



CIP & BOND PROJECTS

STATUS REPORT OCTOBER 20, 2010

Devil's Slide Water

- Project examines the potential for capturing and treating the groundwater generated by the new Devil's Slide Tunnel. Staff expects to start testing after the tunnel lining is completed in early 2011.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$15,000	\$3,720	24.8%	\$11,280

Water Desalination – Water Treatment Feasibility Study

- Studies performed by BAWSCA anticipate a 30 million gallon per day water supply shortfall for SFPUC customers by the year 2035. Conservation will help close some of the water supply shortfall, but a new sustainable and reliable water source is still needed. Staff developed a conceptual desalination plan that would help address the shortfall. The preparation of a technical paper detailing the pitfalls and potential of such a plan is underway. Development of the conceptual design was based on research conducted of existing and planned desalination facilities and discussions with permitting agencies about their expectations and requirements.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$3,000	\$0	0%	\$3,000

Alternate Energy Project

- Staff is working on a project that may result in the installation of an in-pipe hydroelectric power generator (HPG). The HPG would be installed within the District's existing piping system to take advantage of the high pressures created by the elevation of the water tanks located at the top of hills.
- Staff is also investigating solar and wind energy designs that are unobtrusive and don't result in bird kills.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$5,000	\$0,000	0%	\$5,000



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Reina Del Mar/Vallemar Pipeline Replacement Project

- Phase IX - Within the next few months staff will disconnect the piping on Juanita and Ursula from the old low pressure piping system. Concurrently, the piping on those streets will be connected to the new high pressure system.
- Completion of Phase IX work will allow the removal of the temporary regulator installed on Reina Del Mar at Minerva. The temporary regulator was installed at the beginning of the project to maintain pressures on the old low pressure waterline while the construction of the new waterline was taking place.
- Phase XI work connects the existing piping on Hillside and Lauren to the high pressure piping along Reina Del Mar and will complete the project work.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$50,000	\$0	0%	\$50,000

Linda Mar Shopping Center Service Connections

This project replaces the existing water service connection for the businesses within the Linda Mar Shopping Center. Work is expected to start in early 2011.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$55,000	\$0	0%	\$55,000

21" Transmission Main Emergency Piping Nodules

More than a mile of the District's essential 21" transmission main is located directly above the San Andreas Fault within the San Francisco Watershed above the City of San Bruno. The "jump nodules" are designed to be placed at about 500' intervals so staff can quickly attach temporary flexible piping above ground to "jump" sections of the transmission piping damaged during an earthquake. The second and third of the fifteen being planned are scheduled for construction at the end of this fiscal year.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$100,000	\$74,660	74.6%	\$25,340



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21” Transmission Main Relocation Project at Skyline/Sharp Park Rd.:

Staff continues to work on an agreement with AIMCO, the owners of the Tree Tops Apartments, to relocate the District’s 21” Transmission Main to the perimeter of their property along Sharp Park Rd. and Skyline Blvd.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$150,000	\$0	0%	\$150,000

T-4 Transmission Main Replacement Project:

Staff completed this project on time and under budget. Staff constructed nearly 1,800’ of new 18” diameter ductile iron pipe and abandoned the existing 16” diameter steel welded transmission piping that experienced three leaks within the last year.

Staff teamed up with the San Francisco Recreation and Parks Department (SFRPD), which is the owner of the rifle range, to construct the piping in the new alignment after the SFRPD Contractor cleared it of contaminated soil and before their Contractor started work in the area of the existing piping.

Originally the Contractor was to work around the existing transmission piping which increased our exposure to pipe failure and the potential to harm staff and contaminate the water. This cooperative team accomplished many win-win goals including:

- Replacement of the existing piping that was in very poor condition;
- Creating a safe location for the new pipe outside the contaminated area;
- Creating a safe place for staff to work;
- Simplifying the work area for the SFRPD Contractor, and;
- Saving money for both agencies.

Staff is very pleased with the positive working relationship between our two agencies.

On the night of the San Bruno Gas Explosion staff was tying in the new transmission piping with the old transmission piping. It was essential we complete the connection in one day in order to keep our customers online. The work had started at 5:30 a.m. that morning and required the removal of nearly 100’ of existing piping before the new piping could be installed and connected. Despite the critical nature of this connection our response to critical aid requests was equally important. Because the District’s staff is so well trained



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and interchangeable, we were able to peel off three staff (two to open the San Bruno interconnect and the other to operate the main pumps) for a two and one half hour period without skipping a beat.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$175,000	\$154,442	88.3%	\$20,558



(Left) Jason Fernandes, Jose Velazco and Mike Gibbs installing jumper nodule.
 (Right) Staff excavating for new piping installation.

T-4 Transmission Main Valve Installation Project:

This project installs valves along the length of the existing T-4 transmission piping between the Sharp Park Golf Course and Fassler Avenue to allow staff to isolate portions of the T-4 piping during emergencies and planned maintenance activities.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$100,000	\$0	0%	\$100,000



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Tank 27 – Christen Hill Tank Replacement Project

- This item is the CIP portion of the funding for the pay-as-you-go replacement of the Christen Hill Tank. Please find the current project status listed below under Bond Funded Projects.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$700,000	\$0	0%	\$700,000

Sharp Park Tank Bypass Piping Improvement Project:

This project reconfigures the existing inlet/outlet piping at the Sharp Park Tank to allow for the planned bypass of the tank. The bypass would increase flows to the Gypsy Hill Tank and Royce Tanks when needed.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$100,000	\$0	0%	\$100,000

Park Pacifica Tank Seismic Retrofit Project - Design

The Park Pacifica Tank was constructed without seismic restraints. While the interior tank coating has failed and there is severe corrosion of the support columns and roof, the tank's shell metal is in moderate condition. It would be beneficial to retrofit the tank, replace its roof with an aluminum dome roof and recoat the interior and paint the exterior of the tank to help protect the District's investment.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$55,000	\$0	0%	\$55,000

Recycled Water Project

This project constructs a recycled water distribution and storage system that includes a pump station, three miles of distribution piping and a 400,000 gallon tank. The completed project will save nearly 50 million gallons of potable water each year that has historically been used for irrigation. Current status:

- The CEQA and permitting process is complete.
- The Recycled Water Piping Project and Pump Station / Water Tank Project are out to bid. Bids are scheduled to be opened at the end of October with an award scheduled for November 2010.



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- The ARRA (Stimulus) Fund agreement is complete.
- Processing of the State Revolving Fund Agreement is underway. Staff is working with the State Water Resources Control Board to resolve outstanding requirements.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$100,000	\$91,271	91.3%	\$8,729



Staff is conducting site preparation for new Recycled Water Tank at Gypsy Hill site.

ANNUAL PROGRAMS

Reservoir Site Paving

Tank sites, including Fassler, Hickey, Royce, Sharp Park, Skyline and Tapis, received slurry seal emulsion surfacing. The slurry seal is a maintenance procedure applied to asphalt to extend its lifespan (typically five to seven years) and protects the District's initial costly paving expenditure.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$22,000	\$11,398	51.8%	\$10,602



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Reservoir Fence Maintenance

This project installs and maintains fencing at the District's various facilities.

- Staff oversaw the repair of the damaged fence at the San Pedro Corporation Yard. The Contractor was able to reuse most of the fence and install new support brackets and poles.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$15,000	\$6,523	43.5%	\$8,477

Easement Protection

This program is an important part of the District's Emergency Preparedness Program because it provides access to important existing piping for monitoring and repairing leaks. The work not only maintains emergency access, but in many cases, it also serves as a fire break to help protect the District's improvements.

- Staff has completed its summer and fall 2010 easement protection program.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$30,000	\$14,358	47.9%	\$15,642

Meter Replacement Program

This program installs and updates meters and meter clocks (recording/reporting devices mounted on the top of the meters).

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$30,000	\$0	0%	\$30,000

Fire Hydrant Replacement Program

New hydrants were installed throughout the Fairmont area.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$30,000	\$0	0%	\$30,000

Equipment Purchase Program

Expenditures in this program are scheduled for late in the Fiscal Year.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$30,000	\$0	0%	\$30,000



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Geographic Information System

This is a multi-phased, multi-year project to construct a geographic information system (GIS). A GIS combines the physicality of a map with the organizational elements of a database for analysis, trending, design and problem solving. Ideally staff would have a portable computer that shows an aerial photo of the entire District that can be expanded to clearly see the area of focus such as the location of a system leak. Using a query system, the staff person would be able to identify the particulars (age, size, type and depth) of the source of the leak. Additionally, the GIS would identify the nearest isolating valves, customer outages and possible system rerouting to reduce customer inconvenience. A GIS is also a powerful tool for system analysis such as water use/conservation trends, leak trends, budget requirements and emergency response planning.

Phase I - electronically scans the existing District piping maps and project plans. This work is mostly complete with over eleven thousand entries. The scanned originals have been stored offsite to preserve and protect them. Staff has already successfully used the database system to retrieve plans and maps. The query process speeds the retrieval of available plans/maps and the electronic copy of the plans/maps allows staff to zoom in on the information they need immediately for an emergency response or a design question.

Phase II - is underway with staff's investigation into several vendors and consultants that provide GIS programs, GIS system architecture and support services.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$5,000	\$1,212	24.2%	\$3,788

Francisco Facility

The existing Francisco facility office building, mechanic's shop and warehouse do not meet minimum seismic structural requirements. The offices and shop cannot be seismically retrofit and must be demolished and rebuilt. The existing warehouse may be retrofit.

For the purpose of meeting CEQA requirements, the Francisco and San Pedro Corporation Yard projects were combined because the seismic retrofit of



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the Francisco Facility can't occur without providing a location for relocation of the mechanic's shop and warehouse operations.

- The Draft Initial Study/Mitigated Negative Declaration was prepared for the combined project and reviewed by the City of Pacifica and District staff. The City has been involved in the process, even though the District is the lead agency, because the City Planning Commission will have oversight of the project's buildings.
- Staff is currently incorporating comments made by the City's Planning Department and City's legal counsel into the draft CEQA documents before starting the circulation and public review process.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$110,000	\$0	0%	\$110,000

BOND FUNDED PROJECTS

Christen Hill Tank Improvement Project

This project replaces the existing 3.5 million gallon tank with a new seismically-designed 3.8 million gallon tank. The old tank was suffering from severe corrosion, a damaged foundation and no seismic restraints:

- Staff completed the removal of diesel contaminated soil under the old tank that was discovered during the tank's removal.
- Staff completed the new tank foundation with the installation of the geotechnical grid and placement/compaction of the aggregate base material. The work was inspected and approved by ENGEO Geotechnical Consultants.
- Staff is currently performing minor site grading to accommodate tank construction and consequently reduce project costs.
- Bids were received and rejected for the new tank based on an inconsistency in the aluminum domed roof bids. Plans and specifications are being revised to rebid the project in November 2010.
- Separate bid documents for the tank's interior coating and exterior painting will be prepared soon after the revised tank and roof specifications have been rebid.



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Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$1,600,000	\$468,901	29.3%	\$1,131,099

PARTNERSHIP PROJECTS

Devil's Slide Tunnel Waterline Project

- The Devil's Slide Tunnel Project requires water for the tunnel fire suppression system, fire hydrants, Caltrans' operations and maintenance building, drinking fountains, bathrooms and landscaping. To serve these needs the District will construct nearly 4.5 miles of 12" Ductile Iron Pipe looped water distribution system for Caltrans. Caltrans is paying all costs for this project.



October 1, 2010
Devil's Slide Tunnel Breakthrough Event
Board (Bob Vetter unable to attend), General Manager and staff
attended Event