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AUSTIN BEUTNER
General Manager
RAMAN RAJ
Chief Operating Officer

November 9, 2010

The Honorable City Council
c/o Office of the City Clerk
Room 395, City Hall
Mail Stop 160

Attention: Councilmember Jan Perry
Chair, Energy and Environment Committee

Honorable Members:

Subject: Update – Quarterly Status Report on Water Quality Regulatory Compliance
Projects

Enclosed for your information is the Los Angeles Department of Water and Power's Quarterly Status Report on Water Quality Regulatory Compliance Projects. As you are aware compliance with regulatory requirements is a top priority for the Water System. The subject report outlines the Water System status for complying with the United States Environmental Protection Agency's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), and the Stage 2 Disinfectants and Disinfection Byproducts (DBP2) Rule. The current estimated total cost needed for the projects to be in compliance with these two regulations is \$1.6 billion.

If you have any questions or if further information is required, please contact me at (213) 367-1338, or have a member of your staff contact Ms. Winifred J. Yancy, Manager, Local Government and Community Outreach, at (213) 367-0025.

Sincerely,

Austin Beutner

SRR:cgr
Enclosure

Water and Power Conservation ... a way of life

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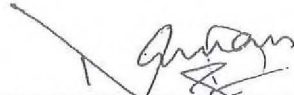

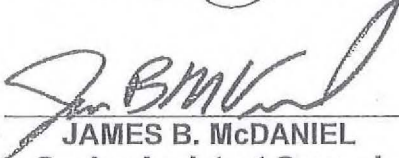
The Honorable City Council

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c/enc: Councilmember Tony Cardenas, Vice Chair, Energy and Environment Committee
Councilmember Richard Alarcon, Member
Councilmember Paul Koretz, Member
Councilmember Paul Krekorian, Member
Mr. Adam R. Lid, Legislative Assistant
Commissioner Lee Kanon Alpert, President
Commissioner Thomas S. Sayles, Vice President
Commissioner Eric Holomon
Commissioner Christina Noonan
Commissioner Jonathan Parfrey
Ms. Winifred J. Yancy

LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP)
INFORMATIONAL BOARD LETTER

TO: BOARD OF WATER AND POWER COMMISSIONERS	DATE: October 14, 2010
 RAMAN RAJ Chief Operating Officer	SUBJECT: Quarterly Status Report on Water Quality Regulatory Compliance Projects
 AUSTIN BEUTNER General Manager	FOR COMMISSION OFFICE USE: This Informational Board Letter was transmitted to all Board Members on:
 JAMES B. McDANIEL Senior Assistant General Manager-Water System	

Water Quality Regulations Update

The Water System is continuing to plan and execute its projects in light of the two regulations promulgated in December 2005 by the United States Environmental Protection Agency (EPA): the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), and the Stage 2 Disinfectants and Disinfection Byproducts (DBP2) Rule. LADWP met the April 1, 2009, deadline for the approval of a negotiated Compliance Agreement for the LT2ESWTR with the California Department of Public Health (CDPH). This newly negotiated agreement identifies a final date of October 2026 to bring the six remaining open distribution reservoirs into compliance with the LT2ESWTR, and includes several interim milestones and dates that are enforceable and must be adhered to. The DBP2 Rule requires compliance with disinfection by-product standards by April 1, 2014, for agencies needing to construct new facilities in order to be in compliance.

Compliance Strategy for Drinking Water Regulations

The Water System's compliance plan is based on the following:

- a. Covering, removing from service, or re-treating the water in the six remaining open reservoirs in the water distribution system.
- b. Switching the water distribution system disinfectant from chlorine to chloramines.

The six remaining reservoirs that need to be addressed are Santa Ynez, Silver Lake, Ivanhoe, Elysian, Upper Stone Canyon, and Los Angeles. Current plans anticipate Santa Ynez Reservoir being removed from service for installation of a floating cover by November 2010; Silver Lake Reservoir removed from service by May 2013; Ivanhoe Reservoir removed from service by November 2014; Elysian and Upper Stone Canyon Reservoirs removed from service for construction of covered storage by early 2015 and mid-2016, respectively; and Los Angeles Reservoir with

ultraviolet (UV) treatment before the original 2022 out-of-service date. The attached schedule, *Water Quality Improvement Projects (WQIPs) needed for LT2ESWTR Regulatory Compliance (Attachment 1)*, shows the most recent timeline for the completion of projects necessary for LT2ESWTR compliance. In addition, the projects are differentiated by crosshatching to indicate those that are needed for reducing the public health vulnerability of an open body of drinking water (i.e., reservoirs out of service, covered, etc.), and those other projects that will return the City of Los Angeles (City) to its original level of operational reliability after all necessary changes.

Both groups of projects are equally important for regulatory compliance. Attachment 2 shows the projects and timelines needed for the DBP2 Rule compliance. Attachment 3 is a summary of the projects for the LT2ESWTR with the associated compliance deadlines.

CDPH has accepted the Water System's proposal to pursue two UV treatment facilities in lieu of the disinfection contact tank, the dam, and the floating covers on the Los Angeles Reservoir. One UV treatment facility would be located at the outlet of the Los Angeles Aqueduct Filtration Plant (LAAFP), and the other UV treatment facility at the outlet of the Los Angeles Reservoir. The Los Angeles Reservoir will be covered with shade balls instead of the floating covers.

The UV plant at the outlet of the LAAFP will replace the contact tank and allow for a continued reduction in ozone use at the LAAFP when the system is converted to chloramines.

The UV plant at the outlet of the Los Angeles Reservoir with the application of shade balls will eliminate the need for Granada Hills Reservoir, the dam in the Los Angeles Reservoir, and the floating covers. The realignment and extension of Bull Creek is still necessary. These changes will save over \$300 million and enable the Los Angeles Reservoir to come into compliance years earlier than anticipated.

The conversion from chlorine to chloramines will not take place until mid-2014 when all reservoirs (except Los Angeles) are either permanently removed from service, off-line due to cover or tank construction, or covered with shade balls. Upper Stone Canyon will be covered with shade balls before the conversion to chloramines. The Los Angeles Reservoir will most likely stay on chlorine even after it is covered with shade balls, with the water disinfectant being converted to chloramines upon exiting the reservoir. The Water System is also in the process of designing and constructing eight ammoniation stations to ensure the facilities are in place to convert the rest of the City's water to chloramines.

The current estimated total cost for complying with the above two regulations is \$1.6 billion.

Current Status

There are 26 capital projects that remain to be completed to reach compliance with the new regulations. As of today, there are 7 projects in planning, 11 projects in design, and 8 projects in construction.

The Water System continues to meet with the EPA and the CDPH to ensure that its plan will successfully comply with the water quality regulations. A key component of the Compliance Plan will be securing the necessary engineering and construction contracts in a timely manner.

Completed Milestones

- City Trunk Line - South, Unit 2
 - Groundbreaking took place on June 24, 2009.
 - Completion is at 40 percent.
- Elysian Reservoir
 - California Environmental Quality Act (CEQA) process on a preferred alternative commenced in March 2008.
 - Initial Study and Notice of Preparation were completed and a Scoping meeting was held on July 12, 2008.
 - Board presentation was held on April 7, 2009.
- EPA Compliance Plan approved on April 1, 2009.
- Headworks Reservoir
 - MWH Americas, Inc., design and geotechnical tasks were initiated in March and April 2008.
- LAAFP Contact Tank
 - To be replaced with a UV treatment facility.
- Los Angeles Reservoir Bull Creek Extension
 - Planning completed in July 2009.

- Metropolitan Water District of Southern California LA-29 Connection
 - Construction awarded to Mladen Buntich on September 1, 2009.
 - Groundbreaking took place on May 24, 2010.
 - 28 percent complete.

- North Hollywood Ammoniation Station
 - Groundbreaking took place on August 29, 2008.
 - Integrated Support Services is constructing the project, with the foundation and walls of the building completed.
 - Construction completed in September 2010.

- River Supply Conduit Improvement – Lower Reach, Unit 1B
 - Advertised August 10, 2010.

- River Supply Conduit Improvement - Lower Reach, Unit 3
 - Construction awarded to W.A. Rasic Construction Co., Inc., on October 21, 2008.
 - Groundbreaking took place on March 26, 2009.
 - Completion is at 40 percent.

- River Supply Conduit Improvement - Lower Reach, Unit 4
 - Construction awarded to Steve P. Rados on July 17, 2009.
 - Groundbreaking took place on March 15, 2010.
 - Completion is at 3 percent.

- River Supply Conduit Improvement - Upper Reach, Units 5, 6, and 7
 - Environmental Impact Report (EIR) approved by the Board on September 16, 2008.

- Santa Ynez WQIP
 - Construction awarded to Environmental Construction, Inc., on April 21, 2009.
 - Groundbreaking took place on August 17, 2009.
 - Completion is at 60 percent.

- Tujunga Wells Ammoniation Station
- Integrated Support Services completed construction of the station in May 2009.
- Upper Stone Canyon Reservoir
 - CEQA process on a preferred alternative commenced in March 2008.
 - Initial Study and Notice of Preparation were completed and a Scoping meeting was held on July 14, 2008.
 - Community meeting held on December 10, 2008, to update residents on the status of the project.
 - Board presentation on Upper Stone Canyon Reservoir was held on March 3, 2009.
- Van Norman Chloramination Stations Nos. 1 and 2
 - Groundbreaking took place on August 26, 2008.
 - Griffith Company has progressed with slab and wall placement, and installation of mechanical piping and electrical conduit. Installation of the structural-steel members for the roof is currently taking place.
 - Van Norman Chloramination Station No. 1 is at 86 percent complete
 - Van Norman Chloramination Station No. 2 is at 78 percent complete.
- Manhattan Wells Ammoniation Station
 - Final planning completed in April 2010.

Three-Month Look Ahead

- River Supply Conduit Improvement – Upper Reach, Units 5 and 7
 - Design scheduled for completion October 2010.
- Santa Ynez Reservoir
 - Reservoir off-line November 2010.
- 99th Street Wells Ammoniation Station
 - Planning scheduled for completion November 2010.

Future Challenges

- Headworks Reservoir
 - Due to liquefaction issues, Water System will divide Headworks Reservoir into two smaller reservoirs and will construct the East reservoir in order to meet the original compliance date of removing Ivanhoe Reservoir from service by November 2014. System-wide conversion to chloramines can still occur by April 1, 2014, since Ivanhoe Reservoir is covered with shade balls. Construction of the East Reservoir will use an alternative project delivery approach that will require an ordinance through City Council. Current schedules allow for a 15-month specifications, bid, and Executive Directive No. 4 process. Water System staff plans to request the assistance of top management to expedite this contract through the procurement process.

- First Street Trunk Line
 - The contractor has been terminated and the remaining work will be done by in-house forces. The job completion date has been delayed for six months, which may impact the connections of the other major trunk lines. However, the delays are not expected to affect the CDPH compliance date for removal of Silver Lake Reservoir from service.
 - Construction has restarted with in-house forces.
 - Construction is 70 percent complete.

- River Supply Conduit Improvement – Lower Reach, Unit 3
 - The project has been delayed approximately six months due to shoring and traffic control plan issues. The project is currently on schedule to meet the CDPH compliance date and will not affect the date for removal of Silver Lake Reservoir from the distribution system.

- River Supply Conduit Improvement – Upper Reach, Unit 5
 - Design has been delayed due to constructability review issues that needed to be resolved. The required CDPH compliance date for the trunk line will not be met; however, this will not impact the compliance date for the removal of Ivanhoe Reservoir from service.

- River Supply Conduit Improvement – Upper Reach, Unit 7
 - Design has slipped due to unresolved issues with the City of Los Angeles Department of Public Works, Bureau of Engineering regarding storm drain

alignment and the discovery of contaminated groundwater in the area resulting in revisions to the contract language. The required CDPH operational compliance date for the trunk line will not be met; however, this will not impact the compliance date for the removal of Ivanhoe Reservoir from service.

- Silver Lake Bypass Tunnel and Regulator Station
 - The project is behind schedule due to delays in obtaining geotechnical services. This will not impact the overall schedule for removing Ivanhoe Reservoir from service.

- Upper Stone Canyon and Elysian Reservoirs WQIPs
 - The schedules for the Upper Stone Canyon and Elysian Reservoirs EIRs have slipped due to consideration of a concrete-cover option versus buried tanks for water storage. The concrete-cover option was found to be feasible and information for that option is being developed for the EIRs. It is anticipated the concrete cover would be lower in cost and have shorter construction duration than the tanks, although it will still be the most costly option of the alternatives being considered in the EIR. The CDPH compliance dates for removal of the reservoirs from services are still expected to be met.

SRR:cgr

Attachments

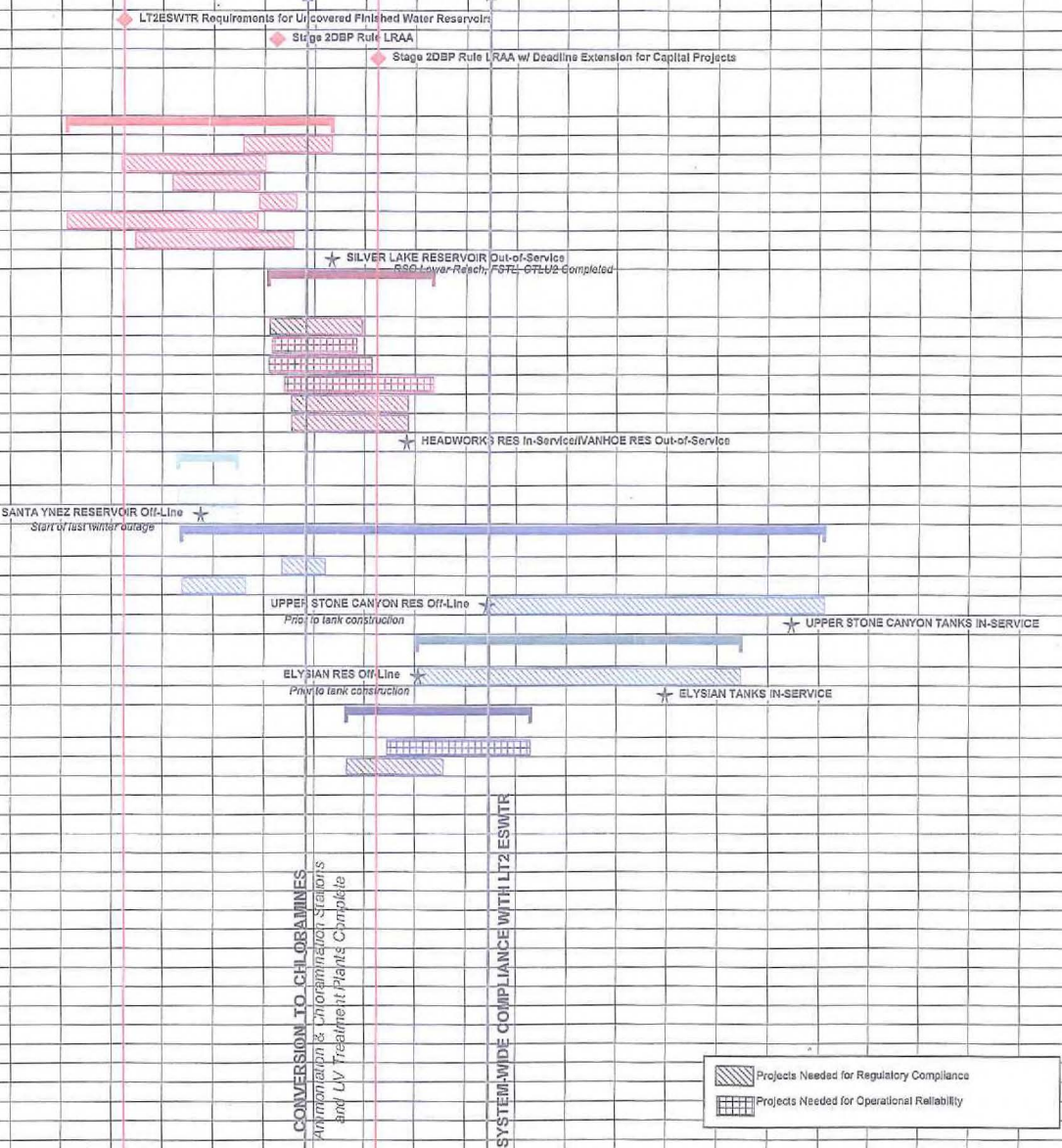
c/att: Mayor Antonio R. Villaraigosa
Austin Beutner, Office of the Mayor
Brett Messing, Office of the Mayor

e-c/att: Austin Beutner
Raman Raj
Richard M. Brown
Aram Benyamin
James B. McDaniel
Pankaj Parekh

Cecilia K.T. Weldon
Lorraine A. Paskett
Ann M. Santilli
Maria Sison-Roces
Glenn C. Singley
Susan R. Rowghani

Water Quality Improvement Projects Needed For LT2ESWTR Regulatory Compliance

Estimated Construction Schedules and Total Project Costs



Water Quality Improvement Projects Needed For DBP2 Regulatory Compliance

Estimated Construction Schedules and Total Project Costs

ID	Task Name	Total Project Cost	Start	Finish	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1																											
2			Wed 4/1/09	Wed 4/1/09																							
3			Mon 4/2/12	Mon 4/2/12																							
4			Tue 4/1/14	Tue 4/1/14																							
5	Projects Meeting DBP2 Regs	\$269.6 million																									
6	Ammoniation, Chloramination, Nitrification Control Program, UV Treatment Process and Shade Balls		Wed 6/20/07	Wed 10/9/14																							
7	Tujunga Wells Ammoniation Station	\$11.1 million	Wed 6/20/07	Mon 3/30/09																							
8	Van Norman Chloramination Station 1	\$30.8 million	Tue 8/28/09	Tue 12/21/10																							
9	Van Norman Chloramination Station 2	\$26.3 million	Mon 8/11/09	Mon 12/20/10																							
10	99th Street Wells Ammoniation Station	\$12.6 million	Fri 2/10/12	Fri 1/31/14																							
11	Manhattan Wells Ammoniation Station	\$11.4 million	Tue 7/5/11	Tue 9/11/14																							
12	Pollock Wells Ammoniation Station	\$8.5 million	Thu 9/13/12	Thu 6/26/14																							
13	Mission Wells Ammoniation Station	\$25.9 million	Wed 12/12/12	Fri 9/26/14																							
14	LAAFP UV Treatment Plant	\$71 million	Mon 3/12/12	Thu 3/13/14																							
15	Shade Balls - LA Reservoir	\$38 million	Mon 1/3/11	Fri 6/29/12																							
16	Shade Balls - Upper Stone Canyon Reservoir	\$3.2 million	Fri 7/1/11	Tue 7/31/12																							
17	North Hollywood Ammoniation Station	\$19.5 million	Fri 9/29/06	Mon 6/2/10																							
18	North Hollywood Chlorination Stations	\$7.7 million	Wed 7/6/11	Thu 6/14/12																							
19	Tank and Reservoir Nitrification Control Plan	\$3.6 million	Mon 10/9/12	Wed 10/9/14																							
20	Total Project Cost *	\$1.638 billion																									

◆ LT2ESWTR Requirements for Uncovered Finished Water Reservoir
◆ Stage 2DBP Rule LRAA
◆ Stage 2DBP Rule LRAA w/ Deadline Extension for Capital Projects

CONVERSION TO CHLORAMINES
 Ammoniation Chloramination Stations
 and UV Treatment Plants Complete

SYSTEM-WIDE COMPLIANCE WITH LT2 ESWTR

*Total Project Cost includes direct charges, department overhead, and inflation adjustment using 3% CPI

Summary of Project Milestones for Compliance With LT2ESWTR

Distribution Reservoir	Required Compliance Date (CDPH)*	Current Schedule for Compliance	Projects that must be completed for WQ Regulatory Compliance **	Required Compliance Date (CDPH)	Current Schedule for Compliance	Projects to be completed for Operational Reliability Regulatory Compliance	Required Compliance Date (CDPH)	Current Schedule for Compliance
Santa Ynez	November 2011	November 2010	Not Applicable			Not Applicable		
Silver Lake	December 2013	May 2013	RSC Trunk Line Unit 1b RSC Trunk Line Unit 3 RSC Trunk Line Unit 4 First Street Trunk Line City Trunk Line – South, Unit 2	May 31, 2012 Jan. 31, 2013 April 30, 2013 Dec. 30, 2011 June 29, 2012	May 2013 January 2012 August 2012 March 2012 May 2012	Not Applicable		
Ivanhoe	November 2014	November 2014	Silver Lake BTRS RSC Trunk Line Unit 1a Headworks Reservoir East	March 29, 2013 Nov. 14, 2014 Nov. 14, 2014	December 2013 November 2014 November 2014	RSC Trunk Line Unit 5 RSC Trunk Line Unit 6 RSC Trunk Line Unit 7 Headworks Reservoir West	Mar. 29, 2013 Aug. 30, 2013 Aug. 30, 2013 TBD	February 2014 April 2014 June 2015 TBD
Elysian	August 2015	January 2015	Not Applicable			Not Applicable		
Upper Stone Canyon	January 2017	June 2016	MWD LA-29 MWD LA-30	Not Applicable Not Applicable	August 2011 March 2013	Not Applicable		
Los Angeles	March 2022	March 2022	UV Los Angeles Reservoir	TBD	TBD	Bull Creek Extension Realignment	Dec. 30, 2016	Dec. 30, 2016

RSC – River Supply Conduit

BTRS – Bypass Tunnel & Regulator Station

* California Department of Public Health

** Projects are interrelated due to connections that must be made. If one project slips beyond a certain point, that group of projects may be delayed a year due to the time frames in which system outages and connections can be made.