Physical Infrastructure Connectivity

Physical Infrastructure Connectivity Goals and Policies

The Physical Infrastructure Connectivity element addresses every aspect of physical infrastructure including: transportation; airports and aviation; rail and freight; water resources, conservation, supply, demand and quality; wastewater; energy, including alternative energy sources; waste removal and recycling; brownfield clean up and redevelopment potential; communications; public facilities and grounds; arts and culture; trails; flood control/drainage; and county-wide infrastructure concurrency. This element provides goals and policies related to the efficient use of existing and planned infrastructure needed to support current and future populations. It does not include Economic Development goals and policies. These are included in the Economic Development element.

The Background and Current Conditions Volume (Appendix A) summarizes all of the background data and analysis supporting these goals and policies. Fiscal impact and viability are addressed in the Cost of Development element, Fiscal Impact Analysis Study (Appendix D) and in the Implementation volume (Appendix B). These documents are not provided at this stage. It is anticipated that the policies contained in this element will change as a result of the fiscal impact analysis.

This Comprehensive Plan introduces the concept of an Integrated Facilities Planning System (IFPS) that includes an Integrated Monitoring System based on Level of Service standards. The intent of the IFPS is to provide a more efficient and measurable planning process that allows for a comprehensive evaluation of infrastructure needs tied to the Capital Improvements Program (CIP).

5.1 Transportation Element

Goal 1: Provide a comprehensive and multi-modal transportation system that provides safe access and mobility for all users and goods, and all modes of travel including automobile, rail, air, transit, bicycle and pedestrians

Policy 1: Manage traffic congestion and demand through capacity improvements, land use decisions, transit service, and other comprehensive strategies.

Policy 2: Support transit service and programs, especially for those who are transit dependent, and where ridership meets minimum thresholds.

Policy 3: Support land use policies that support multi-modal transportation and transit-oriented development to improve mobility and reduce traffic congestion.

Policy 4: Manage roadway access points to improve safety and accessibility for all users.

Policy 5: Incorporate "complete streets" designs to improve access for all roadway users, including bicyclists and pedestrians.

Policy 6: Encourage bicycling and pedestrian safety through education, engineering, enforcement and evaluation.

Goal 2: Maintain and repair the condition of the county roadway system

Policy 1: Develop a sustainable program for roadway maintenance, resurfacing and improvements to improve major and local roadway conditions.

Policy 2: Support and seek alternative funding sources for roadway maintenance efforts.

Goal 3: Improve traffic safety and reduce accidents on County roadways

Policy 1: Prioritize roadway safety projects based on ongoing evaluation of crash statistics through the County's Safety Management System.

Policy 2: Support efforts to educate drivers on traffic safety.

Policy 3: Support legislative efforts to improve and fund traffic safety programs.

Policy 4: Support additional efforts to enforce traffic laws to improve traffic safety and reduce accidents.

Major Streets and Scenic Routes Recommended Updates

The Major Streets and Scenic Routes Plan designates "major" and "scenic" roadways and associated right-of-way widths. The Major Streets and Scenic Routes Plan is used to determine setbacks for new development along scenic roadways. Scenic roadways limit building heights close to road sides, road width and other design standards.

Goal 4: Provide a safe, convenient, functional and efficient transportation network hierarchy

Policy 1: Update and keep current Pima County's Major Streets and Scenic Routes Plan to establish a logical hierarchy of roads appropriately scaled to meet the mobility needs of the areas they are serving.

Goal 5: Integrate the Major Streets and Scenic Routes, the Loop and economic development strategies when making land use decisions

Policy 1: Reinstate a roadway classification system.

Policy 2: Update the Major Streets and Scenic Routes Planto ensure that future street widths and setbacks support a cohesive pedestrian and bicycle friendly environment.

Policy 3: Explore opportunities for incorporating transit, shuttle, and other transportation modes that provide solutions for regional mobility.

Regionally Significant Corridors

The Regionally Significant Corridor study completed by the Pima Association of Governments (PAG) includes recommendations for a transportation network to serve the 300-square mile Pima Association of Governments Region when it doubles from its current population of one million to two million. Overall goals of the study are to identify potential new state routes as well as potential candidate projects for inclusion in the next Pima County Regional Transportation Authority Plan.

A major focus of the study is on multi-modal corridors as solutions to regional mobility, including transit and bicycle mobility, and freight and goods movement (via trucks, rails, and air). The project involves developing design criteria for existing and proposed Regionally Significant Corridors.

Goal 6: Regionally Significant Corridors are the backbone of the regional transportation system

Policy 1: Focus infrastructure, economic development, and land use efforts along Regionally Significant Corridors.

Policy 2: Identify transportation corridors directly feeding into Regionally Significant Corridors as additional opportunities for economic development and community revitalization.

Policy 3: Identify areas along Regionally Significant Corridors that support the establishment of Regional Activity Centers.

Policy 4: Identify areas along transportation routes feeding into Regionally Significant Corridors that support the establishment of Community Activity Centers.

Policy 5: Identify areas for urban mixed-use along Regionally Significant Corridors.

Policy 6: Ensure that Regionally Significant Corridors include access to different transportation modes (bicycle, pedestrian, transit, other) where appropriate.

Policy 7: Ensure that Regionally Significant Corridors support existing and future employment centers.

Policy 8: Ensure that regionally significant corridors provide biologic connectivity.

Policy 9: Recognize the primary role of Interstate Highways 10 and 19 to provide for travel between cities.

Policy 10: Work with ADOT to identify and consider the addition of major roadways that already function like State Highways to the State Highway System.

Airports and Aviation

The Joint Planning Advisory Committee of the Pima Association of Governments, Maricopa Association of Governments, and Central Arizona Association of Governments, conducted a freight transportation study to identify freight commodities transported by truck, rail, and air; developed an inland port market assessment; and identified freight infrastructure improvements. This study was undertaken to develop strategies to diversify the economic base of the Sun Corridor.

The study examined 16 regional freight focus areas throughout the state and identify those that had the greatest opportunity for expansion and development. Of these 16 focus areas, four were selected for further analysis. One of those selected was the Tucson International Airport (TIA).

The TIA focus area identified important assets and opportunities for the freight industry and considered the proximity of the airport to the international border with Mexico and major infrastructure such as I-10 and I-19, as well as rail facilities.

The study described TIA as an import distribution center, favoring this location in the Sun Corridor for development that serves a vital purpose in global supply-chain logistics. TIA is uniquely positioned in Arizona to focus on accepting imports and redirecting them to precise markets. These logistical advantages of TIA favor continued expansion of basic employment around the airport.

Ryan Airfield is a general aviation airport located approximately 10 miles southwest of Tucson at the intersection of West Valencia Road and Ajo Way (State Route 86). Ryan occupies over 1,804 acres, and serves as a general aviation reliever airport for Tucson International Airport.

More than 300 aircraft are based at the field and 30 tenants ranging from aircraft maintenance shops to charters and flight instruction facilities, provide a variety of services. Ryan Airfield presents

an opportunity to become a job creator. In order to become a job center needed infrastructure must be in place.

Goal 7: Align transportation, land use, infrastructure, and economic development goals to support Tucson International Airport as a logistics center and Ryan Airfield as a job creator

Policy 1: Plan the Sonoran Corridor as a high-speed transportation facility connecting Interstate 19 (I-19) with Interstate 10 (I-10) in an integrated manner following land use directives.

Policy 2: Create the Sonoran Corridor as a fully-controlled access parkway that meets the criteria for a full access freeway by:

a) Requiring that access to the corridor is only allowed through interchange points;
b) The operating speed of the corridor is similar to existing freeway speeds in the urban area;
c) Maximize public infrastructure investments along the corridor;
d) Ensure that highway investments made to relocate Hughes Access Road are compatible with the Sonoran Corridor;
e) Propose that the Sonoran Corridor be designated as a state highway under the operational management and control of ADOT; and
f) Secure significant local funding for development and approval to be provided by local government agencies including Pima County.

Policy 3: Support Tucson International Airport Master Plan and the development of a second main runway.

Policy 4: Support the current and future missions of the 162nd Fighter Wing and the Arizona Air National Guard.

Policy 5: Work with the Tucson Airport Authority, ADOT, and others to provide in the infrastructure needed to best position Ryan Airfield as a sub-regional employer.

Rail, Freight and Shipping

The Port of Tucson's Container Export Rail Facility is one of only six rail projects selected to receive TIGER V grant funding from the US Department of Transportation. Implementation of the Container Export Rail Facility will make the Port of Tucson the only true inland port in the southwestern United States.

This new facility is a key component of the County's economic development strategy. It will enable our region's businesses to access Asian pacific seaports through the Ports of Los Angeles and Long Beach, as well as private facilities such as American President Line's Global Gateway South (GGS). As the region that includes the Tucson/Phoenix megapolitan area (Sun Corridor) and Sonora, Mexico continue to expand in population and jobs, this facility will provide global market access for

manufacturers and commodity exporters through highly efficient direct rail connection to the piers at the Ports of Los Angeles and Long Beach and GGS.

Goal 8: Support Port of Tucson as a key transportation and logistics center in southern Arizona

Policy 1: Support any rail enhancements, construction and extension needed for the successful operation of the Port.

Policy 2: Continue to participate in ADOTs process seeking intercity rail connectivity between Tucson, Phoenix and beyond.

Policy 3: Support efforts to extend rail access throughout the region.

5.2 Water Resources Element

Pima County 2011-2015 Action Plan for Water Sustainability

The City of Tucson and Pima County completed Phase 2 of a water/wastewater infrastructure study. Phase 2 establishes a framework for sustainable water resources planning through the implementation of 19 goals and 56 recommendations. Phase 1 was completed in February 2009 and consisted of an infrastructure inventory. With respect to drought, the Phase 2 report, completed in November 2009, recommends the City and County pursue adaptive, flexible, multi-pronged preparedness strategies, including diversification of water supplies and improved demand management, such as increased reliance on water harvesting.

Goal 1: Achieve water sustainability through comprehensive integrated planning that coordinates water supply, demand management and respect for the environment

Policy 1: Comply with all applicable goals and recommendations in the 2011-2015 Action Plan for Water Sustainability, approved by the Board of Supervisors.

Rezoning Proposals

Goal 2: Ensure all rezoning proposals meet all applicable water requirements

Policy 1: Require a Preliminary Integrated Water Management plan (PIWMP) for all rezoning requests requiring a site analysis.

Water Conservation and Protection

Goal 3: Promote the efficient use of all water supplies

Policy 1: Create a multiple choice water mitigation matrix to comprehensively address water conservation for proposed development.

Policy 2: Offset or mitigate the findings of the PWIMP in a site appropriate manner.

Water Quality

Goal 4: Effectively protect groundwater quality

Policy 1: New development proposals, including County projects, shall enhance water quality or provide appropriate mitigation to maintain existing water quality.

Policy 2: Continue to assess soil and groundwater quality in the vicinity of all County-owned sites of concern, including landfills, and promptly implement clean-up activities where soil or groundwater has been affected.

Policy 3: Continue to operate existing remediation systems and monitoring programs until all contamination has been fully cleaned up.

Policy 4: Implement new programs to protect groundwater quality for County facilities that have the potential to impact groundwater.

Policy 5: Encourage coordination among County departments that use or generate hazardous materials and waste to institute pollution prevention policies and practices.

Policy 6: Support practices that reduce the generation of waste that could impact groundwater quality and implement spill management plans.

Policy 7: Encourage land use decisions that maintain the function and quality of watercourses and areas designated in the Sonoran Desert Conservation Plan as riparian and aquatic habitat.

Policy 8: Further protect surface water from degradation through land use planning to limit the potential for unforeseen discharges and review emergency response plans for existing transportation corridors.

Policy 9: Continue to implement the Floodplain and Erosion Hazard Management Ordinance to manage and purchase lands in the regulatory floodplain areas to enhance overall watershed management.

Policy 10: Continue to implement the Watercourse and Riparian Habitat Protection and Mitigation Requirements Ordinance to protect endangered natural riparian areas.

Tradeoffs for Human Populations, Energy Production, Habitat and Economic Development

The development and implementation of renewable energy opportunities, efforts, and projects can present significant challenges in ecosystem and water management and ecosystem tradeoffs, such as the large amount of energy required to pump CAP water to our region.

Alternative clean energy sources may be utilized to operate pumps and supply water to agriculture and livestock. There is a direct correlation between the consumption of water and energy. Power plants, and in many instances, solar fields, require fresh water for cooling, some of which is lost in the process, and energy is required to pump, move and treat water.

Conserving energy through the use of water efficient solar energy systems conserve water that would have been lost during power generation, and conserving water helps reduce energy demands from pumping, moving and treating water. It is important to note that some solar energy technologies require large amounts of water for cooling and are therefore not recommended for a desert environment where water conservation is a priority.

Goal 5: Minimize tradeoffs for human populations, energy production, habitat and economic development

Policy 1: Balance energy, including alternative energy sources, production and economic development with available water and environmental resources.

Policy 2: Establish partnerships with the University of Arizona to study the impacts of clean energy production on human populations, habitat, water, and economic development and develop criteria for the development of environmentally-friendly alternative energy generation and deployment that minimize tradeoffs.

Policy 3: Align energy and utility corridors with existing infrastructure, where feasible and appropriate, while minimizing natural environment disturbance.

Goal 6: Ensure an adequate water supply for economic development

Policy 1: Work with water providers to allocate appropriate amounts of the regional water supply for economic development.

Policy 2: Emphasize water conservation and water efficiency when recruiting new businesses or expanding existing businesses.

Goal 7: Ensure the utilization of water-efficient solar energy systems

Policy 1: Coordinate alternative energy strategies with water conservation strategies.

Policy 2: Reduce energy demands for pumping, moving and treating water that utilize water-efficient solar energy systems to conserve water.

Policy 3: Require that all solar energy generating fields utilize solar technologies that minimize consumption of water.

5.3 Energy Element

Along with an excellent climate featuring year-round sunshine, an aggressive new pro-business package has made Arizona especially advantageous. The Renewable Energy Tax Incentive Program authorizes allocations of up to $70 million per year through 2019.

With more than 100 significant solar energy businesses already established in Arizona, building a robust industry that ranges from rooftop panel makers to major power generators, the state has become a preeminent location for the renewable energy industry.

In 2012 the Solar Energy Industries Association (SEIA) ranked Arizona #1 nationwide in solar employment per capita, with an estimated 316 solar companies and 9,800 jobs. Arizona accounts for approximately 8.2% of the nation's total employment in the solar industry and consistently ranks as a top state for photovoltaic energy generation.

Goal 1: Support the increased utilization of clean alternative energy systems

Policy 1: Promote the generation, transmission and use of a range of renewable energy sources such as solar, biofuels and wind power to meet current and future energy demands and decrease reliance on fossil fuels.

Policy 2: Encourage new development and redevelopment projects to generate their energy needs through on-site renewable sources to support the energy efficient methods and practices provided in the County Net Zero Energy Program Standard.

Policy 3: Continue to implement the Renewable Energy Incentive District (REID).

Policy 4: Promote and increase utilization of clean alternative/solar energy systems County-wide by:

a) Creating educational programs to promote clean alternative/solar energy systems;
b) Providing information on all existing incentives for establishing solar energy systems;
c) Providing design information on maximizing the use of solar energy systems and methods in new construction, remodels, and retrofits; and
d) Coordinating with local power utilities to increase alternative/solar energy use.

Policy 5: Encourage residential and nonresidential development to maximize the use of solar energy systems on individual sites and throughout the development.

Policy 6: Encourage the use of passive solar to reduce overall energy demand.

Policy 7: Mitigate urban heat island effect by reducing paved areas and increasing shade.

Policy 8: Encourage the replacement of traditional fossil fuel-fired equipment such as emergency generators and peak power-sharing generators with energy efficient systems.

Wind and Solar Power as Clean Energy Sources for Agriculture and Livestock

There are several different models for developing wind and solar energy on farms. Farmers can invest in a small wind turbine and solar panel tracking units for their own electricity needs, join with neighboring landowners for a cooperative wind and solar farm, or use land for a larger-scale wind & solar energy development.

Goal 2: Explore clean and efficient energy sources for agriculture and livestock

Policy 1: Conduct a County-wide study identifying suitability (appropriate technology for the appropriate location) and feasibility or cost benefit analysis for alternative energy sources to operate pumps and supply water to agriculture and livestock, and the appropriateness of such technologies for the different planning areas.

Energy to Support Economic Development

Receiving an annual average of 296 sunny days, the region was identified by the National Renewable Energy Laboratory (NREL) as one of the highest direct normal solar energy resources in the United States. Combined with the location of a major university, the establishment of the Arizona Research Institute for Solar Energy, the identification of the region as one of the best areas in the nation for solar energy production, and the draw for corporations to relocate here as a way to attract quality employees, Pima County is well positioned to offer opportunities to the emerging solar energy industry.

In 2010, the UA Solar Zone at The University of Arizona Tech Park (UA Tech Park) began construction of its first solar field. Today, the 200-acre parcel has become the centerpiece that could make the region the leading solar energy producers and innovators. The UA Solar Zone is currently the largest multi-technology solar generating facility in the world where different types of the latest solar technologies are being tested for energy, storage capacity and water efficiency. Energy production, distribution and storage in Solar Zone facilities is managed by Tucson Electric Power (TEP).

Goal 3: Encourage the utilization of energy and renewable energy systems as tools for economic development

Policy 1: Strengthen partnerships with utility companies, The University of Arizona and other jurisdictions to lead efforts in establishing energy and renewable energy system production and innovation in the region to meet the energy needs of new and emerging industry.

Other Forms of Clean Energy

In addition to solar and wind, the Arizona Corporation Commission's Renewable Energy Standards also encourage utility companies to use biomass, biogas, geothermal and other similar technologies to generate "clean" energy to power Arizona's future.

Pima County's Regional Wastewater Reclamation Department (RWRD) is embarking on using Biogas byproduct of wastewater treatment at Ina Road Wastewater Reclamation Facility (Ina Road WRF).

RWRD operates nine wastewater treatment plants throughout Pima County. To meet the wastewater solids disposal challenge, the County commissioned the development of a System-Wide Biosolids and Biogas Utilization Master Plan (Master Plan). The Master Plan, published in August 2012, considers current conditions of the County's wastewater treatment an solids handling facilities, and recommends the implementation of a number of projects. The Biogas Sale and Utilization Project is one of the capital improvements recommended in the Master Plan.

Goal 4: Encourage, promote and support biogas utilization

Policy 1: Implement the Biogas Utilization Master Plan recommendations.

Goal 5: Explore other new forms of energy as they emerge

Policy 1: Continue to work collaboratively with all potential partners to explore new clean, renewable and cost efficient forms of energy as they emerge.

5.4 Wastewater Treatment Element

The Pima County Regional Wastewater Reclamation Department (RWRD) provides design, management and maintenance of the sanitary sewer system including conveyance and treatment systems, for example the extension of sewer lines is the most significant public works infrastructure tool the County has to guide growth and development into suitable areas.

The Pima County Board of Supervisors and the City of Tucson Mayor and Council initiated a multi-year Water and Wastewater Infrastructure, Supply and Planning Study (WISP). The ultimate goal of this effort is to assure a sustainable community water source given continuing pressure on water supplies caused by population growth and the environment.

The WISP resulted in the 2011-2015 Action Plan for Water Sustainability. To achieve water sustainability goals, changes to the existing infrastructure must begin by improving the efficiency and flexibility of the existing built environment, including roads, parks, public services water, wastewater and stormwater systems. In addition to considering the location and form of development, the Action Plan integrates cross-departmental planning needs to consider the efficient allocation, distribution and use of all available water resources including stormwater, effluent, reclaimed and potable water.

In addition to the WISP, the Pima County Infrastructure Study identifies future wastewater improvements and deficiencies by Planning Area. The Background and Current Conditions Appendix of this Comprehensive Plan summarizes these improvements and deficiencies.

Goal 1: Efficiently manage and operate the County's wastewater system

Policy 1: Plan, manage, and operate the County's wastewater system for long term sustainability, reliability, and efficiency.

Policy 2: Explore innovative methodologies for reclaiming renewable resources.

Policy 3: Manage the County's wastewater service area, considering service area expansion when it furthers long-term social, economic, and environmental interests of the rate payers.

Policy 4: Collaborate on multi-jurisdictional and regional planning efforts.

5.5 Environmental: Air Quality, Solid Waste and Brownfields Element

Air Quality

Pima County Department of Environmental Quality (PDEQ) monitors ambient (outdoor) air pollutants throughout eastern Pima County. There are six criteria pollutants that are monitored in accordance with the National Ambient Air Quality Standards (NAAQS) set by the Environmental Protection Agency (EPA) to comply with the Federal Clean Air Act.

The EPA has initiated an evaluation of the current ozone standard to determine if it sufficiently protects public health and the environment. If the standard is changed in the future, Pima County may be in nonattainment. Were that to happen, the County would need to develop an air quality control plan to reduce emissions to return the area to compliance.

PDEQ issues air quality operating permits to facilities known as Stationary Sources which may be any building, structure or installation subject to regulation which emits or may emit air pollution. These facilities must comply with the conditions in their operating permits to limit air pollution. Other sources of air pollution include Fugitive Dust, Asbestos and Open Burning, which are also regulated by PDEQ.

Goal 1: Continue to monitor and reduce ambient (outdoor) air pollutants throughout eastern Pima County

Policy 1: Update and amend as needed County ordinances related to monitoring and reducing air pollutants.

Policy 2: Continue to enforce and monitor all applicable permits and standards to reduce air pollutants in Pima County including fugitive dust, asbestos and open burning.

Policy 3: Work collaboratively with the Pima County Health Department to identify strategies to reduce adverse health impacts related to air quality such as recent increases in Valley Fever and other respiratory diseases.

Policy 4: Encourage land use patterns and transportation alternatives (walk, bike, and ride) that support the reduction of automobile emissions.

Waste Removal, Recycling and Solid Waste

The City of Tucson maintains a curbside garbage and recycling collection program within city limits. The rest of the County is either served by private waste haulers or residents self-haul waste and recycling to approved disposal locations. There are several landfills, transfer stations, recycling centers, and waste haulers throughout the county allowing for environmentally appropriate disposal options.

As of June 1, 2013 Pima County entered into a contract with Tucson Recycling and Waste Services to operate the County's landfills and transfer stations. The county will continue to own the facilities.

Goal 2: Waste removal, recycling and solid waste are efficiently and safely managed to protect public and environmental health

Policy 1: Continue to identify safe and efficient strategies and promote educational programs for waste removal, reduction and recycling.

Policy 2: Ensure that hazardous and non-hazardous wastes are managed in an environmentally sound manner.

Policy 3: Encourage the recycling and recovery of waste materials through suitable incentives and efforts.

Policy 4: Provide remedial responses and/or provide oversight to the uncontrolled releases of hazardous and petroleum substances into the environment.

Policy 5: Continue to enforce the Waste Hauler Program which requires inspection of septic tank cleaners, liquid waste haulers and pumper trucks on an annual basis.

Policy 6: Continue to safely and efficiently implement the Waste Tire Program.

Policy 7: Continue to work collaboratively with all serve providers in the provision of solid waste and recycling services.

Policy 8: Consider revenue and/or amenity generating opportunities for the utilization of closed landfills for other appropriate land uses such as parks and open space.

Policy 9: Secure financial resources to comply with regulatory requirements in landfill closure activities.

Policy 10: Work with all jurisdictions in the region to establish and financially support a Regional Household Hazardous Waste program.

Brownfield Cleanup and Redevelopment Potential

The purpose of the Pima County Brownfields Program is to take advantage of available federal, state, and local resources to promote brownfields redevelopment activities. This is accomplished by analyzing the distribution, quantity, and conditions of brownfields sites in Pima County. This program encourages the reuse of abandoned, deteriorated, and underutilized properties into productive and viable land uses facilitating community and economic revitalization in targeted areas. The program fosters a broad economic and community development strategy for Pima County and is designed to complement existing and proposed redevelopment initiatives.

Goal 3: Take full economic advantage of the Pima County Brownfields Program to successfully redevelop brownfield target areas

Policy 1: Utilize and pursue available brownfields resources to facilitate and expand economic development opportunities specifically focusing on Pima County Community Development Target Areas and established Infill Incentive Districts.

Policy 2: Engage, educate and foster active and interested communities within Pima County to partner and pursue available brownfields resources.

Policy 3: Continue to work closely with other brownfields programs within Southern Arizona to develop a more regional approach to brownfields redevelopment.

5.6 Communications Element

Communication Networks

The Pima County Wireless Integrated Network Plan (PCWIN) is intended to provide guidance to all Project Stakeholders. The new Pima County Wireless Integrated Network (PCWIN) system will enable 30 fire and law enforcement agencies from Tucson to Ajo, from Sahuarita to Mount Lemmon, and from the Rincon Valley to Avra Valley, to talk to each other by radio in real time on a single system, regardless of their jurisdiction boundaries. This program includes the following Pima County departments:

- Sheriff's Department;
- Office of Emergency Management and Homeland Security;
- Facilities Management Department;
- Information Technology Department;
- Finance and Risk Management Department;
- Procurement Department;
- Department of Transportation;
- Regional Flood Control District;
- Regional Wastewater Reclamation Department;
- Capital Improvement Project Office; and

- Real Property.

Goal 1: Improve countywide response time for fire services, law enforcement, agencies, critical facilities and County departments through the Wireless Integrated Network and other emerging communication technologies

Policy 1: Continue to implement the Pima County Wireless Integrated Network Plan.

Policy 2: Explore opportunities to improve the Pima County Wireless Integrated Network.

Policy 3: Co-locate fiber optic lines with other utilities such as sewer conveyance lines.

New or Updated Facilities Corridors

Access to fast, efficient, affordable and reliable wireless communication is a primary need. It improves quality of life and increases access to health care and other vital services while reducing reliance on automobile use, particularly for seniors and for populations living in more remote areas of the County.

Goal 2: Provide fast, efficient, affordable and reliable access to countywide wireless communication and explore emerging communication technologies

Policy 1: Support the development of utility corridors and facilities that provide fast, efficient, affordable and reliable access to programs and services via wireless communication.

Policy 2: Explore opportunities to extend wireless communication services into rural and more remote areas of the County.

Policy 3: Explore the use of fiber and other emerging communication technologies.

5.7 Public Buildings and Facilities Element

This Comprehensive Plan introduces the concept of an Integrated Facilities Planning System (IFPS) that includes an Integrated Monitoring System based on Level of Service standards. The intent of the IFPS is to provide a more efficient and measurable planning process that allows for a comprehensive evaluation of infrastructure needs tied to the Capital Improvements Program (CIP).

Performance standards are adopted based on Level of Service (LOS) for roads, sewer, housing, open space, recreation, libraries, and any other services provided by the County. LOS are established by the different County departments based on current usage and projected needs following the policy direction provided in this element. These Level of Service standards will allow the County to determine facility and service expansions in a more predictable and efficient manner.

The use of the Integrated Facilities Planning System in coordination with the Capital Improvements Program (CIP) and other programs, as established by the County Board of Supervisors, will be the

key implementation components of this Comprehensive Plan. The IFPS will rely on multi-department collaboration to ensure efficiencies, minimize cost, and better serve the community.

Goal 1: Explore the possibility of establishing a County-wide Integrated Facilities Planning System

Policy 1: The Integrated Facilities Planning System will:

a) Integrate land use decisions with transportation systems, flood control, infrastructure, library system, parks and recreation, safety, and other County services and facilities planning;

b) Prioritize, schedules and identifies funding for ongoing maintenance of County public facilities and infrastructure;

c) Utilize the inter-departmental effort resulting in the Pima County Infrastructure Study as the framework to periodically assess the needs and deficiencies of each established planning area;

d) Establish a multi-department County-wide shared database minimizing duplication of efforts;

e) Minimize costs, maximizes resources and eases the process of grant writing and funding identification by working collaboratively;

f) Capitalize on the synergies of inter-departmental, inter-agency and inter-jurisdictional coordination to create a viable region;

g) Rely on private/public partnerships for the provision of services, where applicable;

h) Allow flexibility to accommodate fluctuations in consumer choices or market changes, providing a dynamic tool for Comprehensive Plan implementation;

i) Ensure the provision of high quality public facilities and services;

j) Expedite the development review process as an incentive to quality economic development;

k) Prioritize the preparation of implementation tools based on timing of land availability;

l) Monitor Comprehensive Plan progress on a systematic basis; and

m) Provide user friendly access to available public information.

Goal 2: Continue to support the Sustainable Action Plan for County Operations

Policy 1: Continue to take a systematic approach to integrating the goals of sustainability into all facets of the way Pima County government operates by incorporating:

a) Alternative fuel vehicles;
b) Green building;
c) Renewable energy and energy efficiency;
d) Green purchasing;
e) Land conservation and management;
f) Waste reduction; and
g) Water conservation and management.

Public Facilities and Healthy Communities

A strong sense of community has been associated with improved wellbeing, increased feelings of safety and security, participation in community affairs and civic responsibility. A variety of strategies can incorporate public facilities mission with healthy community principles. These may include incorporation of arts and culture, grouping of public facilities that provide compatible functions, the utilization of mixed use to create new government centers to meet public facility expansion needs, and the provisions of services to rural areas through existing or new multipurpose community centers.

Goal 3: Align County public facilities mission with healthy community principles

Policy 1: Encourage new County facilities and the expansion of older facilities to be built to:

a) Complement the scale, massing, character and identity of adjacent residential areas to create an authentic sense of place;
b) Incorporate courtyards, plazas, pocket parks, landscape amenities and public art to increase community interaction and create safety by design;
c) Group public facilities that provide complementary public services and have compatible functions to become a one-stop center;
d) Incorporate horizontal and vertical mixed-use when designing new or expanding existing facilities to provide support services and retail to meet the needs of the community;
e) Be located in areas accessible by multiple forms of transportation (walking, biking, and transit);
f) Integrate pedestrian oriented features and bicycle facilities (parking, showers, etc.) to discourage automobile dependence and support healthy lifestyles;
g) Provide opportunities for farmers markets, healthy foods and community gardens, multipurpose community events;

h) Provide flexibility in the design of facilities to accommodate changing needs (meeting spaces, art studio space, temporary work space for small businesses and ventures, job and skill training, health programs, etc.); and
i) Be consistent with the Maeveen Marie Behan Conservation Land System (CLS) as applicable.

Arts and Culture

The incorporation of public art and well-defined gathering places enhances the public realm, instills a sense of community pride, increases safety and revitalizes. Public facilities and public buildings can serve as canvases for portraying the local history and celebrating the County identity, character, heritage and sense of place. Murals, fountains, gathering plazas, promenades articulate the unique meaning, value, and character of the physical and social form of the community creating space for social intimacy, enhancing the community's character or sense of place, promoting health and enhancing well-being. A community's sense of place is not a static concept. It evolves and develops over time, reflecting the spectrum of social values within and around the community.

Public art serves two primary functions: it provides a tool for economic revitalization, and it creates community identity. Public art helps shape the quality of life for people in Pima County by offering a form of expression that embodies our community's spirit. It represents a sense of community pride and brings people together. Moreover, public art attracts people who bring a broad array of talents and expertise to this community, further enriching it. Over the past 24 years since the Board of Supervisors adopted the One Percent for Art Policy, the Board has rarely exempted a qualifying capital project from this requirement, further reflecting its commitment to public art in the community. A community is defined by those elements it holds most dearly. The Board of Supervisors One Percent for Public Art Policy reflects that commitment.

Art districts can be a successful tool for revitalization, redevelopment, economic development, and the establishment of healthy communities. They can be located in urban areas, in proximity to government services or in more remote communities such as the community of Ajo. Art districts help in making a community a destination.

Goal 4: Continue to support the provision and maintenance of County-wide public art

Policy 1: Continue to require all capital projects to contribute one percent for public art, including maintenance of public art.

Policy 2: Continue to support the Pima County Public Art Program and the Tucson Pima Arts Council (TPAC).

Policy 3: Continue to inventory, assess and maintain all County public art.

Policy 4: Ensure adequate funding is secured to a) support the ongoing maintenance of public art and b) support the existing arts programs.

5.8 Trails Element

The proposed regional trail system, as identified in the Pima Regional Trail System Master Plan (PRTSMP) is a blueprint for the development of a high quality, interconnected, multi-modal regional trail system in Eastern Pima County. The network will expand on the existing and planned river park system, and is intended to include natural tributary washes and upland segments, and road and utility rights-of-way that together will form an interconnected system linking urbanized areas with surrounding public preserves. Successful implementation of the Pima Regional Trail System Master Plan will require a collaborative effort between Pima County, local jurisdictions and land managing agencies.

Pima County is developing The Loop around metro Tucson with links to Marana, Oro Valley, Sahuarita, Green Valley and South Tucson. Pima County residents and visitors can enjoy the more than 100 miles of shared-use paths that have already been completed.

Pima County is responsible for the acquisition and management of land for parks, recreation and trail system. The Pima County Infrastructure Study identifies opportunities and deficiencies for each County Planning Area. These are summarized in the Background and Current Conditions Appendix of this Comprehensive Plan.

Goal 1: Continue to support the development of a high quality, integrated and multi-use countywide trail system

Policy 1: Continue to prioritize land acquisition to support the development of a high quality, integrated and multi-use countywide trail system.

Policy 2: Support and promote our natural resource-based trail system as a regional attraction promoting healthy lifestyles, economic development, and connectivity to a variety of destinations.

Policy 3: Implement the vision, goals and action plan identified in the Pima Regional Trail System Master Plan by:

a) Providing a trails network throughout the region;
b) Siting trails to ensure use does not conflict with natural and cultural resources;
c) Expanding the system to connect recreation lands;
d) Extending trails into urbanized areas where they are lacking;
e) Creating connectivity between homes, schools, jobs and commerce;
f) Increasing opportunities for interpretive experiences;
g) Following all applicable standards and design considerations for trails; singletrack trails; paths; river parks; greenways; enhanced bicycle/pedestrian corridors; trails parks; trail heads, entry nodes, boundary access points; crossings; signs; pedestrian districts; and pedestrian activity areas

h) Accommodating all users;
i) Co-locating trails with other community facilities; and
j) Including a Central Arizona Project (CAP) Loop Trail.

Policy 4: Require dedication of trails identified in the Pima Regional Trail System Master Plan as a condition for rezoning approval.

Policy 5: Separate trail corridors from wildlife corridors unless the trail corridor can be sited in a manner that poses no adverse impacts to native and migratory life.

Policy 6: Protect trail corridors that link individual public lands, connect public lands to existing or planned river parks, create local trail linkages to parks, schools and activity centers, or provide public access to established public lands trails.

Policy 7: Dedicate regulatory flood-prone areas, which are dedicated drainage easements to the Flood Control District and which have been identified as candidate trails to allow additional uses such as recreational and equestrian activities.

Policy 8: Promote vehicular access to trail heads at public preserve boundaries based on a determination by the Natural Resources, Parks and Recreation Department.

Policy 9: Dedicate public road rights-of-way and associated parking and multi-use trail staging areas as a condition of rezoning or specific plan approval in those cases where road access to public land trailheads is deemed critical by the Natural Resources, Parks and Recreation Department.

Policy 10: Ensure that the Residential Recreation Areas comply with the following:

a) Ensure that these areas are available for the use and enjoyment of subdivision residents;
b) Protect and enhance community health and quality of life;
c) Require that new recreation areas meet the minimum standards for safety and efficacy; and
d) Encourage residential multi-modal opportunities and ensure connectivity among parks, neighborhoods and commercial areas. (Parks and Recreation)

Trail System, Transportation Modes, Healthy Communities and Economic Development

The County recognizes the connection between physical activity and healthy bodies and minds. They contribute to healthy lifestyles, provide access and serve as alternate transportation modes. Trails provide connectivity from neighborhoods to diverse land uses, recreation areas and open space. They provide an opportunity to exercise, breathe clean air, and reduce mental stress. Trails also provide opportunities for residents and visitors to learn about the lush Sonoran desert. When appropriately branded, such trails attract visitors to the area and serve as economic development tools.

Goal 2: Integrate trail system, transportation modes, economic development and land use patterns with healthy community's principles

Policy 1: Support and promote The Loop as a regional attraction promoting healthy lifestyles, economic development and connectivity to a variety of destinations.

Policy 2: Support and promote our natural resource-based trail system (the trails in Pima Regional Trail System Master Plan, including the Arizona Trail, Anza Trail, and CAP Trail) as a regional attraction promoting healthy lifestyles, economic development, and connectivity to a variety of destinations.

Policy 3: Encourage the utilization of the urban trail system as an alternate transportation mode to decrease reliance on automobiles, reduce air pollution, increase overall health and serve economic development functions.

5.9 Flood Control/Drainage Element

The Pima County Regional Flood Control District strives to use forward-looking floodplain management practices to minimize flood and erosion damages for all county residents, property and infrastructure. Regionally, the District is involved in a variety of flood monitoring, flood control and natural resource management activities. It also performs floodplain management activities within unincorporated portions of Pima County. While the District is a regional authority, undertaking flood mitigation efforts throughout Pima County, it does not regulate floodplains within incorporated areas or on Tribal Nations.

Goal 1: Minimize flood and erosion damages for all County residents, property and infrastructure

Policy 1: Continue to monitor, control and manage natural resources to minimize flood and erosion damages by implementing the Floodplain Management Ordinance and addressing the impact of development on flooding, erosion and riparian habitat.

Policy 2: Enforce the Federal Emergency Management Agency (FEMA) approved Pima County Multi-Hazard Mitigation Plan.

Policy 3: Preserve washes with a base flood peak discharge equal to or greater than 100 cfs as well as existing riparian habitat in their natural condition.

Policy 4: Preserve habitat by using the Modified Development Standards or other strategies for transferring densities to areas of the property outside of habitat areas.

Policy 5: Administer flood control planning and design on an area-wide basis in conformance with the Watershed Management Plan/Critical and Balanced Basin Map.

Policy 6: Require that drainage improvements are consistent with the overall character of the area and do not create nor worsen existing drainage problems.

Policy 7: Design road crossings of washes to cross the floodplain with minor encroachment.

Policy 8: Comply with all applicable flood control, management and mitigation directives included in the Pima County Code.

Policy 9: Require private and public utility projects to conform to all applicable requirements related to the Pima County Regulated Riparian Habitat (PCRRH) and the Riparian Habitat Mitigation Plan (RHMP) requirements.

Storm Water Runoff

Pima County manages storm water to ensure public safety through three regulatory mechanisms:

- The Pima County Regional Flood Control District, through the Floodplain Management Ordinance, addresses the impact of development on flooding, erosion and riparian habitat.
- The Department of Environmental Quality administers programs to address storm water quality.
- The Pima County Building and Zoning codes contain provisions establishing minimum standards for site grading, site drainage and design.

Goal 2: Manage storm water to protect lives and property, to reduce flood risk and to assure no adverse impact to adjacent or downstream properties

Policy 1: Continue to require new development to comply with all applicable requirements of the Floodplain Management Ordinance addressing the impact of development on flooding, erosion and riparian habitat.

Policy 2: Continue to require all new development to comply with all applicable provisions establishing minimum standards for site grading, site drainage and design included in the Pima County Building and Zoning codes.

Drainage Integration

By weaving together watercourses, riparian and upland habitat, and recreation better urban development can be achieved. This includes increases in property value and services availability. New guidelines under development address water harvesting and habitat mitigation and offer further opportunity for integration, particularly for drought response. Both regulation and infrastructure programs offer these opportunities and will continue to be utilized.

Goal 3: Integrate watercourses, riparian and urban habitat, land use, recreation and drainage to achieve healthy development patterns

Policy 1: Work to resolve regulatory conflicts.

Policy 2: Continue to require development to conform to adopted provisions that integrate watercourse, riparian and urban habitat, land use, recreation and drainage.

Policy 3: Encourage the incorporation of green streets standards that integrate watercourse, riparian and urban habitat, recreation, alternate modes of transportation, shade and landscape amenities, drought tolerant plants and drainage as a form of water harvesting in new development where applicable.

Policy 4: Consider, where appropriate, the use of Low Impact Development (LID) principles in suburban scale development.

5.10 Countywide Infrastructure Concurrency Element

The Pima County Concurrency Management System provides the basis for monitoring infrastructure impacts of land development and helps determine if infrastructure improvements are keeping pace with the prevailing rate of land development.

Goal 1: Establish a formal Concurrency Management System

Policy 1: Update the established Concurrency Management System to:

a) Establish Level of Service Standards (LOS) for infrastructure and services owned and operated by the County;
b) Serve as a tool for infrastructure capacity monitoring and upgrades;
c) Inform the Integrated Facilities Planning System and the Capital Improvements Program; and
d) Guide development to areas with in-place or planned infrastructure.

Policy 2: Ensure that the Concurrency Management System review for rezonings (including requests for waiver of the platting requirements of zoning plans), specific plan and requests for time extensions or modification for existing rezoning and specific plans includes:

a) Wastewater treatment and conveyance/reclamation facility capacity;
b) Flood control infrastructure and drainage capacity;
c) Water supply infrastructure and capacity;
d) Transportation infrastructure and capacity;
e) Park and recreation infrastructure service delivery capacity (to include multi-use trail system);
f) School capacity impact analysis;
g) Cost of development;

Policy 3: Require infrastructure improvements to be provided concurrently with development.