

Barrio de Tubac, Tubac, AZ

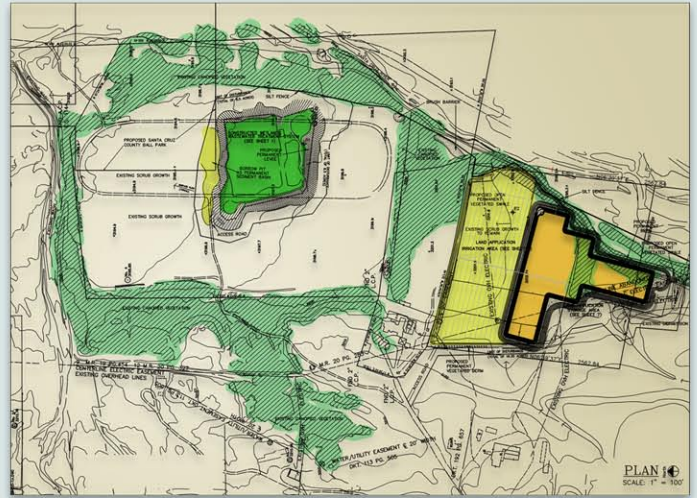
Barrio de Tubac is a 2,500 unit subdivision located adjacent to a historic 18th century Spanish Village adjoining the Santa Cruz River. Tubac is a pristine, upscale master planned community located in the historic Tubac Valley. The development is adjacent to the renowned arts community of Tubac.

NSI designed a wastewater treatment system capable of processing 100,000 gpd. The design flow included water from residential units, commercial development and a golf course. The developer decided that a system which included constructed wetlands would be appropriate because the site is near both the Tubac Presidio Park and the Coronado National Forest.

The project required an on-site wastewater treatment system that met all Arizona water quality standards set by the state Environment Department for effluent water being discharged into the ground and reclaimed for irrigation. The system needed to be integrated into the development, blending aesthetically with local site conditions. Additionally, the system also had to minimize capital costs.

All wastewater from the development is collected using a small diameter system that is gravity powered. The system is operated by the local sanitary district and effluent from the system is treated onsite, then reused onsite. Because wastewater is treated onsite, the reclaimed water is available for development irrigation. Irrigating with reclaimed water eliminated the excessive use of precious potable water and capitalized upon treated effluent water for irrigation. An additional long term cost savings is realized with this approach.

A plant community is always associated with the constructed wetlands. Because nutrients and water are present a habitat was developed within the system. Many wildlife species, including songbirds, can utilize such a habitat and it integrated well with human functions in close proximity.



Above: Onsite wastewater treatment system

