Avra Riparian Restoration and Groundwater Replenishment Project

The Pima County Avra Valley Wastewater Treatment Facility (AVWWTF) site, located near Snyder Hill and Sandario Roads, currently produces 1.2 million gallons per day (mgd) of wastewater. Most of the effluent produced is released into several percolation ponds. At times, water cannons are used to dispose of excess water to nearby cottonwood trees or to the Black Wash. The availability of water has made the treatment facility a haven for migratory birds. As a result, birders have made Avra Valley Wastewater Treatment Facility a well-know destination for observing migratory birds and the site is listed in "Finding Birds in Southeast Arizona," a Tucson Audubon Society (TAS) publication. The facility operators welcome the birders and have them sign into a logbook when they are visiting the site.

The current Avra Valley facility capacity must be expanded to meet projected increases in flow, and is looking for beneficial ways to use the treated effluent. A primary objective is to upgrade the existing wastewater site 5 mgd and establish a riparian restoration and recharge project for the Black Wash/Avra Valley area. This restoration project will be designed to recharge effluent water while enhancing the riparian habitat and creating recreational and wildlife viewing opportunities. Pima County faces continuing challenges in expanding and upgrading its rural treatment facilities to provide needed sewer capacity in time to meet the demands of growth while providing a sustainable environment for the new facilities in the adjacent area. This multi-purpose project would incorporate water reclamation, aquifer recharge, habitat conservation, education and recreation, including wildlife watching and interpretative and hiking trails as part of the site expansion. This will establish the area as an educational site for the sustainable use of water resources, habitat conservation and restoration consistent with the Sonoran Desert Conservation Plan, including the recent resolution of the Pima County Board of Supervisors to maximize the County's water resources and use of effluent to sustain and protect the County's natural environment. The Avra Valley/Black Wash area of Pima County has exceptional environmental values, which is undergoing rapid population growth and corresponding needs for wastewater infrastructure expansion.

PCRFCD and Pima County Regional Reclamation Department (PCRRD) staff prepared and presented information critical to passing of HR 1503 assisting with $14M in federal funding for facility upgrade. Staff also nominated this site as a potential site for the Arizona Watchable Wildlife Project. Members from the Flood Control District, PCRRD, Natural Resources Parks and Recreation, U.S. Fish and Wildlife and the TAS have met to develop project goals and objectives. A mission statement was developed stating, "**Pima County and its cooperative Stakeholders will create a world-class destination site for wildlife watching; protection and enhancement of scarce riparian areas and wildlife habitat; environmental education and other outdoor recreational activities, while reclaiming, reusing and recharging valuable and scarce water resources."**

The Stakeholders have established key goals for the site:

- As part of the site expansion, create a multi-purpose area incorporating wastewater reclamation, recharge, habitat conservation, education, and recreation, including wildlife watching and interpretive and hiking trails.
- Provide quality experiences for all visitors seeking recreation, education and conservation.
- In collaboration with the Sonoran Desert Conservation Plan, establish this area as an educational

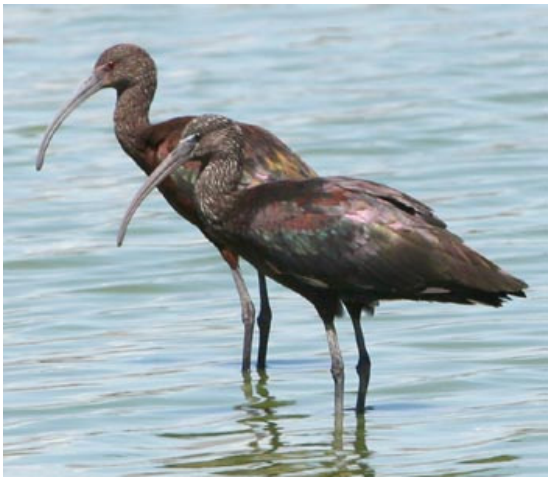
site for sustainable use of water resources, habitat conservation and restoration.

- Meet all local, State and Federal statutes while accomplishing the above goals.

Specific area objectives for this site include:

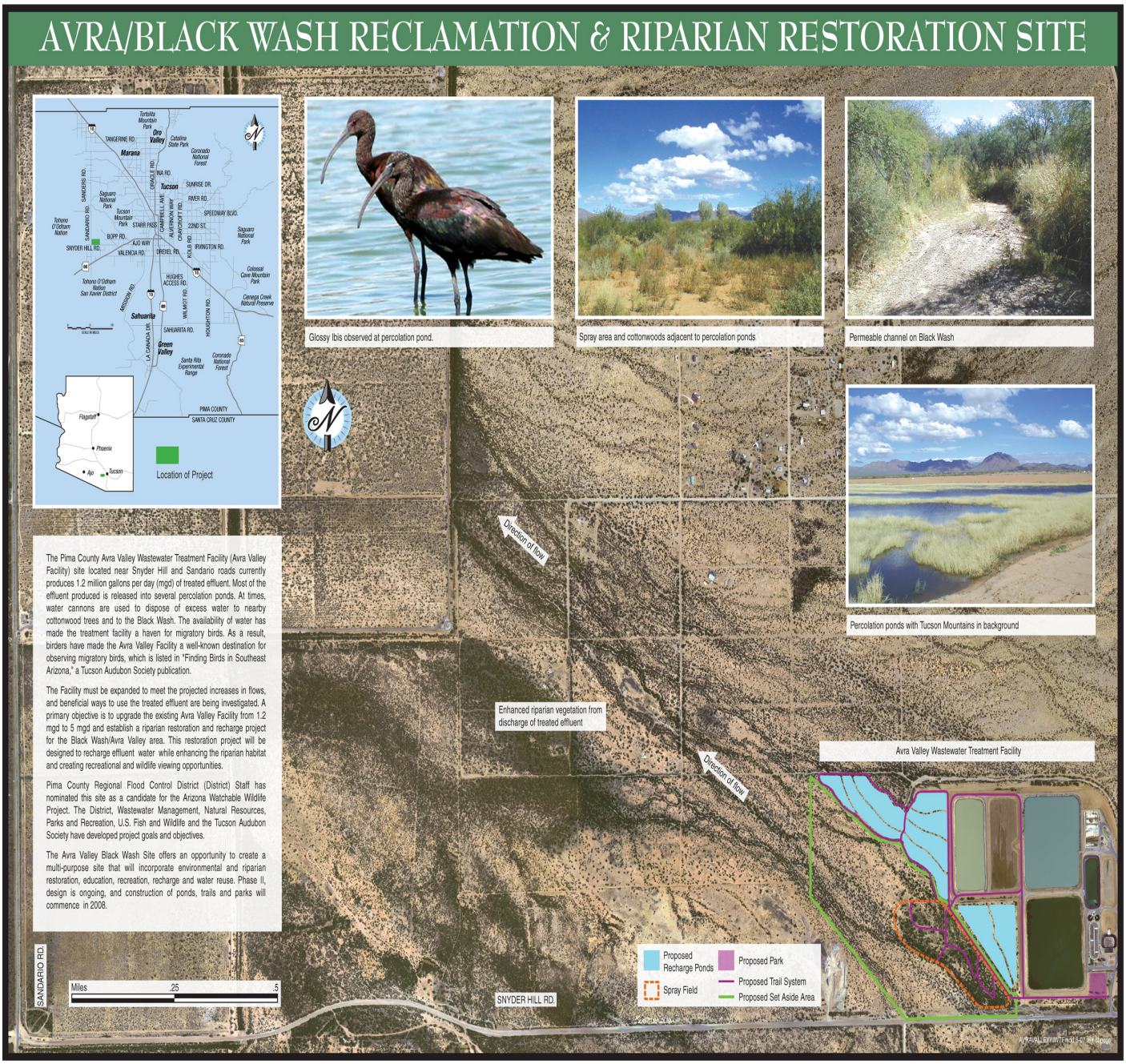
- Expand the current 1.2 mgd wastewater treatment facility to 5 mgd capacity to meet Arizona Water-Quality Standards.
- Create riparian and aquatic habitat.
- Recharge the maximum amount of reclaimed effluent to ponds and Black Wash, while maintaining the planned wildlife and riparian habitat restoration and protection.
- Acquire any necessary land for project's success.
- Provide baseline ecological reconnaissance for future monitoring of diversity and ecological health of the site.
- Develop an overall site plan with conceptual, preliminary and final design of a preferred facility and site satisfying the above goals and vision.
- Resolve effluent ownership and potential impacts to the site.
- Identify and remedy institutional and regulatory issues related to the site plan.
- Identify and obtain funds needed to construct facility and site.
- Develop an operational plan, identifying site managers and areas of jurisdiction.
- Develop and cultivate a volunteer program and possible non-profit site institute to obtain further funding and implement plans.
- Construct the expanded facility and site by December 31, 2008

The Avra Valley Wastewater site offers an opportunity to create a multi-purpose treatment facility that will incorporate environmental restoration, education, recreation, and water reuse and recharge. Phase II of the project is scheduled to continue in 2008. For more information, contact Frank Postillion at Pima County Regional Flood Control District Water Resources Division, (520) 243-1853.



Glossy Ibis (foreground) and White-faced Ibis (back-ground) At Avra Percolation Ponds

Riparian Area on Black Wash



CONCEPT PLANS