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*Sierra Vista Sub-Watershed
Water Conservation and Management
Policy Plan*

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January 6, 2006

PROPOSED COMPREHENSIVE PLAN WATER POLICY AMENDMENT

Section 102. 1E of the Comprehensive Plan is proposed as follows, with additions or changes highlighted and deletions with strikethrough:

E. Water Conservation Goal and Policies

Goal: Sustain an adequate, safe water supply through water conservation measures; **policies**, incentive programs; education; conservation and enhancement of natural recharge areas; and cooperative, multi-jurisdictional planning.

Comment: Water is a limited and limiting resource throughout the County, but certain areas face more immediate issues. Arizona Revised Statutes §11-821.C(3) allows all counties to specifically plan for development as it relates to available water resources.

Policies:

1. The County will use its most current water resources inventory of available surface water, groundwater, and effluent supplies to evaluate the potential impacts to local water supplies from master development plans, **subdivisions**, rezonings, special uses, major amendments to this plan and other major developments.
2. Major developments shall indicate the design features that will be incorporated into the development to:
 - (a) Minimize overall water use through water conservation measures such as drought-tolerant landscaping, low-flow fixtures, re-use, water harvesting, deed restrictions and other water conservation methods.
 - (b) Address accelerated run-off due to construction and impervious surfaces.
 - (c) Conserve and enhance recharge through methods such as the use of detention basins, protection of open space and minimizing disturbance of soils and other methods.
3. Major development shall be defined as all subdivisions; and non-residential, multi-family residential and mobile home park developments of one (1) acre or larger.
4. The County will pursue methods for individual homeowners and businesses to decrease water use through incentives, education and various zoning mechanisms.
5. In order to minimize or mitigate water usage, golf courses and other high water uses shall be permitted only as Special Uses.
6. The County ~~shall~~**may** implement a joint development plans for the Sierra Vista Sub-watershed, or portions thereof, through intergovernmental agreements and a joint planning effort with these incorporated cities of the Sub-watershed that choose to participate, pursuant to ARS § 9-461.11.E and ARS § 11-951, et seq.. The joint development plans ~~shall~~**may** address water issues that ~~may~~ include existing and proposed mechanisms for conserving water, **infrastructure**, vested property rights, incentive programs, implementation schedules, and other issues as they relate to development in the sub-watershed. The County may implement joint development plans for other basins, sub-watersheds, or portions thereof, as necessary.

7. The County will work with agencies and organizations throughout the County, as necessary, to address regional water resources issues as they relate to growth and protection of the County's natural resources.
8. **The County may develop additional water conservation and management policies to be applied to all new development on a sub-watershed by sub-watershed basis.**
9. **Overlay zoning districts may be used by the County as a tool to implement such additional water conservation and management policies through the enforcement of specific site development standards applicable to all residential and non-residential development where appropriate.**

Plan Area Boundaries:

The Sierra Vista Sub-watershed Area Water Management and Conservation Plan will apply to the Sierra Vista Sub-watershed, as defined by the Arizona Department of Water Resources and the USGS. In general, the plan area is defined by the sub-watershed boundary that extends from the Mule Mountains and Dagoon Mountains along the eastern boundary, to the Huachuca and Whetstone Mountains along the western boundary, the international boundary with Mexico to the south and the sub-watershed boundary slightly north of Highway 82.

Reasons for Creating the Plan:

1. In November of 2003, Congress passed legislation currently referred to as Section 321 of the National Defense Authorization Act of 2004 (PL-108-136, herein referred to as Section 321), recognizing the Upper San Pedro Partnership and its members, including Cochise County, as the vehicle for mitigating water use impacts in the sub-watershed. Section 321 calls for the Secretary of the Interior, in consultation with the Secretaries of Agriculture and Defense and in cooperation with the Upper San Pedro Partnership, to report on the water use management and conservation measures that have been implemented and are needed to restore and maintain the sustainable yield of the regional aquifer by and after September 30, 2011, so as to protect the San Pedro River.
2. In addition to community responsibilities referred to in Section 321, the County has agreed to assist Fort Huachuca, a major local economic contributor, in meeting its goals to eliminate deficit groundwater pumping attributable to the existence of the fort under a Biological Opinion with the U.S. Fish and Wildlife Service.
3. Arizona Revised Statutes §11-821.C(3) allows all counties to specifically plan for development as it relates to available water resources.
4. The Cochise County Comprehensive Plan, Section 201 D allows for the establishment of other plan areas and plans, which may "have policies, elements or standards which modify, replace or supersede those in otherwise applicable growth areas or plan designations."

5. While science continues to be applied to help us fully understand the magnitude of a deficit in the Upper San Pedro Basin, and judge its impact, the Board of Supervisors believes we now have a public consensus that we need to pump less water from the aquifer, use and reuse what we take out responsibly, and recharge or augment our supply as necessary to preserve the surface flow in the San Pedro River, accommodate reasonable economic growth, avoid jeopardy to Fort Huachuca's continued operation and protect against drought.

POLICIES

Pursuant to the Cochise County Comprehensive Plan, Section 201 D, this plan and the policies herein shall be applied to all rezonings, special uses and subdivisions within the Sierra Vista Sub-watershed, herein known as the plan area. Unless otherwise specified, these policies shall modify, replace and/or supersede other policies, as applicable, that have been adopted previously.

1. New Land Uses General Policies

Policy 1.1 New commercial or higher density residential development should be located in areas where services, including regulated water providers and wastewater treatment facilities, exist or can be extended or established, and only when these services can adequately serve both new and existing development for the anticipated lifetime of the uses.

Policy 1.2 The use of conservation tools, such as fee-simple acquisition, conservation easements, transfer or purchase of development rights, and the conservation subdivision alternative, are encouraged and supported by this plan to protect washes, open space, wildlife corridors and the hydrologic functions of the plan area.

Policy 1.3 All approvals for rezonings to a higher density shall be conditioned with the requirement that new development proceed under the subdivision process.

Policy 1.4 Overlay zoning districts may be used as a tool in the plan area to implement specific water conservation and management site development standards that will apply to all new residential and non-residential development.

Policy 1.5 Overlay zoning districts may be used in the plan area to establish sending and receiving areas for the transfer of development rights.

2. Water Management and Conservation General Policies

The regional aquifer of the plan area is the County's sole source of water for residential and non-residential development. The regional aquifer also supports the perennial and

intermittent flows of the San Pedro River, especially through the federally-designated San Pedro Riparian National Conservation Area.

The existing zoning of any property throughout the plan area provides a baseline for determining what the potential ground water impacts may be if the area were developed under current, permitted densities. Therefore, future requests for increased densities and/or intensity of uses should take this into consideration and should not increase groundwater withdrawals in the plan area beyond these baseline assumptions.

Policy 2.1 Reduce potential ground water pumping within the Plan area to a level that will contribute, on a cumulative basis, to the Upper San Pedro Partnership's target of reducing the Sierra Vista Sub-Watershed's projected annual deficit which is based on projected growth in the area.

Policy 2.2 With the exception of storm water detention basins, water harvesting facilities, or effluent recharge basins, or other similar technologies, new development shall not incorporate open water facilities or water features, such as ponds, fountains, "misting" features, or non-drip irrigation systems for landscaping.

Policy 2.3 New development shall meet or exceed County Highway and Floodplain Department standards to preserve existing watercourses within the plan area and as identified in the Hydrologic Protection Areas Final Report, adopted in 2001 by the Upper San Pedro Partnership.

Policy 2.4 New residential development proposed in rezonings to higher density shall incorporate an integrated design system of ground water, wastewater and storm water management for each parcel and for entire subdivisions or development such that, in the aggregate, on-site potable water systems are designed to use the same or less water than would be used if the property were developed under existing zoning. This determination shall be based upon the County's and Arizona Department of Water Resources' (ADWR) best available estimates of water use. Proposed and verified effluent recharge may also be used to off-set projected demands. Proposals for rezoning shall include details on how the project will be designed to conform with this policy, including the intent of forming a water company or improvement district, or extending an existing water company, improvement district or municipal water provider.

Policy 2.5 New residential development proposed as subdivisions or in rezonings to higher densities shall conserve water use by incorporating efficient, effective and integrated water pumping, distribution, metering and recharge systems as well as water conservation Best Management Practices (BMPs). Those measures may include, but are not limited to:

- Installation of separate potable water, "grey water" and sanitary sewer distribution lines on individual structures with grey water lines connected to a water harvesting system for on-site use. Rooftop runoff should also be connected to the water harvesting system;

- Limiting landscaping to drought-tolerant native vegetation as defined by the County's Low Water Use/Drought Tolerant Plant List, and incorporate landscape features in locations and of specific types that would shade structures and living areas in summer;
- Elimination or limiting amount of turf in landscaping;
- Requiring front-loading or water efficient washing machines;
- Establishing a building envelope within the lot;
- Prohibition of use of potable water in irrigation and washing down pervious surfaces;
- Prohibition of swimming pools and water spas using potable water;
- Incorporation of effluent re-use and recharge within subdivisions that provide wastewater treatment systems;
- Incorporation of storm water recharge facilities on individual lots, to the greatest extent possible;
- Prohibition of use of evaporative coolers in favor of air conditioning systems with the exception that a dual system is allowed provided that the evaporative cooler portion utilizes a water harvesting system;
- Installation of water line insulation, hot water on-demand systems, and hot water recirculation systems within structures;
- Installation of timers and rain sensors on drip irrigation landscaping systems;
- Installation of low-flow plumbing fixtures;
- Installation of water meters on interior and exterior potable water systems and requirements for financial levies for excessive water use;
- Provision of "water wise" or similar publications and contact information as part of sales contracts to home buyers;

Policy 2.6 New non-residential development proposed as special uses or in rezonings shall incorporate water conservation design features and BMPs to reduce potable water use and to maximize water harvesting and recharge opportunities. Non-residential developments shall incorporate many of the water conservation systems and features described for residential development and, in addition, shall incorporate the following measures and BMPs:

- Incorporate water harvesting and storm water filtering and recharge facilities;
- Installation of waterless urinals in employee and public restrooms;
- Utilize drought-tolerant native plants in landscaping;
- No irrigated turf in parking areas, roadway medians or landscape features;
- No use of misters or water features;
- Use of outdoor drip irrigation systems;
- Use of air conditioners rather than evaporative coolers

Policy 2.7 Any new commercial development proposed as a special use or in rezonings wherein on-site use of ground water is integral to the processes, function or product of the commercial development is discouraged. Car wash operations, commercial water bottling operations, recreational water activities or industrial processes consuming large amounts of water are not appropriate for development

under this plan. New commercial development proposed as a special use or in rezonings, wherein net water use is expected to exceed 200 gallons per day per acre for all uses, shall incorporate an integrated design system of ground water, wastewater and storm water management, including recirculation and capture of water for reuse and recharge, for each project. Proposals shall include descriptions of planned water management measures designed to demonstrate how projected water use over 200 gallons per day per acre shall be off-set to the extent feasible.

3. Growth Category Specific Policies

Policy 3.1 Within existing Growth Category A and B boundaries, requests for increases in residential density over and above existing zoning shall not exceed a gross density of one residence per acre unless:

- The request is accompanied by a proposal to connect to an existing or new wastewater treatment facility that recharges or will be constructed to recharge treated effluent; or
- The request is accompanied by a legal and verifiable transfer, retirement or purchase of development rights, executed by the applicant, on property within the plan area. The transfer, retirement or purchase of development rights should include the number of housing units, as permitted under the existing zoning of said property, equal to or greater than the number requested over and above the gross density of one unit per acre.

Policy 3.2 Within Category D areas of the plan area, no rezonings to higher residential densities will be permitted where pumping is proposed within two (2) miles of the San Pedro Riparian National Conservation Area boundary.

Policy 3.3 Master development plan requests are treated as any Comprehensive Plan amendment and are subject to the procedures set forth in the Cochise County Zoning Regulations. Within the plan area, requests for increases in residential density over and above existing zoning shall not exceed a gross density of one residence per acre unless:

- The request is accompanied by a proposal to connect to an existing or new wastewater treatment facility that recharges or will be constructed to recharge treated effluent; or
- The request is accompanied by a legal and verifiable transfer, retirement or purchase of development rights, executed by the applicant, on property within the plan area. The transfer, retirement or purchase of development rights should include the number of housing units, as permitted under the existing zoning of said property, equal to or greater than the number requested over and above the gross density of one unit per acre.