



SEPTEMBER 2005 MONTHLY PROGRESS REPORT

PROGRAM DESCRIPTION

project partners

The Groundwater Replenishment (GWR) System is a jointly funded project of the Orange County Water District (OCWD) and Orange County Sanitation District (OCSD) with OCWD as the lead or constructing agency. The GWR System is a water supply project designed to ultimately reuse approximately 140,000 acre-feet per year (afy) of advanced treated wastewater (recycled water). The phase currently being constructed will supply approximately 72,000 afy and provide the backbone facilities for future expansion. The GWR System will supplement existing water supplies by providing a new, reliable, high-quality source of water to recharge the Orange County Groundwater Basin (the Basin) and protect the Basin from further degradation due to seawater intrusion. It will also postpone the need for OCSD to construct a new ocean outfall by treating excess storm flows.



The GWR System will be comprised of three major components: (1) Advanced Water Purification Facility (AWPF) and pumping stations; (2) a major pipeline connecting the purification facility to existing recharge basins; and (3) expansion of an existing seawater intrusion barrier. Phase 1 of the GWR System will have a nominal rated product water capacity of 70 million gallons per day (mgd). Timing of future phases will be determined by projected flow requirements for anticipated water demands.

The construction of the GWR System will consist of seven major construction contracts totaling \$410.3 million and a total program budget of \$486.9 million.

For more information regarding the Groundwater Replenishment System, contact our Website at www.gwrssystem.com.

purpose:

The GWR System will be comprised of three major components:

PROJECT HIGHLIGHTS

There are three major components to the GWR System Project:

1. Advanced Water Purification Facility in Fountain Valley - 39% complete.
2. A 13-mile pipeline from Fountain Valley to Anaheim (along the Santa Ana River) - 84% complete.
3. Expansion of the Seawater Intrusion Barrier facilities - 62% complete.

1 Advanced Water Purification Facility (AWPF) and pumping stations

2 A major pipeline connecting the treatment facilities to existing recharge basins

3 Expansion of an existing seawater intrusion barrier.

PROJECTS UNDER CONSTRUCTION

GWR System Unit I Pipeline (Budget \$28,000,000)

The Unit I GWR Pipeline contract involves installation of approximately 31,000 linear feet of 78-inch, 72-inch, and 66-inch diameter cement mortar lined and coated steel pipe along the Santa Ana River from the plant site in Fountain Valley to just north of 17th Street in Santa Ana.

This contractor has completed installation of the tunnel at Talbert Avenue and has begun the tunnel at 17th Street. Pipeline installation continues from Slater Avenue to Edinger Avenue. A total of 28,000 linear feet of pipe has been installed to date. Project completion is scheduled for June 2006.



AWPF Microfiltration West Side
Exterior Walls

GWR System Unit II Pipeline (Budget \$16,900,000)

The Unit II GWR Pipeline contract involves installation of approximately 17,000 linear feet of 66-inch diameter cement mortar lined and coated steel pipe along the Santa Ana River that extends from just north of 17th Street in Santa Ana, through River View Golf Course to Katella Avenue in Anaheim.

The contractor has completed installation of all 66-inch diameter pipe and has two tunnels and appurtenance work remaining on this project. Tunneling at the OCTA railroad has required alignment changes and should resume within the next two weeks. Project completion is scheduled for October 2006, but the contractor anticipates final completion in March 2006.



AWPF Reverse Osmosis
Structural Steel Framing

Barrier Wells and Facilities (Budget \$13,000,000)

The Barrier Facilities contract consists of drilling injection wells at eight sites, installation of wellhead facilities, and extension of the west barrier pipeline. At each well site, wellhead facilities consisting of above ground piping, valves, and site appurtenances will be constructed. The west barrier pipeline for the GWR System will consist of approximately 2,600 linear feet of 30-inch diameter pipe along Ellis Avenue.

The contractor continues above ground piping at well sites I-34, I-35 and I-36. Installation of electrical panels continues at all well sites and modifications to wells I-1 thru I-28 has begun. Project completion is scheduled for June 2006.



AWPF Reverse Osmosis
Electrical Building
Underground Conduit

Advanced Water Purification Facility (Budget \$305,300,000)

The AWPf contract includes all structures, piping and facilities that are within the boundaries of the OCWD and OCSD treatment site located at Ellis Avenue and Ward Street in Fountain Valley. Facilities include the Screening Facility at OCSD's Plant No. 1, the 96-inch diameter influent pipeline from the Screening Facility to Microfiltration Facility, Microfiltration Facility (86 mgd filtrate), Microfiltration Break Tank, Reverse Osmosis Facility (70 mgd permeate), UV System (70 mgd product), Chemical Feed/Lime Stabilization System, Product Water/Barrier Pump Station, and all yard piping. Included in the AWPf contract will be all electrical, instrumentation, and process control systems (PCS) associated with each facility. The MF and UV equipment have been pre-selected by the District and their contracts will be assigned to the Contractor.

The contractor continues pouring walls in the MF area and is approximately 90% complete with the exterior walls and 40% complete with the interior cell walls. Installation of the waste backwash piping continues and should be completed in two weeks. The MF break tank exterior walls are complete and the interior walls are 50% complete. The final RO deck slabs have been poured and the RO gallery deck has been formed. Structural steel continues to be erected at the RO building and is 25% complete. The Decarbonator walls are complete and the deck has been formed. The RO electrical building underground electrical work has been completed and will be backfilled within the next two weeks. The Product Water Pump Station suction header has been installed and encased. Plant start-up is scheduled for May 2007 and overall project completion is scheduled for August 2007.



Barrier Well Site I-31

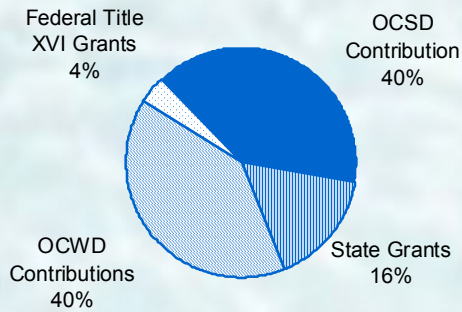
GWR System Active Projects Construction Schedule

ID	Project Name	2005			2006								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	GWR System Unit II Pipeline	[Bar chart showing activity from Oct 2005 to Mar 2006]											
2	GWR System Unit I Pipeline	[Bar chart showing activity from Oct 2005 to Jun 2006]											
3	Barrier Facilities	[Bar chart showing activity from Oct 2005 to Jun 2006]											
4	Advanced Water Purification Facility	[Bar chart showing activity from Oct 2005 to Sep 2006]											

GWR System Construction Schedule

ID	Project Name	2002	2003	2004	2005	2006	2007
1	Southeast Barrier	[Bar chart showing activity in 2002 and 2003]					
2	Interim Water Purification Facility		[Bar chart showing activity in 2003 and 2004]				
3	GWR System Unit III Pipeline			[Bar chart showing activity from 2004 to 2005]			
4	GWR System Unit II Pipeline			[Bar chart showing activity from 2004 to 2006]			
5	GWR System Unit I Pipeline			[Bar chart showing activity from 2004 to 2006]			
6	Barrier Facilities			[Bar chart showing activity from 2004 to 2006]			
7	Advanced Water Purification Facility			[Bar chart showing activity from 2004 to 2007]			

Project Funding



EPA Grant	\$500,000
State Water Resources Control Board Grant	\$5,000,000
US Bureau of Reclamation Grant	\$20,000,000
Department of Water Resources Grant (Prop. 13)	\$30,000,000
Santa Ana Watershed Project Authority Grant (Prop. 13)	\$37,000,000
OCWD Contribution	\$198,560,000
OCSD Contribution	\$198,560,000

Projected vs. Actual Costs

