



PIMA COUNTY COMPREHENSIVE PLAN UPDATE



Regional Plan Policies

Adopted by the
Pima County Board of Supervisors
December 2001

Development Services Department
Planning Division
201 North Stone Avenue
Tucson, Arizona 85701-1317
(520) 740-6800

As Amended
June 2012

This document, ***Regional Plan Policies***, is one of three working documents of the Pima County Comprehensive Plan; see also ***Land Use Intensity Legend*** and ***Rezoning and Special Area Plan Policies***. The complete Comprehensive Plan is available in the office of the Planning Division, Pima County Development Services Department.

**2001 Pima County Comprehensive Plan Update
Regional Plan Policies
As Amended June 2012**

Contents

1. Land Use Element Regional Plan Policies	1
A. Administration	1
B. Cultural Heritage	4
C. Site Design and Housing	15
D. Public Services and Facilities	16
2. Circulation Element Regional Plan Policies	22
3. Water Resources Element Regional Plan Policies	24
4. Open Space Element Regional Plan Policies	32
5. Growth Area Element Regional Plan Policies	33
6. Environmental Element Regional Plan Policies	34
A. Water Quality	34
B. Natural Resources	35
7. Cost of Development Element Regional Plan Policies	46
8. Military Airport Regional Plan Policies	48
A. Findings of the Board of Supervisors	48
B. Pima County Policies	48
C. Joint Land Use Study Implementation Program Plan Introduction	49
D. Joint Land Use Study Implementation Strategy Policies	50

2001 Pima County Comprehensive Plan Update Regional Plan Policies

1. LAND USE ELEMENT REGIONAL PLAN POLICIES

A. Administration

1. Map Interpretation Policies

- a. Comprehensive Plan maps are created using Geographic Information Systems (GIS) digital information from a variety of sources. Based on best available data and practices, digital files and hard-copy maps may contain errors of accuracy, completeness, or timeliness. Precision may change over time as new technologies and sources of data are implemented. Maps are for general reference and are not intended for project level planning. Consult with staff to confirm Land Use Intensity categories and other considerations for specific areas. Revised hard-copy maps will be produced several times a year or periodically.
- b. As annual amendments and other changes to Comprehensive Plan maps are approved, the official electronic version of Comprehensive Plan map layers on the Pima County GIS data server will be updated. Archival electronic versions of these map layers will be created, at minimum once a year, at the end of each yearly amendment cycle.
- c. The following policies apply to the interpretation and amendment of planned land use category boundaries which are based on hydrologic features.
 - 1) The use of a wash centerline as a map boundary is for cartographic purposes, washes shall be considered as whole entities in the rezoning process, in accordance with applicable County regulations and procedures. The centerline of the wash, as it existed on the date a rezoning or similar action is approved by the board, shall be the land use category boundary.
 - 2) Where a natural wash is shown as a polygon, precise location of its boundaries, as determined by detailed studies accepted by the county, shall be the land use category boundaries.
 - 3) Where a Resource Conservation [or “Resource Transition” per Regional Plan Policy 1(A)(4)(d)] map boundary is based upon approved floodplain limits, amendment to such boundary which redefines the mapped floodplain may be requested following a FEMA Letter of Map Revision application or other detailed hydrologic study accepted by the county, and shall be processed as a Minor Revision to the comprehensive plan with public hearing.

2. State Conceptual Land Use Plan Coordination

Growing Smarter Plus statute requires the State Land Department to work with the Pima County Planning and Zoning Commission regarding integrating the State’s conceptual land use plan into Pima County’s Comprehensive Plan. The intent is a

cooperative integration of the State land use plan into Pima County's Comprehensive Plan.

3. Measuring Land Consumption

Create a basic unit of measurement that defines and tracks urbanized area land consumption as it relates to population growth. The purpose of this policy is to keep attuned to land consumption and measure the impacts of conventional low density development and compact form development.

4. Land Use Intensity Legend

- a. Promote a compact form of development; restrict residential rezonings in MHIU, HIU, CAC, MFC or REAC to not be less than half of the maximum gross density or less than twelve residences per acre. Residential rezonings in the MIU and NAC designations to be not less than five residences per acre.
- b. Continue the review of the Land Use Intensity Legend to look for opportunities to promote a compact form of development and mixed use planning in designated growth areas wherever is practicable.
- c. Land Use Intensity Legend Modification to redesignate Resource Productive and adding Resource Extraction. The land use legend shall be modified to indicate on the Comprehensive Plan Land Use Map that mining lands shall be designated as Resource Extractive and ranching and agricultural lands shall be designated as Resource Productive. Resource Productive shall refer to land designated as agricultural and ranching lands. These lands shall be protected for their productive capabilities and from encroachment by incompatible uses. Resource Extraction shall refer to mining lands. These lands shall be protected for their extractive capabilities and from encroachment by incompatible uses. Chapter 18.89 Comprehensive Plan Chapter of the Pima County Zoning Code shall be amended to reflect the direction of the above designations.
- d. Land Use Intensity Modification: Re-designate Resource Conservation to Resource Transition

Resource Transition and Resource Conservation

The land use legend shall be modified to indicate private land exhibited as Resource Conservation on the Comprehensive Land Use Map shall be converted to Resource Transition.

The Resource Transition designation shall refer to private land with environmentally sensitive characteristics that include wildlife corridors, natural washes, floodplains, peaks and ridges, buffers to public preserves, and other environmentally sensitive areas. Development of such land shall emphasize design that blends with the natural landscape and supports environmentally sensitive linkages in developing areas.

The Resource Conservation designation shall refer to public land that protects existing public open space land necessary to achieve objectives regarding environmental quality, public safety, open space, recreation and cultural

heritage and to promote an interconnected, regional open space network, including parks, trails, desert belts, and other open space area.

5. Plan Amendment Policies

- a. Major Plan Amendment: A request to amend the Pima County Comprehensive Plan consisting of 500 or more acres shall be classified as a major plan amendment. A major plan amendment requires a two-thirds vote of the Board of Supervisors for adoption.
- b. Special Area Policies: Special conditions approved during the annual plan amendment process to be considered for a property as part of the rezoning hearing process shall be delineated in a rezoning policy resolution. Rezoning policy resolutions shall be kept on file at the Development Services Department. The rezoning policy resolution shall be submitted along with the rezoning application for the subject property.
- c. Special areas for regional subareas or large sections of a subarea shall be displayed on the Comprehensive Plan map with a notation indicating guidelines for rezoning or specific plan requests for which unique land use characteristics are considered.
- d. Annual Plan Amendment Review Criteria: An annual plan amendment review program is provided in Section 18.89.040. The annual plan amendment program provides an opportunity to address oversights, inconsistencies or land use related inequities in the plan or to acknowledge significant changes in a particular area since the adoption of the plan or plan update. Furthermore, the plan amendment program allows for an opportunity to review implementation of the growth area element and suitability for development proposals that support multimodal transportation, rational infrastructure expansion and improvements, mixed use planning, and conserve significant natural resources in the growth area.

6. Site Analysis Policy

Petitioners for rezoning of any parcel greater than one acre in size to be developed at a residential density of four or more residences per acre; or greater than one acre in size to be developed for non-residential uses; or greater than five acres in size shall submit a Site Analysis prepared in accordance with the Pima County Site Analysis Requirements, as referenced in Section 18.91.030F of the Pima County Zoning Code.

7. Transfer of Development Rights (TDR's)

Pima County shall develop and implement a Transfer of Development Rights (TDR's) program in accordance with A.R.S.§11-821.03. TDR's can reduce the intensity and density of use in areas identified as significant for conservation, biological or cultural resources, sensitive areas in proximity to military airports, or on undeveloped golf courses, by creating incentives for property owners to transfer their development rights in the sensitive (sending) areas to designated "receiving areas" elsewhere. The transfer of development rights is similar to the purchase of development rights, except rather than a public agency buying development rights, which are then in effect "retired", the landowner is compensated for the value of the transferred development rights by property owners wishing to develop in the

receiving areas; developments using TDR's may then develop at densities or intensities greater than otherwise permitted under the existing zoning, though conditions on development may be imposed. Participation in TDR programs shall be voluntary on the part of the landowners(s).

In addition to preserving sensitive lands within sending areas, a TDR program can also provide benefits in the receiving areas. In rural areas, the program can provide incentives for property owners to go through the subdivision process and to provide open space, while in more urban areas, the program can encourage more appropriate urban development.

B. Cultural Heritage

Cultural heritage is a broad concept that encompasses items created by people, aspects of the natural world, and different human cultures. In a nutshell, cultural heritage is about the relationship between places and people.

An important component of cultural heritage is cultural resources, which are things and places that have significance to people. Cultural resources include: archaeological sites, historic buildings, rock art, shrines, trails, human made items (such as pottery, metal objects, projectile points, and grinding stones), traditional cultural places, and traditional cultural landscapes. Traditional cultural places and traditional cultural landscapes are places and areas that have significant meaning to one or more cultural group, and often incorporate significant aspects of both the natural and human made worlds. For example, a traditional cultural landscape may include a mountain that contains archaeological sites, human burials, herb gathering places, and other important cultural resources. Human burials are a special type of cultural resource, which are usually, but certainly not always, found in archaeological sites or graveyards.

Cultural heritage also encompasses our cultures. Each individual belongs to at least one cultural group. Many people identify with more than one culture, but may regard one as their primary identity. Cultural groups may perceive the world in varied ways, and many of them have direct connections with various cultural resources in Pima County. Many cultural groups reside within Pima County, including the Tohono O'odham, Yaqui, Hispanic, Anglo, and Asian communities, and all have connections with cultural resources located here. Even cultural groups that reside outside Pima County, such as the Apache, Hopi, and Zuni, have ties to some cultural resources in Pima County. One cultural distinction that is often missed when discussing cultural heritage is the difference between the urban and rural cultures and lifestyles. The way people interact with the natural landscape delineates what is culturally important to them. In many ways, it is the connections that cultures have with cultural resources that help define who they are as a group. This sense of place is integral to cultural identity and cultural heritage.

Comprehensive planning in Pima County is a means of envisioning our future. Planning for growth and development is an iterative process. *Responsible growth and development includes stewardship of the unique cultural resources in Pima County, enhancing the quality of community life through the affirmation of cultural diversity and cultural heritage values, and promoting cost effective strategies that balance the needs of development with the needs of preservation and conservation of Pima County's cultural heritage.* In this regard, this plan for cultural heritage is intimately tied to the principles and policies of the Sonoran Desert Conservation Plan.

Cultural heritage planning has four primary goals: conservation, protection, public education, and preservation of the historic fabric, each of which is elaborated below. These four goals and related policies promote and enhance the stewardship of Cultural Heritage within Pima County. These cultural resources policies pertain to the designation, conservation, and treatment of cultural resources including archaeological and historical sites and buildings, districts, and landmarks that are identified as places of exceptional importance to the Pima County community. With rapid growth and development, these important places and properties may be affected by County public improvement projects, as well as proposed private sector development involving rezonings, specific plans, Comprehensive Plan amendments, and grading and other land use permits, all of which require additional policies to address in-place conservation, or alternatively, mitigation of impacts through documentation and research.

1. Conservation of Cultural Resources

Because of the multiple benefits of cultural resources protection and the importance of cultural resources in heritage conservation, effective land use planning requires the identification of significant cultural resources and the development of incentives to encourage the conservation and in-place preservation and protection of these non-renewable and irreplaceable cultural resources.

- a. Pima County Priority Cultural Resources: Adopt a list of Pima County Priority Cultural Resources that will serve to identify those cultural resources and historic properties as places of extraordinary importance to the county's culture and history, priorities that should be conserved and protected in-place for the benefit of future generations.

Creating a List of Priority Cultural Resources enhances planning capabilities by enabling the county to identify those currently known places that are exceptionally important to the heritage of Pima County regardless of current jurisdiction. Designation as a priority cultural resource will help to ensure the consideration and protection of these places in land use planning decisions by Pima County and others. The List is thus a planning tool that can be used to guide both the county's own public works projects, as well as private development in order to enhance the protection of these priority cultural resources should they become threatened. Identification of properties for inclusion on this List was conducted under the oversight and direction of the Sonoran Desert Conservation Plan Cultural and Historical Resources Technical Advisory Team and 20 experts in historic preservation and archaeology. The results are two sets of places, one consisting of 91 archaeological sites and site complexes, and the other consisting of 138 historic sites and structures (See attachments). While other sites may qualify in the future for designation, these 229 known historic and archaeological sites are presented as Pima County's List of Priority Cultural Resources.

- b. Pima County Register of Historic Places: The list of Priority Cultural Resources will provide the basis for the establishment of a Pima County Register of Historic Places for designation under the Historic Zone Overlay Ordinance Code Section 18.63 for unincorporated Pima County.

The Pima County Register of Historic Places will be additionally useful in identifying those cultural resources that are most deserving of listing on local, state, and national registers of historic places and that honor places of importance to our common heritage. Most importantly, however, a Pima County Register of Historic Places will give formal acknowledgment to those places determined to be special to the history and culture of its citizens and will provide a level of local recognition that they do not currently receive. Registration acknowledges the exceptional importance of each of these historic properties and places and gives formal sanction through historic designation to their conservation and protection. Historic sites, buildings, objects, and districts subject shall be considered eligible for inclusion in the Pima County Register that:

- 1) Reflect significance in Pima County history, architecture, archaeology, engineering, or culture; and
 - 2) Possess integrity of location, design, setting, materials, workmanship, feeling, and association; and
 - 3) Are associated with events that have made a significant contribution to the broad patterns of our history; or
 - 4) Are associated with the lives of persons significant in our past; or
 - 5) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant or distinguishable entity whose components may lack individual distinction; or
 - 6) Have yielded or may be likely to yield information important in prehistory or history.
- c. Historic Zone Code Section 18.63: Pima County has had a long-term commitment to the protection of cultural resources; however, the current Historic Zone Ordinance passed in 1972 is in need of revision. To better address the diversity of cultural resources within the County, the following categories of cultural resources should be addressed by the broadened ordinance. The following sites, buildings, districts, objects, and features located in unincorporated Pima County are governed by this policy and form the basis for the Pima County Register of Historic Places:

Historic Site - the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure.

Historic District - a geographically defined area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development.

Historic Landmark - a site, building, structure, object, or space of the highest historic, cultural, architectural, or archaeological importance to Pima County, which if demolished or significantly altered or disturbed would constitute an irreplaceable loss to the quality and character of Pima County.

Conservation District - a geographically definable area that possesses architectural character, visual patterns, archaeological potential, cultural significance, scenic, historic, land use or natural features which are representative of and contribute to Pima County's local or regional identity.

- d. Cultural Resources Inventory of Pima County preserves: As Pima County continues to increase its areas of preserves, it is imperative that cultural resources inventories of these areas be completed so that Pima County can better manage and protect its cultural resources and integrate these resources into public heritage education programs.
- e. Encourage Intergovernmental Cooperation in Cultural Resources Management: Cultural resources in Pima County often cross-cut jurisdictions and involve multiple property owners. As such, effective protection for, and management of, Pima County's cultural resources requires the cooperation of other governments and agencies. To coordinate management goals and strategies, an advisory board consisting of professional in the fields of archaeology, architecture, and historic preservation should be formed consisting of representatives of each government and agency with responsibilities for protecting cultural resources in Pima County. Such a precedent exists in the both Tucson Pima County Historical Commission and in the Cultural and Historic Resources Technical Advisory Team formed for the Sonoran Desert Conservation Plan. Pima County seeks to become a member of the Certified Local Government program administered through the National Park Service, and this too will enhance the county's capabilities to share information with other preservation organizations on the state and national level.

2. Protections for Cultural Resources

When impacts to important cultural resources cannot be avoided, historic preservation is about saving significant cultural resources for the future by means of legally prescribed mitigation strategies that require recovery of information before the resource is adversely impacted by private or public actions. What gets preserved is often not the resource itself but the historical and cultural information that is derived from the resource.

- a. Cultural Resources Protection Ordinance: Adopt a comprehensive Cultural Resources Protection Ordinance that will consolidate the County's land use and development policies and regulations pertaining to cultural resources protections to clarify and strengthen existing cultural resources protections and to ensure that cultural resources goals are effectively achieved.

Pima County has an established and long-term commitment to protect its cultural resources. In 1983 the Board of Supervisors passed a resolution providing protection for archaeological and historic sites on County projects. Various existing ordinances and policies also require the consideration and protection of cultural resources on most projects permitted by the County. Cultural resources tend to be managed within a legal and regulatory environment, largely due to the linkage between the cultural resources and property. At present, several different sections of various County ordinances delineate cultural resources management requirements for specific publicly permitted and funded developments. For example:

- Board Resolution 1983-104 requires County public works projects to comply with state law as it pertains to the identification, assessment, and mitigation of impacts to archaeological and historical sites.
 - Actions under Chapter 18.81 (grading standards) require that all private development projects subject to a Development Plan or a Subdivision Plat must get a Type 2 grading permit. To receive a Type 2 grading permit, a private landowner or developer must comply with the County's cultural resources inventory and mitigation requirements as a condition of permitting.
 - Actions under Chapter 18.91 (rezoning) are subject to the same cultural resources requirements whenever a Site Analysis is prepared. These requirements must be met before construction begins.
 - In addition, Pima County attaches cultural resources requirements to Specific Plan review approvals, and has developed Standards and Special Requirements for Archaeological Sites and Historic Resources that apply as conditions to most rezoning and development actions.
- b. Maintain Current Cultural Resources Protections: Land use planning decisions currently require the consideration of potential impacts to cultural resources. For example, as part of the site analysis process, a records check of potential archaeological and historical sites is required as part of the rezoning process. Any sites found as a result of the records check or field survey are evaluated for their eligibility to the National Register of Historic Places by a professional archaeologist and/or architectural historian, as appropriate. To the extent possible, avoidance of impacts to these significant sites is the preferred treatment. An inventory summary and historic preservation plan are further required in the site analysis.

The present process for cultural resources compliance consists of five review steps: 1) records check; 2) survey or inventory; 3) evaluation; 4) impact assessment; and 5) mitigation.

- 1) Records Check - This action determines whether a cultural resource survey has been previously conducted on the property and whether there are any known cultural resources. A records check provides an inventory of known archaeological and historical sites and a summary of records maintained at the Arizona State Museum.
- 2) Site Survey - Parcels that have not been inventoried shall be field surveyed by a professional archaeologist, and any sites encountered shall be recorded in accordance with guidelines established by the Arizona State Museum and the State Historic Preservation Office. If no cultural resources are found, the process ends here. If cultural resources are found, they are recorded with the Arizona State Museum and the project goes to Step 3.
- 3) Evaluation - Evaluation consists of determining the significance or eligibility of the recorded cultural resources for listing on the National Register of Historic Places. An opinion of the State Historic Preservation Officer (SHPO) is requested regarding this eligibility determination. If the cultural resources are determined not to be significant, the process usually ends at this point. If the resources are significant the project moves to Step 4.
- 4) Impact Assessment - Following eligibility review by the State Historic Preservation Office, County staff working with the applicant determine the protective measures that must be taken. If the project can be designed with stipulations to protect the cultural resources in place, the process usually ends here. If cultural resources will be impacted, then a plan to mitigate this impact (Step 5) must be prepared and submitted for County staff and SHPO review and approval.
- 5) Mitigation - Mitigation can include: covenant, deed, or easement restrictions to protect cultural resources; an archaeological excavation, analysis, report and artifact curation; or rehabilitation and adaptive use of historic buildings. Once mitigation is complete, the cultural resources requirements have been met and the process ends.

Very often, the kind of cultural resources found within development areas are archaeological sites. Typically, mitigation involves the preparation of a comprehensive research design and mitigation plan. The research design shall delineate productive areas of scientific investigation that may be pursued given the information the sites can yield and provide direction to the development of a mitigation plan. For those archaeological and historical sites that will be affected or destroyed by the proposed development, sufficient sub-surface test excavations shall be conducted to establish the research potential of the site and the nature and extent of the archaeological deposits. The goals of the testing will be to provide salient information for the development of a research design and to establish a cost effective and efficient data recovery plan. The mitigation plan shall detail

strategies for the management of the subject cultural resources and include a plan of work for implementation that may include further testing, sampling strategies, in-place preservation and protection, interpretive exhibits, and data recovery (scientific excavation and documentation, followed by analyses, report preparation, and curation) for those sites to be impacted or destroyed by the proposed development.

- c. Encourage In-Place Protection of Cultural Resources. As a part of land use planning, in-place conservation and protection of cultural resources should be encouraged through the use of conservation easements; cluster zoning to avoid impacts to the resources; conveyance of title to a local government, land trust, or conservation group of that portion of the parcel that contains the cultural resource; or other creative measures that serve to protect the site for future generations.
- d. Discovery of Unknown Cultural Resources. Unrecorded archaeological materials unearthed during construction activities by the builder, contractors, or individuals will be reported promptly to the Master Developer and Pima County Cultural Resources Office. Reasonable and cost efficient measures will be taken to document these archaeological features and materials by a professional archaeologist.
- e. Restriction of Archaeological Site Information. Except as necessary for avoidance and protection of the cultural resources, the Master Developer shall restrict information on the location and nature of the cultural resources within the proposed development area. No site will be promoted for public or private access unless so stipulated in the mitigation plan.
- f. Discovery of Human Remains. In the event that human remains, including human skeletal remains, cremations, and/or ceremonial objects and funerary objects are found during discovery, scientific excavation or construction, ground disturbing activities shall cease in the immediate vicinity of the discovery. State law (ARS §41-844 and ARS §44-865) requires that the Arizona State Museum be notified of the discovery of these remains so that, in consultation with Native American communities or other groups, appropriate arrangements can be made for their repatriation and reburial by cultural groups who claim cultural or religious affinity to them. The human remains shall be removed from the site pending the review and decision of the affected cultural groups and the Arizona State Museum.
- g. Technical and Professional Standards & Guidelines. All aspects of the cultural resource inventory, evaluation, and mitigation efforts shall be conducted by a professional archaeologist or preservation architect using accepted professional standards and practices consistent with guidelines included in the Advisory Council on Historic Preservation 1980 Handbook; guidelines for Recovery of Scientific, Prehistoric, Historic, and Archaeological Data: Methods, Standards, and Reporting Requirements (36CFR66, dated January 28, 1977); the Standards of Research Performance of the Society of Professional Archaeologists; the Secretary of

the Interior's Standards and Guidelines for Archaeological Documentation (Federal Register, dated September 29, 1983), the Secretary of the Interior's Standards for Archaeology and Historic Preservation (Federal Register, dated September 29, 1983), and the Secretary of the Interior's Standards and Guidelines for Professional Qualifications (Federal Register, dated September 29, 1983). In addition, archaeologists will be required to hold a current Antiquities Permit issued by the Arizona State Museum, and professional architects will be registered with the State of Arizona.

3. Cultural Resources Heritage Education and Outreach

Studies in heritage preservation have shown that the *long-term protection* of cultural resources is accomplished by educating the public about the past and bringing it to life for them. By educating the citizens of Pima County about our rich and diverse cultural history, the past becomes meaningful and relevant to people's daily lives and provides context in the greater scheme of life. Once informed, people generally become excited and interested in preserving their heritage for their children and for future generations.

- a. Cultural Resources Education. Public education is the key to preservation. Cultural heritage education programs must be developed for all age groups and cultural backgrounds, and be made accessible to all by being provided in the dominant languages of the County. Visitors and residents alike benefit from knowing about the County's cultural resources and can be informed through active learning programs in classrooms and recreation centers, as well as from informal education methods. The County must continue to provide educational information through technical reports, brochures, a website, programs, activities, and support for the schools and colleges in the County.
- b. Cultural Resources Outreach. All significant cultural resources in Pima County that would not be endangered by public knowledge of their existence should be indicated on County maps and in brochures, and provided with on-site interpretation. Exhibits, informational signs, plaques, and interpreters provide outreach at heritage sites. Excellent public outreach is currently provided by both public and private organizations and the County can act as a partner in these important outreach efforts.
- c. Specific Cultural Resources Heritage Projects. Specific cultural heritage sites within the County should be identified and developed as public education and outreach projects. An example of such a project is the *Anza National Historic Trail*. This important heritage trail runs for 60 miles through Pima County and is part of the greater 1200-mile trail that was used in 1775 by Spanish explorers looking for a land route from Sonora to San Francisco. The trail has been deemed significant by Congress and is part of the National Park Service's trails network. Its existence in Pima County brings national attention to the County's rich and diverse cultural heritage, and provides economic benefits to local businesses in the form of heritage tourism, in addition to enriching local and national understanding of our colonial heritage.

- d. Cultural Resources Education and Outreach Partnerships. Adopt a policy toward fostering education and outreach partnerships with public agencies and private organizations whose goals and objectives promote preservation of the region's heritage resources. These include all levels of government, Native American Tribes, colleges and universities, non-profit groups, civic organizations, and special interest clubs. Presently, the County is developing a partnership with the Arizona State Parks Site Steward Program which consists of volunteers dedicated to monitoring cultural resources around the state. These volunteers provide countless hours of unpaid stewardship service, often in remote locations, which would be otherwise impossible to provide. Their dedication to monitoring and protecting our shared heritage is just one example of the beneficial partnerships that the County can participate in to protect the cultural heritage.
- e. Cultural Resources Recommendations for New Development Projects. The Pima County Development Code has specific requirements for new construction that are required at the time of application, as noted under Policy 2. The Code requires evaluation of impacts and mitigation, but stops short of requiring on-site preservation of cultural resources. The County must explore incentives to assist developers in preserving cultural resources whenever possible.

4. Preserve and Maintain Historic Fabric of Communities

The cultural heritage of Pima County consists of overlapping layers of history that have evolved over time into a rich and dramatic tapestry. Each layer contributes a link to the collective identity that we all share. For example, as tangible links to its past, a community's historic buildings reflect the unique character of its neighborhoods and public places and provide us with a sense of place and a sense of continuity and interaction with our past. Outside our urban areas, the historic fabric of ranch lands and rural communities define an historic working landscape, also worthy of acknowledgment as contributing to our sense of place. Effective long-range planning for the County's cultural heritage requires a) the identification of significant cultural resources in both urban and rural environments, and b) the development of incentives to encourage the conservation and in-place preservation and protection of the historic fabric of the County.

- a. Encourage Nominations to the National Register of Historic Places. The National Register of Historic Places provides local historic properties and districts with national recognition for their heritage significance. The criteria for nomination to the National Register are similar to those listed under *Policy 1b. Pima County Register of Historic Places*. Currently, Pima County has over 100 properties currently listed on the National Register. They include a diversity of resources, including archaeological sites, historic sites, religious shrines and churches, military installations, evidence of early industry, entire historic neighborhoods, and historic structures representative the County's unique architectural heritage. Every effort will be made to ensure the preservation of those properties listed on the National Register and to nominate additional sites whenever possible.

- b. Preservation and Rehabilitation Incentives. Development of incentives to encourage the conservation and in-place preservation and protection of the County's cultural resources is an on-going priority. Cultural resources tax incentive programs are available at the state and federal levels and County staff should facilitate private participation; development of opportunities at the local level are an on-going priority. Public projects such as the Agua Caliente Ranch and the Colossal Cave rehabilitations are examples of Pima County voters supporting preservation with community funding. Critical architectural, engineering and technical expertise go into the preservation of these irreplaceable properties. Additional local incentives in the form of tax benefits or technical assistance to private property owners need to be explored.
- c. Cultural Resources Protection Ordinance. The County has made the adoption of a revised comprehensive Cultural Resources Historic Zone overlay a priority. This zone would offer a voluntary protection mechanism for properties not covered by other zoning designations. Special landscapes in the County such as rural working landscapes and expanses of open space may be protected without hindrance on property owners' abilities to manage and utilize their properties. Other examples of property for which this designation could be suitable include individual buildings, corridors or linkages between communities, traditional cultural properties and sacred sites, ranches, and rural communities.
- d. Adaptive Use of Cultural Resources. Whenever it is possible to preserve a structure and rehabilitate it for a compatible use, it is the County's policy that this is preferred over demolition or significant alteration of the structure. In keeping with this policy, Pima County will make every effort to rehabilitate and find an adaptive use for County-owned buildings.

Priority Cultural Resources in Pima County by property type

1. Archaeological Sites

49er's, Agua Caliente Ranch, Black Sheep Cave, Blackstone Ruin, Bojorquez-Aguirre Ranch Site, Bosque, CCC Camp Pima, Cienega Stage Stop, Cocoraque Butte, Cortaro Fan, Costello-King/Las Capas, Court Street cemetery, Dairy Site, Donaldson Site, Emkay, Esmond, Fort Lowell, Greaterville, Helvetia, Hodges/Furrey Ranch, Honeybee Village, Houghton Road, Julian Wash, Lime Kilns - Silverbell Road, Linda Vista Hill, Loma Alta, Los Morteros, Los Pozos, Marana Mound, Marsh Station Road site, National Cemetery at Stone and Alameda, Pantano Townsite, Picture Rocks, Pig Farm, Proto historic burials at 17th Street and Main, Quitobaquito, Rabid Ruin, Redington Ruin/Bayless Ruin, Reeve Ruin/Davis Ruin, Roland, Romero Ruin, Rosemont Townsite, Sabino Canyon Ruin, Saguaro Springs, San Agustin/Clearwater, Santa Anna del Chiquiburitac, Santa Cruz Bend, Second Canyon Ruin, Steam Pump Ranch, Stone Pipe, Sutherland Wash Site, Tanque Verde Wash, The Tucson Presidio, Total Wreck, Tumamoc Hill, University Ruin, Valencia/Valencia Vieja, Warner's Mill, West Branch, Whiptail Ruin, Yuma Wash and Zanardelli

2. Archaeological Site Complexes

Brawley – Batamote, Canoa Ranch, Continental- Madera, Coyote Mountain, Dairy, Davidson Canyon, Downtown Tucson, Eastern Sierrita Mountains, Gunsight Mountain, Honeybee, Los Morteros, Los Robles, Marana Mound, Middle Santa Cruz, Redington, Rincon Creek, Rincon Mountain, River Confluence, Tanque Verde Creek, Tucson Mountain, Upper and Lower Cienega Creek, Upper Sutherland Wash, Valencia, West Branch, Wild Burro Canyon and Zanardelli

3. Historic Sites

4th Avenue Streetscape, 4th Avenue Trolley Line, 4th Avenue Underpass, A-7 Ranch, Adkins Property, Agriculture (Forbes) Building - U of A, Agua Calliente Ranch, Ajo Plaza, Arizona Daily Star Building, Arizona Inn, Bayless House, Bear Down Gym, Benedictine Sanctuary, Binghampton Rural Landscape, Blenman House (Royal Elizabeth Bed and Breakfast), Boudreaux-Robinson House, Brady Court Bungalows (Arizona Theater Company), Broadway Village, Brown House / Old Adobe Patio, Campbell Avenue Farm, Canoa Ranch, Carnegie Free Library, Carrillo School, Catalina Foothills Estates, Chemistry Building - U of A, Chicago Store, Cienega Bridge, Cochise Hall, Colossal Cave, Commissary and Quartermaster Offices (Fort Lowell), Communications Building B U of A, Convent Streetscape and Meyer, Corbett House, Cordova House, Coronado Hotel, Cushing Street Bar, Davis School, Desert Laboratory, Dodson-Esquivel House, Douglass Building - U of A, Dunbar Spring School, El Charro, El Con Water Tower, El Paso and Southwestern Railroad Station (Garcias), El Tiradito, Empire Ranch (BLM), Engineering Building - U of A, Esmond Station, First United Methodist Church, Fish-Stevens House, Fox Theater, Gallery in the Sun, Garden of Gethsemane, Gas Station (Art Deco), Gila Hall - U of A, Goodrich House, Grace Lutheran Church, Growler Mine, Healy House, Hereford House, Herring Hall - U of A, Hinchcliffe Court, Hinchcliffe House, Historic Warehouse District, Holy Family Church, Hotel Congress, Julian-Drew Building / Lewis Hotel, Kentucky Camp, Kitt House, Kruttschnitt House/ El Presidio Bed and Breakfast, Lee-Cutler House, Lincoln House, Mac Arthur Building, Manning Cabin, Mansfeld Middle School, Maricopa Hall - U of A, Marist College (West end, St. Augustine Cathedral), Mexican Baptist Church (Templo de Bethel), Missile Site 8, Nugent Building, Odd Fellows Hall, Olcott House (State Land Department), Old Main, Old Pueblo Club, Old U of A Library (currently ASM), Pima County Courthouse, Pioneer Hotel, Producer Cotton Gin Building, Rancho Las Lomas, Reiley Funeral Home, Rialto Theater and Apartments, Rincon Market, Robles Ranch, Rockwell House, Romero House, Ronstadt House, Ronstadt-Sims Adobe Warehouse, Roskruge House, Roskruge School, Safford Middle School, Sam Hughes School, Samaniego House, San Pedro Chapel, San Xavier del Bac, Santa Catalina Apartments, Santa Cruz Church, Scottish Rite Temple Building, Second Owl's Club, Southern Pacific Rail Road Depot and Assoc. Buildings, St. Augustine Cathedral, St. Joseph's / Immaculate Heart Academy, St. Michael's and All Angels, St. Phillips in the Hills Episcopal Church, Steinfeld House / First Owl's Club, Steward Observatory - U of A, Stillwell-Twiggs House, Stone Ashley, Stone Avenue Temple (Temple Emmanu-El), Telles Block, Temple of Music and Art, Third Street Streetscape, Tohono Chul Park, Tucson High/Gymnasium/Vocational Education Building, Tucson Mountain Park (buildings), U.S. Courthouse, Valley National Bank (Bank One), Velasco House, Verdugo House, Veteran's Hospital, Victoria Mine, Wells Fargo (First Interstate) Bank Building, Wright-Zellweger House and WWII Hangars / Triple Hangar.

C. Site Design and Housing

1. Site Planning

- a. **Bufferyards.** Promote adequate buffering in rezonings with greater Intensity uses. The bufferyards shall be used to protect the privacy and character of an adjoining neighborhood. Bufferyards shall be designed to ensure efficient site design and mitigate adverse impacts of noise, odors, views, and traffic as applicable. The bufferyards may contain landscaping, opaque screening, and natural areas.
- b. **Existing neighborhoods.** Ensure that new or redeveloped mixed use or infill rezonings assess the privacy and character concerns of existing neighborhoods in reviewing the location, density, and character of the project.
- c. **Scale of development.** Ensure, where possible, new development shall be designed at a human-scale, i.e. development with multimodal opportunities and mixed uses, rather than solely a car-oriented land use pattern.
- d. **Sense of place.** Encourage development where there are natural resources to create opportunities for natural area linkage or create in more urbanized areas a sense of place in the Sonoran Desert.

2. Compact Development

Rezoning activity shall be promoted which increases housing density and compatible residential infill or refill in a range of prices and housing products to accommodate changing family arrangements, market conditions, and demographics adjacent to multifunctional corridors, neighborhood, community, and regional activity centers; and provides for mixed use and higher density residential development along or at the intersections of major streets or adjacent to commercial or employment sites; and provides for transit-oriented development along major streets and in or adjacent to activity centers and other similar functional or high density areas.

3. Affordable Housing

New rezonings and specific plans which have a residential component shall be subject to the Affordable Housing Policy and Strategies as adopted by the Board of Supervisors.

4. Low Density Residential Areas

Low density development (one acre or greater in size) shall integrate natural areas and a residential setting within environmentally sensitive lands. Adjacent to public preserves and sensitive natural resource areas, only very low density development (lots of three acres or greater in size) shall occur. The conservation subdivision process is the most appropriate development option for subdivision development in low density areas.

D. Public Services and Facilities

1. Wastewater Policies

a. Sewer Line Infrastructure:

- 1) All nonresidential development and residential development at densities of 1.0 residences per acre or greater shall be connected to the public sanitary sewer system in a manner acceptable to Pima County Wastewater Management Department (PCWMD).
- 2) The PCWMD reserves the right to determine the ownership classification of all new interior/on-site sewage collection systems.
- 3) Sanitary sewers that will become part of the public system shall be located to the maximum extent feasible within the paved area of public rights-of-way in order to achieve adequate visibility and vehicular maintenance accessibility in accordance with Arizona Administrative Code R18-9-E301.D.3.h. Sewer line easements and rights-of-way may be located within areas designated as natural open space provided that alternative routes are not feasible from an engineering/economic standpoint. These new sewer alignments shall require the approval of both PCWMD and PCDOTFCD. The area contained within these sewer line easements or rights-of-way may not be included in the computation of natural open space but may be credited toward fulfillment of functional open space requirements of the density range on an acre-by-acre basis.
- 4) Sewer construction plans shall require the contractor to revegetate disturbed areas. A plan for the re-vegetation of these disturbed open space areas shall be established during the review of the associated tentative plat or development plan. The re-vegetation plan shall provide for unrestricted maintenance vehicle access to all public sanitary sewer manholes and other access structures and shall not include plant types that have a history of aggressive root growth that can invade the sanitary sewer system. The re-vegetation plan must be approved by the PCWMD Field Operations Division.
- 5) All extensions of the public sanitary sewer system required to provide service to the development and all sanitary sewer lines and other wastewater transporting facilities within the development shall be paid for with private funds.
- 6) Installation of all utilities and infrastructure shall be phased to coincide with development of individual communities and shall be sized generally to accommodate future needs based on a sewer basin study prepared at the developer's expense, and reviewed and approved by PCWMD.
- 7) Concurrency of sewer line conveyance capacity shall be reviewed by staff for rezonings and specific plan-related requests, as per Regional Plan Policies, 7. Cost of Development Element Regional Plan Policies, C.1.

- b. Sewage Treatment Facilities
 - 1) All new wastewater treatment/reclamation facilities shall be public.
 - 2) All new wastewater treatment facilities shall be financed by all parties, persons and/or landholders who either benefit from the improvements or who have created the need for their installation.
 - 3) Concurrency of wastewater treatment / reclamation facility capacity shall be reviewed by staff for rezoning and specific plan-related requests, as per Regional Plan Policies, 7. Cost of Development Element Regional Plan Policies, C.1.
- c. Solid Waste
 - 1) The creation of additional solid waste facilities and sites shall be subject to the review and approval of Pima County. All solid waste facilities shall be publicly owned and operated.
 - 2) Pima County reserves the right to designate and require the dedication of any site suitable for a solid waste transfer station and/or landfills.
 - 3) The siting of new landfills shall be subject to approval by Pima County and shall be based on the analysis of constraint areas as outlined in the "Alternative Locations for a Regional Waste Disposal and Management Center" report (July, 1991).

2. Flood Control Policies

- a. Washes with a base flood peak discharge equal to or greater than 100 cfs shall be evaluated in the rezoning site analysis and during the development process for maintenance of natural conditions and preservation of existing riparian habitat. Opportunities for transferring densities to other areas of the property in order to preserve habitat shall also be described during the development process.
- b. Flood control planning and design shall be administered on an area-wide basis, and shall be compatible with the Regional Master Drainage Plan. Drainage improvements shall be consistent with the overall character of the area, and shall not create nor worsen existing drainage problems.
- c. Road crossings of washes identified for preservation shall be designed to cross the floodplain with only minor encroachment. Reducing the floodplain width may be acceptable based on site specific characteristics, including but not limited to achieving on-site detention requirements, or facilitating wildlife or pedestrian access.
- d. When modifications of watercourses are proposed which will result in significant reduction of over-bank storage, the Chief Engineer may require a study to demonstrate that the proposed encroachment will not significantly increase downstream peak flood discharges, or create an adverse impact within the watershed. Regional effects shall be analyzed

as necessary, and the study limits may be determined by the Chief Engineer.

- e. Where mitigation or restoration is required, projects shall not be considered complete until the vegetation is established and accepted by PCDOTFCD. If the project is considered otherwise complete, a separate and enforceable agreement to ensure completion of said requirements shall be entered into by PCDOTFCD and the developer.
- f. Alternatives to locating a utilities corridor parallel to and within the floodplain of watercourses identified for preservation shall be investigated to lessen the impact on riparian habitat, and to avoid the costs of structural flood control works. Should the riparian habitat be affected, appropriate mitigation in an approved location shall be required.
- g. Plans for development located in flood hazard areas which propose uses or densities consistent with urban land use intensity categories shall be regarded as inconsistent with County policy, unless provisions of the development plan are designed to remove the area from flooding hazards.
- h. When public or private development is planned for a parcel or parcels equal to or greater than 80 acres, a sub-basin management study may be required, at the discretion of the Chief Engineer. The scope of work shall be determined by the Chief Engineer, and shall include, at a minimum, an evaluation of the existing and with-development watershed conditions.
- i. Concurrency of flood control infrastructure and drainage capacity shall be reviewed by staff for rezonings and specific plans, as per Regional Plan Policies, 7. Cost of Development Element Regional Plan Policies, C.1.

3. Fire Service Policy

A rezoning application for an urban land use intensity category located within a rural or volunteer fire district shall include a letter from the local fire district acknowledging that district's ability to provide adequate fire protection.

4. School Policies

- a. Rezoning requests to TR for a child care center shall be permitted in all Comprehensive Plan designations.
- b. In addition to rezoning site analysis requirements for school impact analysis, as part of concurrency of infrastructure and service delivery capability review, staff shall request comments from school districts regarding adequacy of schools to absorb impacts of applicable rezoning and specific plan-related requests, as per Regional Plan Policies, 7. Cost of Development Element Regional Plan Policies, C.1.

E. Solar Energy Systems Policy

1. Structure and Site Design

Development on individual parcels can employ active and passive solar energy systems. Active solar energy systems include photovoltaic (PV) panels and water heaters, solar arrays which must be oriented within thirty degrees (30°) of true south to maximize collection of solar radiation. These systems work best with a flat roof or a south-facing gabled roof (for the latter, east-west building orientation is optimal); an unobstructed south-facing aspect; at least two hundred (200) square feet of roof space or an equivalent for ground-mounted structures; and utilities for connecting these systems (stub-in conduit for PV systems, stub-outs for solar water heaters).

There are some strictly-defined passive solar energy devices (e.g. greenhouse rooms, Trombe walls), but the most effective passive solar energy systems use basic building design and construction techniques – building orientation is the simplest, most effective method to optimize access to solar energy. The same optimal east-west building orientation for active solar energy systems also maximizes passive heating. As the sun arcs low in the southern sky in the winter, the long south-facing side of the building becomes a solar collector to store and release heat into the building; south-facing windows also allow radiant energy to enter and heat the interior.

In the summer, the sun's arc is almost directly overhead. In a building oriented east-west, the smaller sides of the building are exposed to direct sun, reducing heat loading (the roof receives the most direct sun, and should have a reflective surface to deflect sun and be well-insulated). Other passive climate-control techniques include planting shade-producing landscaping and installing awnings and shades designed to block out summer sun.

The following active and passive solar+ energy techniques are encouraged for structures and sites:

- a. Design developments, parking areas and individual lots for east-west orientation of buildings, and areas designated or planned for solar energy systems should not be shaded by topography, landscaping or other buildings.
- b. Orient the long axis of buildings within \pm twenty degrees (20°) of true east-west to maximize beneficial solar exposure and minimize summer exposure.
- c. Install shade-producing, drought-tolerant native landscaping on the east, north and west sides of buildings, and provide clear, unobstructed south-facing solar access.
- d. Install solar PV systems on buildings and unoccupied structures (e.g. offices, warehouses and storage, parking garages, accessory structures).
- e. Provide adequate roof space and connections for future installation of solar energy systems, if not installed at construction.

- f. Design and install features that help maximize use of solar energy systems (e.g. appropriately sized windows, overhangs and shading devices, adequate insulation, fixtures and reflective surfaces to maximize solar day-lighting potential).

2. Subdivision / Development Design

The design of residential and non-residential development should maximize the use of solar energy systems on individual sites, as well as throughout the development. In addition, passive methods should be used to reduce overall energy demand.

For instance, urban heat islands are created when buildings and paved surfaces trap and hold heat, and the lack of vegetation decreases shade and evapotranspiration. Trapped heat keeps nighttime temperatures high, increasing summertime energy demands and water use. Urban heat island effect may be mitigated by reducing paved areas and increasing shade.

The following active and passive solar energy techniques are encouraged for developments:

- a. Design developments, streets, parking area and individual lots to allow east-west orientation of buildings, and south-facing aspects of buildings are not blocked by topography, landscaping or other buildings.
- b. Design to reduce area of paved surfaces that trap heat (e.g. build narrower streets and smaller parking areas, share driveways, share parking between establishments with alternating schedules [day and evening, weekday and weekend]).
- c. Use light-colored, porous paving materials with a high reflective value to reduce heat gain.
- d. Provide parks and greenspace, and preserve natural open space areas to reduce heat-trapping paved surfaces.
- e. Design landscapes to shade streets, parking areas, sidewalks and structures (east, west and north sides).
- f. Emphasize Arizona Revised Statutes prohibition of any private covenant or condition relating to the transfer, sale or interest in real property, that restricts the installation and use of solar energy devices (ARS §33-439).

3. Energy and Water Conservation

There is a direct connection between the consumption of water and energy: power plants 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 solar energy systems conserves water that would have been lost during power generation, and conserving water helps reduce energy demands from pumping, moving and treating water.

More specifically, the use of passive solar energy systems with water conservation methods (e.g. planting shade-producing landscape that is irrigated with harvested rain water) creates more sustainable development.

The following element is encouraged for new policies on water and energy conservation:

- a. Strategies to conserve energy through the use of solar energy systems should be coordinated with water conservation strategies, and *vice versa*.

4. Solar Energy Strategies

Pima County Development Services Department, in conjunction with other entities as appropriate, may pursue a number of strategies to promote and increase the utilization of solar energy systems in private development in the county.

The following strategies are encouraged:

- a. Implement a voluntary, incentive-based Green Building Program for unincorporated Pima County, which would include components for active and passive solar energy systems.
- b. Determine the implementation of the solar energy policies (above) within the county planning and development review processes; modify those processes where necessary, or create new procedures or programs to promote solar energy systems.
- c. Provide current information on all existing incentives for installing solar energy systems – these should include economic (individual tax credits and rebates, reduced utility bills), environmental (air and water quality), and social (human health, clean air) incentives.
- d. Investigate the creation of additional Pima County incentives for employing solar energy systems.
- e. Provide design information on maximizing the use of solar energy systems in new residential and commercial construction, and remodels/retrofits.
- f. Coordinate with local power utilities to ensure energy infrastructure is adequate for accepting energy from increased use of solar photo voltaic systems.
- g. Identify appropriate sites within Pima County for large-scale solar energy generating facilities, such as solar troughs, large-scale photovoltaic arrays, and solar thermal technologies.
- h. Promote solar energy-powered systems to replace traditional fossil fuel-fired equipment such as emergency generators and peak power-sharing generators.

2. CIRCULATION ELEMENT REGIONAL PLAN POLICIES

- A. Timing/Concurrency -- Off-site transportation infrastructure shall be developed concurrently with land use development to the greatest extent possible, recognizing that much infrastructure development is needed to meet existing traffic demand.
- B. Environment -- Roadway and transportation infrastructure shall be designed in an environmentally- or context-sensitive manner to the greatest extent feasible.
- C. Neighborhoods -- Existing residential areas shall be mitigated from vehicular traffic impacts to the greatest extent feasible when roadway improvements occur.
- D. Alternative Modes -- Multi-modal transportation infrastructure shall balance the needs of all users and provide viable alternatives to driving where appropriate and to the greatest extent feasible.
- E. Funding -- Alternative and equitable funding sources for transportation infrastructure shall be developed, in addition to current funding sources.
- F. Density and Use -- Promote high density, mixed use development/redevelopment along the major transit corridors, and formulate a set of incentives to encourage such development within Growth Areas and along transit corridors.
- G. All new public or private bridges, arterial, collector and local streets shall conform to Pima County Roads and Streets Standards. Any proposed rezoning or specific plan requiring a site analysis shall include a transportation impact study with the site analysis. Parameters and the extent of the transportation impact studies shall be established on a case-by-case basis by the Pima County Department of Transportation and Flood Control District.
- H. Pima County standards for roadway design may be modified by the Board of Supervisors if the design provides substantial environmental protection and meets minimum safety standards.
- I. With the exception of private streets, all streets and routes shall require a dedicated right-of-way. The right-of-way shall match street capacity needs or, where identified on the adopted Major Streets and Routes Plan of Pima County, the specified right-of-way shall be dedicated. All arterial, collector and local streets required for development will be designed for the ultimate capacity of the planned land uses, except where a phased construction plan is approved by the County Engineer.
- J. Concurrency of transportation infrastructure and service delivery capability shall be reviewed by staff for rezonings and specific plan-related requests, as per Regional Plan Policies, 7. Cost of Development Element Regional Plan Policies, C.1.

K. Bikeways

1. All arterial and collector streets which are a part of the Regional Bikeway Plan shall be constructed according to the classification shown on the plan. All other major streets should have sufficient pavement width to accommodate bicycle travel.
 2. Developers shall provide bikeway facilities in conjunction with all types of development when determined appropriate by the Pima County Department of Transportation.
 3. Where appropriate, bike systems within developments shall connect to the Regional Bikeway System. In addition to or in place of connecting to the Regional Bikeway System, a bicycle connection may be provided to adjacent developments. This is encouraged particularly when the adjacent development is adjacent to the Regional Bikeway System.
- L. The development shall provide pedestrian facilities necessary for linkages to the regional trail system and for safe access to community facilities, employment centers, schools, and adjacent commercial nodes.
- M. Sidewalks shall be provided on both sides of public and private streets for double-loaded streets in all developments greater than ten acres and net densities greater than 2.5 residences per acre. Developments of less than ten acres may be required to provide sidewalks that adjoin existing developments. Paths may be used as an alternative to sidewalks in accordance with Pima County subdivision street standards.
- N. Circulation patterns shall discourage transitory automobile traffic flows through existing neighborhoods.
- O. Higher density residential, commercial, and office uses shall include appropriately designed internal circulation in order to prevent individually accessed and signed strip commercial development. The functional orientation of these developments shall consider and provide for pedestrians as well as passing automobile traffic.

3. WATER RESOURCES ELEMENT REGIONAL PLAN POLICIES

A. Policy Intent

The intent of the Water Resources Element Regional Plan policies is:

- To provide pertinent information in a timely fashion to land-use decision-makers about the impacts and sustainability of water resources development;
- To promote the efficient utilization of existing infrastructure and the prudent construction of additional infrastructure needed for a safe, reliable and renewable water supply;
- To increase reliance upon renewable water supplies;
- To minimize impacts of water supply development upon existing and future residents of Pima County, and
- To protect the groundwater-dependent ecosystems of Pima County, including springs, perennial and intermittent streams and shallow groundwater areas.

B. Regional Policies

1. County staff shall conduct a Water Supply Impact Review on proposed Comprehensive Plan amendments that are larger than four acres and make recommendations. The review and recommendation will evaluate five critical issues on existing water infrastructure and potential environmental constraints of the site:
 - a. Water service and renewable water supply options
 - b. Current and projected depth to groundwater and groundwater trend data
 - c. Proximity to areas of known or potential ground subsidence
 - d. Proximity to known groundwater-dependent ecosystems
 - e. Location within a hydrogeologic basin, including depth to bedrock

Staff conducting the Water Supply Impact Review may recommend plan amendments that are expected to have no adverse impacts. The review and recommendation will be included in the staff report for Comprehensive Plan amendments.

2. PCRFC D staff shall conduct a Water Resource Impacts Assessment on any rezoning that requires a Site Analysis. The Assessment shall include a review of the five critical issues described above, plus the information provided by the applicant in the Preliminary Integrated Water Management Plan.

3. A Preliminary Integrated Water Management Plan (PIWMP) shall be required for any rezoning that requires a Site Analysis. The PIWMP shall include the following:
- a. A description of the water supply options;
 - b. A description of where the proposed rezoning will occur geographically based upon its proximity to existing and planned renewable supply and potable water supply infrastructure and defined water service area boundaries; and
 - c. Water demand projections for the development, based upon the *existing and proposed* zoning. Water demand projections for the *proposed* zoning shall be generated, using:

[http://www.azwater.gov/WaterManagement_2005/Content/OAAWS/Generi
c Demand Calculator10.xls](http://www.azwater.gov/WaterManagement_2005/Content/OAAWS/Generi
c Demand Calculator10.xls)
 - d. For rezoning proposals whose water demand projections at full build-out are more than five (5) acre-feet and less than 20 acre-feet per year, the PIWMP shall include:
 - 1) An analysis of water level trends in the area from which groundwater shall be withdrawn for the service to the development and depth to groundwater at the nearest existing well location (<http://www.sahra.arizona.edu/wells/>);
 - 2) The location of the development relative to all groundwater-dependent ecosystems including: springs, perennial streams, intermittent streams and shallow groundwater areas as mapped on the Sonoran Desert Conservation Plan GIS database (<http://www.dot.pima.gov/cmo/sdcpmaps/>);
 - 3) A plan for the location of all wells, existing and proposed, that may be used to supply water to the development, including ADWR well registry numbers for existing wells;
 - e. For rezoning proposals whose water demand projection at full build-out is 20 acre-feet or more and less than 50 acre-feet per year, the PIWMP shall include:
 - 1) All of the information required for developments with a water demand projection at full build out of less than 20 acre-feet (Section B.3.d, above); and,
 - 2) Existing site-specific geologic and hydrogeologic studies available for the area from which groundwater will be withdrawn to serve the project;
 - 3) Any existing aquifer test, pump test or production well data available for the area;

- f. For rezoning proposals whose water demand projection at full build-out is 50 acre-feet per year or more, the PIWMP shall include:
 - 1) All of the information required for developments with a water demand projection at full build out of less than 50 acre-feet per year (Section B.3.e, above); and
 - 2) A draw-down analysis for impact of water demand of the development's proposed wells within the 10-foot draw down contour after five years of pumping at full build-out; and
 - 3) A feasibility study examining the cost and means to deliver renewable and potable water to the development after full build out, OR the applicant may provide a statement declaring no feasibility study has been conducted. Statement will not bar rezoning approval, but will be weighed in the staff's recommendation.

C. Rezoning Policies

1. Comprehensive Plan rezoning policies are proposed for potential future rezoning conditions. Rezoning policies are needed to address the demand for water that will result from future growth projected in the county plan, added to existing uses. One or more of the following rezoning policies shall be implemented:
 - a. Applicants whose proposed rezoning site will be served by an existing water provider with physical access to a renewable and potable water supply shall provide written proof to that effect as a condition of rezoning.
 - b. Applicants whose proposed rezoning site will connect to a water provider with physical access to a renewable and potable water supply in the future shall provide written documentation showing intent to connect as a condition of rezoning.
 - c. Rezoning proposals without physical access to renewable and potable water supply shall not be recommended for approval by staff until such a time as renewable and potable water supply is available in the area, unless it can be shown that the increased water demand projections will not have significant water resource impacts based on staff analysis of the five critical issues that are described in Section B.1, above.
 - d. All rezoning proposals shall include implementation of water conservation measures. These may include measures as provided in Section D, Water Conservation Measures and Management Tools, below. The water conservation measures listed in the rezoning proposal shall become conditions of rezoning. Water conservation measures will be evaluated based on the severity of the water supply constraints of the entire rezoning proposal.
 - e. Water demand projections showing water demand below the average estimates for similar land use types shall be required to list water conservation measures or methods that are proposed to achieve the

lower water demand. Implementation of water conservation measures listed in the rezoning proposal shall become conditions of rezoning.

- f. Staff may not recommend approval of rezoning proposals if they increase the water demand projections in areas that are less than five miles from a groundwater dependent ecosystem and if the development will have an adverse impact on the groundwater dependent ecosystem.
- g. Rezoning requests proposing to employ water conservation measures for individual properties such as landscaping restrictions or private pool regulations shall be required to include the restriction in the Covenants, Codes, and Restrictions (CC&Rs).
- h. Rezoning proposals that increase the water demand above existing zoning shall be fully offset in areas of shallow groundwater (less than 50 feet below the land surface). Increases in water demand shall be offset by recharge, legal and verifiable water rights, or retirement or purchase of water rights from within the same or up-gradient shallow groundwater area.
- i. Rezoning proposals shall not increase the water demand above existing zoning in areas of Isolated Basins. Any increases in water demand shall be fully offset from within the same hydrogeologic basin by recharge, legal and verifiable water rights, or retirement or purchase of water rights.
- j. Rezoning proposals that rely on use of groundwater withdrawn from a five-mile radius of mapped groundwater-dependent ecosystems shall include a hydrologic impact analysis to show how groundwater withdrawn for the development may impact ecological assets. Rezoning proposals that may adversely impact groundwater-dependent ecosystems shall employ pump tests and monitoring, and use avoidance strategies, including well site selection and screening of wells.
- k. Rezoning proposals that are located in areas that will not be served by a water provider with physical access to a renewable and potable water supply and are located in subsidence areas shall employ mitigation measures to minimize subsidence in the area. Mitigation measures that may be used to minimize subsidence in groundwater-dependent areas and areas located in high subsidence potential areas include:
 - 1) Enhance net recharge of storm water runoff in the affected area.
 - 2) Fund construction of recharge facilities in the affected area.
 - 3) Fund construction of infrastructure to connect with a regional water supply infrastructure having access to renewable supplies.
- l. A Final Integrated Water Management Plan (FIWMP) shall be submitted at the tentative plat or development plan stage of a proposed project for which a rezoning has been approved. The FIWMP should include proposed uses of all legally available water resources and pertinent details of reuse,

replenishment, conservation and use of renewable supplies of water, all designed to minimize impacts to the aquifer.

D. Water Conservation Measures and Management Tools

1. The following Water Conservation Measures may be used by all new development in order to promote the efficient use of all water supplies and should be considered in context of mitigation of increased water demand projected between existing zoning and proposed rezonings.

a. Site Planning

- 1) Implement rainwater/storm water harvesting and reuse strategies.
- 2) Implement swimming pool and spa water conservation measures.
- 3) Implement effluent reuse strategies within the development.
- 4) Install reclaimed effluent irrigation (where available) for individual properties and common areas.
- 5) Install drought-tolerant native vegetation and drip irrigation systems with rain sensors.
- 6) Co-locate parks in development detention basins.
- 7) Minimize impervious surfaces to maximize storm water infiltration.

b. Residential/Commercial and Buildings, including the above strategies at the residence/building scale and:

- 1) Install gray water reuse plumbing systems.
- 2) Install water efficient appliances and fixtures and automatic faucets, water-free urinals and/or dual flush toilets in common use buildings.
- 3) Install plumbing systems that drain pools into the sewer.
- 4) Limit private pool and spa construction.
- 5) Install sub-metering for each tenant for multi-family and multi-occupancy commercial buildings.
- 6) Provide “water-wise” or similar water conservation information as part of sales contracts to home buyers.

2. The following Management Tools may be used by Pima County in moving towards a more sustainable water future include:

- a. Consider the water use requirements of current and future residents of the area, as well as other needs, including the natural environment.

- b. Work with neighboring counties to evaluate and provide input on water-resource impacts of development in adjacent jurisdictions, in accordance with State Statutes.
- c. Maintain an inventory of County water resource assets including groundwater rights, surface rights and production and use of effluent to sustain and protect the County's natural environment.
- d. Maximize acquisition of County water resource assets including groundwater rights, surface rights and production and use of effluent to sustain and protect the County's natural environment.
- e. Amend land use regulations to require that all new houses discharging to septic systems also be provided with a gray water reuse system.
- f. Revise design and construction standards to capture and mitigate storm water generated on-site for water harvesting and the incorporation of light-colored permeable materials into the pavement of parking lots and roads, to reduce heat-island effects, water runoff and dust emissions.
- g. Limit pumping near shallow groundwater areas of regional importance – Methods for implementing this strategy include land use controls and the purchase of development and water rights.
- h. Maximize use of CAP, rainfall, runoff and reclaimed water – Implementation methods might include County-sponsored, multi-purpose recharge and reuse projects, limitations on rezonings outside the service area and incentives to landowners.
- i. Limit human groundwater use in certain areas – Implementation methods might include limitations on rezonings outside the service area and incentives to landowners.
- j. Protect and promote natural recharge functions of watercourses – Implementation methods include floodplain management, land acquisition and land use decisions to minimize floodplain encroachments and maintain natural hydraulics and hydrology.
- k. Utilize effluent and surface water for riparian restoration – Preservation of current discharges to the environment, storm water harvesting, repair of altered flow paths and allocation of the water resources to riparian preservation and restoration are favored implementation methods. County effluent uses shall sustain and protect the County's natural environment.
- l. Reduce per capita consumption – Implementation methods might include landscape requirements and requirements for conservation features in new housing.

- m. Limit turf water use – Limit the establishment of golf course uses and requirements that new courses use non-groundwater sources and limitations on the use of turf:
 - 1) Grass is only to be used for functional purposes.
 - 2) No lawns for decorative uses.
 - 3) Plant only low water using turf.
 - 4) Rely on rainfall as primary irrigator.
 - 5) Set irrigation system timers or clock to manual only.
 - 6) Landscape with drought tolerant, native plants – the following link includes a list of plants which are native to Pima County:
<http://www.pima.gov/cmo/sdcp/species/plants.html>
- n. Prevent subsidence – Implementation strategies include substitution of renewable supplies for groundwater and recharge in subsidence-prone areas.
- o. Restore and preserve natural areas – Implementation of this strategy could include floodplain acquisition, improvements to the floodplain management ordinance, purchase of development and water rights and limitations on rezonings.
- p. Rehabilitate or create wetlands and riparian areas – Use of reclaimed water, surface runoff and CAP is suggested. Multi-purpose recharge or water quality improvement projects are also suggested as an implementation method to realize this strategy.
- q. Balance the water budget of Isolated Basins – Pursue options such as purchase of development or water rights and limitations on rezonings consistent with sustainable yield.
- r. Implement a Water Supply Impact Review on rezoning proposals on property where the water system(s) that serve less than 15 homes, where such proposals will demonstrate to Pima County Department of Environmental Quality that it could serve an increased water demand before being approved. Potable water supply requirements for systems involving fewer than 15 homes will be developed as a condition of rezoning.
- s. Domestic Water Improvement Districts (DWID) – Develop a board policy requiring consideration of the renewable supplies, available infrastructure, groundwater trends, subsidence, groundwater-dependent ecosystems and isolated basins in the development and approval of any new DWID.
- t. Research and determine if a Zoning Code Text Amendment should be proposed for enacting Water Conservation Measures.

E. Definitions

Adverse Impact means the lowering of a piezometric surface in the area occupied by a groundwater-dependent ecosystem, or diversion of regional groundwater flows or sources of recharge away from a groundwater-dependent ecosystem.

Final Integrated Water Management Plan means a plan detailing proposed water resources, reuse, replenishment, conservation and use of renewable water supplies for the tentative plat or development plan stage of a proposed project.

Groundwater-dependent ecosystem means shallow groundwater areas, springs and intermittent and perennial streams that are not effluent-dominated, as mapped by Pima County.

Isolated Basins means all hydrologic basins in Pima County except the Tucson and Avra basins.

Preliminary Integrated Water Management Plan means a plan identifying all sources and uses of water intended for, and water demand projections based upon, a proposed rezoning.

Renewable and Potable Water means a quality of water suitable for essential human uses such as drinking, cooking or cleaning, which is derived from a renewable source. In the manner used in this policy, treated surface water, including treated Central Arizona Project water, is considered renewable and potable, but effluent and groundwater are not.

Subsidence Area means a lowering of the land surface more than 3 inches as mapped by U.S. Geological Survey.

Water Resource Impacts Assessment means the review County staff performs on proposed rezoning applications.

Water Supply Impact Review means the review County staff performs on a proposed Comprehensive Plan amendment.

4. OPEN SPACE ELEMENT REGIONAL PLAN POLICIES

State law requires planning for open space as part of the comprehensive plan. At the same time, it states in Section 11-824 (F) that "In applying an open space element or a growth area element of a comprehensive plan a county shall not designate private or state land as open space, recreation, conservation or agriculture unless the county receives the written consent of the landowner or provides an alternative, economically viable designation in the general plan or zoning ordinance, allowing at least one residential dwelling per acre. If the landowner is the prevailing party in any action brought to enforce this subsection, a court shall award fees and other expenses to the landowner." This provision limits the open space element of the comprehensive plan to a description of the existing resource base.

5. GROWTH AREA ELEMENT REGIONAL PLAN POLICIES

- A. Mixed use planning shall be encouraged in designated growth areas and areas with community-wide commercial activity that have opportunities for multimodal transportation.
- B. The current growth area profile shall be reviewed during the review of a development proposal. Infill and redevelopment proposals within a growth area shall attempt to create a mix of uses most beneficial to encourage multimodal transportation opportunities and be coordinated with any current or planned transit stop locations.
- C. Development proposals shall be evaluated for their potential to increase the mix of uses within the growth area and create a demand for residential density and a commercial base that supports a multimodal transportation option.
- D. Development proposals shall be reviewed for potential pedestrian and bicycle access opportunities among surrounding land uses.
- E. Development proposals shall be designed to add architectural attractiveness to the area and to protect the character and privacy of adjoining existing residential areas.
- F. A residential proposal shall attempt to increase densities to not less than eight residences per acre within an evolving mixed use area and provide a variety of housing types, costs, and ownership concepts.
- G. A commercial proposal's design may support a local and community customer base and shall create multimodal transportation options within the growth area.
- H. The City of Tucson shall be designated as a growth area of Pima County.

6. ENVIRONMENTAL ELEMENT REGIONAL PLAN POLICIES

A. Water Quality

1. Groundwater Quality Policies

- a. Encourage the protection of groundwater quality within the framework of federal, state, and local laws, regulations, and guidelines that govern water quality.
- b. Continue to assess soil and groundwater quality in the vicinity of all County-owned sites of concern, including landfills.
- c. Monitor soil and groundwater, develop and implement cleanup strategies.
- d. Continue to operate existing remediation systems and continue existing monitoring programs, or implement new programs to protect groundwater quality at County facilities that have the potential to impact groundwater.
- e. Continue to ensure septic systems are installed and maintained in accordance with applicable federal, state and local requirements.
- f. Encourage coordination among County departments that use or generate hazardous materials and waste to institute pollution prevention policies and practices.
- g. Implement practices that reduce the generation of wastes that could impact groundwater quality and implement spill management plans.

2. Natural Waterbody Quality Policies

- a. Evaluate planned activities within the County relative to their cumulative impacts and compliance with state water quality standards. Strive to minimize human impact to aquatic and riparian ecosystems from development, roads, and trails.
- b. 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. Land use proposals should be evaluated as to their potential to cause water quality degradation.
- c. 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.
- d. Work with the appropriate entities to ensure suitable stream flows that maintain channel morphology and function, support hydrological connected wetlands and promote biological diversity in these systems.
- e. Evaluate land use proposals including transportation as to their potential impact on water quality. County and utility roads should be graded and maintained in such a way as to reduce side-casting of material into streams or watercourses.

3. Stormwater Quality Policies

- a. Promote land use policies and best management practices that protect the quality of stormwater runoff where a receiving waterbody is a perennial or intermittent stream with habitat for native aquatic species.
- b. Continue to comply with Clean Water Act stormwater permit requirements.
- c. Continue to operate and manage County-owned facilities and properties in a manner that does not degrade stormwater quality.
- d. 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.
- e. Continue to implement the Watercourse and Riparian Habitat Protection and Mitigation Requirements Ordinance to protect endangered natural riparian areas.
- f. Continue to comply with requirements for pollutant control at landfills.

B. Natural Resources

1. Conservation Lands System (CLS)

The Environmental Planning Element calls for analysis, policies and strategies to address anticipated effects of implementation of plan elements on natural resources. Policies and strategies under this plan element are designed to have countywide applicability. Conservation actions are to be encouraged, and protection of biological resources is considered an essential component of land-use planning.

The Conservation Lands System (CLS) is designed to protect biodiversity and provide land use guidelines consistent with the conservation goal of the Sonoran Desert Conservation Plan (SDCP). The overarching purpose of the SDCP is to:

Ensure the long-term survival of the full spectrum of plants and animals that are indigenous to Pima County through maintaining or improving the habitat conditions and ecosystem functions necessary for their survival.

The CLS was constructed according to the most current tenets of conservation biology and biological reserve design. The CLS:

- perpetuates the comprehensive conservation of vulnerable species;
- retains those areas that contain large populations of focal vulnerable species;
- provides for the adjacency and proximity of habitat blocks;
- preserves the contiguity of habitat at the landscape level; and
- retains the connectivity of reserves with functional corridors.

The collective application of these individual tenets produces a CLS that retains the diverse representation of physical and environmental conditions, preserves an intact functional ecosystem, minimizes the expansion of exotic or invasive species, maximizes the extent of roadless areas, and minimizes fragmentation. Implementation of the CLS not only conserves those biological resources that exist today but, because of its landscape focus, preserves the future ebb and flow of resources essential to a healthy functioning ecosystem. The seven CLS conservation land categories reflect relative values of biodiversity for various lands across the landscape.

Based on the science of the SDCP with participation and oversight by the SDCP Science Technical Advisory Team (STAT), seven CLS conservation land categories (CLS categories) were created, defined, and mapped. Each category has an associated conservation guideline policy.

a. **General Application of CLS**

CLS category designations and Conservation Guidelines policies apply to land uses and activities under the jurisdiction of Pima County and Pima County Flood Control District. Application of these designations or guidelines shall not alter, modify, decrease or limit existing and legal land uses, zoning, permitted activities, or management of lands. These policies apply to new rezoning and specific plan requests, time extension requests for rezonings, requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes, requests for Comprehensive Plan amendments, Type II and Type III conditional use permit requests, and requests for waivers of the subdivision plat requirement of a zoning plan. Implementation of these policies shall achieve the level of conservation necessary to protect a site's conservation values, preserve landscape integrity, and provide for the movement of native fauna and pollination of native flora across and through the landscape. New applications subject to this policy will be evaluated against the following conservation guidelines for the CLS categories, where applicable, to determine their appropriateness:

b. **Important Riparian Areas**

- 1) These areas are characterized by hydro-riparian, meso-riparian and xero-riparian biological communities. Hydro-riparian communities generally exist in areas where vegetation is supported by perennial watercourses or springs. Meso-riparian communities generally exist in areas where vegetation is supported by perennial or intermittent watercourses or shallow groundwater. Xero-riparian communities generally exist in areas where vegetation is supported by an ephemeral watercourse.

Important riparian areas are valued for their higher water availability, vegetation density, and biological productivity. In addition to the high inherent biological value of these water-related communities, important riparian areas including their associated upland areas provide a framework for linkages and landscape connections. Important riparian areas are essential elements in the CLS.

2) Conservation Guidelines: At least 95 percent of the total acreage of lands within this designation shall be conserved in a natural or undisturbed condition. Every effort should be made to protect, restore and enhance the structure and functions of Important Riparian Areas, including their hydrological, geomorphological and biological functions. Areas within an Important Riparian Area that have been previously degraded or otherwise compromised may be restored and/or enhanced. Such restored and/or enhanced areas may contribute to achieving the 95 percent conservation guideline for Important Riparian Areas.

c. Biological Core Management Areas

1) This category identifies lands that fulfill the five tenets used to construct the CLS and which provide greater biological diversity than Multiple Use Management Areas. These areas are primarily distinguished from other lands within the CLS by their potential to support high value habitat for five or more priority vulnerable species as identified by the SDCP.

2) Conservation Guidelines: At least 80 percent of the total acreage of lands within this designation shall be conserved as undisturbed natural open space. As such, land-use changes will result in 4:1 land conservation (i.e., four acres conserved for every one acre developed) and may occur through a combination of on- and/or off-site conservation inside the Biological Core Management Area or Habitat Protection Priority Areas. For purposes of this policy, Habitat Protection Priority Areas are those areas referenced and mapped as part of the 2004 Conservation Bond Program. The 4:1 mitigation ratio will be calculated according to the extent of impacts to the total surface area of that portion of any parcel designated as Biological Core Management Areas. Development shall be configured in the least sensitive portion(s) of the property. Area(s) of undisturbed natural open space will be configured to include on-site conservation values and preserve the movement of native fauna and pollination of native flora across and through the landscape. Land use and management within these areas shall focus on the preservation, restoration, and enhancement of native biological communities. Land uses appropriate for these areas must retain and improve conditions for on-site conservation values, preserve the movement of native fauna and pollination of native flora across and through the landscape, and preserve landscape integrity. A transfer of development rights may be used in order to secure mitigation lands.

d. Scientific Research Areas

1) This designation identifies lands currently managed for scientific research: the Santa Rita Experimental Range and the University of Arizona Desert Laboratory (at Tumamoc Hill). Land uses and management within these areas focus on balancing conservation, restoration, and enhancement of natural communities in support of scientific research on the environment and natural resources (e.g., monitoring ecological change, measuring effects of experimental grazing methods).

- 2) Conservation Guidelines: Scientific Research Areas should continue to be managed for the purpose of scientific research on the environment and natural resources. Scientific research activities should minimize any long-lasting impacts that may affect adjacent or nearby CLS lands. Any land-use changes subject to Pima County jurisdiction should achieve the conservation goals of the underlying CLS category.
- e. Multiple Use Management Areas
- 1) This category identifies those lands that fulfill the five tenets used to construct the CLS, but which are not as biologically rich as those lands designated as Biological Core Management Areas. These areas are primarily distinguished from other lands within the CLS by their potential to support high value habitat for three or more priority vulnerable species as identified by the SDCP.
 - 2) Conservation Guidelines: At least 66 ⅔ percent of the total acreage of lands within this designation shall be conserved as undisturbed natural open space. As such, land-use changes will result in a 2:1 land conservation (i.e., two acres conserved for every one acre developed) and may occur through a combination of on- and off-site conservation inside the Multiple Use Management Area or any more protective category of the CLS, including Habitat Protection Priority Areas. For purposes of this policy, Habitat Protection Priority Areas are those areas referenced and mapped as part of the 2004 Conservation Bond Program. The 2:1 mitigation ratio will be calculated according to the extent of impacts to the total surface area of that portion of any parcel designated as Multiple Use Management Areas. Development shall be configured in the least sensitive portion(s) of the property. Area(s) of undisturbed natural open space will include on-site conservation values and facilitate the movement of native fauna and pollination of native flora across and through the landscape. Land use and management goals within these areas shall focus on balancing land uses with conservation, restoration, and enhancement of native biological communities. Land uses appropriate for these areas must facilitate the movement of native fauna and pollination of native flora across and through the landscape, maximize retention of on-site conservation values, and promote landscape integrity. Additional conservation exceeding 66⅔ percent will be encouraged through the use of development-related incentives and may utilize undisturbed natural open space on individual lots. A transfer of development rights may be used in order to secure lands utilized for mitigation, restoration, and/or enhancement purposes.
- f. Agriculture In-Holdings within the Conservation Lands System
- 1) This designation denotes those lands utilized for agricultural purposes and lands where agricultural uses have been abandoned. Agricultural land uses, in general, are more conducive to the movement of native fauna and functional pollination processes than other lands supporting higher intensity uses. Intensifying the land use of these areas could compromise landscape integrity, promote the spread of exotic species, and otherwise compromise the biodiversity of adjacent or nearby CLS lands.

- 2) Conservation Guidelines: Intensifying land uses of these areas will emphasize the use of native flora, facilitate the movement of native fauna and pollination of native flora across and through the landscape, and conserve on-site conservation values when they are present. Development within these areas will be configured in a manner that does not compromise the conservation values of adjacent and nearby CLS lands.

g. Special Species Management Areas

- 1) These are areas defined as crucial for the conservation of specific native floral and faunal species of special concern to Pima County. Currently, three species are designated as Special Species: cactus ferruginous pygmy-owl, Mexican spotted owl, and southwest willow flycatcher. Special Species and associated Conservation Guidelines may be added or deleted in the future based on the best available regional scientific information as developed by the Science Technical Advisory Team and added to or deleted from the Special Species Management Areas as shown on the CLS map. Such additions and/or deletions will be processed as a comprehensive plan amendment. Land use and management within these areas will focus on conservation, restoration, and enhancement of habitat for these species.
- 2) Conservation Guidelines: At least 80 percent of the total acreage of lands within this designation shall be conserved as undisturbed natural open space and will provide for the conservation, restoration, or enhancement of habitat for the affected Special Species. As such, land use changes will result in 4:1 land conservation (i.e., four acres conserved for every one acre developed) and may occur through a combination of on- and off-site conservation inside the Special Species Management Area. The 4:1 mitigation ratio will be calculated according to the extent of impacts to the total surface area of that portion of any parcel designated as Special Species Management Area. Development shall be configured in the least sensitive portion(s) of the property. Area(s) of undisturbed natural open space will be configured to facilitate the movement of the relevant Special Species through the landscape and will include those on-site conservation values essential to survival of the relevant Special Species. A transfer of development rights may be used in order to secure mitigation lands.

h. Critical Landscape Connections

- 1) These are broadly defined areas that provide connectivity for movement of native biological resources but which also contain potential or existing barriers that tend to isolate major conservation areas. Specifically, these regional-scale areas are located:
 - (1) Across the I-10 / Santa Cruz River corridors in the northwest;
 - (2) Between the Catalina and Tortolita Mountains;
 - (3) Across the I-10 corridor along Cienega Creek in the east;
 - (4) Across the I-19 and Santa Cruz River corridors in southern Pima County;
 - (5) Across the Garcia strip extension of the Tohono O'odham

Nation; and
(6) Across the Central Arizona Project canal in Avra Valley.

Roads, other infrastructure services, and residential and commercial land uses within these areas, depending on configuration, can result in habitat loss and fragmentation that inhibits the movement of native fauna and interrupts the pollination processes of native flora.

- 2) Conservation Guidelines: Land-use changes in these broadly defined areas should protect existing biological linkages. Where they occur, barriers to the movement of native fauna and pollination of native flora across and through the landscape should be removed and fragmented corridors of native biological communities should be restored. Opportunities to remove barriers and restore corridor connectivity may arise as part of other, non-land use related activities (e.g., new construction for or upgrade of infrastructure services). Such opportunities should be pursued. High priority shall be given to identifying, preserving, and re-establishing the connection between native biological communities especially where natural connectivity is most constrained.
 - i. Adherence to CLS Conservation Guidelines
Adherence to Conservation Lands System Guidelines will protect against the loss of conservation values and landscape integrity through in-place preservation and restoration or enhancement of degraded or otherwise compromised natural resources. Urban development will occur in a manner that retains conservation values at both the micro and macro landscape scale by minimizing impacts to site-specific sensitive conservation values, maximizing landscape continuity, facilitating the movement of native fauna and pollination of native flora across and through the landscape, promoting the long-term diversity of native flora and fauna, and preserving the viability of the CLS.
 - j. Project Inventory and Analysis
Application and review of requests for the establishment of land use policy (comprehensive plan amendments) and the implementation of land use policy (rezonings) that require approval by the Board of Supervisors (Board) shall include an inventory and assessment of the site's conservation values and context within an area-wide landscape as well as an analysis of the biological impact of the requested land use change.
 - 1) Comprehensive Plan Amendments
 - a) Applications for comprehensive plan amendments will, at a minimum, be reviewed for the following parameters:
 - The site's landscape context as it relates to the biological and built environments; and
 - The proposed amendment's consistency with the existing infrastructure service area or land use planning and infrastructure studies that address the logical expansion of infrastructure services.

- b) Requests for comprehensive plan amendments that seek to increase the intensity of allowable land uses within the CLS may be approved provided there is adequate demonstration that intensifying the land use designation will:
 - Preserve the integrity of the CLS; and
 - Promote development that is consistent with the existing infrastructure service area or land use planning and infrastructure studies that address the logical expansion of infrastructure services.
- c) Special area policies may be applied to govern or otherwise direct subsequent rezoning to specifically address conservation of certain landscape attributes.

2) Rezoning Activities

- a) Applications for rezoning will, at a minimum, be reviewed for the following parameters:
 - The site's landscape context as it relates to the biological and built environments;
 - The on-site presence of or potential to support highly valued native floral and faunal species; and
 - The occurrence of physical characteristics that contribute to biodiversity.
- b) Requests for rezoning that would result in new high-intensity residential uses, commercial and industrial uses, or other high intensity land uses within the CLS may be permitted provided there has been adequate demonstration that the new land use will:
 - Preserve the integrity of the CLS;
 - Actively contribute to the conservation of highly valued native floral and faunal species; and
 - Provide for development that achieves at least as much conservation as development under the existing zoning.

k. Application of Conservation Guidelines

- 1) The Conservation Guideline for the associated CLS designation shall apply to the total acreage of the site that lies within the boundaries of that designation. If a CLS designation applies to a portion of a site, Conservation Guidelines for that designation will apply only to that portion of the site affected by that category. For purposes of this policy, site is defined as a single lot or combination of contiguous lots. If more than one CLS category applies to all or a portion of a site, the more protective Conservation Guideline will apply to the affected portion.

- 2) Those conservation lands that are to be reserved from development, or which are provided as mitigation, shall be conserved and managed, in perpetuity, for the benefit of the natural resources. Various means may be utilized to protect conservation or mitigation lands including, but not limited to, the transfer of deeded property to Pima County, pending approval by the Board of Supervisors, or other conservation entities and the granting of conservation easements. Land conserved through application of the CLS shall be established as separate, natural open space parcel(s) from the development area. Residents, or associations of residents, of a development may not serve as the sole administrator or enforcement entity for the management and protection of those conservation or mitigation lands.

- 3) The authority to increase, reduce, exempt, or otherwise modify the full application of the Conservation Guidelines for proposed land use changes that require the setting of land use policy (comprehensive plan amendments) or its implementation (rezoning) lies solely with the Board of Supervisors. Requests to modify or exempt the full application of the Conservation Guidelines will be deliberated on a case-by-case basis. Staff may review and make recommendations on proposals that seek to modify the full application of the Conservation Guidelines. The full application of the Conservation Guidelines may be modified as part of a decision that establishes land use policy (comprehensive plan amendment). The full application of the Conservation Guidelines may also be modified as part of a decision that implements land use policy (rezoning requests). Applicants seeking to modify the full application of the Conservation Guidelines must demonstrate that the proposed land use change is consistent with the goals of the SDCP, does not adversely impact the landscape integrity of the CLS, retains the ability of native fauna and pollination of native flora to move through and across the landscape, and will protect and enhance or restore conservation values.
 - a) Should the Board, as part of a land use policy decision, reduce or otherwise adjust a comprehensive plan amendment from complying with a Conservation Guideline(s), then the adjustment will be applied to any subsequent implementation of that policy through rezoning. Applicants seeking to reduce or otherwise adjust the full application of a Conservation Guideline(s) as part of a proposed comprehensive plan amendment or rezoning must demonstrate that the proposed land use change is consistent with the goals of the SDCP, does not adversely impact the landscape integrity of the CLS, retains the ability of native fauna and pollination of native flora to move through and across the landscape, and will protect and enhance or restore on-site conservation values.

 - b) Should the Board, as part of a land use policy decision, exempt a comprehensive plan amendment from complying with a Conservation Guideline(s), then the exemption will be applied to any subsequent implementation of that policy through rezoning.

Applicants seeking to exempt a comprehensive plan amendment or rezoning from compliance with the Conservation Guidelines shall demonstrate that the exemption is necessary to accommodate public health and safety.

CONSERVATION LANDS SYSTEM IMPLEMENTATION STRATEGIES

- Develop or revise Site Analysis inventory requirements for comprehensive plan amendment and rezoning applications to identify the presence of conservation values and identify areas most suitable for development.
- Develop or revise Biological Impact Report requirements for comprehensive plan amendment and rezoning applications in order to analyze the proposed land use change. Biological Impact Reports will evaluate and compare the effects of the proposed land use against the effects of development without the proposed land use.
- Standardize staff evaluation of comprehensive plan amendment and rezoning applications to determine application's conformance with CLS, consistency with existing or logical expansion of infrastructure, and long-term conservation of highly valued natural resources.
- Develop guidance and criteria for restoration, enhancement, and mitigation proposals. Forward guidance and criteria to the Board of Supervisors for approval.
- Develop site design guidance and other site planning recommendations for environmentally-sensitive development.
- Develop and implement development-related incentives appropriate for use in Multiple Use Management Areas. Incentives may, if appropriate, be established through revision of allowable zoning districts, overlays, comprehensive plan land use plan designations;
- Develop policies and procedures to govern transfer of development rights;
- Review and revise existing environmentally-related zoning code ordinances to create incentives accessible to existing and legal land uses, zoning, and permitted activities to promote broader support of CLS and goals of the Sonoran Desert Conservation Plan. Ordinances appropriate for review and revision may include:
 - Native Plant Preservation Ordinance (18.72);
 - Buffer Overlay Zone Ordinance (18.67);
 - Cluster Development Option (18.09.040);
 - Conservation Subdivision Requirements (18.09.100);
 - Hillside Development Zone Ordinance (18.61);
 - Modification of Development Standards in Riparian Areas (18.07.080);
 - Landscape and Bufferyard Ordinance (18.73); and
 - Off-Street Parking & Loading Standards (18.75)

2. Regional Trail System

The proposed regional trail system, as identified in the Eastern Pima County Trail System Master Plan (EPCTSMP) is a blueprint for a public trails network. 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 Eastern Pima County Trail System Master Plan will require a collaborative effort between Pima County, local jurisdictions and land managing agencies.

- a. Dedication of High Priority Trail System Elements: High priority trail system elements, as identified in the EPCTSMP and approved by the Department of Natural Resources, Parks and Recreation, shall be given a high priority for acquisition by Pima County for the regional trail system. Based on the priority status of the trail system element, as determined by the Department of Natural Resources, Parks and Recreation, dedication of particular trail system elements shall be required as a condition of rezoning approval. Examples of high priority trail system elements include, but are not limited to, primary trails identified in the EPCTSMP, trail corridors that link individual public lands units, connect public lands with existing or planned river parks, create local trail linkages to parks, schools, or activity centers, or provide public access to established public lands trails.
- b. Regulatory flood-prone areas, which are dedicated as drainage easements to the Flood Control District and which are identified as candidate trails on the EPCTSMP, shall also be dedicated to Pima County to allow additional uses such as recreational and equestrian activities.
- c. Dedication of high priority trail corridors, trail access points, and associated staging areas for public use shall be negotiated by the Department of Natural Resources, Parks and Recreation. Any fencing of the trail corridor shall meet the specifications of the Department of Natural Resources, Parks and Recreation and said specifications shall be included as a condition of rezoning or specific plan approval.
- d. Trails Access--Vehicular Access to Public Land Trailheads: Vehicular access to trailheads at public preserve boundaries shall be promoted, based on a determination by the public lands manager and the Department of Natural Resources, Parks and Recreation. In those cases where road access to public lands trailheads is deemed critical, dedication of public road rights-of-way and associated parking and equestrian staging areas shall be required as a condition of rezoning or specific plan approval.
- e. Trails within the Project Site: (1) Where appropriate to the scale and nature of the planned development and its location relative to inventoried trail system elements, trails and paths within the project site shall connect with the regional system to provide open space and recreational opportunities for planned community residents. The developer and the

Department of Natural Resources, Parks & Recreation will determine application of this policy; (2) If the project site contains a route identified on the EPCTSMP that provides irreplaceable access to a public preserve boundary, public access through the site shall be provided.

- f. Concurrency of infrastructure and service delivery capability for parks and recreation, including trail system elements, shall be reviewed by staff for rezoning and specific plan-related requests, as per Regional Plan Policies, 7. Cost of Development Element Regional Plan Policies, C.1.

7. COST OF DEVELOPMENT ELEMENT REGIONAL PLAN POLICIES

- A. Establish Urban Service Area and Urban Expansion Area districts which collectively cover areas within the urban area.
1. Except as noted in A.2 below, as a means of implementing the establishment of Growth Areas and urban areas, Urban Service Area districts should be established, using the existing sewer system service area as a starting point. These districts would identify where public facilities will be provided in the near and far future and at what levels. Thus, for example, the County may focus its efforts at providing necessary infrastructure to the identified Growth Areas, while allowing infrastructure improvements in other urban areas. It may also establish time lines when facilities will be expanded into areas which may become urbanized in the future.
 2. While sewer system service area expansion is a useful tool in establishing Urban Expansion Area districts, it is County policy to assess sewer system connection fees on a regional basis using a system that normalizes capacity increase costs over the entire system and allocates those costs to users seeking use of the additional capacity. This ensures that all County ratepayers pay for capacity at a reasonable, affordable, and equitable rate.

For new developments requiring sewer service, the developer pays the cost of installing new sewers within the development and of connecting the development to the existing public sewer system. The County employs a system of connection fee discounts and credits to reimburse developers who install public sewer system improvements beyond those needed to serve their developments.

- B. Determine minimum Level-of-Service Standards, specific to each Urban Service Area Urban Expansion Area, for selected public infrastructure and facilities.
- C. Establish a formal Concurrency Management System:
1. Proposed rezonings (including requests for waiver of the platting requirements of zoning plans) and specific plans, and requests for time extensions or modification of conditions for existing rezonings and specific plans, shall be reviewed for concurrency of infrastructure and service delivery capability to accommodate the proposed developments. Staff reports for the aforementioned process requests shall, as applicable, address adequacy of infrastructure and service delivery capability for transportation, flood control, wastewater, air quality, parks and recreation, water, and school services. As part of the staff report analysis for these requests, Public Works Departments shall follow County-wide Concurrency Review Process and Criteria provisions for rezonings and specific plans authorized by the County Administrator.
 2. Establish a formal permit review procedure to allow the County to determine and coordinate the individual and cumulative impacts each proposed development request will have on each of the minimum level-of-service standards identified for the urban service/expansion area where the development request is located.

- D. Establish a scale of development assessment fees to finance necessary public infrastructure and facilities. Once the built-out projection of a given Urban Service Area or Urban Expansion Area has been used to calculate its total public infrastructure requirement, a total cost estimate for the area's public infrastructure can be completed. This total infrastructure cost estimate can then be used to establish equitable developer-assessment fees for each area.

8. MILITARY AIRPORT REGIONAL PLAN POLICIES

Comprehensive Plan Regional Plan Policies state County commitments to current and future actions and programs. Some regional plan policies are implemented through the rezoning process and describe various standards which apply county wide, while some are implemented through other programs or actions. Most of the policies below are from Chapter 6 (Implementation Program) of the Davis-Monthan Air Force Base Joint Land Use Study (JLUS), describing a wide range of actions and strategies. The remainder of the policies are based on the February 2004 Board resolution, reiterating the County commitment to work proactively with the base and other entities to implement the DMAFB JLUS and take other actions to protect the interests of the community and future missions of the base, as necessary.

A. Findings of the Board of Supervisors

The following findings of the Board of Supervisors contained in Resolution 2004-17, dated February 17, 2004, provide the basis for Comprehensive Plan Military Airport Regional Plan Policies:

1. Pima County has a long history of cooperation and collaboration with Davis-Monthan Air Force Base, resulting in proactive and progressive planning and zoning activities.
2. As growth occurs, Pima County commits to working diligently towards ensuring the development of land uses compatible with the long-term sustainability of operations at Davis-Monthan Air Force Base.
3. Residents should be protected to a reasonable extent from continued long-term exposure to high levels of noise and from increasing levels of noise.
4. Citizens should be protected to a reasonable extent from the high level of risk associated with over-flights and the conveyance of live ordinance that are integral to Davis-Monthan Air Force Base operations.
5. Recommended land use compatibility zones have been defined by the *Davis-Monthan Air Force Base / Tucson / Pima County Joint Land Use Study*, February 2004.

B. Pima County Policies

1. Pima County will protect the public health, safety, and welfare by consideration of the long-term sustainability of operations at Davis-Monthan Air Force Base and the effects on residents of continued long-term exposure to high levels of noise and of the high level of risks associated with over-flights and the conveyance of live ordinance as decision making components in all discretionary development decisions.
2. Pima County staff will provide timely notification to Davis-Monthan Air Force Base of all discretionary development requests within the "Territory within the Vicinity of Davis-Monthan Air Force Base military airport," A.R.S. §28-8461.

3. Pima County staff will incorporate the comments from Davis-Monthan Air Force Base for formal consideration by the Planning and Zoning Commission and the Board of Supervisors in the hearing process for consideration of discretionary development requests.
4. The Pima County Board of Supervisors will work toward the implementation of the recommendations contained within the *Davis-Monthan Air Force Base / Tucson / Pima County Joint Land Use Study*, February 2004.
5. Pima County will integrate the recommended JLUS Compatibility Plan into its Comprehensive Plan, and will show all regulatory zones and boundaries related to Davis-Monthan Air Force Base on its Comprehensive Plan Maps, including High Noise Areas, Accident Potential Zones, Approach-Departure Corridors, Davis-Monthan Air Force Base boundary, and "Territory Within the Vicinity of Davis-Monthan Air Force Base military airport," A.R.S. §28-8461.

C. Joint Land Use Study Implementation Program Plan Introduction

The *February 2004 Davis-Monthan Air Force Base / Tucson / Pima County Joint Land Use Study* (JLUS) is intended to guide the decisions made by a variety of public and private entities in relation to compatible land use around DMAFB. In addition to the State of Arizona and its agencies, DMAFB, local jurisdictions, and private interests within the area can contribute to the implementation of the recommendations of the JLUS.

The Compatible Land Use Plan presented in Chapter 5 of the JLUS defines recommended compatible uses and performance standards that are intended to be used by Pima County and the City of Tucson and to guide development in order to protect Davis-Monthan's mission and its economic benefits, while increasing the economic diversity and viability of the community by facilitating the development of other key sectors in ways that are compatible with DMAFB mission. Implementation of the Compatible Use Plan is fundamental to achieving these goals, and integration of land use recommendations into general and comprehensive plans and zoning ordinances is a key element in implementing the JLUS. However, successful implementation requires that other tools be utilized to achieve the JLUS goals. These tools are contained in the implementation program presented in the following sections.

This implementation program has been developed in recognition of the ongoing planning by DMAFB and jurisdictions, as well as considering the divergent viewpoints expressed through the public participation process, and the need to present strategies that realistically accomplish the goal of preserving Davis-Monthan Air Force Base and its mission. While the changing nature of economics and politics may change the scope and timing of the implementation strategies, these recommendations provide the framework and guidance for achieving long-term compatibility of development with DMAFB and its mission.

The following sections present the recommended JLUS Implementation Strategies. Three aspects of implementation that are integral to the process follow a brief description of each strategy. The first aspect of implementation, "Priority/Timing," establishes the importance of the action and the time frame within which the Strategy is to be effected, as follows:

- High - by January 2005,
- Moderate -- within 2 - 3 years, that is by January 2007, or
- Low - within 4 - 5 years; that is by January 2009.

The second aspect of implementation, "Responsible Party(s)," indicates the governmental agency, local political jurisdiction, and other parties responsible for implementing the Strategy. The third aspect of implementation, "Evaluation Measures," presents recommendations concerning review and monitoring to facilitate adjustments if the strategy is not meeting its desired results. One of the appropriate functions for the State would be to monitor the implementation and effectiveness of the recommended measures through the Arizona Department of Commerce or other State agency.

D. Joint Land Use Study Implementation Strategy Policies

1. Joint Land Use Study Recognition

While the JLUS is not adopted in the traditional sense by local jurisdictions and is not a legal document, the completion of the JLUS and its status as guidance for land use decisions in the vicinity of Davis-Monthan Air Force Base should be recognized by Pima County, the City of Tucson and DMAFB. Appendix C contains a model resolution for consideration by Pima County and the City of Tucson.

- Priority/Timing - High
- Responsible Party(s) - Pima County, City of Tucson, and Davis-Monthan AFB
- Evaluation Measures - Resolution or similar official acknowledgement adopted in 2004

Note: Resolutions supporting recommendations of the February 2004 JLUS were adopted by the Pima County Board of Supervisors and Tucson City Council in February 2004.

2. Revision of Airport Environs Zone Plans and Ordinances

The Compatible Land Use Plan of the JLUS study defines compatible land uses for Accident Potential Zones APZ-I, APZ-II, Approach-Departure Corridors and high-noise zones around Davis-Monthan Air Force Base. The Airport Environs Zone plans and ordinances of Pima County and the City of Tucson are the primary means of implementing the recommended compatible uses. Both the County and City should review their respective plans and ordinances to identify changes that are necessary to implement recommended compatible uses and prepare necessary amendments to the plans and ordinances for consideration and adoption by their respective governing bodies. The County and City should also utilize the notional noise contours, as recommended in the JLUS, as the basis for defining high-noise zones.

- Priority/Timing - High
- Responsible Party(s) - Pima County and City of Tucson
- Evaluation Measures - Plan and Zoning Ordinance amendments adopted in 2004

3. Support for Recommendations of the Governor’s Military Facilities Task Force

The December 2003 Governor’s Military Facilities Task Force made recommendations to the Governor relating to actions needed at the federal, State and local levels to ensure the long-term viability of military installations and resources. A number of these recommendations, including the designation of dedicated funding to assist military installation preservation and expansion projects, and the expansion of county planning and zoning authority (equivalent to current municipal authority) to enable them to better manage growth and development in areas impacted by military airports, involve legislative action and are of particular interest for implementing the JLUS recommendations for Davis-Monthan Air Force Base. The County and City, along with the DM-50 and other interested groups should actively support the implementation of the recommendations of the Governor’s Military Facilities Task Force at the State level.

- Priority/Timing - High
- Responsible Party(s) - Pima County, City of Tucson, DM-50, and other organizations
- Evaluation Measures - Enactment of the legislative recommendations of the Governor’s Task Force

4. Support for Recommendations of the State Trust Land Reform Group

The State Trust Land Reform group is considering a recommendation that a mechanism be developed to allow for the exchange of land in support of planning and disposition of State Trust land in support of the long-term preservation of Arizona’s military installations. The ability for the State Trust to engage in land exchanges and the ability to transfer densities and land uses between various State Trust lands is potentially an important element for achieving compatibility in the development of State Trust lands in the Approach-Departure Corridor. As the mechanism to allow this will likely require legislative action and/or a vote of the electorate to modify the State Constitution, Pima County, the City of Tucson, DM-50, and other interested organizations should actively support the recommendations of the State Trust Land Reform Group.

- Priority/Timing - High
- Responsible Party(s) - Pima County, City of Tucson, DM-50 and other organizations
- Evaluation Measures - Enactment of the legislative recommendations of the State Lands Reform Group

5. Ongoing Organization for JLUS Implementation

Efficient and effective communication between, Pima County, the City of Tucson, area landowners, other local organizations and Davis-Monthan AFB is critical to the successful implementation of the JLUS. To provide a means to maintain communication and coordination as the JLUS recommendations are carried out, the City, County and DMAFB should consider the formation of an ongoing coordinating committee. This committee, in addition to representatives from the County, City and DMAFB, should include representatives from area landowners and other local organizations that have an interest in compatible land use around DMAFB. This committee could also serve as the interface with the State Military Affairs Commission proposed by the Governor's Military Facilities Task Force.

- Priority/Timing - High
- Responsible Party(s) - Pima County, City of Tucson, Davis-Monthan AFB, area landowners and other local organizations
- Evaluation Measures - Formation of committee by end of 2004; Operation of committee - Ongoing

6. Davis-Monthan AFB Community Initiatives Team

As a means of maintaining effective liaison between with the surrounding community, the base should consider the formation of a dedicated "Community Initiatives Team." Made up of individuals with an understanding of base operations as well as development issues, this team, working as part of the base's command structure, would focus on land use compatibility issues, and would serve as a consistent mechanism for outreach and input by surrounding communities on environmental and growth issues. The team would also be tasked with working at the staff level with other implementing organizations during the JLUS implementation process.

- Priority/Timing - High
- Responsible Party(s) - Davis-Monthan AFB
- Evaluation Measures - Formation of Team by end of 2004; Operation of Team Ongoing

7. Department of Defense Land Acquisition

Pima County, the City of Tucson, and other interested groups such as DM-50 should work with the State's Congressional delegation to obtain appropriations in the Department of Defense's budget dedicated to the purchase of critical parcels around the base, especially under the primary flight paths in the APZs and Approach-Departure Corridor. In addition to working for an appropriation in the next budget year (2005), efforts should be made for additional appropriations in the years following the 2005 Base Realignment and Closure (BRAC) process.

- Priority/Timing - High for the initial appropriation; moderate for subsequent appropriations
- Responsible Party(s) - Pima County, City of Tucson, DM-50, and other organizations, Arizona Congressional delegation
- Evaluation Measures - Appropriated funding in the Department of Defense (DOD) budget

8. Department of Defense Purchase of Conservation Easements

The Department of Defense is implementing a program of purchase of conservation easements around military installations in order to address environmental and encroachment issues. The “Bob Stump National Defense Authorization Act” for Fiscal Year 2003 (P.L. 107-314) provided new statutory authority that permits DOD to enter into agreements with eligible entities to address the use or development of real property near a military installation, and to accept on behalf of the United States Government any property or interest acquired pursuant to such agreements. The Department of Defense is working to determine how this new authority will be used, and each of the Military Departments is developing specific program guidance.

In general terms the new authority includes the following specific elements:

- Eligible entities are States, political subdivisions or private conservation organizations. The amendment provides for the acquisition by an eligible entity of all right, title, interest in and to any real property, and sharing by the Government and the entity in acquisition costs. The amendment also requires the entity, upon request of the DOD, to transfer to the Government the minimum property or interests necessary to avoid encroachment from the use or management of the property.
- Department of Defense funds may be used for such agreements for purchase from willing sellers. It is important to note that the amendment does not provide specific funding for these purchases. The Department of Defense will determine if, and how much funding will be available for this initiative.
- The amendment also permits DOD to convey surplus real property to states or other eligible entities for conservation of natural resources.
- Pima County and the City of Tucson should work with Davis-Monthan Air Force Base and the DOD to acquire conservation easements in appropriate locations within the Approach-Departure Corridors and APZs.
 - Priority/Timing - High to Moderate
 - Responsible Party(s) - Pima County, City of Tucson, Davis-Monthan Air Force Base, Department of Defense and private landowners
 - Evaluation Measures - Completed purchase of conservation easements

9. Aerospace Maintenance and Regeneration Center (AMARC) Expansion
Pima County and the City of Tucson should continue to facilitate the land acquisition that has been proposed involving private landowners and Davis-Monthan Air Force Base for the expansion of the AMARC. This would result in approximately 600 acres of land in one of the APZs being secured for a compatible land use.

- Priority/Timing - High
- Responsible Party(s) - Pima County, City of Tucson, Davis-Monthan Air Force Base, and private landowners
- Evaluation Measures - Completed transfer of title of land for AMARC expansion

10. University of Arizona Science and Technology Park Development
Pima County should continue to work with the University of Arizona to develop the Science and Technology Park in a way that provides compatibility with the base, while achieving the objective of developing the Park as a major economic driver for the Tucson area. Key elements to achieve compatibility include use of density transfers within the Park to shift employee density from the northern part of the park to the southern part; and limiting development of the Park to employment-generating uses within the first 30,000 feet of the Approach-Departure Corridor (specifically, that a hotel not be developed within this area and that the existing high school use be relocated)

- Priority/Timing - High to Moderate
- Responsible Party(s) - Pima County and University of Arizona
- Evaluation Measures - Compatible Development under the Science and Technology Park's Master Plan

11. Land and Water Conservation Fund
The Land and Water Conservation Fund (LWCF) was established by Congress in 1964 to create parks and open spaces, protect wilderness, wetlands, and refuges, preserve wildlife habitat, and enhance recreational opportunities. The LWCF has a matching grants program that provides funds to states for planning, developing and acquiring land and water areas for state and local parks and recreation areas. These funds could be used to match state monies to purchase critical parcels of land around the Base for use as conservation/open space.

- Priority/Timing - High
- Responsible Party(s) - Federal and State governments
- Evaluation Measures - Use of land and water conservation funds as appropriate

12. Military Installation Fund
One of the recommendations of the Governor's Military Facilities Task Force is the creation of a Military Installation Fund (MIF), to be administered by the State and funded by dedicated revenue at the State level. The MIF, as envisioned by the Task Force, would provide grants to

local governments for land acquisition or other activities to preserve or expand military installations. If this fund is established, the County and City should consider use of MIF funding to support acquisition of land or development rights in critical areas (most likely in combination with other funding), or for other activities that would support compatible land use.

- Priority/Timing - High to Moderate
- Responsible Party(s) - Pima County, City of Tucson and State of Arizona
- Evaluation Measures - Use of MIF funds as provided for in grant

13. Land Acquisition through Bonds

Pima County and the City of Tucson should consider a bond issue for purchasing land in critical areas of the APZs and Approach-Departure Corridors. Priority for purchase should be given to lands under the primary flight paths. Communities that pursue land purchase can save money by using the Greater Arizona Development Authority (GADA), which is empowered by state statute to sell bonds at a lower interest rate by subsidizing the costs of issuance. All of the municipalities surrounding the military installations/facilities are eligible for the program. Participation in the GADA program requires that there be an estimate of the total cost of the land to be purchased and a determination that GADA has enough capacity to loan.

- Priority/Timing - Moderate to Low
- Responsible Party(s) - Pima County, City of Tucson and Greater Arizona Development Authority
- Evaluation Measures - Issuance of bonds for acquisition of land

14. Purchase of Development Rights

An alternative to the purchase of land is the purchase of development rights, which would be negotiated with the owner of the development rights. Participation in the purchase of development rights would be voluntary on the part of the owner. This type of acquisition may be effective in appropriate situations and areas, particularly where the issue of compatibility involves density of development rather than the type of land use proposed. When development rights are purchased, a landowner is paid fair market value for the rights that are purchased. The value of the purchased rights is roughly equal to the value of the land without any special restriction less the value of the land with the land use restrictions. The use of this strategy would be dependent on securing funding for the purchase through one of the other strategies identified in this chapter.

- Priority/Timing - High to Moderate
- Responsible Party(s) - Federal government, State government, and local jurisdictions
- Evaluation Measures - Development Rights are purchased

15. Transfer of Development Rights

The use of Transfer of Development Rights (TDRs) can reduce the intensity and density of use in areas identified as significant to preserving the base's mission while increasing density in other areas by encouraging local political jurisdictions to create incentives for developers to use the density transfer technique in appropriate situations and areas in proximity to the base. The transfer of development rights is similar to the purchase of development rights, except rather than a public agency buying development rights, which are then in effect "retired," the landowner is compensated by having the permitted uses of other land expanded or intensified. The land to which the rights are transferred may be either owned by the landowner, or by someone else. In the latter case, compensation is paid to the "sending" landowner by the "receiving" landowner. Participation in TDR programs would be voluntary on the part of the landowner(s). Under the TDR scenario, the use of land currently zoned for lower intensity use outside the APZs could be modified to allow higher density development at the same time the use of land in the APZs currently zoned to permit higher density development would be restricted to lower density use.

- Priority/Timing - High to Moderate
- Responsible Party(s) - Local jurisdictions
- Evaluation Measures - TDR programs are adopted by the City of Tucson (and could be by Pima County, if State legislation is enacted to allow the County to use TDRs)

16. Partnerships with Non-Governmental Organizations to Facilitate Transfers of Development Rights

Governmental or non-governmental entities such as the Trust for Public Land (TPL), may acquire development rights for land adjacent to a military installation or facility, especially for land in the high hazard and noise zones, and dedicating it to uses compatible with military missions or to transferring those lands to public ownership for conservation or open space uses. TPL also has a program to assist communities in pursuing a preservation ballot initiative, providing services that include political analysis and campaign strategy.

- Priority/Timing - High to Moderate
- Responsible Party(s) - Local jurisdictions and TPL or other entity
- Evaluation Measures - TDR programs are adopted by the City of Tucson (and by Pima County, if State legislation is enacted to allow the County to use TDRs)

17. Noise Attenuation Retrofit Program

The City of Tucson should work with the State's Congressional delegation to secure a Department of Defense funded and administered program for noise attenuation retrofitting of homes in the high-noise zones that is similar to the program that Tucson International Airport has had in operation since 1992. Through grants from the Federal Aviation Administration and the Arizona Department of Transportation, the Tucson

Airport Authority is providing acoustic treatment to approximately 1,400 homes within the highest noise areas. Permanent-structure residences in the 65 Ldn noise contour and the 70 Ldn noise contour are eligible for the program. At no cost to eligible homeowners, the residences are retrofitted with acoustic windows and doors, ventilation systems are modified, and other improvements are made to drastically reduce interior noise levels.

- Priority/Timing - High to Moderate
- Responsible Party(s) - City of Tucson, State Congressional delegation, Department of Defense, and Davis-Monthan Air Force Base
- Evaluation Measures - Noise Attenuation Retrofit Program in place

18. Adaptive Reuse of Julia Keen School

With the anticipated closure of Julia Keen School, which is located in ADC-1 an APZ northwest of the main Davis-Monthan runway, there is a need to find an adaptive reuse for the school that is compatible both with the operation of Davis-Monthan and with the surrounding neighborhood. The City of Tucson should work with the Tucson Unified School District and the Julia Keen neighborhood to bring an appropriate adaptive reuse to the school building so that it remains an asset for the neighborhood.

- Priority/Timing - High
- Responsible Party(s) - City of Tucson, Tucson Unified School District, local residents, and neighborhood organizations
- Evaluation Measures - Implementation of adaptive reuse

19. Enhanced Local Notification and Disclosure

The Governor's Military Facilities Task Force is recommending that current notification and disclosure provisions in State law for military facilities be strengthened, including a recommendation that the Arizona Department of Real Estate develop a "rule" to strengthen and standardize the notification process for its licensees. Increasingly, communities have determined that there is value to their citizens in going beyond the minimum public notification and disclosure standards outlined in State law. Greater understanding of local military operations can also enhance the sustainability of the base by building support for the base's mission. Specific mechanisms to enhance public notification and disclosure may include:

- Requiring notices and maps to be posted in real estate sales and leasing offices, including identification of noise contours
- Requiring notices placed in model home complexes and sales offices advising potential buyers that the area is subject to military aircraft overflight.
- Requiring avigation easements and indemnification/release of liability language on all recorded subdivision plats
- Installing overflight signage at roadway intersections within the noise contour lines

Pima County and the City of Tucson should consider the need for adopting specific additional methods of notification and disclosure.

- Priority/Timing - High to Moderate
- Responsible Party(s) - Pima County and City of Tucson
- Evaluation Measures - Enhanced Notification and Disclosure procedures in place

20. Best Practice Techniques

A process to assess the usefulness of various techniques used by other political jurisdictions with similar military air base encroachment issues is an effective means to ensure that the “best practices” are being used to guide development around Davis-Monthan Air Force Base and the State’s other military facilities. This evaluation of “best practice” techniques will need to determine their potential to be adapted to the needs of various political jurisdictions in the State, and the State will continue its role as convener and clearinghouse in these efforts. Other stakeholders are anticipated to participate in this data collection in support of the statewide effort. Results of the Best Practices research will be compiled into the State Policy Guide developed as part of the statewide effort by the Department of Commerce to address land use compatibility and encroachment issues under the Arizona Military Regional Compatibility Project.

- Priority/Timing - Development of State Policy Guide - High; continuing assessment is ongoing
- Responsible Party(s) - State government, local jurisdictions, and other stakeholder groups
- Evaluation Measures - Development of State Policy Guide an ongoing assessment