**NVRRWP Partners**

The NVRRWP is a collaborative partnership that includes the Cities of Modesto, Turlock, Ceres, the Del Puerto Water District, and Stanislaus County. The proposed North Valley Regional Recycled Water Program (NVRRWP) is being developed as a regional solution to address south of the Delta water supply shortages and reliability concerns by utilizing recycled water for beneficial use. The proposed NVRRWP would deliver recycled water produced by the Cities of Modesto, Turlock, and Ceres to the Del Puerto Water District (DPWD), a Central Valley Project (CVP) agricultural water district located primarily in western Stanislaus County.

**Key Issues**

Located in western San Joaquin, Stanislaus, and Merced Counties, DPWD parallels and delivers water directly from the Delta-Mendota Canal (DMC) to 45,000 acres of productive farmland between Vernalis on the north and Santa Nella to the south. As a CVP water contractor located south of the Sacramento-San Joaquin Delta, DPWD has experienced significant shortages and decreased reliability in the quantity of water it receives annually under the terms of its federal water service contract. Over the past five years, DPWD has received an average of less than 40% of its full contract supply and, in 2009, received only 10% of its contracted supply. DPWD’s current year (2013) supply is 20% of its full contract amount, totaling approximately 28,000 AFY, far short of the irrigation needs of DPWD’s growers.

Because DPWD does not have an alternative water supply, except for limited privately developed groundwater supplies, shortages in CVP deliveries result in serious economic hardship, not only on DPWD growers but on the region in general. To address this situation, the NVRRWP is looking to utilize available recycled water to augment existing supplies and provide a more reliable supply of irrigation water to the region.

Concurrent with DPWD’s ongoing CVP shortages, the Cities of Turlock and Modesto are facing more restrictive regulatory requirements for wastewater discharges to the San Joaquin River. Both Cities have constructed tertiary treatment facilities to comply with more stringent National Pollutant Discharge Elimination System (NPDES) permits. The tertiary facilities not only provide NPDES compliance, they create a valuable water resource – recycled water – which can be applied for beneficial use in the area. While the future likely holds even stricter limits on the Cities’ treated wastewater discharges to the San Joaquin River, there are no significant impacts to River flows associated with the removal of these discharges.

**Solution**

With the development of conveyance capability, the Cities of Modesto and Turlock could ultimately provide up to 60,000 acre-feet per year of tertiary-treated recycled water to DPWD lands, produced from wastewater collected from the Cities of Ceres, Turlock, and Modesto. This recycled water that is produced would meet California Department of Public Health Title 22 standards for unrestricted non-potable reuse.

A number of alternatives for conveying the recycled water to DPWD have been evaluated. Using the Delta-Mendota Canal as a means of conveyance and delivery has shown itself as the most cost effective while at the same time providing the greatest number of benefits. Utilizing the DMC not only provides for the delivery of much-needed irrigation water to local agriculture but, during the non-irrigation season, also provides for the temporary storage of the water for later delivery. DMC conveyance also allows for the possibility of providing some water supply benefits to others including neighboring water districts and State and federal wildlife refuges.
Impacts to the San Joaquin River

San Joaquin River

The NVRRWP would eliminate discharge to the San Joaquin River from the Cities of Modesto and Turlock.

- Turlock presently discharges 15 cfs
- Modesto discharge ranges from zero in the summer months to 45 cfs.
- These discharges represent less than 1% of the flow in the San Joaquin River at Vernalis.
- Withdrawing these discharges would have impacted the minimum flow requirement at Vernalis on 2 days in the last 10 years.

Fisheries

The effects on aquatic biota of reduced flows associated with discontinuing recycled water discharges from the Cities of Modesto and Turlock have been evaluated using Chinook salmon as an indicator species. Results indicate no change in juvenile salmon when the Head of River Barrier is in place.

Magnitude of predicted change was estimated for:

- The impact on adult Chinook salmon escapement is less than 1% change in adult escapement
- Habitat, as measured by river depth – less than 1% change in river depth
- These changes are within observed natural variations within the San Joaquin River system, and would not be detectable in field studies. These changes are therefore considered less than significant