



DANA POINT TIMES | THE CAPISTRANO DISPATCH | SOUTH OC BRIDAL GUIDE | SUBSCRIBE | SIGN UP FOR E-BLASTS



Wednesday, July 13, 2011

sign in

LOCAL NEWS YOU CAN USE

articles

EYE ON SC | GETTING OUT | SC LIVING | SPORTS | SURF | SOAPBOX | VISIT SC | TALK SC | CLASSIFIEDS | BIZ DIRECTORY | ARCHIVE | MY CONTENT | ADVERTISE |

Headlines | Reader Reports | Community Calendar | Blotter | Breaking News |

Securing the Water Supply

by Jonathan Volzke

Jul 07, 2011 | 798 views | 0 | 1 | | |



Santa Margarita Water District Chief Engineer Daniel Ferons in front of the Upper Chiquita Reservoir, a 266 million gallon emergency-storage facility that San Clemente is a partner in. Photo by Patricia McCauley

Whether it comes from the Colorado River or Northern California, the last leg of the journey for San Clemente's drinking water begins in Yorba Linda, at the Robert B. Diemer Treatment Plant. From Diemer—a massive plant that puts out enough water daily to fill the Rose Bowl every hour—the water travels nearly 50 miles through a series of pipes buried beneath toll roads and city streets to supply virtually all of South Orange County's drinking-water needs.

The long route brings a threat of earthquakes breaking the line, which in places is more than 5 feet tall, but other dangers lurk too: Fires can knock out electrical systems needed to push the water along, and even routine maintenance at Diemer closes the tap for a week every year.

When it comes to getting fresh water, San Clemente is, as Mayor Lori Donchak puts it, "at the end of the line."

The pipeline did suffer a serious break once, in 1999. Those who rely on the waterline as a lifeline were forced to rely on city reservoirs and strict conservation for 10 days. "Everybody got through it, but it happened in December," said Daniel Ferons, chief engineer of the Santa Margarita Water District. "But if it had happened in July, it might have been a different story."

Santa Margarita Water, San Clemente and three other agencies have teamed up to create an insurance policy of sorts against any troubles with the water supply, turning a 27.4-acre canyon off Oso Road into a 266 million gallon emergency reservoir.

After more than two years of construction, led by SMWD, officials expect to start filling the Upper Chiquita Reservoir on July 18. The process will be slow: After adding one to three feet of water a day to the reservoir for two weeks, officials will let the water sit, closely watching test equipment and monitoring wells to ensure the reservoir's liner—the same material used for inflatable boats—and floating cover hold, before filling resumes, Ferons said.

But when it's full, the reservoir will hold enough water to provide 168,000 families with 200 gallons of water a day for a week.

Ferons likens the shape of the reservoir to a huge martini glass. Standing on the rim of the

Sign Up for E-Blasts

Email Address

Subscribe Unsubscribe
Submit

SEARCH south OC or Search by category
Categories

HOT DEAL
SAVE MORE THAN
50% OFF
at your favorite local
businesses and restaurants
Click HERE to see this week's offer

Videos

Upper Chiquita this week, he pointed out the funnel shape of the canyon: The bottom foot of the reservoir holds 150,000 gallons of water. The top foot—160 feet from the bottom—holds 5 million gallons. The surface area of the reservoir alone is 17 acres.

“The raw size of the project was quite impressive,” said Donchak, who toured the reservoir in June.

Overall, the project cost \$53 million. With its partners, San Clemente bought only a portion of the storage capacity, and paid accordingly. San Clemente bought just over 11 percent of the project, paying \$5.6 million for 83.8 acre-feet of water. A single acre foot, water officials say, is enough water to serve a family of four for a year, or 325,851 gallons.

San Juan Capistrano bought into the project for \$5.1 million, or 10 percent, for 76 acre feet, while Moulton Niguel Water District—which serves Laguna Niguel—paid \$17.1 million for 256 acre feet and South Coast Water District—serving Dana Point—paid \$3 million for 46 acre feet. Santa Margarita Water paid \$19.3 million for 289 acre feet of storage.

San Clemente now has 14 reservoirs and two regional reservoirs. The 14 reservoirs hold 22.4 million gallons, while the regional reservoirs—shared with other agencies—push the total up to 35.9 million gallons, said Assistant City Engineer Dave Rebensdorf.

That means the 27.5 million gallons that San Clemente is getting in Upper Chiquita nearly doubles the city’s storage. And at a bargain, too. The city still uses Reservoir No. 1, which was built above the golf course in 1955. That reservoir is scheduled to be rebuilt and doubled in size to a million gallons in 2015—at a cost of \$3.5 million.

“The cost per gallon is significantly less in the regional reservoir,” Rebensdorf said. “It’s a great deal.”

The water in Upper Chiquita will be treated before it goes into the reservoir, but the project includes the ability to treat it additionally, if necessary, including by ultraviolet lights. Ferons said officials will determine the best way to manage the reservoir after it is filled—either by moving water in and out to circulate it, or allowing it to remain in static storage.

Donchak said San Clemente’s investment will provide residents with two weeks of water in an emergency.

The water can move from the reservoir into supply pipelines by gravity for the first 10 to 15 feet of water, matching the water pressure in the pipelines. After that, four pumps, each with 250-horsepower engines, kick in. The state’s Division of Safety of Dams reviewed the plans and performed independent calculations to ensure the project was safe and have been on-site throughout construction, Ferons said.

Other agencies were involved, too, from Caltrans, which let construction traffic enter the project off the 241 to avoid snarling traffic on Oso Road, to environmental-resource agencies that ensured cactus, coastal sage scrub and other natural habitat will be returned to the site when the project is finished.

In addition to an emergency supply, the reservoir can help the agencies save money, too, Ferons said. Since the agencies buy their water from the Metropolitan Water District, they also pay more for using more than their regular amount of water. Having the Upper Chiquita Reservoir in place will allow cities to dip into that pool of water if they are getting close to their peak usage, thereby avoiding extra charges.



Surfing America 2011 banquet. Video and editing by Justin Jung. Photos by Rich Cruse

[...more](#)

Local Events

[event calendar](#)

[post a new event](#)

Wednesday, July 13, 2011

[Summer Beach Camps](#)

11:00 AM - 6:00 PM

[Laguna Beach Festival of Arts](#)

12:00 PM - 1:30 AM

[Capo Shakespeare Festival](#)

8:00 PM - 12:00 AM

[Abbey Road - A Tribute to the Beatles](#)

10:00 PM - 7:08 PM

[Pageant of the Masters](#)

10:30 PM - 1:30 AM

[Kids Storytime at the Casa](#)

10:00 AM - 10:00 AM

[iKaleido-Kids! Variety Show](#)

10:30 AM - 10:30 AM

[90 Minute Sunset Harbor Cruise & Beyond](#)

6:00 PM - 7:30 PM

[Show more events...](#)

Thursday, July 14, 2011

[San Clemente Friends of the Library Bookstore Silent Auction NOW - 1:00PM August 7th](#)

10:00 AM - 4:00 PM

[Summer Beach Camps](#)

11:00 AM - 6:00 PM

[Laguna Beach Festival of Arts](#)

12:00 PM - 1:30 AM

[Japanese Flower Arranging Ikebana](#)

4:30 PM - 6:30 PM

[Capo Shakespeare Festival](#)

8:00 PM - 12:00 AM

[Abbey Road - A Tribute to the Beatles](#)

10:00 PM - 7:08 PM

[Pageant of the Masters](#)

10:30 PM - 1:30 AM

[Wildlife Company](#)

10:30 AM - 10:30 AM

[Show more events...](#)

[...all events](#)

When the taps turn on later this month, it will be a turning point in the project first envisioned in 1988, Ferons said.

"It's been a long time coming," Ferons said. "The region has needed additional reliability for a long time."

[Share This Article](#) | [f](#) [t](#) [g+](#) [p](#)

similar stories

[Repairs Being Done on Water Supply Pipeline](#) | 13 months ago

[Water Conservation Measures Sought During Plant Closure](#) | 4 months ago

[South Coast Water District Issues \\$37.12 Million in Revenue Bonds](#) |

13 months ago

[A Desalination Plant for San Clemente?](#) | 3 years ago

[Federal Funding Coming to San Clemente](#) | 3 years ago

[post a comment](#)

comments (0)

no comments yet

HOT DEAL
 SAVE MORE THAN
50% OFF
 at your favorite local
businesses and restaurants
 Click **HERE** to see this week's offer

CASA ROMANTICA
 CULTURAL CENTER AND GARDENS

Spectacular views of the Pacific and stunning architecture make Casa Romantica the perfect venue for weddings and private gatherings.

415 AVENIDA GRANADA, SAN CLEMENTE, CA 92672
 (949) 498-2139

[Help](#) [Contact Us](#)

Powered by [Matchbin Inc.](#) © Copyright 2011

Content provided by The San Clemente Times. © Copyright 2011

San Clemente Times is in Capistrano Beach, CA

Media Partners : [Coastline Pilot](#) | [Daily Pilot](#) | [Huntington Beach Independent](#) |