

## INITIATIVE FOR THE ENHANCEMENT OF RESEARCH PROGRAMS AT THE AGRICULTURAL SCIENCE CENTER AT TUCUMCARI WASTEWATER REUSE FOR AGRICULTURAL IRRIGATION

In the American southwest, as in many arid and semi-arid regions, water is becoming increasingly scarce and planners are considering all sources that might be available for use. Interest is increasing in the possibilities of recycling treated municipal wastewater for agricultural irrigation.

The City of Tatumcari Wastewater Treatment Facility (WWTF) has improved its processes and is producing Class 1B treated wastewater. These changes and an additional \$1.75 million New Mexico Water Trust Board grant and loan created an opportunity to recycle wastewater from the Tatumcari WWTF for research related to agricultural irrigation and for other purposes.

New Mexico State University's (NMSU) 470-acre Agricultural Science Center (ASC) at Tatumcari has been in continuous operation since 1912 and is located approximately 2.5 miles east of the Tatumcari WWTF (Figure 1). The Advisory Committee to the ASC at Tatumcari encouraged NMSU Administration and Board of Regents to pursue the opportunity, leading to a 20-year contract with the City of Tatumcari for the purchase of 300 acre-feet per year of recycled wastewater. In conjunction with this purchase, the City has used the New Mexico Water Trust Board grant and loan to construct a pipeline and pumping station to provide the recycled municipal wastewater to the ASC Tatumcari and other potential users and installed two center pivot irrigation systems (blue circles in the figure), increasing sprinkler irrigation capacity from 35 to 85 acres with two additional valves for future expansion (green x's in Figure 1).

Through this win-win collaboration (Figure 2), NMSU obtained a much needed year-around supply of water for agricultural research, the City can reduce its contribution to the contamination of the Canadian River watershed, producers in New Mexico and other semiarid regions will receive improved research capabilities from ASC Tatumcari regarding the use of recycled treated municipal wastewater, and local economies will benefit from agricultural production by secondary users.

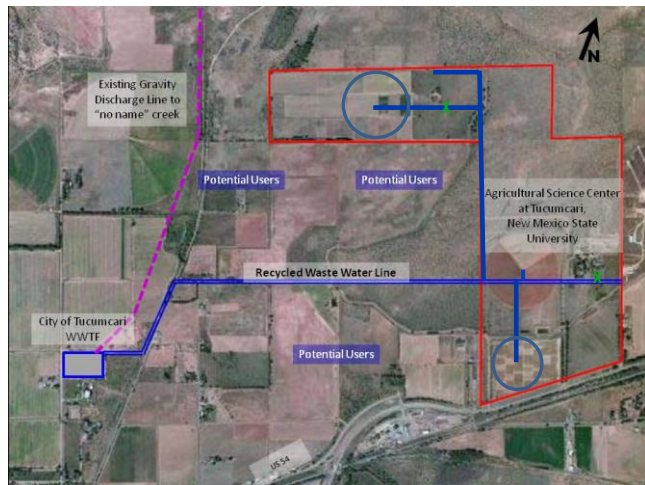


Figure 1. Locations of Tatumcari Wastewater Treatment Facility, its current discharge system, and the recycled wastewater line developed to New Mexico State University's Agricultural Science Center at Tatumcari.



Figure 2. Wastewater reuse project sign with irrigation system and research projects at the Agricultural Science Center at Tatumcari

**NMSU AGRICULTURAL SCIENCE CENTER AT TUCUMCARI  
SHOP BUILT IN 1912**

