Heliport (SBAH)



training sites for UH-60 Black Hawk helicopters. Pinal County is currently conducting a Joint Land Use Study, in association with Marana and other regional communities, to assess military operational impacts at Silverbell Army Heliport on and from the surrounding communities. This study is planned to be completed in the summer of 2019 and will result in recommendations for land use, development, transportation, and infrastructure within 10 miles of the Heliport. This should be taken into consideration during the Make Marana 2040 General Plan update.





# People & Community

M A K E

**MARANA**

2040 • GENERAL PLAN

MAP ATLAS

Marana is home to a diverse group of people from all backgrounds, creating a greater sense of community, culture, and quality of life for residents and visitors alike.



# DEMOGRAPHICS

Understanding the demographics of a community helps in knowing how to serve and provide support for existing and future residents. Demographics relating to population, race, ethnicity, age, gender, educational attainment, and household income help illustrate the social background of community residents. The majority of the demographic information presented here comes from the U.S. Census Bureau's decennial census and annual American Community Survey (ACS). The ACS is an ongoing survey that provides standardized socioeconomic information about the nation's communities and is

the premier source of housing and demographic data.

While community-specific data provides a good snapshot of Marana, comparisons with similar communities in the area places that snapshot within a broader context. This helps municipal leaders and planners better understand if local trends are unique or shared across the region and how to best respond to them. Although not used for every demographic comparison, the nearby and regional communities that are used as points of comparison for the Marana General Plan Update are Oro Valley, the City of Maricopa, Casa Grande, Coolidge, Eloy, Florence, and Tucson. Comparisons are also made with Pima County and, on occasion, the State of Arizona and the nation as a whole.

## Population

Between 2000 and 2010, Marana experienced significant growth, expanding from 13,556 residents to 34,961. This constitutes a 158% increase in population in a single decade, and while growth has slowed, it has remained constant. An average of 877 people per year relocated to Marana in the following six years, to bring the 2016 population to 40,221 fulltime residents. According to the ACS 2016 5-year estimates, Marana is now the third largest community in Pima County. With steady growth expected over the next 20 years, the population is expected to reach over 75,000 people by 2040. In comparison, Oro Valley's population is only expected to increase 9% between 2010 and 2020, and has a projected 2040 population of 54,271 people.

Population density in terms of persons per square mile varies throughout Marana. The areas of Town that have the highest densities are generally the master planned communities, such as Continental Ranch, Dove

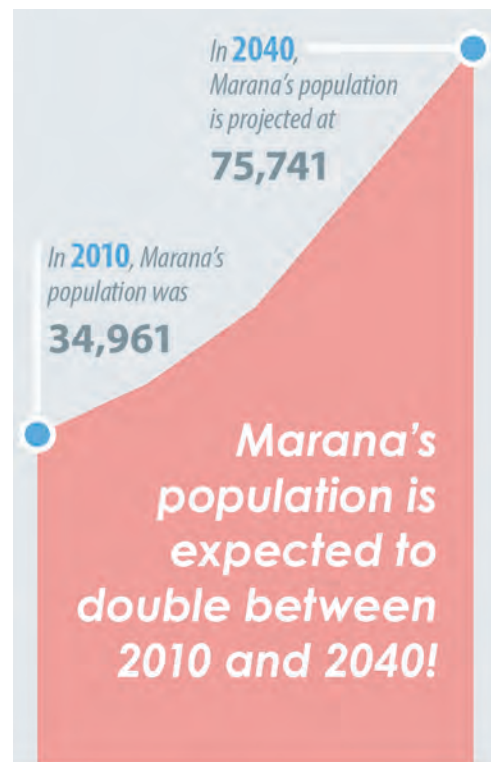


Marana Founders' Day Parade, 2018

Mountain, and Gladden Farms (see Figure 8). However, as many of the undeveloped Specific Plans are developed (see Chapter 2), the population density throughout Marana and within those areas will increase.

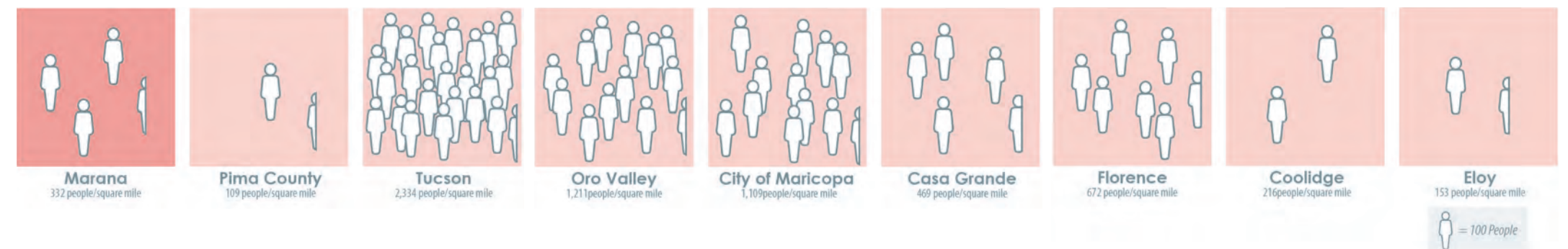
When compared to other communities overall, Marana has the second lowest population

density. Density in Marana is most comparable to Casa Grande, a city of similar size and population, but significantly lower than in Oro Valley and Tucson. The discrepancy is mostly due to the large amount of undeveloped land in northern Marana. Marana's population density is expected to increase as undeveloped areas experience new growth.



Source: Arizona Department of Economic Security, 2011 – 2016 ACS

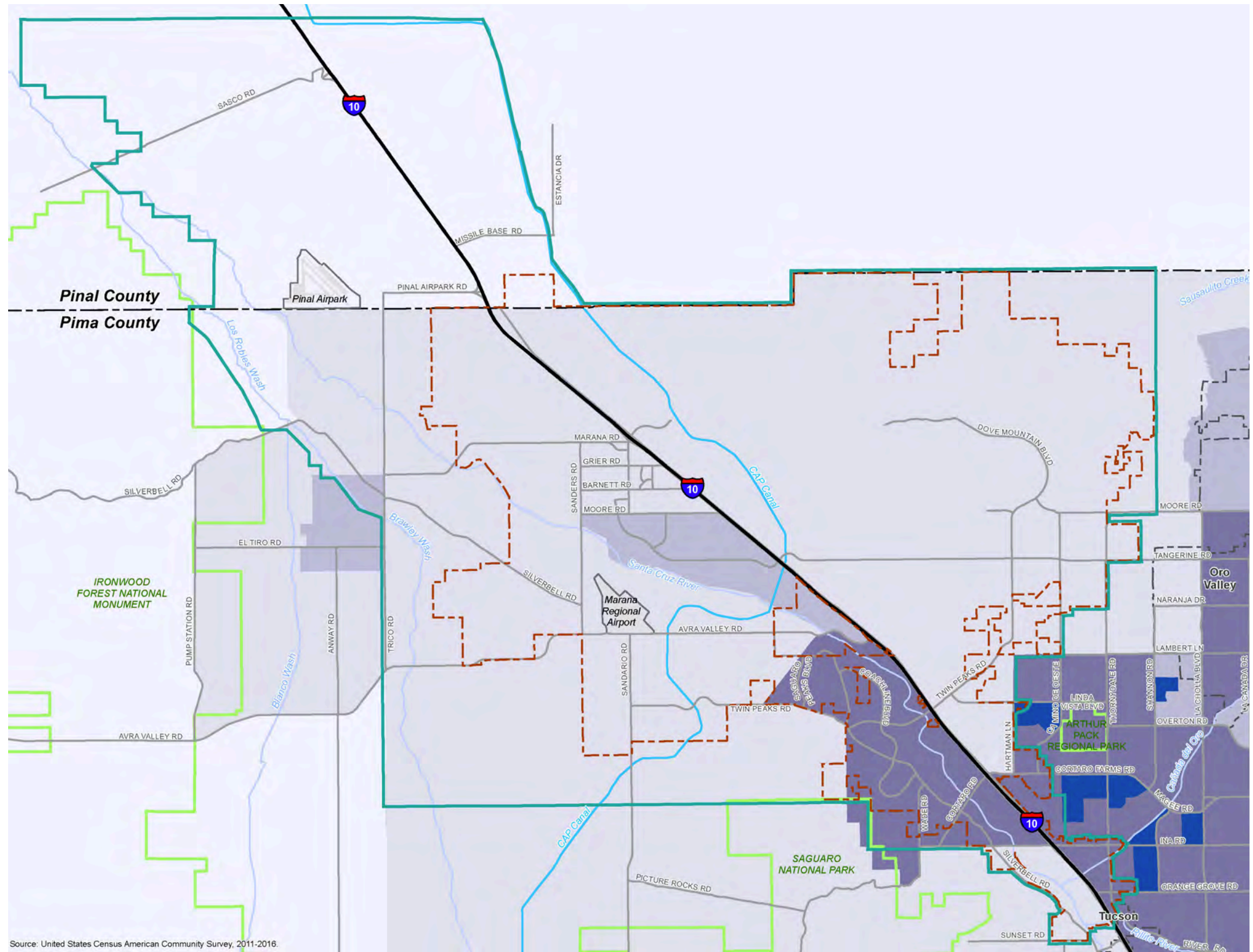
## Population Density, 2016





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Figure 8  
**2016 POPULATION DENSITY**



**Legend**

**Persons per Square Mile**

- 1 - 20
- 21 - 500
- 501 - 1,000
- 1,101 - 5,000
- 5,101 - 10,000

- Marana Planning Area
- Marana Town Limits
- County Boundary
- Other City/Town
- Interstate
- Major Road
- CAP Canal
- River or Wash
- Airport
- Regional Park

**Matrix**  
DESIGN GROUP

0 1/2 1 2 3 4 5 Miles

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Map Revised: 2/18/2019

Source: United States Census American Community Survey, 2011-2016.



# DEMOGRAPHICS *(continued)*

## Age and Gender

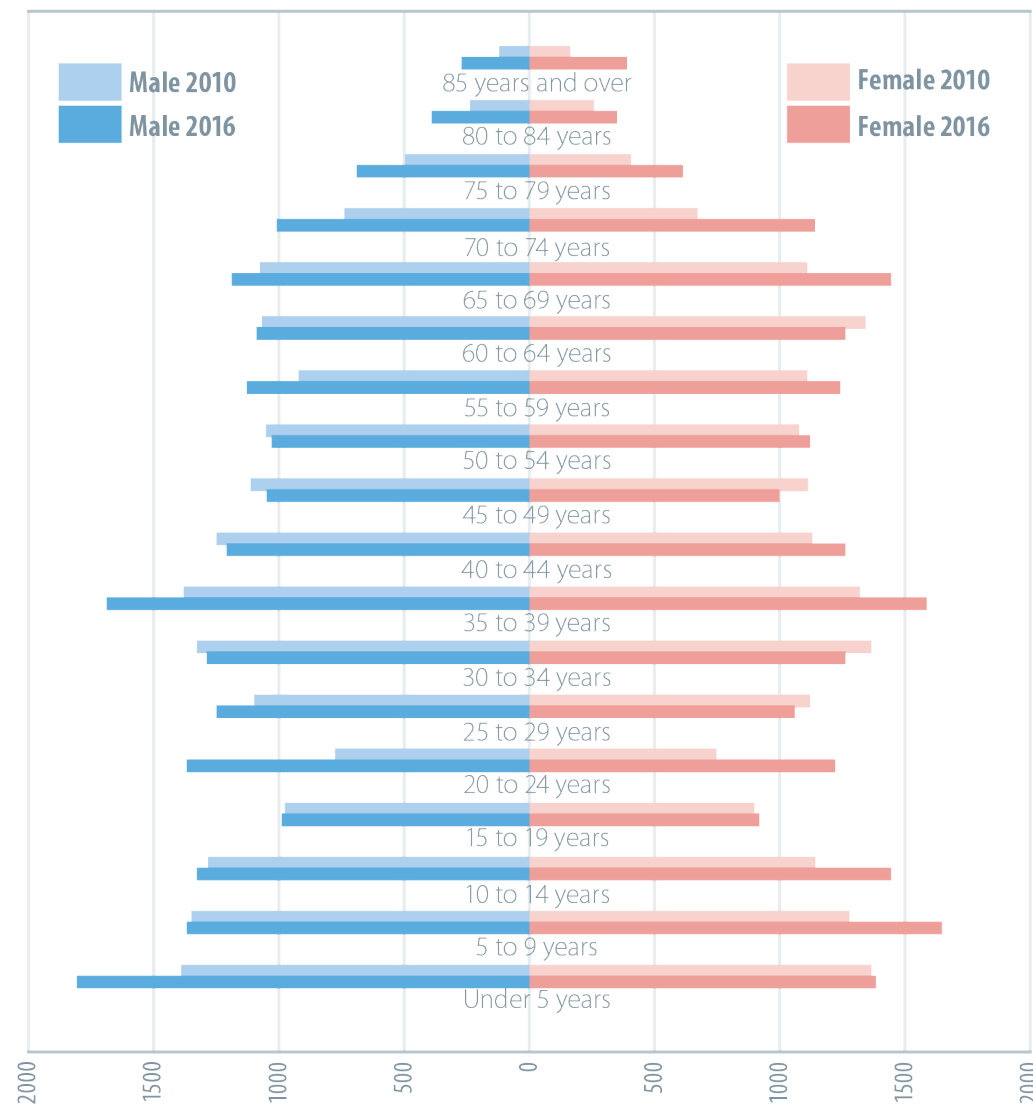
Population pyramids are used to graphically represent age and gender characteristics of a community. Identifying these characteristics, in a minimum of

five-year increments, can highlight and help predict long-term changes in population demographics and aid municipalities in future decision making. The two largest age cohorts in Marana between 2010 and 2016 were 35 to 39-year-olds and

0 to 5-years-old. This indicates the Town of Marana is an attractive community for young families to call home. However, there were significant increases in other age groups between 2010 and 2016—those 65 years of age and older and the 20-24-year-old cohort. The number of residents who are 65 years old or older increased by 30%, suggesting Marana is a particularly desirable place for retirees. The number of residents who are 20 to 24 years old increased by over 40%. This increase is less expected, given the association of the age cohort with college enrollment and the lack of post-secondary educational opportunities within Marana.

These trends have many implications for planning future services. Due to the dominance of young families, young college-aged adults, and retirees, it will be important for the Town to develop and support communities that meet multigenerational needs. These needs range from daycare facilities, elementary to post-secondary educational opportunities, elderly transportation and assisted living facilities, and a broad range of entertainment and recreational opportunities for residents of all abilities.

Population Pyramid, 2010, 2016



Source: US Census Bureau 2010 Census, 2012-2016 AC

## QUICK FACT:

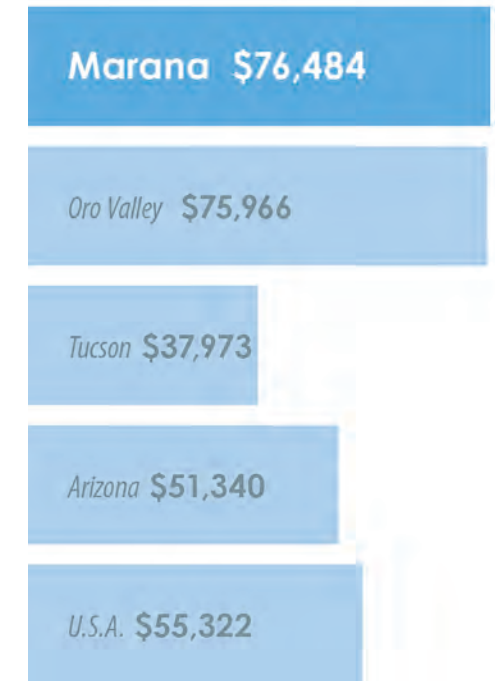
One-third of Marana households earn more than \$100,000 per year.

## Household Income

The median household income in Marana was \$76,484 in 2016, which was slightly higher than households in Oro Valley (\$75,966) and more than 25% higher than both state and national median income levels. It is important that Marana continues to support and sustain high-earning job opportunities to maintain the economic success many of the residents enjoy.

Figure 9 displays a geographic representation of the 2016 median household income of Marana residents. The map indicates that many of the higher-income households live east of I-10 along Twin Peaks Road and in the Dove Mountain area. West of I-10, the higher-income households are generally located south of Ina Road and in the Continental Ranch neighborhood. The areas on the map indicated as having lower household incomes are generally rural and undeveloped.

## Median Household Income, 2016

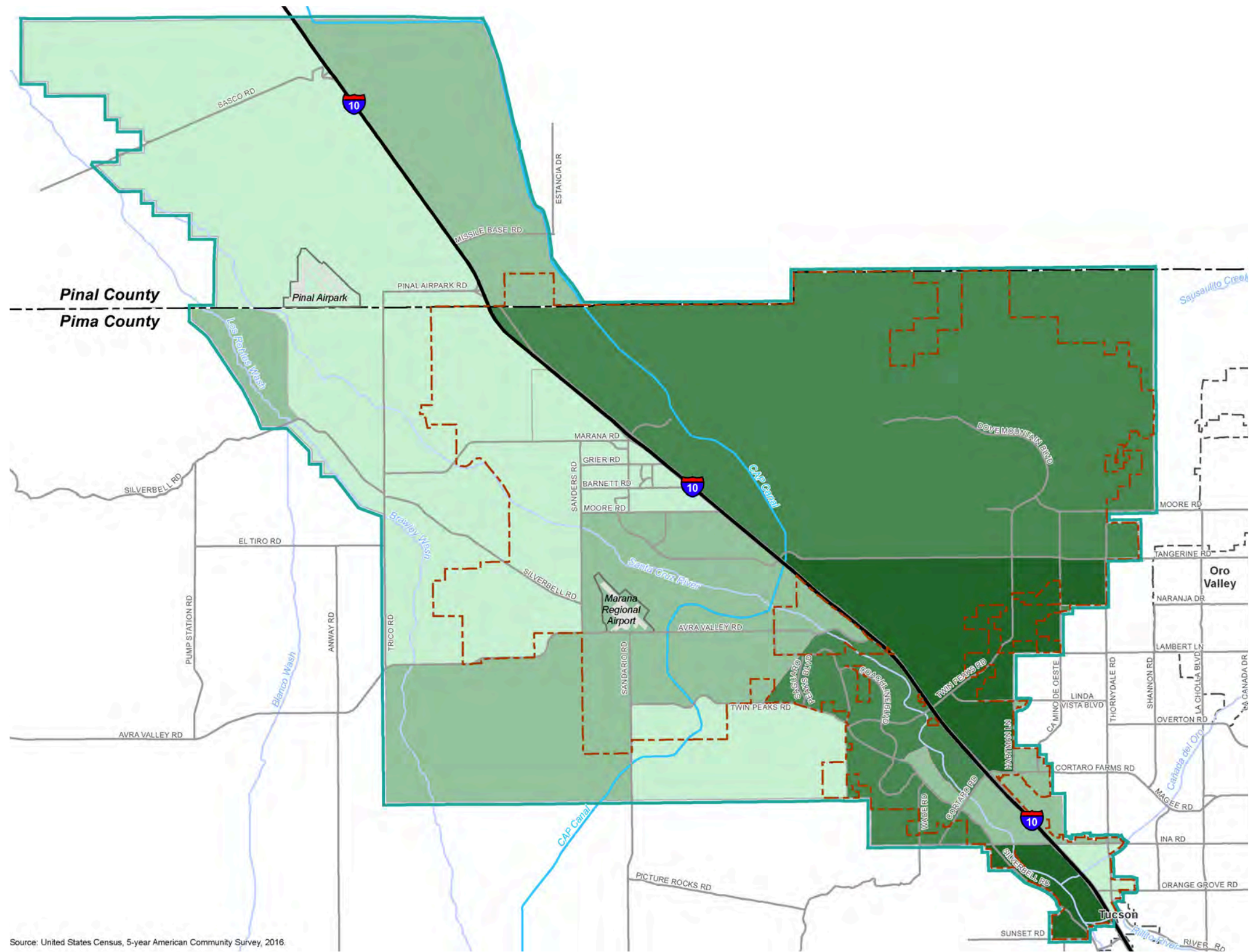


Source: US Census Bureau 2012-2016 ACS



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Figure 9  
**2016 Household Income**



**Legend**

**Median Household Income (by Census Tract)**

- \$35,000 - \$49,999
- \$50,000 - \$74,999
- \$75,000 - \$89,999
- \$90,000 or Greater

- Marana Planning Area
- Marana Town Limits
- County Boundary
- Other City/Town
- Interstate
- Major Road
- CAP Canal
- River or Wash
- Airport

**Matrix**  
DESIGN GROUP

0 1/4 1 2 3 4 5 Miles

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Map Revised: 2/18/2019

Source: United States Census, 5-year American Community Survey, 2016.



# DEMOGRAPHICS *(continued)*

## Educational Attainment

A well-educated community fosters a highly-skilled labor force, supporting a competitive employment base that is attractive to new businesses and industries. Of the individuals who are 25 years old or older and who live in Marana, approximately 95% have earned a high school diploma or similar accreditation, while 42% have a bachelor's degree or higher as of 2016. The level of education that Marana's residents have

achieved is significantly higher than that of the City of Tucson, and the statewide and nationwide averages, but lower than the Town of Oro Valley. This high level of educational attainment in Marana is a key driver of the long-term social and economic prosperity in the Town.

Due to Marana's proximity to the City of Tucson and the University of Arizona, it is likely that the Town attracts many University of Arizona graduates who remain in the region. Given that children of college-

educated parents also tend to be well-educated, it is likely the quality and accessibility of local schools and educational programs will be an important variable in whether younger residents with college degrees raise families in Marana or relocate over the next 10 years. For this reason, it is important for Marana to invest in its schools and support high-quality educational programming to remain appealing to college graduates.

## Race and Ethnicity

The racial and ethnic composition of Marana is presented in Table 7. Slightly more than 82% of the population self-identifies as white, while the remaining 17.9% self-identifies as Black or African American (2.2%), Native American / Alaskan (0.6%), Native Hawaiian / Pacific Islander (0.2%), an unspecified race (5.2%), or multi-racial (5.1%). Of the total population, 23% of residents identify as being of Hispanic ethnic origin.

Most of the individuals who do not consider themselves white consider themselves of a race not listed by the U. S. Census Bureau's ACS, or a combination of races that may or may not have been listed. The number of Asians among the non-white survey respondents is still relatively high and most likely reflects the influx of Chinese railroad workers who came to the area during the 19th Century and the detainment of Japanese and Japanese Americans only 61 miles to the northwest of Marana during World War II. In contrast, the number of individuals living in Marana who self-identify as Native American is relatively low, given the proximity of the Tohono O'odham Nation and the tendency for tribal members to live off-reservation.

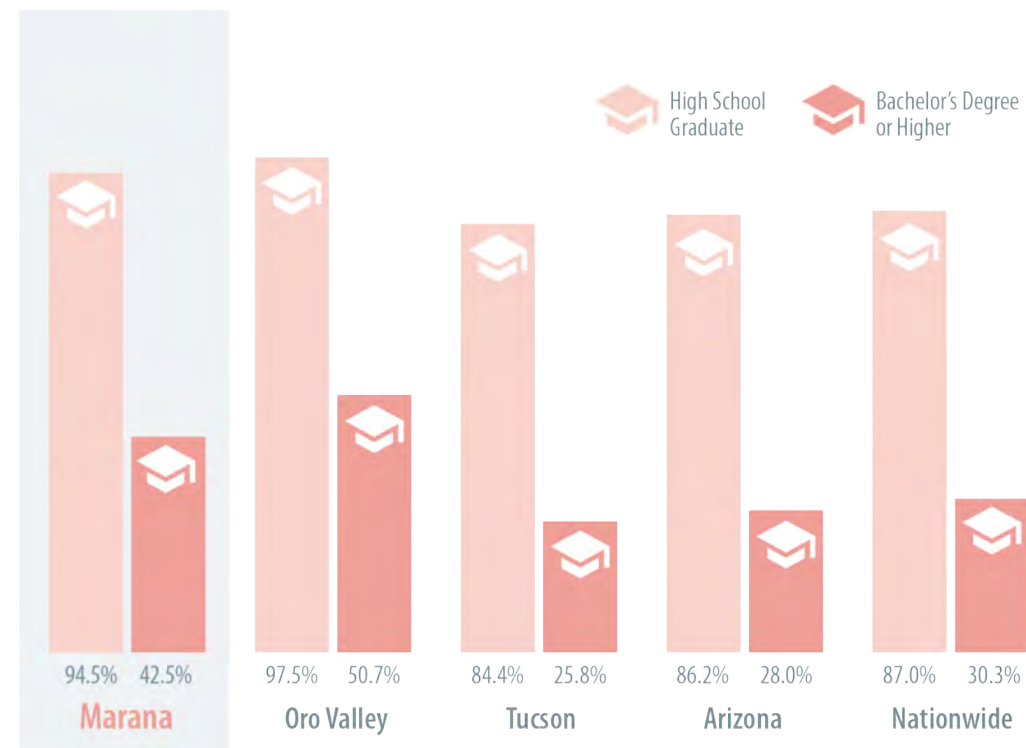
Table 7. Race & Ethnicity Breakdown, 2016

Race	
White	82.2%
Black or African American	2.2%
American Indian and Alaska Native	0.6%
Asian	4.6%
Native Hawaiian and Other Pacific Islander	0.2%
Some other race	5.2%
Two or more races	5.1%
Ethnicity	
Hispanic or Latino (of any race)	23.0%

Source: US Census Bureau 2012-2016 ACS

Racial and ethnic diversity can be important drivers of the socioeconomic health, strength, and vitality of a community. People with different backgrounds often have different skill sets, experiences, and points of view that can drive innovation and economic diversification, as well as creative placemaking and cultural opportunities.

Educational Attainment, 2016



Source: US Census Bureau 2012-2016 ACS

**QUICK FACT:**  
42% of Marana residents 25 or older have earned a bachelor's degree or higher. This is nearly double the statewide and City of Tucson rate.



# ECONOMY

The health of a community's economy is vital to supporting continued and prosperous growth and sustaining a high quality of life for residents. Indicators of a healthy economy discussed in this section include low unemployment rates and growing industries, as well as the economic incentives that drive growth.

Marana is well-positioned to stimulate and sustain economic growth into the future. The Town is already experiencing a great deal of growth, seeing the resident population grow by 197% from 2000 to 2016. The population is expected to continue growing, with estimates listing a resident population of over 75,000 by 2040.

Marana is strategically located within the Sun Corridor and has access to multiple forms of transportation for imports and exports. These include:

- 18 miles of frontage along I-10,
- Union Pacific Rail Line,
- Marana Regional Airport, and Pinal Airpark.

These transportation methods provide access to numerous regional markets (Phoenix, Tucson, San Diego, Los Angeles, and El Paso), state markets (California, Nevada, Utah, Colorado, and New Mexico), and international markets (Mexico and Canada).

In addition to the Town's transportation assets, Marana has a number of other assets that are determinant of future economic success. Some examples of these assets are:

- Well-educated and highly-skilled workforce
- High-quality school system
- Low crime rates
- Abundance of undeveloped land ready for new development
- Major tourist attractions, such as the Ritz-Carlton, Tucson Premium Outlets, Saguaro National Park, Ironwood Forest National Monument, and Tortolita Mountain Park

## Employment

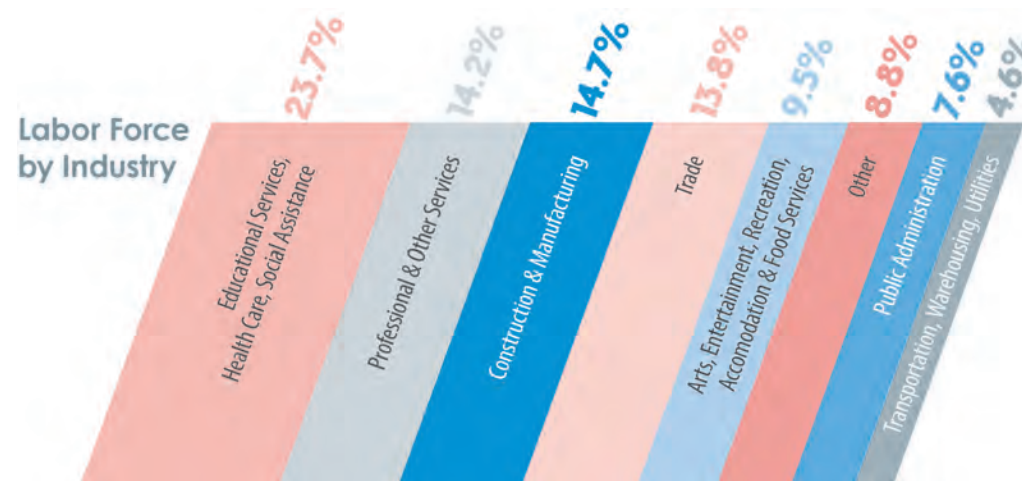
Marana's unemployment rate in 2016 was 4.3%, which was down from 7.0% in 2010. Additionally, the Town's labor force grew by over 3,000 people between 2010 and 2016, mirroring the population growth.

Marana's employed residents work in a variety of industries, the top three being Educational Services, Health Care, and Social Assistance; Professional and Other Services; and Construction and Manufacturing. These three industries alone account for nearly 50% of the Town's employed residents. Other notable industries include Trade (13.8%) and Arts, Entertainment, and Recreation (9.5%). Many of these industries are represented in Marana:

- Educational services jobs are primarily located near Downtown Marana where Estes Elementary School, Marana Middle School, and the Marana Unified School District offices are located.
- Professional and scientific jobs are largely clustered along Business Park Drive between Cortaro Road and Ina Road west of I-10, including Sargent Aerospace & Defense and FLSmidth USA Inc.
- Trade jobs are primarily clustered near the I-10 interchanges at Orange Grove Road, Ina Road, and Cortaro Road, as well as the Tucson Premium Outlets near the Twin Peaks interchange.

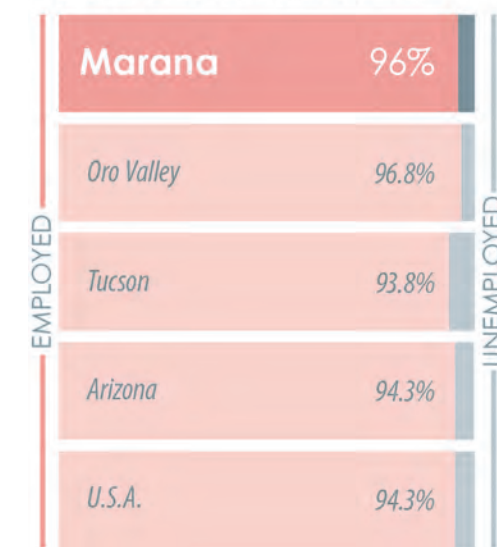
### QUICK FACT:

The statewide and national unemployment rates in 2016 were 6.7%. At 4.3%, Marana's unemployment rate was 2.4% less than the statewide and national rates.



Source: US Census Bureau 2012-2016 ACS

### Employment Rates, 2016



Source: US Census Bureau 2012-2016 ACS

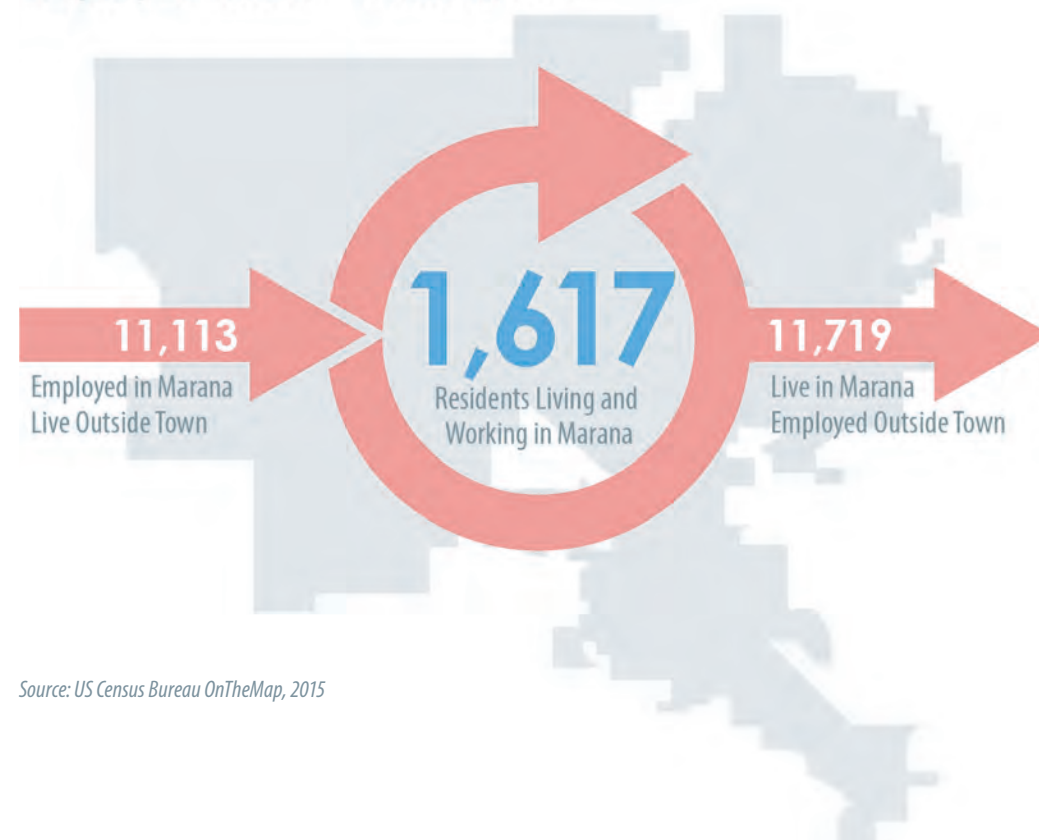


## ECONOMY *(continued)*

### Employee Inflow - Outflow

According to 2015 US Census Bureau “OnTheMap” data, most employed Marana residents (11,719) commuted to other municipalities for their job, mainly to the City of Tucson. Conversely, 11,113 people commuted to Marana for work, along with 1,617 residents who both lived and worked within the Town. This results in a relatively balanced ‘inflow-outflow’ of commuters. As the Town continues to grow and mature, economic development efforts should be focused on increasing the number of residents who both live and work in the community and who commute to the Town from other municipalities. Developing a diversity of housing types, ranging from apartments to executive style single-family homes, can help entice those commuting to Marana for work to move and establish households within Marana, thereby growing the Town’s resident population base and attracting additional retailers and other businesses.

### Employee Inflow – Outflow, 2015



Source: US Census Bureau OnTheMap, 2015

### Economic Development Strategy

The Town adopted an economic development strategy in 2017 with the goal of identifying the best and highest value-added opportunities to strengthen and diversify the local economy. Included in the strategy is a set of target industry sectors recommended for growth within Marana. These are: Information Technology (including finance and insurance industries), Advanced Business Services, Manufacturing, and Transportation and Logistics. Target sectors were identified based on the workforce available within Marana, mainly the skills required for each industry and residents’ educational attainment.

### Marana Major Employers

Table 8 lists the top 10 largest employers in the Town. Three of the top ten employers in Marana are in the retail industry and provide a combined 1,180 jobs within the Town. The employers that are in line with the target sectors identified in the economic development strategy include Sargent Aerospace & Defense, Waste Management, and FLSmidth USA Inc.

Table 8. Marana Major Employers

Business Name	Employees	Industry
Walmart	480	Retail
Frys Food Stores	450	Retail
Town of Marana	330	Government, Social, & Advocacy Services
The Ritz-Carlton Hotel Company	320	Hospitality, Tourism, & Recreation
Sargent Aerospace & Defense	310	High Tech Manufacturing & Development
Waste Management	300	Business Services
Administration and Support Office	280	Government, Social, & Advocacy Services
Costco Wholesale	250	Retail
Marana Health Center	250	Health Care
FLSmidth USA Inc.	240	Business Services

Source: 2017 Arizona COG/MPO Employer Database



## Employment Corridors

The 2017 economic development strategy identifies four employment corridors expected to experience growth in the near future. As such, these areas should be a priority for public and private sector investment, and will influence the goals and policies in the General Plan. The four areas are: Downtown Marana, North Marana Gateway, Marana Regional Airport, and Tangerine Corporate Corridor (see Figure 10). Each of these corridors have their own advantages and challenges based on their location.

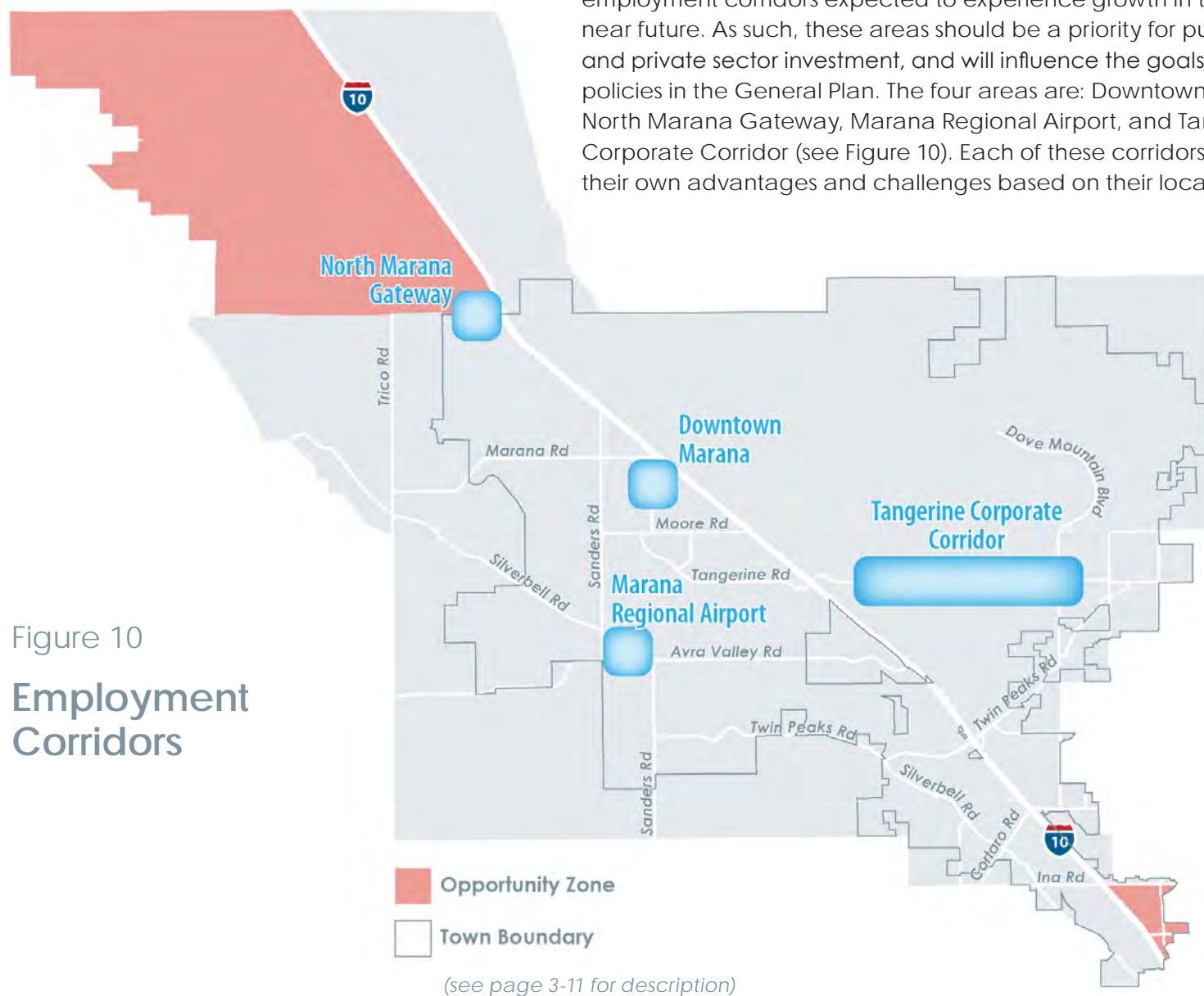


Figure 10  
Employment Corridors



*Downtowns represent the communal identity of the municipality*

### Downtown Marana

According to Marana’s 2017 economic development strategy, one of the major opportunities for Marana is to develop a modern downtown area from the ground up. Other, more established communities do not have this benefit and are reliant on infill development or expensive redevelopment efforts to modernize their downtown areas. Downtowns are vital for the community in that they represent the communal identity of the municipality. Marana’s downtown should be a mixture of industry, commerce, tourism, culture, and residents for a work, live, play environment.

As part of the development of the 2017 strategic plan, a visioning workshop was held for various Town

stakeholders to determine next steps and priorities in developing Downtown Marana. Eight priorities were identified during the workshop:

1. Create and install infrastructure
2. Create a Downtown Development Corporation
3. Create a public/private event company and start programming
4. Create a drainage system
5. Create a gateway
6. Create a focal point
7. Create design guidelines
8. Create a traffic management system

The Make Marana 2040 General Plan should consider the necessary next steps for implementation of these priorities.



## ECONOMY *(continued)*



Marana Regional Airport

### North Marana Gateway

The North Marana Gateway is located in the Town's northernmost boundary along the I-10 corridor. Much of this land is currently dedicated to agricultural uses. Once developed, this corridor is envisioned to establish Marana's identity for those passing through on I-10. Growth within this corridor will largely be dependent on private property owners. The Town should guard against residential development pressures and ensure that development in the North Marana Gateway is supportive of one (or more) of the target sectors identified in the economic development strategy.

### Marana Regional Airport

The Marana Regional Airport provides the Town and local industries access to outside markets. It is a resource that can be leveraged to keep the Town and business community competitive in an everchanging economy. The Marana Regional Airport Master Plan was updated in 2016 and provides several recommendations for continued development of the airport. These recommendations include the need for upgraded runways and the installation of an air traffic control tower. The 2010 General Plan envisioned the Marana Regional Airport serving as an anchor for a large industrial and commercial hub in the Town.

### Tangerine Corporate Corridor

The Tangerine Corporate Corridor spans from I-10 and Tangerine Road interchange to Dove Mountain. As this area is programmed to include a number of high-quality master planned communities, anchored by Dove Mountain, the type of industries and structural development within this employment corridor should be of equal quality. Specifically, development within this corridor should include:

- Large corporate campuses as well as clustered offices
- Research and business park developments
- Extended stay hotels
- Housing diversity including townhomes, condominiums, and apartments
- Open space, vistas, and view corridors
- Public recreation amenities (hiking, biking, and parks with water features)

### Economic Incentives

In an effort to support existing businesses and provide the impetus for economic growth, the Town has developed two primary incentive programs—the Marana Job Creation Incentive Program (MJCIP) and the Downtown Marana Reinvestment Fund (DMRF). Both of these programs will help grow the Town's targeted industry sectors and help create flourishing economic corridors. Following is a description of these two economic incentives.

#### Marana Job Creation Incentive Program

The goal of the MJCIP is to stimulate the development of sustainable, career-oriented, head-of-household wage jobs and commerce in Marana. The program is designed to encourage both new business attraction and existing business expansion, and meet the objectives set forth in the Marana Strategic Plan.

The economic program moves construction sales tax revenues from new construction or expansion projects and makes them available for reimbursement to a qualifying employer. Funding available for reimbursement is limited to the amount collected in construction sales tax revenues by the Town of Marana from an individual project. Qualifying employers may request reimbursement for the following elements:

- **Employee Relocation Expenses:** An allowance of \$3,000 per employee-purchased home within the Marana Town limits to assist with the cost of relocating employees to a new facility. This reimbursement is also available to any new employee who does not already live in Marana who is hired as part of the employer's relocation or expansion.
- **I-10 Corridor and Main Arterial Roadways Beautification:** Expenses which improve the appearance of the I-10 Corridor and main arterial roadways within the Marana Town limits, including signage, building facade, and landscaping. Allowable projects must conform to Marana Commercial Design Standards. A certain percentage of landscaping may be in the public right-of-ways with appropriate license agreement and acceptable design.



- **Student Internship and Training Opportunities:** Actual costs of internship and training programs in the employer’s industry for high school and college students who are Marana residents.
- **Job Training:** Actual costs of training programs for new or existing employees, including but not limited to the cost of course design and development, instruction costs for job-specific training, training materials and supplies, and training facility rental.
- **Sustainable Development:** Actual costs associated with solar and/or wind energy improvements, low environmental impact development, and other green industry best practices.

- **Public Infrastructure Costs:** Actual costs of constructing public infrastructure needed to serve the Targeted Employer’s facilities, including the cost of any Town of Marana-adopted development impact fees.

### Downtown Marana Reinvestment Fund

The goal of the Downtown Marana Reinvestment Fund (DMRF) is to stimulate development of the Downtown District/Activity Center as identified in the Marana Economic Development Strategic Plan. The program is designed to encourage new business attraction as well as current business retention/expansion through public infrastructure projects.

The DMRF program reallocates 50% of construction sales tax

revenues received from a new construction or renovation project, and 50% of general sales tax revenues collected by the Town from new and existing businesses within the Downtown District to the Reinvestment Fund. These relocated funds may also be used to pay for public infrastructure incentives associated with Downtown Marana mixed-use development. The Town of Marana may spend the funds deposited into the Downtown Marana Reinvestment Fund on items including, but not limited to:

- Public Roads
- Public Water and Wastewater Projects
- Public Drainage and Floodplain
- Public Beautification Projects (including landscaping/hardscaping, and parking areas with landscaping)
- Public Infrastructure Incentives (projects associated with mixed-use development related to the Downtown Marana Overlay Zone form-based zoning code guidelines)

### Opportunity Zones

One important federal program that originated in 2018 to spur new investment and economic development is the Opportunity Zone program. The Opportunity Zone program allows investment in approved economically distressed Census Tracts to receive preferential tax treatment. Specific Census Tracts are nominated by the Governor of each state, and certified by the U.S. Treasury Department. The Marana MPA contains two approved Opportunity Zones: the area east of I-10 and south of Ina Road, and the portion of Marana’s metropolitan planning area (MPA) within Pinal County and west of I-10.

Opportunity Zone Funds are private sector investment entities that invest at least 90% of their capital into the Opportunity Zones, and offer substantial benefits to investors in the form of three separate tax breaks:

- Deferral of taxes on gains from investment properties sold in 2018 to 2026;
- A 15% reduction on those gains when they are ultimately taxed in 2026; and
- Tax free growth on Opportunity Zone investments (through approved Opportunity Zone funds) for investments held at least ten years.

The net results for investors vary by state, but in general, after-tax returns are projected to be more than 30% higher using Opportunity Zone investments when compared to a more traditional investment.



Source: Discover Marana



# EDUCATION



Gladden Farms Elementary School

Providing quality education for school children and continuing education for adults is a key factor in sustaining and improving quality of life. A quality educational system attracts both young families and new businesses that bring skilled, high-wage jobs, thereby boosting the local economy. This section discusses the K through 12 educational system in Marana.

## K-12 Education

Most students in Marana are served by the Marana Unified School District (MUSD). However, as shown on Figure 11, there is a small portion in southeast Marana that is within the Flowing Wells Unified District, as well as the two non-unified school districts in Pinal County that cover the northern portion of Marana’s MPA—the Red Rock Elementary District and Santa Cruz Valley Union High School District. A non-unified school district simply means the individual elementary schools and high schools each have their own governing body.

Despite the increase in young families as mentioned earlier in this chapter, Table 9 indicates MUSD enrollment has actually decreased by approximately 5% from the 2009-2010 to 2015-2016 school years. Similarly, both the Flowing Wells Unified District and Santa Cruz Valley Union High School District also experienced enrollment decreases

Table 9. School Enrollment

District	2009-2010 Enrollment	2015-2016 Enrollment	% Change in Enrollment 2009-2010 to 2015-2016
Marana Unified School District	12,884	12,252	-4.9%
Flowing Wells Unified District	5,459	5,253	-3.8%
Red Rock Elementary District	306	313	2.3%
Santa Cruz Valley Union High School District	459	453	-1.3%
Amphitheater Unified District	15,020	13,737	-8.5%
Tucson Unified District	55,369	47,839	-13.6%

Source: National Center for Education Statistics

during the same timeframe. Only the Red Rock Elementary District increased enrollment slightly by seven students. However, in comparison, the nearby school districts (Amphitheater Unified District and Tucson Unified District) have decreased enrollment at more rapid rates than those districts within Marana. As the influx of young families remain and mature in Marana, it is anticipated that the enrollment numbers will increase in the near future.

## Post-Secondary Education

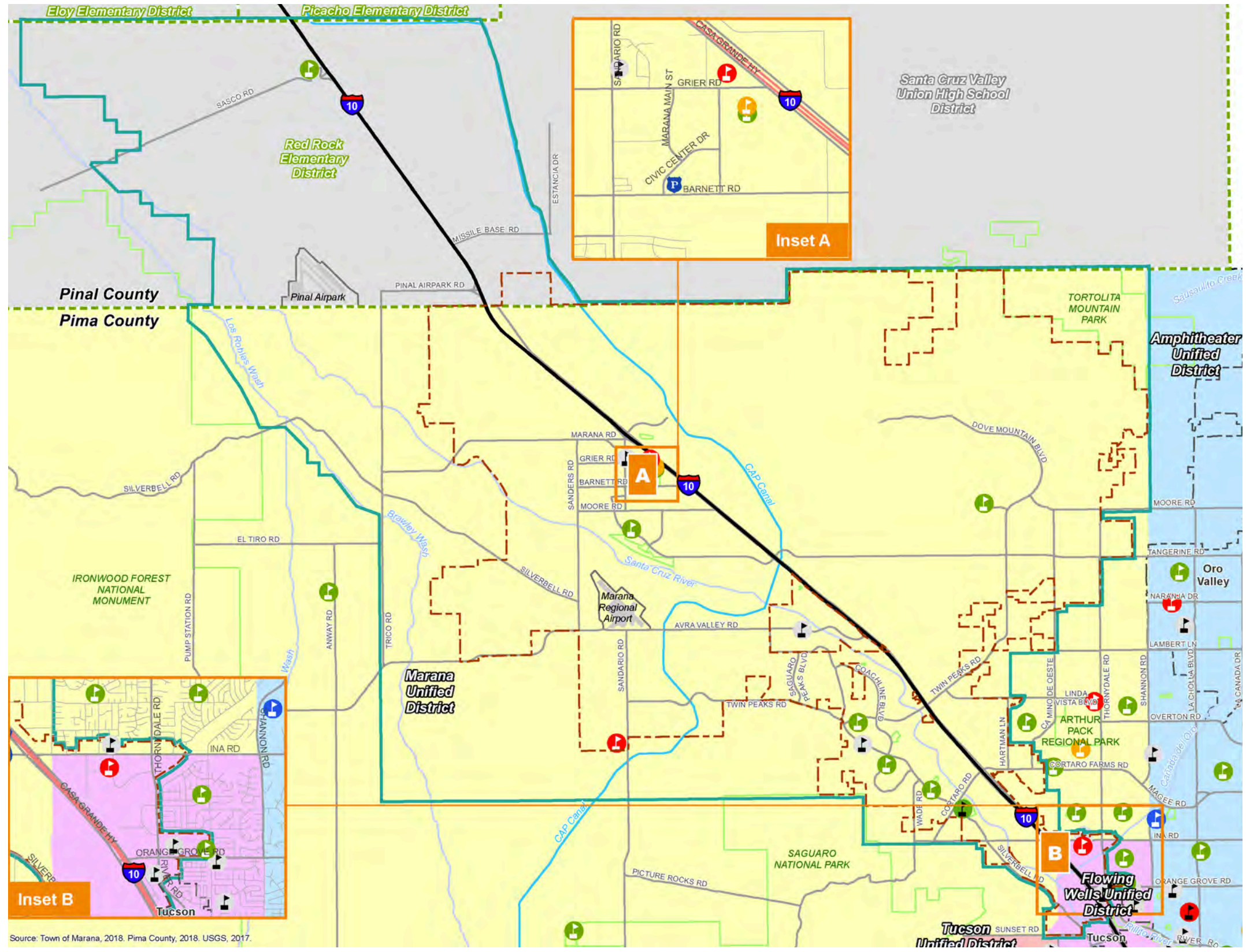
There are no post-secondary educational institutions in the Marana Planning Area, which may limit the Town’s ability to attract and retain young adults who are interested in higher education, professional development, or

vocational training. However, there are at least 15 post-secondary programs in the general area, including two community colleges and the University of Arizona. Arizona State University, Northern Arizona University, and Grand Canyon University are also accessible through their Distance Learning programs. The proximity of so many post-secondary programs, and of different types, provides Marana with potential opportunities for partnerships that offer professional development and specialized training for local businesses’ employees as an additional incentive for incoming and existing businesses.



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Figure 11  
School Districts



Source: Town of Marana, 2018. Pima County, 2018. USGS, 2017.

**Matrix**  
DESIGN GROUP

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Map Revised: 2/18/2019



# COMMUNITY SERVICES & FACILITIES



A highly-visible aspect of any local government is its community services and facilities. Access to public services has a direct impact on residents' quality of life, and as the Town continues to grow, it will need to ensure that new developments have sufficient services and that funding is available for operations and maintenance into the future. Services and facilities detailed in this section include publicly owned buildings, water and wastewater infrastructure, and public safety.

## Public Buildings

### Municipal Complex

The Municipal Complex was built in 2005 on West Civic Center Drive in Marana's downtown area and houses the administrative, law enforcement, and judicial functions of the Town. More specifically, the complex includes facilities for the Mayor, Town Council, Town Management, Development

Services, Engineering, Animal Services Division, the Water Department and the Police Department, as well as the Marana Municipal Court and other departments. The Complex is adjacent to a community park, agricultural land, and undeveloped lots and will serve as the anchor for future development in Marana's downtown.

### Marana Operations Center

The Marana Operations Center (MOC), located off Ina Road, houses the Public Works Department consisting of Streets, Traffic, Facilities and the Fleet Services Divisions.

### Wheeler Taft Abbott Sr. Library

The Wheeler Taft Abbott Sr. Library located off Cortaro and Silverbell Roads is the only public library in the Marana MPA. The library is part of the Pima County Public Library system, and, as such, facilitates access to all Pima County public library resources.

## Water / Wastewater Infrastructure

The availability of both potable and wastewater services is a critical component for future development and sustaining growth. As shown on Figure 12, Marana residents are served by four potable water providers and two wastewater providers.

### Potable Water

One of the primary reasons the Town incorporate in 1977 was to protect residents' water rights, and water supply remains a central concern as the community continues to grow and demand increases. Today, Marana residents are primarily served by two water providers—Marana Water Department (Marana Water) and Tucson Water. Oro Valley Water and Metro Water also serve small areas within Marana along the southeast border. Residents that live outside of a service area of one of the two primary water providers typically receive potable water from private wells.

Marana Water was first formed in 1997 with approximately 500 customers and now serves over 8,000 customers dispersed throughout both the northern and southern parts of Town, including Gladden Farms, Saguaro Bloom, and the downtown area. The department employs 32 staff that advise consumers on

water production, distribution, reclamation, water quality, and water conservation, as well as other topics. It is supported by the Marana Utilities Board that meets biannually to discuss and make recommendations about the department's future direction.

The Marana Water Department has also produced a series of plans that identify the capital improvements and renewable water resource acquisitions that are required over the next 10 years. These plans include cost estimates and appropriate fees for investments. The 2017 Water Impact Fee Infrastructure Improvement Plan, and the 2017 Water and Wastewater Utility Impact Fee Study are made available through the Town's website (<http://www.maranaaz.gov>).

Tucson Water provides potable water to a large portion of Marana, including Dove Mountain and Continental Ranch. However, the City of Tucson adopted Resolution 21602 in 2010 which restricts the water utility to be extended in Marana outside of its current service area as depicted on Figure 12. This will require Marana to provide potable water services to future developments throughout the Town.

### Assured Water Supply

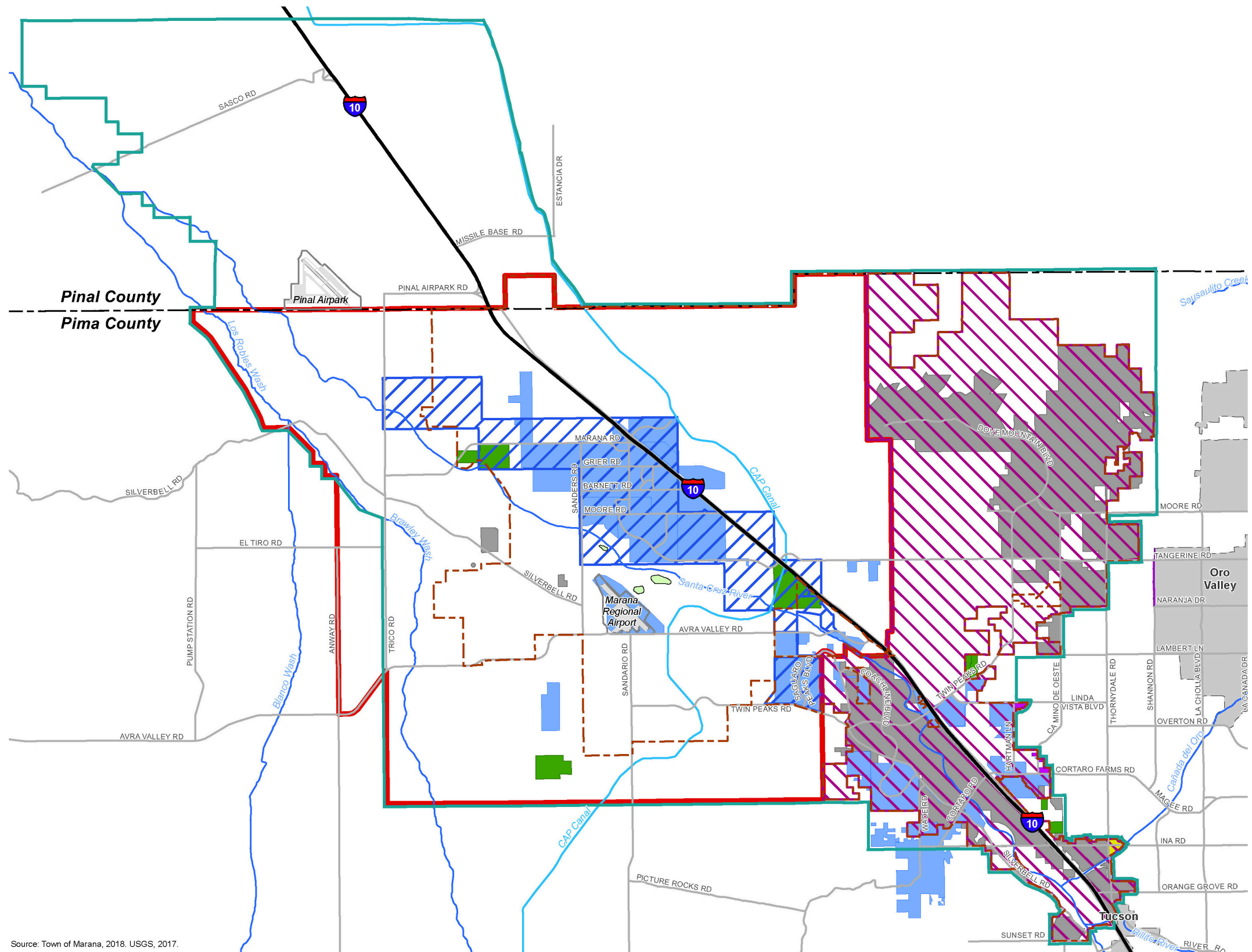
The Arizona Department of Water Resources (ADWR) Assured Water Supply program addresses the

problem of limited groundwater supplies in Arizona. The program sustains the State's economic health by preserving groundwater resources and promoting long-term water supply planning in areas where significant groundwater depletion has occurred historically, including portions of Pima and Pinal counties. The program evaluates the availability of 100-year water supplies in municipalities relative to current and committed demand, as well as future growth projections. Marana Water received a certificate of assured water supply in 2017 and will need to renew it every 10 years, or as necessary to maintain growth. As part of the Assured Water Supply Program, developers must show there is a continuous, legal source of high-quality water to sustain a given development for 100 years and also the financial capability to construct appropriate water delivery, storage, and treatment systems. All development plans must be consistent with Marana's water management goals and ADWR conservation requirements. The Town of Marana is also seeking additional renewable sources of water such as Central Arizona Project (CAP) water and recharged effluent to guarantee a secure, adequate water supply and facilitate development.



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Figure 12  
**Water Resources**



**Legend**

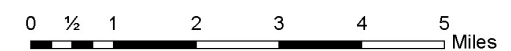
**Water Reclamation**

- Marana Water Reclamation DMA
- Pima County Sewer Service Area
- Marana Water Reclamation Service Area

**Water Provider Service Areas**

- Marana Water Existing Service Area
- Tucson Water Service Area
- Metro Service Area
- Oro Valley Water Utility Service Area
- Private Water Service Areas
- Recharge Basins
- CAP Canal
- River or Wash

- Marana Planning Area
- Marana Town Limits
- County Boundary
- Other City/Town
- Interstate
- Major Road



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Map Revised: 2/18/2019

Source: Town of Marana, 2018. USGS, 2017.



# COMMUNITY SERVICES & FACILITIES *(continued)*

## Wastewater

Sewer services (wastewater) throughout the Town are provided by the Marana and Pima County. Marana owns and operates the Marana Water Reclamation Facility located in the northern part of the Town along Treatment Plan Road. In 2016, this facility was operating at approximately 75% capacity, but has since been expanded to triple its hydraulic capacity from 0.5 million gallons per day (MGD) to 1.5 MGD. Although the Marana Water Reclamation Facility currently serves a small area north of the Santa Cruz River and West of I-10, the future designated management area (DMA) will include most new communities west of Dove Mountain as shown on Figure 12. Additionally, as part of the expansion project, this facility recharges 100% of its treated wastewater back into the groundwater aquifer, which will in turn support future growth.

The Pima County Regional Wastewater Reclamation Department owns and operates the Tres Rios Water Reclamation Facility located in Marana along I-10 Frontage Road and south of Ina Road. This facility provides sewer services to a large portion of residents in southern and eastern Marana, as well as others in the Tucson metropolitan area. According to the Pima County 2016 Wastewater Facility Plan, the Tres Rios Water Reclamation Facility has a maximum capacity of 50 MGD, and was operating at approximately 60% capacity in 2015.

## Law Enforcement

The Marana Police Department is responsible for law enforcement in the Town and maintains a police station within the incorporated limits—one at the Marana Municipal Complex.



Marana Police Department Headquarters

## Services

- Communications Center
- Crime Analysis
- Emergency Management
- Marana Tri-Star Program
- Merchant Information
- Records
- Impounded Vehicles
- Vacation Watch
- Neighborhood Watch
- Fingerprinting
- Dispose-a-Med

## Community Engagement

- Citizens Police Academy
- Explorer Post #77
- Special Duty Program
- Police Volunteers
- Nextdoor- Social Media for Neighborhoods
- TIP A COP for Special Olympics
- Youth Citizens Police Academy

Marana's Police Department is comprised of 124 full-time employees, including 93 sworn officers and 31 civilians. As of 2016, the ratio of sworn officers to 1,000 residents was 2.26, slightly below the national average of 2.40 reported by the FBI Uniform Crime Reporting

Table 10. Marana PD Average Response Times, 2017

Call Priority	Call to Arrival Time
One	4:54
Two	5:49
Three	8:46
Four	9:45

Source: Marana Police Department

(UCR) Program. Nonetheless, in 2017, Marana experienced a lower crime rate (27.1) than the statewide average (34.2), and less than half of the crime rate experienced in the City of Tucson (60.5) according to FBI UCR data. Furthermore, the Town's 2017 crime rate was down from 33.0 in 2010, representing an 18% decrease. Due to the Town's low crime rates, Marana is recognized as one of Arizona's safest communities, ranking 6th overall according to SafeWise.

Response times are categorized by type of call, or level, ranging from dire or life-threatening emergency (level one) to non-emergency situations (level four). Table 10 presents the average response times for each of the four priorities reported in 2017. Call to arrival time is considered the time it takes dispatch to receive the call and transmit the location of the call to arrival of the first unit on scene.

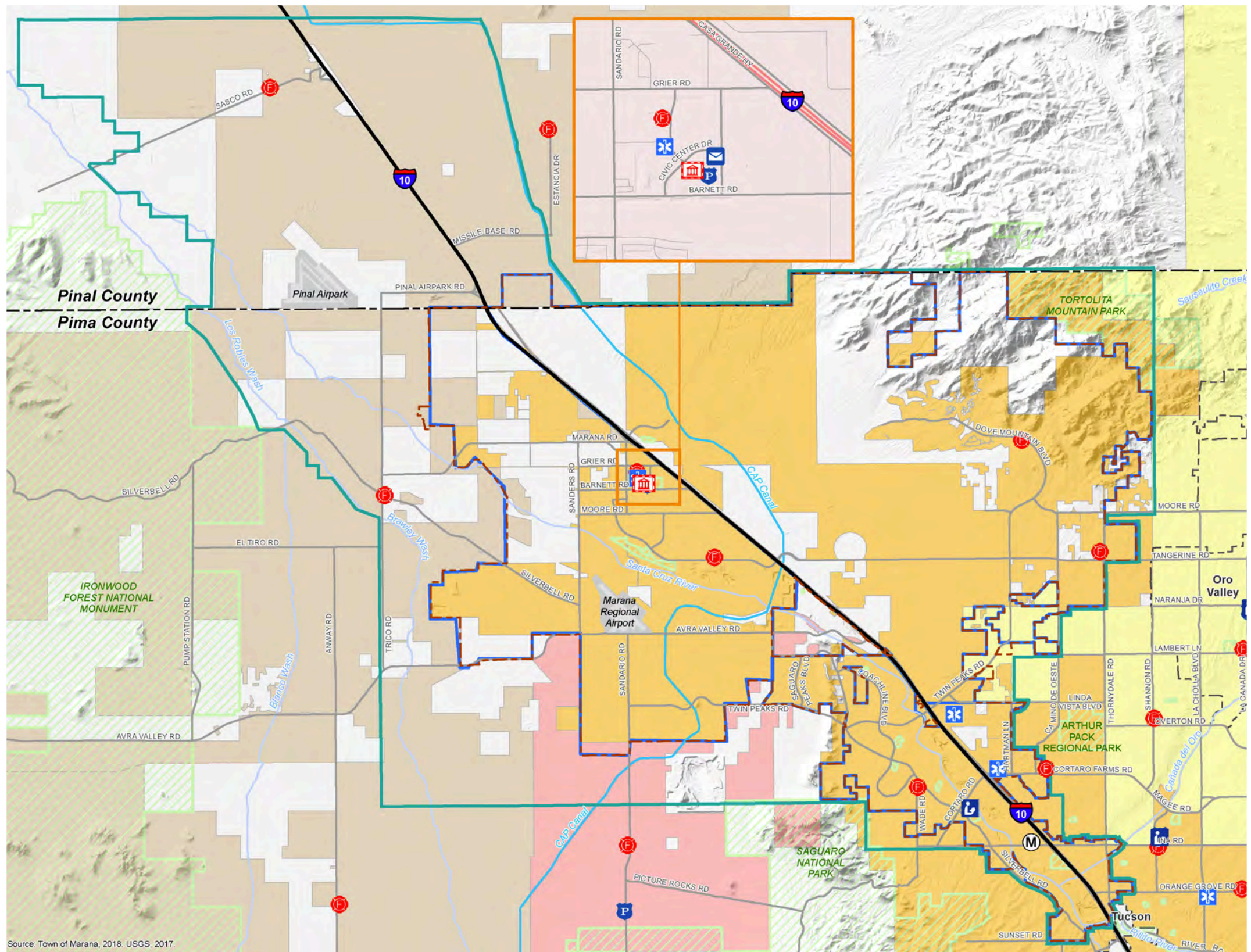
## Fire and Emergency Medical Services

There are four fire districts that provide service within Marana's MPA (Figure 13). Northwest Fire District (NWFD) provides fire and emergency services to a majority of the area within the incorporated Town limits. The other three fire districts that provide emergency services within Marana's MPA are Golder Ranch, Avra Valley, and Picture Rocks. NWFD serves 122,389

residents and 3,427 businesses over a 151 square mile area. It maintains 208 trained personnel at 10 fire stations, including multiple paramedic units distributed throughout the area that provide advanced life treatment and transport within minutes. The NWFD's firefighter to population ratio is 1.70 firefighters per 1,000 people. According to the National Fire Protection Association (NFPA), the median firefighter to population ratio in the United States for service areas between 100,000 – 249,999 people is 1.24 firefighters per 1,000 residents, placing NWFD above the average ratio.

Per NWFD's website, the District has been internationally accredited since 2007 and has an Insurance Service Office (ISO) Public Protection Classification rating that places the District's fire protection community among the top 3% in the country. The ISO rating ensures lower insurance costs for District property owners. Additionally, the NWFD maintains response times less than NFPA standards. The NFPA's standard response time is 9:00 minutes for urban calls and 14:00 minutes for rural calls. According to the NWFD's 2016 Community Risk Assessment, the District has response times of 7:53 minutes for urban calls and 8:55 minutes for rural calls 90% of the time.





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Figure 13  
**Public Facilities & Safety**

- Legend**
- Marana Municipal Complex
  - Library
  - Police Station
  - Fire Station
  - Medical Facility
  - Marana Operations Center
  - Marana Police District
- Fire Districts**
- Avra Valley
  - Golder Ranch
  - Northwest
  - Picture Rocks
- Other Features**
- Marana Planning Area
  - Marana Town Limits
  - County Boundary
  - Other City/Town
  - Interstate
  - Major Road
  - CAP Canal
  - River or Wash
  - Airport
  - Park

**Matrix**  
DESIGN GROUP

0 1/4 1 2 3 4 5 Miles

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Map Revised: 2/18/2019

Source: Town of Marana, 2018. USGS, 2017.



# PARKS & RECREATION



Marana Heritage River Park

Park and recreational facilities are essential components of a community's quality of life, by promoting healthy, active lifestyles. These facilities provide places to play, explore, and spend time outdoors with family and friends creating bonds which can create a strong sense of community. This section covers the types of park and recreational facilities in Marana.

In October 2016, the Town of Marana adopted the Parks, Recreation, Trails and Open Space 5 Year Update and Strategic Plan. The plan was an update to the 2010 plan and was a joint collaboration with the University of Arizona College of Architecture, Planning, and Landscape Architecture. This strategic plan envisions future parks, programs, trail and open space development for the next five years. To continually to meet citizens' park and recreation needs, the plan is to be updated every five years. Marana's current park and recreational facilities are shown on Figure 14.

## Parks

The 2016 Strategic Plan identified five different types of parks in Marana for which it also identifies a level of service for each. These five types are:

- **Neighborhood Parks** are defined as usually being less than ten acres with a service radius of 0.5 miles.
- **Community Parks** are defined as usually being between 10 to 30 acres with a service radius of one mile.
- **District Parks** are defined as usually between 30 to 50 acres with a service radius of 2.5 miles.
- **Regional Parks** are defined as being over 50 acres with a service radius of five miles.
- **Natural & Cultural Resources Parks** are areas which include forest, preserves, wildlife areas, historical sites, flora and fauna preservation areas and water recharge basin properties. These areas provide active and passive recreational opportunities for residents and visitors.

The National Recreation and Park Association (NRPA) recommends communities maintain at least 9.6 acres of park space per 1,000 residents. The Town of Marana maintains a total of 189 acres of park space, and is currently developing the 104-acre El Rio Preserve (for more information on the El Rio

Preserve project, see Chapter 4). This equates to only 7.2 acres of park space per 1,000 residents, including the El Rio Preserve. However, there is an additional 103 acres of park space maintained by homeowner associations (HOAs), plus over 3,000 acres maintained by Pima County. Pima County parks within Marana include the Mike Jacob Sports Park and Ted Walker Park located along I-10 Frontage Road and south of Ina Road, as well as the 3,137-acre Tortolita Mountain Park in the northeast corner of Marana's MPA. In total, this equates to nearly 3,593 acres of park space, or 89.3 acres per 1,000 residents. A full breakdown of the parks in Marana is provided in Table 11.

Although there is a significant amount of park and open space in Marana, in large part due to the Tortolita Mountain Park, the Town will need to continue to add new parks to maintain its level of service to residents as the population grows. Ideally, additional park space would be within short walking or biking distance from established neighborhoods to cover the largest number of residents. Other areas that highlight Marana's natural beauty or are near points of interest like the Santa Cruz River and the CAP Canal as well as open space near developments would make suitable sites for new parks.

Table 11. Parks in Marana

Park	Acreage
<b>Neighborhood Parks</b>	
Continental Reserve	9.2
Wade McLean	9.0
White Avenue Park	9.1
El Rio	1.3
HOA/Private Parks	109.2*
<b>Community Parks</b>	
Continental Ranch	11.9
San Lucas	13.5
Gladden Farms	12.5
Tangerine Sky	18.0
<b>District Parks</b>	
Crossroads at Silverbell	48.3
Ora Mae Harn	34.7
<b>Regional Parks</b>	
Mike Jacob Sports Park	50.0*
Ted Walker Park	10.0*
<b>Natural &amp; Cultural Resource Parks</b>	
Marana Heritage River Park	15.0
El Rio Preserve (under construction)	104.0
Tortolita Mountain Park	3,136.8
<b>Total</b>	<b>3,592.5</b>

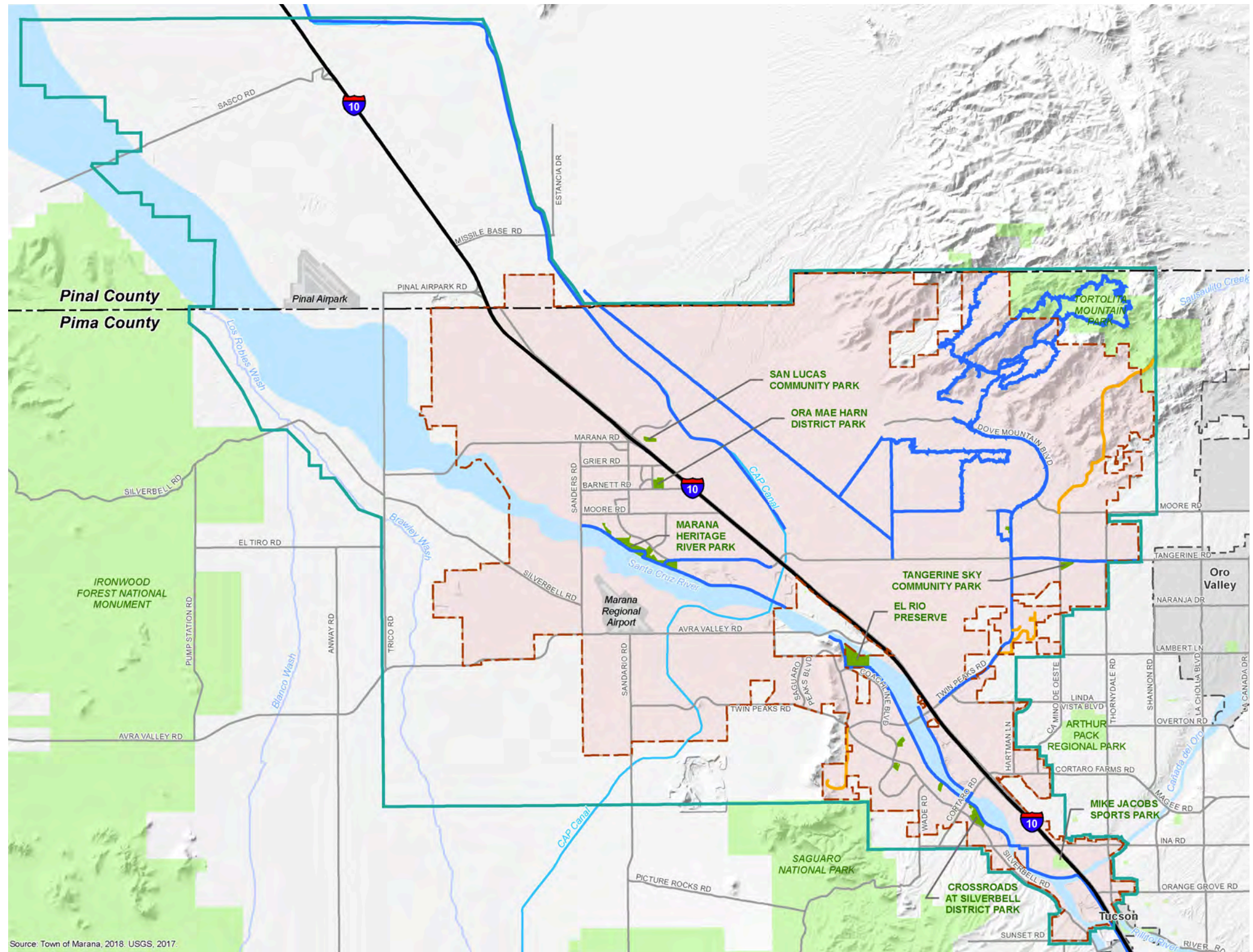
Source: Town of Marana, 2018

\*From Parks, Recreation, Trails and Open Space 5 Year Update and Strategic Plan, 2016



**MAKE**  
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2040 • GENERAL PLAN

Figure 14  
**Parks and Recreation**



- Legend**
- Trail Status**
- Trail
  - Trail Commitments
  - Town Park
  - Regional Park
- Marana Planning Area
  - Marana Town Limits
  - County Boundary
  - Other City/Town
  - Interstate
  - Major Road
  - CAP Canal
  - River or Wash
  - Airport

**Matrix**  
DESIGN GROUP

0 1/2 1 2 3 4 5 Miles

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Map Revised: 2/18/2019

Source: Town of Marana, 2018. USGS, 2017.



# PARKS & RECREATION *(continued)*

## Community Centers and Recreation Programming

The Town has one community center and a community conference room. Recreation programs offered by the Town Parks and Recreation Department drive the need for facilities, park design, and recreation amenities. An active programs component gives additional reasons for residents to use parks, enhances the social capital of the community, and fills gaps where other recreation providers cannot. According to the 2016 Parks, Recreation, Trails and Open Space 5 Year Update and Strategic Plan, 53% of households participate in at least one program offered by the Town. Activities are offered throughout the year, ranging from outdoor recreation to special interest training and lessons. Recreational programs are offered at the Marana Community Center and other recreational facilities throughout the Town.

## Trails

Trails provide important connections between neighborhoods, parks, and other destinations, offering an alternative mode of transportation and a healthy activity while engaging with nature. Marana contains 61 miles of trails throughout the Town, plus 53 miles that are currently under construction or proposed. These include both

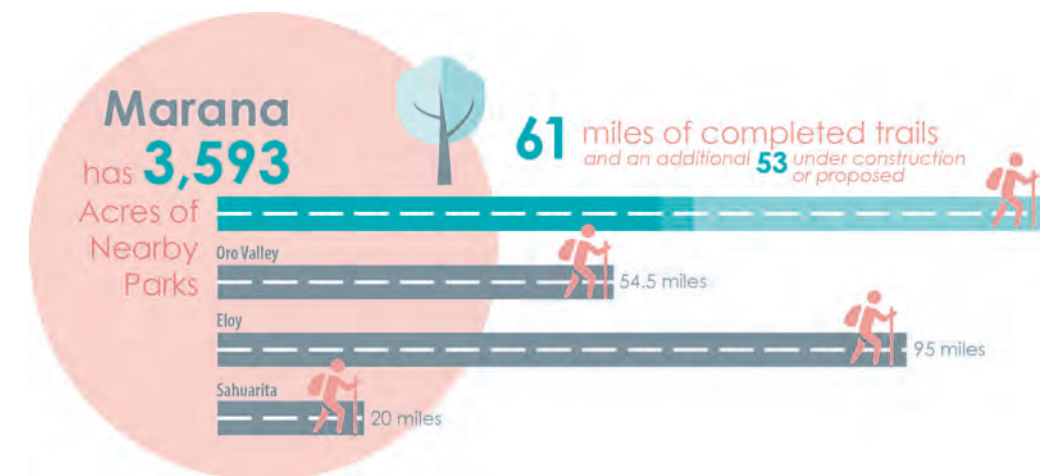


Mountain bikers enjoy one of the many trails available in Marana.

paved and unpaved pathways. Paved trails run along Twin Peaks Road east of I-10 and Tangerine Road west of I-10, and east of Twin Peaks at Dove Mountain, as well as a shared-use path along the Santa Cruz River from Sanders Road to the City of Tucson. Unpaved paths are located along the CAP Canal north of Tangerine Road. Paved paths include Tangerine Road east of Twin Peaks Road, and along Dove Mountain Boulevard, which connects to the 11 hiking trails through the Tortolita Mountains.

Future planned or proposed connections in Marana include a one-mile shared-use path

connecting the trail along the Santa Cruz River as it passes the CalPortland Cement Plant, extending the trail along the CAP Canal south of Tangerine Road and the Santa Cruz Trail, as well as along Tangerine Road connecting the paved path west of I-10 to the paved path east of Twin Peaks Road. Although Marana features a wide array of trail connections today, as growth occurs in both population and geographic size, the Town should continue prioritizing interconnecting trails and pathways that are easily accessible by all, regardless of ability, and which enhance the character and varying environments of the Town.





# COMMUNITY HEALTH INDICATORS

Factors that have an influence on health include social circumstances, access to medical care, and behavioral choices. The built environment also has a major impact on the health of residents. How a community is designed can affect the ways residents access healthy food, commute to work and other destinations, the types of housing available, and recreational activities.

## Making Action Possible

Making Action Possible (MAP) for Southern Arizona provides health data for the Tucson Metropolitan Statistical Area. While the data is not specific to Marana, it provides a more generalized picture of the health of the region. The Make Marana 2040 General Plan should consider strategies to identify and track local Marana metrics.

Some of the health metrics identified include health insurance coverage, physical well-being, and poverty rate. A full breakdown of the health and social well-being of the Tucson MSA is available at <https://mapazdashboard.arizona.edu/health-social-well-being-overview>.

## Physical Well-Being

The factors that contribute to an individual's physical well-being are the number of poor physical days per month, reported heart conditions, adult obesity rates, and the percent of population diagnosed with diabetes. 83.9% of the population in the Tucson MSA are considered to have either good or excellent health when considering these factors. This is slightly higher than the national

average of 83.3%. The factors that determined the physical well-being rating are:

- Residents in the Tucson MSA reported an average of 3.9 poor physical health days per month
- The reported data for heart attack rates was 2.9% (nationwide average was 4.5%). Reported rates of coronary heart disease was 3.2% (nationwide average was 4.3%)
- Obesity rates in the Tucson MSA were 24.9%
- 8.6% of the population reported having a diagnosis of diabetes

An individual's health plays an important role in their quality of life. Additionally, diseases like diabetes, heart disease, and obesity have high financial costs for the nation. According to the Center for Disease Control (CDC) heart disease is the leading cause of death in the U.S. Regular physical activity plays an important role in the prevention of many health-related diseases including heart disease.



## Poverty Rate

The poverty rate in Marana was 7.5% according to the 2016 ACS, more than 10% below the statewide rate and more than 7% below the national rate. Families whose income is near or below the poverty level regularly have difficulty affording necessities such as housing, food, and healthcare. Local poverty rates are important drivers of government decisions related to spending on programs such as affordable housing, free and reduced school lunches, and other forms of public assistance. Poverty rates have also been linked to undesirable social outcomes, reduced regional home ownership rates, as well as a decreased likelihood of attending college.

## Health Services

Marana has a number of medical facilities located within the Town limits. The Marana Health Center (MHC) has two locations within the Town, one off of Marana Main Street near the Municipal Complex and the other in the Dove Mountain community. MHC was established in 1957 and was the first community health center in Arizona. MHC Healthcare has 14 health centers located throughout Arizona serving over 40,000 patients. Other health organizations in Marana include an urgent care and dialysis surgicenter at Tangerine Road and Thornydale Road, an emergency room at Twin Peaks Road and I-10, the Carondelet Micro Hospital at Cortaro Road and I-10, and urgent cares at Silverbell Road and Cortaro Road and Ina Road and Meredith Road.

## QUICK FACT:

The Marana Parks & Recreation Department offers over 50 programs and activities for families to get active and live healthy lifestyles.

## The Built Environment

The Environmental Protection Agency (EPA) states that healthy community design is about planning and designing communities that enable and encourage small changes resulting in happier and healthier lifestyles. Arizona state law requires the inclusion of healthy community design strategies within a community's General Plan. These design strategies could include:

- Mixed land uses
- A varied housing stock for residents in different stages of life and incomes
- Transportation alternatives
- Pedestrian and bicycle infrastructure
- Community centers
- Preservation and access to parks and open space



## ARTS & CULTURE



*Petroglyphs in Tortolita Mountain Park; Photo: discovermarana.org*

### QUICK FACT:

Heritage tourism is one of the largest and fastest growing segments of the tourism industry and can bring to an area private investment, micro-enterprises, jobs, and general economic stimulation.

The American Planning Association recognizes that one sign of a healthy community is its ability to simultaneously preserve its history and create new forms of expression in forward-thinking identity building and placemaking. That is, healthy communities draw on their existing cultural heritage while developing opportunities for community-oriented creativity and engagement with contemporary arts and culture. This chapter discusses the cultural assets existing in Marana, from prehistoric sites to contemporary art.

Preserving prehistoric and historic artifacts, buildings, sites, and other cultural resources can provide opportunities for people of all ages to engage with the stories of their local area, state, and nation and to develop a sense of shared identity. Investing in cultural resources can foster inclusivity and respect for others. Moreover, heritage tourism is one of the largest and fastest growing segments of the tourism industry and can bring to an area private investment, micro-enterprises, jobs, and general economic stimulation.

According to Americans for the Arts, arts-related businesses employ 3.48 million people nationwide, and the non-profit arts and culture industry generated \$166.3 billion in economic activity in 2015 alone. In Pima County, 2,322 arts-related businesses—4.9% of all business in

the county—employ 7,703 people, demonstrating that contemporary arts and cultural experiences constitute a significant economic opportunity for local municipalities like Marana.

In the early 2000s, the Town established a cultural resources preservation board in an effort to protect culturally significant sites. However, the board is currently inactive and may be reestablished in the future.

### Cultural Resources

The area within and surrounding the Town of Marana is rich in cultural resources, with hundreds of known archaeological sites. Some are very important pre-Hohokam sites; most are prehistoric remains of Hohokam settlements, including large villages with platform mounds, ball courts, and fully developed canal systems. Hohokam rock art (images carved into boulders and canyon walls) is found in the Tortolita Mountains and elsewhere.

Most historic period sites in the immediate area have been destroyed or are threatened by encroaching development. Only 1-2 homesteads and early ranches still exist, and as previously noted, Marana's historic downtown was demolished in 1961 during the construction of I-10. The following sites discussed are some of the larger and more important resources

in the area. They also represent the range of cultural assets that are known at this time in the region and the different strategies that can be used to manage them.

### Marana Mound Complex

The Marana Mound Complex is one of the very few Hohokam Early Classic period (AD 1150-1300) villages that has survived modernization with remnants of ancient adobe walls still visible today. The Complex is most famous for a 12-foot-tall earthen platform mound that was likely used for ceremonial and communal purposes. The mound is associated with at least 40 residential compounds, each with living quarters, activity areas, and trash mounds containing an overabundance of broken shell and obsidian that was traded or brought from areas throughout the Southwest and Mexico. A nearly seven-mile-long canal for irrigating crops was also discovered in the agricultural fields that surrounded the ancient compounds.

The Marana Mound Complex is located on privately owned lands and Arizona State Trust lands in the northern part of the area. The site is managed through a partnership with the ASLD, the Arizona State Museum, Pima County, the Arizona State Historic Preservation Office, and Arizona Site Stewards. Although the Complex is predominantly



managed as a research site, public tours have been given as recently as October 2018. It was also listed as an acquisition priority in the 2015 Pima County Open Space Bond Initiative.

### Wild Burro Canyon Trail

The Wild Burro Canyon Trail is the gateway to the Tortolita Mountains trail system that is managed by the Town of Marana Parks and Recreation Department. The 6.3 mile long dirt pathway meanders past ancient cupules and petroglyphs dating as far back as 8,000 years ago, as well as petroglyphs made by the Hohokam between A.D. 1100 and A.D. 1450. The ancient rock art offers a different window on aspects of prehistoric lifeways than remnant villages do, although the meaning and function of the petroglyphs is largely unknown. Wild Burro Trail also takes hikers past the remains of several stone houses and outbuildings that were built by Marana's homesteaders in the mid-to-late 19th Century, allowing visitors a glimpse of early ranching in the Tortolitas. Wild Burro Trail is well-maintained and easily accessed from a large parking area with public restrooms on the property of the Ritz-Carlton Dove Mountain resort. However, the trail is moderately challenging to hike in places and may limit access to many within the general public.

### Crossroads at Silverbell District Park

Crossroads at Silverbell District Park is a public park facility adjacent to the Santa Cruz River and Yuma Wash that is owned and managed by the Town. The once reliable water sources and rich floodplain attracted Hohokam farmers, and the Town has excavated at least two dozen adobe lined pit houses and artifacts from a small Hohokam village within park boundaries. Members of the Tohono O'odham tribe were actively involved in the excavation process, providing indigenous insight into the village and ensuring all materials were handled with appropriate sensitivity. Many of the artifacts were repatriated to the Tohono O'odham Nation. The park also preserves remains of the historic Bojorquez-Aguirre Ranch, including the stone foundations of the main ranch house, a bunk house or tack room, a 23-foot by 23-foot stone cistern, and well.

From 2001 to 2008, the Town entered into a partnership with a local non-profit to provide educational programming relating to the Hohokam village, the historic ranch, and archaeological research and preservation methods. Marana received the 2002 Arizona Governor's Award in Public Archaeology for the highly successful heritage program, which provides a viable model for future cultural resource development and education in Marana.



Cotton Gin; Photo: [maranaheritage.org](http://maranaheritage.org)

### Trincheras of Los Morteros

Los Morteros, or "the mortars," is a large Colonial-Classic period Hohokam community on the Santa Cruz River in southeastern Marana that was occupied from A.D. 300 to 1450. The site was named after the 300-plus bedrock mortars found there but also includes petroglyphs, an intact ball court, a network of canals, rock shelters, and over 200 "trincheras," or dry-laid rock alignments. The rock features appear to have had several functions, including collecting water in terraced areas and directing runoff onto lower-lying agricultural fields. Residential, defensive, and ritual functions are also possible uses. The site is further known as the location of one of Juan Bautista de Anza's major encampments, the Llano del Azotado, during his famous 18th Century expedition to modern-day California.



Petroglyphs; [discovermarana.org](http://discovermarana.org)

Pima County owns and protects 121 acres in and around the site and has made improvements to facilitate public access, including developing a parking area, trailhead, erecting fencing and interpretive signs that explain the cultural resources to visitors. The management strategy has proven an effective means of controlling damage to the site while simultaneously improving enjoyment and appreciation of Los Morteros.

### Marana Cotton Gin

The Marana cotton gin was identified as an historic property during a survey of farmlands along I-10 in 2004. The gin was constructed for Anderson Clayton in 1951 and was eligible for listing on the National Register of Historic Places due to its representation of cotton production in the Southwest. Cotton production has been central to Marana's prehistoric, early historic, historic,



Wild Burro Canyon Trail; Photo: [discovermarana.org](http://discovermarana.org)

and now contemporary lifeways. Although the Clayton cotton gin was demolished, portions have been preserved for future display. It exemplifies the variation in Marana's cultural resources and the ways in which everyday objects can link past activities and peoples to present-day endeavors and values. In preserving and using cultural resources in creative ways—in this case, recreating a significant structure—they can link diverse groups of people in a shared community history and vision for the future.



# ARTS & CULTURE *(continued)*

## Contemporary Arts & Culture

Marana has the building blocks for developing a community that understands the positive impacts of arts and culture on both residents and visitors. In 2017, the Marana Citizens' Forum proposed a public art policy for the Town that would help implement public art projects to create a unique sense of place throughout the Town. Proposed locations for art pieces included the Marana Municipal Complex, retail centers, public parks, and the Ina Road / I-10 interchange.

Marana Parks and Recreation programs a number of arts and culture related courses and activities that could serve as a catalyst to provide free concerts and art exhibitions in community parks. Some of the classes and events offered include:

- Tots & Me Story Art Class
- Nature to You – Garden Education Series (Parent/Youth)
- Music Workshops – Desert Bluegrass Association
- Senior Adventure Trips
- Paint Nights in the Park
- Marana Community Musical Theatre (MCMT)
- Marana Bluegrass & Acoustic Music Festival
- Marana Art Expo
- Music in Marana Concert

As of 2018, no policy has been formally adopted, but a public arts initiative remains a viable possibility.



Marana residents enjoy a music festival

## Film in Hand with Hospitality

Southern Arizona has a long history of attracting film production companies due to the environment of the region. Movies, television shows, and commercials have been filmed in Marana dating from the late 1930s to the present. As the film industry rose in prominence, so to did the hospitality industry. A number of homesteads that date back to the 1800s were converted to high-end guest ranches, the first of which was Saguaro Vista in 1936. Saguaro Vista, known today as Mira Vista Resort, is still in operation.

The Marana Film Office has a number of services to assist film production companies, including helping to identify appropriate filming locations. Some hospitality locations that have been used include:

- Lazy K Bar Ranch,
- Lil' Abner's Stakehouse,
- Mira Vista Resort,
- The Ritz-Carlton, Dove Mountain,
- Sanctuary Cove,
- White Stallion Ranch,
- Marana Regional Airport,
- Wild Burro Wash,
- Stardance Event Center, and
- Marana's Neighborhoods.

## Marana Gastronomy Tours

The Marana Gastronomy Tour program highlights the

Town's ancient foodways and contemporary gastronomy. Two different tours are offered by the Town with transportation provided; the "Marana Gastronomy Tour" and the "A Taste of the Wild: The Marana Wild Foods Gastronomy Tour". Each guided tour takes attendees to ancient archaeological sites and includes tastings of ancient Sonoran wild foods with modern interpretations. Attendees learn about the ancient cultures in the region and other interesting aspects of the Town.

In 2016, Tucson was named the first City of Gastronomy in the United States by UNESCO. (The Marana Gastronomy Tours are the first gastronomy tours in the United States to be approved by the Tucson City of Gastronomy board of directors to use the UNESCO seal of approval.)

## Native American Cultural Traditions

In 2018, the Town of Marana partnered with Pima Community College to offer classes on Native American style flute playing. The courses covered the history of indigenous flute playing, as well as the mechanics involved in playing in a Native American style. The classes constitute an important opportunity for Marana residents to become more familiar with, participate in, and appreciate the traditions from different cultures.

They also allow for contemporary native peoples to re-engage with the landscape in and around Marana where their ancestors lived. Other indigenous traditions may be appropriate for public display or provide teaching and learning opportunities for Marana's residents, including seasonal dances, farming techniques, cooking, etc.

## Art Today



Sculpture at Tangerine Sky Park; Photo: Town of Marana

Although in its infancy, contemporary arts and culture in Marana has significant potential to become an essential part of the community—to bring together individuals with diverse backgrounds, interests, skills, and ages.



# Resources & Sustainability

**M A K E**  
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MAP ATLAS

Marana is dedicated to pursuing innovative solutions to support a healthy environment for generations to come.



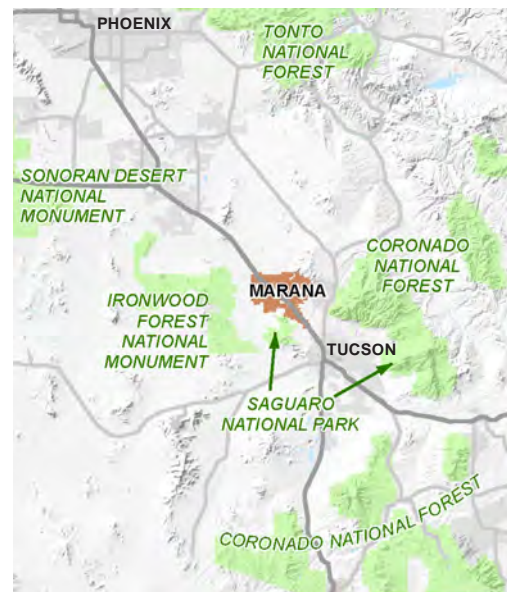
# CONSERVATION

Located in the vast Sonoran Desert, Marana is home to a diverse habitat of plants, animals, and cultural resources. As development occurs, habitats can become disconnected and fragmented, cutting off migration patterns, reducing genetic diversity, and loss of species critical to the natural ecosystem. Additionally, through development, cultural resources can be damaged or destroyed. Since Marana’s planning area is largely undeveloped, there are many opportunities to protect these resources, fostering a healthy ecosystem while preserving the past.

## Sonoran Desert

The Sonoran Desert covers approximately 120,000 square miles between southwest Arizona, southeast California, and northwest Mexico. The arid climate provides habitat for over 500 animal species and 2,000 plant species, many of which are uncommon in other areas of North America. The Sonoran Desert is well known for its abundance of cacti, most notably the Saguaro Cactus. Some of the more significant animal species are

the Anna’s Hummingbird, Cactus Wren, Roadrunner, Gila Monster, Diamondback Rattlesnake, Collared Lizard, Desert Tortoise, Bobcat, and Javelina. There are several significant natural areas in the Sonoran Desert and in Marana’s regional area. These areas contain critical wildlife habitats that should be protected, including the Santa Cruz River, Saguaro National Park, Coronado National Forest, Sonoran Desert National Monument, and Tonto National Forest.



## Santa Cruz River

The Santa Cruz River is a unique U.S. waterway. Its headwaters begin in the United States, southeast of Tucson. The river flows south, across the International Boundary with Mexico for roughly 35 miles before turning north and crossing into the U.S. near Nogales, Arizona. The river continues north for nearly 184 miles until reaching, and becoming a tributary to the Gila River.

The Santa Cruz was an important waterway for early Native Americans, Spanish missionaries and early American pioneers. Over time, this waterway declined due to increased mining, grazing and farming.

Today, the Santa Cruz River is receiving increased attention for rehabilitation efforts and is quickly becoming an integral part of southern Arizona’s quality-of-life with restored grasslands, designated wildlife habitat, as well as, bicycle and pedestrian trails.

In Marana, the river corridor contains a riparian habitat. This riparian habitat provides a sanctuary for a variety of birds and other wildlife through the developed areas of Marana and Tucson, and connects to other natural areas of the Sonoran Desert. Mitigating development impacts to the riparian habitat is an important consideration of the General Plan.



Source: <https://new.azwater.gov/tags/santa-cruz-river>

## Saguaro National Park (West)

Saguaro National Park (West), or Tucson Mountain District, is directly south of Marana and was added to the national monument in 1931. This national park contains varied terrain and habitats, at different elevations. Lower elevations support much of the typical Sonoran Desert wildlife, while the higher elevations contain black bear, deer, and owl habitats.

## Coronado National Forest

The Coronado National Forest is located east of Marana and contains approximately 1.8 million acres between southern Arizona and New Mexico. The forest contains 12 different mountain ranges, with elevations up to 10,000 feet above sea level. The closest mountain range to Marana is the Santa Catalina Mountain Range, which includes Mount Lemmon. The various elevations throughout the Coronado National Forest support a vast biodiversity of plant and animal species.

## Sonoran Desert National Monument

The Sonoran Desert National Monument is located roughly 50 miles northwest of Marana, and covers nearly 500,000 acres. This area is the most biologically diverse desert in North America, and is home to a multitude of different plant and animal species.

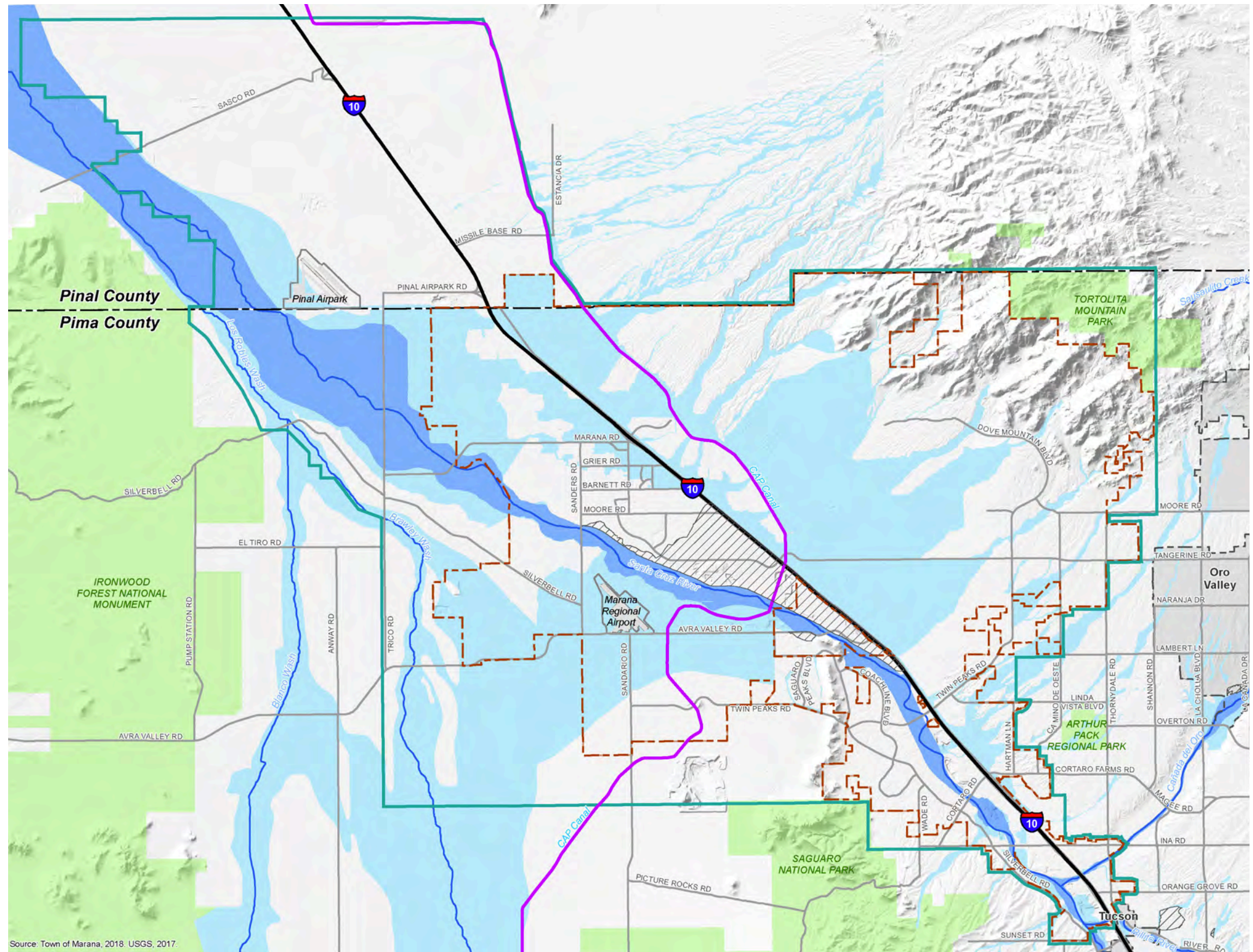
## Tonto National Forest

The Tonto National Forest is located approximately 50 miles north of Marana, and is the fifth largest national forest in the United States encompassing nearly three million acres. The vegetation ranges from cacti-filled desert to pine-forested mountains. The national forest was established in 1905, primarily to protect its watershed and reservoirs. This created an abundance of fish and wildlife habitats in the area, which is still supported and experienced today.



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Figure 15  
**Conservation and Floodplains**



- Legend**
- Floodway
  - 100 Year Flood Zones
  - Area with Reduced Flood Risk Due to Levee
  - CAP Canal
  - River or Wash
  - Regional Park
  - Marana Planning Area
  - Marana Town Limits
  - County Boundary
  - Other City/Town
  - Interstate
  - Major Road

**Matrix**  
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Map Revised: 2/18/2019

Source: Town of Marana, 2018. USGS, 2017.



# OPEN SPACE

In Marana, open space is categorized in two ways:

- **General:** Any area to be kept in open uses including recreational lands such as golf courses and parks, desert, floodways, floodplains, greenbelts, common areas, and other unbuilt, vegetated areas.
- **Natural Undisturbed Open Space (NUOS):** An area of land with natural vegetation that is unimproved and not occupied by structures or man-made impervious surfaces that is set aside, dedicated or reserved in perpetuity as a conservation area.

An expansive open space network provides environmental and economic benefits, as well as opportunities for active and passive recreation. The Town’s open space network includes the El Rio Preserve, the Santa Cruz River, and various parks throughout Marana. The Marana Heritage River Park is a 112 acre special purpose park intended to showcase and celebrate Marana’s rich agricultural heritage. Located along the Santa Cruz River, in southwestern Marana, it has access to the Juan Bautista de Anza National Historic Trail and the Santa Cruz Shared Use Path. This park represents Marana’s culture, heritage, and history; and serves as an economic development

asset for the Town. Marana also benefits from nearby regional parks and open space that fall outside the MPA, such as Saguaro National Park, Ironwood Forest National Monument, Tortolita Mountain Park, and Arthur Pack Regional Park.

It should be noted that while the vast majority of Marana’s MPA is undeveloped and has the appearance of open space, only lands preserved in perpetuity are classified as naturally undisturbed open space. Figure 16 shows the land areas in the MPA that are publicly owned and preserved in perpetuity. In addition, the majority of the land that lies east of Interstate 10, where new development should be sensitively integrated with the natural environment.

For more information on parks and recreation, see Chapter 3, People and Community.

### El Rio Preserve

El Rio Preserve is a 104-acre site located south of Avra Valley Road along the Santa Cruz River. The Preserve is one of several protected riparian habitats along the Lower Santa Cruz River that, collectively, provide a network of habitats and feeding area for the over 200 species of birds. This is also the location of the Puerto del Azotado trailhead and near the Llano del Azotado trailhead, which are both



El Rio Preserve; photo by Craig Thayer

part of the Juan Bautista de Anza National Historic Trail.

The Tucson Audubon Society has worked with Town of Marana staff and a number of volunteers to plant a pollinator garden near the parking lot of the Preserve. Pollinator species include species of butterflies, moths, bees, and bats that move from one flower to another, transferring pollen and aiding plant reproduction. Many pollinator species are declining in population due to habitat loss and fragmentation, pesticides, climate change, and invasive species.

The Preserve serves as a collecting basin for runoff from the Tucson Mountains and overflow from the Santa Cruz River. It further acts as a stormwater retention basin that protects nearby neighborhoods



Marana Heritage River Park

from flooding in the event of heavy rainfall. The Preserve is surrounded by a berm to help retain water, but the barrier was breached in 2014 and again in 2016. In 2018, the Town completed engineering and landscaping plans for improvements that will help protect against future flooding, reduce mosquito problems, reduce trash and invasive seed buildup during storm events, facilitate routine maintenance at the site, and provide outdoor classroom space for Marana schools. All features associated with the project will be compatible with the existing natural habitat and its role in the region’s open space network.

El Rio Preserve is also of cultural importance, as Juan Bautista de Anza camped there during his 1775 expedition along the Santa Cruz

River. Additionally, there is a large boulder in the preserve associated with the Los Morteros.

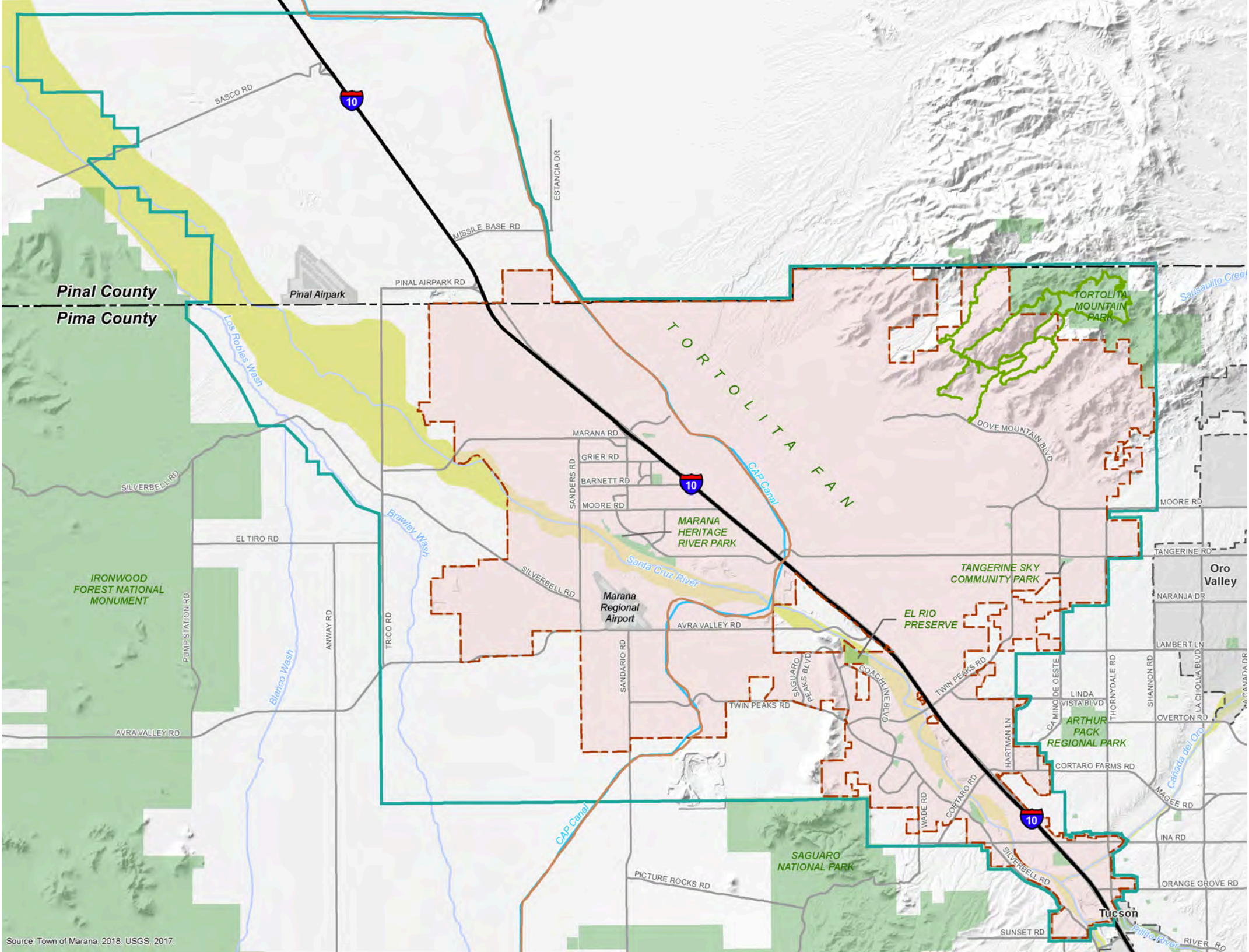
### Santa Cruz River

The Santa Cruz River runs from the southeast to the northwest through Marana. The northern portion of the Santa Cruz River has an extensive floodway area that has historically been used for farming. The river is watered by effluent in sections that run through the Town. A thick riparian habitat is present in portions of the Santa Cruz River that is home to a variety of birds species as well as raccoon and bobcat.



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Figure 16  
**Open Space**



- Legend**
- Tortolita Trails
  - CAP Trail
  - Designated Open Space
  - Floodway Open Space
  - Marana Planning Area
  - Marana Town Limits
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Map Revised: 2/18/2019

Source: Town of Marana, 2018; USGS, 2017.





*Tortolita Mountain Park; discovermarana.org*

## Regional Open Spaces

Tortolita Mountain Park is a regional park in the northeast corner of Marana's MPA with trails that take visitors past Hohokam rock carvings and other archaeological sites. It has been identified by both Pima and Pinal counties as offering potential trail corridors and opportunities to enhance connectivity between Marana and Oro Valley, and between the Central Arizona Project (CAP) Recreational Trail and Oracle Junction. It also provides opportunities to protect and enhance natural and cultural resources of value to the region at large.

There are also three large open space areas outside of the MPA that significantly enhance the Town's open space network. These areas are Saguaro National Park, Ironwood Forest National Park, and Picacho Peak State Park. The Saguaro National Park is divided into two districts geographically separated by the City of Tucson. Saguaro National Park (West), or the Tucson Mountain District, is located immediately south of Marana and is protected habitat for the largest cactus species in the country, the Saguaro. The park covers 39

square miles and is managed by the National Park Service (NPS). Saguaro National Park attracts nearly a million visitors each year, constituting an economic engine for the region.

Ironwood Forest National Monument is located west of the MPA and is managed by the Bureau of Land Management (BLM). The Monument covers 129,000 acres and is named after the Desert Ironwood tree, one of the longest living and most ecologically important trees in the Sonoran Desert. There are several mountain ranges within the national monument, including the Silver Bell, Waterman, and Sawtooth Mountain Ranges that provide habitat for two federally recognized endangered plant and animal species and the last remaining relict population of desert bighorn sheep in Arizona. There are also over 200 Hohokam and Paleo-Indian archaeological sites and a handful of old mines within the Monument boundaries.

Picacho Peak State Park covers 3,747 acres of land approximately 19 miles north of Marana. The park is known for the prominent 1,500 foot Picacho Peak and offers numerous hiking trails and campsites.



# WATER RESOURCES

Due to the arid environment of the southwest, the provision of water is especially important. One of the contributing factors for the Town leaders to seek incorporation in 1977 was to protect water rights for those living in the area. Marana Water relies solely on groundwater from wells for its potable water. The existing well fields used for the Town are primarily located in the Santa Cruz basin. Today, the primary water sources for the Town to replenish groundwater is water from the CAP and recycled effluent from wastewater treatment plants. Each of these supplies are stored underground in the Marana area in exchange for pumping credits which the Town can recover through groundwater recovery wells. The current well capacity for the service provider is 15,417 gallons per minute (gpm). The 2010 Potable Water System Master Plan identifies a projected 85,422 gpm well capacity requirement for the Town, once it reaches buildout. Assuming the existing wells maintain current production capacities, approximately 47 additional wells with a capacity of 1,500 gpm each will be required to meet anticipated water needs. The 2010 Potable Water Master Plan estimates that the cost to dig and equip a single well of appropriate capacity will be around \$900,000. The Potable Water Master Plan is scheduled to be revised in 2020.

In addition to the resources Marana controls, the Town also utilizes the Central Arizona Groundwater Replenishment District (CAGRDR). In 1993, the Arizona legislature created the CAGRDR to provide a way for developers and water providers to demonstrate an assured water supply and to help the state meet objectives stated in the 1980 Groundwater Management Act by replenishing pumped groundwater. The CAGRDR recharges groundwater supplies on behalf of its members in order to reach and maintain a “safe yield” in the region. Marana Water is a member of the CAGRDR. The CAGRDR is managed by the Central Arizona Project (CAP), which, in turn, is managed and operated by the Central Arizona Water Conservation District (CAWCD). The CAWCD was formed to repay the federal government for the cost of constructing, operating, and managing the CAP.

## Water Quality

Each year, Marana Water publishes a Consumer Confidence Report (CCR) for the Town’s water systems. These CCRs are required as part of the Safe Drinking Water Act (SDWA), which identifies maximum contaminant levels (MCLs) for health-related constituents. Marana Water fully complies with, and in some instances exceeds, the requirements laid out in the SDWA.



## Water Conservation

Because we live in the desert, water is a most precious resource. We must all do our part to use water wisely to ensure an adequate and safe supply for future generations. Among the many ways that Marana Water is working to conserve water are: the Marana Water Festival, run in coordination with Project WET, the Water Conservation Alliance of Southern Arizona, or WaterCASA, run in coordination with other local water providers, and Water Meter Monitors, a way for our customers to engage in their own water measurement and conservation goals.

### QUICK FACT:

Marana Water currently has rights to 2,336 acre feet per year of CAP water.



## Buildout System Demands

The Land Use Assumptions Public Report approved by the Marana Town Council on September 19, 2017 identifies buildout units specified in the specific plans and subdivisions known at the time of the report. Estimates for potential water demands are calculated in terms of equivalent dwelling units (EDUs) and will be used for long-term planning and financial analysis. One EDU represents the average water consumption of a single-family residence, or the nonresidential equivalency of a single-family residence. One acre of commercial development is equivalent to 4 EDUs. As growth occurs, the future water system must expand to serve newly developed areas within the planning area. The specific plans and subdivisions that supported the analysis and their estimates for EDUs are presented in Table 12.

Table 12. Future Water Demand

Specific Plans/ Subdivisions	Total Buildout EDUs
Barrios De Marana	430
Camino De Oeste	144
Cascada	3,551
Continental Ranch	0
Cortaro Crossing	68
Cypress Gardens (Ong)	165
Lazy K Bar Ranch	180
De Anza	265
Fianchetto Farms	114
Gladden Farms	1,994
Gladden Farms II	2,679
Marana 59	58
Linda Vista Village	797
Marana Main Street	112
Marana Mercantile	156
Rancho Marana (West) (Vanderbilt Farms)	2,796
Rancho Marana Town Center	396
Saguaro Bloom (Formerly Saguaro Springs)	2,509
San Lucas	880
Sanders Grove	2,326
Marana Spectrum	588
Tangerine Commerce Park	448
The Villages of Tortolita	7,870
Twin Peaks Estates	82
Twin Peaks Oasis	74
Twin Peaks Vista	58
Uptown At Marana	1,414
Willow Ridge Commercial	29
Willow Vista	69
Airport	0
<b>Total</b>	<b>30,252</b>

Source: Town of Marana





The Santa Cruz River flows through North Marana

**QUICK FACT:**

The Town of Marana is dedicated to being prepared and responsive to any natural hazards that may occur.

**Floodplain**

The desert environment of southwest Arizona contains arroyos, washes, and primarily dry rivers. These are often overwhelmed during storm events and summer monsoon rains, leading to flooding. The Town code regulates construction and development in three areas in response to the floodplain: Federal Emergency Management Agency (FEMA) floodplain, locally regulated floodplain, and erosion hazard setback areas. Any development in the areas subject to the floodplain code requires an engineering study and a floodplain use permit.

The region has a history of experiencing floods. In 1983, Tropical Storm Octave caused extreme amounts of rain to fall in southern Arizona and is considered the worst tropical cyclone in the history of the state. It is estimated that in a five-day span the area received 6.5-7.5 inches of rain, overflowing rivers and causing \$500 million in damage. Around 10,000 people were left temporarily homeless.

Figure 15, on page 4-3, shows the floodway of the Santa Cruz River and its associated 100-year flood zone. The floodway is the channel of the river that carries and discharges water. The 100-year flood zone is the area adjoining the river that has a one percent chance of flooding in any given year. The areas under 100-year flood zone spread out east of I-10, around Tangerine Road and Dove Mountain, and west of I-10 around Avra Valley Road and the Marana Regional Airport.

**FEMA Floodplain**

Areas classified by the Federal Emergency Management Agency (FEMA) as having an annual chance of flooding of 1 percent are classified as Special Flood Hazard Areas by FEMA. FEMA produces Flood Insurance Rate Maps (FIRMs) depicting these areas.

**Locally Regulated Floodplain**

Locally regulated floodplains are areas that do not meet FEMA's criteria for federal mapping. Locally regulated floodplains are also based on the principle of an annual chance of flooding of 1 percent.

**Erosion Hazard Setback Areas**

Due to the soil composition of the region, nearby drainage areas and washes can be experience channel migration, erosion, and avulsions. For this reason, the Town has applied an erosion hazard setback to all-natural channels. The setback is a horizontal distance measured from the primary channel bank of an incised channel or from the floodplain limit of a non-incised channel to provide a measure of safety against lateral erosion.

**Stormwater**

Stormwater is water from rain or snow and urban runoff from human activities that flows toward surface waters including washes and rivers. When this water flows it comes into contact with pollutants that are then transferred into nearby water bodies where it can pollute the potable water supply. Common pollutants contained in stormwater runoff include gasoline, motor oil, bleach and other household cleaners, pet waste, and fertilizers.

Marana is regulated under the Phase II of the Arizona Pollutant Discharge Elimination System (AZPDES). Through these regulations, Marana requires a permit for stormwater discharges that occur within the Town. Additional stormwater prevention and control measures under Phase II include:

- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Pollution prevention and good housekeeping
- Public education and outreach
- Public involvement and participation

Much of the concerns related to stormwater stem from human activities and development. Developed areas contain impervious surfaces such as roadways, driveways, parking lots, and other surfaces that slow or prevent water from absorbing into the ground increasing the amount of runoff that makes its way to washes and rivers. Chapter 17-16 of the Town Code addresses Marana's stormwater management efforts.



# ENERGY

Tucson Electric Power and Trico Electric Cooperative provide electricity to Marana. The sources of the power provided by these suppliers include coal, nuclear generators, natural gas, solar photovoltaic and hydroelectric power plants.

The Town is dedicated to energy efficiency and conservation. In 2017, the Town Council approved a resolution to review all options for the use of alternative energy throughout Marana. This resolution came in response to increasing costs of electricity and decreasing costs of solar energy systems. It is estimated that the Town currently spends \$1.1 million annually on electricity. Additionally, the Town Land Development Code highlights efficiency by emphasizing solar access and building designs and layouts with low energy demands.

The number of homes with solar panels in Marana is increasing each year. In 2018, it is estimated that 496 homes installed rooftop solar panels. This is an increase from 2016 and 2017 in which there were 408 and 335 homes that added solar panels, respectively.

Energy conservation is the process of reducing or eliminating demand for a limited energy source. This can be prioritized at the Town level through the implementation of programs, incentives, and improvements to existing

development patterns. Marana has adopted the International Energy Conservation Code (IECC) to promote energy conservation. The IECC is a model code that regulates minimum energy conservation requirements for new buildings. Conservation requirements in the code address heating and ventilation, lighting, water heating, and power usage of appliances in both commercial and residential construction.

## Alternative Energy Projects

With electricity costs increasing, alternative energy is becoming more attractive and profitable. The Town has been at the forefront of alternative energy development, particularly solar energy. Both the Marana Health Center and Marana Unified School District have installed solar shade structures over parking lots, generating energy from the sun and providing shade to parked cars.

In 2018, Marana completed solar energy projects at Ora Mae Harn District Park and at Crossroads at Silverbell District Park. The panels at Crossroads are 9,600 square feet and cover the two basketball courts at the park. It is estimated that the solar panels at Crossroads at Silverbell District Park will save the Town \$338,679 on power costs over the next 20 years. This is a 24.9% reduction in costs. Additionally, Town

staff report that the array at Ora Mae will provide enough energy to power the Community Center located at the park. Both of these projects are estimated to save taxpayers \$3 million on power costs over a 30-year period.

These solar shade structures are part of a power-purchase agreement the Town has made with SOLON in which the company pays for the installation costs of the solar panel arrays, and the Town pays a discounted rate for the energy it uses. Other solar projects within Marana include an array covering the parking lot at the Marana Municipal Complex, an array covering the parking lot at the Marana Municipal Operations Center off Ina Road, and numerous arrays at the Marana Wastewater Treatment Plant.

Additionally, Trico Electric Cooperative and Torch Clean Energy partnered to construct the Avion Community Solar facility, which is an 80-acre single-axis tracking solar photovoltaic array located along Avra Valley Road west of Sanders Road in west Marana. This facility includes 40,716 panels and will generate approximately 30,000 megawatt hours, enough to power 3,059 homes annually.



Photo: <https://www.trico.coop/staying-ahead-of-the-sun>

### QUICK FACT:

The average US household consumes approximately 10,400 kilowatthours (kWh) annually, compared to an average Arizona household that consumes approximately 12,400 kWh annually.



# LAND OWNERSHIP

Land in Marana’s Municipal Planning Area (MPA) is owned by a variety of entities. Owners include the federal government, state government, Pima County, Town of Marana, school districts, and private land owners. Over 50% of the land in Marana’s MPA is publicly owned, including through federal, state, and local agencies. The Bureau of Land Management, Bureau of Reclamation, and the Department of Defense all manage lands in Marana. The Arizona State Land Department manages the state land, while Pima County, Pinal County, and the Town of Marana itself have holdings. Approximately 48% of Marana’s MPA is privately owned. Much of this land is the property of by a few major land owners within the Town. Table X and Figure 17 show the breakdown of

land ownership in the MPA. Lands belonging to the three largest public land owners—the Arizona State Land Department, Pima County, and Federal government—are described in further detail below.

## Arizona State Land Department

The Arizona State Land Department (ASLD) owns over 43% of the land in Marana’s MPA.

The ASLD land includes areas in northeast Marana, areas outside Marana in Pinal County, and areas surrounding the Marana Regional Airport. The ASLD was created in 1915 when the Federal government granted public lands to Arizona with the formation of the state. The ASLD manages its land holdings

in trust, with the express purpose of maximizing revenues for 13 trust beneficiaries. The beneficiaries include public schools, correctional facilities, and other publicly funded entities. K–12 schools are the largest beneficiary, receiving close to 90% of the revenue from 87% of ASLD holdings. All uses of Arizona State Trust land must benefit the trust, which distinguishes ASLD land management practices from the way in which public lands are managed and used. While public use of Trust land is not prohibited, it is regulated to ensure protection of the land and compensation to the beneficiaries for its use. Importantly, State Trust parcels may eventually transfer to private interests through sale or lease for residential, commercial, employment development, agricultural uses, or for natural resource extraction. Therefore, for planning purposes, ASLD property should be viewed as developable property, in much the same way as private land.

## Pima County

Pima County owns approximately 5% of land in the MPA, largely for conservation purposes, flood control, and public facilities. The county-owned land includes Tortolita Mountain Park in the northeast portion of Marana’s MPA and large portions of the Santa Cruz River floodway. Additionally, Pima County owns and protects the property surrounding the Los Morteros Conservation Area, an important cultural resource for Marana and Southern Arizona.

## Federal

1.7% of land in Marana consists of federally-owned property, with the Bureau of Land Management and Bureau of Reclamation (BOR) managing the bulk of it. Even though federal land accounts for a small portion of the MPA, it has significant impacts on the Town with respects to open space and water resources.

The BLM manages public lands throughout the country for a variety of uses, including recreation, energy development, and livestock grazing. Over 99% of BLM holdings can be used recreationally with no fee. The BLM is also charged with preserving the natural and cultural resources that are present on the land that it maintains. The BLM manages a small portion of the Tortolita Mountains; outside of Marana’s MPA, the BLM manages a large portion of the Ironwood Forest National Monument.

The BOR is a federal agency that manages, develops, and protects water and water-related resources in 17 Western states. Unlike with BLM lands, the public must apply to use most of the land, facilities, and water bodies owned by BOR. It owns much of the land along the CAP Canal, which runs through Marana.

Table 13. Land Ownership

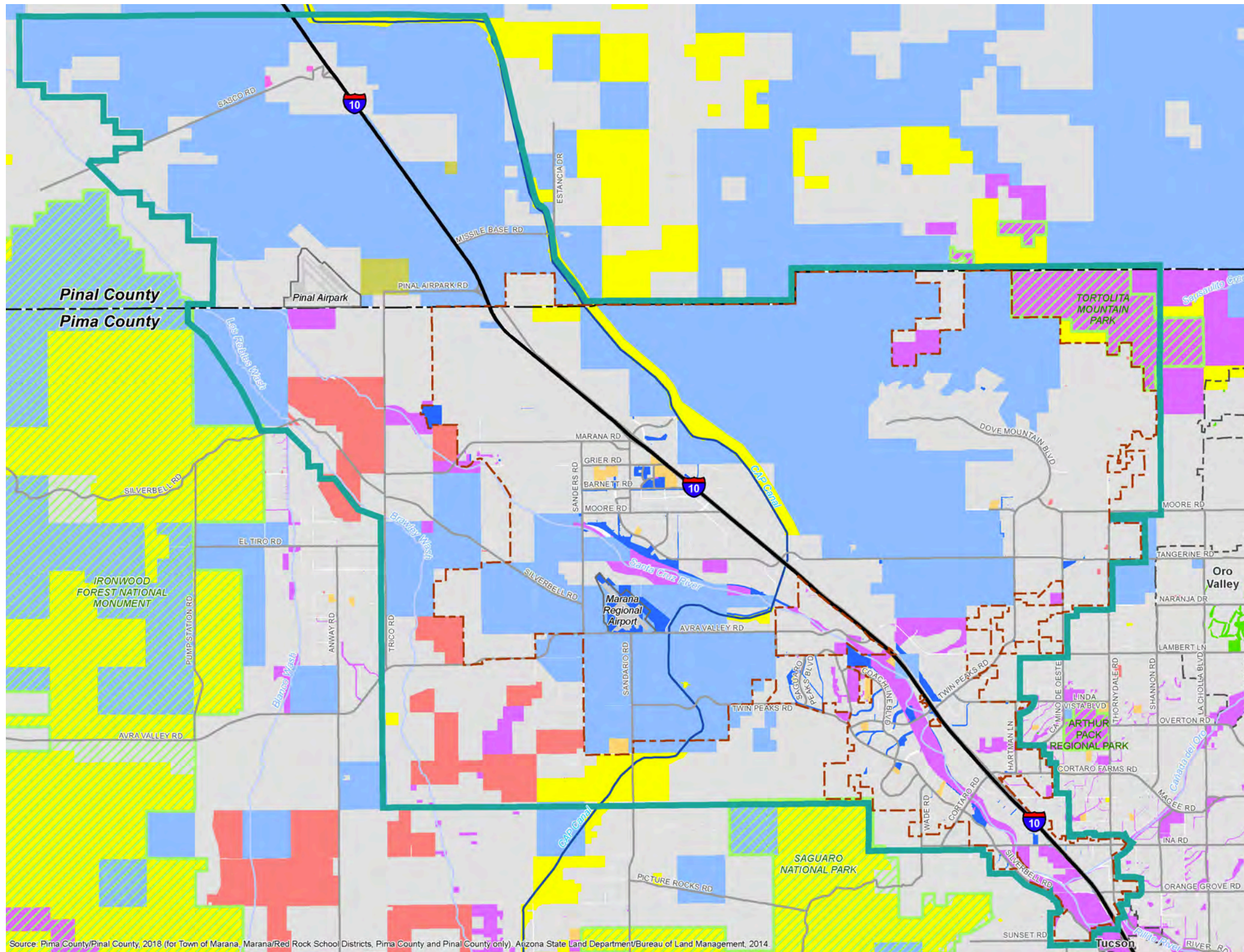
Owner Entity	Acres	Percentage of MPA
Private	69,778	48.3%
Arizona State Land Department	62,643	43.3%
Pima County	7,133	4.9%
Federal	2,438	1.7%
Town of Marana	1,615	1.1%
Pinal County	522	0.4%
Marana Unified School District	455	0.3%
Red Rock Elementary School District	25	< 0.1%
<b>Total</b>	<b>144,610</b>	

Source: Town of Marana

### QUICK FACT:

The single largest land owner in Marana is the Arizona State Land Department. Their holdings make up 43% of all land in the MPA.





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Figure 17  
Land Ownership

- Legend**
- Ownership**
- Federal
  - State of Arizona
  - Pima County
  - Pinal County
  - Marana Unified School District
  - Red Rock Elementary School District
  - Town of Marana
  - City of Tucson
  - Town of Oro Valley
  - Private
- Other Features**
- Marana Planning Area
  - Marana Town Limits
  - County Boundary
  - Other City/Town
  - Interstate
  - Major Road
  - CAP Canal
  - River or Wash
  - Regional Park

**Matrix**  
DESIGN GROUP

0 1/2 1 2 3 4 5 Miles

The Town of Marana provides this map information "As Is" at the request of the user with the understanding that it is not guaranteed to be accurate, correct or complete and conclusions drawn from such information are the responsibility of the user. In no event shall The Town of Marana become liable to users of these data, or any other party, for any loss or direct, indirect, special, incidental, or consequential damages, including but not limited to time, money, or goodwill, arising from the use or modification of the data.

Map Revised: 2/18/2019

Source: Pima County/Pinal County, 2018 (for Town of Marana, Marana/Red Rock School Districts, Pima County and Pinal County only), Arizona State Land Department/Bureau of Land Management, 2014.



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MAP  
ATLAS

For More  
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