

## Santuario de Chimayo Wastewater Treatment Unit

David Venhuizen designed and provided construction observation services for a wastewater treatment system to serve the Santuario de Chimayo. This chapel, located in Chimayo, New Mexico, is the largest Roman Catholic pilgrimage destination in the western hemisphere. The seasonal pattern of visitation, and in particular a severe peak in Holy Week, and a requirement to produce an effluent with an effluent nitrogen concentration of  $<15$  mg/L posed a challenge. The high performance biofiltration (recirculating gravel filter) treatment concept was chosen to cope with the operating conditions, to produce the required quality of effluent, consistently and reliably. As a sub-consultant to the prime consultant, Venhuizen created all of the design drawings for the wastewater system, utilizing standard, off-the-shelf septic tanks, modified to suit, available in the region. This included siting the treatment center on a remote corner of the site, requiring placement of primary tanks and an effluent pump station near the restroom building, located next to the chapel. The nominal design flow rate of the system is 2,500 gallons/day. The reclaimed water is distributed in parking lot islands in a subsurface drip irrigation field (designed by another sub-consultant) to beautify the grounds.



A Broad View of the Treatment Center, Chapel is in Background through Trees



The Installed Treatment Center, Prior to Covers Being Installed on Filter Beds



Filter Bed with Media Installed, Spray System Being Tested



The Treatment Center Showing the Filter Bed Covers

