



## North Coast County Water District

# CIP & BOND PROJECTS

---

---

## STATUS REPORT APRIL 21, 2010

### San Pedro Creek Water Rights Utilization

- The completion of the Filter Plant Rehabilitation and the success of the filter system permits the water to be used for non-potable sources.
- A conceptual design has been prepared for the in situ repair of the piping between the existing intake structure and the Filter Plant intake piping. Staff will be contacting vendors/contractors during this calendar year to verify constructability and obtain construction estimates.

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

### Water Desalination – Water Treatment Feasibility Study

- This project investigates the necessary conditions and steps needed to construct a desalination facility. The investigation will include preliminary discussions with other agencies to determine their interest in purchasing the water or perhaps partnering to construct a facility.

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

### Alternate Energy Project

While studying potential alternate energy power sources staff found several promising sources including in-pipe hydroelectric power generation (HPG). This source would take advantage of the potential energy stored in the water tanks on the hillsides and the District's need to dissipate that energy from the pipelines within the valleys before high pipeline pressures cause damage. The HPG would be installed at various locations to maximize the difference between the mountain top tanks and low lying valleys.

Currently, the water tanks are filled by pumping water during off peak hours to save energy costs. The new HPG would slightly alter current operations by maximizing water pumped to the highest tank elevations and flowing that water



## North Coast County Water District

# CIP & BOND PROJECTS

through an HPG by gravity to the lower elevation tanks during high energy use peak hours to maximize revenues and thereby better offset pumping costs.

At the April 2010 Board Meeting staff will request support for an application for a \$90,000 matching fund grant from the Department of Interior, Bureau of Reclamation for the study and construction of an in-pipe hydroelectric generator.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$2,000	\$0	0%	\$2,000

### Reina Del Mar/Valleamar Pipeline Replacement Project

The Reina Del Mar Pipeline Replacement Project is a multi-phase multi-year project to improve pressures and flow characteristics, access to water storage, and eliminate the low pressure zone in the Valleamar Valley.

- Phase VIII work attaches the new high pressure waterline located on the north side of Reina Del Mar to the existing piping on side streets and water service connections along the south side of Reina Del Mar. Staff is currently replacing the hydrant on Ramona which completes all work in this phase.
- Phase IX work removes the temporary regulator installed on Reina Del Mar and 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.
- Future Phases will connect existing piping on Hillside, Lauren, Juanita and Ursula to the high pressure piping and will complete the project work.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$100,000	\$48,946	48.9%	\$51,054

*Next Page: Frank Capizano & Crew (Rolando Valdez, Joe Cardera and Brian McCarthy) working in Valleamar area.*



# CIP & BOND PROJECTS



### Annual Pipeline Project

*T-4 Transmission Main Replacement Project.* This is a joint project with the San Francisco Recreation and Parks Department (SFRPD) to replace approximately 1,800' of existing pipe within the lead-contaminated Sharp Park Rifle Range. The project is currently on hold until the SFRPD can obtain a Fish & Wildlife Permit for their soil remediation project. SFRPD has not yet scheduled this work.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$150,000	\$29,419	19.6%	\$120,581

### 21" Transmission Main Emergency Piping Nodules

- Staff is planning the installation of a nodule at the end of this fiscal year. The nodule installation will be the second of 15 needed to prepare for upcoming earthquakes on the San Andreas Fault. More than a mile of the District's essential transmission main is located directly above the San Andreas Fault. The "jump nodules" will be placed at about 500' intervals to allow staff to quickly attach temporary flexible piping above ground to



# CIP & BOND PROJECTS

---

---

“jump” sections of the transmission piping damaged during an earthquake.

- By January 2010 staff had replaced all of the air release valves (ARV) along the 21” transmission main within the watershed area. Only two ARV’s remain along the remaining three miles of 21” main that need to be replaced.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$40,000	\$8,290	20.7%	\$31,710

## ANNUAL PROGRAMS

### Reservoir Site Paving

- This year an asphalt pad for two 20 foot long steel storage containers at the Gypsy Tank site was completed. Paving work adjacent to the Royce Tank is also complete.



*Above: Royce Tank  
Site Paving*



# CIP & BOND PROJECTS



*Above: Main Pump Station Paving*

- This month the area surrounding the Main Pump Station was paved to improve site access and reduce site maintenance.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$60,000	\$14,791	24.7%	\$45,209

## Reservoir Fence Maintenance

- Work on this project started with a replacement fence at Christen Hill Tank Site as part of the Tank Replacement Project (See Bond Funded Projects.)(Pictures next page.)
- The damaged concrete fence at the Skyline Intertie site was repaired and paid for by the responsible motorist's insurance carrier.



# CIP & BOND PROJECTS



*Above: Christen Hill Tank Site Fencing*

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$25,000	\$2,669	10.7%	\$22,331

## Easement Protection

This program is part of the District’s Emergency Preparedness Program because it provides access to important existing piping for monitoring and repairing leaks.

- Staff completed its maintenance of the easement on Gypsy Hill between the District’s tank site and Sharp Park Road.
- Staff is also working with the GGNRA to improve access to the District easements on Mori Ridge (east of State Highway 1), Cattle Ridge and Sweeney Ridge.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$50,000	\$36,002	72.0%	\$13,998



## North Coast County Water District

# CIP & BOND PROJECTS

---

---

### Meter Replacement Program

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

- Staff conducted the meter replacement/rehabilitation work within Route 29 including Aspen and Park Mall.
- Work will continue during the remainder of this year at a much slower pace as major piping work has resumed with the start of nice weather.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$5,000	\$1,016	20.3%	\$3,984

### Fire Hydrant Replacement Program

Work on this project will resume later in this fiscal year.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$15,000	\$3,846	25.6%	\$11,154

### Regulator Upgrades

- Repair and replacement of the Zamora regulator and vault is complete. Staff reused an access panel from a previous regulator project to save money and improve vault access.
- Staff ordered and will install an on-site solar driven pump to remove ground water that regularly floods the Rockaway Regulator vault.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$30,000	\$19,724	65.7%	\$10,276

### Equipment Purchase Program

Staff purchased four attachments for the mini-excavator including the pavement/concrete breaker, vibrating compaction plate, compaction wheel and 12" auger.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$125,000	\$29,971	24.0%	\$95,029

### Geographic Information System

Staff is continuing the process of scanning existing maps into electronic format and entering map details into an Excel spreadsheet for later use in a

---

---



## North Coast County Water District

# CIP & BOND PROJECTS

---

database. Staff is already experiencing success in using 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.

This project also starts the process of developing a Geographical Information System (GIS) for the District. When complete, the GIS will effectively manage and retrieve essential information such as project plans, as-built maps, photos, maintenance data, property/easement titles, meter location data and utility data for other utilities. The GIS ties together this data into a mapping system that simplifies its retrieval and improves analysis.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$20,000	\$2,948	14.7%	\$17,052

## BOND FUNDED PROJECTS

### Nelson Tank Removal Project

The tank is drained of water, but work on other critical projects has delayed tank removal.

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

### San Pedro Corporation Yard Improvements

Staff is waiting for the site to dry out before starting reconstruction of the wall adjacent to the access roadway. The concrete block wall will be constructed with large concrete blocks very similar to children's LEGO game pieces. They can be stacked to form walls and then removed as necessary. The fence on the top of the wall leaned over towards the yard area during the last large storm and will be repaired with the temporary concrete block construction.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$100,000	\$39,261	39.3%	\$60,739



## North Coast County Water District

# CIP & BOND PROJECTS

---

---

### Christen Hill Tank Improvements – Tank Design

This project replaces the existing 3.5 million gallon tank with a new seismically-designed 3.5 million gallon tank.

- The required CEQA documentation has been prepared and certified.
- Staff is currently conducting its final review of the 100% plans and specifications and readying them for bidding in May 2010.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$190,000	\$128,258	67.5%	\$61,742

### Christen Hill Tank Improvements – Tank Construction

- Staff completed the on-site piping modifications at Christen Hill Tank and at the adjacent Daly City Tank that are necessary prior to the removal of the tank. The work included the installation of a meter assembly connection between the District’s system and Daly City’s tank. It also included the installation of three separate valve sets to isolate and redirect water currently connecting the Christen Hill Tank to NCCWD and Westborough Water District piping.



*Christen Hill Tank Site:  
Meter Assembly Vault*



## North Coast County Water District

# CIP & BOND PROJECTS

---

- Preparatory electrical work such as SCADA connections to the adjacent Daly City Tank and procedures for the planned disconnects of the SCADA/electrical at Christen Hill Tank are complete.
- Removal of the tank is scheduled after satisfactory tank replacement bids are received.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$910,000	\$98,190	10.8%	\$811,810

### Christen Hill Tank Improvements – Regan Pump Station Modifications

Staff completed the installation of the booster pumps and connective piping and electrical improvements. The three-pump booster system will help maintain pressures and fire flows within the pressure zone served by the Regan Pump Station and Christen Hill Tank during the 1 ½ year period that the tank will be off-line for its removal and replacement.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$105,000	\$96,777	92.2%	\$8,223

### Christen Hill Tank Project - Milagra Piping Modifications

This project is one of many innovative projects designed by staff. It solves a pressure problem along the 21” transmission main by essentially constructing a stand pipe instead of a new pressure vessel or water tank. Staff is replacing the existing 16” piping at the site with 36” diameter piping that was recycled from the Filter Plant. Improvements at the Filter Plant constructed by staff earlier this year made the old 36” chlorine contact piping system obsolete. Rather than abandon the 36” piping in place, staff learned how to disconnect the piping and moved it to the Milagra Site. Staff video taped the process for disconnecting the piping and has already shared the process with another District. The Milagra site has sufficient ground elevation differences to install most of the stand pipe below ground to achieve the pressure changes needed for the 21” transmission main. A side benefit from this project is several interconnections between site piping that would allow staff to drain Christen Hill Tank very quickly. The ability to drain the tank will help during an emergency or during normal operations when there is a necessity to turnover the tank’s water.



## North Coast County Water District

# CIP & BOND PROJECTS

---

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$150,000	\$20,786	13.9%	\$129,214

### Francisco Facility

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

For the purpose of meeting CEQA requirements, the Francisco and San Pedro Corporation Yard projects were combined because the seismic retrofit of 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 projects' 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
\$0	\$0	0%	\$0

## **GENERAL PROJECTS**

## **PARTNERSHIP PROJECTS**

### Recycled Water Project

This project, to construct a pump station, three miles of distribution system and a 400,000 gallon tank is designed to replace potable water uses with recycled water. The project is estimated to save nearly 50 million gallons of potable water each year.

- A requirement of obtaining the \$2,200,000 in funding from the ARRA (Stimulus) Grant is the execution by the Board of Directors of the U.S.



## North Coast County Water District

# CIP & BOND PROJECTS

---

---

Department of the Interior Bureau of Reclamation Assistance Agreement. The Agreement is before the Board for action at their April 21, 2010 meeting. As a project partner and prompted by the Assistance Agreement requirement, the SFPUC agreed to reaffirm their commitment to the project. We are meeting with SFPUC staff to jump start this project and finalize the steps required to put the project out for bid.

- Staff is continuing their efforts to complete the State Revolving Fund Loan (SRF) and ARRA application process.
- Project plans and technical specifications are complete and ready for bidding, however, the bid documents will need to be modified to meet State Revolving Fund Loan (SRF) and ARRA requirements once the application process is complete.

Budget	Year to Date Spent	Percent Spent	Balance Remaining
\$130,000	\$53,951	41.5%	\$76,049

### 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. So far:

- Piping has already been constructed within the southbound tunnel bridge and has passed pressure test requirements.
  - Piping from the valley below the bridge to the south abutment of the bridge is also complete.
  - The project IS/MND for the East and West Alignments was prepared and has completed the review period without public comment. The Board of Directors adopted the Initial Study/Mitigated Negative Declaration for the NCCWD Water Transmission Pipeline Project and authorized filing the Notice of Determination at their December 16, 2009 Board Meeting.
  - Design work for the remaining pipeline within Shamrock Ranch and along Highway 1 is also underway.
- 
-



## North Coast County Water District

# CIP & BOND PROJECTS

---

---

### Sample Stations

Staff is in the process of installing the last of the fourteen sample stations needed for the water quality sampling of the District's distribution system. The stations are being constructed at strategic locations throughout the District to develop a true representative sample of the water quality at any given time. The stations replace water sampling from private hose bibs.

### **LEAK REPORT**

Leaks that occurred during this last month are listed on the attached form. A map of the leaks that have occurred since 2002 is also attached.