

# UPPER SAN PEDRO WATER DISTRICT

## What Is It?



### The First Step to More Local Control and Planned Water Management

In 2007, the Arizona Legislature enacted House Bill 2300, which allows for the establishment of the Upper San Pedro Water District, if approved by local voters. The goal of the Water District would be to maintain the conditions needed to sustain the Upper San Pedro River and to help meet the water supply needs and water conservation requirements for Fort Huachuca and the communities within the District.

### District Voters Will Decide

Registered voters within the proposed District will need to approve the formation of the District, a measure scheduled to be on the November 2010 ballot.

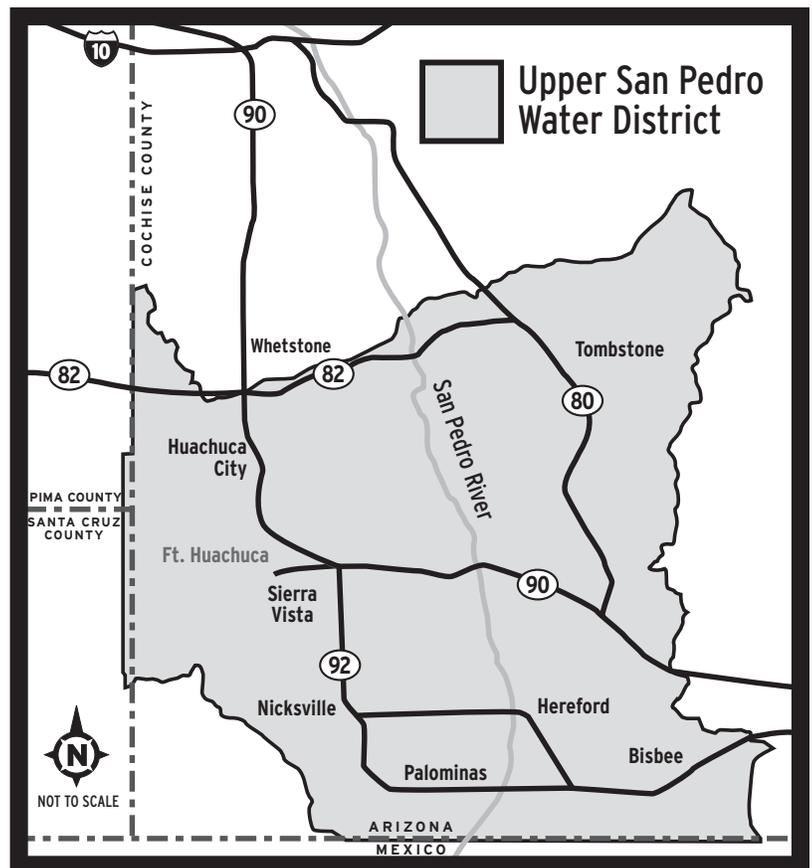
If the District is approved, a local seven-member Board of Directors selected by voters in the same election will manage the District.

### The Area and Population Affected

The Sierra Vista Subwatershed, which is roughly the same area as the proposed Upper San Pedro Water District, including the San Pedro River, supports a human population of about 78,970 (Water Management 2007 Report to Congress). The Subwatershed includes Fort Huachuca, unincorporated rural areas, and the cities of Bisbee, Sierra Vista, Huachuca City and Tombstone.

### What the District WOULD do:

- Provide local control over water management decisions.
- Take a leadership role in coordinating and assisting in



water conservation projects with individuals, businesses, industries, and public and private entities in the District.

- Assist communities in setting up programs for recharging and/or reusing wastewater, effluent and stormwater runoff.
- Actively pursue project funding from federal, state and private sources.
- Develop enhanced water conservation programs for public facilities, schools and industries.
- Review new major development and subdivision plans

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to address whether adequate water supply exists for the proposed development.

- Develop new water supply wells in locations that would not as directly impact the San Pedro River.

### **What the District SHALL NOT do, by law:**

- Levy a tax unless approved by voters.
- Engage in the retail sale of water to customers.
- Require the use of a water-measuring device for any well, except as a condition in a contract agreed to by both parties.
- Impose mandatory conservation requirements on persons in the District.
- Regulate the acquisition, use or disposal of water or rights within the District.
- Exercise any right of eminent domain (property acquisition).

### **The public has a voice**

The temporary Organizing Board has drafted plans for how to get the Water District up and running as well as what projects they would pursue that they need public input on. These plans are not final without public input. The Organizing Board is presenting the plans during public meetings in January, February and March 2010 with a second round of public meetings scheduled in April and May 2010. Feedback and information from those meetings will be used to modify the plans as needed.

### **Questions:**

- Do you support the conservation, reuse, recharge and augmentation projects in these draft plans?
- What other projects would you prefer?
- What is the best way to finance these projects?

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The Organizing Board represents a cross-section of the community: Chairman Mike Rutherford, president of Rutherford Industries (business); Vice Chairman Holly Richter, Upper San Pedro Program Director for The Nature Conservancy, based out of Palominas (conservation); Treasurer Rick Coffman (water utility); Secretary Steve Pauken, Bisbee city manager (city population below 35,000); Mike Boardman (retired military personnel or military support group); Carl Robie, director of Water Policy for Cochise County (Cochise County); John Ladd (agriculture and ranching); Mary Ann Black, Supervisor, Education Center Director Hereford Natural Resources Conservation District, (Natural Resources Conservation District); James Herrewig, Community Development Director for Sierra Vista (city population above 35,000).

# UPPER SAN PEDRO WATER DISTRICT

## Our Plans for the Future

### Plans That Would Guide The District Board

A set of draft plans for the District have been prepared by the Organizing Board, based on existing information. The plans recognize that many entities have already taken steps to conserve, reuse and recharge water in the area, but more needs to be done.

Altogether there are four plans: a water resources plan, a financial plan, an organizational plan and an election plan.

The public will review these plans during a series of outreach meetings during 2010. The projects within the plans are intended to support the goal of the District, as it was defined by the Arizona Legislature:

The District's goal is to maintain the aquifer and base flow of the Upper San Pedro River at current levels (or better) while meeting the water supply needs of the District's communities and Fort Huachuca.

### The Water Resources Plan

The Water Resources Plan focuses on "water conservation, reuse activities, water recharge programs and water augmentation concepts that can be implemented or enhanced" within the 10-year timeframe. The draft plan demonstrates how the District might assist communities located within its boundaries in "recharging, reusing and obtaining water supplies to protect the aquifer and base flow of the river."

### No action option

The plan looks at the consequences of "no action" or maintaining current policies as well as possible actions to meet current and future water management challenges.

### Projects the District would focus on first

Over the first 10 years, the four priorities for the District would include:

- Water conservation practices that reduce domestic, commercial and industrial uses.
- Vegetation management: reducing invasive mesquite that uses more groundwater than other species.
- Enhancing stormwater recharge: construction of detention basins to increase recharge.
- Rainwater harvesting: incentives to use rainwater for irrigation instead of pumping groundwater.



### District projects over the long term

Over the long term, in addition to the projects listed above, District plans also include:

- Reuse programs that encourage the use of gray water, rain harvesting and other reuse activities in cities, towns and the county.

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## Our Plans for the Future

- Recharge: to encourage and expand the ability of cities, Fort Huachuca, and other entities to treat and recharge effluent.
- Augmentation: to investigate additional capture of urban runoff and stormwater runoff and to offset impacts from new development near the River.
- Creation of an Augmentation Fund that would require all new subdivisions within the District to contribute to the formation of an investment fund for long-term planning, design and construction of projects.
- Groundwater and surface water monitoring programs and to monitor the effectiveness and water savings of conservation activities.



### Questions:

- What other projects should the District prioritize?
- What projects don't make sense? Why?

# UPPER SAN PEDRO WATER DISTRICT

## Building on Science



Water is a very limited resource in Arizona, and the San Pedro River is one of the last rivers in the state that continually flows in many stretches all year long. While balancing the needs of both nature and people can be difficult, we know more about ways to do this today than we ever have before.

### **More pumped out than nature can replenish**

Currently more water is taken from the underground aquifer in the Sierra Vista Subwatershed each year than nature can recharge or replenish with rainwater and snow melt, resulting in a water deficit or overdraft. Overdrafting groundwater reduces the amount of water that is available for residents and the San Pedro River, and the lush habitats it supports for wildlife. As our municipal and domestic water demands increase over time, balancing human and natural water needs becomes increasingly important.

### **Species habitat and vegetation would be lost**

Scientific studies have shown that if the groundwater levels within the Subwatershed continue to decline, the flow of the San Pedro River will be disrupted and vegetation near the river will be lost. The result from the loss of vegetation would be severe erosion and loss of habitat for hundreds of species of plants, fish and wildlife, including effects on endangered species.

### **Diverse nature area**

According to The U.S. Bureau of Land Management, “more than 80 species of mammals, 40 species of reptiles and amphibians, 100 species of butterflies, 20 species of bats, and 350 species of birds live or migrate along the San Pedro riverbanks.”

In Arizona, most of the once common streamside habitats along our rivers have dried up due to over-pumping of groundwater or the diversion of water for agricultural or urban uses. However, much of the San Pedro River still continues to flow in the U.S. and Mexico today.

### **Current science and our understanding of water issues**

Many state and federal agencies, universities and scientific institutions have studied the San Pedro River and surrounding areas over the past few decades. Complex computer models are able to predict how the river and groundwater will change according to how we manage water. Where water is pumped or recharged can be as important to river flows over the next decade as how much we pump. We also know how much water is required to keep the river system healthy, and we can estimate our total human water uses within the region, and how they



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## Building on Science

are changing over time. Improved monitoring systems tell us how much water is in the river, how climate varies from year to year, and what the benefits are from the water management projects that have already been implemented.

### **How wet is the San Pedro River now? What are we specifically trying to protect?**

A recent study by the U.S. Geological Survey concluded that at least 43 percent of the San Pedro Riparian National Conservation Area within the Sierra Vista Subwatershed had water all year long with stable groundwater levels near the ground surface throughout the floodplain. The remaining reaches of the Conservation Area within the Sierra Vista Subwatershed had water in the river at least 50 percent of the time, with groundwater only slightly deeper. Projects supported by a future District would be designed to maintain those streamflow and groundwater conditions, protecting streamside habitats as a result.

#### **Question:**

- What additional information do you think is important for decision-making that the District could explore?

# UPPER SAN PEDRO WATER DISTRICT

## Finding Funding to Get the Job Done



The proposed District will need adequate funding to implement the water management projects needed.

The District could raise funds from several revenue sources authorized by law, including:

- Federal funding sources: for example, the \$289,000 appropriated this year for the U.S. Bureau of Reclamation appraisal study of water management alternatives in our area.
- State funding sources: the Arizona Department of Water Resources has already provided \$250,000 for the initial operating and outreach expenses of the District's Organizing Board.
- Local municipalities within the District: including Sierra Vista, Huachuca City, Bisbee, Tombstone and Cochise County, which can work together with the District to coordinate regional water management projects that cross jurisdictional boundaries.
- Private foundations, gifts, grants and donations.
- The sale of water or water rights that may be owned by the District in the future (wholesale only to retail purveyors).
- User fees for services provided by the District that are agreed to by those users.
- The District board may sell revenue bonds.

### Potential Fees for New Users

The Comprehensive Water Resources Draft Plan states "any projects or programs the District undertakes specifically to address water use by new users should be paid for by those users. In particular, large scale augmentation programs that require major investments need to be financed by those who benefit the most." In other words, the costs for



additional water management projects needed as a result of new development should be the responsibility of the new residents, not existing residents.

### Operating costs

The estimated annual operating expenses for the District will be \$400,000 for the Executive Director, administrative and technical staff, and other operating expenses. This annual cost would require funding, along with actual project expenses. Part of the responsibility of the Executive Director would be to ensure that these expenses are met.

### Questions:

- How should the District be funded?
- What alternatives to the above ideas do you see for funding?

# UPPER SAN PEDRO WATER DISTRICT

## The Vision for a Sustainable Water Future



### Current conservation efforts

Many actions to conserve, reuse and recharge water in our area have already been taken by local, state, and federal agencies, as well as by local residents. However, all of these projects are still not enough to sustain the San Pedro River and the water needs of local communities and Fort Huachuca over the long term. What are reasonable goals for meeting all of our needs in the future?



### In the next 10 years...

The District would select projects to ensure that the San Pedro River keeps flowing over the coming decade approximately as it does today.

The groundwater that moves underground toward the river to keep it flowing during dry periods would also be maintained at approximately current levels to help sustain the river. Projects in close proximity to the river would be most important to meet this short-term goal.

### In the next 20 years...

The District would expand its efforts to balance water needs throughout the larger Sierra Vista Subwatershed, by finding new ways to balance our total water demands (of both the river and people) with our available water supplies. This regional effort to reach long-term sustainability will be difficult to accomplish, and will likely require innovative technology, new projects and policies.

### 2030 and beyond...

After 20 years, the District would actually begin to store additional water back in our underground aquifer, and to build new reserves for the future of our valley.



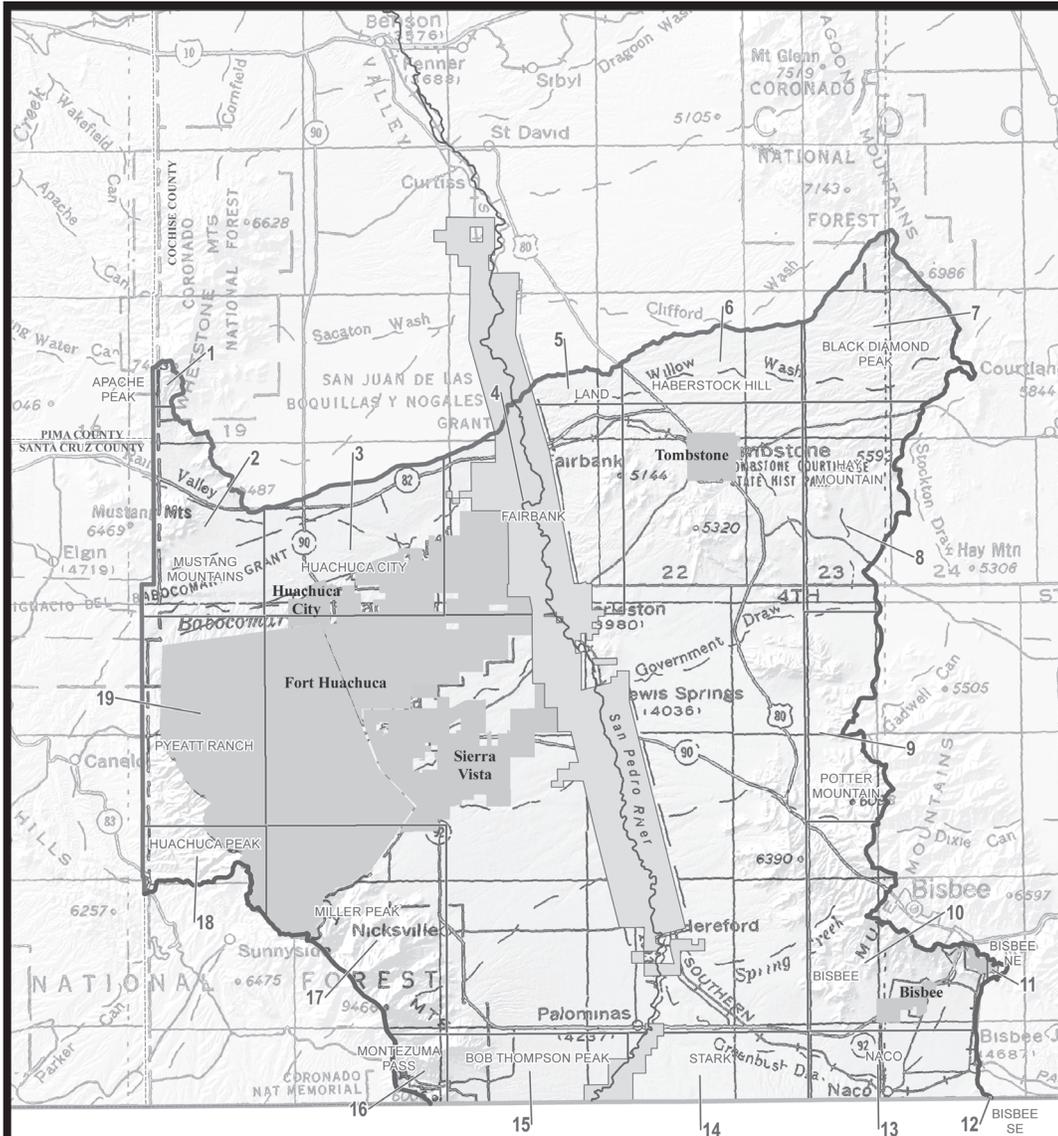
### Questions:

- Do you support these goals?
- How would you change them?
- What else needs to be accomplished by the District?



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## The Vision for a Sustainable Water Future



### Index Map for the Upper San Pedro Water District

#### Boundaries that Comprise the Upper San Pedro Water District Boundary

-  Adjudication Subwatershed Boundary (Sierra Vista)
-  ADWR Groundwater Basin Boundary (Upper San Pedro)
-  County Boundary (Cochise)
-  International Boundary (U.S./Mexico)
-  San Pedro River
-  San Pedro River Natural Conservation Area
-  Fort Huachuca
-  City Boundary Within USP Water District
-  1:24,000 Scale USGS Topographic Quadrangle Index
-  15 Map Index Number
-  County Boundary
-  International Boundary



1:270,000



# UPPER SAN PEDRO WATER DISTRICT

## Economic Implications



### The Fort Is Our Main Economic Engine

The economy of the Sierra Vista Subwatershed is heavily dependent on Fort Huachuca, headquarters for the U.S. Army Intelligence Center, NETCOM, the Electronic Proving Ground and other Department of Defense operations. Fort Huachuca is Southern Arizona's largest employer.

- A recent economic impact analysis of Arizona's military installations estimates Fort Huachuca's impact as more than \$2.5 billion statewide, the highest of all of the State's six installations (Maguire Study 2008 based on 2005 fiscal year data).
- The Maguire Study 2008 also found:
  - Fort Huachuca directly contributes \$24 million in local and state sales, property and income taxes.
  - When indirect contributions, from vendors and suppliers to the military operation are added, the number increases to more than \$95 million.
  - Sierra Vista-based contracts for building and construction in connection with the Fort were \$39.7 million and \$127.2 million total.
  - The Fort has an annual payroll of \$513.1 million. Retirees within a 50-mile radius of the base add more than \$100 million to that total. This is money that is spent at local businesses and on local goods.

### Effective Water Management Is Critical for Both Fort Huachuca and Our Economy

As a federal installation, Fort Huachuca has legal water conservation requirements that must be met related to the San Pedro River. If these requirements are not adequately addressed, the mission at Fort Huachuca could be impacted.

To avoid the possibility of affecting the Fort's mission and our regional economy, protection of the San Pedro River is critical. The District would provide essential assistance to the Fort in meeting its water conservation requirements. One of the nine Organizing Board members was specifically recruited to represent Fort Huachuca's water interests and to ensure that its needs are addressed by the draft plans that the Board has prepared.

#### Questions:

- How would reduced missions at Fort Huachuca affect your personal budget?
- How much would you be willing to pay to support water conservation programs that protected the Fort?