

## UPDATE ON RAINBOW MWD CONSTRUCTION PROJECTS

This is a very busy time for construction activity at RMWD, and this issue of the newsletter is devoted to bringing you up to date on these major projects.

### Line Q-3

As you may recall line Q-3, one of the main water lines that crosses under the San Luis Rey River, ruptured last December. Without that 22-inch steel pipe we are severely hampered in our ability to move water throughout our service area. Early this month we went out to bid to replace Line Q-3 with three new 16-inch pipelines. We are using three pipelines because we elected to use heavy-duty P.V.C. material to avoid the corrosion issues that resulted in the current pipe failure, and 16-inch is the largest size available in that pressure rating.

Plans call for a two phase approach to the replacement. In the first phase the contractor will use the existing damaged pipe as a sleeve and pull the new pipe through the old pipe from one side of the river to the other. That will result in the quickest way to get at least one pipe connected, and it avoids myriad environmental issues involved with working in the sensitive location.

The second phase will start once we receive environmental approvals—probably in early fall. In the second phase the contractor will use a technique called *horizontal directional drilling* (HDD) to install a new casing under the river. This process is similar to drilling a well—only sideways! After the new casing is in place the contractor will pull the remaining two pipes through and connect them at each end.

We hope to award the construction contract at the June board meeting. In May the Board of Directors approved purchasing the pipe material for the project since it takes six to eight weeks for delivery—that way the contractor will be able to start right away.

### Line NN

Line NN is another pipe that crosses under the San Luis Rey River. At one time RMWD had six lines crossing the river; today we have only two. Prior to the failure of Line Q-3 the Board had recognized the need to replace Line NN to provide better reliability and to meet water demands when the Morro Reservoir is taken out of service later this year.

Like Line Q-3, Line NN has numerous leaks under the river. In order to determine the extent of damage to the existing pipe staff utilized a video camera to inspect the entire pipe to locate failures. The plans call for the contractor to excavate and repair damaged locations in more accessible areas and then utilize the same HDD technology we are using on the Line Q-3 project to install a new line in the areas of sensitive habitat.

We hope to award the construction contract at our July board meeting.

### Lift Station #2

This sewage lift station pumps nearly all of the sewage from our district to the treatment plant in Oceanside. Originally constructed in the 1970's it has been modified and expanded several times. The pumping equipment and other infrastructure have exceeded their service life and the station lacks adequate pumping capacity to meet our ultimate demands.

Plans call for a new lift station to be constructed on the same site as the existing facility. We will expand the capacity of the station from the current one-million gallons per day to our contract capacity of one-and-a-half-million gallons per day. In addition we will construct an emergency storage holding tank that will provide several hours of reserve storage in case the pump station fails.

Plans should be out to bid in July with an anticipated construction contract awarded at the August board meeting.

**RAINBOW  
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**UNCOVERED RESERVOIR  
PROJECTS**

On March 19<sup>th</sup> the State of California Department of Public Health (CDPH) issued RMWD a Compliance Order for Noncompliance (Order) because of our open-air drinking water storage reservoirs. We received similar Orders in 1993, 2004, and two in 2005. The good news is that this time they only mentioned three of our reservoirs because we completed the project to cover North Reservoir last year.

At the Northside Reservoir the Order requires that we complete the current construction project to cover the reservoir by December of this year. That project is slightly ahead of schedule so complying with that directive should not be an issue. Once Northside is covered we will only have two open-air reservoirs remaining.

At Morro Reservoir the Order requires that we begin construction by January 2011, and complete the project by January 2012. We are finalizing the design to cover Morro Reservoir and expect those plans to be out to bid this summer with construction beginning in January as required. The plans call for the reservoir to be lined with an impermeable membrane and then have a floating cover installed. We will also install a new overflow and drain line, and add new piping to enhance water quality.

The Beck Reservoir poses a particular problem because of its size. Beck is our largest reservoir at 204 million gallons, so the cost to either cover it or build a disinfection facility is a big burden to the ratepayers. The Order requires that we provide construction plans to address Beck by November of this year, and begin construction by April 2011.

In order to satisfy the Order the District will construct a new steel water tank at the abandoned Pala Mesa Reservoir site. This new tank will only hold about six-million gallons, but it will meet all CDPH standards. That means we still need to address Beck Reservoir in the future to maintain our emergency storage.

The new Pala Mesa Tank is currently under design and we anticipate the grading to begin this fall, so we will meet the requirements of the Order.

If you would like to read the Compliance Order for Noncompliance a copy is available on our web site. Also, if you would like to see pictures of the construction projects to cover the North and Northside Reservoirs, our Engineering Department maintains a photo album on our website at [www.rainbowmwd.com](http://www.rainbowmwd.com). Simply click on Engineering Services, and then click Reservoir Construction Photos.

***RAINBOW ICON TO RETIRE***

*RMWD's longest-tenured employee Henry Monroe has announced he will retire from the District at the end of June.*

*Henry has worked for the District for more than 30 years in a variety of capacities and he will be missed!*

*Congratulations, Henry, and thank you for your decades of dedicated service to the ratepayers of RMWD.*

***RMWD EMPLOYEE CERTIFICATIONS***

Lawrence Garcia, Chris Hoelscher, and Scott Terrell each received their Grade D2 Water Distribution Certifications in June, 2010.

Congratulations Lawrence, Chris, and Scott!