

Zone 7

**Report to the Zone Commissioners
Design and Construction Projects
for Calendar Year 2009**

By Dusty Williams, General Manager-Chief Engineer
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GENERAL:

Throughout the District (all Zones) during Calendar Year 2009, the Design and Construction Division completed four capital projects with a combined value of \$4.7 million. Two projects with a total contract value of \$8,500,000 are currently under construction. In Calendar Year 2009 the District also inspected and issued notices of completion for 20 developer-built projects with a total value of almost \$24 million.

Recent bids for District construction projects have shown that general contractors are becoming very competitive. The District will continue to try and leverage this dip in construction costs by pushing hard to complete designs and advertise projects while prices are low.

Twenty-five capital improvement projects in the FY 2009/2010 budget are either under active design or pre-design study at the District with five of those projects expected to be advertised for construction in Calendar Year 2010. The total construction contract cost of those five projects is estimated at around \$11 million. Another ten or so drainage projects are being managed by individual cities with the District participating in funding.

Additionally, we are also underway with six repair projects that require engineered drawings due to the severity of the damage or potential damage to our facilities. Deficiencies range from exposed and rusting rebar to undermined slope paving. As all in-house resources are devoted to our capital improvement projects, these six projects are being designed by outside consulting engineers.

Calendar Year 2010 should also see completion of significant changes at the District's office site. The proposed Low Impact Development (LID) Retrofit Project is a three part project. The completed project will convert the District's Market Street campus into a regional example of green development concepts. The upgraded facility will be used as a regional "green" training center for municipal employees, developers, engineers, and contractors throughout the Inland Empire and Orange County. Currently, there are limited locations and opportunities to demonstrate the proper application of LID BMPs. This facility is uniquely designed to accomplish both demonstration and monitoring of the effectiveness of LID practices. This project is intended to facilitate the support and implementation of LID BMPs by municipalities and developers. The cost of this project is being partially subsidized by a \$475,000 State Proposition 13 grant administered by SAWPA.

Following is a status summary of the capital improvement projects for Zone 7:

1. **Murrieta Creek Channel - Corps of Engineers (7-8-00021-01)** - Murrieta Creek continues to be the District's highest priority project in Zone 7. Channel improvements to Murrieta Creek were first proposed by the District in its Master Plan adopted in 1987. The plan basically consisted of a soft bottom channel with concrete sideslopes. During the early 1990's the District worked with the local municipalities and citizens groups to develop a new plan for Murrieta Creek that would include flood retention, recreation and environmental amenities. A revised plan meeting these goals was endorsed by the City Councils of Murrieta and Temecula in 1995.

In 1996, in an effort to solicit Federal funding for the project, the District requested the Senate Committee on Environment and Public Works authorize the U.S. Army Corps of Engineers to prepare a Reconnaissance Study of the Murrieta Creek Watershed. The authorization was made and the study recommended moving forward with a Feasibility Study.

Early in 1998 the Corps initiated an expedited effort to complete a Feasibility Study for a Murrieta Creek flood control project. The 2-year process included close coordination with the District and other agencies, as well as with the public at large. In September 2000, the Corps completed the Feasibility Study Report and forwarded it to both Division and Headquarters for review and approval. Corps Division in San Francisco supported the Los Angeles District's recommendation of "Alternative 6 - The Recommended Plan".



The Recommended Plan is similar to a conceptual plan approved by the local community and Cities in 1995. It includes soft channelization from the U.S.G.S. stream gauge southerly of Old Town Temecula, upstream to Tenaja Road in the city of Murrieta. In order to provide 100-year protection the plan provides a 250-acre detention basin to attenuate peak flows on District property bounded roughly by Santa Gertrudis Channel, Murrieta Creek, Elm Street and Jefferson Avenue. The entire basin site will provide flood attenuation benefits, while approximately 160 acres of the site would be planted for environmental restoration. Approximately 50 acres within the basin site (located to the west of Jefferson Avenue between Santa Gertrudis Creek Channel and Cherry Street) will be set aside as a community regional sports park. This park area would be separated from the remainder of the basin by a small berm, and would be flooded only at very infrequent intervals. The project also includes pedestrian/bicycle and equestrian trails throughout the full seven-mile length of the project.

On October 27, 2000 the Energy and Water Development Appropriations Act of 2001 was signed into law by the President. The Act specifically directed the Corps to proceed with detailed engineering design for Alternative 6 - The Recommended Plan, based upon the Murrieta Creek Feasibility Study report and accompanying environmental documents. More importantly, Congress committed to cost share on the entire cost of the then \$90 million Recommended Plan. This will result in Federal funding in the amount of approximately \$60 million. The Act also included a \$750,000 FY 2001 Federal appropriation for the Corps to

initiate the Pre-Construction Engineering and Design (PED) phase of the project. The Corps estimated that the PED effort would take approximately two years, at an estimated cost of \$6 million. These costs are to be shared with the Federal government on a 35% local/65% Federal share basis. On February 23, 2001 the Corps and District executed a PED cost sharing agreement for the project, and the engineering design phase was officially underway.

The overall project is broken into four phases: Phase 1 - channel improvements from near the Front Street/Highway 79 South junction upstream to First Street in Temecula; Phase 2 - channel improvements from First Street upstream to Winchester Road; Phase 3 - the detention basin/environmental restoration/sports park; and Phase 4 - channel improvements from the detention basin upstream to Tenaja Road in Murrieta.

The District secured and certified all necessary real estate for Phase 1 of the project in 2003 and the Corps advertised for construction bids, eventually awarding a construction contract in the amount of \$2.9 million to Oregon Mountain Constructors of Redding, California. Construction began in early December 2003 and was completed in December 2004. Unfortunately, the project sustained significant damage due to the winter rains of 2004. The Corps completed the repairs in May 2007.

The single most important issue facing the Corps continues to be the optimization of the basin site. The amount of flow released from the basin will dictate the channel geometry through Old Town Temecula. The basin discharge will also greatly affect the water surface elevation within the detention basin. Any embankments required around the basin to accommodate an above-ground water surface would translate into levees along the improved channel upstream into the city of Murrieta. The Corps is striving to minimize or eliminate all levees within each of the cities. The Corps staff hired a consultant to look at optimization of the basin site to minimize the height of any embankments around the basin.

The District has the necessary rights of way for Phases 2 and 3 secured. Depending on the amount of the Federal appropriation received, construction of Phase 2 may be initiated in early 2011.

2. **Wildomar MDP Lateral C, Stage 3 (7-8-00075-03)** - This project as shown in the District's Wildomar Master Drainage Plan is an open channel starting at the existing Stage 2 facility near Pasadena Street and extending north approximately 2,000 feet to Central Street. The facility, as master planned, is a concrete-lined channel aligned within the existing Bundy Canyon Wash. Given the environmental sensitivity of the Murrieta Valley Watershed, obtaining the necessary regulatory permits to construct the master plan facility is nearly impossible. Therefore, when the District began work on the project in April 2004 it began by preparing an alternative study. The most promising alternative is a project that avoids improvements to the most sensitive part of the wash, the upper 1,450 feet, by bifurcating storm flows at Central Street and conveying the flows in an underground storm drain in Como Street as well as the existing wash. The project does require channel improvements to the lower 750 feet of the wash downstream of Como Street and while the intent is to use concrete-lining over this reach, some other type of armoring may be required. While working on the environmental assessment for the project, it became clear that a comprehensive study of the entire Lateral C watershed was required. Design work on the project is now on hold while a new master plan is prepared for the entire Lateral C system.

3. **Murrieta MDP Line D, Stage 2 (7-8-00135-02)** - Contribution to the City of Murrieta for construction of the downstream end of the MDP line in conjunction with Guava Avenue Bridge project. Current budgeted amount is limited to Murrieta Valley Local ADP fund balance (+/- \$950k).
4. **Warm Springs Channel, Stage 3 (7-8-00760-03)** - This project consists of ultimate channel improvements to Warm Spring Channel from Madison Avenue westerly about 500 feet to existing Stage 2 near Jefferson Avenue. Design mapping for this project is complete, however, detail engineering design work has not yet begun.

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