The City of San Diego
Water Department
600 B Street, Suite 700
San Diego, CA 92101

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## Conserve Water

*Take the 20-Gallon Challenge*

Last year was a historically dry year throughout the western United States. Since San Diego imports more than 85 percent of its water, conservation is now more important than ever.

As part of a region-wide effort to increase voluntary water conservation, the City of San Diego Water Department is participating with other water providers in issuing a "20-Gallon Challenge." Each San Diegan is being asked to conserve 20 gallons of water a day.

For more information visit www.sandiego.gov/water/conservation or call the Water Conservation Hotline at (619) 515-3500. Information about the regional water conservation effort is available at www.sdcwa.org

THE CITY OF SAN DIEGO

## *Community Advisory Group 2008 Meetings*

Meetings are held at the Scripps Miramar Ranch Library Center in the Community Room and begin at 6:15 p.m. The public is welcome to attend. Interested persons should confirm meeting information by calling (858) 926-4014.

Wednesday, April 16, 2008
Wednesday, July 16, 2008
Wednesday, October 15, 2008

## *Useful Water Department Phone Numbers*

| | |
|---|---|
| *Project Information Line* | *619-533-4679* |
| *Billing Information* | *619-515-3500* |
| *Drinking Water Questions* | *619-668-3232* |
| *Water Pressure Problems* | *619-527-7482* |
| *Report a Water Main Break* | *619-515-3525* |
| *Lakes Recreation Program* | *619-465-3474* |
| *Speakers Bureau* | *619-533-6638* |
| *Storm Water Pollution Prevention* | *619-235-1000* |
| *EPA Drinking Water Information* | *800-426-4791* |

*This information is available in alternative formats upon request.* *Printed on recycled paper.

# MWTP WaterWorks

***The Miramar Water Treatment Plant Construction News***

Winter 2008

## Construction Milestone Celebration

On December 12, City officials, staff and community members gathered to celebrate the completion of the Contract A phase of work for the Miramar Water Treatment Plant upgrade and expansion project. Contract A included the most visible and extensive construction work at the plant. The work began in August 2003 and was completed in late 2007.

*Guests walked across the pedestrian bridge that leads to the new administration building.*

City officials gathered at the new pedestrian bridge and cut a ribbon that led across the walkway to the new administration building. Speakers from the Scripps Ranch area recognized the combined efforts of the City administration, the Water Department and the local community in working together on the project. David Jarrell, Chief of Public Works, acknowledged that the Scripps Ranch community is vested in the project. He also noted that the community's continued support is critical for a project of this size.

Bob Dingeman, long-time Scripps Ranch resident and member of the project's Community Advisory Group since it was formed in 1999, praised the upgrade and expansion project as state-of-the art. He complimented the Water Department on the minimum disruption to the community and thanked the engineers and construction managers for their efforts in this area. Work will continue with Contracts B, C and D. The project is expected to conclude in late 2010 or early 2011 and have a final project completion event.

***During all of the construction and upgrade work, the Water Department must ensure that the Miramar Water Treatment Plant continues to operate successfully, uninterrupted and produces high quality drinking water for the approximately 500,000 San Diegans that receive water from the plant. Strictly coordinated construction scheduling continues to achieve this goal.***

## Contract A Wraps Up

The largest phase of construction work for the upgrade and expansion project was Contract A. This aspect of the project was the largest in cost, length of time and number of new structures and facilities built.

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*The Water Department Capital Improvements Program is committed to creating a safe and reliable water treatment and distribution system with state-of-the-art facilities at the lowest possible cost to our customers.*

# Contract A Construction

### *"By the Numbers"*

- *Over 150 employees on the job*
- *750,000 hours worked*
- *250,000 cubic yards excavated*
- *50,000 cubic yards of structural concrete poured*
- *2,500 feet of tunnels, ranging in size from 12 to 14 feet in diameter, installed*
- *Pipelines, 78 inches to 120 inches in diameter, installed*

# Miramar Recycles

*Steel rebar and concrete material removed during demolition work are taken to a local recycling center where it is processed and recycled into other construction material. Excavated earth removed from some locations at the plant will be used later to fill holes in other locations at the plant. As much as possible, recycled materials are purchased for construction materials.*





Key components of Contract A were completed in June 2007 when the new filters and pumps were put into service. Work continued on certain aspects of the administration and chlorine buildings into late 2007.

The contractor, Western Summit Constructors, Inc., finished the work within the anticipated time frame with excellent quality and had an outstanding safety record. Specialty construction work included teams of experts that installed large diameter pipelines in tunnels under portions of the treatment plant.

The cost of Contract A was $83 million. Project funding has come from water rates, revenue bonds and capacity charges assessed on new connections to the water system. Additional funding sources may be used as the work continues.

Before the upgrade began, the plant produced 140 million gallons of drinking water per day (mgd). Although much work has been done, the plant will not produce 215 mgd until work in Contract B is completed.

*The new administration building and other structures, seen from the rear across the existing flocculation-sedimentation basins.*

**The highlights of Contract A included building:**

- *12 new filter basins*
- *a rapid mix facility*
- *a de-aeration basin*
- *an ozonation structure*
- *a new chlorine facility*
- *a new administration building*
- *a new chemical storage and chemical feed facility*
- *new mechanical and electrical systems*
- *new instrumentation and control systems*

## Chlorine and Ozone: *Two disinfectants, two uses*

A new disinfectant process will be part of the Miramar Water Treatment Plant upgrade. The drinking water will be disinfected with ozone, instead of chlorine, which is currently used. Ozone is a highly effective way to eliminate any germs and viruses in the water at drinking water treatment plants and has been used for this purpose for over 100 years.

Ozone is created from oxygen by using energy in an ozone generator. The same strict federal and state regulations for drinking water quality must be met, regardless of the disinfection method.

Chlorine will still be used at the plant. Before the ozonated water leaves the treatment plant on its way to storage tanks and pipelines throughout the city, chlorine will be added. Chlorine provides a disinfectant "residual" so that the water remains disinfected in the storage tanks and pipeline delivery system prior to being used by customers.

## The Next Chapter - *What's Ahead in Contract B*

Construction work in Contract B began November 2007. Western Summit Constructors, Inc. was selected through a competitive bidding process to complete the $50.4 million construction contract.

The most prominent aspect of work will be building four new high efficiency flocculation-sedimentation (floc-sed) basins to replace the four existing basins, built in the 1960's and 1970's.

The floc-sed basins are a critical part of water treatment. In the basins, particles in the water are forced to clump together (flocculation) to form larger particles and then settle to the bottom of a tank (sedimentation). This makes the particles easier to remove from the water. After this process, water goes to the filtration step.

The Contract B work also includes demolishing the existing filters, the existing flocculation and sedimentation basins, the operations building and other existing structures. These are demolished as the new replacement facilities become operational.

### Demolition Work in Contract B

This construction work will create noise, dust and additional truck traffic coming in and out of the plant when demolition is occurring. Recycling used material on site helps reduce truck traffic. There has already been a large amount of demolition work at the plant and this next phase of activity will not differ greatly from previous work. The most intensive phase of demolition work will be from December 2007 through March 2008. The work schedule is:

| | |
|---|---|
| *December 2007– March 2008* | *Demolish existing filters which are in the location where the new floc-sed basins will be built* |
| *February 2008 – July 2009* | *Construct new floc-sed basins* |
| *Summer 2009 – Fall 2009* | *Demolish old floc-sed basins and other structures* |

## Looking Ahead to Contracts C and D

Contract C work will construct the ozone disinfection facilities. The construction will start in March 2008 and be completed in March 2010. The cost is estimated at $24 million and will be a separate construction contract and funded separately, as are all the six phases of the project construction.

Contract D work will complete the paving and install landscaping inside the plant facility. Landscaping on the perimeter of the plant, new sound walls and a new security entrance booth are also part of Contract D. The construction will start in January 2010 and be completed in December 2010. The cost is estimated at $4 million.

*Community Advisory Group 2008 Meeting Schedule on page four*

# Miramar Reservoir

*Recreation*

- *Open for boating and fishing daily*
- *Boat rentals and private boat launch*
- *California license required to fish*
- *Fishing permits at kiosk*
- *Paved path open ½ hour before sunrise until sunset*
- *Path open across the dam for a full-loop trip*

# Quagga Mussels

*Quagga mussels are a serious problem for public water providers in San Diego. These mussels are spread to new water bodies by aqueducts, commercial ships and recreational boats. They multiply rapidly and can clog pipes, reservoir and treatment plant equipment, ruin the ecosystem of lakes and reduce fish populations. Once in a drinking water reservoir, their presence can affect the taste of drinking water.*

*Quagga mussels attach to docks and the bottom of boats and can spread from lake to lake by boating activity. The tiny mollusks have been found at San Diego County reservoirs, including City of San Diego reservoirs. Anglers need to take special steps to clean the bottoms of boats and other equipment before leaving a reservoir or lake. More information is available at www.sandiego.gov/water/recreation/quaggamussels*